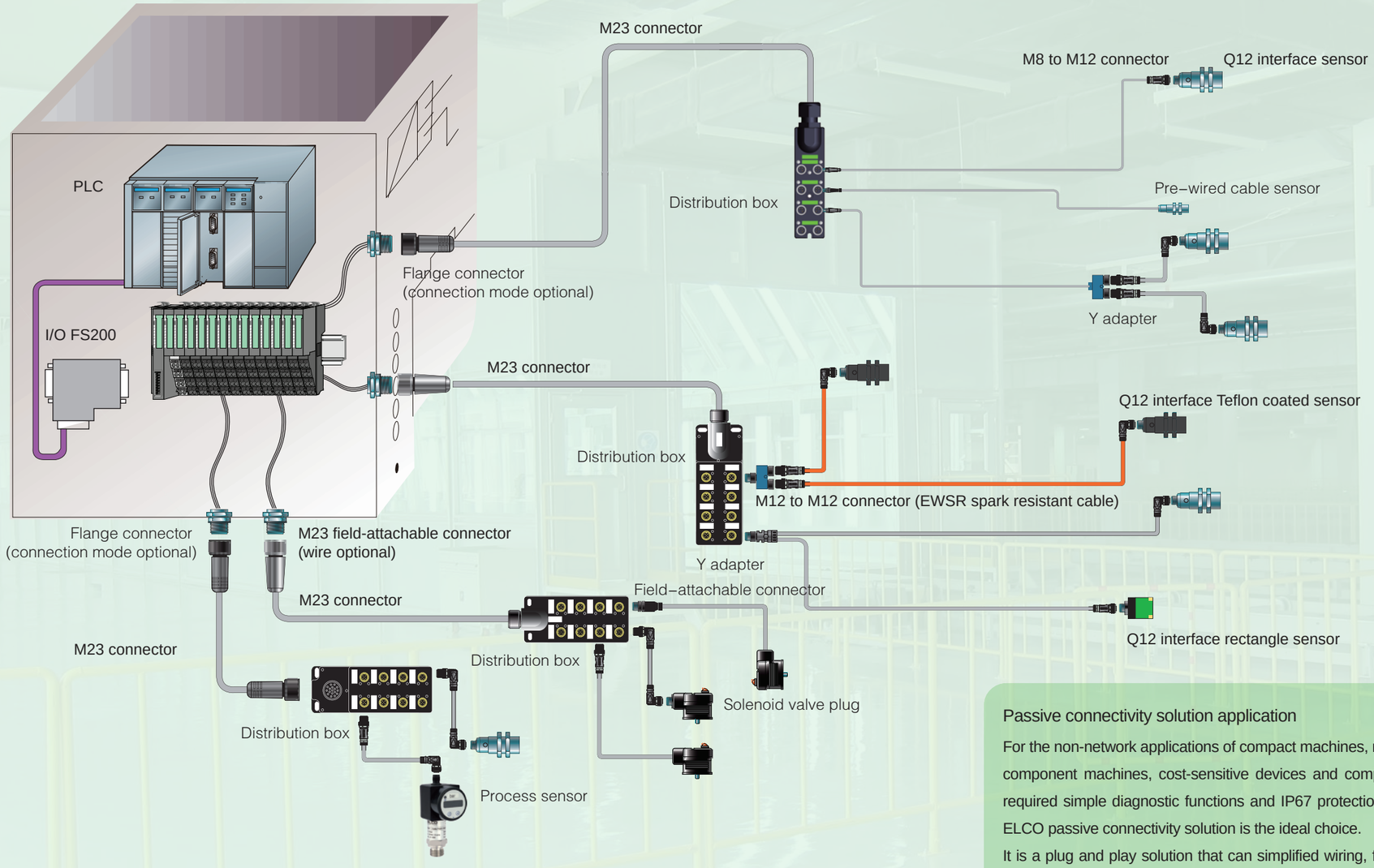
ELCO
INDUSTRIAL AUTOMATION

Connectivity Product

Contents

Typical passive connectivity solution

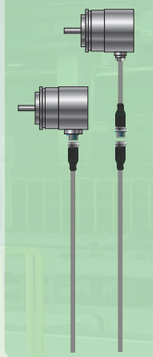


ELCO standard connectors covered 2-, 3-, 4-, 5-, 8-core connectors, which can connect between proximity switches, photoelectric sensors, ultrasonic sensors, process sensors (pressure sensors, flow sensors), mechanical limit switches, security curtains, encoders and other devices. We also provide customized cable jacket, length and connector functions to realize quick connection and apply to the different conditions in the field.

Optional distribution boxes including M8 and M12 interface, which provide customer to build plug and play solution. Different number of ports, various connection mode, customized cable length, and optional PNP, NPN can meet system requirements of PLC with different brands. We also provide passive and solenoid valve devices.

5-core, 8-core shielded M12 connectors
Match with safety curtains

Features:
- Fully shielding plugs
- Customized pin definitions
- Customized compatible adapters
- Optional field-attachable metal connectors



5-core, 8-core shielded M12 connectors
Match with encoders

Features:
- Fully shielding plugs
- Customized pin definitions
- Customized compatible adapters
- Optional field-attachable metal connectors
- Pigtail kit available

Passive connectivity solution application

For the non-network applications of compact machines, modular component machines, cost-sensitive devices and components required simple diagnostic functions and IP67 protection class, ELCO passive connectivity solution is the ideal choice.

It is a plug and play solution that can simplified wiring, fast and safe connection between sensors, limit switches, photoelectric sensors, solenoid valves, etc., connect to the I/O module or controller in the cabinet via cable from distribution box.

ELCO passive connectivity solution, including:

- Single-ended cordsets (one end with connector, the other end with homerun cable)
- Double-ended cordsets (both ends with connectors)
- Field-attachable connectors (reserved wiring terminals, PG waterproof connectors)
- Panel mounting sockets (flange mounting holes, sockets)
- Distribution boxes (M8, M12 interface, various of connection mode)
- Y-type modules and the Y-type cable distributors
- Solenoid valve plugs and extension components (A, B, C-type)
- Bulk cables (200, 300,500m)

Order Code

Pre-wired connector

C B O 12. 4 -2 - C B 12. 4 / P

Product Category
C-type
Q-type

Shape
Null: Straight
B: Angled

Gender
Null: Male
O: Female

Size
8: M8*1
12: M12*1

No. of Pin
2: 2-pin(2.2, 2.21, 2.22 different pin sequence)
3: 3-pin
4: 4-pin
5: 5-pin
8: 8-pin
12: 12-pin

Cable length
Standard: 2m

Specification
Null: Single pre-wired

Product Category
C-type
Q-type

Shape
Null: Straight
B: Angled

Size
8: M8*1
12: M12*1

No. of Pin
3: 3-pin
4: 4-pin
5: 5-pin
8: 8-pin
12: 12-pin

Special Function and Cable Material
Null: PVC
P: PUR/PP
Bending 5 Million
WS: Shielded
L: PNP LED
LN: NPN LED
EWSR: Welding spark resistance

Field-attachable Connector

L S B O 12. 4 - 0 / C(BU)

Product Category
L: Field-attachable connector

Connection Type
S: Screw ternimation

Shape
Null: Straight
B: Angled

Gender
Null: Male
O: Female

Size
M8×1
M12×1

No. of Pin
3: 3-pin
4: 4-pin
5: 5-pin
8: 8-pin

Cable Diameter
0：PG7(4-6mm)
9：PG9(6-8mm)

Special Function
Null: No special function
M/S: Metal housing shielded
C(BU): Standard

Order Code

Y Splitter/Adapter

ECS - F E 2 C B . 12 . 4 - 2/2 / .

Product Category
Y splitter/adapter

Gender
Null: Male
F: Female

Size
Null: M12
E: M8

Product Category
Null： Y adapter
2: Y splitter

Specification
Null: Homerun cable
C: Pre-wired connector

Shape
Null: Straight
B: Angled

Gender
Null: Male
O: Female

Connection Type (adapter)
Null: Homerun cable
8: M8*1
12: M12*1

No. of Pin
3: 3-pin
4: 4-pin
5: 5-pin

Connection Type (splitter)
2-C12.4: Male straight M12 connector with 2m cable
2-C8.4: Male straight M8 connector with 2m cable
2-CB12.4: Male angled M12 connector with 2m cable
2-CB8.4: Male angled M8 connector with 2m cable

Special Function and Cable Material
Null: PVC
P: PUR/PP
Bending 5 Million
WS: Shielded
L: PNP LED
LN: NPN LED
B24: 2-, 4-pin shorted

Flange Connector

F O 12. 4 - 0 / M16/ F

Product Category
F: Flange connector

Gender
Null: Male
O: Female

Size
12: M12*1
8: M8*1
7:7/8, 7/8 inch

No. of Pin
3: 3-pin
4: 4-pin
5: 5-pin
8: 8-pin
12: 12-pin

Mounting
Null: Rear panel mounting
F: Front panel mounting

Screw Connection
M16：M16×1.5
M20：M20×1.5
M8：M8×1
M11：M11×1

Connection Type
0: Reserved soldering cover
P: PCB welding pin
0.5: Cable length (unit: m)

Pre-Wired I/O Connectors

The pre–wired and plastic I/O connectors meet all requirements for safe, fast and reliable field connections. Our standardized pre–wired connectors guarantee steady and shock prove IP67 connections. Depending on the selected cable type, they cover all applications in difficult environmental conditions like chemical influences, high or low air temperatures and significant mechanical stress. Cables are available with screening shields to ensure secure and interference–free signal transmissions.

- Shock resistant, reliable contact
- 360° shielded connectors
- Protection class IP67
- Current rating 2-4 A (depends on number of cores)
- Optional 2, 3, 4, 5, 8 core cables available
- Various cable types:
  PVC, PUR, with or without shields, EWSR spark resistant
  STPE high elastic and high flexible
- Oil and chemical resistant, flame retardant, drag chain suitable
- Connectors M8x1, M12x1, 7/8", M23x1 threads
- Optional straight and angled connectors
- Built in LED indicators
- Optional A-coded, B-coded etc. interface
- Standard cable lengths 2m, all other lengths optionally available
- Special cables for special applications available on request

Y Splitter/Adapter

Y Splitter/Adapter includes different types of products, such as module type and cable output type. It can be used as simple distribution box and extend port access to reduce installation cost and save installation time. The material and structure of Y splitter/adapter are available in dirty and damp industrial environment and its protection rating is up to IP67.

Y splitter/adapter including M12 to 2×M12, M12 to 2×M8, M8 to 2×M12, M8 to 2×M8 and M8/M12 to homerun cable with customized length.It can be used for port extension, distribution box kit and distributed I/O connector extension.

Field-attachable I/O Connectors

Field-attachable I/O connectors can be used in the field where the different or special cable lengths are required, for example the special mechanical manufcturing filed. Elco supply straight /angled connector of 3, 4, 5 cores and Y Splitter, and its cable is fixed by screw or clamp and other ways. The contacted elastic rubber ensure tightness, and the maximum cable diameter is 8mm. Cable section is from 0.25 to 0.75 mm², and wire oulet can be adjusted within 90° for angled connector according to connector terminal layout ,shielded(metal) type is available for straight connector, so all the products installed under the insert state can meet the requirement of IEC60529 protection class IP67.

- Screw locked
- With cable sleeve (prevent from bending)
- Cable clamp ring reducing the tension
- Protection class IP67
- Two housing types: plastic and zinc alloy casting housing
- Wired against customer's requirement, assembling and installing in the field
- M8 interface: 3 and 4 cores optional, M12 interface: 4 5 8 cores optional
- Straight and angled connectors optional
- Zinc casting housing with shield function, using in the harsh environment

Cable is an important part of the pre-wired connector, therefore it's very important to select the right cable for corresponding connector. ELCO connectivity system provide cables with various jackets and functions for different application environment and field.

PVC Cable

The cable with PVC jacket and its good mechanical performance (e.g. tensile strength, crack and abrasion resistance) is suitable for most applications in industrial installations. The cable is weatherproof and resistant to oil and chemical solutions. It is therefore a standard and economic solution for field installations to link I/O systems.

Cable Type	Conductor Cross Section	Optional Cores No.	Wire Diameter(mm)	Matching Products
PVC（gray）	0.25mm²	3，4	4.4±0.15	M8
PVC（gray）	0.34mm²	2，3，4，5	5.2±0.15	M12

PUR Cable

The PUR jacket cable with its superior mechanical performance (e.g. tensile strength, crack and abrasion resistance, weather and oil/chemical resistance) is suitable for applications in extreme environments. It is therefore an ideal solution for industrial installations to link I/O systems in a harsh environment.

Cable Type	Conductor Cross Section	Optional Cores No.	Wire Diameter(mm)	Matching Products
PUR（gray）	0.25mm²	3，4	4.4±0.15	M8
PUR（gray）	0.25mm²	8	6.4±0.15	M12
PUR（gray）	0.34mm²	2，3，4，5	5.2±0.15	M12

EWSR Cable

The special jacket material can enhanced mechanical properties (including tensile strength, crack resistance and wear resistance) and have high temperature resistance. Once you choose this cable, the detailed field environment and requirements must be clear.

Shielding Cable

The tinned copper braid shielding layer provides a good electromagnetic shield against interferences. Shielded cables therefore improve safe signal transmissions.
A wide range of special cables for special applications are available upon request. Please contact us to disucuss your exact requirements.

Wire Color and Pin Table

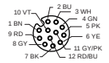
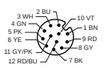
Color Code	corresponding pin 2pin(.2)	corresponding pin 2pin(.21)	corresponding pin 2pin(.22)	corresponding pin 3pin	corresponding pin 4pin	corresponding pin 5pin	corresponding pin 8pin	corresponding pin 12pin
WH					2	2	1	1
BN	1	1	3	1	1	1	2	2
GN							3	3
YE							4	4
GY						5	5	5
PK							6	6
BU	4	2	4	3	3	3	7	7
RD							8	8
BK				4	4	4		9
VI								10
GY/PK								11
RD/BU								12

Special Cable Jacket Color

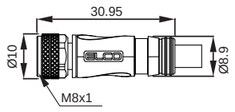
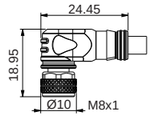
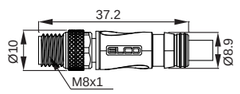
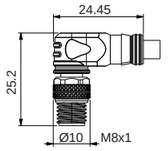
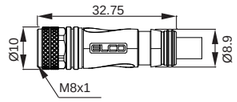
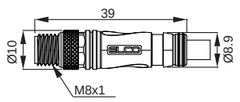
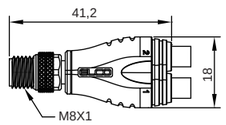
Jacket Color	Cable Identification
OG	EWSR
BK	PUR
GY	PVC PUR

Pre-wired I/O connector

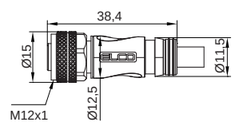
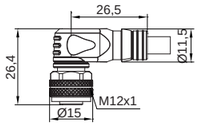
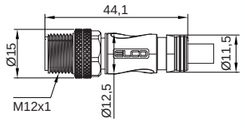
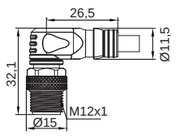
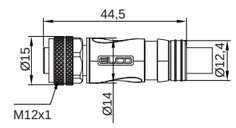
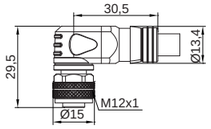
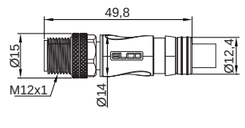
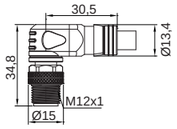
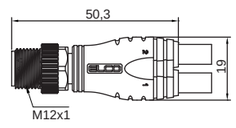
Pin Assignment

	2pin			3pin	4pin	5pin	8pin	12pin
	2.2	2.21	2.22					
M8 Female								
M8 Male								
M12 Female								
M12 Male								

Dimensions M8

	Straight Female	Angled Female	Straight Male	Angled Female
Standard				
Special Application				
Y Splitter				

Dimensions M12

	Straight Female	Angled Female	Straight Male	Angled Female
Standard				
Special Application				
Y Splitter				

Field-attachable connector

Pin Assignment

	3pin	4pin	5pin	8pin
M8 Female				
M8 Male				
M12 Female				
M12 Male				

Dimensions M8

Straight Female (Screwing)	Angled Female (Screwing)	Straight Male(Screwing)	Angled Male(Screwing)

Dimensions M12

	Straight Female	Angled Female	Straight Male	Angled Female
Plastic housing				
Metal housing				

Single-ended I/O Cordsets- M12 (Straight-female)

Description:

Used for sensors, I/O connector connecting. Standard M12(straight-female) threaded connection.
2, 3, 4, 5, 8, 12-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female DC 2-core	CO12.2-2	2	4A/250V	2m	0.34mm²
	Female AC/DC 2-core	CO12.21-2	2	4A/250V	2m	0.34mm²
	Female AC 2-core	CO12.22-2	2	4A/250V	2m	0.34mm²
	Female 3-core NO	CO12.3-2	3	4A/250V	2m	0.34mm²
	Female 3-core NO with LEDPNP	CO12.3-2/L	3	4A/30V	2m	0.34mm²
	Female 3-core NO with LEDNPN	CO12.3-2/LN	3	4A/30V	2m	0.34mm²
	Female 4-core NO/NC	CO12.4-2	4	4A/250V	2m	0.34mm²
	Female 4-core NO/NC with LEDPNP	CO12.4-2/L	4	4A/30V	2m	0.34mm²
	Female 4-core NO/NC with LEDNPN	CO12.4-2/LN	4	4A/30V	2m	0.34mm²
	Female 5-core NO/NC	CO12.5-2	5	4A/60V	2m	0.34mm²
	Female 8-core	CO12.8-2	8	2A/30V	2m	0.25mm²
	Female 12-core	CO12.12-2	12	1.5A/30V	2m	0.25mm²
PUR Bending 5 Million	Female 3-core NO	CO12.3-2/P	3	4A/250V	2m	0.34mm²
	Female 3-core NO with LEDPNP	CO12.3-2/L/P	3	4A/30V	2m	0.34mm²
	Female 3-core NO with LEDNPN	CO12.3-2/LN/P	3	4A/30V	2m	0.34mm²
	Female 4-core NO/NC	CO12.4-2/P	4	4A/250V	2m	0.34mm²
	Female 4-core NO/NC with LEDPNP	CO12.4-2/L/P	4	4A/30V	2m	0.34mm²
	Female 4-core NO/NC with LEDNPN	CO12.4-2/LN/P	4	4A/30V	2m	0.34mm²
	Female 5-core NO/NC	CO12.5-2/P	5	4A/60V	2m	0.34mm²
	Female 8-core	CO12.8-2/P	8	2A/30V	2m	0.25mm²
	Female 12-core	CO12.12-2/P	12	1.5A/30V	2m	0.25mm²

Selection Instructions

CO12.4- 2 / P
① ②

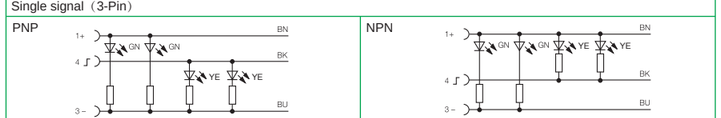
Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

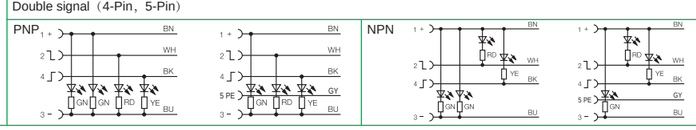
Cable Length

Product with LED

Single signal（3-Pin）



Double signal（4-Pin，5-Pin）



Single-ended I/O Cordsets- M12 (Straight-male)

Description:

Used for sensors, I/O connector connecting. Standard M12(straight-male) threaded connection.
2, 3, 4, 5, 8, 12-core are optional. Customized cable lengths.Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Male DC 2-core	C12.2-2	2	4A/250V	2m	0.34mm²
	Male AC/DC 2-core	C12.21-2	2	4A/250V	2m	0.34mm²
	Male AC 2-core	C12.22-2	2	4A/250V	2m	0.34mm²
	Male 3-core NO	C12.3-2	3	4A/250V	2m	0.34mm²
	Male 4-core NO/NC	C12.4-2	4	4A/250V	2m	0.34mm²
	Male 5-core NO/NC	C12.5-2	5	4A/60V	2m	0.34mm²
	Male 8-core	C12.8-2	8	2A/30V	2m	0.25mm²
	Male 12-core	C12.12-2	12	1.5A/30V	2m	0.25mm²
PUR Bending 5 Million	Male 3-core NO	C12.3-2/P	3	4A/250V	2m	0.34mm²
	Male 4-core NO/NC	C12.4-2/P	4	4A/250V	2m	0.34mm²
	Male 5-core NO/NC	C12.5-2/P	5	4A/60V	2m	0.34mm²
	Male 8-core	C12.8-2/P	8	2A/30V	2m	0.25mm²
	Male 12-core	C12.12-2/P	12	1.5A/30V	2m	0.25mm²

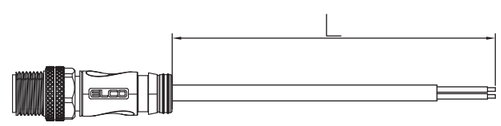
Selection Instructions

C12.4- 2 / P
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Single-ended I/O Cordsets-M12 (Angled-female)

Description:

Used for sensors, I/O connector connecting. Standard M12(angled-female) threaded connection.

2, 3, 4, 5, 8, 12-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female DC 2-core	CBO12.2-2	2	4A/250V	2m	0.34mm²
	Female AC/DC 2-core	CBO12.21-2	2	4A/250V	2m	0.34mm²
	Female AC 2-core	CBO12.22-2	2	4A/250V	2m	0.34mm²
	Female 3-core NO	CBO12.3-2	3	4A/250V	2m	0.34mm²
	Female 3-core NO with LEDPNP	CBO12.3-2/L	3	4A/30V	2m	0.34mm²
	Female 3-core NO with LEDNPN	CBO12.3-2/LN	3	4A/30V	2m	0.34mm²
	Female 4-core NO/NC	CBO12.4-2	4	4A/250V	2m	0.34mm²
	Female 4-core NO/NC with LEDPNP	CBO12.4-2/L	4	4A/30V	2m	0.34mm²
	Female 4-core NO/NC with LEDNPN	CBO12.4-2/LN	4	4A/30V	2m	0.34mm²
	Female 5-core NO/NC	CBO12.5-2	5	4A/60V	2m	0.34mm²
	Female 8-core	CBO12.8-2	8	2A/30V	2m	0.25mm²
	Female 12-core	CBO12.12-2	12	1.5A/30V	2m	0.25mm²
PUR Bending 5 Million	Female 3-core NO	CBO12.3-2/P	3	4A/250V	2m	0.34mm²
	Female 3-core NO with LEDPNP	CBO12.3-2/L/P	3	4A/30V	2m	0.34mm²
	Female 3-core NO with LEDNPN	CBO12.3-2/LN/P	3	4A/30V	2m	0.34mm²
	Female 4-core NO/NC	CBO12.4-2/P	4	4A/250V	2m	0.34mm²
	Female 4-core NO/NC with LEDPNP	CBO12.4-2/L/P	4	4A/30V	2m	0.34mm²
	Female 4-core NO/NC with LEDNPN	CBO12.4-2/LN/P	4	4A/30V	2m	0.34mm²
	Female 5-core NO/NC	CBO12.5-2/P	5	4A/60V	2m	0.34mm²
	Female 8-core	CBO12.8-2/P	8	2A/30V	2m	0.25mm²
	Female 12-core	CBO12.12-2/P	12	1.5A/30V	2m	0.25mm²

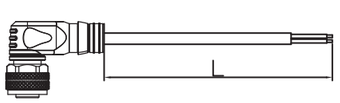
Selection Instructions

CBO12.4 - 2 / P
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

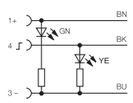
Cable Length



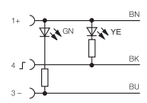
Product with LED

Single signal（3-Pin）

PNP

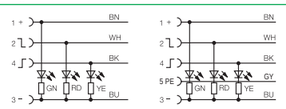


NPN

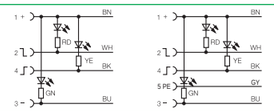


Double signal（4-Pin，5-Pin）

PNP



NPN



Single-ended I/O Cordsets-M12 (Angled-male)

Description:

Used for sensors, I/O connector connecting. Standard M12(angled-male) threaded connection.

2, 3, 4, 5, 8, 12-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- Optional LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Male DC 2-core	CB12.2-2	2	4A/250V	2m	0.34mm²
	Male AC/DC 2-core	CB12.21-2	2	4A/250V	2m	0.34mm²
	Male AC 2-core	CB12.22-2	2	4A/250V	2m	0.34mm²
	Male 3-core NO	CB12.3-2	3	4A/250V	2m	0.34mm²
	Male 4-core NO/NC	CB12.4-2	4	4A/250V	2m	0.34mm²
	Male 5-core NO/NC	CB12.5-2	5	4A/60V	2m	0.34mm²
	Male 8-core	CB12.8-2	8	2A/30V	2m	0.25mm²
	Male 12-core	CB12.12-2	12	1.5A/30V	2m	0.25mm²
PUR Bending 5 Million	Male 3-core NO	CB12.3-2/P	3	4A/250V	2m	0.34mm²
	Male 4-core NO/NC	CB12.4-2/P	4	4A/250V	2m	0.34mm²
	Male 5-core NO/NC	CB12.5-2/P	5	4A/60V	2m	0.34mm²
	Male 8-core	CB12.8-2/P	8	2A/30V	2m	0.25mm²
	Male 12-core	CB12.12-2/P	12	1.5A/30V	2m	0.25mm²

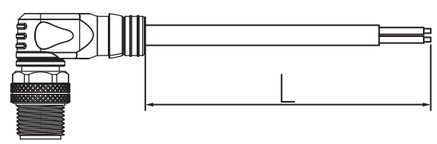
Selection Instructions

CB12.4 - 2 / P
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Single-ended I/O Cordsets-M12 (Straight-female)

Description:

Used for sensors, I/O connector connecting. Standard M12(straight-female) threaded connection.

2, 3, 4, 5, 8-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- ■ Shielded cable, welding spark resistance EWSR
- ■ A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
Welding spark resistance	Female 3-core welding spark resistance	CO12.3-2/EWSR	3	4A/250V	2m	0.34mm²
	Female 4-core welding spark resistance	CO12.4-2/EWSR	4	4A/250V	2m	0.34mm²
	Female 5-core welding spark resistance	CO12.5-2/EWSR	5	4A/60V	2m	0.34mm²
Bending 5 Million Welding spark resistance	Female 3-core welding spark resistance	CO12.3-2/P/EWSR	3	4A/250V	2m	0.34mm²
	Female 4-core welding spark resistance	CO12.4-2/P/EWSR	4	4A/250V	2m	0.34mm²
	Female 5-core welding spark resistance	CO12.5-2/P/EWSR	5	4A/60V	2m	0.34mm²
PVC Shielded	Female 3-core	CO12.3-2/WS	3	4A/250V	2m	0.34mm²
	Female 4-core	CO12.4-2/WS	4	4A/250V	2m	0.34mm²
	Female 5-core	CO12.5-2/WS	5	4A/60V	2m	0.34mm²
	Female 8-core	CO12.8-2/WS	8	2A/30V	2m	0.25mm²
	Female 12-core	CO12.12-2/WS	12	1.5A/30V	2m	0.25mm²
PUR Shielded Bending 5 Million	Female 3-core	CO12.3-2/WS/P	3	4A/250V	2m	0.34mm²
	Female 4-core	CO12.4-2/WS/P	4	4A250V	2m	0.34mm²
	Female 5-core	CO12.5-2/WS/P	5	4A/60V	2m	0.34mm²
	Female 8-core	CO12.8-2/WS/P	8	2A/30V	2m	0.25mm²
	Female 12-core	CO12.12-2/WS/P	12	1.5A/30V	2m	0.25mm²

Selection Instructions

CO12.4 - 2 / WS
① ②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length

Single-ended I/O Cordsets-M12 (Straight-male)

Description:

Used for sensors, I/O connector connecting. Standard M12(straight-male) threaded connection.

2, 3, 4, 5, 8-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- ■ Shielded cable, welding spark resistance EWSR
- ■ A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
Welding spark resistance	Male 3-core welding spark resistance	C12.3-2/EWSR	3	4A/250V	2m	0.34mm²
	Male 4-core welding spark resistance	C12.4-2/EWSR	4	4A/250V	2m	0.34mm²
	Male 5-core welding spark resistance	C12.5-2/EWSR	5	4A/60V	2m	0.34mm²
Bending 5 Million Welding spark resistance	Male 3-core welding spark resistance	C12.3-2/P/EWSR	3	4A/250V	2m	0.34mm²
	Male 4-core welding spark resistance	C12.4-2/P/EWSR	4	4A/250V	2m	0.34mm²
	Male 5-core welding spark resistance	C12.5-2/P/EWSR	5	4A/60V	2m	0.34mm²
PVC Shielded	Male 3-core	C12.3-2/WS	3	4A/250V	2m	0.34mm²
	Male 4-core	C12.4-2/WS	4	4A/250V	2m	0.34mm²
	Male 5-core	C12.5-2/WS	5	4A/60V	2m	0.34mm²
	Male 8-core	C12.8-2/WS	8	2A/30V	2m	0.25mm²
	Male 12-core	C12.12-2/WS	12	1.5A/30V	2m	0.25mm²
PUR Shielded Bending 5 Million	Male 3-core	C12.3-2/WS/P	3	4A/250V	2m	0.34mm²
	Male 4-core	C12.4-2/WS/P	4	4A/250V	2m	0.34mm²
	Male 5-core	C12.5-2/WS/P	5	4A/60V	2m	0.34mm²
	Male 8-core	C12.8-2/WS/P	8	2A/30V	2m	0.25mm²
	Male 12-core	C12.12-2/WS/P	12	1.5A/30V	2m	0.25mm²

Selection Instructions

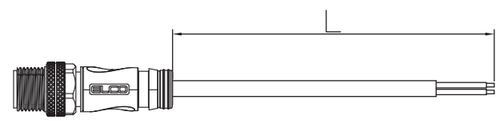
C12.4 - 2 / WS
① ②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Single-ended I/O Cordsets-M12 (Angled-female)

Description:

Used for sensors, I/O connector connecting. Standard M12(angled-female) threaded connection.

2, 3, 4, 5, 8, 12-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

■ Shielded cable, welding spark resistance EWSR,
■ A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
Welding spark resistance	Female 3-core welding spark resistance	CBO12.3-2/EWSR	3	4A/250V	2m	0.34mm²
	Female 4-core welding spark resistance	CBO12.4-2/EWSR	4	4A/250V	2m	0.34mm²
	Female 5-core welding spark resistance	CBO12.5-2/EWSR	5	4A/60V	2m	0.34mm²
Bending 5 Million Welding spark resistance	Female 3-core welding spark resistance	CBO12.3-2/P/EWSR	3	4A/250V	2m	0.34mm²
	Female 4-core welding spark resistance	CBO12.4-2/P/EWSR	4	4A/250V	2m	0.34mm²
	Female 5-core welding spark resistance	CBO12.5-2/P/EWSR	5	4A/60V	2m	0.34mm²
PVC Shielded	Female 3-core	CBO12.3-2/WS	3	4A/250V	2m	0.34mm²
	Female 4-core	CBO12.4-2/WS	4	4A/250V	2m	0.34mm²
	Female 5-core	CBO12.5-2/WS	5	4A/60V	2m	0.34mm²
	Female 8-core	CBO12.8-2/WS	8	2A/30V	2m	0.25mm²
	Female 12-core	CBO12.12-2/WS	12	1.5A/30V	2m	0.25mm²
PUR Shielded Bending 5 Million	Female 3-core	CBO12.3-2/WS/P	3	4A/250V	2m	0.34mm²
	Female 4-core	CBO12.4-2/WS/P	4	4A/250V	2m	0.34mm²
	Female 5-core	CBO12.5-2/WS/P	5	4A/60V	2m	0.34mm²
	Female 8-core	CBO12.8-2/WS/P	8	2A/30V	2m	0.25mm².
	Female 12-core	CBO12.12-2/WS/P	12	1.5A/30V	2m	0.25mm²

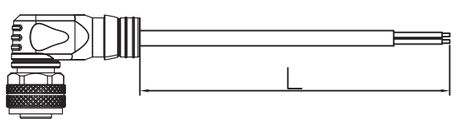
Selection Instructions

CBO12.4 - 2 / WS
① ②

Attn：
①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Single-ended I/O Cordsets-M12 (Angled-male)

Description:

Used for sensors, I/O connector connecting. Standard M12(angled-male) threaded connection.

2, 3, 4, 5, 8, 12-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

■ Shielded cable, welding spark resistance EWSR
■ A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
Welding spark resistance	Male 3-core welding spark resistance	CB12.3-2/EWSR	3	4A/250V	2m	0.34mm²
	Male 4-core welding spark resistance	CB12.4-2/EWSR	4	4A/250V	2m	0.34mm²
	Male 5-core welding spark resistance	CB12.5-2/EWSR	5	4A/60V	2m	0.34mm²
Bending 5 Million Welding spark resistance	Male 3-core welding spark resistance	CB12.3-2/P/EWSR	3	4A/250V	2m	0.34mm²
	Male 4-core welding spark resistance	CB12.4-2/P/EWSR	4	4A/250V	2m	0.34mm²
	Male 5-core welding spark resistance	CB12.5-2/P/EWSR	5	4A/60V	2m	0.34mm²
PVC Shielded	Male 3-core	CB12.3-2/WS	3	4A/250V	2m	0.34mm²
	Male 4-core	CB12.4-2/WS	4	4A/250V	2m	0.34mm²
	Male 5-core	CB12.5-2/WS	5	4A/60V	2m	0.34mm²
	Male 8-core	CB12.8-2/WS	8	2A/30V	2m	0.25mm²
	Male 12-core	CB12.12-2/WS	12	1.5A/30V	2m	0.25mm²
PUR Shielded Bending 5 Million	Male 3-core	CB12.3-2/WS/P	3	4A/250V	2m	0.34mm²
	Male 4-core	CB12.4-2/WS/P	4	4A/250V	2m	0.34mm²
	Male 5-core	CB12.5-2/WS/P	5	4A/60V	2m	0.34mm²
	Male 8-core	CB12.8-2/WS/P	8	2A/30V	2m	0.25mm².
	Male 12-core	CB12.12-2/WS/P	12	1.5A/30V	2m	0.25mm²

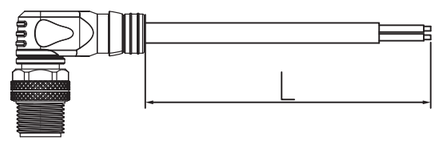
Selection Instructions

CB12.4 - 2 / WS
① ②

Attn：
①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Double-ended I/O Cordsets-M12 (female) to M12 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4, 5, 8,12-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- Optional shielded function
- A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight	CO12.3-2-C12.3	3	4A/250V	2m	0.34mm²
	3-core straight to angled	CO12.3-2-CB12.3	3	4A/250V	2m	0.34mm²
	4-core straight to straight	CO12.4-2-C12.4	4	4A/250V	2m	0.34mm²
	4-core straight to angled	CO12.4-2-CB12.4	4	4A/250V	2m	0.34mm²
	5-core straight to straight	CO12.5-2-C12.5	5	4A/60V	2m	0.34mm²
	5-core straight to angled	CO12.5-2-CB12.5	5	4A/60V	2m	0.34mm²
	8-core straight to straight	CO12.8-2-C12.8	8	2A/30V	2m	0.25mm²
	8-core straight to angled	CO12.8-2-CB12.8	8	2A/30V	2m	0.25mm²
	12-core straight to straight	CO12.12-2-C12.12	12	1.5A/30V	2m	0.25mm²
	12-core straight to angled	CO12.12-2-CB12.12	12	1.5A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core straight to straight	CO12.3-2-C12.3/P	3	4A/250V	2m	0.34mm²
	3-core straight to angled	CO12.3-2-CB12.3/P	3	4A/250V	2m	0.34mm²
	4-core straight to straight	CO12.4-2-C12.4/P	4	4A/250V	2m	0.34mm²
	4-core straight to angled	CO12.4-2-CB12.4/P	4	4A/250V	2m	0.34mm²
	5-core straight to straight	CO12.5-2-C12.5/P	5	4A/60V	2m	0.34mm²
	5-core straight to angled	CO12.5-2-CB12.5/P	5	4A/60V	2m	0.34mm²
	8-core straight to straight	CO12.8-2-C12.8/P	8	2A/30V	2m	0.25mm²
	8-core straight to angled	CO12.8-2-CB12.8/P	8	2A/30V	2m	0.25mm²
	12-core straight to straight	CO12.12-2-C12.12/P	12	1.5A/30V	2m	0.25mm²
	12-core straight to angled	CO12.12-2-CB12.12/P	12	1.5A/30V	2m	0.25mm²

Selection Instructions

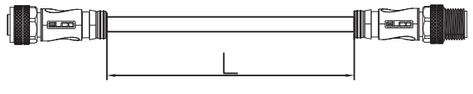
CO12.4 - ② - C12.4/P②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Double-ended I/O Cordsets-M12 (female）to M12 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4, 5, 8,12-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- Optional shielded function
- A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight	CBO12.3-2-C12.3	3	4A/250V	2m	0.34mm²
	3-core angled to angled	CBO12.3-2-CB12.3	3	4A/250V	2m	0.34mm²
	4-core angled to straight	CBO12.4-2-C12.4	4	4A/250V	2m	0.34mm²
	4-core angled to angled	CBO12.4-2-CB12.4	4	4A/250V	2m	0.34mm²
	5-core angled to straight	CBO12.5-2-C12.5	5	4A/60V	2m	0.34mm²
	5-core angled to angled	CBO12.5-2-CB12.5	5	4A/60V	2m	0.34mm²
	8-core angled to straight	CBO12.8-2-C12.8	8	2A/30V	2m	0.25mm²
	8-core angled to angled	CBO12.8-2-CB12.8	8	2A/30V	2m	0.25mm²
	12-core angled to straight	CBO12.12-2-C12.12	12	1.5A/30V	2m	0.25mm²
	12-core angled to angled	CBO12.12-2-CB12.12	12	1.5A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core angled to straight	CBO12.3-2-C12.3/P	3	4A/250V	2m	0.34mm²
	3-core angled to angled	CBO12.3-2-CB12.3/P	3	4A/250V	2m	0.34mm²
	4-core angled to straight	CBO12.4-2-C12.4/P	4	4A/250V	2m	0.34mm²
	4-core angled to angled	CBO12.4-2-CB12.4/P	4	4A/250V	2m	0.34mm²
	5-core angled to straight	CBO12.5-2-C12.5/P	5	4A/60V	2m	0.34mm²
	5-core angled to angled	CBO12.5-2-CB12.5/P	5	4A/60V	2m	0.34mm²
	8-core angled to straight	CBO12.8-2-C12.8/P	8	2A/30V	2m	0.25mm²
	8-core angled to angled	CBO12.8-2-CB12.8/P	8	2A/30V	2m	0.25mm²
	12-core angled to straight	CBO12.12-2-C12.12/P	12	1.5A/30V	2m	0.25mm²
	12-core angled to angled	CBO12.12-2-CB12.12/P	12	1.5A/30V	2m	0.25mm²

Selection Instructions

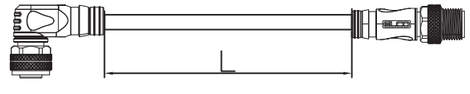
CBO12.4 - ② - C12.4 / P②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Double-ended I/O Cordsets-M12 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12, M8 threaded connecting. Advanced design idea of female-to-male ends connector. Straight series, angled series and 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight	CO12.3-2-C8.3	3	4A/60V	2m	0.25mm²
	3-core straight to angled	CO12.3-2-CB8.3	3	4A/60V	2m	0.25mm²
	4-core straight to straight	CO12.4-2-C8.4	4	4A/30V	2m	0.25mm²
	4-core straight to angled	CBO12.4-2-CB8.4	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core straight to straight	CO12.3-2-C8.3/P	3	4A/60V	2m	0.25mm²
	3-core straight to angled	CO12.3-2-CB8.3/P	3	4A/60V	2m	0.25mm²
	4-core straight to straight	CO12.4-2-C8.4/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled	CO12.4-2-CB8.4/P	4	4A/30V	2m	0.25mm²

Selection Instructions

CO12.4 - 2 - C8.4 / P
① ②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length

Double-ended I/O Cordsets-M12 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12, M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight	CBO12.3-2-C8.3	3	4A/60V	2m	0.25mm²
	3-core angled to angled	CBO12.3-2-CB8.3	3	4A/60V	2m	0.25mm²
	4-core angled to straight	CBO12.4-2-C8.4	4	4A/30V	2m	0.25mm²
	4-core angled to angled	CBO12.4-2-CB8.4	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core angled to straight	CBO12.3-2-C8.3/P	3	4A/60V	2m	0.25mm²
	3-core angled to angled	CBO12.3-2-CB8.3/P	3	4A/60V	2m	0.25mm²
	4-core angled to straight	CBO12.4-2-C8.4/P	4	4A/30V	2m	0.25mm²
	4-core angled to angled	CBO12.4-2-CB8.4/P	4	4A/30V	2m	0.25mm²

Selection Instructions

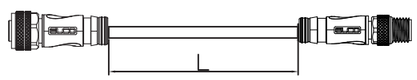
CBO12.4 - 2 - C8.4 / P
① ②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Double-ended I/O Cordsets-M12 (female) to M12 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4, 5-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- Optional shielded function
- M12 (female) with LED to M12 (male)

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight LEDPNP	CO12.3-2-C12.3/L	3	4A/30V	2m	0.34mm²
	3-core straight to angled LEDPNP	CO12.3-2-CB12.3/L	3	4A/30V	2m	0.34mm²
	4-core straight to straight LEDPNP	CO12.4-2-C12.4/L	4	4A/30V	2m	0.34mm²
	4-core straight to angled LEDPNP	CO12.4-2-CB12.4/L	4	4A/30V	2m	0.34mm²
	3-core straight to straight LEDNPN	CO12.3-2-C12.3/LN	3	4A/30V	2m	0.34mm²
	3-core straight to angled LEDNPN	CO12.3-2-CB12.3/LN	3	4A/30V	2m	0.34mm²
	4-core straight to straight LEDNPN	CO12.4-2-C12.4/LN	4	4A/30V	2m	0.34mm²
	4-core straight to angled LEDNPN	CO12.4-2-CB12.4/LN	4	4A/30V	2m	0.34mm²
PUR Bending 5 Million	3-core straight to straight LEDPNP	CO12.3-2-C12.3/L/P	3	4A/30V	2m	0.34mm²
	3-core straight to angled LEDPNP	CO12.3-2-CB12.3/L/P	3	4A/30V	2m	0.34mm²
	4-core straight to straight LEDPNP	CO12.4-2-C12.4/L/P	4	4A/30V	2m	0.34mm²
	4-core straight to angled LEDPNP	CO12.4-2-CB12.4/L/P	4	4A/30V	2m	0.34mm²
	3-core straight to straight LEDNPN	CO12.3-2-C12.3/LN/P	3	4A/30V	2m	0.34mm²
	3-core straight to angled LEDNPN	CO12.3-2-CB12.3/LN/P	3	4A/30V	2m	0.34mm²
	4-core straight to straight LEDNPN	CO12.4-2-C12.4/LN/P	4	4A/30V	2m	0.34mm²
	4-core straight to angled LEDNPN	CO12.4-2-CB12.4/LN/P	4	4A/30V	2m	0.34mm²

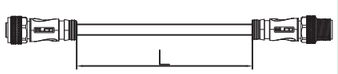
Selection Instructions

CO12.4 - 2 - C12.4 / P
① ②

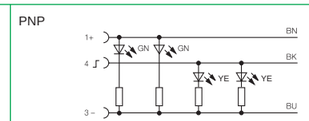
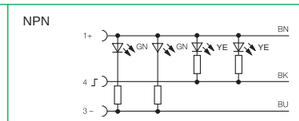
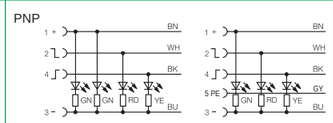
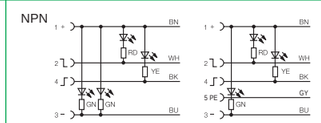
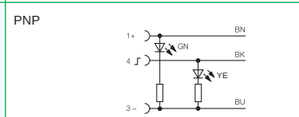
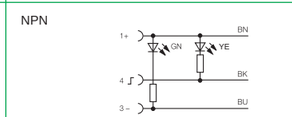
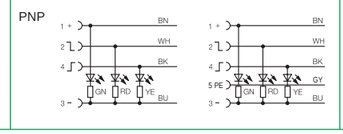
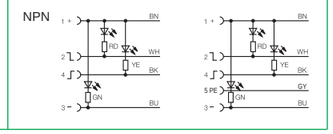
Attn：
①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Product with LED

	PNP	NPN
Straight Single Signal (3-Pin)		
Straight Double Signal (4-pin, 5-pin)		
Angled Single Signal (3-Pin)		
Angled Double Signal (4-pin, 5-pin)		

Double-ended I/O Cordsets-M12 (female) to M12 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4, 5-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- Optional shielded function
- M12 (female) with LED to M12 (male)

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight LEDPNP	CBO12.3-2-C12.3/L	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDPNP	CBO12.3-2-CB12.3/L	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDPNP	CBO12.4-2-C12.4/L	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDPNP	CBO12.4-2-CB12.4/L	4	4A/30V	2m	0.25mm²
	3-core angled to straight LEDNPN	CBO12.3-2-C12.3/LN	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDNPN	CBO12.3-2-CB12.3/LN	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDNPN	CBO12.4-2-C12.4/LN	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDNPN	CBO12.4-2-CB12.4/LN	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core angled to straight LEDPNP	CBO12.3-2-C12.3/L/P	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDPNP	CBO12.3-2-CB12.3/L/P	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDPNP	CBO12.4-2-C12.4/L/P	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDPNP	CBO12.4-2-CB12.4/L/P	4	4A/30V	2m	0.25mm²
	3-core angled to straight LEDNPN	CBO12.3-2-C12.3/LN/P	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDNPN	CBO12.3-2-CB12.3/LN/P	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDNPN	CBO12.4-2-C12.4/LN/P	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDNPN	CBO12.4-2-CB12.4/LN/P	4	4A/30V	2m	0.25mm²

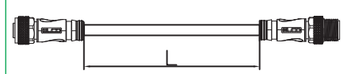
Selection Instructions

CBO12.4 - 2 - C12.4 / P
① ②

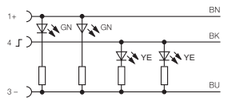
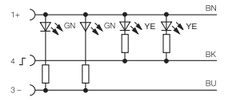
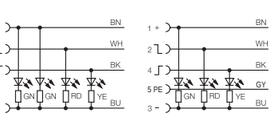
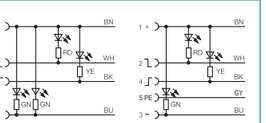
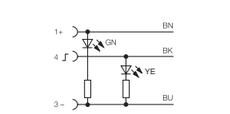
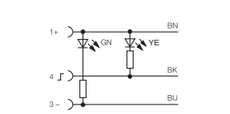
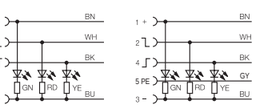
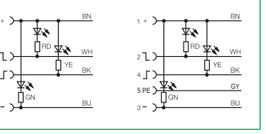
Attn：
①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Product with LED

	PNP	NPN
Straight Single Signal (3-Pin)		
Straight Double Signal (4-pin, 5-pin)		
Angled Single Signal (3-Pin)		
Angled Double Signal (4-pin, 5-pin)		

Double-ended I/O Cordsets-M12 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12, M8 threaded connecting. Advanced design idea of female-to-male ends connector. Straight series, angled series and 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- M12 (female) with LED to M8 (male)

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight LEDPNP	CO12.3-2-C8.3/L	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDPNP	CO12.3-2-CB8.3/L	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDPNP	CO12.4-2-C8.4/L	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDPNP	CO12.4-2-CB8.4/L	4	4A/30V	2m	0.25mm²
	3-core straight to straight LEDNPN	CO12.3-2-C8.3/LN	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDNPN	CO12.3-2-CB8.3/LN	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDNPN	CO12.4-2-C8.4/LN	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDNPN	CO12.4-2-CB8.4/LN	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core straight to straight LEDPNP	CO12.3-2-C8.3/L/P	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDPNP	CO12.3-2-CB8.3/L/P	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDPNP	CO12.4-2-C8.4/L/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDPNP	CO12.4-2-CB8.4/L/P	4	4A/30V	2m	0.25mm²
	3-core straight to straight LEDNPN	CO12.3-2-C8.3/LN/P	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDNPN	CO12.3-2-CB8.3/LN/P	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDNPN	CO12.4-2-C8.4/LN/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDNPN	CO12.4-2-CB8.4/LN/P	4	4A/30V	2m	0.25mm²

Selection Instructions

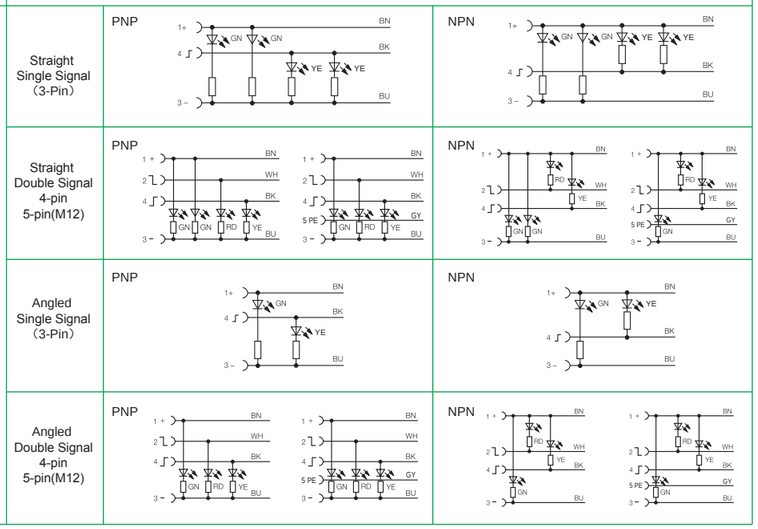
CO12.4 - 2 - C8.4 / P
① ②

Attn：
① : Customized cable lengths are available.
② : Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length

Product with LED



Double-ended I/O Cordsets-M12 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12, M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- M12 (female) with LED to M8 (male)

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight LEDPNP	CBO12.3-2-C8.3/L	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDPNP	CBO12.3-2-CB8.3/L	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDPNP	CBO12.4-2-C8.4/L	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDPNP	CBO12.4-2-CB8.4/L	4	4A/30V	2m	0.25mm²
	3-core angled to straight LEDNPN	CBO12.3-2-C8.3/LN	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDNPN	CBO12.3-2-CB8.3/LN	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDNPN	CBO12.4-2-C8.4/LN	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDNPN	CBO12.4-2-CB8.4/LN	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core angled to straight LEDPNP	CBO12.3-2-C8.3/L/P	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDPNP	CBO12.3-2-CB8.3/L/P	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDPNP	CBO12.4-2-C8.4/L/P	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDPNP	CBO12.4-2-CB8.4/L/P	4	4A/30V	2m	0.25mm²
	3-core angled to straight LEDNPN	CBO12.3-2-C8.3/LN/P	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDNPN	CBO12.3-2-CB8.3/LN/P	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDNPN	CBO12.4-2-C8.4/LN/P	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDNPN	CBO12.4-2-CB8.4/LN/P	4	4A/30V	2m	0.25mm²

Selection Instructions

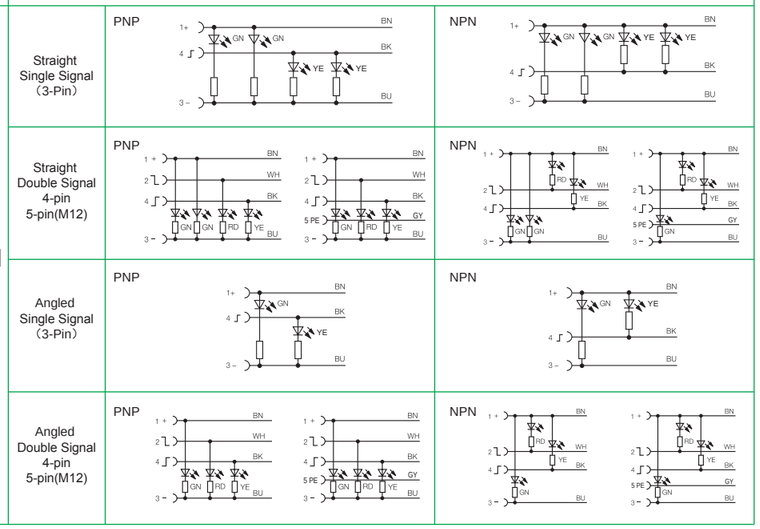
CBO12.4 - 2 - C8.4 / P
① ②

Attn：
① : Customized cable lengths are available.
② : Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length

Product with LED



Y Splitter M12-male to M12-female

Description:

Used for sensors, I/O connector connecting. Standard M12 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Straight to 2 straight	ECS-2CO12.4-2/2	4-3/3	4A/250V	2m	0.34mm²
	Straight to 2 angled	ECS-2CBO12.4-2/2	4-3/3	4A/250V	2m	0.34mm²
	Straight to 2 straight	ECS-2CO12.4-2/2/B24	4-4/4	4A/250V	2m	0.34mm²
	Straight to 2 angled	ECS-2CBO12.4-2/2/B24	4-4/4	4A/250V	2m	0.34mm²
PUR Bending 5 Million	Straight to 2 straight	ECS-2CO12.4-2/2/P	4-3/3	4A/250V	2m	0.34mm²
	Straight to 2 angled	ECS-2CBO12.4-2/2/P	4-3/3	4A/250V	2m	0.34mm²
	Straight to 2 straight	ECS-2CO12.4-2/2/B24/P	4-4/4	4A/250V	2m	0.34mm²
	Straight to 2 angled	ECS-2CBO12.4-2/2/B24/P	4-4/4	4A/250V	2m	0.34mm²
	Straight to 2 straight	ECS-2CO12.4-2/2/B24/P	4-4/4	4A/250V	2m	0.34mm²
	Straight to 2 angled	ECS-2CBO12.4-2/2/B24/P	4-4/4	4A/250V	2m	0.34mm²

Selection Instructions

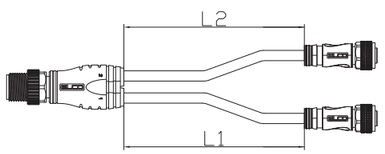
ECS-2CO12.4-2/2/P
① ②

Attn： ①: Customized cable lengths are available.

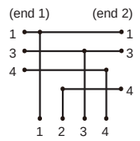
②: Cable jacket or function can be customized according to the requirements.

Additional Information

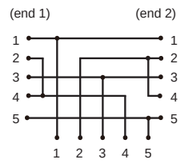
Cable Length



Wiring Diagram



Standard



A5

Y Splitter M12-male to M8-female

Description:

Used for sensors, I/O connector connecting. Standard M12 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Straight to 2 straight	ECS-2CO8.3-2/2	4-3/3	4A/60V	2m	0.25mm²
	Straight to 2 angled	ECS-2CBO8.3-2/2	4-3/3	4A/60V	2m	0.25mm²
PUR Bending 5 Million	Straight to 2 straight	ECS-2CO8.3-2/2/P	4-3/3	4A/60V	2m	0.25mm²
	Straight to 2 angled	ECS-2CBO8.3-2/2/P	4-3/3	4A/60V	2m	0.25mm²

Selection Instructions

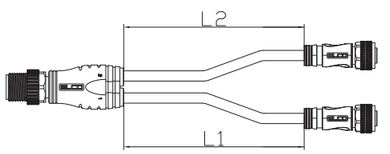
ECS-2CO8.3-2/2/P
① ②

Attn： ①: Customized cable lengths are available.

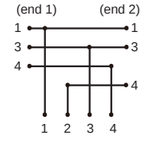
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Wiring Diagram



Standard

Y Splitter M12-male to M12-female

Description:

Used for sensors, I/O connector connecting. Standard M12 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Straight to 2 straight PNP	ECS-2CO12.4-2/2/L	4-3/3	4A/30V	2m	0.34mm²
	Straight to 2 angled PNP	ECS-2CBO12.4-2/2/L	4-3/3	4A/30V	2m	0.34mm²
	Straight to 2 straight NPN	ECS-2CO12.4-2/2/LN	4-3/3	4A/30V	2m	0.34mm²
	Straight to 2 angled NPN	ECS-2CBO12.4-2/2/LN	4-3/3	4A/30V	2m	0.34mm²
PUR Bending 5 Million	Straight to 2 straight PNP	ECS-2CO12.4-2/2/L/P	4-3/3	4A/30V	2m	0.34mm²
	Straight to 2 angled PNP	ECS-2CBO12.4-2/2/L/P	4-3/3	4A/30V	2m	0.34mm²
	Straight to 2 straight NPN	ECS-2CO12.4-2/2/LN/P	4-3/3	4A/30V	2m	0.34mm²
	Straight to 2 angled NPN	ECS-2CBO12.4-2/2/LN/P	4-3/3	4A/30V	2m	0.34mm²

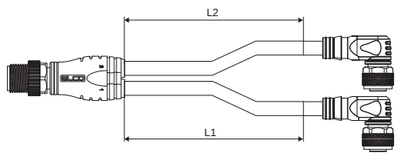
Selection Instructions

ECS-2CO12.4-2/2/P
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

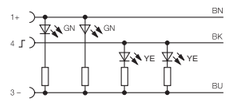
Cable Length



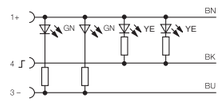
Product with LED

Straight Single Signal (3-Pin)

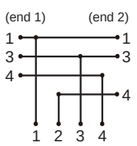
PNP



NPN



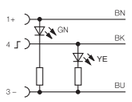
Wiring Diagram



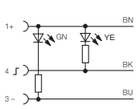
Standard

Angled Single Signal (3-Pin)

PNP



NPN



Y Splitter M12-male to M8-female

Description:

Used for sensors, I/O connector connecting. Standard M12 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Straight to 2 straight PNP	ECS-2CO8.3-2/2/L	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled PNP	ECS-2CBO8.3-2/2/L	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 straight NPN	ECS-2CO8.3-2/2/LN	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled NPN	ECS-2CBO8.3-2/2/LN	4-3/3	4A/30V	2m	0.25mm²
PUR Bending 5 Million	Straight to 2 straight PNP	ECS-2CO8.3-2/2/L/P	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled PNP	ECS-2CBO8.3-2/2/L/P	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 straight NPN	ECS-2CO8.3-2/2/LN/P	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled NPN	ECS-2CBO8.3-2/2/LN/P	4-3/3	4A/30V	2m	0.25mm²

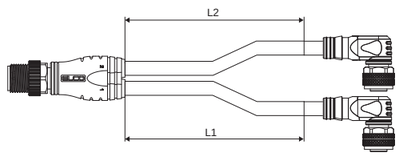
Selection Instructions

ECS-2CO8.3-2/2/L
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

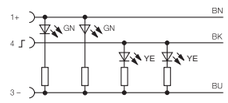
Cable Length



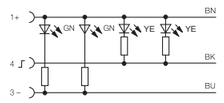
Product with LED

Straight Single Signal (3-Pin)

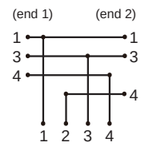
PNP



NPN



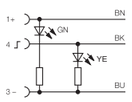
Wiring Diagram



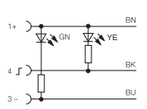
Standard

Angled Single Signal (3-Pin)

PNP



NPN



Y Splitter M12(M) to Homerun Cable

Description:

Used for field equipment connecting, such as sensors and solenoid valves. Standard threaded connection with two free ends, 3-core. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- Homerun cable

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Y Splitter M12(M) to Homerun Cable	ECS-2.3-2/2	4-3/3	4A/250V	2m	0.34mm²
PUR Bending 5 Million	Y Splitter M12(M) to Homerun Cable	ECS-2.3-2/2/P	4-3/3	4A/250V	2m	0.34mm²

Selection Instructions

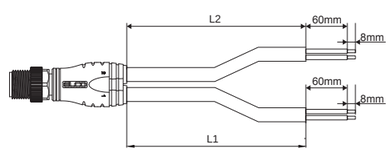
ECS-2.3-2/2/P
① ②

Attn： ①: Customized cable lengths are available.

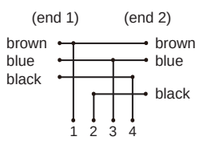
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Wiring Diagram



Standard

Y Adapter

Description:

Standard M12, M8 threaded connection,female to male interface.
3, 4, 5-core are available. Degree of protection IP67.

Features:

- TPU covering
- A-coded interface

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length
Standard	Universal Y adapter	ECS-CO12.3	4-3/3	4A/60V	——
	Universal Y adapter	ECS-CO12.3/L	4-3/3	4A/30V	——
	Universal Y adapter	ECS-CO12.3/LN	4-3/3	4A/30V	——
	Universal Y adapter	ECS-CO8.3	4-3/3	4A/60V	——
	Universal Y adapter	ECS-CO8.3/L	4-3/3	4A/30V	——
	Universal Y adapter	ECS-CO8.3/LN	4-3/3	4A/30V	——
Special	Special Y adapter	ECS-CO12.5	5-5/5	4A/60V	——
	Special Y adapter	ECS-CO12.5/S5	5-5/5	4A/60V	——
	Special Y adapter	ECS-CO12.5/S1	5-4/4	4A/60V	——
	Special Y adapter	ECS-CO12.5/B24	5-4/4	4A/60V	——
	Special Y adapter	ECS-FC12.5VT	5-4/4	4A/60V	——

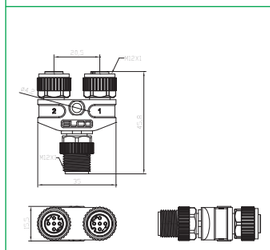
Selection Instructions

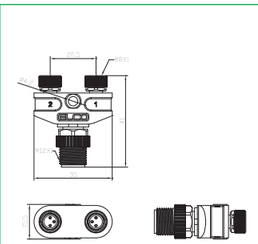
ECS-CO12.3

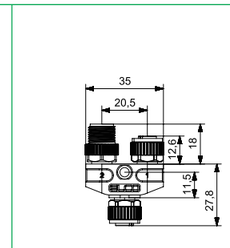
Attn： Standard.

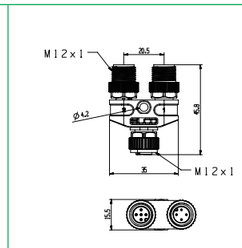
Additional Information

Dimensions

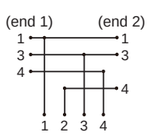




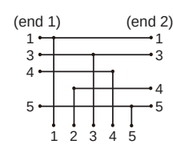




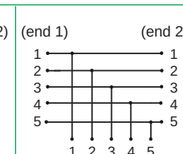
Wiring Diagram



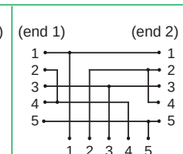
ECS-CO12.3orCO8.3



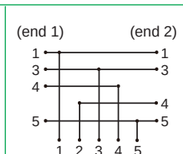
ECS-CO12.5/S1



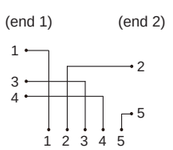
ECS-CO12.5



ECS-CO12.5/B24



ECS-CO12.5/S5



ECS-FC12.5VT

Y Adapter with Cable

Description:

Standard M12 threaded connection, female to male/female interface,
4-core extended cable is available. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- M12 or M8 interface optional

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
Special Y adapter PVC	M12 male straight	ECS-CO12.3-2-C12.4	4-3/3	4A/60V	2m	0.34mm²
	M8 male straight	ECS-CO12.3-2-C8.4	4-3/3	4A/60V	2m	0.25mm²
	M12 male angled	ECS-CO12.3-2-CB12.4	4-3/3	4A/60V	2m	0.34mm²
	M8 male angled	ECS-CO12.3-2-CB8.4	4-3/3	4A/60V	2m	0.25mm²
Special Y adapter PUR Bending 5 Million	M12 male straight	ECS-CO12.3-2-C12.4/P	4-3/3	4A/60V	2m	0.34mm²
	M8 male straight	ECS-CO12.3-2-C8.4/P	4-3/3	4A/60V	2m	0.25mm²
	M12 male angled	ECS-CO12.3-2-CB12.4/P	4-3/3	4A/60V	2m	0.34mm²
	M8 male angled	ECS-CO12.3-2-CB8.4/P	4-3/3	4A/60V	2m	0.25mm²

Selection Instructions

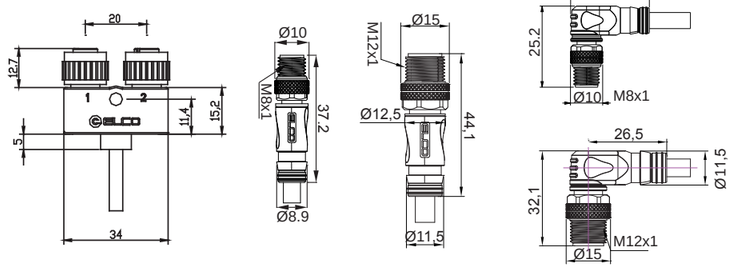
ECS-CO12.3-2-C12.4
① ②

Attn： ①: Customized cable lengths are available.

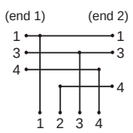
②: Customized (optional straight/angled type), M12 and M8 are optional.

Additional information

Dimensions



Wiring Diagram



Universal
4-3

Field-attachable I/O Connector-M12 (Straight-female)

Description:

Used for sensors and I/O connecting. Standard threaded connection. Designed with the female port.
4, 5, 8-core are available. PG7(4-6mm) and PG9(6-8mm) output interface are optional.
Degree of protection IP67.

Features:

- Flexible screw joints and pin contact.
- Optional transparent housing.

Type Code

Housing material	Description	Type	Pin	Rated current/voltage	Cable ϕ
PA	4-core female	LSO12.4-0/C(BU)	4	4A/250V	4-6mm
	5-core female	LSO12.5-0/C(BU)	5	4A/60V	4-6mm
	4-core female	LSO12.4-9/C(BU)	4	4A/250V	6-8mm
	5-core female	LSO12.5-9/C(BU)	5	4A/60V	6-8mm
	8-core female	LSO12.8-0/C(BU)	8	2A/30V	4-6mm
	8-core female	LSO12.8-9/C(BU)	8	2A/30V	6-8mm

Selection Instructions

LSO12.4 - 0/C(BU)

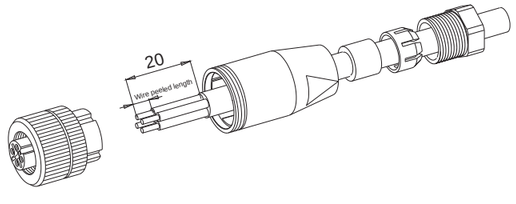
Attn: Standard

Additional information

1.Cross section of core, max.0.75mm^2.

2. If it connect to distribution box or IP67 module, please note the right match with the internal slot to avoid affecting the overall wiring.

3. The cable jacket peeled length is 20mm, and the wire peeled length is 5mm during mounting process.



Field-attachable I/O Connector-M12 (Straight-male)

Description:

Used for sensors and I/O connecting. Standard threaded connection. Designed with the male port.
4, 5, 8-core are available. PG7(4-6mm) and PG9(6-8mm) output interface are optional.
Degree of protection IP67.

Features:

- Flexible screw joints and pin contact.
- Optional transparent housing.

Type Code

Housing material	Description	Type	Pin	Rated current/voltage	Cable ϕ
PA	4-core male	LS12.4-0/C(BU)	4	4A/250V	4-6mm
	5-core male	LS12.5-0/C(BU)	5	4A/60V	4-6mm
	4-core male	LS12.4-9/C(BU)	4	4A/250V	6-8mm
	5-core male	LS12.5-9/C(BU)	5	4A/60V	6-8mm
	8-core male	LS12.8-0/C(BU)	8	2A/30V	4-6mm
	8-core male	LS12.8-9/C(BU)	8	2A/30V	6-8mm

Selection Instructions

LS12.4 - 0/C(BU)

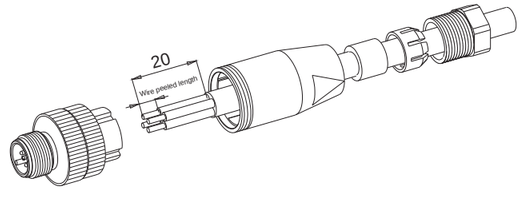
Attn: Standard

Additional information

1.Cross section of core, max.0.75mm^2.

2. If it connect to distribution box or IP67 module, please note the right match with the internal slot to avoid affecting the overall wiring.

3. The cable jacket peeled length is 20mm, and the wire peeled length is 5mm during mounting process.



Field-attachable I/O Connector-M12 (Angled-female)

Description:

Used for sensors and I/O connecting. Standard threaded connection. Designed with the female port.
4, 5, 8-core are available. PG7(4-6mm) and PG9(6-8mm) output interface are optional.
Degree of protection IP67.

Features:

- Flexible screw joints and pin contact.
- Optional transparent housing.

Type Code

Housing material	Description	Type	Pin	Rated current/voltage	Cable ϕ
PA	4-core female	LSBO12.4-0/C(BU)	4	4A/250V	4-6mm
	5-core female	LSBO12.5-0/C(BU)	5	4A/60V	4-6mm
	4-core female	LSBO12.4-9/C(BU)	4	4A/250V	6-8mm
	5-core female	LSBO12.5-9/C(BU)	5	4A/60V	6-8mm
	8-core female	LSBO12.8-0/C(BU)	8	2A/30V	4-6mm
	8-core female	LSBO12.8-9/C(BU)	8	2A/30V	6-8mm

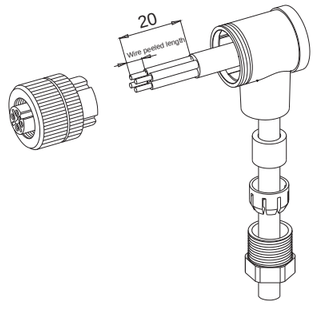
Selection Instructions

LSBO12.4 - 0/C(BU)

Attn：Standard

Additional information

1. Cross section of core, max.0.75mm^2.
2. If it connect to distribution box or IP67 module, please note the right match with the internal slot to avoid affecting the overall wiring.
3. The cable jacket peeled length is 20mm, and the wire peeled length is 5mm during mounting process.



Field-attachable I/O Connector-M12 (Angled-male)

Description:

Used for sensors and I/O connecting. Standard threaded connection. Designed with the male port.
4, 5, 8-core are available. PG7(4-6mm) and PG9(6-8mm) output interface are optional.
Degree of protection IP67.

Features:

- Flexible screw joints and pin contact.
- Optional transparent housing.

Type Code

Housing material	Description	Type	Pin	Rated current/voltage	Cable ϕ
PA	4-core male	LSB12.4-0/C(BU)	4	4A/250V	4-6mm
	5-core male	LSB12.5-0/C(BU)	5	4A/60V	4-6mm
	4-core male	LSB12.4-9/C(BU)	4	4A/250V	6-8mm
	5-core male	LSB12.5-9/C(BU)	5	4A/60V	6-8mm
	8-core male	LSB12.8-0/C(BU)	8	2A/30V	4-6mm
	8-core male	LSB12.8-9/C(BU)	8	2A/30V	6-8mm

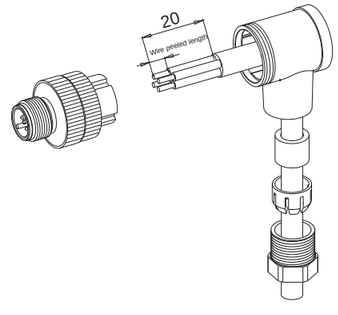
Selection Instructions

LSB12.4 - 0/C(BU)

Attn：Standard

Additional information

1. Cross section of core, max.0.75mm^2.
2. If it connect to distribution box or IP67 module, please note the right match with the internal slot to avoid affecting the overall wiring.
3. The cable jacket peeled length is 20mm, and the wire peeled length is 5mm during mounting process.



Field-attachable I/O Connector - M12(Straight/angled-female)

Description:

Used for sensors and I/O connecting. Standard M12 threaded connection. Designed with the female port. 4, 5, 8-core are available. PG7(4-6mm) and PG9(6-8mm) output interface are optional. Degree of protection IP67.

Features:

- Flexible screw joints and pin contact.
- Metal housing; shielding function.

Type Code

Housing material	Description	Type	Pin	Rated current/voltage	Cable ϕ
Nickel-plated cast zinc	4-core female straight	LSO12.4-0/M/S/C	4	4A/250V	4-6mm
	4-core female straight	LSO12.4-9/M/S/C	4	4A/250V	6-8mm
	5-core female straight	LSO12.5-0/M/S/C	5	4A/60V	4-6mm
	5-core female straight	LSO12.5-9/M/S/C	5	4A/60V	6-8mm
	8-core female straight	LSO12.8-9/M/S/C	8	2A/30V	6-8mm
	4-core female angled	LSBO12.4-0/M/S/C	4	4A/250V	4-6mm
	4-core female angled	LSBO12.4-9/M/S/C	4	4A/250V	6-8mm
	5-core female angled	LSBO12.5-0/M/S/C	5	4A/60V	4-6mm
	5-core female angled	LSBO12.5-9/M/S/C	5	4A/60V	6-8mm
	8-core female angled	LSBO12.8-9/M/S/C	8	2A/30V	6-8mm

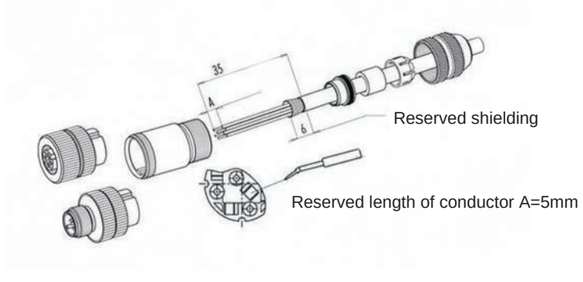
Selection Instructions

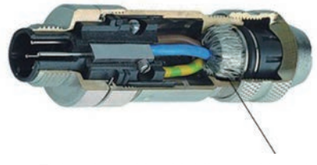
LSO12.4 - 0/M/S/C

Attn：Standard

Additional Information

1. Cross section of core, max.0.75mm^2.
2. If it connect to distribution box or IP67 module, please note the right match with the internal slot to avoid affecting the overall wiring.
3. The cable jacket peeled length is 20mm, and the wire peeled length is 5mm during mounting process.





Fixing the cable shielding and housing

Field-attachable I/O Connector - M12(Straight/angled-male)

Description:

Used for sensors and I/O connecting. Standard M12 threaded connection. Designed with the male port. 4, 5, 8-core are available. PG7(4-6mm) and PG9(6-8mm) output interface are optional. Degree of protection IP67.

Features:

- Flexible screw joints and pin contact.
- Metal housing; shielding function.

Type Code

Housing material	Description	Type	Pin	Rated current/voltage	Cable ϕ
Nickel-plated cast zinc	4-core male straight	LS12.4-0/M/S/C	4	4A/250V	4-6mm
	4-core male straight	LS12.4-9/M/S/C	4	4A/250V	6-8mm
	5-core male straight	LS12.5-0/M/S/C	5	4A/60V	4-6mm
	5-core male straight	LS12.5-9/M/S/C	5	4A/60V	6-8mm
	8-core male straight	LS12.8-9/M/S/C	8	2A/30V	6-8mm
	4-core male angled	LSB12.4-0/M/S/C	4	4A/250V	4-6mm
	4-core male angled	LSB12.4-9/M/S/C	4	4A/250V	6-8mm
	5-core male angled	LSB12.5-0/M/S/C	5	4A/60V	4-6mm
	5-core male angled	LSB12.5-9/M/S/C	5	4A/60V	6-8mm
	8-core male angled	LSB12.8-9/M/S/C	8	2A/30V	6-8mm

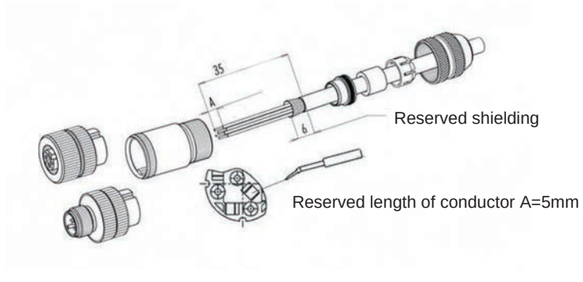
Selection Instructions

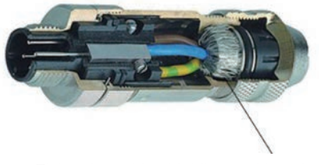
LS12.4 - 0/M/S/C

Attn：Standard

Additional Information

1. Cross section of core, max.0.75mm^2.
2. If it connect to distribution box or IP67 module, please note the right match with the internal slot to avoid affecting the overall wiring.
3. The cable jacket peeled length is 20mm, and the wire peeled length is 5mm during mounting process.





Fixing the cable shielding and housing

Single-ended I/O Cordsets-M8 (Straight-female)

Description:

Used for sensors, I/O connector connecting. Standard M8(straight-female) threaded connection.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- ■ PVC and PUR cable are optional
- ■ A-coded interface
- ■ LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female 3-core	CO8.3-2	3	4A/60V	2m	0.25mm²
	Female 4-core	CO8.4-2	4	4A/30V	2m	0.25mm²
	Female 3-core PNP	CO8.3-2/L	3	4A/30V	2m	0.25mm²
	Female 3-core NPN	CO8.3-2/LN	3	4A/30V	2m	0.25mm²
	Female 4-core PNP	CO8.4-2/L	4	4A/30V	2m	0.25mm²
	Female 4-core NPN	CO8.4-2/LN	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	Female 3-core	CO8.3-2/P	3	4A/60V	2m	0.25mm²
	Female 4-core	CO8.4-2/P	4	4A/30V	2m	0.25mm²
	Female 3-core PNP	CO8.3-2/L/P	3	4A/30V	2m	0.25mm²
	Female 3-core NPN	CO8.3-2/LN/P	3	4A/30V	2m	0.25mm²
	Female 4-core PNP	CO8.4-2/L/P	4	4A/30V	2m	0.25mm²
	Female 4-core NPN	CO8.4-2/LN/P	4	4A/30V	2m	0.25mm²
Welding spark resistance	Female 3-core welding spark resistance	CO8.3-2/EWSR	3	4A/60V	2m	0.25mm²
	Female 4-core welding spark resistance	CO8.4-2/EWSR	4	4A/30V	2m	0.25mm²
PVC Shielded	Female 3-core	CO8.3-2/WS	3	4A/60V	2m	0.25mm²
	Female 4-core	CO8.4-2/WS	4	4A/30V	2m	0.25mm²
PUR Shielded Bending 5 Million	Female 3-core	CO8.3-2/WSP	3	4A/60V	2m	0.25mm²
	Female 4-core	CO8.4-2/WS/P	4	4A/30V	2m	0.25mm²

Selection Instructions

CO8.4 - 2 / P
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

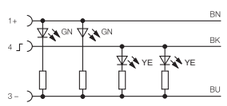
Additional Information

Cable Length

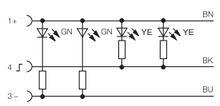
Wiring diagram

Single signal（3-Pin）

PNP

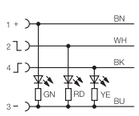


NPN

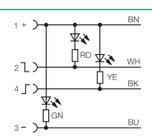


Double signal（4-Pin）

PNP



NPN



Single-ended I/O Cordsets-M8 (Straight-male)

Description:

Used for sensors, I/O connector connecting. Standard M8(straight-male) threaded connection.
3, 4-core are optional. Customized cable lengths.Degree of protection IP67.

Features:

- ■ PVC and PUR cable are optional
- ■ A-coded interface
- ■ Optional LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Male 3-core	C8.3-2	3	4A/60V	2m	0.25mm²
	Male 4-core	C8.4-2	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	Male 3-core	C8.3-2/P	3	4A/60V	2m	0.25mm²
	Male 4-core	C8.4-2/P	4	4A/30V	2m	0.25mm²
Welding spark resistance	Male 3-core welding spark resistance	C8.3-2/EWSR	3	4A/60V	2m	0.25mm²
	Male 4-core welding spark resistance	C8.4-2/EWSR	4	4A/30V	2m	0.25mm²
PVC Shielded	Male 3-core	C8.3-2/WS	3	4A/60V	2m	0.25mm²
	Male 4-core	C8.4-2/WS	4	4A/30V	2m	0.25mm²
PUR Shielded Bending 5 Million	Male 3-core	C8.3-2/WS/P	3	4A/60V	2m	0.25mm²
	Male 4-core	C8.4-2/WS/P	4	4A/30V	2m	0.25mm²

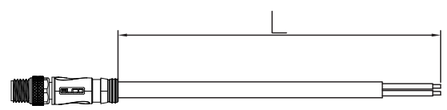
Selection Instructions

C8.4 - 2 / P
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Connectivity

Single-ended I/O Cordsets-M8 (Angled-female)

Description:

Used for sensors, I/O connector connecting. Standard M8(angled-female) threaded connection.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC and PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female 3-core	CBO8.3-2	3	4A/60V	2m	0.25mm²
	Female 4-core	CBO8.4-2	4	4A/30V	2m	0.25mm²
	Female 3-core PNP	CBO8.3-2/L	3	4A/30V	2m	0.25mm²
	Female 3-core NPN	CBO8.3-2/LN	3	4A/30V	2m	0.25mm²
	Female 4-core PNP	CBO8.4-2/L	4	4A/30V	2m	0.25mm²
	Female 4-core NPN	CBO8.4-2/LN	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	Female 3-core	CBO8.3-2/P	3	4A/60V	2m	0.25mm²
	Female 4-core	CBO8.4-2/P	4	4A/30V	2m	0.25mm²
	Female 3-core PNP	CBO8.3-2/L/P	3	4A/30V	2m	0.25mm²
	Female 3-core NPN	CBO8.3-2/LN/P	3	4A/30V	2m	0.25mm²
	Female 4-core PNP	CBO8.4-2/L/P	4	4A/30V	2m	0.25mm²
	Female 4-core NPN	CBO8.4-2/LN/P	4	4A/30V	2m	0.25mm²
Welding spark resistance	Female 3-core welding spark resistance	CBO8.3-2/EWSR	3	4A/60V	2m	0.25mm²
	Female 4-core welding spark resistance	CBO8.4-2/EWSR	4	4A/60V	2m	0.25mm²
PVC Shielded	Female 3-core	CBO8.3-2/WS	3	4A/60V	2m	0.25mm²
	Female 4-core	CBO8.4-2/WS	4	4A/60V	2m	0.25mm²
PUR Shielded Bending 5 Million	Female 3-core	CBO8.3-2/WS/P	3	4A/60V	2m	0.25mm²
	Female 4-core	CBO8.4-2/WS/P	4	4A/60V	2m	0.25mm²

Selection Instructions

CBO8.3 - 2/P
① ②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

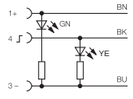
Additional Information

Cable Length

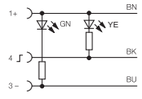
Wiring diagram

Single signal（3-Pin）

PNP

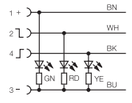


NPN

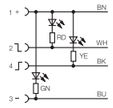


Double signal（4-Pin）

PNP



NPN



Single-ended I/O Cordsets-M8 (Angled-male)

Description:

Used for sensors, I/O connector connecting. Standard M8(angled-male) threaded connection.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC and PUR cable are optional
- A-coded interface
- Optional LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Male 3-core	CB8.3-2	3	4A/60V	2m	0.25mm²
	Male 4-core	CB8.4-2	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	Male 3-core	CB8.3-2/P	3	4A/60V	2m	0.25mm²
	Male 4-core	CB8.4-2/P	4	4A/30V	2m	0.25mm²
Welding spark resistance	Male 3-core welding spark resistance	CB8.3-2/EWSR	3	4A/60V	2m	0.25mm²
	Male 4-core welding spark resistance	CB8.4-2/EWSR	4	4A/30V	2m	0.25mm²
PVC Shielded	Male 3-core	CB8.3-2/WS	3	4A/60V	2m	0.25mm²
	Male 4-core	CB8.4-2/WS	4	4A/30V	2m	0.25mm²
PUR Shielded Bending 5 Million	Male 3-core	CB8.3-2/WS/P	3	4A/60V	2m	0.25mm²
	Male 4-core	CB8.4-2/WS/P	4	4A/30V	2m	0.25mm²

Selection Instructions

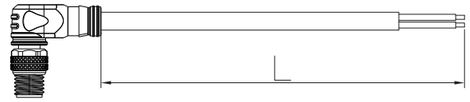
CB8.3 - 2/P
① ②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Double-ended I/O Connector-M8 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67

Features:

■ PVC and PUR cable are optional
■ A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight	CO8.3-2-C8.3	3	4A/60V	2m	0.25mm²
	3-core straight to angled	CO8.3-2-CB8.3	3	4A/60V	2m	0.25mm²
	4-core straight to straight	CO8.4-2-C8.4	4	4A/30V	2m	0.25mm²
	4-core straight to angled	CO8.4-2-CB8.4	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core straight to straight	CO8.3-2-C8.3/P	3	4A/60V	2m	0.25mm²
	3-core straight to angled	CO8.3-2-CB8.3/P	3	4A/60V	2m	0.25mm²
	4-core straight to straight	CO8.4-2-C8.4/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled	CO8.4-2-CB8.4/P	4	4A/30V	2m	0.25mm²

Selection Instructions

CO8.4 - 2 - C8.4 / P
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length

Double-ended I/O Connector-M8 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

■ PVC and PUR cable are optional
■ A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight	CBO8.3-2-C8.3	3	4A/60V	2m	0.25mm²
	3-core angled to angled	CBO8.3-2-CB8.3	3	4A/60V	2m	0.25mm²
	4-core angled to straight	CBO8.4-2-C8.4	4	4A/30V	2m	0.25mm²
	4-core angled to angled	CBO8.4-2-CB8.4	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core angled to straight	CBO8.3-2-C8.3/P	3	4A/60V	2m	0.25mm²
	3-core angled to angled	CBO8.3-2-CB8.3/P	3	4A/60V	2m	0.25mm²
	4-core angled to straight	CBO8.4-2-C8.4/P	4	4A/30V	2m	0.25mm²
	4-core angled to angled	CBO8.4-2-CB8.4/P	4	4A/30V	2m	0.25mm²

Selection Instructions

CBO8.4 - 2 - C8.4 / P
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length

Double-ended I/O Cordsets-M8 (female) to M12 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12, M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

■ PVC and PUR cable are optional
■ A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight	CO8.3-2-C12.3	3	4A/60V	2m	0.25mm²
	3-core straight to angled	CO8.3-2-CB12.3	3	4A/60V	2m	0.25mm²
	4-core straight to straight	CO8.4-2-C12.4	4	4A/30V	2m	0.25mm²
	4-core straight to angled	CO8.4-2-CB12.4	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core straight to straight	CO8.3-2-C12.3/P	3	4A/60V	2m	0.25mm²
	3-core straight to angled	CO8.3-2-CB12.3/P	3	4A/60V	2m	0.25mm²
	4-core straight to straight	CO8.4-2-C12.4/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled	CO8.4-2-CB12.4/P	4	4A/30V	2m	0.25mm²
	4-core straight to straight	CO8.4-2-C12.4/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled	CO8.4-2-CB12.4/P	4	4A/30V	2m	0.25mm²

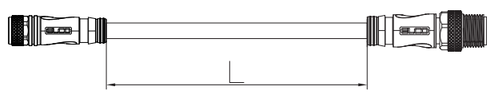
Selection Instructions

CO8.4 - 2 - C12.4 / P
① ②

Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Double-ended I/O Cordsets-M8 (female) to M12 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12, M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

■ PVC and PUR cable are optional
■ A-coded interface

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight	CBO8.3-2-C12.3	3	4A/60V	2m	0.25mm²
	3-core angled to angled	CBO8.3-2-CB12.3	3	4A/60V	2m	0.25mm²
	4-core angled to straight	CBO8.4-2-C12.4	4	4A/30V	2m	0.25mm²
	4-core angled to angled	CBO8.4-2-CB12.4	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core angled to straight	CBO8.3-2-C12.3/P	3	4A/60V	2m	0.25mm²
	3-core angled to angled	CBO8.3-2-CB12.3/P	3	4A/60V	2m	0.25mm²
	4-core angled to straight	CBO8.4-2-C12.4/P	4	4A/30V	2m	0.25mm²
	4-core angled to angled	CBO8.4-2-CB12.4/P	4	4A/30V	2m	0.25mm²

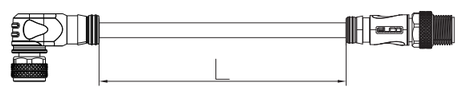
Selection Instructions

CBO8.4 - 2 - C12.4 / P
① ②

Attn： ①: Customized cable lengths are available. C
②: able jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Double-ended I/O Cordsets-M8 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- ■ PVC and PUR cable are optional
- ■ A-coded interface
- ■ M8 (female) with LED to M8(male)

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight LEDPNP	CO8.3-2-C8.3/L	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDPNP	CO8.3-2-CB8.3/L	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDPNP	CO8.4-2-C8.4/L	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDPNP	CO8.4-2-CB8.4/L	4	4A/30V	2m	0.25mm²
	3-core straight to straight LEDNPN	CO8.3-2-C8.3/LN	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDNPN	CO8.3-2-CB8.3/LN	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDNPN	CO8.4-2-C8.4/KN	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDNPN	CO8.4-2-CB8.4/LN	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core straight to straight LEDPNP	CO8.3-2-C8.3/L/P	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDPNP	CO8.3-2-CB8.3/L/P	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDPNP	CO8.4-2-C8.4/L/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDPNP	CO8.4-2-CB8.4/L/P	4	4A/30V	2m	0.25mm²
	3-core straight to straight LEDNPN	CO8.3-2-C8.3/LN/P	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDNPN	CO8.3-2-CB8.3/LN/P	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDNPN	CO8.4-2-C8.4/LN/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDNPN	CO8.4-2-CB8.4/LN/P	4	4A/30V	2m	0.25mm²

Selection Instructions

CO8.4 - 2 - C8.4 / P

① ②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

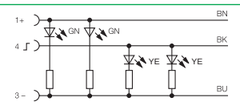
Additional Information

Cable Length

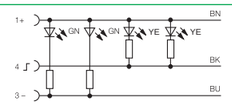
Product with LED

Straight Single Signal (3-Pin)

PNP

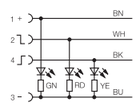


NPN



Straight Double Signal (4-Pin)

PNP



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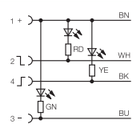
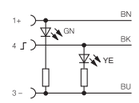
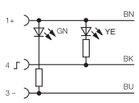


Angled Single Signal (3-Pin)

PNP

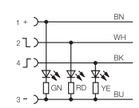


NPN

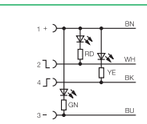


Angled Double Signal (4-Pin)

PNP



NPN



Double-ended I/O Cordsets-M8 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- ■ PVC and PUR cable are optional
- ■ A-coded interface
- ■ M8 (female) with LED to M8(male)

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight LEDPNP	CBO8.3-2-C8.3/L	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDPNP	CBO8.3-2-CB8.3/L	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDPNP	CBO8.4-2-C8.4/L	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDPNP	CBO8.4-2-CB8.4/L	4	4A/30V	2m	0.25mm²
	3-core angled to straight LEDNPN	CBO8.3-2-C8.3/LN	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDNPN	CBO8.3-2-CB8.3/LN	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDNPN	CBO8.4-2-C8.4/LN	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDNPN	CBO8.4-2-CB8.4/LN	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core straight to straight LEDPNP	CBO8.3-2-C8.3/LP	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDPNP	CBO8.3-2-CB8.3/L/P	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDPNP	CBO8.4-2-C8.4/L/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDPNP	CBO8.4-2-CB8.4/L/P	4	4A/30V	2m	0.25mm²
	3-core straight to straight LEDNPN	CBO8.3-2-C8.3/LN/P	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDNPN	CBO8.3-2-CB8.3/LN/P	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDNPN	CBO8.4-2-C8.4/LN/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDNPN	CBO8.4-2-CB8.4/LN/P	4	4A/30V	2m	0.25mm²

Selection Instructions

CBO8.4 - 2 - C8.4 / P

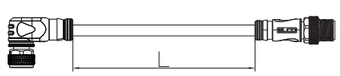
① ②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

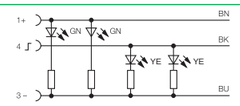
Cable Length



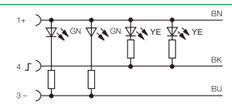
Product with LED

Straight Single Signal (3-Pin)

PNP

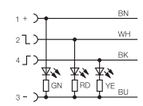


NPN

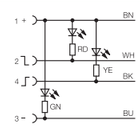


Straight Double Signal (4-Pin)

PNP

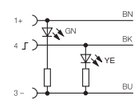


NPN



Angled Single Signal (3-Pin)

PNP



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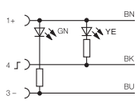
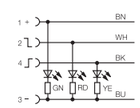
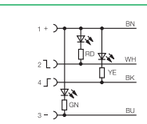


Angled Double Signal (4-Pin)

PNP



NPN



Double-ended I/O Cordsets-M8 (female) to M12 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12, M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- ■ PVC and PUR cable are optional
- ■ A-coded interface
- ■ M8 (female) with LED to M12(male)

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight LEDPNP	CO8.3-2-C12.3/L	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDPNP	CO8.3-2-CB12.3/L	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDPNP	CO8.4-2-C12.4/L	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDPNP	CO8.4-2-CB12.4/L	4	4A/30V	2m	0.25mm²
	3-core straight to straight LEDNPN	CO8.3-2-C12.3/LN	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDNPN	CO8.3-2-CB12.3/LN	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDNPN	CO8.4-2-C12.4/LN	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDNPN	CO8.4-2-CB12.4/LN	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core straight to straight LEDPNP	CO8.3-2-C12.3/L/P	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDPNP	CO8.3-2-CB12.3/L/P	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDPNP	CO8.4-2-C12.4/L/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDPNP	CO8.4-2-CB12.4/L/P	4	4A/30V	2m	0.25mm²
	3-core straight to straight LEDNPN	CO8.3-2-C12.3/LN/P	3	4A/30V	2m	0.25mm²
	3-core straight to angled LEDNPN	CO8.3-2-CB12.3/LN/P	3	4A/30V	2m	0.25mm²
	4-core straight to straight LEDNPN	CO8.4-2-C12.4/LN/P	4	4A/30V	2m	0.25mm²
	4-core straight to angled LEDNPN	CO8.4-2-CB12.4/LN/P	4	4A/30V	2m	0.25mm²

Selection Instructions

CO8.4 - 2 - C12.4 / P

① ②

Attn：

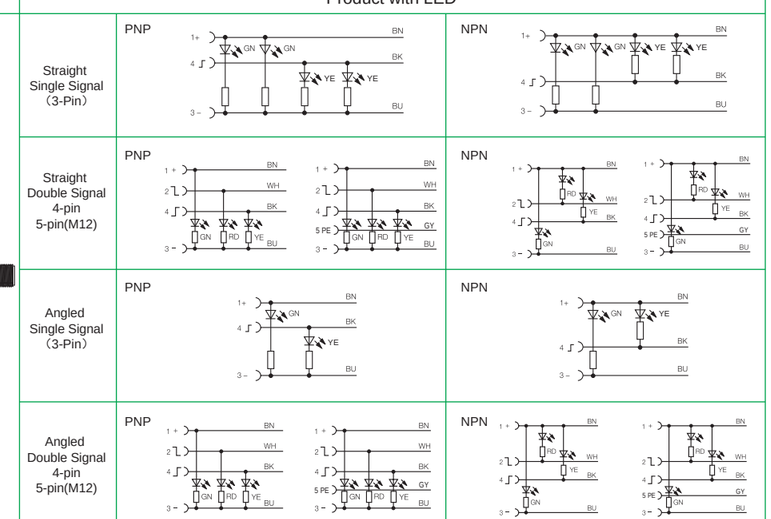
①：Customized cable lengths are available.

②：Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length

Product with LED



Double-ended I/O Cordsets-M8 (female) to M12 (male)

Description:

Used for sensors, I/O connector connecting. Standard M12, M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- ■ PVC and PUR cable are optional
- ■ A-coded interface
- ■ M8 (female) with LED to M12(male)

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight LEDPNP	CBO8.3-2-C12.3/L	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDPNP	CBO8.3-2-CB12.3/L	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDPNP	CBO8.4-2-C12.4/L	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDPNP	CBO8.4-2-CB12.4/L	4	4A/30V	2m	0.25mm²
	3-core angled to straight LEDNPN	CBO8.3-2-C12.3/LN	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDNPN	CBO8.3-2-CB12.3/LN	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDNPN	CBO8.4-2-C12.4/LN	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDNPN	CBO8.4-2-CB12.4/LN	4	4A/30V	2m	0.25mm²
PUR Bending 5 Million	3-core angled to straight LEDPNP	CBO8.3-2-C12.3/L/P	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDPNP	CBO8.3-2-CB12.3/L/P	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDPNP	CBO8.4-2-C12.4/L/P	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDPNP	CBO8.4-2-CB12.4/L/P	4	4A/30V	2m	0.25mm²
	3-core angled to straight LEDNPN	CBO8.3-2-C12.3/LN/P	3	4A/30V	2m	0.25mm²
	3-core angled to angled LEDNPN	CBO8.3-2-CB12.3/LN/P	3	4A/30V	2m	0.25mm²
	4-core angled to straight LEDNPN	CBO8.4-2-C12.4/LN/P	4	4A/30V	2m	0.25mm²
	4-core angled to angled LEDNPN	CBO8.4-2-CB12.4/LN/P	4	4A/30V	2m	0.25mm²

Selection Instructions

CBO8.4 - 2 - C12.4 / P

① ②

Attn：

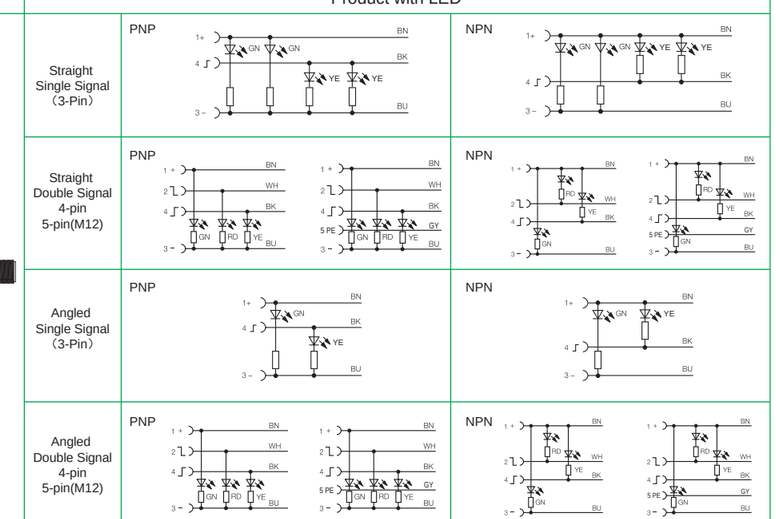
①：Customized cable lengths are available.

②：Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length

Product with LED



Y Splitter M8-male to M8-female

Description:

Used for sensors, I/O connector connecting. Standard threaded connection.
Straight series and angled series are available. 3, 4-core are optional.
Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR are optional
- A-coded interface
- Optional LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Straight to 2 straight	ECS-E2CO8.3-2/2	4-3/3	4A/60V	2m	0.25mm²
	Straight to 2 angled	ECS-E2CBO8.3-2/2	4-3/3	4A/60V	2m	0.25mm²
PUR Bending 5 Million	Straight to 2 straight	ECS-E2CO8.3-2/2/P	4-3/3	4A/60V	2m	0.25mm²
	Straight to 2 angled	ECS-E2CBO8.3-2/2/P	4-3/3	4A/60V	2m	0.25mm²

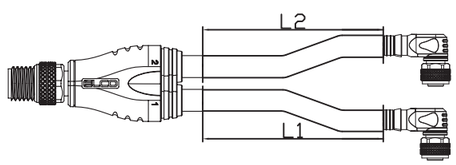
Selection Instructions

ECS-E2CO8.3 - 2/2 / P
① ②

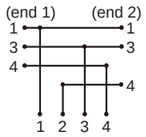
Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Wiring Diagram



Standard

Y Splitter M8-male to M12-female

Description:

Used for sensors, I/O connector connecting. Standard threaded connection.
Straight series and angled series are available. 3, 4-core are optional.
Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR are optional
- A-coded interface
- Optional LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Straight to 2 straight	ECS-E2CO12.3-2/2	4-3/3	4A/60V	2m	0.25mm²
	Straight to 2 angled	ECS-E2CBO12.3-2/2	4-3/3	4A/60V	2m	0.25mm²
PUR Bending 5 Million	Straight to 2 straight	ECS-E2CO12.3-2/2/P	4-3/3	4A/60V	2m	0.25mm²
	Straight to 2 angled	ECS-E2CBO12.3-2/2/P	4-3/3	4A/60V	2m	0.25mm²

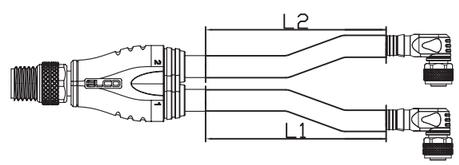
Selection Instructions

ECS-E2CO12.3-2/2/P
① ②

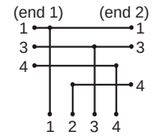
Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Wiring Diagram



Standard

Y Splitter M8-male to M8-female

Description:

Used for sensors, I/O connector connecting. Standard threaded connection. Advanced design idea of female terminal to male terminal. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC and PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Straight to 2 straight PNP	ECS-E2CO8.3-2/2/L	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled PNP	ECS-E2CBO8.3-2/2/L	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 straight NPN	ECS-E2CO8.3-2/2/LN	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled NPN	ECS-E2CBO8.3-2/2/LN	4-3/3	4A/30V	2m	0.25mm²
PUR Bending 5 Million	Straight to 2 straight PNP	ECS-E2CO8.3-2/2/L/P	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled PNP	ECS-E2CBO8.3-2/2/L/P	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 straight NPN	ECS-E2CO8.3-2/2/LN/P	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled NPN	ECS-E2CBO8.3-2/2/LN/P	4-3/3	4A/30V	2m	0.25mm²

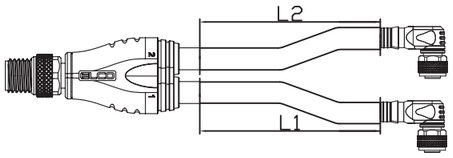
Selection Instructions

ECS-E2CO8.3 - 2/2 / P
① ②

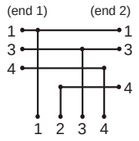
Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Wiring Diagram

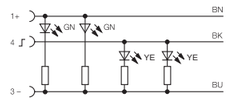


Standard

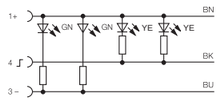
Product with LED

Straight Single Signal（3-Pin）

PNP

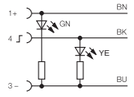


NPN

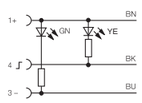


Angled Single Signal（3-Pin）

PNP



NPN



Y Splitter M8-male to M12-female

Description:

Used for sensors, I/O connector connecting. Standard threaded connection. Advanced design idea of female terminal to male terminal. Straight series and angled series are available.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC and PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Straight to 2 straight PNP	ECS-E2CO12.3-2/2/L	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled PNP	ECS-E2CBO12.3-2/2/L	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 straight NPN	ECS-E2CO12.3-2/2/LN	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled NPN	ECS-E2CBO12.3-2/2/LN	4-3/3	4A/30V	2m	0.25mm²
PUR Bending 5 Million	Straight to 2 straight PNP	ECS-E2CO12.3-2/2/L/P	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled PNP	ECS-E2CBO12.3-2/2/L/P	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 straight NPN	ECS-E2CO12.3-2/2/LN/P	4-3/3	4A/30V	2m	0.25mm²
	Straight to 2 angled NPN	ECS-E2CBO12.3-2/2/LN/P	4-3/3	4A/30V	2m	0.25mm²

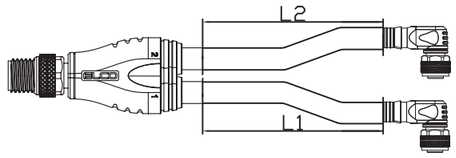
Selection Instructions

ECS-E2CO12.3-2/2/L/P
① ②

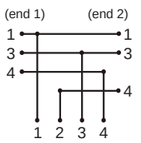
Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Wiring Diagram

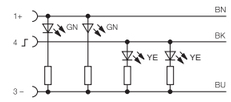


Standard

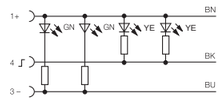
Product with LED

Straight Single Signal（3-Pin）

PNP

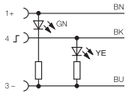


NPN

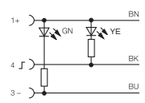


Angled Single Signal（3-Pin）

PNP



NPN



Y Splitter M8(M) to Homerun Cable

Description:

Used for field equipment connecting, such as sensors and solenoid valves. Standard threaded connection with homerun cable, 3-core. Standard cable length 2m, optional cable lengths. Degree of protection IP67.

Features:

- ■ PVC and PUR cable are optional
- ■ A-coded interface
- ■ Open-ended wires

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Y Splitter M8(M) to homerun cable	ECS-E2.3-2/2	4-3/3	4A/60V	2m	0.25mm²
PUR Bending 5 Million	Y Splitter M8(M) to homerun cable	ECS-E2.3-2/2/P	4-3/3	4A/60V	2m	0.25mm²

Selection Instructions

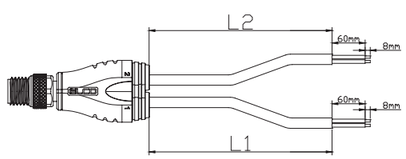
ECS-E2.3 - 2/2 / P
① ②

Attn ： ①: Customized cable lengths are available.

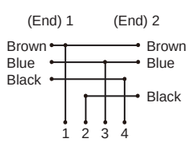
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Wiring Diagram



Standard

Field-attachable I/O Connector-M8 (Straight-female)

Description:

Used for sensors and I/O connecting. Standard threaded connection. Designed with the female port.
3,4-core are available. Degree of protection IP67.

Features:

■ Screw connection, quickly and flexibly

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable ϕ
PA	Female 3-core	LSO8.3-0/C(BU)	3	4A/60V	3.5-5mm
	Female 4-core	LSO8.4-0/C(BU)	4	4A/30V	3.5-5mm

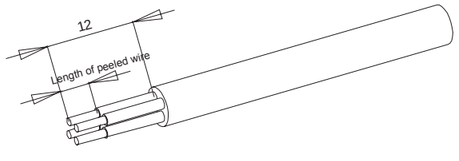
Selection Instructions

LSO8.4 - 0/C(BU)

Attn: Standard

Additional Information

1. Cross section of core for welded connection , max.0.75mm^2; Cross section of core for screwed connection , Max.0.5mm^2.
2. To connected into distribution box or IP 67 modular, match the internal mistake-proofing slot.
3. “00” connector : length of peeled jacket 12mm, length of peeled wire 4mm.
4. “A6” connector : length of peeled jacket 12mm, length of peeled wire 3mm.



Field-attachable I/O Connector-M8 (Straight-male)

Description:

Used for sensors and I/O connecting. Standard threaded connection. Designed with the male port.
3,4-core are available. Degree of protection IP67.

Features:

■ Screw connection, quickly and flexibly

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable ϕ
PA	Male 3-core	LS8.3-0/C(BU)	3	4A/60V	3.5-5mm
	Male 4-core	LS8.4-0/C(BU)	4	4A/30V	3.5-5mm

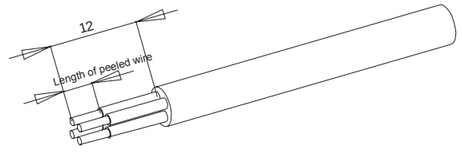
Selection Instructions

LS8.4 - 0/C(BU)

Attn: Standard

Additional Information

1. Cross section of core for welded connection , max.0.75mm^2; Cross section of core for screwed connection , Max.0.5mm^2.
2. To connected into distribution box or IP 67 modular, match the internal mistake-proofing slot.
3. “00” connector : length of peeled jacket 12mm, length of peeled wire 4mm.
4. “A6” connector : length of peeled jacket 12mm, length of peeled wire 3mm.



Field-attachable I/O Connector-M8 (Angled-female)

Description:

Used for sensors and I/O connecting. Standard threaded connection. Designed with the female port.
3,4-core are available. Degree of protection IP67.

Features:

■ Flexible welding joints and pin contact.

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable ϕ
PA	Female 3-core	LSBO8.3-0/C	3	4A/60V	3.5-5mm
	Female 4-core	LSBO8.4-0/C	4	4A/30V	3.5-5mm

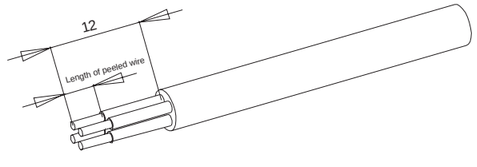
Selection Instructions

LSBO8.3 - 0/C

Attn: Standard

Additional Information

1. Cross section of core for welded connection , max.0.25mm²
2. To connected into distribution box or IP 67 modular, match the internal mistake-proofing slot.
3. “A6” connector : length of peeled jacket 12mm, length of peeled wire 3mm.



Field-attachable I/O Connector-M8 (Angled-male)

Description:

Used for sensors and I/O connecting. Standard threaded connection. Designed with the male port.
3,4-core are available. Degree of protection IP67.

Features:

■ Flexible welding joints and pin contact.

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable ϕ
PA	Male 3-core	LSB8.3-0/C	3	4A/60V	3.5-5mm
	Male 4-core	LSB8.4-0/C	4	4A/30V	3.5-5mm

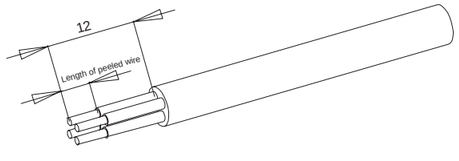
Selection Instructions

LSB8.3 - 0/C

Attn: Standard

Additional Information

1. Cross section of core for welded connection , max.0.25mm²
2. To connected into distribution box or IP 67 modular, match the internal mistake-proofing slot.
3. “A6” connector : length of peeled jacket 12mm, length of peeled wire 3mm.



Single-ended Power-M12 L-code

Description:

Used for power, Standard M12(straight, female or male) threaded connection.
Customized cable lengths. Degree of protection IP67.

Features:

■ PVC, PUR cable are optional

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Single-ended I/O Cordsets-(Straight-female)	CO12.5-2/LC	5	12A/63V DC	2m	1.5mm²
	Single-ended I/O Cordsets-(Straight-male)	C12.5-2/LC	5	12A/63V DC	2m	1.5mm²
	Single-ended I/O Cordsets-(Angled-female)	CBO12.5-2/LC	5	12A/63V DC	2m	1.5mm²
	Single-ended I/O Cordsets-(Angled-male)	CB12.5-2/LC	5	12A/63V DC	2m	1.5mm²
PUR Bending 5 Million	Single-ended I/O Cordsets-(Straight-female)	CO12.5-2/P/LC	5	12A/63V DC	2m	1.5mm²
	Single-ended I/O Cordsets-(Straight-male)	C12.5-2/P/LC	5	12A/63V DC	2m	1.5mm²
	Single-ended I/O Cordsets-(Angled-female)	CBO12.5-2/P/LC	5	12A/63V DC	2m	1.5mm²
	Single-ended I/O Cordsets-(Angled-male)	CB12.5-2/P/LC	5	12A/63V DC	2m	1.5mm²

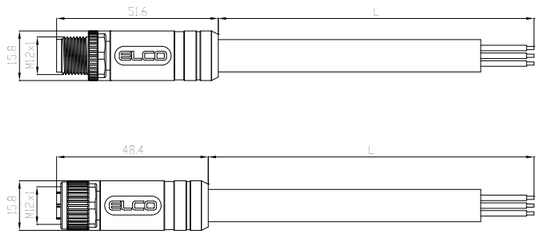
Selection Instructions

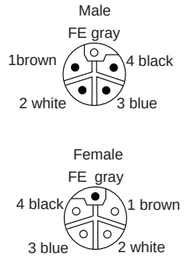
CO12.5 - 2/LC
① ②

Attn： ①: Customized cable lengths are available.
②: L-coding,Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length





Double-ended Power-M12 L-code

Description:

Used for power, Standard M12(straight, female to male) threaded connection.
Customized cable lengths. Degree of protection IP67.

Features:

■ PVC, PUR cable are optional

* All technical information about the raw cable for connectors, please refer to the “cable” section (P166).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Straight-female to Straight-male	CO12.5-2-C12.5/LC	5	12A/63V DC	2m	1.5mm²
	Straight-female to Angled-male	CO12.5-2-CB12.5/LC	5	12A/63V DC	2m	1.5mm²
	Angled-female to Straight-male	CBO12.5-2-C12.5/LC	5	12A/63V DC	2m	1.5mm²
	Angled-female to Angled-male	CBO12.5-2-CB12.5/LC	5	12A/63V DC	2m	1.5mm²
PUR Bending 5 Million	Straight-female to Straight-male	CO12.5-2-C12.5/P/LC	5	12A/63V DC	2m	1.5mm²
	Straight-female to Angled-male	CO12.5-2-CB12.5/P/LC	5	12A/63V DC	2m	1.5mm²
	Angled-female to Straight-male	CBO12.5-2-C12.5/P/LC	5	12A/63V DC	2m	1.5mm²
	Angled-female to Angled-male	CBO12.5-2-CB12.5/P/LC	5	12A/63V DC	2m	1.5mm²

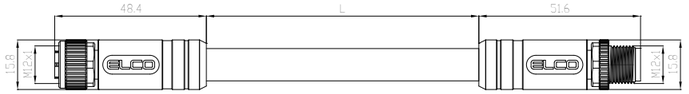
Selection Instructions

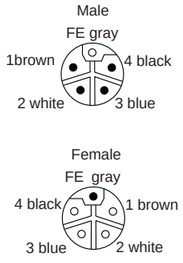
CO12.5 - 2/LC
① ②

Attn： ①: Customized cable lengths are available.
②: L-coding,Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length





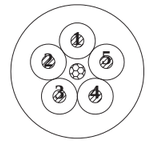
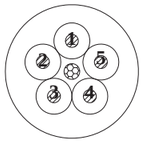
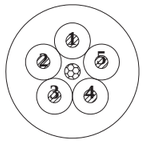
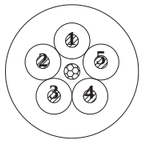
Connectivity

7/8" Connectors

ELCO provides pre-wired power connectors and bus connectors for industrial automation field. The pre-wired cordsets are easy for the installation of filed bus, reducing wiring errors or incomplete shielding in the process of field wiring, to ensure that the bus connection is correct and normal communication.

Single-ended and double-ended cordsets are available, which are used for power supply, communication of Profibus/ProfiNet, DeviceNet module. Straight or angled type are optional, customized cable length according to the field configuration, 7/8'' thread interface.

- Profibus/ProfiNet power supply: Mini-Change (5P), field-attachable connectors.
- DeviceNet power supply: Minichange (4P), field-attachable connectors.

				
Type	85-1654	85-1655	85-1656	85-1660
Condition	Fixed installation	Drag chain installation	Fixed installation	Drag chain installation
Structure	5C×16AWG	5C×16AWG	5C×16AWG	5x1.5mm²
Conductor				
Material	Bare copper stranded	Bare copper stranded	Bare copper stranded	Bare copper stranded
Size	65/0.16±0.008mm	105/0.127±0.008mm	26/0.254±0.008mm	192/0.1±0.008mm
Insulation				
Material	PVC	PVC	PVC	PP
Cabling				
Filler	Cotton	Cotton	Cotton	Cotton
Jacket				
Material	PVC	PUR	PVC	PUR
O.D.	12.9±0.3mm	8.40±0.3mm	8.40±0.3mm	9.0±0.3mm
Electrical characteristic				
Rated voltage	600V	300V	300V	600V
Rated temperature	-20...105℃	-40...80℃	-40...80℃	-40...80℃
Max. DC conductor resistance(at 20℃)	14.6Ω/km	14.6Ω/km	14.6Ω/km	13.7Ω/km
Voltage withstand test	AC 2.0kV/1min	AC 2.0kV/1min	AC 2.0kV/1min	AC 2.0kV/1min
Voltage withstand test				
Tensile strength	≥10.3MPa	≥10.3MPa	≥10.3MPa	≥10.3MPa
Elongation	≥100%	≥100%	≥100%	≥100%
Aged condition	136±2℃×168h	113±1℃×168h	113±1℃×168h	113±1℃×168h
Percent of original tensile strength	≥70%	≥70%	≥70%	≥70%
Percent of original elongation	≥65%	≥65%	≥65%	≥65%
Bending test	—	R=10xOD, ≥1 million	—	R=10xOD, ≥5 million
Color code				
Insulation	1.white 2.red 3.green	1.white 2.red 3.green	1.white 2.red 3.green	1.brown 2.white 3.blue
	4.orange 5.black	4.orange 5.black	4.orange 5.black	4.black 5.yellow/green
Jacket	yellow	yellow	yellow	gray

* MOQ: 50m

Single-ended/double-ended power cordsets (Profibus/ProfiNet)

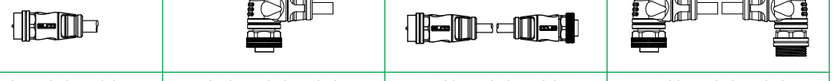
Functions:

- Profibus/ProfiNet power supply
- Flexible cable
- Mini Change (7/8") interface

Technical Data

Electrical Data	
Voltage	600/300V AC/DC
Current	8A
Cable Specifications	See Cable list
Diameter	5x16AWG
Material	
Contact Carrier	PUR
Molded Head	PUR
Coupling Nut	Nickel Plated Brass
Cable Color	Yellow / Black
Using Grade	
Protection Class	IP67

Type List



Cross Section	Single-ended Straight		Single-ended Angled		Double-ended Straight		Double-ended Angled	
	Type	Fig.	Type	Fig.	Type	Fig.	Type	Fig.
Male 1- WHITE (OUTPUT POWER V-) 2- RED (BUS/INPUT POWER V-) 3- GREEN (EARTH GROUND) 4- ORANGE (BUS/INPUT POWER V+) 5- BLACK (OUTPUT POWER V+)	105006A01M010	Fig. 1	105007A01M010	Fig. 2	115030A01M010	Fig. 5	115033A01M010	Fig. 6
Female 1- WHITE (OUTPUT POWER V-) 2- RED (BUS/INPUT POWER V-) 3- GREEN (EARTH GROUND) 4- ORANGE (BUS/INPUT POWER V+) 5- BLACK (OUTPUT POWER V+)	105000A01M010	Fig. 3	105001A01M010	Fig. 4				

Order Code

115030A01Mxxx

Cable
- Single-ended Pre-wire..... 10
- Double-ended Pre-wire..... 11

Connector
- Single-ended Female Straight 000
- Single-ended Female Angled..... 001
- Single-ended Male Straight 006
- Single-ended Male Angled..... 007
- Female Straight/Male Straight..... 030
- Female Angled/Male Angled..... 033

Cable Material
- PVC 01
- PUR 03

Length
- 0.6 m 006
- 1 m 010
- 2 m 020
- 5 m 050

Single-ended/double-ended power cordsets (Profibus/ProfiNet)

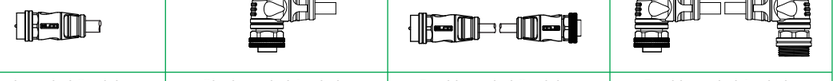
Functions:

- Profibus/ProfiNet power supply
- Flexible cable
- Mini Change (7/8") interface

Technical Data

Electrical Data	
Voltage	600/300V AC/DC
Current	8A
Cable Specifications	See Cable list
Diameter	5x1.5mm²
Material	
Contact Carrier	PUR
Molded Head	PUR
Coupling Nut	Nickel Plated Brass
Cable Color	Gray
Using Grade	
Protection Class	IP67

Type List



Cross Section	Single-ended Straight		Single-ended Angled		Double-ended Straight		Double-ended Angled	
	Type	Fig.	Type	Fig.	Type	Fig.	Type	Fig.
Male 1- WHITE (OUTPUT POWER V-) 2- RED (BUS/INPUT POWER V-) 3- GREEN (EARTH GROUND) 4- ORANGE (BUS/INPUT POWER V+) 5- BLACK (OUTPUT POWER V+)	C7.5-1/P	Fig. 1	CB7.5-1/P	Fig. 2	CO7.5-1-C7.5/P	Fig. 5	CBO7.5-1-CB7.5/P	Fig. 6
Female 1- WHITE (OUTPUT POWER V-) 2- RED (BUS/INPUT POWER V-) 3- GREEN (EARTH GROUND) 4- ORANGE (BUS/INPUT POWER V+) 5- BLACK (OUTPUT POWER V+)	CO7.5-1/P	Fig. 3	CBO7.5-1/P	Fig. 4				

Order Code

CO7.5-1-C7.5/P
① ②

Attn： ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Profibus / ProfiNet Power Single-ended / Double-ended Cordsets

Dimensions

FIG 1

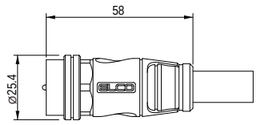


FIG 2

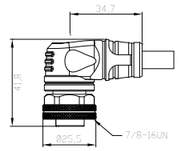


FIG 3

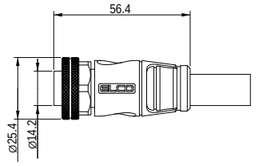


FIG 4

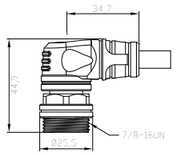


FIG 5

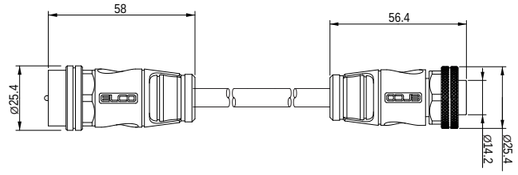
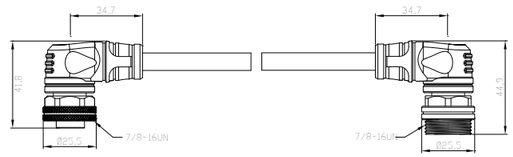


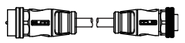
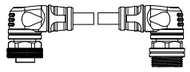
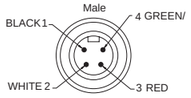
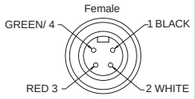
FIG 4



DeviceNet Auxiliary Power Cordsets

- Mini-change interface
- Single-ended pre-wire male / female , straight / 90º
- Double-ended pre-wire male / female, straight / 90º

Type List

								
Cross Section	Single-ended Straight		Single-ended Angled		Double-ended Straight		Double-ended Angled	
	Type	Fig.	Type	Fig.	Type	Fig.	Type	Fig.
	104006A01M010	FIG1	104007A01M010	FIG2	114030A01M010	FIG5	114033A01M010	FIG6
	104000A01M010	FIG3	104001A01M010	FIG4				

Order Code

114030A01Mxxx

Cable

Single-ended Pre-wire	10
Double-ended Pre-wire	11

Connector

Single-ended Female Straight	000
Single-ended Female Angled	001
Single-ended Male Straight	006
Single-ended Male Angled	007
Female Straight/Male Straight	030
Female Angled/Male Angled	033

Cable Material

PVC	01
PUR	03

Length

0.6 m	006
1 m	010
2 m	020
5 m	050

Dimensions

FIG 1
Female Straight

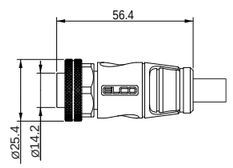


FIG 2
Female Angled

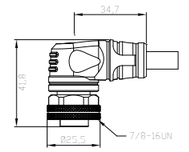


FIG 3
Male Straight

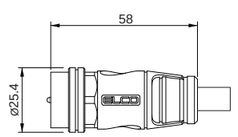
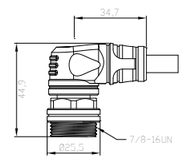


FIG 4
Male Angled



Connectivity

Profibus / ProfiNet / DeviceNet Field-attachable Connectors

- Mini-Change (7/8") field-attachable connector for standard module
- Micro (M12) field-attachable connector for compact module

Technical Data	
Electrical Data	
Voltage	600V AC/DC
Current	8A
Material	
Contact Carrier	PU
Molded Head	Nylon
Coupling Nut	Nickel Plated Brass
Using Grade	
Protection Class	IP67

Type list

Cross section	Max. Current	Voltage Rating	Cable Diameter	Mini Female Type	Mini Female Fig.	Mini Male Type	Mini Male Fig.	7/8 Female Type	7/8 Female Fig.	7/8 Male Type	7/8 Male Fig.
4-Pin Female / 4-Pin Male	8.0A	600V AC/DC	10-12mm	1A4000-34/C	FIG1	1A4006-34/C	FIG2	1A4001-34/C	FIG3	1A4007-34/C	FIG3
5-Pin Female / 5-Pin Male	8.0A	600V AC/DC	10-12mm	1A5000-34/C	FIG1	1A5006-34/C	FIG2	1A5001-34/C	FIG3	1A5007-34/C	FIG3

Dimensions

FIG 1

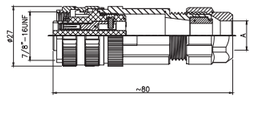


FIG 2

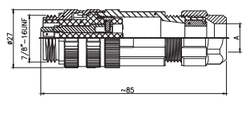


FIG 3

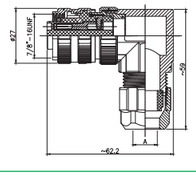
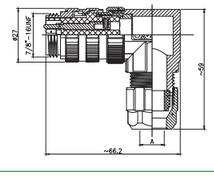


FIG 4

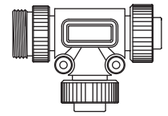


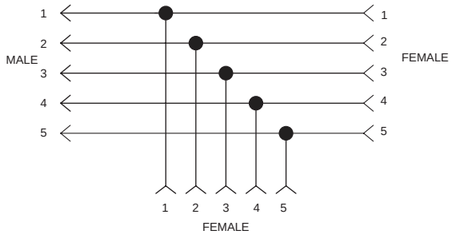
Profibus / ProfiNet Power Tee

- Power supply for trunk line
- Tap power for Profibus module

Technical Data	
Electrical Data	
Voltage	600V
Current	8.0A
Material	
Contact Carrier	PVC
Molded Head	Nylon
Coupling Nut	Nickel Plated Brass
Using Grade	
Protection Class	IP67

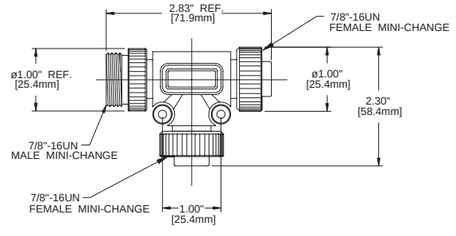
Type list



Male		Wiring Diagram	Type	Fig.
5 Pole	1-Output Power V- 2-Bus/Input Power V- 3-Earth Ground 4-Bus/Input Power V+ 5-Output Power V+		PBAPT	FIG1
5 Pole				
5 Pole				

Dimensions

FIG 1



Connectivity

Single-ended I/O Cordsets- Φ8 (Straight- female)

Description:

Used for sensors, I/O connector connecting. Standard Φ8(straight-female) threaded connection.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- LED indicator is optional

* All technical information about the raw cable for connectors, please refer to the “cable” section (P513).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female 3-core	QO8.3-2	3	4A/60V	2m	0.25mm²
	Female 4-core	QO8.4-2	4	4A/30V	2m	0.25mm²
PUR	Female 3-core	QO8.3-2/P	3	4A/60V	2m	0.25mm²
	Female 4-core	QO8.4-2/P	4	4A/30V	2m	0.25mm²

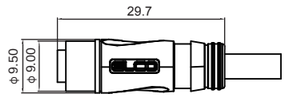
Selection Instructions

QO8.3 - 2 / P
① ②

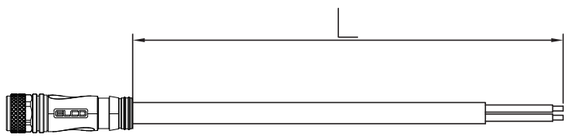
Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Dimensions



Cable Length



Single-ended I/O Cordsets- Φ8 (Angled- female)

Description:

Used for sensors, I/O connector connecting. Standard Φ8(straight-female) threaded connection.
3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- LED indicator is optional

* All technical information about the raw cable for connectors, please refer to the “cable” section (P513).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female 3-core	QBO8.3-2	3	4A/60V	2m	0.25mm²
	Female 4-core	QBO8.4-2	4	4A/30V	2m	0.25mm²
PUR	Female 3-core	QBO8.3-2/P	3	4A/60V	2m	0.25mm²
	Female 4-core	QBO8.4-2/P	4	4A/30V	2m	0.25mm²

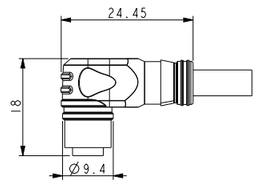
Selection Instructions

QBO8.3 - 2 / P
① ②

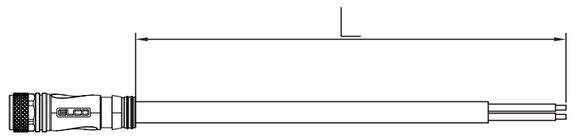
Attn： ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Dimensions



Cable Length



Automation Connectors

ELCO provides pre-wired power connectors and bus connectors for industrial automation field. The pre-wired cordsets are easy for the installation of filed bus, reducing wiring errors or incomplete shielding in the process of field wiring, to ensure that the bus connection is correct and normal communication.
Single-ended and double-ended cordsets are available, which are used for power supply, communication of Profibus/ProfiNet, DeviceNet module. Straight or angled type are optional, customized cable lengths according to the field configuration, M12 threaded interface.

- Profibus M12(B-coded), field-attachable connectors.
- DeviceNet Minichange, M12(A-coded), field-attachable connectors.
- ProfiNet M12(D-coded), RJ45 cordsets, field-attachable connectors.

			
	Profibus Standard	**Profibus Flexible Cable**	**Profibus Drag Chain Cable**
Type	85-0001	85-0003	85-0005
Condition	Fixed installation，22AWG	Flexible installation，23AWG	Drag chain installation，23AWG
Rated Voltage	300V		
Ambient Temperature	-30...+75℃		-40...+80℃
Max. diameter	8.0mm±0.4mm	8.0mm±0.4mm	8.5mm±0.4mm
Conductor	Single-strand bare copper （0.64mm）	Multi-strand bare copper （11*0.14mm）	Multi-strand bare copper （19*0.14mm）
Impedence	17.5 Ω / 1k.feet	16.5 Ω / 1k.feet	16.5 Ω / 1k.feet
Wire	Double twist wires, inner jacket	Double twist wires, inner jacket	Double twist wires,filler
Shielding	Aluminum foil + tinned-copper braid (density 35%)	Aluminum foil + tinned-copper braid （density 65%）	Aluminum foil + tinned-copper braid （density 85%）
Outer Jacket	PVC，Violet	PVC，Violet	TPU，Lake blue
Flame Resistance	IEC 60332-3-24	IEC 60332-1-2	IEC 60332-1-2
Bending Resistance	IEC 60811-1-4	IEC 60811-1-4	IEC 60811-1-4
Bending Diameter	15*Cable diameter	10*Cable diameter	7.5*Cable diameter
Bending life	—	—	5 million times

* MOQ：100m

Profibus - Single-ended Cordsets

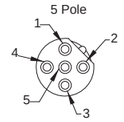
Features:

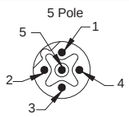
- PVC(TPU) jacket for chemical and oil resistance
- Low-resistance contact design
- 360° shielded

Technical Data

Material	
Contact Carrier	Nylon
Molded Head	PUR
Coupling Nut	zinc die cast alloy
Using Grade	
Protection Class	IP67

Type List


Pin Assignment	Max. current	Max. voltage	Cable type	Cable jacket	Wire size	Length	Female/Straight Type	Female/Straight Fig.	Female/Angled Type	Female/Angled Fig.
 5 Pole 1 - Not used 4 - Red 2 - Green (Bus B) (Bus A) 5 - Shield 3 - Not used	4.0A	300VAC/DC	Twisted pair	PVC	22	1.0m	B05S00PP4M010	Fig.1	B05S01PP4M010	Fig.2
				TPU	23		B05S00PP8M010		B05S01PP8M010	

Pin Assignment	Max. current	Max. voltage	Cable type	Cable jacket	Wire size	Length	Male/Straight Type	Male/Straight Fig.	Male/Angled Type	Male/Angled Fig.
 5 Pole 1 - Not used 4 - Red 2 - Green (Bus B) (Bus A) 5 - Shield 3 - Not used	4.0A	300VAC/DC	Twisted pair	PVC	22	1.0m	B05S06PP4M010	Fig.1	B05S07PP4M010	Fig.2
				TPU	23		B05S06PP8M010		B05S07PP8M010	

Order Code

B05S01PP4 Mxxx

Connection type		Cable Length	
Straight Female....	00	1 m.....	010
Angled Female.....	01	2 m.....	020
Straight Male.....	06	3 m.....	030
Angled Male.....	07	5 m.....	040

PP4 : 85-0001 cable
PP6 : 85-0003 cable
PP8 : 85-0005 cable

Profibus - Double-ended Cordsets

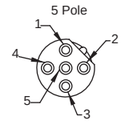
Features:

- PVC(TPU) jacket for chemical and oil resistance
- Low-resistance contact design
- 360° shielded

Technical Data

Material	
Contact Carrier	Nylon
Molded Head	PUR
Coupling Nut	zinc die cast alloy
Using Grade	
Protection Class	IP67
Ambient Temperature	-30 - +80℃

Type List


Pin Assignment	Max. current	Max. voltage	Cable type	Cable jacket	Wire size	Length	Straight Type	Straight Fig.	Angled Type	Angled Fig.
 5 Pole 1 - Not used 4 - Red 2 - Green (Bus B) (Bus A) 5 - Shield 3 - Not used	4.0A	250VAC/DC	Twisted pair	PVC	22	1.0m	BB5S30PP4M010	Fig.1	BB5S33PP4M010	Fig.2
				PUR	23		BB5S30PP8M010		BB5S33PP8M010	

Order Code

BB5S30PP4 Mxxx

Connection type	
Double-ended straight.....	30
Double-ended angled.....	33

PP4 : 85-0001 cable
PP6 : 85-0003 cable
PP8 : 85-0005 cable

Cable Length	
0.3m.....	003
0.6m.....	006
1m.....	010
2m.....	020

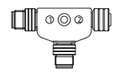
Profibus - Fieldbus Tee

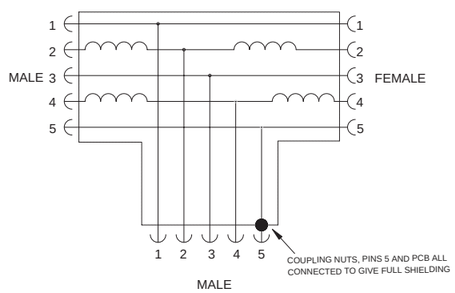
Features:

- For quick disconnect / recovery data bus
- Use with IP67 distributed module

Technical Data	
Material	
Contact Carrier	Nylon
Molded Head	PVC
O-ring	Rubber
Coupling Nut	Nickel Plated Brass
Using Grade	
Protection Class	IP67
Electrical Data	
Rated Voltage	30V AC/36V DC
Rated Current	4.0A

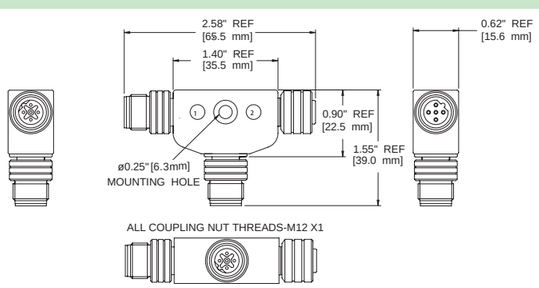
Type List



Pin Assignment	Wiring Diagram	Type	Fig.
5 Pole Bus In Male Face View		PDTS01	Fig. 1
5 Pole Bus Out Female FaceView			
5 Pole Drop Bus Male Face View			

Order Code

Fig. 1



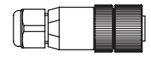
Profibus - Fieldbus Connectors

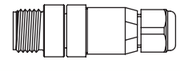
Features:

- Used for M12 Profibus Connector
- Designed with shield 5Pin
- Screw connecting

Technical Data	
Material	
Contact Carrier	PUR
Molded Head	Nickel Plated Brass
Contact	Silver-plated
Coupling Nut	Nickel Plated Brass
O-ring	Nitrile rubber
Conductor	4.10-8.10mm
Using Grade	
Protection Class	IP67

Type List





Pin Assignment	Max. current	Max. voltage	Cable diameter range	Female/Straight		Male/Straight	
				Type	Fig.	Type	Fig.
5 Pole Female 1 - Not used 4 - Red 2 - Green (Bus B) (Bus A) 5 - Shield 3 - Not used	4.0A	250V AC/DC	4.10-8.10mm	BA5S00-32/C	Fig.1		
5 Pole Male 1 - Not used 4 - Red 2 - Green (Bus B) (Bus A) 5 - Shield 3 - Not used						BA5S06-32/C	Fig.2

Dimensions

Fig. 1

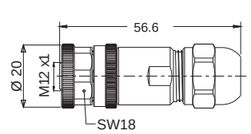
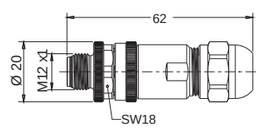


Fig. 2



Profibus -Termination Resistors

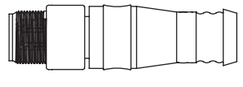
Features:

- M12 B-coded male
- Used with IP67 Distributed I/O module
- Profibus fieldbus termination

Technical Data

Material	
Contact Carrier	Nylon
Molded Head	PVC
Coupling Nut	zinc die cast alloy
Using Grade	
Protection Class	IP67
Electrical Data	
Rated Voltage	250V AC/DC
Rated Current	4.0A

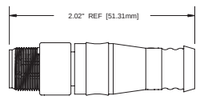
Type List



Pin Assignment	Wiring Diagram	Type	Fig.
5 Pole 1 - 5VDC 4 - Bus-B 2 - Bus-A 5 - Shield 3 - Ground	220Ω 1/4 W 330Ω 1/4 W 330Ω 1/4 W	B05S06	Fig.1

Dimensions

Fig.1



DeviceNet Cable

	DeviceNet Standard Thick Cable	DeviceNet Standard Thin Cable	DeviceNet Standard Thin Cable	DeviceNet Flexible Thick Cable	DeviceNet Standard Thin Cable
Type	86-0001	86-0003	86-0004	86-0005	86-0006
Condition	Fixed installation 2x18AWG+2x15AWG	Fixed installation 2x24AWG+2x22AWG	Fixed installation 2x24AWG+2x22AWG	Drag chain installation 2x24AWG+2x22AWG	Fixed installation 2x24AWG+2x22AWG
Rated Voltage	300V				
Ambient Temperature	-20...+70℃				
Max. diameter	12.2±0.3 mm	6.9±0.3 mm	6.9±0.3 mm	12.2±0.3 mm	6.9±0.3 mm
Conductor	multi-strand tin copper				
Impedence	Power：3.6 ohms/100ft	Power：16.5 ohms/100ft	Power:16.5 ohms/100ft	Power：3.6 ohms/100ft	Power:16.5 ohms/100ft
	Data：6.9 ohms/100ft	Data：28 ohms/100ft	Data:28 ohms/100ft	Data：6.9 ohms/100ft	Data:28 ohms/100ft
Wire	Two wires side by side, copper and aluminum package				
Shielding	Tinned copper braid				
Outer Jacket	PVC，Gray	PVC，Gray	PVC，Violet	PVC，Gray	PVC，Violet
Power Cable Color	Red+black				
Communication Cable Color	White+blue				
Bending Diameter	15* Cable diameter	15* Cable diameter	15* Cable diameter	10* Cable diameter	15* Cable diameter
Bending Life	—		10 million times	1.4 million times	5 million times

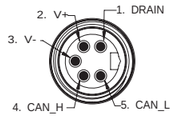
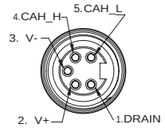
* MOQ：50m

Connectivity

DeviceNet Single-ended Fieldbus Cordsets (7/8")

■ Male/female Mini -Change single-ended cordsets

Single-ended

Diagram	Male	Female
		

5 Pole		1- BARE (SHIELD) 2- RED (V+) 3- BLACK (V-) 4- WHITE (CAN-H) 5- BLUE (CAN-L)
Male	Fig.	Single-ended
Straight	1	DN01A-Mxxx
Angled	2	DN09A-Mxxx
Female	Fig.	Single-ended
Straight	3	DN10A-Mxxx
Angled	4	DN90A-Mxxx

Order Code

DN 01A-M xxx

Cable Specification

DEVICENET thin cable	ADD	D
DEVICENET thick STPE	ADD	F

Cable Length

2m	020
4m	040
5m	050
6m	060
10m	100

Dimensions

Fig. 1

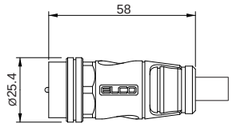


Fig. 2

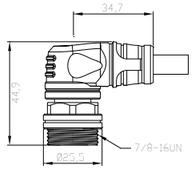


Fig. 3

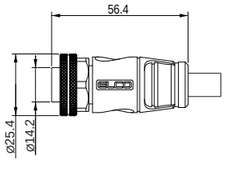
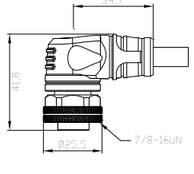


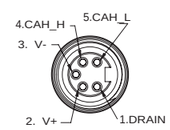
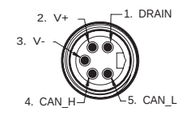
Fig. 3



DeviceNet - Double-ended Fieldbus Cordsets (7/8" - 7/8")

■ Mini-Change-Mini-Change

Double-ended

Diagram	Female	Male
		

5 Pole		1- BARE (SHIELD) 2- RED (V+) 3- BLACK (V-) 4- WHITE (CAN-H) 5- BLUE (CAN-L)
Female/Male	Fig.	Double-ended
Straight/Straight	1	DN11A-Mxxx
Angled/Straight	2	DN91A-Mxxx
Straight/Angled	3	DN19A-Mxxx
Angled/Angled	4	DN99A-Mxxx

Order Code

DN 11A-M xxx

Cable Specification

DEVICENET thin cable	ADD	D
DEVICENET thick STPE	ADD	F

Cable Length

0.6m	006
1 m	010
2 m	020
3 m	030
4 m	040
5 m	050
10 m	100

Dimensions

FIG 1

Female straight/Female straight

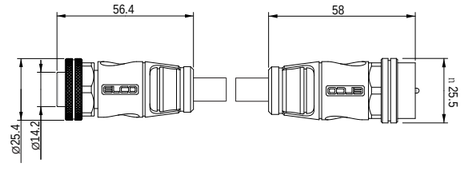


FIG 2

Female Angled/ Male straight

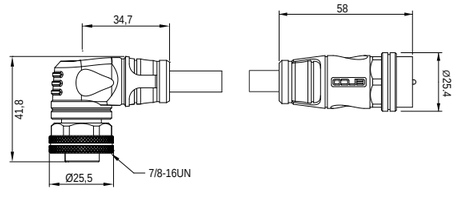


FIG 3

Female straight/ Male Angled

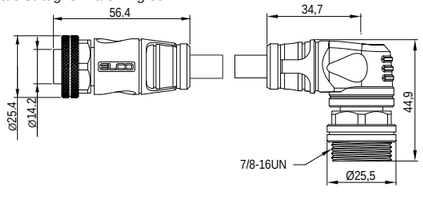
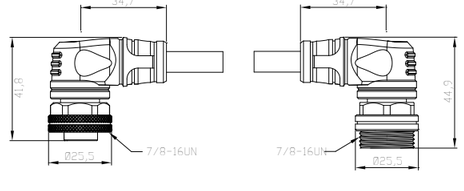


FIG 3

Female Angled/Male Angled

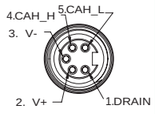
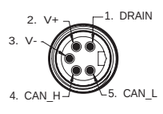
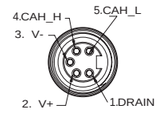
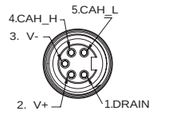
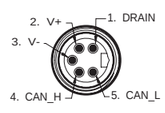
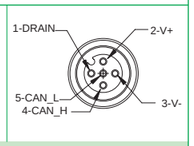
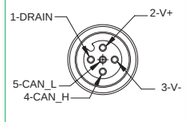
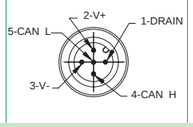
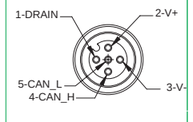


Connectivity

DeviceNet - Trunk Tee /Y Splitter

- Mini-Change Trunk Tee
- Mini-Change Trunk Tee
- Micro-Change Trunk Tee

Trunk Tee/Y Splitter

Female (left)		Male (right)		Female	
	FIG				
MINI-CHANGE Trunk Tee	1 AND 3		DN3020		
Female (left)		Male (right)		Female	
	FIG				
MICRO-CHANGE Trunk Tee	2 AND 3		DND3020		
Female (left)		Male (right)		Female	
	FIG				
MICRO-MICROMICRO Trunk Tee	2 AND 3		MICT555		

Dimensions

FIG 1
Trunk T Tee

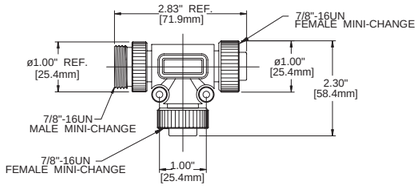
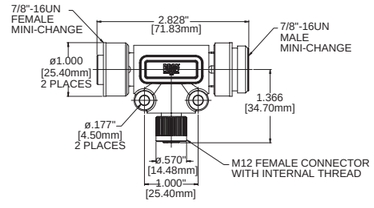
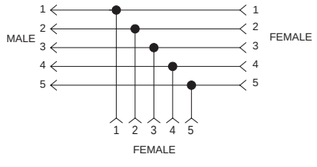


FIG 2
Trunk to Branch T Tee



Wiring Diagram

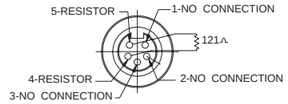
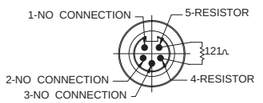
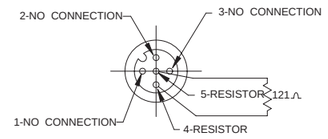
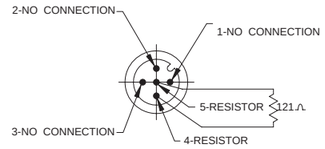
FIG 3
Trunk T Tee



DeviceNet - Termination Resistance

- Male/Female
- Mini-Change/Micro-Change
- LED diagnosis

Mini-Change and Micro-Change terminal resistance

Pin Assignment	Female 		Male 
Female	Fig.	MINI-CHANGE	
With LED	1	DN150L	
Without LED	1	DN150	
Male	Fig.	MINI-CHANGE	
With LED	2	DN100L	
Without LED	2	DN100	
Pin Assignment	Female 		Male 
Female	Fig.	MICRO-CHANGE	
Standard	3	DND150	
Male	Fig.	MICRO-CHANGE	
Standard	4	DND100	

Dimensions

FIG 1
Female Mini-Change

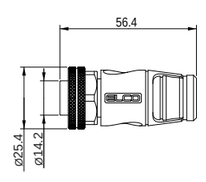


FIG 2
Male Mini-Change

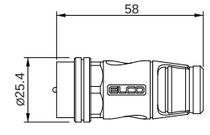


FIG 3
Female Micro-Change

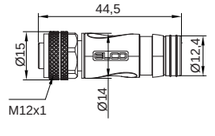
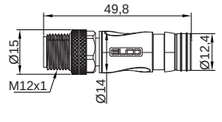


FIG 4
Male Micro-Change



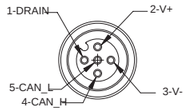
DeviceNet - Single-ended fieldbus Cordsets

■ Male/Female Micro-Change Single-ended Cordsets

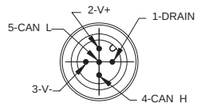
5P

Pin Assignment

Female



Male



Female	Fig.	Single-ended with branch (thin cable)
Straight	1	DND02A-Mxxx
Angled	2	DND03A-Mxxx
Male	**Fig.**	**Single-ended with branch (thin cable)**
Straight	3	DND20A-Mxxx
Angled	4	DND30A-Mxxx

Order Code

DND□02A-Mxxx

Cable Specification
DEVICENET thin STPE .....ADD F

Cable Length
2 m 020
4 m 040
5 m 050
6 m 060
10 m..... 100

Dimensions

Fig. 1
Straight Female

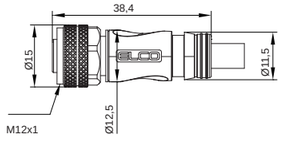


Fig. 2
Angled Female

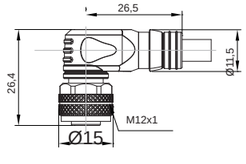


Fig. 3
Straight Male

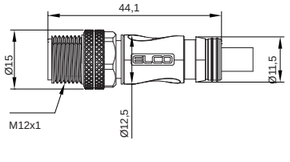
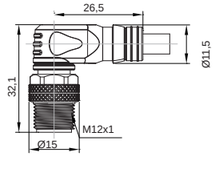


Fig. 3
Angled Male



DeviceNet - Double-ended Fieldbus Cordsets

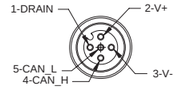
■ Micro-Change - Micro-Change

■ Micro-Change (female) - Mini-Change (male)

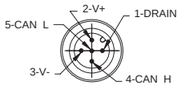
Double-ended

Pin Assignment

Female



Male

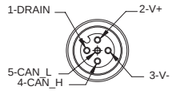


MICRO-CHANGE – MICRO-CHANGE

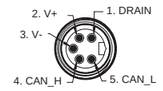
Female / Male	Fig.	Double-ended Thin cable
Straight / Straight	1	DND22A-Mxxx
Angled / Straight	2	DND32A-Mxxx
Straight / Angled	3	DND23A-Mxxx
Angled / Angled	4	DND33A-Mxxx

Pin Assignment

Female



Male



MICRO-CHANGE – MINI-CHANGE

Female MICROCHANGE/ Male MINI-CHANGE		Double-ended Thin cable
Straight / Straight	5	DND21A-Mxxx
Angled / Straight	6	DND31A-Mxxx
Straight / Angled	7	DND29A-Mxxx
Angled / Angled	8	DND39A-Mxxx

Order Code

DND□22A-Mxxx

Cable Specification
DEVICENET thin STPE ..... ADD F

Cable Length
0.6m..... 006
1 m..... 010
2 m..... 020
3 m..... 030
4 m..... 040
5 m..... 050
10 m..... 100

尺寸图

FIG 1
Straight female Micro-Change / Straight male Micro-Change

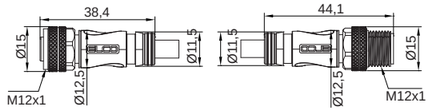


FIG 2
Angled female Micro-Change/ Straight male Micro-Change

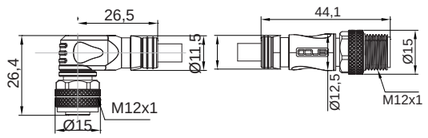


FIG 3
Straight female Micro-Change /Angled male Micro-Change

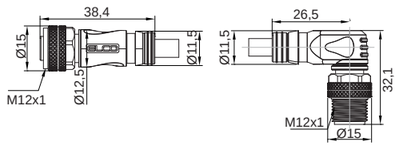


FIG 4
Angled female Micro-Change / Angled male Micro-Change

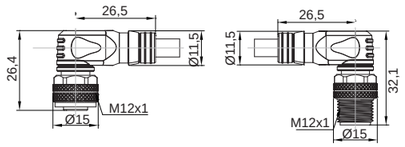


FIG 5
Straight female Micro-Change / Straight male Mini-Change

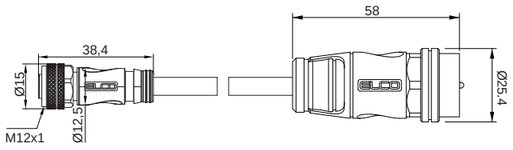


FIG 6
Angled female Micro-Change / Straight male Mini-Change

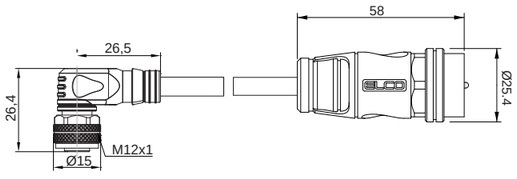


FIG 7
Straight female Micro-Change / Angled male Mini-Change

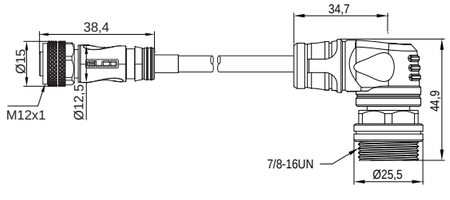
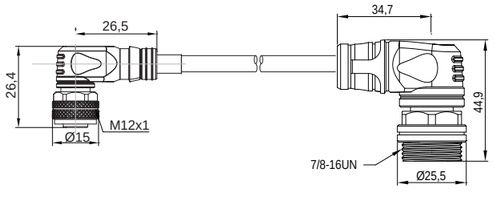


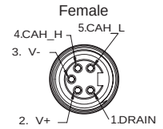
FIG 8
Angled female Micro-Change / Angled male Mini-Change



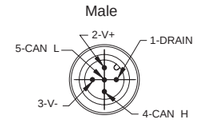
■ Mini-Change（female）- Micro-Change（male）

Double-ended

Pin Assignment



MINI-CHANGE



MICRO-CHANGE

Female (MINI-CHANGE) / male (MICRO-CHANGE)		Double-ended Thin cable
Straight / Straight	1	DND12A-Mxxx
Straight / Angled	2	DND13A-Mxxx
Angled / Straight	3	DND92A-Mxxx
Angled / Angled	4	DND93A-Mxxx

Order Code

DND 12A-M xxx

Cable Specification
DEVICENET thin STPE ..... ADD F

Cable Length

0.6m.....	006
1 m.....	010
2 m.....	020
3 m.....	030
4 m.....	040
5 m.....	050
10 m.....	100

Dimensions

FIG 1
Straight female Mini-Change / Straight male Micro-Change

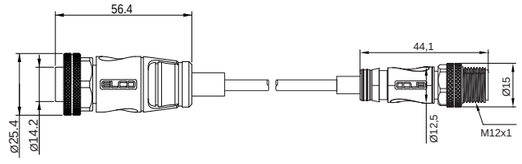


FIG 2
Angled female Mini-Change / Straight male Micro-Change

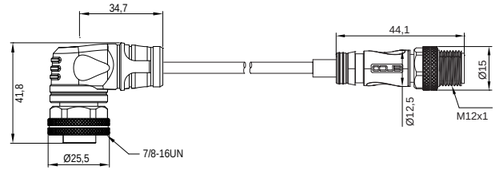


FIG 3
Straight female Mini-Change / Angled male Micro-Change

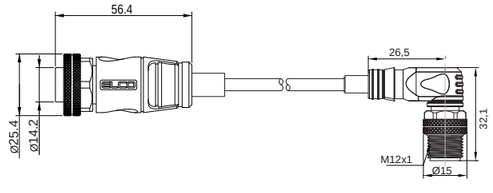
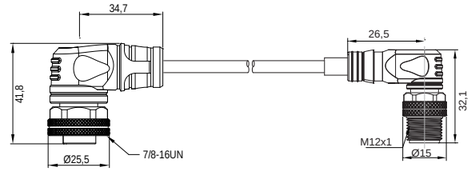


FIG 4
Angled female Mini-Change / Angled male Micro-Change



Connectivity

Profinet Cable

Type Code

E 1 W R 1 W B D 0 4 001 M xxx

Ethernet connector

Connection Type (compulsory)
1: M12, male
2: M12, female
6: RJ45
8: M8, male
9: M8, female

Shape (optional)
Null: Straight
W: Angled (M8, M12)
L: Left outlet cable (RJ45)
R: Right outlet cable (RJ45)

Flange (optional)
Null: No flange
R: Front plate flange
B: Back plate flange

Connection Type (compulsory)
0: Homerun cable
1: M12, male
2: M12, female
6: RJ45
8: M8, male
9: M8, female

Shape (optional)
Null: Straight
W: Angled (M8, M12)
L: Left outlet cable (RJ45)
R: Right outlet cable (RJ45)

Flange (optional)
Null: No flange
R: Front plate flange
B: Back plate flange

Length
020: 2m
040: 4m
050: 5m

Length Unit
M: m

Cable No.
001:84-0001
003:84-0003
005:84-0005
009:84-0009
604:88-0004
605:88-0005
607:88-0007
* : For other cable information, please inquire

No. of pin
4: 4-pin
8: 8-pin

A: Pre-wired RJ45, Cat 5e
B: Pre-wired RJ45, Cat 6
C: Pre-wired RJ45, Cat 7
D: M8,D-code

Connection Code
D: D-coding
X: X-coding
A: A-coding

Profinet Cable

EtherNet/IP	PROFINET	EtherCAT	sercos the automation bus	CC-Link IE
Automation application of industrial control technology	Production and process automization of automation industry	Automation techniques	Motion control	Automation technology
Star topology structure in active state	Star-, line-, tree-, loop-structure as well as mixed structure	Line-, tree-, star-structure as well as mixed structure	Line-, loop-, layer/level-structure	Line-, tree- and star topology-structure
Max. 100 Mbps	100 Mbps to 1 Gbps	100 Mbps	Fast Ethernet 100 Mbps	Gigabit Ethernet
4-pin or 8-pin	4-pin	4-pin	4-pin	8-pin

EtherNet/IP

Signal Indication	Plug Connector	
	RJ45	M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Color of cable core		Signal
WH/OG	🟧	TD+
OG	🟧	TD-
WH/BL	🟦	
BL	🟦	
WH/GN	🟩	RD+
GN	🟩	RD-
WH/BN	🟫	
BN	🟫	

PROFINET

Signal Indication	Plug Connector	
	RJ45	M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Color of cable core		Signal
YL	🟨	TD+
OG	🟧	TD-
WH		RD+
BL	🟦	RD-

EtherCAT

Signal Indication	Plug Connector	
	RJ45	M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Color of cable core		Signal
YL	🟨	TD+
OG	🟧	TD-
WH		RD+
BL	🟦	RD-

sercos

Signal Indication	Plug Connector	
	RJ45	M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Color of cable core		Signal
YL	🟨	TD+
OG	🟧	TD-
WH		RD+
BL	🟦	RD-

CC-Link IE

Signal Indication	Plug Connector	
	RJ45	M12
TD+	2	3
TD-	1	2
RD+	3	5
RD-	6	8

Color of cable core		Signal
WH/OG	🟧	TD+
OG	🟧	TD-
WH/BL	🟦	
BL	🟦	
WH/GN	🟩	RD+
GN	🟩	RD-
WH/BN	🟫	
BN	🟫	

	Type	Condition	Rated Voltage	Ambient Temperature	Max. diameter	Conductor
	84-0001 (UL)	Fixed installation 2x2x22AWG 1typeA	30V	-40...+75℃	6.5±0.2 mm	Solid bare copper wire （0.65mm）
	84-0003	For application with high load and moving 2x2x22AWG 19typeC	30V	-40...+80℃	6.5±0.2 mm	Tin Stranded wire （19*0.16mm）
	84-0005 (UL)	Flexible installation 2x2x22AWG 19typeB	30V	-40...+80℃	6.5±0.2 mm	Tin Stranded wire （19*0.16mm）
	84-0009 (UL)	Fixed installation 2x2x26AWG 19	30V	-40...+80℃	4.9±0.2 mm	Bare copper wire （19*0.1mm）
	88-0004 (UL)	Fixed installation 4x2x26 AWG 1	30V	-20...75℃	6.2±0.3 mm	Bare copper wire （7*0.155mm）
	88-0005 (UL)	Flexible installation 4x2x24 AWG 7	30V	-40...+80℃	6.6±0.3 mm	Bare copper wire （7*0.6mm）
	88-0007 (UL)	Fixed installation 4x2x26 AWG 1	30V	-20...75℃	6.2±0.3 mm	Bare copper wire （7*0.155mm）

	Type	Shielding	Outer Jacket	Communication Cable Color	Bending Diameter	Bending Life
	84-0001 (UL)	Tined copper braid	PVC, Green	Red+Yellow+ White+Blue	15* Cable diameter	—
	84-0003	Tined copper braid	PUR, Green	Red+Yellow+ White+Blue	10* Cable diameter	5 million times
	84-0005 (UL)	Tined copper braid	PVC, Green	Red+Yellow+ White+Blue	10* Cable diameter	—
	84-0009 (UL)	Tined copper braid	PUR, Green	Orange+Yellow+ White+Blue	7.5* Cable diameter	5 million times
	88-0004 (UL)	Tined copper braid	PVC, Grey	Orange+White/Orange+ Blue+White/Blue+ Green+White/Green+ Brown+White/Brown	8* Cable diameter	—
	88-0005 (UL)	Tined copper braid	PUR, Blue	Orange+White/Orange+ Blue+White/Blue+ Green+White/Green+ Brown+White/Brown	5* Cable diameter	—
	88-0007 (UL)	Tined copper braid	PVC, Green	Orange+White/Orange+ Blue+White/Blue+ Green+White/Green+ Brown+White/Brown	8* Cable diameter	—

Profinet - M12/M12 (Pin) Pre-wired Cable

Double-ended M12 D-code Pre-wired Cable

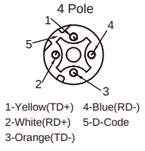
Cat 5e, 100Mbit/S, 4-pin, IP67

Support: PROFINET EtherCAT EtherNet/IP ETHERNET POWERLINK sercos the automation bus

Apply to: Connection of devices on field.

Technical Data	
Material	
Circular Cordsets	PUR
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	4A
Conductor	2x2x22AWG，shielded twisted pair
TIA/EIA Grade	Cat5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

Type List

Pin Assignment	Cable material	Specification	Type
 1-Yellow(TD+) 4-Blue(RD-) 2-White(RD+) 5-D-Code 3-Orange(TD-)	PVC	22 AWG	E11DA4001M020
	TPU	22 AWG	E11DA4003M020
	PVC	22 AWG	E11DA4005M020

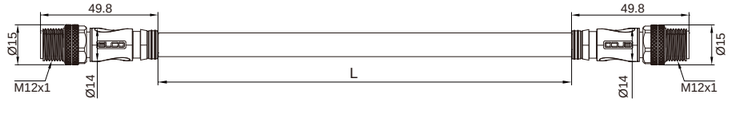
Order Code

E11DA4001Mxxx

11: Double-ended M12
10: Single-ended M12

001: 84-0001 cable
003: 84-0003 cable
005: 84-0005 cable

Dimensions



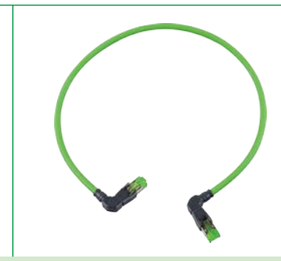
Profinet - RJ45/ RJ45 Pre-wired Cable

Double-ended RJ45 Pre-wired Cable

Cat 5e, 100Mbit/S, 4-pin, IP20

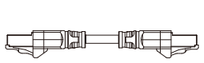
Support: PROFINET EtherCAT EtherNet/IP

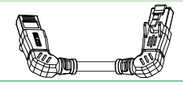
Apply to: Connection between the devices in cabinet, the controller and switch.



Technical Data	
Material	
Square Injection Molding Body	TPU
Contact Carrier	Gold plated
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	1.5A
Conductor	2x2x22AWG，shielded twisted pair
TIA/EIA Grade	Cat5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

Type List





100Base-TX(4wire)	Cable material	Specification	Type	Type
Male 1. Yellow(TD+) 2. Orange(TD-) 3. White(RD+) 4. N/C 5. N/C 6. Blue(RD-) 7. N/C 8. N/C 12345678	PVC	22 AWG	E66DA4001M020	E6L6LDA4001M020
	TPU	22 AWG	E66DA4003M020	E6L6LDA4003M020
	PVC	22 AWG	E66DA4005M020	E6L6LDA4005M020

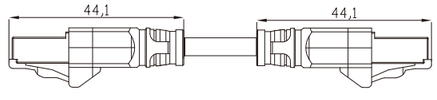
Order Code

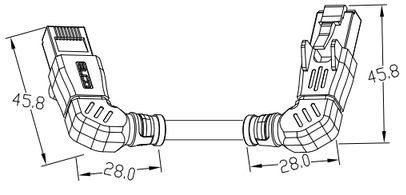
E66DA4002Mxxx

66: Double-ended RJ45
60: Single-ended RJ45

001: 84-0001 cable
003: 84-0003 cable
005: 84-0005 cable

Dimensions





Connectivity

Profinet - RJ45/M12 Double-ended Pre-wired Cable

Double-ended RJ45-M12 Pre-wired Cable

Cat 5e, 100Mbit/S, 4-pin, IP67->IP20

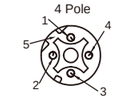
Support: PROFINET EtherCAT EtherNet/IP ETHERNET POWERLINK sercos the automation bus

Apply to: Star topology of field devices; connection between the field devices, the controller and switch.

Technical Data

Material	
Square Injection Molding Body	TPU
Contact Carrier	Gold plated
Circular Cordsets	PUR
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	1.5A
Conductor	2x2x22AWG，shielded twisted pair
TIA/EIA Grade	Cat 5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

Type List

Pin Assignment				
 1-Yellow(TD+) 4-Blue(RD-) 2-White(RD+) 5-D-Code 3-Orange(TD-)	100Base-TX(4wire) Male  1. Yellow(TD+) 2. Orange(TD-) 3. White(RD+) 6. Blue(RD-)	Cable material	Specification	Type
		PVC	22 AWG	E16DA4001M020
		TPU	22 AWG	E16DA4003M020
		PVC	22 AWG	E16DA4005M020

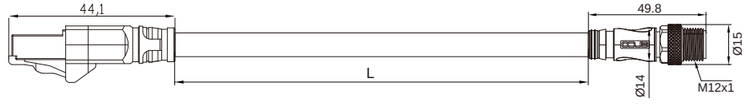
Order Code

E16DA4001Mxxx

16: M12-RJ45

001: 84-0001 cable
003: 84-0003 cable
005: 84-0005 cable

Dimensions



Profinet - RJ45-M12 Flange Pre-wired Cable

Double-ended RJ45-M12 Flange Pre-wired Cable

Cat 5e, 100Mbit/, 4-pin, IP67->IP20

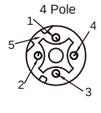
Support: PROFINET EtherCAT EtherNet/IP

Apply to: Connection of panel and cabinet.

Technical Data

Material	
Square Injection Molding Body	TPU
Contact Carrier	Gold plated
Flange	Metal
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	1.5A
Conductor	2x2x22AWG，shielded twisted pair
TIA/EIA Grade	Cat 5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

Type List

Pin Assignment				
 1-Yellow(TD+) 4-Blue(RD-) 2-White(RD+) 5-D-Code 3-Orange(TD-)	100Base-TX(4wire) Male  1. Yellow(TD+) 2. Orange(TD-) 3. White(RD+) 6. Blue(RD-)	Cable material	Specification	Type
		PVC	22 AWG	E2R6DA4001M020
		TPU	22 AWG	E2R6DA4003M020
		PVC	22 AWG	E2R6DA4005M020

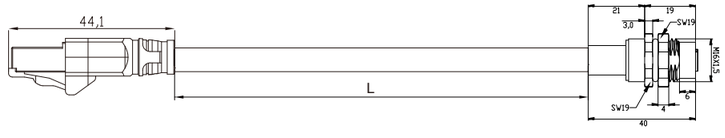
Order Code

E2R6DA4001Mxxx

2R6: RJ45-M12 Flange

001: 84-0001 cable
003: 84-0003 cable
005: 84-0005 cable

Dimensions



Connectivity

Profinet - M12-M12 Flange Double-ended Pre-wired Cable

Double-ended M12-M12 Flange Pre-wired Cable

Cat 5e, 100Mbit/S, 4-pin, IP67->IP20

Support: PROFINET EtherCAT EtherNet/IP ETHERNET POWERLINK sercos the automation bus

Apply to: Connection of panel and external devices of cabinet.

Technical Data	
Material	
Circular Cordsets	PUR
Flange	Metal
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	4A
Conductor	2x2x22AWG，shielded twisted pair
TIA/EIA Grade	Cat5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

Type List

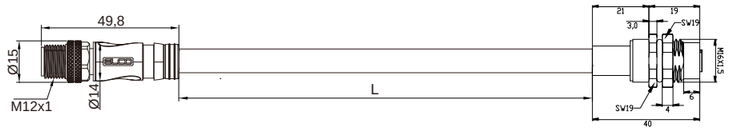
Pin Assignment				
4 Pole 1-Yellow(TD+) 4-Blue(RD-) 2-White(RD+) 5-D-Code 3-Orange(TD-)	4 Pole 1-Yellow(TD+) 4-Blue(RD-) 2-White(RD+) 5-D-Code 3-Orange(TD-)	Cable material	Specification	Type
		PVC	22 AWG	E2R1DA4001M020
		TPU	22 AWG	E2R1DA4003M020
		PVC	22 AWG	E2R1DA4005M020

Order Code

E2R1DA4001Mxxx

- 2R1: M12-M12 Flange
- 001: 84-0001 cable
- 003: 84-0003 cable
- 005: 84-0005 cable

Dimensions



Profinet - M8-M8 Double-ended Pre-wired Cable

Double-ended M8-M8 Pre-wired Cable

Cat 5e, 100Mbit/S, 4-pin, IP67->IP20

Support: PROFINET EtherCAT EtherNet/IP ETHERNET POWERLINK sercos the automation bus

Apply to: Connection of panel and cabinet.

Technical Data	
Material	
Circular Cordsets	PUR
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	4A
Conductor	2x2x26AWG，shielded twisted pair
TIA/EIA Grade	Cat5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

Type List

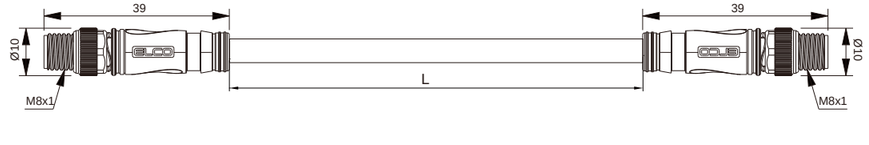
Pin Assignment				
4 Pole 1-Yellow(TD+) 2-White(RD+) 3-Blue(RD-) 4-Orange(TD-)	4 Pole 1-Yellow(TD+) 2-White(RD+) 3-Blue(RD-) 4-Orange(TD-)	Cable material	Specification	Type
		PUR	26 AWG	E88DA4009M020
		PUR	26 AWG	E88DA4009M050
		PUR	26 AWG	E88DA4009M100

Order Code

E88DA4009Mxxx

- 88: Double-ended M8
- 009: 84-0009 cable

Dimensions



Connectivity

Profinet - M8-M12 Double-ended Pre-wired Cable

Double-ended M8-M12 Pre-wired Cable

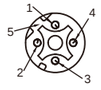
Cat 5e, 100Mbit/, 4-pin, IP67->IP20

Support: PROFINET EtherCAT EtherNet/IP

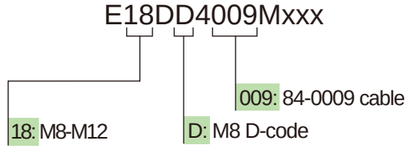
Apply to: Connection of panel and cabinet.

Technical Data	
Material	
Circular Cordsets	PUR
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	4A
Conductor	2x2x22AWG，shielded twisted pair
TIA/EIA Grade	Cat5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>10

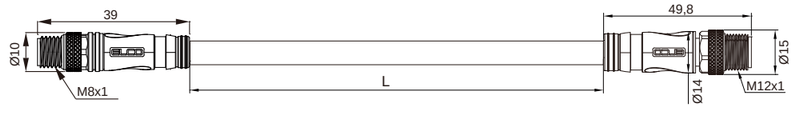
Type List

Pin Assignment				
4 Pole	4 Pole	Cable material	Specification	Type
		PUR	26 AWG	E18DD4009M020
1-Yellow(TD 2-White(RD+) 3-Blue(RD-) 4-Orange(TD-)	**1-**Yellow(TD 2-White(RD+) 3-Blue(RD-) 4-Orange(TD-)	PUR	26 AWG	E18DD4009M050
		PUR	26 AWG	E18DD4009M100

Order Code



Dimensions



Profinet - M8-M8 Double-ended Pre-wired Cable

Double-ended M8-M8 Pre-wired Cable

Cat 5e, 100Mbit/S, 4-pin, IP67->IP20

Support: PROFINET EtherCAT EtherNet/IP ETHERNET POWERLINK sercos the automation bus

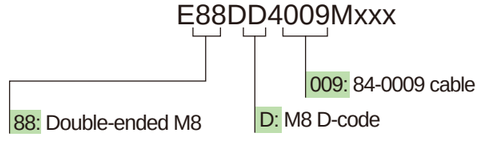
Apply to: Connection of panel and cabinet.

Technical Data	
Material	
Circular Cordsets	PUR
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	4A
Conductor	2x2x26AWG，shielded twisted pair
TIA/EIA Grade	Cat5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

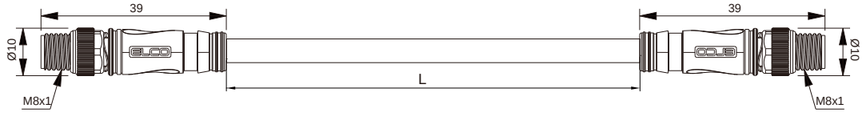
Type List

Pin Assignment				
4 Pole	4 Pole	Cable material	Specification	Type
		PUR	26 AWG	E88DD4009M020
1-Yellow(TD+) 2-White(RD+) 3-Blue(RD-) 4-Orange(TD-)	1-Yellow(TD+) 2-White(RD+) 3-Blue(RD-) 4-Orange(TD-)	PUR	26 AWG	E88DD4009M050
		PUR	26 AWG	E88DD4009M100

Order Code



Dimensions



Profinet - RJ45-M8 Double-ended Pre-wired Cable

Double-ended RJ45-M8 Pre-wired Cable

Cat 5e, 100Mbit/S, 4-pin, IP67->IP20

Support: PROFINET EtherCAT EtherNet/IP ETHERNET POWERLINK sercos the automation bus

Apply to: Star topology of field devices; connection between the field devices, the controller and switch.

Technical Data

Material	
Square Injection Molding Body	TPU
Contact Carrier	Gold plated
Circular Cordsets	PUR
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	1.5A
Conductor	2x2x26AWG，shielded twisted pair
TIA/EIA Grade	Cat5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

Type List

Pin Assignment				
4 Pole  1-Yellow(TD+) 2-White(RD+) 3-Blue(RD-) 4-Orange(TD-)	100Base-TX(4wire) Male  12345678 1. Yellow(TD+) 2. Orange(TD-) 3. White(RD+) 6. Blue(RD-)	Cable material	Specification	Type
		PUR	26 AWG	E86DA4009M020
		PUR	26 AWG	E86DA4009M050
		PUR	26 AWG	E86DA4009M100

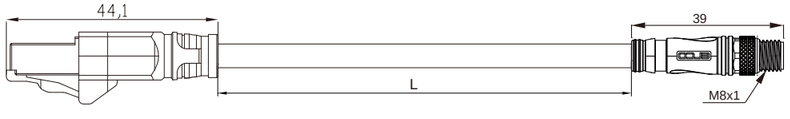
Order Code

E86DA4009Mxxx

86: RJ45-M8

009: 84-0009 cable

Dimensions



Profinet - M8-M12 Double-ended Pre-wired Cable

Double-ended M8-M12 Pre-wired Cable

Cat 5e, 100Mbit/, 4-pin, IP67->IP20

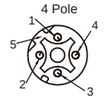
Support: PROFINET EtherCAT EtherNet/IP

Apply to: Connection of panel and cabinet.

Technical Data

Material	
Circular Cordsets	PUR
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V (30V UL)
Operating Current	4A
Conductor	2x2x26AWG，shielded twisted pair
TIA/EIA Grade	Cat5e
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

Type List

Pin Assignment				
4 Pole  1-Yellow(TD+) 2-White(RD+) 3-Orange(TD-) 4-Blue(RD-)	4 Pole  1-Yellow(TD+) 2-White(RD+) 3-Blue(RD-) 4-Orange(TD-)	Cable material	Specification	Type
		PUR	26 AWG	E18DA4009M020
		PUR	26 AWG	E18DA4009M050
		PUR	26 AWG	E18DA4009M100

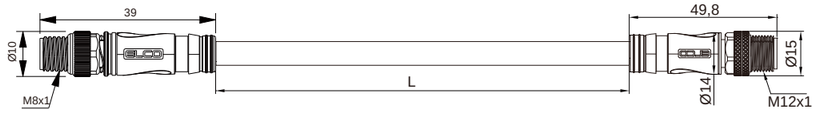
Order Code

E18DA4009Mxxx

18: M8-M12

009: 84-0009 cable

Dimensions



Connectivity

Profinet - RJ45 Field-attachable Cable/M12 Pre-wired Cable

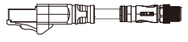
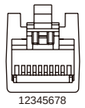
Double-ended RJ45 Field-attachable Cable-M12 Pre-wired Cable

Cat 6, 1000Mbit/S, 8-pin, IP67->IP20

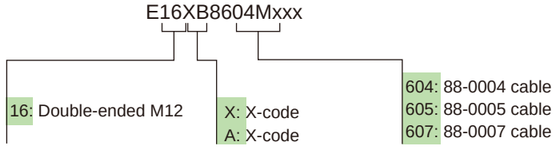
Apply to: Star topology of field devices; connection between the field devices, the controller and switch.

Technical Data	
Material	
Square Injection Molding Body	PA
Contact Carrier	Gold plated
Circular Cordsets	PUR
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V
Operating Current	0.5 A
Conductor	4x2x24/26AWG，shielded twisted pair
TIA/EIA Grade	Cat6
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

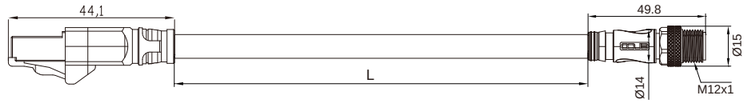
Type List

Pin Assignment				
8 Pole  1. wh/or 2. or 3. wh/gn 4. gn 5. wh/bn 6. bn 7. wh/bu 8. bu	1000Base-TX(8wire) Male  12345678 1. wh/or 2. or 3. wh/gn 4. bu 5. wh/bu 6. gn 7. wh/bn 8. bn	Cable material	Specification	Type
		PVC	26 AWG	E16XB8604M020
		TPU	24 AWG	E16XB8605M020

Order Code



Dimensions



Profinet - M12-M12 Double-ended Pre-wired Cable

Double-ended M12 X-code Pre-wired Cable

Cat 6, 1000Mbit/S, 8-pin, IP67

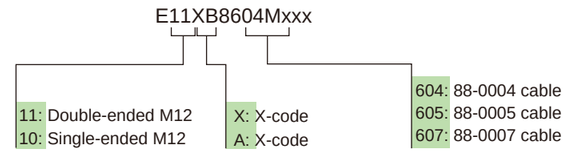
Apply to: Connection of devices on field.

Technical Data	
Material	
Circular Cordsets	PUR
Contact	Gold plated
Connecting Nut/Bolt	Nickel plated brass
Cable	For details, see cable list.
Operating Voltage	60V
Operating Current	0.5 A
Conductor	4x2x24/26AWG，shielded twisted pair
TIA/EIA Grade	Cat6
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

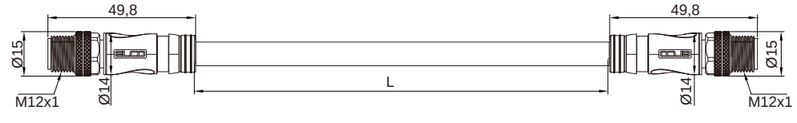
Type List

Pin Assignment				
8 Pole  1. wh/or 2. or 3. wh/gn 4. gn 5. wh/bn 6. bn 7. wh/bu 8. bu	8 Pole  1. wh/or 2. or 3. wh/gn 4. gn 5. wh/bn 6. bn 7. wh/bu 8. bu	Cable material	Specification	Type
		PVC	26AWG	E11XB8604M020
		TPU	24 AWG	E11XB8605M020

Order Code



Dimensions



Connectivity

Profinet - RJ45 Field-attachable Cable

Double-ended RJ45 Field-attachable Cable

Cat 6, 1000Mbit/S, 8-pin, IP20

Apply to: Connection between the devices in cabinet, the controller and switch.

Technical Data

Material	
Square Injection Molding Body	PA
Contact Carrier	Gold plated
Cable	For details, see cable list.
Operating Voltage	60V
Operating Current	0.5 A
Conductor	4x2x24/26AWG，shielded twisted pair
TIA/EIA Grade	Cat6
Certificate	CE，UL
Protection Class	IP67
Ambient Temperature	-30...+80℃
Mechanical Life	>100

Type List

Pin Assignment		Cable material	Specification	Type
1000Base-TX(8wire) Male 12345678	1. wh/or 2. or 3. wh/gn 4. bu 5. wh/bu 6. gn 7. wh/bn 8. bn	PVC	26AWG	E66XB8604M020
1000Base-TX(8wire) Male 12345678	1. wh/or 2. or 3. wh/gn 4. bu 5. wh/bu 6. gn 7. wh/bn 8. bn	TPU	24 AWG	E66XB8605M020

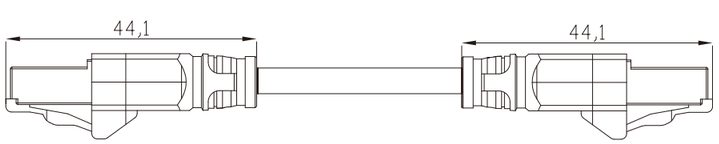
Order Code

E66XB8604Mxxx

66: Double-ended RJ45
60: Single-ended RJ45

604: 88-0004 cable
605: 88-0005 cable
607: 88-0007 cable

Dimensions



Profinet Field-attachable Connector

Functions:

- For Profinet field connection
- M12 D-coded interface

Technical Data

Material	
Nut	Nickel plated brass
Housing	Nickel plated brass
Contact	Gold-plated
Cable	
Cable Material	22-24 AWG
	0.25-0.34mm2
Outer Diameter	5.5-7.2mm
Using Grade	
Protection Class	IP67
Ambient Temperature	-30...+80℃

Type List

Cross section	Max. current	Voltage	Outer diameter	Male straight Type	Male straight Fig.	Female straight Type	Female straight Fig.
4 Pole 1 - Yellow (TD+) 2 - White (RD+) 3 - Orange (TD-) 4 - Blue (RD-)	4.0A	32V	5.50-7.20mm	ES06-52/C	FIG1	ES00-52/C	FIG2
Cross section	Max. current	Voltage	Outer diameter	Male straight Type	Male straight Fig.	Female straight Type	Female straight Fig.
4 Pole 1 - Yellow (TD+) 2 - White (RD+) 3 - Orange (TD-) 4 - Blue (RD-)	4.0A	32V	5.50-7.20mm	ES07-52/C	FIG3	ES01-52/C	FIG4

Dimensions

FIG 1

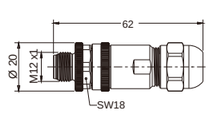


FIG 2

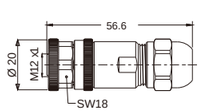


FIG 3

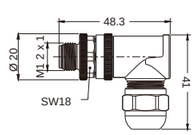
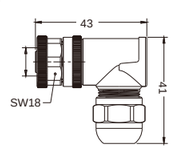


FIG 4



Connectivity

Profinet Field-attachable Connector

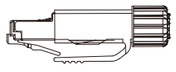
Functions:

- For Profinet field connection
- RJ45 interface

Technical Data

Material	
Housing	PA
Contact Carrier	Nickel plated brass
Contact	Gold-plated
Cable	
Cable Material	22-24 AWG
	0.25-0.34mm2
Outer Diameter	6.0-6.9mm
Using Grade	
Protection Class	IP20
Ambient Temperature	-30...+80℃

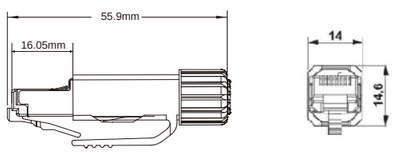
Type List



Cross section	Max. current	Voltage	Outer diameter	Type	Fig.
100Base-TX(4wire) Male 1. Yellow(TD+) 2. Orange(TD-) 3. White(RD+) 4. N/C 5. N/C 6. Blue(RD-) 7. N/C 8. N/C 12345678	1.75A	60V	6.0-6.9mm	ENS45	Fig. 1

Dimensions

Fig. 1



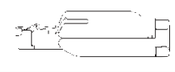
Profinet Field-attachable Connector

- For Profinet field connection
- RJ45 interface

Technical Data

Material	
Housing	Zinc alloy
Contact	Gold plating
Cable	
Cable Material	22-24 AWG
	0.25-0.34mm²
Outer Diameter	6.0-6.9mm
Using Grade	
Protection Class	IP20
Ambient Temperature	-25...+85℃

Type List



Cross section	Max. current	Voltage	Outer diameter	Type	Fig.
100Base-TX(4wire) Male 1. Yellow(TD+) 2. Orange(TD-) 3. White(RD+) 4. N/C 5. N/C 6. Blue(RD-) 7. N/C 8. N/C 12345678	1.75A	60V	6.0-6.9mm	ENS45-G1	FIG1

Dimensions

FIG 1

Profinet Field——ProfiNet Extension part

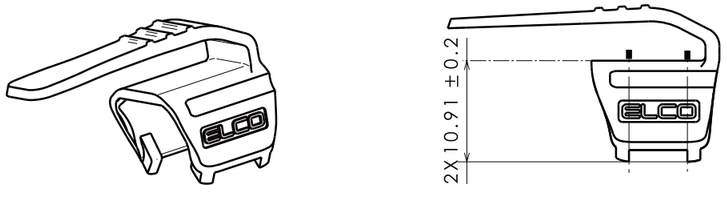
Functions:

■ For Profinet field connection

Technical Data		
Housing	PC+ABS	
Ambient Temperature	-40...80℃	
Type		
Type	ENS-DA1	ENS-DA1/10PCS
Fig.	FIG1	

Dimensions

FIG 1



CC-Link Cable

	CC-Link Standard Cable
Type	87-0001
Condition	Fixed installation 3x20 AWG
Rated Voltage	300V
Ambient Temperature	-30...80℃
Max. diameter	7.7±0.3 mm
Conductor	Bare copper wire (7*0.32mm)
Impedence	17.5 ohms/100ft
Wire	3 wires stranded cable
Shield	Tined copper braid
Jacket	PVC , Red
Communication cable color	Yellow+White+Blue
Bending diameter	10*Cable diameter
Bending life	—

* MOQ : 50m

CC-Link - Single - ended Cordsets

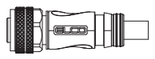
Features:

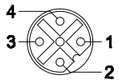
- PVC(TPU), waterproof(oil-proof)
- Low impedance design
- 360° shielded

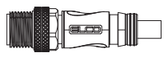
Technical Data

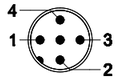
Material	
Contact Carrier	Nylon
Molded Head	PUR
Coupling Nut	zinc die cast alloy
Using Grade	
Protection Class	IP67
Ambient Temperature	-30-+80℃

Type List



Pin Assignment	Max. current	Max. voltage	Cable type	Cable material	Wire size	Length	Female/Straight Type	Female/Straight Fig.	Female/Angled Type	Female/Angled Fig.
 1 - Shield SLD 2 - Bus DB 3 - Bus DG 4 - Bus DA	4.0A	250VAC/DC	Three pair	PVC	20	1.0m	A05S00C01M010	Fig. 1	A05S01C01M010	Fig. 2
				TPU						



Pin Assignment	Max. current	Max. voltage	Cable type	Cable material	Wire size	Length	Male/Straight Type	Male/Straight Fig.	Male/Angled Type	Male/Angled Fig.
 1 - Shield SLD 2 - Bus DB 3 - Bus DG 4 - Bus DA	4.0A	250VAC/DC	Three pair	PVC	20	1.0m	A05S06C01M010	Fig. 1	A05S07C01M010	Fig. 2
				TPU						

Order Code

A05S01C01 Mxxx

Connection type
Female Straight 00
Female Angled..... 01
Male Straight..... 06
Male Angled..... 07

C01：PVC,UL,violet,3x20AWG

Length
1 m..... 010
2 m..... 020
3 m..... 030
5 m..... 040

CC-Link - Double-ended Cordsets

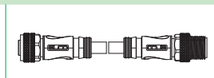
Features:

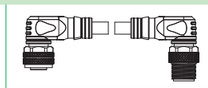
- PVC(TPU), waterproof(oil-proof)
- Low impedance design
- 360° shielded

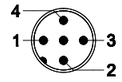
Technical Data

Material	
Contact Carrier	Nylon
Molded Head	PUR
Coupling Nut	zinc die cast alloy
Using Grade	
Protection Class	IP67
Ambient Temperature	-30-+80℃

Type List





Pin Assignment	Max. currentv	Max. voltage	Cable type	Cable material	Wire size	Length	Female/Straight Type	Female/Straight Fig.	Female/Angled Type	Female/Angled Fig.
 1 - Shield SLD 2 - Bus DB 3 - Bus DG 4 - Bus DA	4.0A	250VAC/DC	Three pair	PVC	20	1.0m	AA5S30C01M010	Fig. 1	AA5S33C01M010	Fig. 2

Order Code

AA5S30C01 Mxxx

Connection type
Double-ended Straight..... 30
Double-ended Angled..... 33

C01：PVC,UL,violet,2XAWG 22

Length
0.3 m..... 003
0.6 m..... 006
1 m..... 010
2 m..... 020

Dimensions

Fig. 1

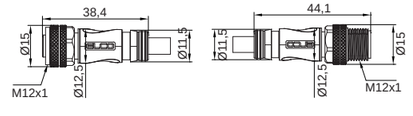
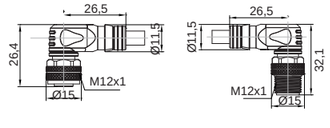


Fig. 2



Connectivity

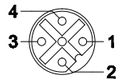
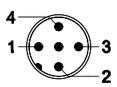
Features:

- Used for M12 CC-Link connector
- 5-pin Shield
- Screw connecting

Technical Data

Material	
Contact Carrier	PU
Housing material	Nickel plated brass
Contact	Silver-plated
Coupling Nut	Nickel plated brass
O-Ring	Rubber
Cable	4.10-8.10mm
Using Grade	
Protection Class	IP67

Type List

Pin Assignment	Max. current	Max. voltage	Cable diameter	Female/Straight		Female/Male+D-Sub	
				Type	Fig.	Type	Fig.
 1 - Shield SLD 2 - Bus DB 3 - Bus DG 4 - Bus DA	4.0A	250V AC/DC	4.10-8.10mm	AA5S00-32	Fig. 1		
 1 - Shield SLD 2 - Bus DB 3 - Bus DG 4 - Bus DA						AA5S06-32	Fig. 2

Dimensions

Fig. 1

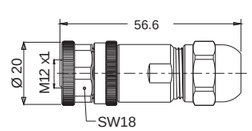
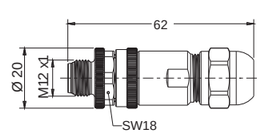


Fig. 2



Flange socket connector - M12 female (F)

Description:

Used for fixed I/O connecting such as panel and cabinet. Standard M12(female) threaded connection.
4, 5, 8-core are optional.

Features:

- Optional front/rear panel installation
- Customized cable lengths

Technical Data

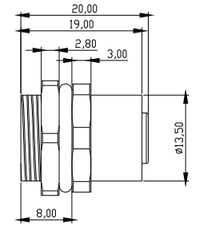
Cable jacket	Description	Type	Pin	Rated current/voltage	Dia. of cable
Brass zine nickel plating	Female 4-core rear panel installation	FO12.4-0/M16	4	4A/250V	0.25-1mm²
	Female 4-core front panel installation	FO12.4-0/M16/F	4	4A/250V	0.25-1mm²
	Female 5-core rear panel installation	FO12.5-0/M16	5	4A/60V	0.25-0.75mm²
	Female 5-core front panel installation	FO12.5-0/M16/F	5	4A/60V	0.25-0.75mm²
	Female 8-core rear panel installation	FO12.8-0/M16	8	2A/30V	Max.0.25mm²
	Female 8-core front panel installation	FO12.8-0/M16/F	8	2A/30V	Max.0.25mm²

Selection Instructions

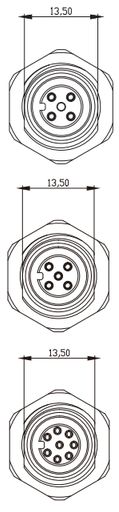
FO12.4 - 0/M16

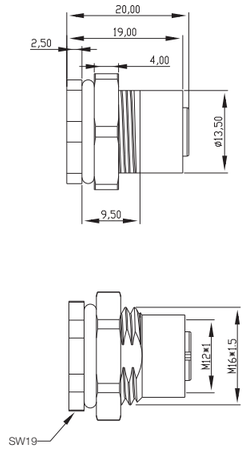
Attn: Standard

Dimensions



Rear panel installation





Front panel installation

Flange socket connector - M12 male (M)

Description:

Used for fixed I/O connecting such as panel and cabinet. Standard M12(male) threaded connection.
4, 5, 8-core are optional.

Features:

- Optional front/rear panel installation
- Customized cable lengths

Technical Data

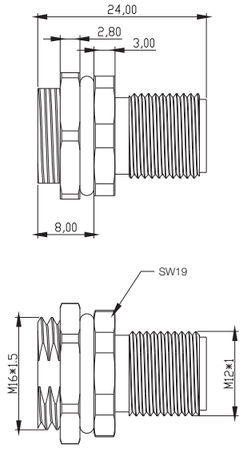
Cable jacket	Description	Type	Pin	Rated current/voltage	Dia. of cable
Brass zine nickel plating	Male 4-core rear panel installation	F12.4-0/M16	4	4A/250V	0.25-1mm²
	Male 4-core front panel installation	F12.4-0/M16/F	4	4A/250V	0.25-1mm²
	Male 5-core rear panel installation	F12.5-0/M16	5	4A/60V	0.25-0.75mm²
	Male 5-core front panel installation	F12.5-0/M16/F	5	4A/60V	0.25-0.75mm²
	Male 8-core rear panel installation	F12.8-0/M16	8	2A/30V	Max.0.25mm²
	Male 8-core front panel installation	F12.8-0/M16/F	8	2A/30V	Max.0.25mm²

Selection Instructions

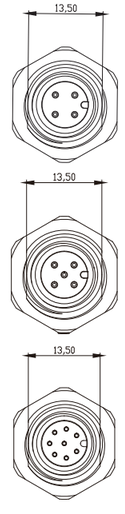
F12.4 - 0/M16

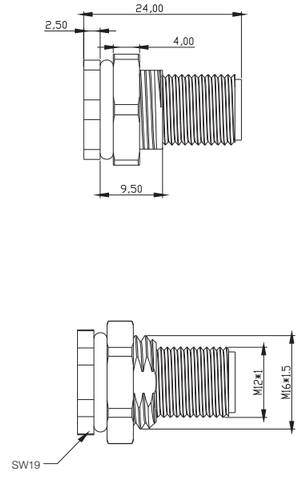
Attn: Standard

Dimensions



Rear panel installation





Front panel installation

Connectivity

Flange socket connector - M8 female (F)

Description:

Used for fixed I/O connecting such as panel and cabinet. Standard M8(female) threaded connection.
3, 4-core are optional.

Features:

- Optional front/rear panel installation
- Customized cable lengths

Technical Data

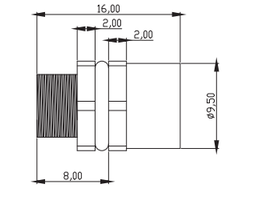
Cable jacket	Description	Type	Pin	Rated current/voltage	Dia. of cable
Brass zine nickel plating	Female 3-core rear panel installation	FO8.3-0/M8	3	4A/60V	0.25mm²
	Female 3-core front panel installation	FO8.3-0/M11/F	3	4A/60V	0.25mm²
	Female 4-core rear panel installation	FO8.4-0/M8	4	4A/30V	0.25mm²
	Female 4-core front panel installation	FO8.4-0/M11/F	4	4A/30V	0.25mm²

Order Code

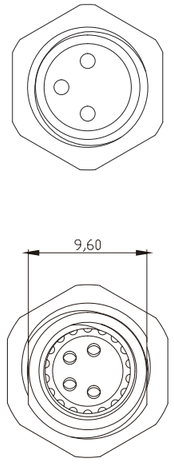
FO8.3-0/M8

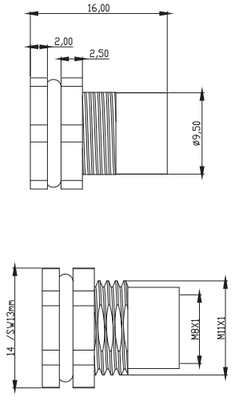
Attn: Standard

Dimensions



Rear panel installation





Front panel installation

Flange socket connector - M8 male (M)

Description:

Used for fixed I/O connecting such as panel and cabinet. Standard M8(male) threaded connection.
3, 4-core are optional.

Features:

- Optional front/rear panel installation
- Customized cable lengths

Technical Data

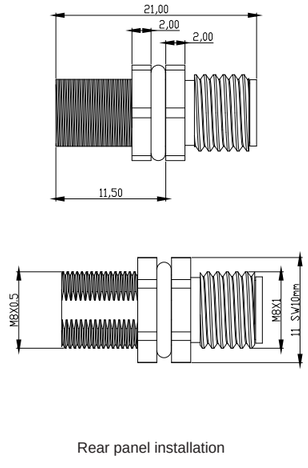
Cable jacket	Description	Type	Pin	Rated current/voltage	Dia. of cable
Brass zine nickel plating	Male 3-core rear panel installation	F8.3-0/M8	3	4A/60V	0.25mm²
	Male 3-core front panel installation	F8.3-0/M8/F	3	4A/60V	0.25mm²
	Male 4-core rear panel installation	F8.4-0/M8	4	4A/30V	0.25mm²
	Male 4-core front panel installation	F8.4-0/M8/F	4	4A/30V	0.25mm²

Order Code

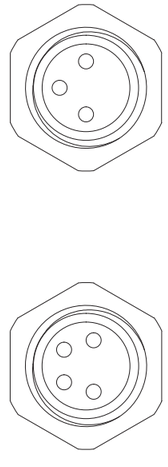
F8.3-0/M8

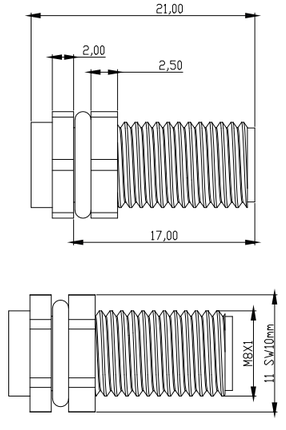
Attn: Standard

Dimensions



Rear panel installation





Front panel installation

Flange socket connector - 7/8'' female (F)

Description:

Used for fixed I/O connecting such as panel and cabinet. Standard 7/8''(female) threaded connection.
3, 4, 5-core are optional.

Features:

- Optional front/rear panel installation
- Customized cable lengths

Technical Data

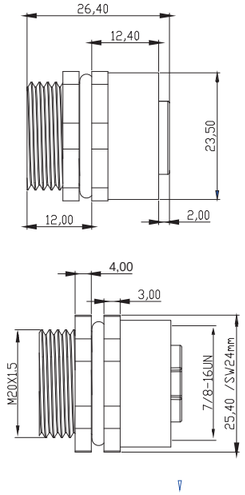
Cable jacket	Description	Type	Pin	Rated current / voltage	Dia. of cable
Brass zine nickel plating	Female 3-core rear panel installation	FO7.3-0/M20	3	8A/600V	Max1.5mm^2
	Female 4-core rear panel installation	FO7.4-0/M20	4	8A/600V	Max1.5mm^2
	Female 5-core rear panel installation	FO7.5-0/M20	5	8A/600V	Max1.5mm^2

Order Code

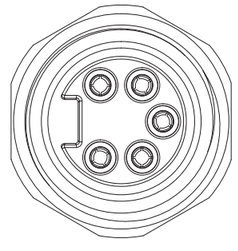
FO7.3-0/M16

Attn: Standard

Dimensions



Rear panel installation



Flange socket connector - 7/8'' Male (M)

Description:

Used for fixed I/O connecting such as panel and cabinet. Standard 7/8"(male) threaded connection.
3, 4, 5-core are optional.

Features:

- Optional front/rear panel installation
- Customized cable lengths

Technical Data

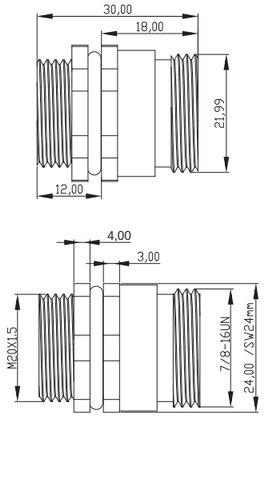
Cable jacket	Description	Type	Pin	Rated current / voltage	Dia. of cable
Brass zine nickel plating	Male 3-core rear panel installation	F7.3-0/M20	3	8A/600V	Max1.5mm^2
	Male 4-core rear panel installation	F7.4-0/M20	4	8A/600V	Max1.5mm^2
	Male 5-core rear panel installation	F7.5-0/M20	5	8A/600V	Max1.5mm^2

Order Code

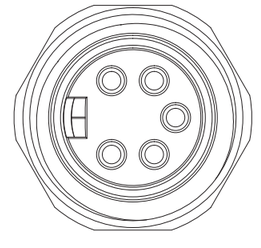
F7.4-0/M16

Attn: Standard

Dimensions



Rear panel installation



Distribution Box

Elco supplies metal and plastic housing junction box. Metal junction box is circular connector wiring, while plastic junction box isdivided into straight wiring and terminal wiring products. All junction box products up to IP67 provide economical and practicalwiring system in the sensors and actuators working area. Sensing and executive signal need transferring and extending, and thejunction box is imperative, because it can connect with large criss-cross controlling system easily and quickly. Meanwhile, Elco has multi-branch box for DeviceNet, incluing 4, 6, 8 terminal inlet and 2, 4, 6 terminal inlet\outlet products.

- LED indicator for diagnosing input signal and power error of all products.
- Juntion box interface for selection: M8 M12
- Supplying 4 and 8 channel products for selection.
- Wiring type: pre-wired, M23 interface wiring and terminal wiring
- Metal and plastic housing for selection
- One I/O interface importing 2 signals
- Field wiring products with plastic terminal choosing 2-zone power mode
- Indication function: PNP NPN

ELCO INDUSTRIAL AUTOMATION

ES P 8 — 12 — 3 P — 3 / P

Products Type

Distribution Box

Housing Material and Connection

P: Plastic Housing
Threaded Connection

I/O Port No.

4:4-way
6:6-way
8:8-way
10:10-way
12:12-way(M8)

Size

8：M8*1
12：M12*1

Special Instruction and Cable Material

Null: No Special Function
/P: PUR/PP
Drag chain 5 million times
Cable Material: PUR/PP

Connection Type

Null：Standard 3m cable(optional length)
Q12: Top M12×1
Q23: Top M23×1
Q: Spring terminal

LED Indicator

P：PNP
N：NPN

Output Function

2: 1 power+1 signal LED /channel
3: 1 power+2 signals LED /channel
4: 2 power+2 signals LED /channel

Plastic distribution box ESP4 series (M8 socket, with M12 plug connector)

Description:

Plastic housing, distributed design, 4-way, single/double signal.

Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Compact size - 93mm, especially suitable for small space installation
- Standard 3m PUR cable for M12 connector, optional cable material and length

Type List	ESP4-8-2P-Q12	ESP4-8-2N-Q12	ESP4-8-3P-Q12	ESP4-8-3N-Q12
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	3-pin M8 female		4-pin M8 female	
Locking Sockets	Threaded M8x1			
Dimensions	Fig.1,3		Fig.2,3	
Pin Assignment	Fig.4		Fig.5	
Wiring Diagram	Fig.9	Fig.10	Fig.11	Fig.12
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	4			
Signals per Port	1		2	
Status Indicators	LED yellow		LED yellow / red	
Operating Current	Max. 1.5A			
Current Parameter	Max. 1.5A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80°C			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Connector	M12(12pins)			

Dimensions

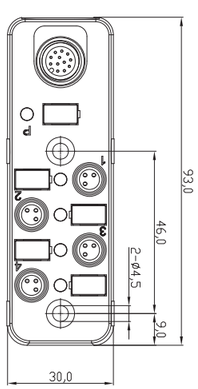


Fig. 1

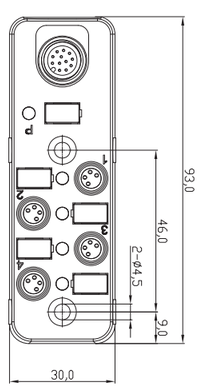


Fig. 2

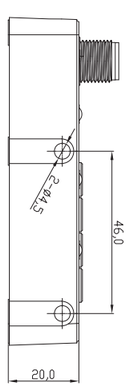
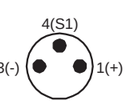


Fig. 3

Pin Assignment

Fig. 4



3-pin PNP/NPN 1 signal

Fig. 5

4-pin PNP/NPN 2 signals

Accessories of Distribution Box -Connector

Type List		
Type	CO12.12-3 / P	CBO12.12-3 / P
Description	Straight pre-wired connector	Angled pre-wired connector
Cable Material	Standard PUR / PP Bending≥5 million	Standard PUR / PP Bending≥5 million
Cable Length	3m	3m
Dimensions	Fig. 6	Fig. 7
Pin Assignment	Fig. 8	

Dimensions

Fig. 6

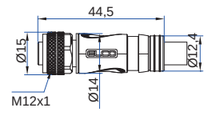
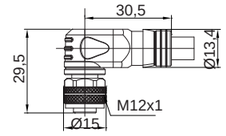
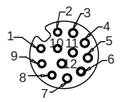


Fig. 7



Pin Assignment

Fig. 8

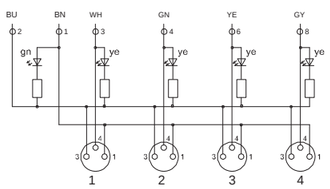


12-pin M12 Male	Suggested Cable Color
1	BN
2	BU
3	WH
4	GN
5	PK
6	YE
7	BK
8	GY
9	RD
10	VT
11	GY/PK
12	RD/BU

Wiring Diagram

Fig. 9

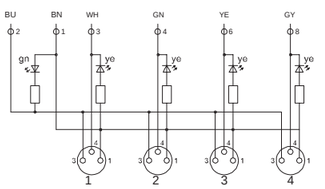
Connector



LED indicator PNP

Fig. 10

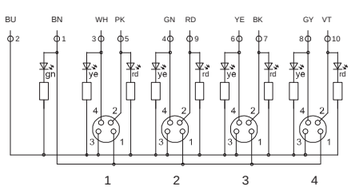
Connector



LED indicator NPN

Fig. 11

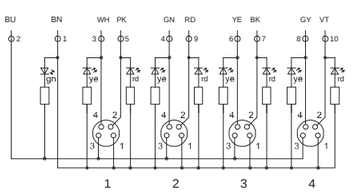
Connector



LED indicator PNP

Fig. 12

Connector



LED indicator NPN

Connectivity

Plastic distribution box ESP4 series (M8 socket, with pre-wired cable)

Description:

Plastic housing, 4-way, pre-wired cable, single/double signal.

Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Compact size - 93mm, especially suitable for small space installation
- Standard 3m PUR cable, optional cable length

Type List	ESP4-8-2P-3/P	ESP4-8-2N-3/P	ESP4-8-3P-3/P	ESP4-8-3N-3/P
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	3-pin M8 female		4-pin M8 female	
Locking Sockets	Threaded M8x1			
Dimensions	Fig.1,3		Fig.2,3	
Pin Assignment	Fig.4		Fig.5	
Wiring Diagram	Fig. 6	Fig. 7	Fig. 8	Fig. 9
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	4			
Signals per Port	1		2	
Status Indicators	LED yellow		LED yellow / red	
Operating Current	Max. 2A			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80°C			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Cable Material	Standard PUR / PP Bending≥5 million			
Length	3m			

Dimensions

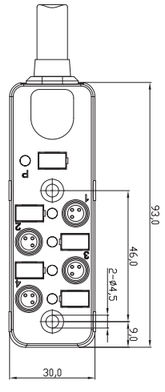


Fig. 1

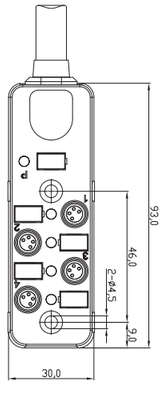


Fig. 2

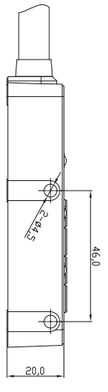
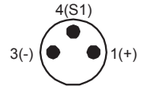


Fig. 3

Pin Assignment

Fig. 4



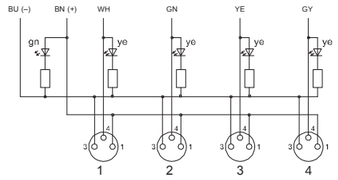
3-pin PNP/NPN 1 signal

Fig. 5

4-pin PNP/NPN 2 signals

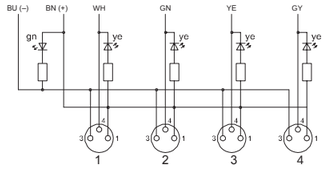
Wiring Diagram

Fig. 6
Cable



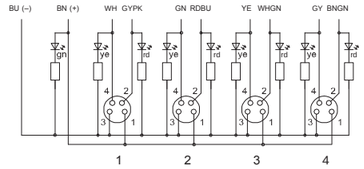
LED indicator PNP

Fig. 7
Cable



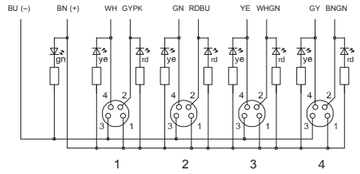
LED indicator NPN

Fig. 8
Cable



LED indicator PNP

Fig. 9
Cable



LED indicator NPN

Plastic distribution box ESP6 series (M8 socket, with M12 plug connector)

Description:

Plastic housing, distributed design, 6-way, single signal.

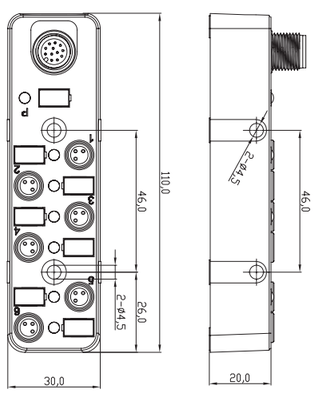
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Compact size - 110mm, especially suitable for small space installation
- Standard 3m PUR cable for M12 connector, optional cable material and length

Type List	ESP6-8-2P-Q12	ESP6-8-2N-Q12
Technical Data		
Output Function	1 signal	
Output Type	PNP	NPN
Connection for Sensors/Actuators	3-pin M8 female	
Locking Sockets	Threaded M8x1	
Dimensions	Fig. 1	
Pin Assignment	Fig. 2	
Wiring Diagram	Fig. 6	Fig. 7
Supply Voltage	10...30VDC (24VDC)	
Supply Voltage Indicator	LED green	
I/O Channels	6	
Signals per Port	1	
Status Indicators	LED yellow	
Operating Current	Max. 1.5A	
Current Parameter	Max. 1.5A	
	Please do not operate cables above max. load capacity.	
Housing Material	Plastic	
	PC + ABS	
Protection Class	IP67	
Temperature Range	-40...+80°C	
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.	
Connector	M12(12pins)	

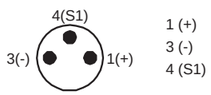
Dimensions

Fig. 1



Pin Assignment

Fig. 2



3-pin PNP/NPN 1 signal

Accessories of Distribution Box -Connector

Type List		
Type	CO12.12-3 / P	CBO12.12-3 / P
Description	Straight pre-wired connector	Angled pre-wired connector
Cable Material	Standard PUR / PP Bending≥5 million	Standard PUR / PP Bending≥5 million
Cable Length	3m	3m
Dimensions	Fig. 3	Fig. 4
Pin Assignment	Fig. 5	Fig. 5

Dimensions

Fig. 3

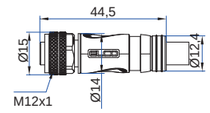
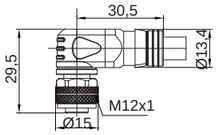
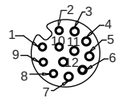


Fig. 4



Pin Assignment

Fig. 5

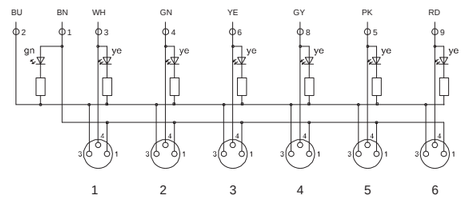


12-pin M12 Male	Suggested Cable Color
1	BN
2	BU
3	WH
4	GN
5	PK
6	YE
7	BK
8	GY
9	RD
10	VT
11	GY/PK
12	RD/BU

Wiring Diagram

Fig. 6

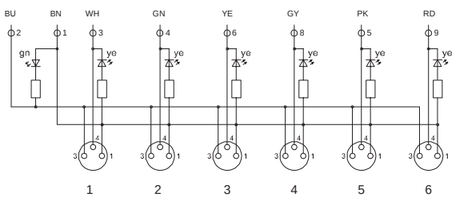
Connector



LED indicator PNP

Fig. 7

Connector



LED indicator NPN

Connectivity

Plastic distribution box ESP6 series (M8 socket, with pre-wired cable)

Description:

Plastic housing, 6-way, pre-wired cable, single/double signal.

Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Compact size - 110mm, especially suitable for small space installation
- Standard 3m PUR cable, optional cable length

Type List	ESP6-8-2P-3/P	ESP6-8-2N-3/P	ESP6-8-3P-3/P	ESP6-8-3N-3/P
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	3-pin M8 female		4-pin M8 female	
Locking Sockets	Threaded M8x1			
Dimensions	Fig.1,3		Fig.2,3	
Pin Assignment	Fig.4		Fig.5	
Wiring Diagram	Fig.6	Fig.7	Fig.8	Fig.9
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	6			
Signals per Port	1		2	
Status Indicators	LED yellow		LED yellow / red	
Operating Current	Max. 2A			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80˚C			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Cable Material	Standard PUR / PP Bending≥5 million			
Length	3m			

Dimensions

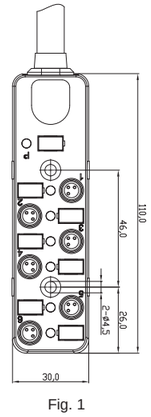


Fig. 1

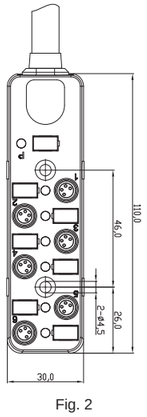


Fig. 2

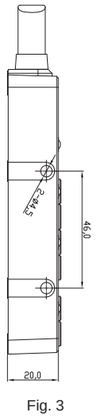
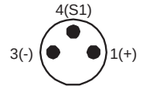


Fig. 3

Pin Assignment

Fig. 4



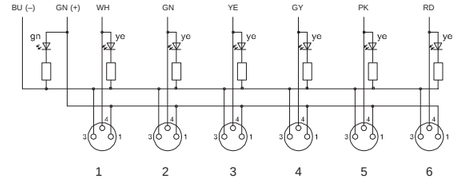
3-pin PNP/NPN 1 signal

Fig. 5

4-pin PNP/NPN 2 signals

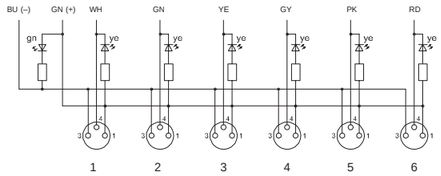
Wiring Diagram

Fig. 6
Cable



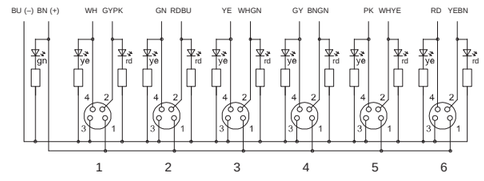
LED indicator PNP

Fig. 7
Cable



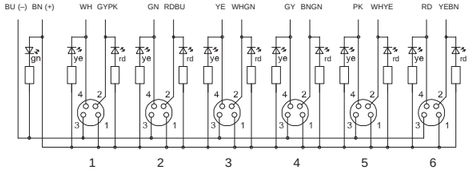
LED indicator NPN

Fig. 8
Cable



LED indicator PNP

Fig. 9
Cable



LED indicator NPN

Plastic distribution box ESP8 series (M8 socket, with M12 plug connector)

Description:

Plastic housing, distributed design, 8-way, single signal.

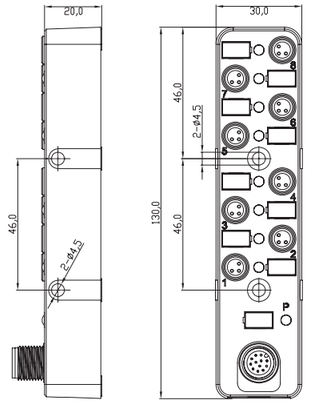
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Compact size - 130mm, especially suitable for small space installation
- Standard 3m PUR cable for M12 connector, optional cable material and length

Type List	ESP8-8-2P-Q12	ESP8-8-2N-Q12
Technical Data		
Output Function	1 signal	
Output Type	PNP	NPN
Connection for Sensors/Actuators	3-pin M8 female	
Locking Sockets	Threaded M8x1	
Dimensions	Fig.1	
Pin Assignment	Fig.2	
Wiring Diagram	Fig.6	Fig.7
Supply Voltage	10...30VDC (24VDC)	
Supply Voltage Indicator	LED green	
I/O Channels	8	
Signals per Port	1	
Status Indicators	LED yellow	
Operating Current	Max. 1.5A	
Current Parameter	Max. 1.5A	
	Please do not operate cables above max. load capacity.	
Housing Material	Plastic	
	PC + ABS	
Protection Class	IP67	
Temperature Range	-40...+80℃	
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.	
Connector	M12(12pins)	

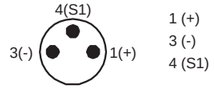
Dimensions

Fig. 1



Pin Assignment

Fig. 2



1 (+)
3 (-)
4 (S1)

3-pin PNP/NPN 1 signal

Accessories of Distribution Box -Connector

Type List		
Type	CO12.12-3 / P	CBO12.12-3 / P
Description	Straight pre-wired connector	Angled pre-wired connector
Cable Material	Standard PUR / PP Bending≥5 million	Standard PUR / PP Bending≥5 million
Cable Length	3m	3m
Dimensions	Fig. 3	Fig. 4
Pin Assignment	Fig. 5	Fig. 5

Dimensions

Fig. 3

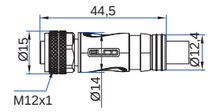
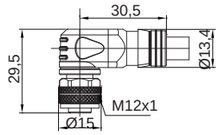
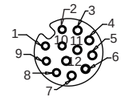


Fig. 4



Pin Assignment

Fig. 5

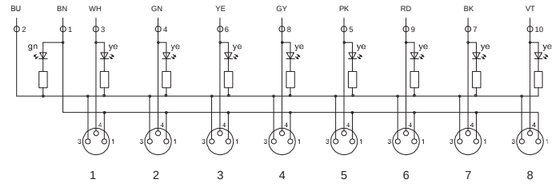


12-pin M12 Male	Suggested Cable Color
1	BN
2	BU
3	WH
4	GN
5	PK
6	YE
7	BK
8	GY
9	RD
10	VT
11	GY/PK
12	RD/BU

Wiring Diagram

Fig. 6

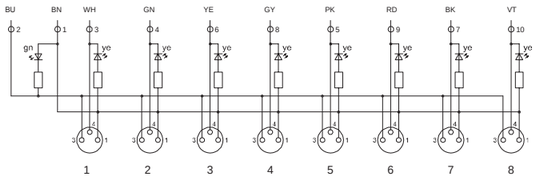
Connector



LED indicator PNP

Fig. 7

Connector



LED indicator NPN

Plastic distribution box ESP8 series (M8 socket, with pre-wired cable)

Description:

Plastic housing, 8-way, pre-wired cable, single/double signal.

Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Compact size - 130mm, especially suitable for small space installation
- Standard 3m PUR cable, optional cable length

Type List	ESP8-8-2P-3/P	ESP8-8-2N-3/P	ESP8-8-3P-3/P	ESP8-8-3N-3/P
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	3-pin M8 female		4-pin M8 female	
Locking Sockets	Threaded M8x1			
Dimensions	Fig.1,3		Fig.2,3	
Pin Assignment	Fig.4		Fig.5	
Wiring Diagram	Fig.6	Fig.7	Fig.8	Fig.9
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	8			
Signals per Port	1		2	
Status Indicators	LED yellow		LED yellow / red	
Operating Current	Max. 2A			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80˚C			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Cable Material	Standard PUR / PP Bending≥5 million			
Length	3m			

Dimensions

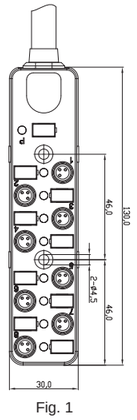


Fig. 1

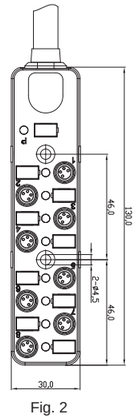


Fig. 2

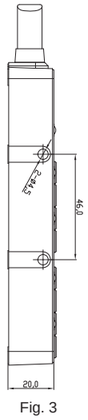
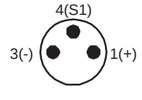


Fig. 3

Pin Assignment

Fig. 4



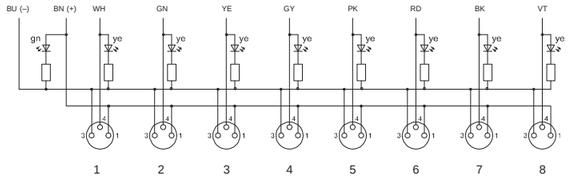
3-pin PNP/NPN 1 signal

Fig. 5

4-pin PNP/NPN 2 signals

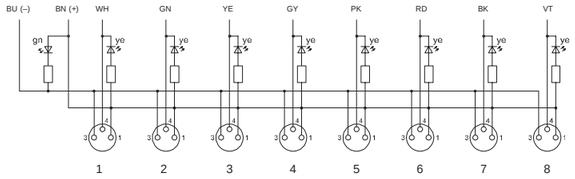
Wiring Diagram

Fig. 6
Cable



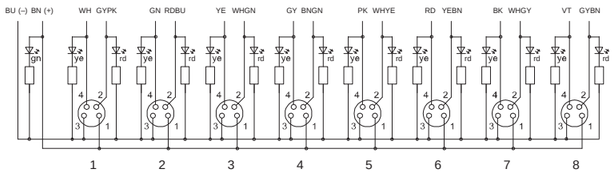
LED indicator PNP

Fig. 7
Cable



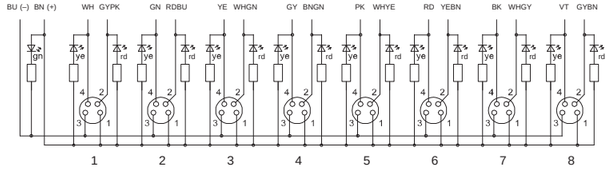
LED indicator NPN

Fig. 8
Cable



LED indicator PNP

Fig. 9
Cable



LED indicator NPN

Connectivity

Plastic distribution box ESP10 series (M8 socket, with M12 plug connector)

Description:

Plastic housing, distributed design, 10-way, single signal.

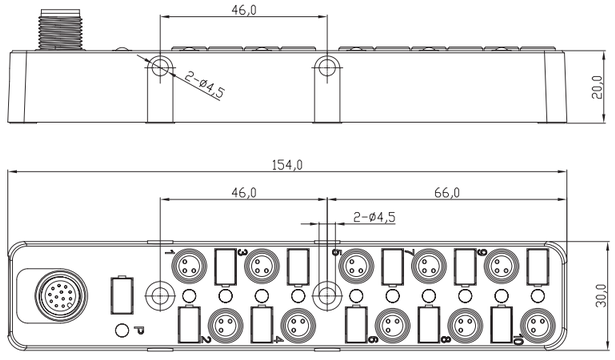
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Compact size - 154mm, especially suitable for small space installation
- Standard 3m PUR cable for M12 connector, optional cable material and length

Type List	ESP10-8-2P-Q12	ESP10-8-2N-Q12
Technical Data		
Output Function	1 signal	
Output Type	PNP	NPN
Connection for Sensors/Actuators	3-pin M8 female	
Locking Sockets	Threaded M8x1	
Dimensions	Fig.1	
Pin Assignment	Fig.2	
Wiring Diagram	Fig.6	Fig.7
Supply Voltage	10...30VDC (24VDC)	
Supply Voltage Indicator	LED green	
I/O Channels	10	
Signals per Port	1	
Status Indicators	LED yellow	
Operating Current	Max. 1.5A	
Current Parameter	Max. 1.5A	
	Please do not operate cables above max. load capacity.	
Housing Material	Plastic	
	PC + ABS	
Protection Class	IP67	
Temperature Range	-40...+80℃	
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.	
Connector	M12(12pins)	

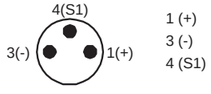
Dimensions

Fig. 1



Pin Assignment

Fig. 2



3-pin PNP/NPN 1 signal

Accessories of Distribution Box -Connector

Type List		
Type	CO12.12-3 / P	CBO12.12-3 / P
Description	Straight pre-wired connector	Angled pre-wired connector
Cable Material	Standard PUR / PP Bending≥5 million	Standard PUR / PP Bending≥5 million
Cable Length	3m	3m
Dimensions	Fig. 3	Fig. 4
Pin Assignment	Fig. 5	Fig. 5

Dimensions

Fig. 3

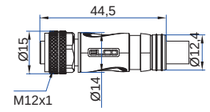
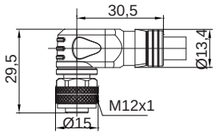
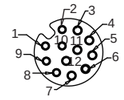


Fig. 4



Pin Assignment

Fig. 5

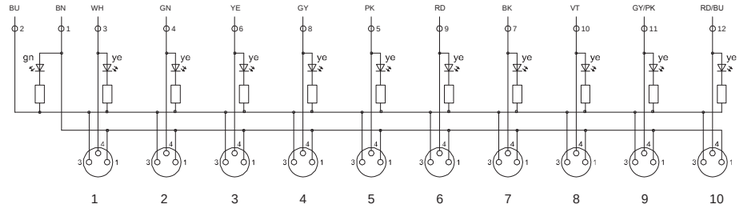


12-pin M12 Male	Suggested Cable Color
1	BN
2	BU
3	WH
4	GN
5	PK
6	YE
7	BK
8	GY
9	RD
10	VT
11	GY/PK
12	RD/BU

Wiring Diagram

Fig. 6

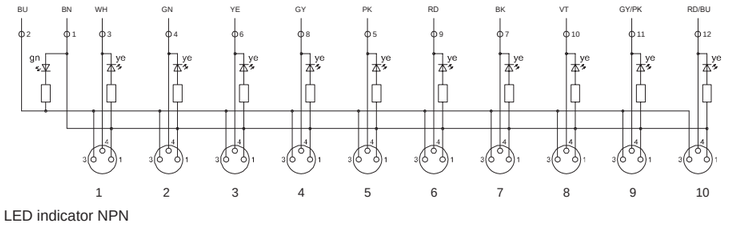
Connector



LED indicator PNP

Fig. 7

Connector



LED indicator NPN

Connectivity

Plastic distribution box ESP10 series (M8 socket, with pre-wired cable)

Description:

Plastic housing, 10-way, pre-wired cable, single/double signal.

Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Compact size - 154mm, especially suitable for small space installation
- Standard 3m PUR cable, optional cable length

Type List	ESP10-8-2P-3/P	ESP10-8-2N-3/P	ESP10-8-3P-3/P	ESP10-8-3N-3/P
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	3-pin M8 female		4-pin M8 female	
Locking Sockets	Threaded M8x1			
Dimensions	Fig.1,3		Fig.2,3	
Pin Assignment	Fig.4		Fig.5	
Wiring Diagram	Fig.6	Fig.7	Fig.8	Fig.9
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	10			
Signals per Port	1		2	
Status Indicators	LED yellow		LED yellow / red	
Operating Current	Max. 2A			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	ABS			
Protection Class	IP67			
Temperature Range	-40...+80˚C			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Cable Material	Standard PUR / PP Bending≥5 million			
Length	3m			

Dimensions

Fig. 1

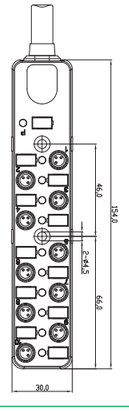


Fig. 2

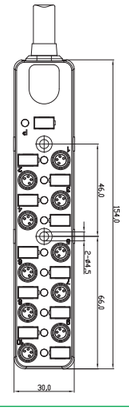
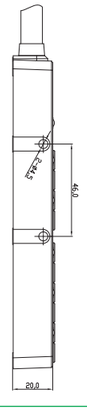
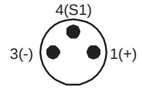


Fig. 3



Pin Assignment

Fig. 4



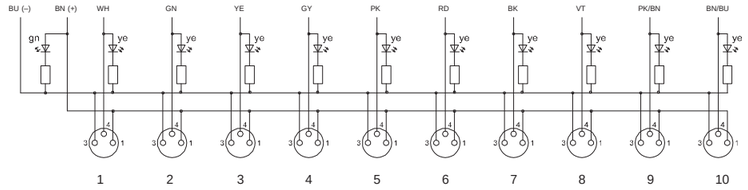
3-pin PNP/NPN 1 signal

Fig. 5

4-pin PNP/NPN 2 signals

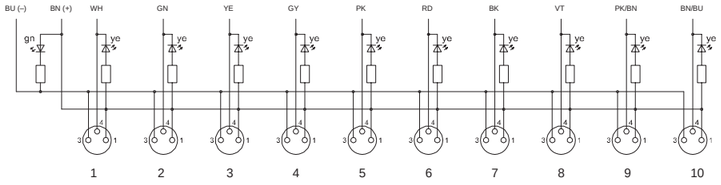
Wiring Diagram

Fig. 6
Cable



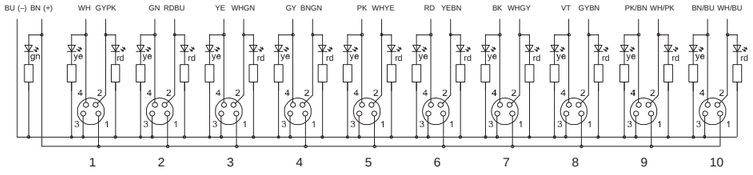
LED indicator PNP

Fig. 7
Cable



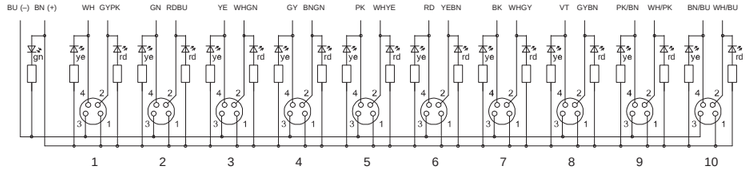
LED indicator NPN

Fig. 8
Cable



LED indicator PNP

Fig. 9
Cable



LED indicator NPN

Connectivity

Plastic distribution box ESP12 series (M8 socket, with pre-wired cable)

Description:

Plastic housing, 12-way, pre-wired cable, single signal.

Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable, optional cable length

Type List	ESP12-8-2P-3/P	ESP12-8-2N-3/P
Technical Data		
Output Function	1 signal	
Output Type	PNP	NPN
Connection for Sensors/Actuators	3-pin M8 female	
Locking Sockets	Threaded M8x1	
Dimensions	Fig.1,2	
Pin Assignment	Fig.3	
Wiring Diagram	Fig.4	Fig.5
Supply Voltage	10...30VDC (24VDC)	
Supply Voltage Indicator	LED green	
I/O Channels	12	
Signals per Port	1	
Status Indicators	LED yellow	
Operating Current	Max. 2A	
Current Parameter	Max. 8A	
	Please do not operate cables above max. load capacity.	
Housing Material	Plastic	
	ABS	
Protection Class	IP67	
Temperature Range	-40...+80℃	
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.	
Cable Material	Standard PUR / PP Bending≥5 million	
Length	3m	

Dimensions

Fig. 1

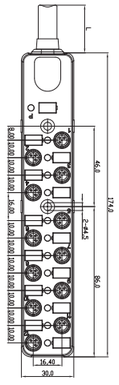
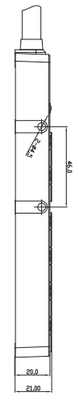
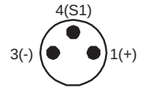


Fig. 2



Pin Assignment

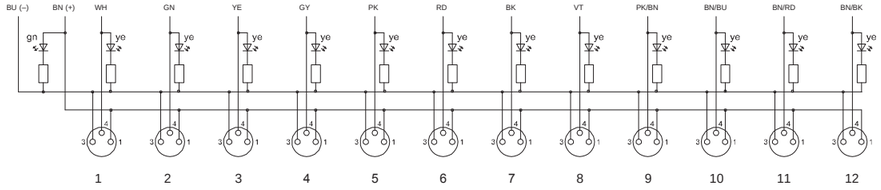
Fig. 3



3-pin PNP/NPN 1 signal

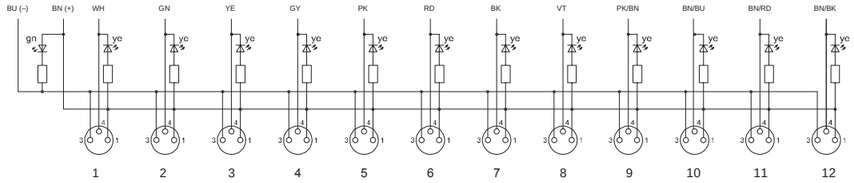
Wiring Diagram

Fig. 4
Cable



LED indicator PNP

Fig. 5
Cable



LED indicator NPN

Connectivity

Plastic distribution box ESP4 series (M12 socket, with M12 plug connector)

Description:

Plastic housing, distributed design, 4-way, single/double signal.

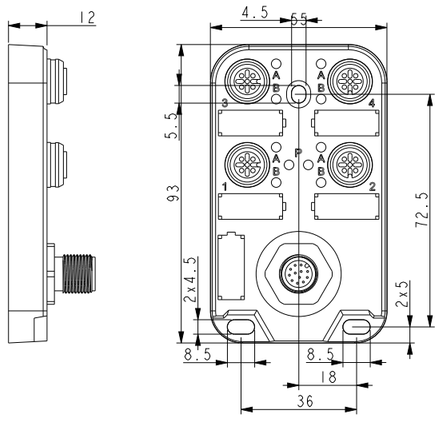
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable for M12 connector, optional cable material and length

Type List	ESP4-12-2P-Q12	ESP4-12-2N-Q12	ESP4-12-3P-Q12	ESP4-12-3N-Q12
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female		5-pin M12 female	
Locking Sockets	Threaded M12x1			
Dimensions	Fig. 1			
Pin Assignment	Fig. 2		Fig. 3	
Wiring Diagram	Fig. 7	Fig. 8	Fig. 9	Fig.10
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	4			
Signals per Port	1		2	
Status Indicators	LED yellow			
Operating Current	Max. 1.5A / per contact			
Current Parameter	Max. 1.5A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80℃			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Connector	M12(12pins)			

Dimensions

Fig. 1



Pin Assignment

Fig. 2

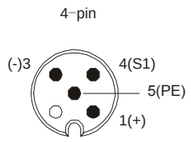
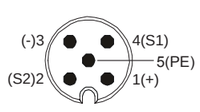


Fig. 3



1(+) 2(S2)
3(-) 4(S1)
5(PE)

Accessories of Distribution Box -Connector

Type List		
Type	CO12.12-3 / P	CBO12.12-3 / P
Description	Straight pre-wired connector	Angled pre-wired connector
Cable Material	Standard PUR / PP Bending≥5 million	Standard PUR / PP Bending≥5 million
Cable Length	3m	3m
Dimensions	Fig. 4	Fig. 5
Pin Assignment	Fig. 6	Fig. 6

Dimensions

Fig. 4

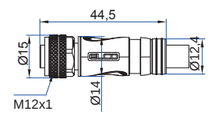
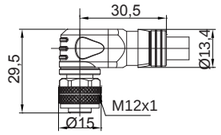
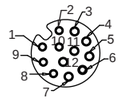


Fig. 5



Pin Assignment

Fig. 6



12-pin M12 Male	Suggested Cable Color
1	BN
2	BU
3	WH
4	GN
5	PK
6	YE
7	BK
8	GY
9	RD
10	VT
11	GY/PK
12	RD/BU

Wiring Diagram

Fig. 7
Connector

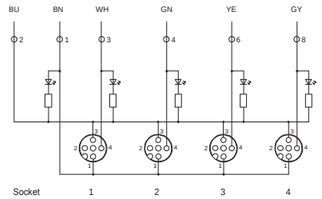


Fig. 8
Connector

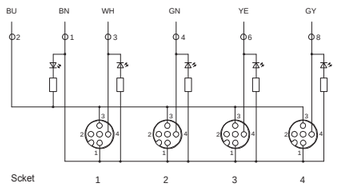


Fig. 9
Connector

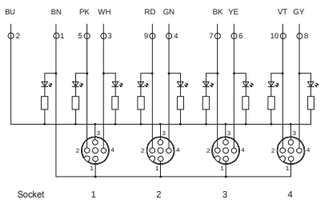
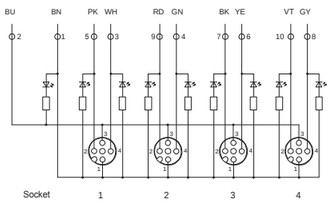


Fig. 10
Connector



Plastic distribution box ESP4 series (M12 socket, with M23 plug connector)

Description:

Plastic housing, distributed design, 4-way, single/double signal.

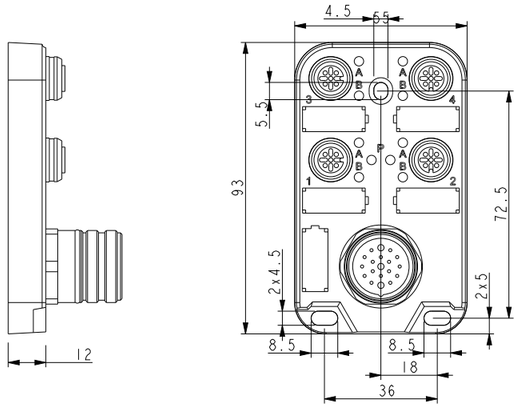
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable for M23 connector, optional cable material and length

Type List	ESP4-12-2P-Q23	ESP4-12-2N-Q23	ESP4-12-3P-Q23	ESP4-12-3N-Q23
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female		5-pin M12 female	
Locking Sockets	Threaded M12x1			
Dimensions	Fig. 1			
Pin Assignment	Fig. 2		Fig. 3	
Wiring Diagram	Fig. 8	Fig. 9	Fig. 10	Fig. 11
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	4			
Signals per Port	1		2	
Status Indicators	LED yellow			
Operating Current	Max. 2A / per contact			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80℃			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Connector	M23(19pins)			

Dimensions

Fig. 1



Pin Assignment

Fig. 2

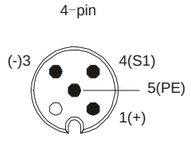
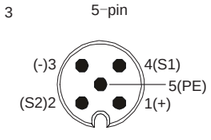


Fig. 3



1(+) 2(S2)
3(-) 4(S1)
5(PE)

Accessories of Distribution Box -Connector

			
Type List			
Type	LSO23.19-0	LSBO23.19-0	CO23.19-3/P
Description	Straight field-attachment connector	Angled field-attachment connector	Straight pre-wired connector
Cable Material	--	--	Standard PUR/ PP Bending≥5 million
Cable Length	--	--	3m
Dimensions	Fig. 4	Fig. 5	Fig. 6
Pin Assignment	Fig. 7	Fig. 7	Fig. 7

Dimensions

Fig. 4

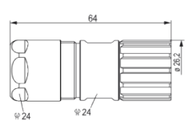


Fig. 5

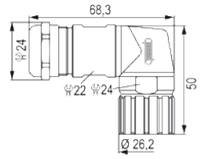
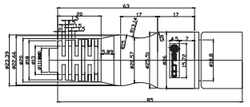
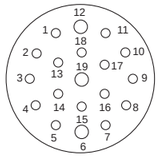


Fig. 6



Pin Assignment

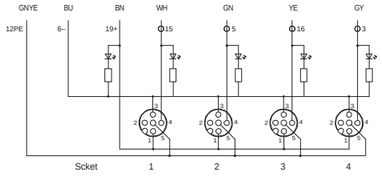
Fig. 7



19-pin M19 Male	Suggested Cable Color	19-pin M19 Male	Suggested Cable Color
1	VT	11	BK
2	RD	12	GN/YE
3	GY	13	YE/BN
4	RD/BU	14	BN/GN
5	GN	15	WH
6	BU	16	YE
7	GY/PK	17	PK
8	WH/GN	18	GY/BN
9	WH/YE	19	BN
10	WH/GY		

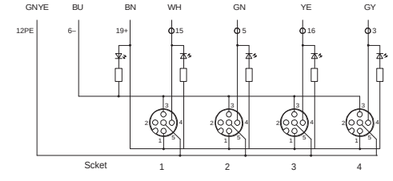
Wiring Diagram

Fig. 8
Connector



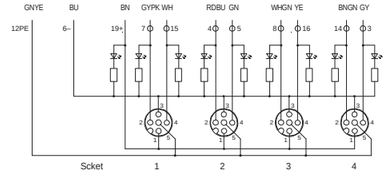
LED indicator PNP

Fig. 9
Connector



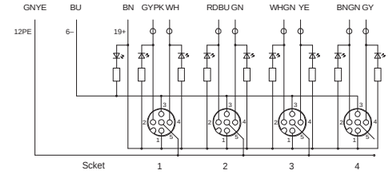
LED indicator NPN

Fig. 10
Connector



LED indicator PNP

Fig. 11
Connector



LED indicator NPN

Connectivity

Plastic distribution box ESP4 series (M12 socket, with pre-wired cable)

Description:

Plastic housing, 4-way, pre-wired cable, single/double signal.

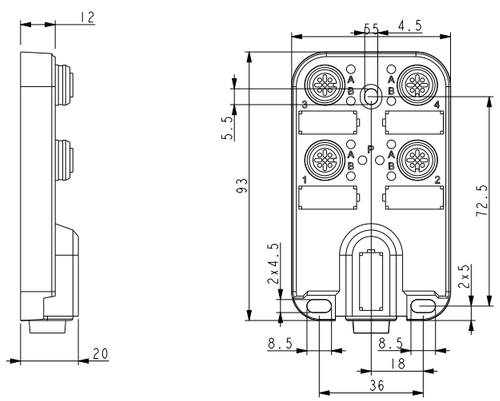
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable, optional cable length

Type List	ESP4-12-2P-3/P	ESP4-12-2N-3/P	ESP4-12-3P-3/P	ESP4-12-3N-3/P
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female		5-pin M12 female	
Locking Sockets	Threaded M12x1			
Dimensions	Fig.1			
Pin Assignment	Fig.2		Fig.3	
Wiring Diagram	Fig.4	Fig.5	Fig.6	Fig.7
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	4			
Signals per Port	1		2	
Status Indicators	LED yellow			
Operating Current	Max. 2A			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80°C			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Cable Material	Standard PUR / PP Bending≥5 million			
Length	3m			

Dimensions

Fig. 1



Pin Assignment

Fig. 2

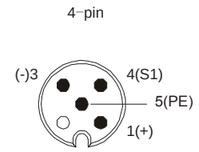
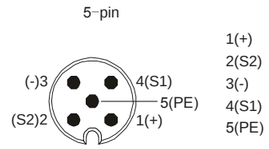
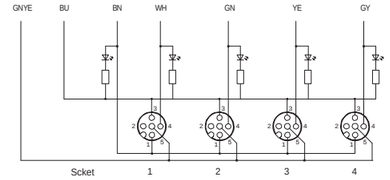


Fig. 3



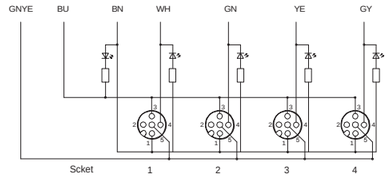
Wiring Diagram

Fig. 4
Cable



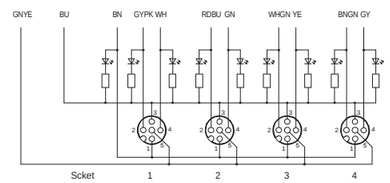
LED indicator PNP

Fig. 5
Cable



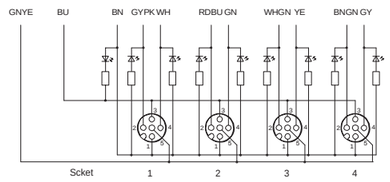
LED indicator NPN

Fig. 6
Cable



LED indicator PNP

Fig. 7
Cable



LED indicator NPN

Plastic distribution box ESP6 series (M12 socket, with M12 plug connector)

Description:

Plastic housing, distributed design, 6-way, single signal.

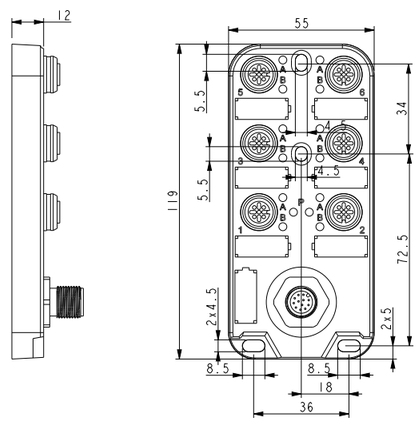
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable for M12 connector, optional cable material and length

Type List	ESP6-12-2P-Q12	ESP6-12-2N-Q12
Technical Data		
Output Function	1 signal	
Output Type	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female	
Locking Sockets	Threaded M12x1	
Dimensions	Fig. 1	
Pin Assignment	Fig. 2	
Wiring Diagram	Fig. 6	Fig. 7
Supply Voltage	10...30VDC (24VDC)	
Supply Voltage Indicator	LED green	
I/O Channels	6	
Signals per Port	1	
Status Indicators	LED yellow	
Operating Current	Max. 1.5A / per contact	
Current Parameter	Max. 1.5A	
	Please do not operate cables above max. load capacity.	
Housing Material	Plastic	
	PC + ABS	
Protection Class	IP67	
Temperature Range	-40...+80℃	
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.	
Connector	M12(12pins)	

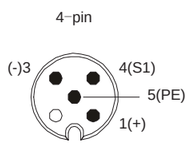
Dimensions

Fig. 1



Pin Assignment

Fig. 2



Accessories of Distribution Box -Connector

Type List		
Type	CO12.12-3 / P	CBO12.12-3 / P
Description	Straight pre-wired connector	Angled pre-wired connector
Cable Material	Standard PUR / PP Bending≥5 million	Standard PUR / PP Bending≥5 million
Cable Length	3m	3m
Dimensions	Fig. 3	Fig. 4
Pin Assignment	Fig. 5	Fig. 5

Dimensions

Fig. 3

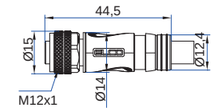
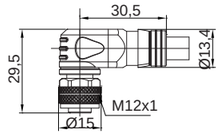
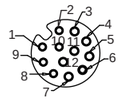


Fig. 4



Pin Assignment

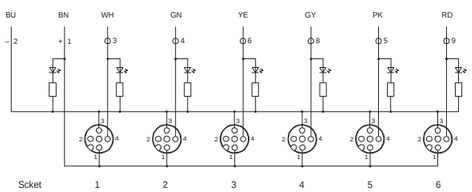
Fig. 5



12-pin M12 Male	Suggested Cable Color
1	BN
2	BU
3	WH
4	GN
5	PK
6	YE
7	BK
8	GY
9	RD
10	VT
11	GY/PK
12	RD/BU

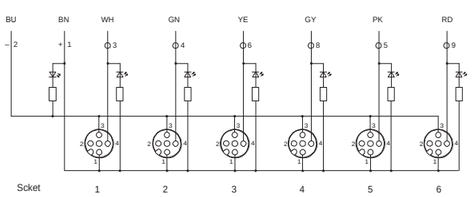
Wiring Diagram

Fig. 6
Connector



LED indicator PNP

Fig. 7
Connector



LED indicator NPN

Connectivity

Plastic distribution box ESP6 series (M12 socket, with M23 plug connector)

Description:

Plastic housing, distributed design, 6-way, single/double signal.

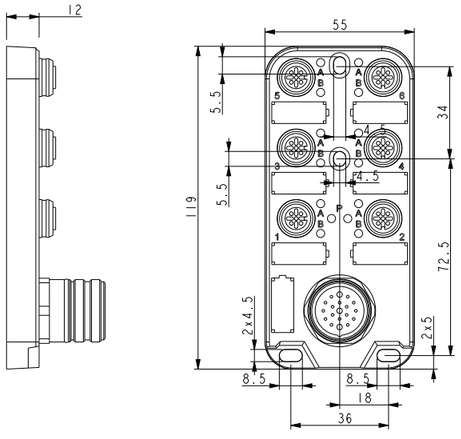
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable for M23 connector, optional cable material and length

Type List	ESP6-12-2P-Q23	ESP6-12-2N-Q23	ESP6-12-3P-Q23	ESP6-12-3N-Q23
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female		5-pin M12 female	
Locking Sockets	Threaded M12x1			
Dimensions	Fig. 1			
Pin Assignment	Fig. 2		Fig. 3	
Wiring Diagram	Fig. 8	Fig. 9	Fig. 10	Fig. 11
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	6			
Signals per Port	1		2	
Status Indicators	LED yellow			
Operating Current	Max. 2A / per contact			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80℃			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Connector	M23(19pins)			

Dimensions

Fig. 1



Pin Assignment

Fig. 2

4−pin

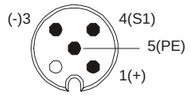
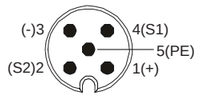


Fig. 3

5−pin



1(+) 2(S2)
3(-) 4(S1)
5(PE)

Accessories of Distribution Box -Connector

Type List			
Type	LSO23.19-0	LSBO23.19-0	CO23.19-3/P
Description	Straight field-attachment connector	Angled field-attachment connector	Straight pre-wired connector
Cable Material	--	--	Standard PUR/ PP Bending≥5 million
Cable Length	--	--	3m
Dimensions	Fig. 4	Fig. 5	Fig. 6
Pin Assignment	Fig. 7	Fig. 7	Fig. 7

Dimensions

Fig. 4

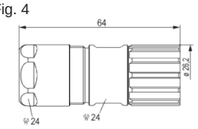


Fig. 5

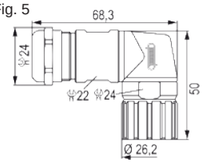
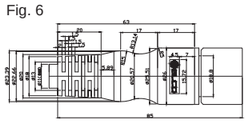
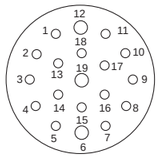


Fig. 6



Pin Assignment

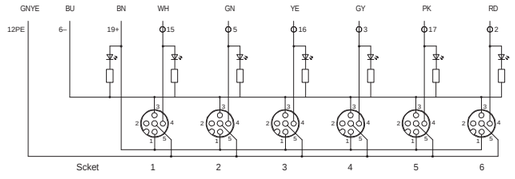
Fig. 7



19-pin M19 Male	Suggested Cable Color	19-pin M19 Male	Suggested Cable Color
1	VT	11	BK
2	RD	12	GN/YE
3	GY	13	YE/BN
4	RD/BU	14	BN/GN
5	GN	15	WH
6	BU	16	YE
7	GY/PK	17	PK
8	WH/GN	18	GY/BN
9	WH/YE	19	BN
10	WH/GY		

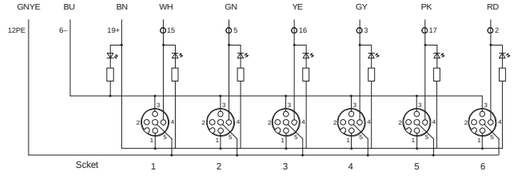
Wiring Diagram

Fig. 8
Connector



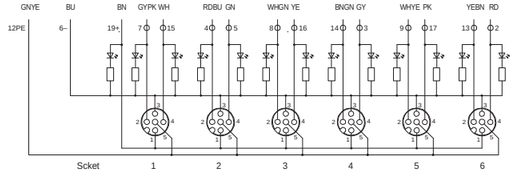
LED indicator PNP

Fig. 9
Connector



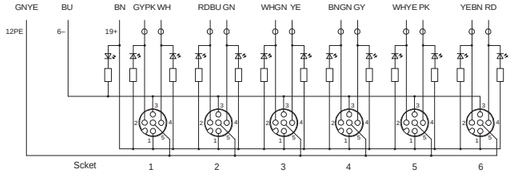
LED indicator NPN

Fig. 10
Cable



LED indicator PNP

Fig. 11
Cable



LED indicator NPN

Plastic distribution box ESP6 series (M12 socket, with pre-wired cable)

Description:

Plastic housing, 6-way, pre-wired cable, single/double signal.

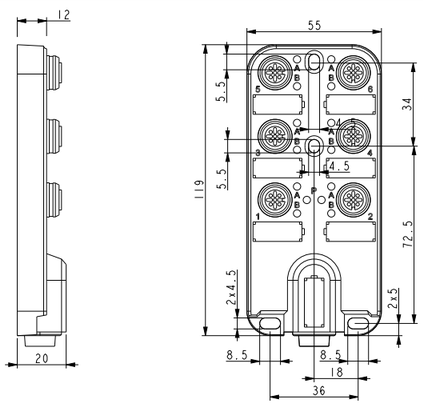
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable, optional cable length

Type List	ESP6-12-2P-3/P	ESP6-12-2N-3/P	ESP6-12-3P-3/P	ESP6-12-3N-3/P
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female		5-pin M12 female	
Locking Sockets	Threaded M12x1			
Dimensions	Fig.1			
Pin Assignment	Fig.2		Fig.3	
Wiring Diagram	Fig.4	Fig.5	Fig.4	Fig.5
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	6			
Signals per Port	1		2	
Status Indicators	LED yellow			
Operating Current	Max. 2A / per contact			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80°C			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Cable Material	Standard PUR / PP Bending≥5 million			
Length	3m			

Dimensions

Fig. 1



Pin Assignment

Fig. 2

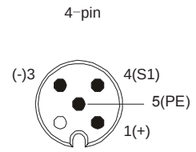
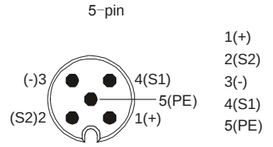
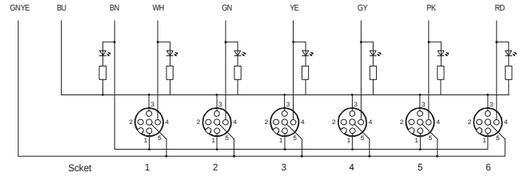


Fig. 3



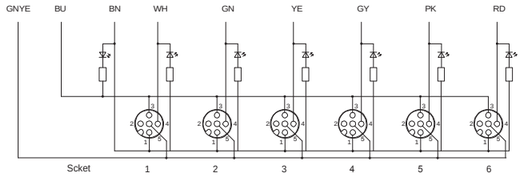
Wiring Diagram

Fig. 4
Cable



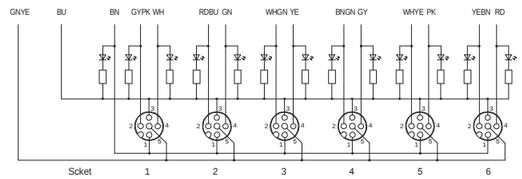
LED indicator PNP

Fig. 5
Cable



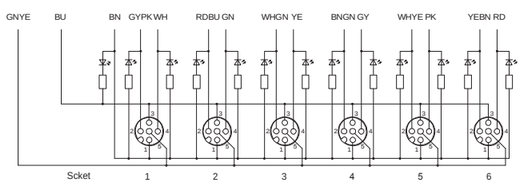
LED indicator NPN

Fig. 6
Cable



LED indicator PNP

Fig. 7
Cable



LED indicator NPN

Connectivity

Plastic distribution box ESP8 series (M12 socket, with M12 plug connector)

Description:

Plastic housing, distributed design, 8-way, single signal.

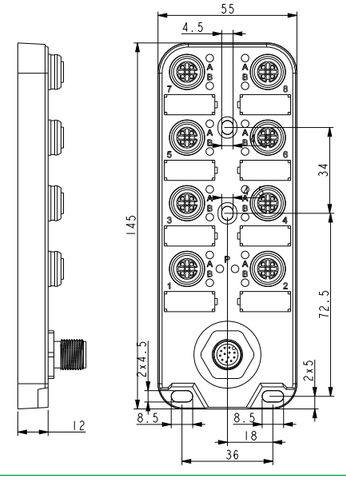
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable for M12 connector, optional cable material and length

Type List	ESP8-12-2P-Q12	ESP8-12-2N-Q12
Technical Data		
Output Function	1 signal	
Output Type	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female	
Locking Sockets	Threaded M12x1	
Dimensions	Fig. 1	
Pin Assignment	Fig. 2	
Wiring Diagram	Fig. 6	Fig. 7
Supply Voltage	10...30VDC (24VDC)	
Supply Voltage Indicator	LED green	
I/O Channels	8	
Signals per Port	1	
Status Indicators	LED yellow	
Operating Current	Max. 1.5A / per contact	
Current Parameter	Max. 1.5A	
	Please do not operate cables above max. load capacity.	
Housing Material	Plastic	
	PC + ABS	
Protection Class	IP67	
Temperature Range	-40...+80℃	
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.	
Connector	M12(12pins)	

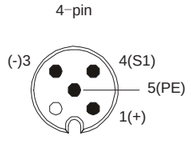
Dimensions

Fig. 1



Pin Assignment

Fig. 2



Accessories of Distribution Box -Connector

Type List		
Type	CO12.12-3 / P	CBO12.12-3 / P
Description	Straight pre-wired connector	Angled pre-wired connector
Cable Material	Standard PUR / PP Bending≥5 million	Standard PUR / PP Bending≥5 million
Cable Length	3m	3m
Dimensions	Fig. 3	Fig. 4
Pin Assignment	Fig. 5	Fig. 5

Dimensions

Fig. 3

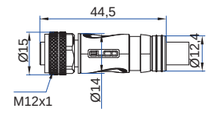
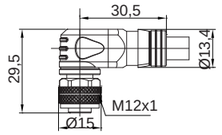
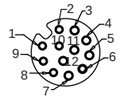


Fig. 4



Pin Assignment

Fig. 5

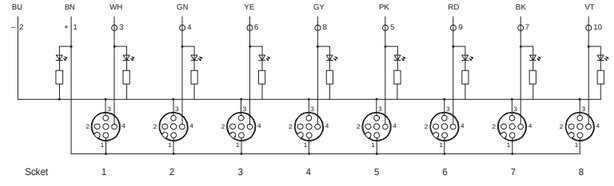


12-pin M12 Male	Suggested Cable Color
1	BN
2	BU
3	WH
4	GN
5	PK
6	YE
7	BK
8	GY
9	RD
10	VT
11	GY/PK
12	RD/BU

Wiring Diagram

Fig. 6

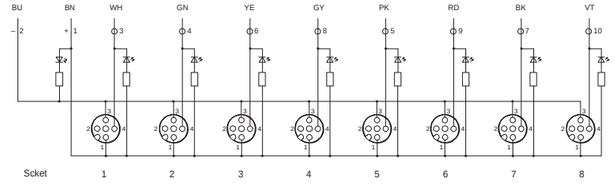
Connector



LED indicator PNP

Fig. 7

Connector



LED indicator NPN

Connectivity

Plastic distribution box ESP8 series (M12 socket, with M23 plug connector)

Description:

Plastic housing, distributed design, 8-way, single/double signal.

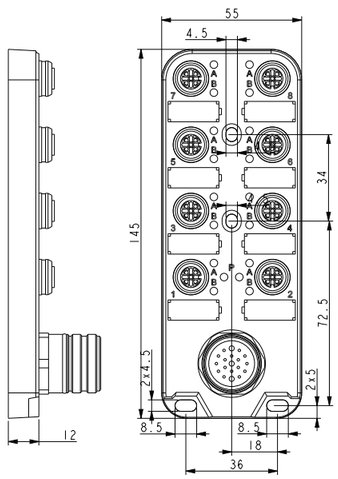
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable for M23 connector, optional cable material and length

Type List	ESP8-12-2P-Q23	ESP8-12-2N-Q23	ESP8-12-3P-Q23	ESP8-12-3N-Q23
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female		5-pin M12 female	
Locking Sockets	Threaded M12x1			
Dimensions	Fig. 1			
Pin Assignment	Fig. 2		Fig. 3	
Wiring Diagram	Fig. 8	Fig. 9	Fig. 10	Fig. 11
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	8			
Signals per Port	1		2	
Status Indicators	LED yellow			
Operating Current	Max. 2A / per contact			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80℃			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Connector	M23(19pins)			

Dimensions

Fig. 1



Pin Assignment

Fig. 2

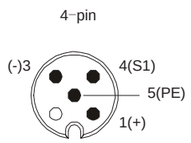
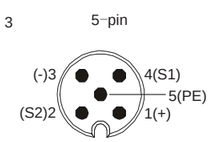
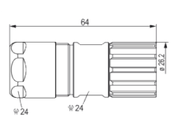
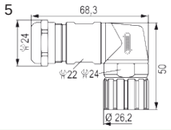
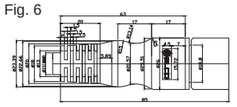


Fig. 3



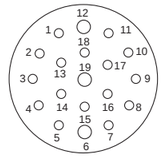
1(+) 2(S2)
3(-) 4(S1)
5(PE)

Accessories of Distribution Box -Connector

			
Type List			
Type	LSO23.19-0	LSBO23.19-0	CO23.19-3/P
Description	Straight field-attachment connector	Angled field-attachment connector	Straight pre-wired connector
Cable Material	--	--	Standard PUR/ PP Bending≥5 million
Cable Length	--	--	3m
Dimensions	Fig. 4	Fig. 5	Fig. 6
Pin Assignment	Fig. 7	Fig. 7	Fig. 7
Dimensions			
	Fig. 4 	Fig. 5 	Fig. 6 

Pin Assignment

Fig. 7



19-pin M19 Male	Suggested Cable Color	19-pin M19 Male	Suggested Cable Color
1	VT	11	BK
2	RD	12	GN/YE
3	GY	13	YE/BN
4	RD/BU	14	BN/GN
5	GN	15	WH
6	BU	16	YE
7	GY/PK	17	PK
8	WH/GN	18	GY/BN
9	WH/YE	19	BN
10	WH/GY		

Wiring Diagram

Fig. 8
Connector
LED indicator PNP

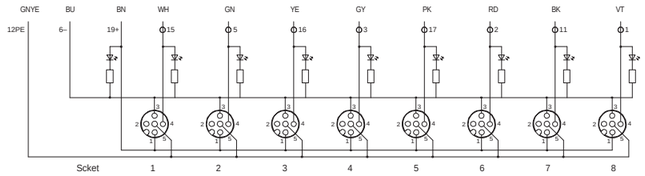


Fig. 9
Connector
LED indicator NPN

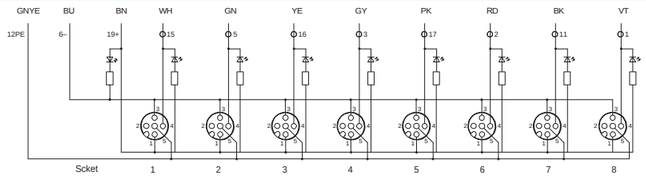


Fig. 10
Connector
LED indicator PNP

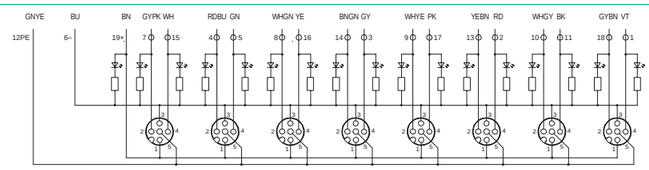
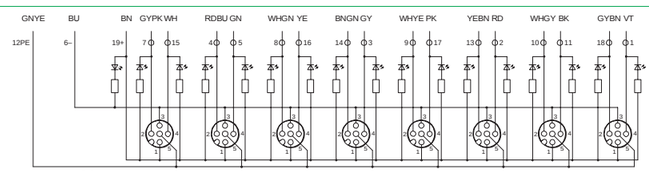


Fig. 11
Connector
LED indicator NPN



Plastic distribution box ESP8 series (M12 socket, with pre-wired cable)

Description:

Plastic housing, 8-way, pre-wired cable, single/double signal.

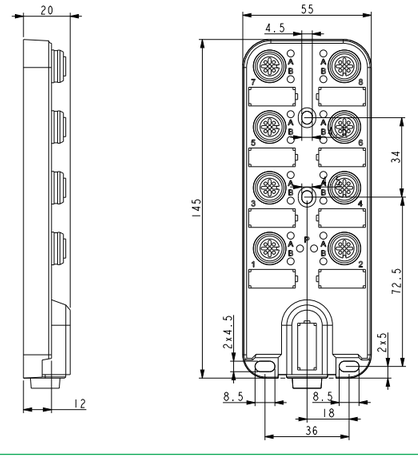
Features:

- Optional output (PNP/NPN)
- LED indicator and high protection class IP67
- Standard 3m PUR cable, optional cable length

Type List	ESP8-12-2P-3/P	ESP8-12-2N-3/P	ESP8-12-3P-3/P	ESP8-12-3N-3/P
Technical Data				
Output Function	1 signal		2 signals	
Output Type	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female		5-pin M12 female	
Locking Sockets	Threaded M12x1			
Dimensions	Fig.1			
Pin Assignment	Fig.2		Fig.3	
Wiring Diagram	Fig.4	Fig.5	Fig.4	Fig.5
Supply Voltage	10...30VDC (24VDC)			
Supply Voltage Indicator	LED green			
I/O Channels	8			
Signals per Port	1		2	
Status Indicators	LED yellow			
Operating Current	Max. 2A			
Current Parameter	Max. 8A			
	Please do not operate cables above max. load capacity.			
Housing Material	Plastic			
	PC + ABS			
Protection Class	IP67			
Temperature Range	-40...+80˚C			
Resistance	Good resistance against chemicals and oils. The resistance to aggressive media should be individually verified for your application.			
Cable Material	Standard PUR / PP Bending≥5 million			
Length	3m			

Dimensions

Fig. 1



Pin Assignment

Fig. 2

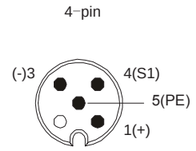
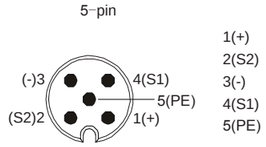
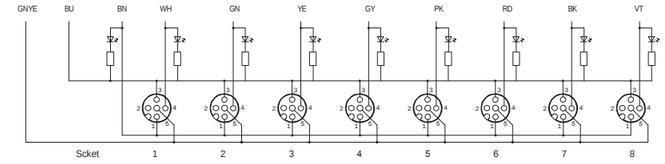


Fig. 3



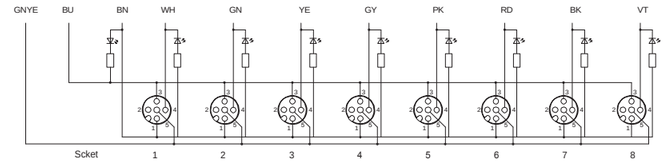
Wiring Diagram

Fig. 4
Cable



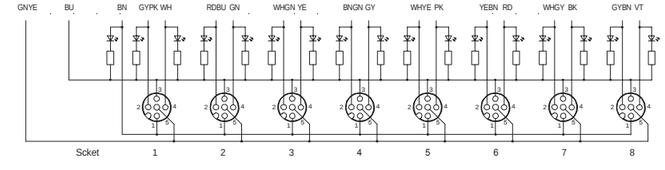
LED indicator PNP

Fig. 5
Cable



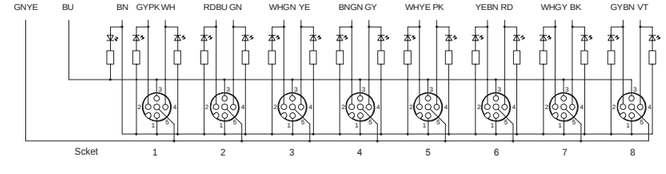
LED indicator NPN

Fig. 4
Cable



LED indicator PNP

Fig. 5
Cable



LED indicator NPN

Plastic distribution box ESP4 series (M12 socket, Terminal field-wired)

Description:

Plastic housing, split design, 4 channels, single signal or dual signal, indicator for action display, IP67.

Features:

- LED indicator PNP, NPN optional
- Single signal and dual signal provided
- Terminal type wiring to meet the flexible configuration of different cable outlet lengths
- Optional bridging mode to achieve district power supply (Power 1, 3 ports and 2, 4 ports respectively)

Type List	ESP4-12-2P-Q	ESP4-12-2N-Q	ESP4-12-3P-Q	ESP4-12-3N-Q	ESP4-12-4P-Q	ESP4-12-4N-Q
Technical Data						
Output Function	1 signal		2 signals			
Output Type	PNP	NPN	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female		5-pin M12 female			
Locking Sockets	Threaded M12x1					
Dimensions	Fig. 1, Fig. 2, Fig. 5		Fig. 1. Fig. 2. Fig. 6		Fig. 1. Fig. 2. Fig. 7	
Pin Assignment	Fig. 3		Fig. 4			
Wiring Diagram	Fig. 8	Fig. 9	Fig. 8	Fig. 9	Fig. 8	Fig. 9
Supply Voltage	10...30VDC (24VDC)					
Supply Voltage Indicator	LED green					
I/O Channels	4					
Signals per Port	1 or 2					
Status Indicators	LED yellow					
Operating Current	Max. 2A / per contact / 4A/channel					
	8A				16A	
Housing Material	Plastic					
Protection Class	IP67					
Temperature Range	-40...+80℃					
Resistance	Good resistance against chemicals and oils. The resistance to aggressive					
	media should be individually verified for your application.					

Dimensions

Fig. 1

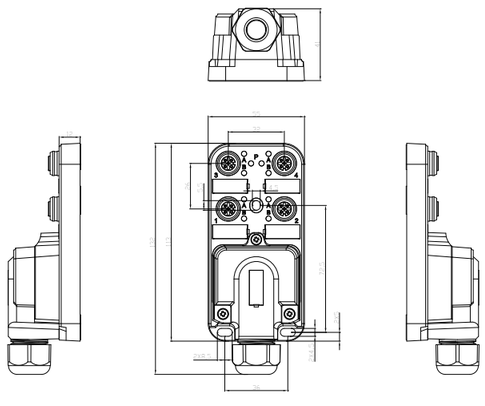
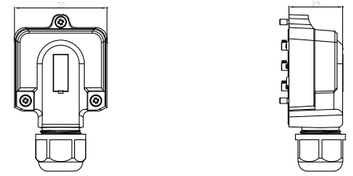


Fig. 2



Pin Assignment

Fig. 3

4-pin

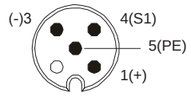


Fig. 4

5-pin

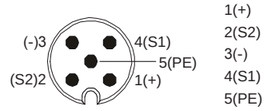


Fig. 5
2P

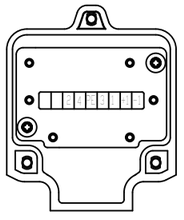


Fig. 6
3P

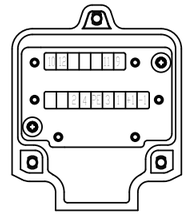
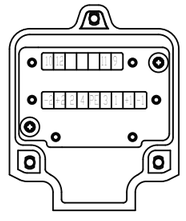


Fig. 7
4P



Wiring Diagram

Fig. 8
Connector

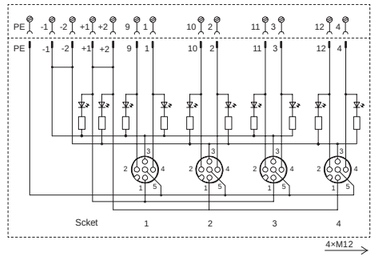
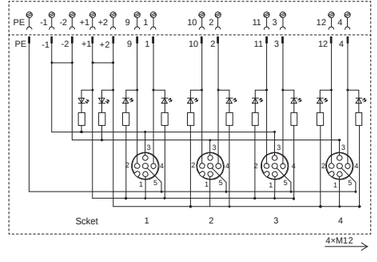


Fig. 9
Cable



Connectivity

Plastic distribution box ESP8 series (M12 socket, Terminal field-wired)

Description:

Plastic housing, split design, 8 channels, single signal or dual signal,
indicator for action display, IP67.

Features:

- LED indicator PNP, NPN optional
- Single signal and dual signal provided
- Terminal type wiring to meet the flexible configuration of different cable outlet lengths
- Optional bridging mode to achieve district power supply (Power 1, 3 , 5, 7ports and 2, 4, 6, 8 ports respectively)

Type List	ESP8-12-2P-Q	ESP8-12-2N-Q	ESP8-12-3P-Q	ESP8-12-3N-Q	ESP8-12-4P-Q	ESP8-12-4N-Q
Technical Data						
Output Function	1 signal		2 signals			
Output Type	PNP	NPN	PNP	NPN	PNP	NPN
Connection for Sensors/Actuators	4-pin M12 female		5-pin M12 female			
Locking Sockets	Threaded M12x1					
Dimensions	Fig. 1-1, Fig. 2, Fig. 5		Fig. 1-2, Fig. 1-1, Fig. 6		Fig. 1-3, Fig. 1-1, Fig. 7	
Pin Assignment	Fig. 3		Fig. 4			
Wiring Diagram	Fig. 8	Fig. 9	Fig. 8	Fig. 9	Fig. 8	Fig. 9
Supply Voltage	10...36VDC (24VDC)					
Supply Voltage Indicator	LED green					
I/O Channels	8					
Signals per Port	1 or 2					
Status Indicators	LED yellow					
Operating Current	Max. 2A / per contact / 4A/channel					
	8A		16A			
Housing Material	Plastic					
Protection Class	IP67					
Temperature Range	-40...+80℃					
Resistance	Good resistance against chemicals and oils. The resistance to aggressive					
	media should be individually verified for your application.					

Dimensions

Fig. 1-1
2P

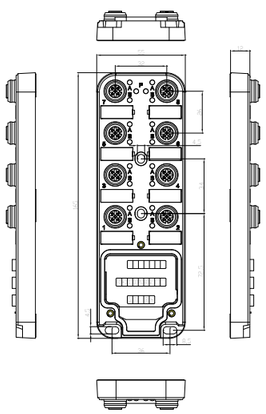


Fig. 1-2
3P

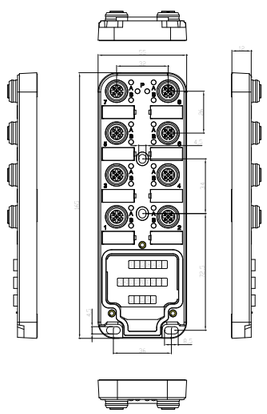


Fig. 1-3
4P

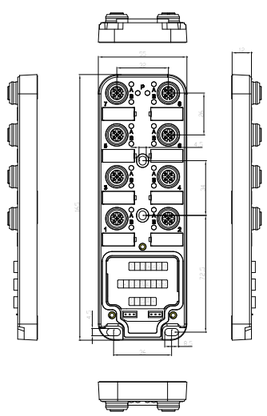
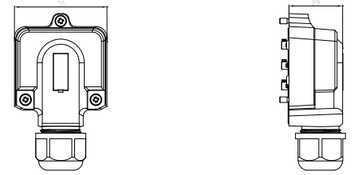


Fig. 2



Pin Assignment

Fig. 3

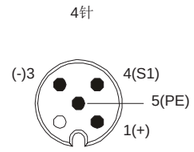


Fig. 4

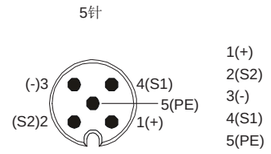


Fig. 5
2P

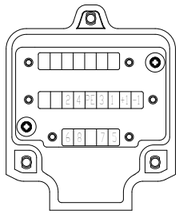


Fig. 6
3P

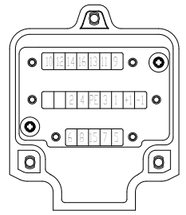
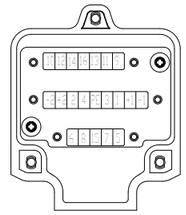


Fig. 7
4P



Wiring Diagram

Fig. 8
Connector

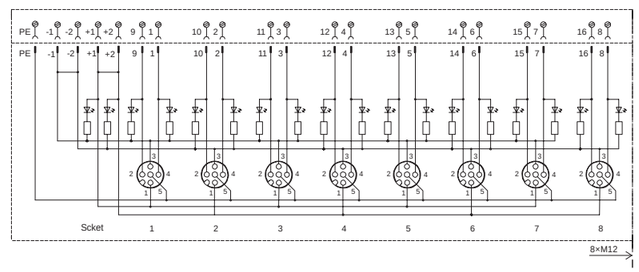
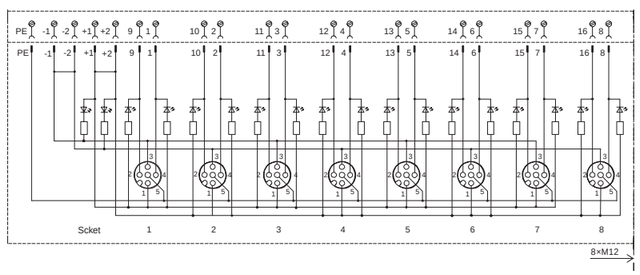
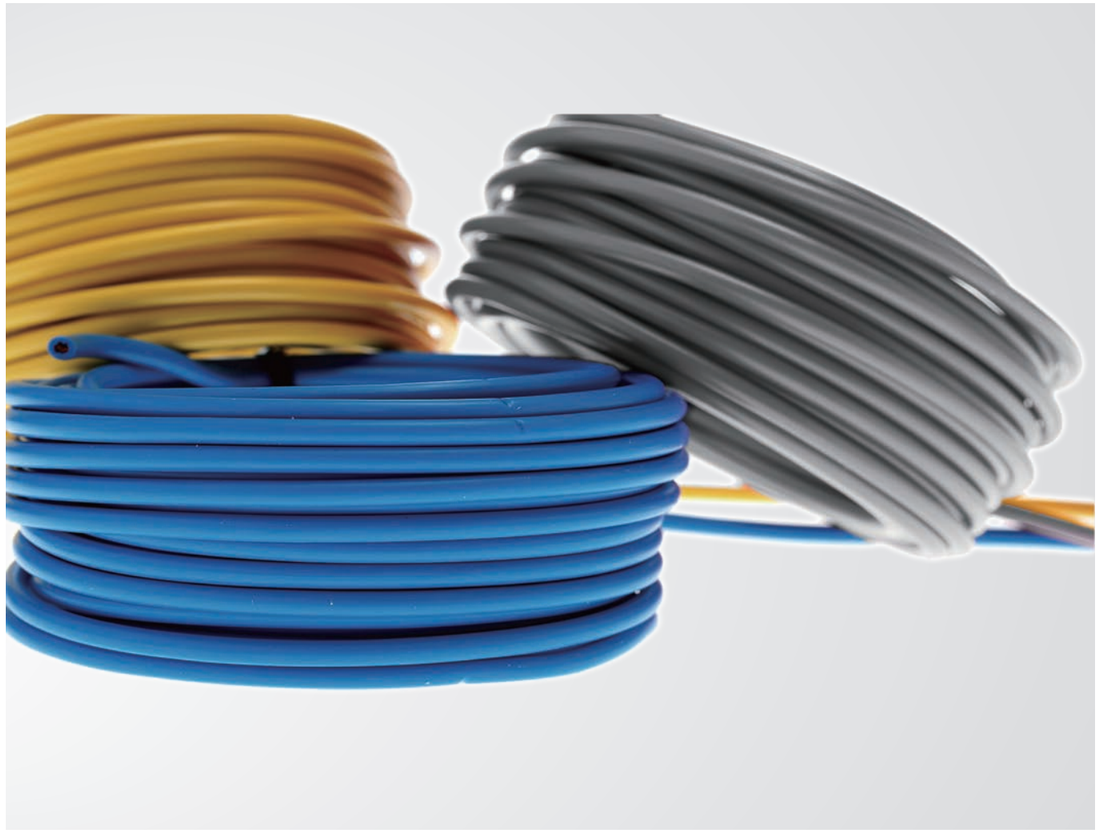


Fig. 9
Cable





Cable

ELCO provides PVC, PUR cable and other cables with special specifications and functions, which can meet the requirement of flexible field wiring. With the field-attachable connector and distribution box with spring clamp terminal, ELCO can provide a complete solution for the customer.

Description

L200 / E127

Category

L1：……

……：Standard 1m

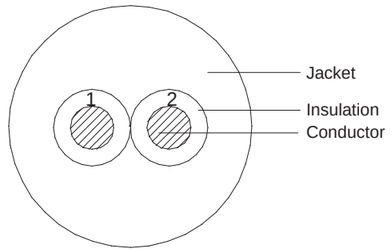
L200：200m/reel

L300：300m/reel

L500：500m/reel

Material no.

Refer to the material no. in following data sheet

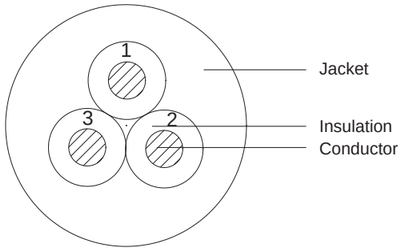


Color code	Color	Core
BN		1
BU		2

Type List	L1/E129	L200/E129	L300/E129	L500/E129
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure		Product description		
No. of core	2-core	Rated temperature (℃)	-40...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Cross section (mm^2)	0.34mm^2	Max. DC resistance 20℃ (Ω/km)	55	
Structure (mm)	43/0.10	Rated voltage	300V/80℃	
OD of Conductor (mm)	0.75(Ref)	Mechanical property		
Insulation		Test object	Insulation	Jacket
Material	PVC(LF)	Test material	PVC(LF)	PVC(LF)
Thickness of thinnest point (mm)	0.35	Before aging		
Standard thickness (mm)	0.44	Tensile strength (kg/mm^2)	≧1.05	≧1.05
Insulation O.D. (±0.08mm)	1.80	Elongation (%)	≧100	≧100
Color	1 Blue 2 Brown	Aging condition	113±2℃ X 168hr	
Cable	YES	After aging		
Stranding direction	S	Tensile strength(kg/mm^2)	≧70%(Original value)	≧70%(Original value)
Jacket		Elongation(%)	≧65%(Original value)	≧65%(Original value)
Material	PVC(LF)	Combustion test	VW-1	
Thickness of thinnest point (mm)	0.85	Application	Apply to internal and external wiring	
Standard thickness (mm)	1.06		for electronic equipment	
O.D. (±0.15mm)	5.20			
Jacket color	Gray			

I/O Cable - PVC

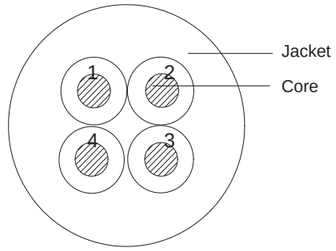


Color code	Color	Core
BN		1
BU		3
BK		4

Type List	L1/E127	L200/E127	L300/E127	L500/E127
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure		Product description		
No. of core	3-core	Rated temperature (℃)	-40...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Cross section (mm²)	0.34mm²	Max. DC resistance 20℃ (Ω/km)	55	
Structure (mm)	43/0.10	Ampacity20℃（A）	5	
OD of Conductor (mm)	0.75(Ref)	Rated voltage	300V/80℃	
Insulation		Mechanical property		
Material	PVC(LF)	Test object	Insulation	Jacket
Thickness of thinnest point (mm)	0.32	Test material	PVC(LF)	PVC(LF)
Standard thickness (mm)	0.40	Before aging		
Insulation O.D. (±0.08mm)	1.55	Tensile strength (kg/mm²)	≧1.05	≧1.05
Color	1.Black 2.Brown 3.Blue	Elongation (%)	≧100	≧100
Cable	YES	Aging condition	113±2℃ X 168hr	
Jacket		After aging		
Material	PVC(LF)	Tensile strength(kg/mm²)	≧70%(Original value)	≧70%(Original value)
Thickness of thinnest point (mm)	0.58	Elongation(%)	≧65%(Original value)	≧65%(Original value)
Standard thickness (mm)	0.73	Combustion test	VW-1,FT1	
O.D. (±0.15mm)	5.20	Application	Apply to internal and external wiring	
Jacket color	Gray		for electronic equipment	

I/O Cable - PVC

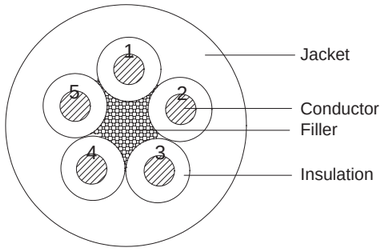


Color code	Color	Core
BN		1
WH		2
BU		3
BK		4

Type List	L1/E126	L200/E126	L300/E126	L500/E126
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure		Product description		
No. of core	4-core	Rated temperature (℃)	-40...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Cross section (mm²)	0.34mm²	Max. DC resistance 20℃ (Ω/km)	55	
Cross section (mm²)	43/0.10	Ampacity20℃（A）	5	
OD of Conductor (mm)	0.75(Ref)	Rated voltage	300V/80℃	
Insulation		Mechanical property		
Material	PVC(LF)	Test object	Insulation	Material
Thickness of thinnest point (mm)	0.32	Test material	PVC(LF)	PVC(LF)
Standard thickness (mm)	0.40	Before aging		
Insulation O.D. (±0.08mm)	1.55	Tensile strength (kg/mm²)	≧1.05	≧1.05
Color	1.Black 2. Brown 3.White 4.Blue	Elongation (%)	≧100	≧100
Cable	YES	Aging condition	113±2℃ X 168hr	
Jacket		After aging		
Material	PVC(LF)	Tensile strength(kg/mm²)	≧70%(Original value)	≧70%(Original value)
Thickness of thinnest point (mm)	0.58	Elongation(%)	≧65%(Original value)	≧65%(Original value)
Standard thickness (mm)	0.73	Combustion test	VW-1,FT1	
O.D. (±0.15mm)	5.20	Application	Apply to internal and external wiring	
Jacket color	Gray		for electronic equipment	

I/O Cable - PVC



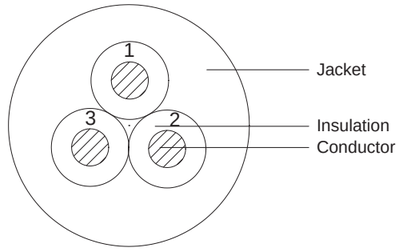
Color code	Color	Core
BN		1
WH		2
BU		3
BK		4
GY		5

Type List	L1/E131	L200/E131	L300/E131	L500/E131
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure		Product description		
No. of core	5-core	Rated temperature (℃)	-40...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Cross section (mm²)	0.34mm²	Max. DC resistance 20℃ (Ω/km)	53.14	
Cross section (mm²)	43/0.10	Rated voltage	300V/80℃	
OD of Conductor (mm)	0.75(Ref)	Mechanical property		
Insulation		Test object	Insulation	Material
Material	PVC(LF)	Test material	PVC(LF)	PVC(LF)
Thickness of thinnest point (mm)	0.26	Before aging		
Standard thickness (mm)	0.33	Tensile strength (kg/mm²)	≧1.05	≧1.05
Insulation O.D. (±0.08mm)	1.40	Elongation (%)	≧100	≧100
Color	1.Black 2. Brown 3.White 4.Blue 5. Gray	Aging condition	113±2℃ X 168hr	
Cable	YES	After aging		
Jacket		Tensile strength(kg/mm²)	≧70%(Original value)	≧70%(Original value)
Material	PVC(LF)	Elongation(%)	≧65%(Original value)	≧65%(Original value)
Thickness of thinnest point (mm)	0.57	Combustion test	VW-1,FT1	
Standard thickness (mm)	0.71	Application	Apply to internal and external wiring	
O.D. (±0.15mm)	5.20		for electronic equipment, and	
Jacket color	Gray		connector connection	

I/O Cable - PVC



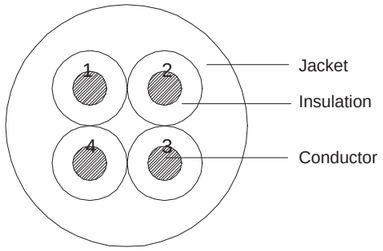
Color code	Color	Core
BN		1
BU		3
BK		4

Type List	L1/E140	L200/E140	L300/E140	L500/E140
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure		Product description		
No. of core	3-core	Rated temperature (℃)	-40...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Cross section (mm²)	0.25mm²	Max. DC resistance 20℃ (Ω/km)	80.15	
Cross section (mm²)	32/0.10	Ampacity20℃（A）	5	
OD of Conductor (mm)	0.65(Ref)	Rated voltage	300v/80℃	
Insulation		Mechanical property		
Material	PVC(LF)	Test object	Insulation	Jacket
Thickness of thinnest point (mm)	0.24	Test material	PVC(LF)	PVC(LF)
Standard thickness (mm)	0.30	Before aging		
Insulation O.D. (±0.08mm)	1.25	Tensile strength (kg/mm²)	≧1.05	≧1.05
Color	1.Black 2.Blue 3.Brown	Elongation (%)	≧100	≧100
Cable	YES	Aging condition	113±2℃ X 168hr	
Jacket		After aging		
Material	PVC(LF)	Tensile strength(kg/mm²)	≧70%(Original value)	≧70%(Original value)
Thickness of thinnest point (mm)	0.68	Elongation(%)	≧70%(Original value)	≧65%(Original value)
Standard thickness (mm)	0.85	Combustion test	VW-1,FT1	
O.D. (±0.15mm)	4.40	Application	Apply to internal and external wiring	
Jacket color	Gray		for electronic equipment, and	
			connector connection	

I/O Cable - PVC



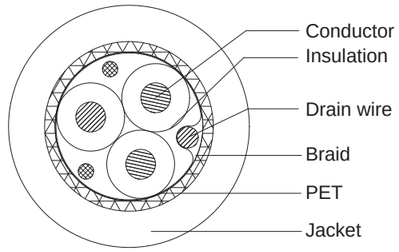
Color code	Color	Core
BN		1
WH		2
BU		3
BK		4

Type List	L1/E141	L200/E141	L300/E141	L500/E141
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure		Product description		
No. of core	4-core	Rated temperature (℃)	-40...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Cross section (mm^2)	0.25mm^2	Max. DC resistance 20℃ (Ω/km)	80.15	
Cross section (mm^2)	32/0.10	Rated voltage	300V/80℃	
OD of Conductor (mm)	0.65(Ref)	Mechanical property		
Insulation		Test object	Insulation	Jacket
Material	PVC(LF)	Test material	PVC(LF)	PVC(LF)
Thickness of thinnest point (mm)	0.24	Before aging		
Standard thickness (mm)	0.30	Tensile strength (kg/mm^2)	≧1.05	≧1.05
Insulation O.D. (±0.08mm)	1.25	Elongation (%)	≧100	≧100
Color	1.White 2.Black 3.Blue 4.Brown	Aging condition	113±2℃ X 168hr	
Cable	YES	After aging		
Stranding direction	S	Tensile strength(kg/mm^2)	≧70%(Original value)	≧70%(Original value)
Jacket		Elongation(%)	≧70%(Original value)	≧65%(Original value)
Material	PVC(LF)	Combustion test	VW-1,FT1	
Thickness of thinnest point (mm)	0.55	Application	Apply to internal and external wiring for	
Standard thickness (mm)	0.69		electronic equipment, and connector	
O.D. (±0.15mm)	4.40		connection	
Jacket color	Gray			

I/O Cable - PVC Shielded



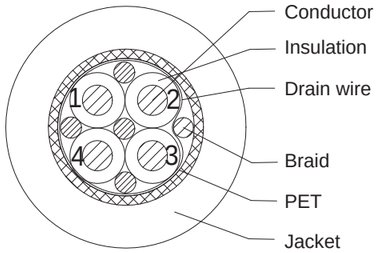
Color code	Color	Core
BK		1
BN		2
BU		3

Type List	L1/E474	L200/E474	L300/E474	L500/E474
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure		Physical and Electrical Performance		
Conductor		Physical		
No. of pair	3	Conductor resistance max. at 20℃	87.6	
Material	Bare copper wire	The rated voltage	300V	
Construction(mm) (±0.008mm)	32/0.10	Test project	Insulation	Jacket
Nom. O.D.:(mm)	0.65		SR-PVC(LF)	PVC(LF)
Insulation		Before aging	2.11 kg/mm^2	1.05 kg/mm^2
Material	SR-PVC(LF)	After aging(113±2℃x168hr)	70% of original	70% of original
Nom. Thickness	0.25	Cold bend test(-20±2℃x4hr)	No crack	No crack
Nom. O.D.: (±0.05mm)	1.15	Flame test	VW-1	VW-1
Color	Blue、Brown、Black	Min. Bending radius	10XOD	10XOD
Outer		Color		
Material	PET	Insulation	1.Blue 2.Brown 3.Black	
Overlap min.	25%	Jacket	Grey RAL7001	
Drain wire				
Material	Tinned Copper wire			
Construction	11/0.16TC±0.08			
Braid				
Material	Tinned copper wire			
Construction	16/6/0.10			
Coverage min.	80%			
Jacket	PVC(LF)			
Nom. Thickness	0.56			
Nom. O.D.:	4.80			

I/O Cable - PVC Shielded



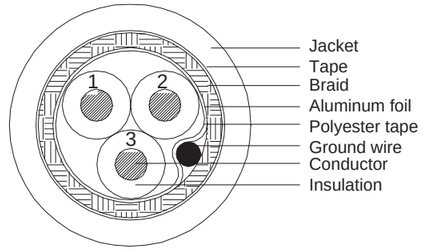
Color code	Color	Core
BK		1
BN		2
WH		3
BU		4

Type List	L1/E475	L200/E475	L300/E475	L500/E475
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure		Physical and Electrical Performance		
Conductor		Physical		
No. of pair	4	Conductor resistance max. at 20℃	87.6	
Material	Bare copper wire	The rated voltage	300V	
Construction(mm) (±0.008mm)	32/0.10	Test project	Insulation	Jacket
Nom. O.D.:(mm)	0.65		PVC(LF)	PVC(LF)
Insulation		Before aging	2.11 kg/mm²	1.05 kg/mm²
Material	SR-PVC(LF)	After aging(113±2℃x168hr)	70% of original	70% of original
Nom. Thickness	0.25	Cold bend test(-20±2℃x4hr)	No crack	No crack
Nom. O.D.: (±0.05mm)	1.15	Flame test	VW-1	VW-1
Color	Blue、Brown、Black、White	Min. Bending radius	10XOD	10XOD
Outer		Color		
Material	PET	Insulation	1.Blue 2.Brown 3.Black 4.White	
Overlap min.	25%	Jacket	Grey RAL7001	
Drain wire				
Material	Tinned Copper wire			
Construction	11/0.16TC±0.08			
Braid				
Material	Tinned copper wire			
Construction	16/6/0.10			
Coverage min.	80%			
Jacket	PVC(LF)			
Nom. Thickness	0.56			
Nom. O.D.:	4.80			

I/O Cable - PVC Shielded



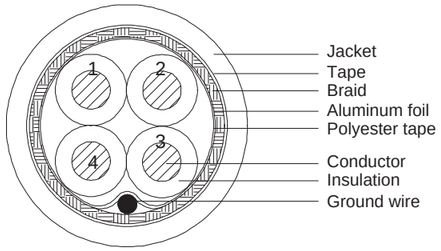
Color code	Color	Core
BN		1
BU		3
BK		4

Type List	L1/E145	L200/E145	L300/E145	L500/E145
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure		Product description	
No. of core	3C×0.34mm²	Rated temperature (℃)	-40...105
Conductor	Bare stranded copper conductor	Electrical characteristic	
Structure (mm)	43/0.10	Max. DC resistance 20℃ (Ω/km)	55
OD of Conductor (mm)	0.75(Ref)	Rated voltage	300V/80℃
Insulation		Mechanical property	
Material	PVC(LF)	Test object	Insulation / Jacket
Thickness of thinnest point (mm)	0.20	Test material	PVC(LF) / PVC(LF)
Standard thickness (mm)	0.25	Before aging	
Insulation O.D.(±0.05mm)	1.25	Tensile strength (kg/mm²)	≧1.05 / ≧1.05
Color	1.Brown 2.Blue 3.Black	Elongation (%)	≧100 / ≧100
Cable	YES	Aging condition	113±2℃ X 168hr / 113±2℃ X 168hr
Stranding direction	S	After aging	
Polyester tape isolation (overlap rate,%)	≥25	Tensile strength(kg/mm²)	≧70%(Original value) / ≧70%(Original value)
Ground wire (between aluminum foil and braid)	Tinned stranded copper wire	Elongation(%)	≧70%(Original value) / ≧65%(Original value)
Structure (mm)	7/0.254	Combustion test	VW-1，FT1 / VW-1，FT1
OD of Conductor (mm)	0.76(Ref)	Application	Apply to internal and external wiring
Foil shield (overlap rate,%)	≥25		for electronic equipment, and
Braid shield	Tinned copper wire		connector connection, especially
Braid structure（mm）	16/7/0.12		suitable for the environment of
Braid density (%)	≧90		shielding electromagnetic signal
Jacket			
Material	PVC(LF)		
Thickness of thinnest point (mm)	0.75		
Standard thickness (mm)	0.94		
O.D. (±0.15mm)	5.20		
Jacket color	Gray		

I/O Cable - PVC Shielded

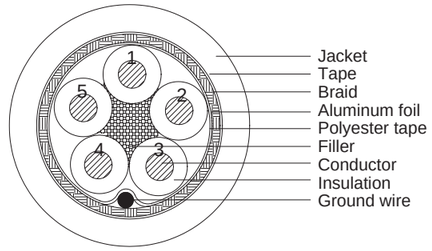


Color code	Color	Core
BN		1
WH		2
BU		3
BK		4

Type List	L1/E146	L200/E146	L300/E146	L500/E146
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure		Product description		
No. of core	4C×0.25mm²	Rated temperature (℃)	-40...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Structure (mm)	43/0.10	Max. DC resistance 20℃ (Ω/km)	55	
OD of Conductor (mm)	0.75(Ref)	Rated voltage	300V/80℃	
Insulation		Mechanical property		
Material	PVC(LF)	Test object	Insulation	Jacket
Thickness of thinnest point (mm)	0.20	Test material	PVC(LF)	PVC(LF)
Standard thickness (mm)	0.25	Before aging		
Insulation O.D.(±0.05mm)	1.40	Tensile strength (kg/mm²)	≧1.05	≧1.05
Color	1.Brown 2.Blue 3. White 4.Black	Elongation (%)	≧100	≧100
Cable	YES	Aging condition	113±2℃ X 168hr	113±2℃ X 168hr
Stranding direction	S	After aging		
Polyester tape isolation (overlap rate,%)	≥25	Tensile strength(kg/mm²)	≧70%(Original value)	≧70%(Original value)
Ground wire (between aluminum foil and braid)	Tinned stranded copper wire	Elongation(%)	≧70%(Original value)	≧65%(Original value)
Structure (mm)	0.76(Ref)	Combustion test	VW-1，FT1	VW-1，FT1
OD of Conductor (mm)	7/0.254	Application	Apply to internal and external wiring	
Foil shield (overlap rate,%)	≥25		for electronic equipment, and	
Braid shield	Tinned copper wire		connector connection, especially	
Braid structure（mm）	16/8/0.10		suitable for the environment of	
Braid density (%)	≧85		shielding electromagnetic signal	
Jacket				
Material	PVC(LF)			
Thickness of thinnest point (mm)	0.62			
Standard thickness (mm)	0.78			
O.D. (±0.15mm)	5.20			
Jacket color	Gray			

I/O Cable - PVC Shielded

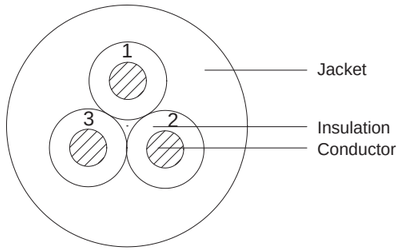


Color code	Color	Core
BN		1
WH		2
BU		3
BK		4
GY		5

Type List	L1/E147	L200/E147	L300/E147	L500/E147
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure		Product description		
No. of core	5C×0.34mm²	Rated temperature (℃)	-40...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Structure (mm)	43/0.10	Max. DC resistance 20℃ (Ω/km)	55	
OD of Conductor (mm)	0.75(Ref)	Rated voltage	300V/80℃	
Insulation		Mechanical property		
Material	PVC(LF)	Test object	Insulation	Jacket
Thickness of thinnest point (mm)	0.20	Test material	PVC(LF)	PVC(LF)
Standard thickness (mm)	0.25	Before aging		
Insulation O.D.(±0.08mm)	1.25	Tensile strength (kg/mm²)	≧1.05	≧1.05
Color	1.Brown 2.Blue 3.Gray 4.White 5.Black	Elongation (%)	≧100	≧100
Cable	YES	Aging condition	113±2℃ X 168hr	113±2℃ X 168hr
Stranding direction	S	After aging		
Polyester tape isolation (overlap rate,%)	≥25	Tensile strength(kg/mm²)	≧70%(Original value)	≧70%(Original value)
Ground wire (between aluminum foil and braid)	Tinned stranded copper wire	Elongation(%)	≧70%(Original value)	≧65%(Original value)
Structure (mm)	7/0.254	Combustion test	VW-1，FT1	VW-1，FT1
OD of Conductor (mm)	0.76(Ref)	Application	Apply to internal and external wiring	
Foil shield (overlap rate,%)	≥25		for electronic equipment, and	
Braid shield	Tinned copper wire		connector connection, especially	
Braid structure（mm）	16/7/0.10		suitable for the environment of	
Braid density (%)	≧79		shielding electromagnetic signal	
Jacket				
Material	PVC(LF)			
Thickness of thinnest point (mm)	0.48			
Standard thickness (mm)	0.60			
O.D. (±0.15mm)	5.20			
Jacket color	Gray			

I/O Cable - EWSR Spark Resistant

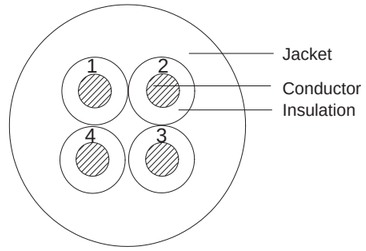


Color code	Color	Core
BN		1
BU		3
BK		4

Type List	L1/E157	L200/E157	L300/E157	L500/E157
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure		Product description		
No. of core	3-core	Rated temperature (℃)	-30...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Cross section (mm^2)	0.34mm^2	Max. DC resistance 20℃ (Ω/km)	55	
Structure (mm)	43/0.10	Ampacity20℃（A）	5	
OD of Conductor (mm)	0.75(Ref)	Rated voltage	300V/80℃	
Insulation		Mechanical property		
Material	PVC(LF)	Test object	Insulation	Jacket
Thickness of thinnest point (mm)	0.32	Test material	PVC(LF)	PVC(LF)
Standard thickness (mm)	0.40	Before aging		
Insulation O.D. (±0.10mm)	1.55	Tensile strength (kg/mm^2)	≧1.05	≧1.05
Color	1.Black 2.Brown 3.Blue	Elongation (%)	≧100	≧100
Cable	YES	Aging condition	113±2℃ X 168hr	
Jacket		After aging		
Material	PVC(LF)	Tensile strength(kg/mm^2)	≧70%(Original value)	≧70%(Original value)
Thickness of thinnest point (mm)	0.58	Elongation(%)	≧65%(Original value)	≧65%(Original value)
Standard thickness (mm)	0.73	Combustion test	VW-1,FT1	
O.D. (±0.15mm)	5.20	Application	Apply to internal and external wiring for	
Jacket color	Orange		electronic equipment, especially suitable	
			for welding spark splash conditions, such	
			as automotive welding workshop	

I/O Cable - EWSR Spark Resistant

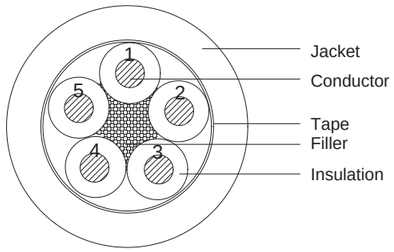


Color code	Color	Core
BN		1
WH		2
BU		3
BK		4

Type List	L1/E156	L200/E156	L300/E156	L500/E156
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure		Product description		
No. of core	4-core	Rated temperature (℃)	-30...105	
Conductor	Bare stranded copper conductor	Electrical characteristic		
Cross section (mm^2)	0.34mm^2	Max. DC resistance 20℃ (Ω/km)	55	
Structure (mm)	43/0.10	Ampacity20℃（A）	5	
OD of Conductor (mm)	0.75(Ref)	Rated voltage	300V/80℃	
Insulation		Mechanical property		
Material	PVC(LF)	Test object	Insulation	Jacket
Thickness of thinnest point (mm)	0.32	Test material	PVC(LF)	PVC(LF)
Standard thickness (mm)	0.40	Before aging		
Insulation O.D. (±0.10mm)	1.55	Tensile strength (kg/mm^2)	≧1.05	≧1.05
Color	1.Black 2.Brown 3.White 4.Blue	Elongation (%)	≧100	≧100
Cable	YES	Aging condition	113±2℃ X 168hr	
Jacket		After aging		
Material	PVC(LF)	Tensile strength(kg/mm^2)	≧70%(Original value)	≧70%(Original value)
Thickness of thinnest point (mm)	0.58	Elongation(%)	≧65%(Original value)	≧65%(Original value)
Standard thickness (mm)	0.73	Combustion test	VW-1,FT1	
O.D. (±0.15mm)	5.20	Application	Apply to internal and external wiring for	
Jacket color	Orange		electronic equipment, especially suitable	
			for welding spark splash conditions, such	
			as automotive welding workshop	

I/O Cable - EWSR Spark Resistant

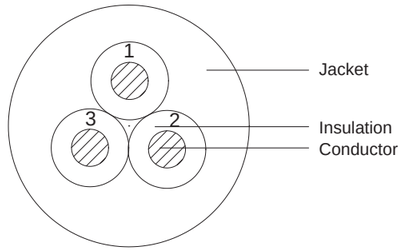


Color code	Color	Core
BN		1
WH		2
BU		3
BK		4
GY		5

Type List	L1/E168	L200/E168	L300/E168	L500/E168
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure		Product description	
No. of core	5-core	Rated temperature (℃)	-30...105
Conductor	Bare stranded copper conductor	Electrical characteristic	
Cross section (mm²)	0.34mm²	Max. DC resistance 20℃ (Ω/km)	55
Cross section (mm²)	43/0.10	Ampacity20℃（A）	5
OD of Conductor (mm)	0.75(Ref)	Rated voltage	300V/80℃
Insulation		Mechanical property	
Material	PVC(LF)	Test object	Insulation / Jacket
Thickness of thinnest point (mm)	0.32	Test material	PVC(LF) / PVC(LF)
Standard thickness (mm)	0.40	Before aging	
Insulation O.D. (±0.10mm)	1.55	Tensile strength (kg/mm²)	≧1.05 / ≧1.05
Color	1.Brown 2.Blue 3.Gray 4.White 5.Black	Elongation (%)	≧100 / ≧100
Cable	YES	Aging condition	113±2℃ X 168hr
Jacket		After aging	
Material	PVC(LF)	Tensile strength(kg/mm²)	≧70%(Original value) / ≧70%(Original value)
Thickness of thinnest point (mm)	0.58	Elongation(%)	≧65%(Original value) / ≧65%(Original value)
Standard thickness (mm)	0.73	Combustion test	VW-1,FT1
O.D. (±0.15mm)	5.20	Application	Apply to internal and external wiring for
Jacket color	Orange		electronic equipment, especially suitable
			for welding spark splash conditions, such
			as automotive welding workshop

I/O Cable - EWSR Spark Resistant

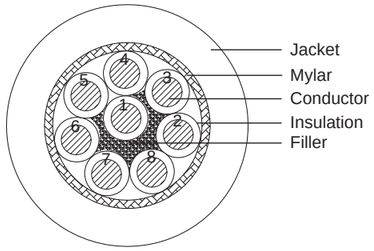


Color code	Color	Core
BN		1
BK		2
BU		3

Type List	L1/E177	L200/E177	L300/E177	L500/E177
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure		product Description	
No. of core	3-core	Rated Temperature (℃)	-20~105
Conductor	Bare copper stranded	Electrical Characteristic	
Cross section (mm²)	0.25mm²	Max. Dc Resistance 20℃ (Ω/km)	94.2
Structure (mm)	32/0.10±0.008mm	Rated Voltage	300V
OD of Conductor (mm)	0.65(Ref)	Voltage Withstand Test	AC 0.5kV/1min
Insulation		Flame Test	FT4
Material	PVC(LF)	Physical Properties	
Thickness of thinnest point (mm)	0.32	Tensile Strength	≥10.3MPa
Standard thickness (mm)	0.24	Elongation	≥100%
Insulation O.D. (±0.10mm)	1.40±0.05mm	Aged Condition	113±1℃×168h
Color	1.brown 2.black 3.blue	Percent Of Original Tensile Strength	≥70%
Cable		Percent Of Original Elongation	≥65%
Assembly	3C×0.25mm2(32/0.10B)		
Jacket			
Material	PVC(LF)		
Thickness of thinnest point (mm)	0.60		
Standard thickness (mm)	0.50		
O.D. (±0.15mm)	4.40±0.10mm		
Jacket color	Orange		

I/O Cable - PVC



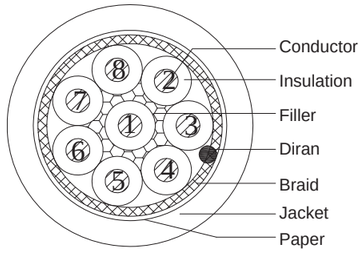
Color code	Color	Core
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

Type List	L1/E219	L200/E219	L300/E219	L500/E219
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure		Product description		
No. of core	8-core	Rated temperature (℃)		-40...105
Conductor	Bare stranded copper conductor	Electrical characteristic		
Cross section (mm²)	0.25mm²	Max. DC resistance 20℃ (Ω/km)		55
Cross section (mm²)	32/0.10	Ampacity20℃（A）		5
OD of Conductor (mm)	0.653(Ref)	Rated voltage		300V/80℃
Insulation		Mechanical property		
Material	PVC(LF)	Test object	Insulation	Jacket
Thickness of thinnest point (mm)	0.24	Test material	PVC(LF)	PVC(LF)
Standard thickness (mm)	0.30	Before aging		
Insulation O.D. (±0.08mm)	1.25	Tensile strength (kg/mm²)	≧1.05	≧1.05
Color	1.Brown 2.White 3.Green 4.Yellow	Elongation (%)	≧100	≧100
	5.Gray 6. Pink 7.Blue 8.Red	Aging condition	113±2℃ X 168hr	
Cable	YES	After aging		
Jacket		Tensile strength(kg/mm²)	≧70%(Original value)	≧70%(Original value)
Material	PVC(LF)	Elongation(%)	≧65%(Original value)	≧65%(Original value)
Thickness of thinnest point (mm)	0.64	Combustion test	VW-1,FT1	
Standard thickness (mm)	0.80	Application	Apply to internal and external wiring for	
O.D. (±0.15mm)	6.00		electronic equipment, especially suitable	
Jacket color	Gray		for welding spark splash conditions, such	
			as automotive welding workshop	

I/O Cable - PVC Shielded



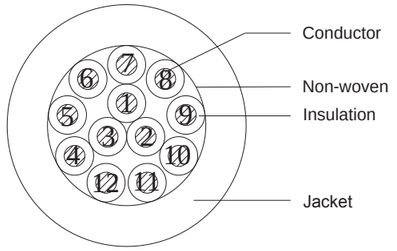
Color code	Color	Core
BN		1
WH		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

Type List	L1/E388	L200/E388	L300/E388	L500/E388
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	8C×0.25mm²(32/0.10B)+DBP	Electrical Characteristics	
Conductor		Rated Voltage	300V
Material	Bared copper stranded	Rated Temperature	-40～80℃
Size	32/0.10±0.008mm	Max. Dc Conductor Resistance（20℃）	87.6Ω/km
O.D.（Ref）	0.65mm	Voltage Withstand Test	2.0kV/1min
Insulation		Min.bending Radius	Flexing 15×OD
Material	SR-PVC		Flxed 7.5×OD
Min.average thickness	0.30mm	Physical Properties	
Min.thickness at any point	0.24mm	Tensile Strength	≥10.3MPa
O.D.	1.25±0.05mm	Elongation	≥100%
Cabling		Aged Condition	113±1℃×168h
Filler	Cotton	Percent Of Original Tensile Strength	≥70%
Material	32/0.10T±0.008mm	Percent Of Original Elongation	≥65%
Drain wire	8C×0.25mm²(32/0.10B)+DBP	Flame	VW-1
Braid		Color Code	
Material	Tinned copper	Insulation	1.brown 2.white 3.green 4.yellow
Size	16/9/0.12T(90%min.)		5.grey 6.pink 7.blue 8.red
Jacket		Jacket	Gray RAL7001
Material	Paper		
Material	PVC		
Min.average thickness	0.76mm		
Min.thickness at any point	0.61mm		
O.D.	6.40±0.15mm		

I/O Cable - PVC



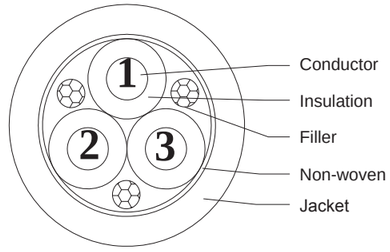
Color code	Color	Core	Color code	Color	Core
VI		1	GY/PK		11
BK		2	RD/BU		12
PK		3			
YE		4			
WH		5			
BN		6			
GN		7			
GY		8			
RD		9			
BU		10			

Type List	L1/E260	L200/E260	L300/E260	L500/E260
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	12C×24AWG(7/0.20T)	Electrical Characteristics	
Conductor		Rated Voltage	300V
Material	Tinned copper stranded	Rated Temperature	80℃
Size	7/0.20±0.008mm	Max. Dc Conductor Resistance（20℃）	94.2Ω/km
O.D.（Ref）	0.60mm	Voltage Withstand Test	AC 2.0kV/1min
Insulation		Physical Properties	
Material	PVC	Tensile Strength	≥10.3MPa
Min.average Thickness	0.31mm	Elongation	≥100%
Min.thickness At Any Point	0.25mm	Aged Condition	113±1℃×168h
O.D.	1.30±0.05mm	Percent Of Original Tensile Strength	≥70%
Cabling		Percent Of Original Elongation	≥65%
Material	Non-woven		
Assembly	12C×24AWG(7/0.20T)		
Jacket			
Material	PVC(Oil Resistance)		
Min.average Thickness	0.76mm		
Min.thickness At Any Point	0.61mm		
O.D.	8.00±0.20mm		

I/O Cable - PUR



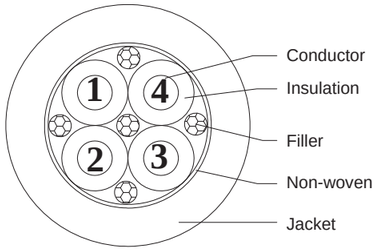
Color code	Color	Core
BK		1
BN		2
BU		3

Type List	L1/E344	L200/E344	L300/E344	L500/E344
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	3C×24AWG(44/0.08B)+W	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	87.6Ω/km
O.D.（Ref）	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Jacket		Aged condition	113±1℃×168h
Material	PUR	Percent of original tensile strength	≥70%
Min.average thickness	0.76mm	Percent of original elongation	≥65%
Min.thickness at any point	0.61mm	Flame test	FT1, IEC 60332-1
O.D.	4.40±0.20mm	Chain test	20times/minute, distance：1.0m，
		Bending radius	100mm ≥5 million times
			Halogen free
		Color code	
		Insulation	1.black 2.brown 3.blue
		Jacket	Gray

I/O Cable - PUR



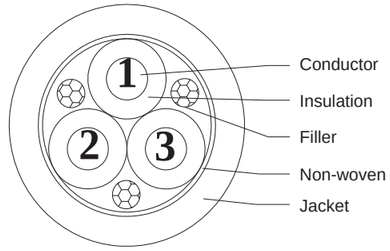
Color code	Color	Core
WH		1
BK		2
BU		3
BN		4

Type List	L1/E345	L200/E345	L300/E345	L500/E345
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	4C×24AWG(44/0.08B)+W	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	87.6Ω/km
O.D.（Ref）	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Jacket		Aged condition	113±1℃×168h
Material	PUR	Percent of original tensile strength	≥70%
Min.average thickness	0.76mm	Percent of original elongation	≥65%
Min.thickness at any point	0.61mm	Flame test	FT1, IEC 60332-1
O.D.	4.40±0.20mm	Chain test	20times/minute, distance：1.0m，
		Bending radius	100mm ≥5 million times
			Halogen free
		Color code	
		Insulation	1.white 2.black 3.blue 4.brown
		Jacket	Gray

I/O Cable - PUR



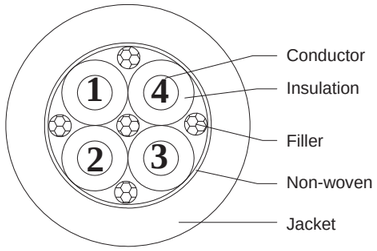
Color code	Color	Core
BK		1
BN		2
BU		3

Type List	L1/E346	L200/E346	L300/E346	L500/E346
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	3C×22AWG(65/0.08B)+W	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	55.4Ω/km
O.D.（Ref）	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.25±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Jacket		Aged condition	113±1℃×168h
Material	PUR	Percent of original tensile strength	≥70%
Min.average thickness	0.80mm	Percent of original elongation	≥65%
Min.thickness at any point	0.64mm	Flame test	FT1, IEC 60332-1
O.D.	5.20±0.20mm	Chain test	20times/minute, distance：1.0m，
		Bending radius	100mm ≥5 million times
			Halogen free
		Color code	
		Insulation	1.black 2.brown 3.blue
		Jacket	Gray

I/O Cable - PUR



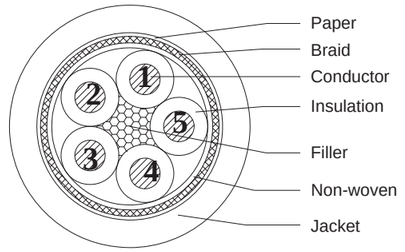
Color code	Color	Core
WH		1
BK		2
BU		3
BN		4

Type List	L1/E347	L200/E347	L300/E347	L500/E347
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	4C×22AWG(65/0.08B)+W	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	55.4Ω/km
O.D.（Ref）	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.25±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Jacket		Aged condition	113±1℃×168h
Material	PUR	Percent of original tensile strength	≥70%
Min.average thickness	0.80mm	Percent of original elongation	≥65%
Min.thickness at any point	0.64mm	Flame test	FT1, IEC 60332-1
O.D.	5.20±0.20mm	Chain test	20times/minute, distance：1.0m,
		Bending radius	100mm ≥5 million times
			Halogen free
		Color code	
		Insulation	1.white 2.black 3.blue 4.brown
		Jacket	Gray

I/O Cable - PUR



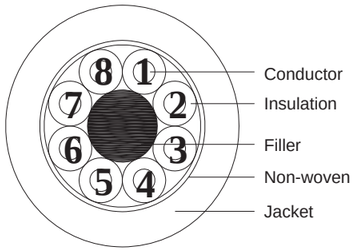
Color code	Color	Core
BN		1
WH		2
BU		3
BK		4
GY		5

Type List	L1/E348	L200/E348	L300/E348	L500/E348
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	5C×0.34mm² (65/0.08B)+W	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	55.4Ω/km
O.D.（Ref）	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Braid		Aged condition	113±1℃×168h
Material	Tinned copper	Percent of original tensile strength	≥70%
Size	0.10mm(80% min.)	Percent of original elongation	≥65%
Jacket		Flame test	FT1, IEC 60332-1
Material	Paper	Chain test	20times/minute, distance：1.0m,
Material	PUR	Bending radius	100mm ≥5 million times
Min.average thickness	0.76mm		Halogen free
Min.thickness at any point	0.61mm	Color code	
O.D.	6.00±0.20mm	Insulation	1.brown 2.blue 3.gray 4.white 5.black
		Jacket	Gray

I/O Cable - PUR

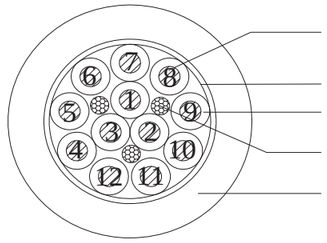


Color code	Color	Core
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

Type List	L1/E390	L200/E390	L300/E390	L500/390
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Structure	8Cx0.25mm²(32/0.10B)+W	electrical Characteristics	
Conductor		Rated Voltage	300V
Material	Bared Copper Stranded	Rated Temperature	-40...80℃
Size	32/0.10±0.008mm	Max. Dc Conductor Resistance（20℃）	87.6Ω/km
O.D.（Ref）	0.65mm	Voltage Withstand Test	AC 2.0kV/1min
Insulation		Min.bending Radius	Flexing 5×OD Flxed 10×OD
Material	PP	Physical Properties	
Min.average thickness	0.23mm	Tensile Strength	≥10.3MPa
Min.thickness at any point	0.18mm	Elongation	≥100%
O.D.	1.15±0.10mm	Aged Condition	113±1℃×168h
Cabling		Percent Of Original Tensile Strength	≥70%
Filler	Optional	Percent Of Original Elongation	≥65%
Material	Non-woven	Flame Test	FT1, IEC 60332-1
Jacket		Chain Test	20times/minute, distance：1.0m
Material	PUR	Bending Radius	100mm ≥5 million times
Min.average thickness	0.76mm		Halogen free
Min.thickness at any point	0.61mm	Color Code	
O.D.	6.00±0.25mm	Insulation	1.white 2.brown 3.green 4.yellow
			5.gray 6.pink 7.blue 8.red
		Jacket	gray RAL7001

I/O Cable - PUR



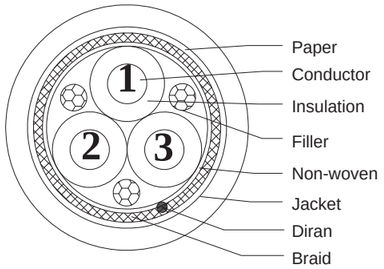
Color code	Color	Core	Color code	Color	Core
BN		1	RD		9
BU		2	VI		10
WH		3	GY/PK		11
GN		4	RD/BU		12
PK		5			
YE		6			
BK		7			
GY		8			

Type List	L1/E363	L200/E363	L300/E363	L500/E363
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	12C×0.25mm²(44/0.08B)+W	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	87.6Ω/km
O.D.（Ref）	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Jacket		Aged condition	113±1℃×168h
Material	PUR	Percent of original tensile strength	≥70%
Min.average thickness	0.76mm	Percent of original elongation	≥65%
Min.thickness at any point	0.61mm	Flame test	FT1, IEC 60332-1
O.D.	5.60±0.20mm	Chain test	20times/minute, distance：1.0m，
		Bending radius	100mm ≥5 million times
			Halogen free
		Color code	
		Insulation	1.white 2.brown 3.green 4.yellow
			5.gray 6.pink 7.blue8.red 9.black
			10.purple 11.gray/pink 12.red/blue
		Jacket	Gray

I/O Cable - PUR Shielded

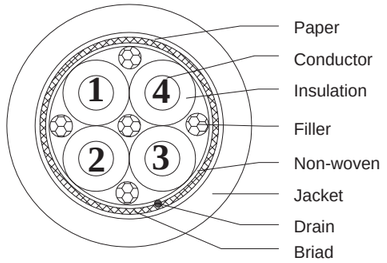


Color code	Color	Core
BN		1
BU		3
BK		4

Type List	L1/E366	L200/E366	L300/E366	L500/E366
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	3C×0.25mm² (44/0.08B)+WB	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	87.6Ω/km
O.D.（Ref）	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper, 32/0.10±0.008mm	Aged condition	113±1℃×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance：1.0m，
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black
O.D.	4.80±0.20mm	Jacket	Gray

I/O Cable - PUR Shielded

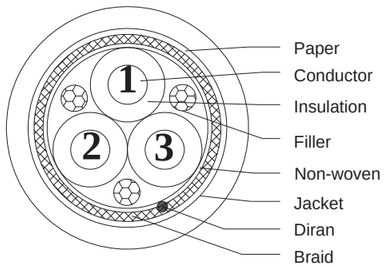


Color code	Color	Core
BN		1
WH		2
BU		3
BK		4

Type List	L1/E367	L200/E367	L300/E367	L500/E367
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	4C×0.25mm² (44/0.08B)+WB	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	87.6Ω/km
O.D.（Ref）	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper，32/0.10±0.008mm	Aged condition	113±1℃×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance：1.0m，
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black 4.white
O.D.	5.20±0.20mm	Jacket	Gray

I/O Cable - PUR Shielded

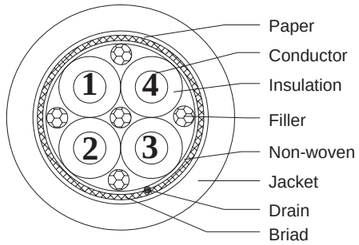


Color code	Color	Core
BN		1
BU		3
BK		4

Type List	L1/E368	L200/E368	L300/E368	L500/E368
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	3C×0.34mm² (65/0.08B)+WB	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	55.4Ω/km
O.D.（Ref）	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper，43/0.10±0.008mm	Aged condition	113±1℃×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance：1.0m，
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black
O.D.	5.20±0.20mm	Jacket	Gray

I/O Cable - PUR Shielded

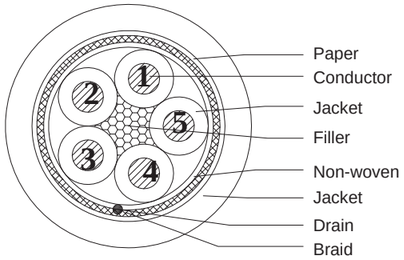


Color code	Color	Core
BN		1
WH		2
BU		3
BK		4

Type List	L1/E369	L200/E369	L300/E369	L500/E369
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	4C×0.34mm² (65/0.08B)+WB	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	55.4Ω/km
O.D.（Ref）	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.25±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper，43/0.10±0.008mm	Aged condition	113±1℃×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance：1.0m，
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black 4.white
O.D.	5.60±0.25mm	Jacket	Gray

I/O Cable - PUR Shielded



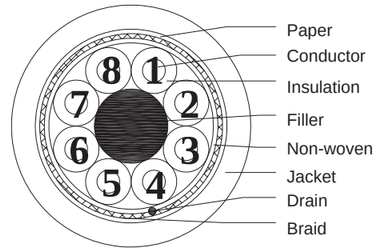
Color code	Color	Core
BN		1
WH		2
BU		3
BK		4
GY		5

Type List	L1/E370	L200/E370	L300/E370	L500/E370
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	5C×0.34mm²(65/0.08B)+WB	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	55.4Ω/km
O.D.（Ref）	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.25±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper，43/0.10±0.008mm	Aged condition	113±1℃×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance：1.0m，
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black 4.white 5.gray
O.D.	5.60±0.25mm	Jacket	Gray

I/O Cable - PUR Shielded



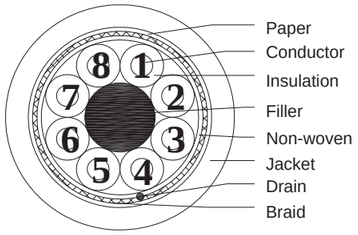
Color code	Color	Core
WH		1
BU		2
GN		3
YE		4
GY		5
PK		6
BN		7
RD		8

Type List	L1/E371	L200/E371	L300/E371	L500/E371
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	8C×0.25mm² (44/0.08B)	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	87.6Ω/km
O.D.（Ref）	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper, 32/0.10±0.008mm	Aged condition	113±1℃×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance：1.0m，
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.white 2.brown 3.green 4.yellow
O.D.	6.80±0.25mm		5.gray 6.pink 7.blue 8.red
		Jacket	Gray

I/O Cable - PUR Shielded

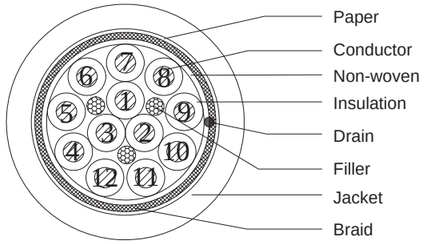


Color code	Color	Core
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

Type List	L1/E372	L200/E372	L300/E372	L500/E372
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	8C×0.34mm² (65/0.08B)+WB	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	55.4Ω/km
O.D.（Ref）	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.25±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper，43/0.10±0.008mm	Aged condition	113±1℃×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance：1.0m，
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.white 2.brown 3.green 4.yellow
O.D.	7.10±0.30mm		5.gray 6.pink 7.blue 8.red
		Jacket	Gray

I/O Cable - PUR Shielded

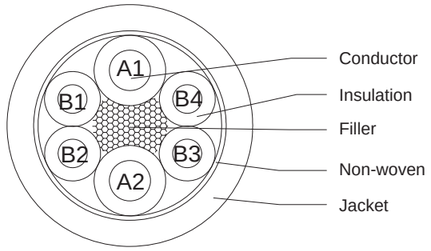


Color code	Color	Core	Color code	Color	Core
BN		1	RD		9
BU		2	VI		10
WH		3	GY/PK		11
GN		4	RD/BU		12
PK		5			
YE		6			
BK		7			
GY		8			

Type List	L1/E389	L200/E389	L300/E389	L500/E389
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	12C×0.25mm2(32/0.10B)+WDBP	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40～80℃
Size	32/0.10±0.008mm	Max. DC conductor resistance(at 20℃)	87.6Ω/km
O.D.（Ref）	0.65mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 15×OD
Material	PP		Flxed 7.5×OD
Min.average thickness	0.23mm	Physical properties	
Min.thickness at any point	0.18mm	Tensile strength	≥10.3MPa
O.D.	1.25±0.10mm	Elongation	≥100%
Cabling		Aged condition	113±1℃×168h
Filler	Cotton	Percent of original tensile strength	≥70%
Material	Non-woven	Percent of original elongation	≥65%
Drain	Tinned copper stranded，32/0.10±0.008mm	Flame test	FT1, IEC 60332-1
Braid		Chain test	20times/minute, distance：1.0m，
Material	Tinned copper	Bending radius	100mm ≥5 million times
Size	0.10mm , 80% min.		Halogen free
Jacket		Color code	
Material	Paper	Insulation	1.white 2.brown 3.green 4.yellow
Material	PUR		5.gray 6.pink 7.blue8.red 9.black
Min.average thickness	0.76mm		10.purple 11.gray/pink 12.red/blue
Min.thickness at any point	0.61mm	Jacket	Gray
O.D.	8.00±0.40mm		

I/O Cable - PUR(for Distribution Box)

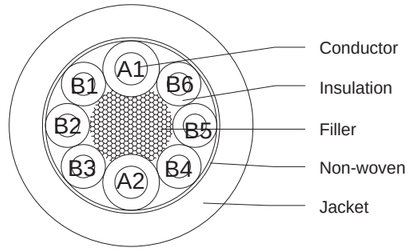


Color code	Color	Core	Color code	Color	Core
BN		A1	WH		B1
BU		A2	GN		B2
			YE		B3
			GY		B4

Type List	L1/E358	L200/E358	L300/E358	L500/E358
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure	A:2C×AWG 20 (0.5024mm²)	B:4C×AWG 24 (0.2211mm²)	Electrical characteristic	
Conductor			Rated voltage	300V
Material	Bared Copper Stranded		Rated temperature	-40～80℃
Size	100/0.08±0.008mm	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	A : 43.6Ω/km B : 87.6Ω/km1.5kV/1min
O.D.（Ref）	0.92mm	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation			Oil Resistant Condition(IRM 902)	100℃×24hrs
Material	PP	PP	Tensile strength	≥60% of original
Min.average thickness	0.23mm	0.23mm	Elongation(%)	≥60% of original
Min.thickness at any point	0.18mm	0.18mm	Physical properties	
O.D.	1.60±0.10mm	1.25±0.10mm	Tensile strength	≥10.3MPa
Cabling			Elongation	≥100%
Filler	Cotton		Aged condition	113±1℃×168h
Material	Non-woven		Percent of original tensile strength	≥70%
Jacket			Percent of original elongation	≥65%
Material	PUR		Flame test	FT1, IEC 60332-1
Min.average thickness	0.76mm		Chain test	20times/minute, distance：1.0m，
Min.thickness at any point	0.61mm		Bending radius	100mm ≥5 million times
O.D.	6.80±0.30mm			Halogen free
			Color code	
			Insulation	A1.brown A2.blue
				B1.white B2.green B3.yellow B4.gray
			Jacket	Gray

I/O Cable - PUR(for Distribution Box)

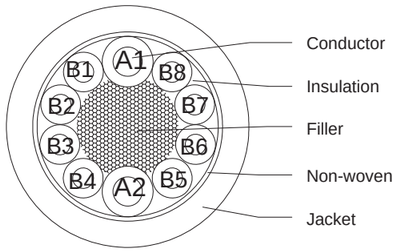


Color code	Color	Core	Color code	Color	Core
BN		A1	WH		B1
BU		A2	GN		B2
			YE		B3
			GY		B4
			PK		B5
			RD		B6

Type List	L1/E360	L200/E360	L300/E360	L500/E360
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure	A:2C×AWG 20 (0.5024mm²)	B:6C×AWG 24 (0.2211mm²)	Electrical characteristic	
Conductor			Rated voltage	300V
Material	Bared Copper Stranded		Rated temperature	-40～80℃
Size	100/0.08±0.008mm	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	A : 43.6Ω/km B : 87.6Ω/km
O.D.（Ref）	0.92mm	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation			Oil Resistant Condition(IRM 902)	100℃×24hrs
Material	PP	PP	Tensile strength	≥60% of original
Min.average thickness	0.23mm	0.23mm	Elongation(%)	≥60% of original
Min.thickness at any point	0.18mm	0.18mm	Physical properties	
O.D.	1.60±0.10mm	1.25±0.10mm	Tensile strength	≥10.3MPa
Cabling			Elongation	≥100%
Filler	Cotton		Aged condition	113±1℃×168h
Material	Non-woven		Percent of original tensile strength	≥70%
Jacket			Percent of original elongation	≥65%
Material	PUR		Flame test	FT1, IEC 60332-1
Min.average thickness	0.76mm		Chain test	20times/minute, distance：1.0m，
Min.thickness at any point	0.61mm		Bending radius	100mm ≥5 million times
O.D.	8.00±0.30mm			Halogen free
			Color code	
			Insulation	A1.brown A2.blue
				B1.white B2.green B3.yellow
				B4.gray B5.pink B6.red
			Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	WH		B1
BU		A2	GN		B2
			YE		B3
			GY		B4
			GYPK		B5
			RDBU		B6
			WHGN		B7
			BNGN		B8

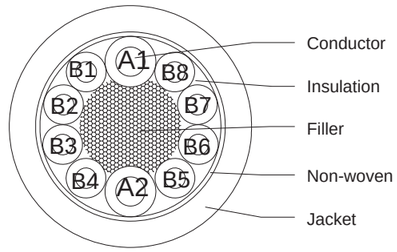
Type List	L1/E359	L200/E359	L300/E359	L500/E359
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A: 2C×AWG 20 (0.5024mm²)	B:8C×AWG 24 (0.2211mm²)
Conductor		
Material	Bared Copper Stranded	
Size	100/0.08±0.008mm	44/0.08±0.008mm
O.D.（Ref）	0.92mm	0.61mm
Insulation		
Material	PP	PP
Min.average thickness	0.23mm	0.23mm
Min.thickness at any point	0.18mm	0.18mm
O.D.	1.60±0.10mm	1.25±0.10mm
Cabling		
Filler	Cotton	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	8.00±0.30mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 43.6Ω/km B : 87.6Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue
	B1.white B2.green B3.yellow B4.gray
	B5.gray/pink B6.red/blue
	B7.white/green B8.brown/green
Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	WH		B1
BU		A2	GN		B2
			YE		B3
			GY		B4
			PK		B5
			RD		B6
			BK		B7
			VI		B8

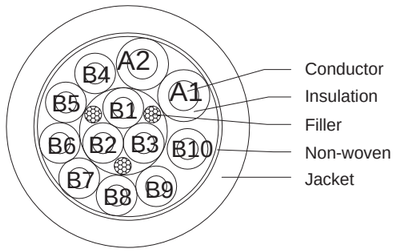
Type List	L1/E354	L200/E354	L300/E354	L500/E354
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A: 2C×AWG 20 (0.5024mm²)	B:8C×AWG 24 (0.2211mm²)
Conductor		
Material	Bared Copper Stranded	
Size	100/0.08±0.008mm	44/0.08±0.008mm
O.D.（Ref）	0.92mm	0.61mm
Insulation		
Material	PP	PP
Min.average thickness	0.23mm	0.23mm
Min.thickness at any point	0.18mm	0.18mm
O.D.	1.60±0.10mm	1.25±0.10mm
Cabling		
Filler	Cotton	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	8.00±0.30mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 43.6Ω/km B : 87.6Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue
	B1.white B2.green B3.yellow B4.gray
	B5.pink B6.red B7.black B8.violet
Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	WH		B1
BU		A2	GN		B2
			YE		B3
			GY		B4
			PK		B5
			RD		B6
			BK		B7
			VI		B8
			PKBN		B9
			BNBU		B10

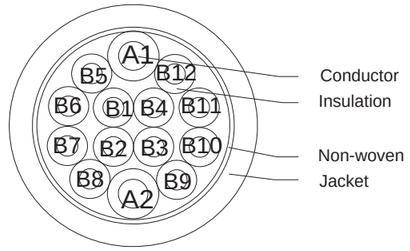
Type List	L1/E349	L200/E349	L300/E349	L500/E349
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A: 2C×AWG 20 (0.5024mm²)	B:10C×AWG 24 (0.2211mm²)
Conductor		
Material	Bared Copper Stranded	
Size	100/0.08±0.008mm	
O.D.（Ref）	0.92mm	44/0.08±0.008mm
Insulation		0.61mm
Material	PP	
Min.average thickness	0.23mm	PP
Min.thickness at any point	0.18mm	0.23mm
O.D.	1.60±0.10mm	0.18mm
Cabling	1.25±0.10mm	
Filler	Cotton	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	8.00±0.30mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 43.6Ω/km B : 87.6Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue
	B1.white B2.green B3.yellow B4.gray
	B5.pink B6.red B7.black
	B8.violet B9.pink/brown B10.brown/blue
Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	WHGN		B9
BU		A2	BNGN		B10
WH		B1	WHYE		B11
GN		B2	YEBN		B12
YE		B3			
GY		B4			
PK		B5			
RD		B6			
GYPK		B7			
RDBU		B8			

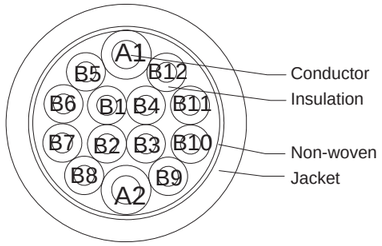
Type List	L1/E361	L200/E361	L300/E361	L500/E361
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A: 2C×AWG 20 (0.5024mm²)	B:12C×AWG 24 (0.2211mm²)
Conductor		
Material	Bared Copper Stranded	
Size	100/0.08±0.008mm	44/0.08±0.008mm
O.D.（Ref）	0.92mm	0.61mm
Insulation		
Material	PP	PP
Min.average thickness	0.23mm	0.23mm
Min.thickness at any point	0.18mm	0.18mm
O.D.	1.60±0.10mm	1.25±0.10mm
Cabling		
Filler	Optional	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	8.00±0.30mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 43.6Ω/km B : 87.6Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue
	B1.white B2.green B3.yellow B4.gray
	B5.pink B6.redB7.gray/pink B8.red/blue
	B9.white/green B10.brown/green
	B11.white/yellow B12.yellow/brown
Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	PKBN		B9
BU		A2	BNBU		B10
WH		B1	BNRD		B11
GN		B2	BNBK		B12
YE		B3			
GY		B4			
PK		B5			
RD		B6			
BK		B7			
VT		B8			

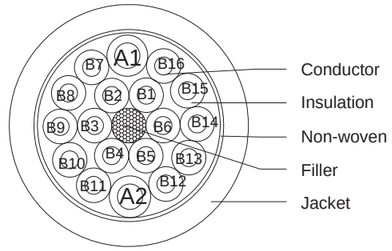
Type List	L1/E380	L200/E380	L300/E380	L500/E380
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A: 2C×AWG 20 (0.5024mm²)	B:12C×AWG 24 (0.2211mm²)
Conductor		
Material	Bared Copper Stranded	
Size	100/0.08±0.008mm	44/0.08±0.008mm
O.D.（Ref）	0.92mm	0.61mm
Insulation		
Material	PP	PP
Min.average thickness	0.23mm	0.23mm
Min.thickness at any point	0.18mm	0.18mm
O.D.	1.60±0.10mm	1.25±0.10mm
Cabling		
Filler	Optional	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	8.00±0.30mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 36.0Ω/km B : 87.6Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue
	B1.white B2.green B3.yellow B4.gray
	B5.pink B6.red B7.black B8.violet
	B9.pink /brown B10.brown/blue
	B11.brown/red B12.brown/black
Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	GYPK		B9
BU		A2	RDBU		B10
WH		B1	WHGN		B11
GN		B2	BNGN		B12
YE		B3	WHYE		B13
GY		B4	YEBN		B14
PK		B5	WHGY		B15
RD		B6	GYBN		B16
BK		B7			
VI		B8			

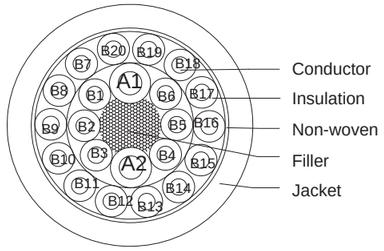
Type List	L1/E355	L200/E355	L300/E355	L500/E355
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A: 2C×AWG 20 (0.5024mm²)	B:16C×AWG 24 (0.2211mm²)
Conductor		
Material	Bared Copper Stranded	
Size	100/0.08±0.008mm	44/0.08±0.008mm
O.D.（Ref）	0.92mm	0.61mm
Insulation		
Material	PP	PP
Min.average thickness	0.23mm	0.23mm
Min.thickness at any point	0.18mm	0.18mm
O.D.	1.60±0.10mm	1.25±0.10mm
Cabling		
Filler	Cotton	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	9.60±0.30mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 43.6Ω/km B : 87.6Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue
	B1.white B2.green B3.yellow B4.gray
	B5.pink B6.red B7.blackB8.violet
	B9.gray/pink B10.red/blue B11.white/green
	B12.brown/greenB13.white/yellow
	B14.yellow/brown B15.white/gray
	B16.gray/brown
Jacket	Gray

I/O Cable - PUR(for Distribution Box)

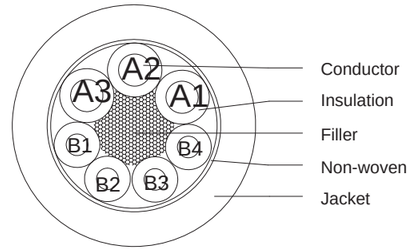


Color code	Color	Core	Color code	Color	Core	Color code	Color	Core
BN		A1	GYPK		B9	WHBU		B19
BU		A2	RDBU		B10	BNBU		B20
WH		B1	WHGN		B11			
GN		B2	BNGN		B12			
YE		B3	WHYE		B13			
GY		B4	YEBN		B14			
PK		B5	WHGY		B15			
RD		B6	GYBN		B16			
BK		B7	WHPK		B17			
VI		B8	PKBN		B18			

Type List	L1/E350	L200/E350	L300/E350	L500/E350
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure	A: 2C×AWG 20 (0.5024mm²)	B: 20C×AWG 24 (0.2211mm²)	Electrical characteristic	
Conductor			Rated voltage	300V
Material	Bared Copper Stranded		Rated temperature	-40～80℃
Size	100/0.08±0.008mm	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	A : 43.6Ω/km B : 87.6Ω/km
O.D.（Ref）	0.92mm	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation			Oil Resistant Condition(IRM 902)	100℃×24hrs
Material	PP	PP	Tensile strength	≥60% of original
Min.average thickness	0.23mm	0.23mm	Elongation(%)	≥60% of original
Min.thickness at any point	0.18mm	0.18mm	Physical properties	
O.D.	1.60±0.10mm	1.25±0.10mm	Tensile strength	≥10.3MPa
Cabling			Elongation	≥100%
Filler	Optional		Aged condition	113±1℃×168h
Material	Non-woven		Percent of original tensile strength	≥70%
Jacket			Percent of original elongation	≥65%
Material	PUR		Flame test	FT1, IEC 60332-1
Min.average thickness	0.76mm		Chain test	20times/minute, distance：1.0m,
Min.thickness at any point	0.61mm		Bending radius	100mm ≥5 million times
O.D.	10.00±0.40mm			Halogen free
			Color code	
			Insulation	A1.brown A2.blue
				B1.white B2.green B3.yellow B4.gray B5.pink
				B6.red B7.blackB8.violet B9.gray/pink
				B10.red/blue B11.white/green B12.brown/green
				B13.white/yellow B14.yellow/brown
				B15.white/gray B16.gray/brown
				B17.white/pink B18.pink/brown
				B19.white/blue B20.brown/blue
			Jacket	Gray

I/O Cable - PUR(for Distribution Box)

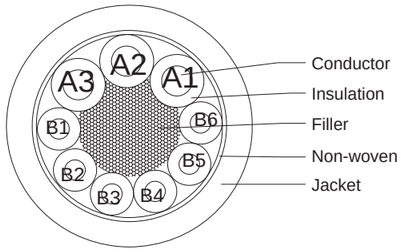


Color code	Color	Core	Color code	Color	Core
BN		A1	WH		B1
BU		A2	GN		B2
YEGN		A3	YE		B3
			GY		B4

Type List	L1/E352	L200/E352	L300/E352	L500/E352
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters				
Structure	A: 3C×AWG 19(0.7536mm²)	B:4C×AWG 22(0.3266mm²)	Electrical characteristic	
Conductor			Rated voltage	300V
Material	Bared Copper Stranded		Rated temperature	-40～80℃
Size	150/0.08±0.008mm	65/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	A : 27.4Ω/km B : 55.4Ω/km
O.D.（Ref）	1.13mm	0.76mm	Voltage withstand test	AC 2.0kV/1min
Insulation			Oil Resistant Condition(IRM 902)	100℃×24hrs
Material	PP	PP	Tensile strength	≥60% of original
Min.average thickness	0.30mm	0.30mm	Elongation(%)	≥60% of original
Min.thickness at any point	0.24mm	0.24mm	Physical properties	
O.D.	1.90±0.10mm	1.60±0.10mm	Tensile strength	≥10.3MPa
Cabling			Elongation	≥100%
Filler	Cotton		Aged condition	113±1℃×168h
Material	Non-woven		Percent of original tensile strength	≥70%
Jacket			Percent of original elongation	≥65%
Material	PUR		Flame test	FT1, IEC 60332-1
Min.average thickness	0.76mm		Chain test	20times/minute, distance：1.0m,
Min.thickness at any point	0.61mm		Bending radius	100mm ≥5 million times
O.D.	8.00±0.40mm			Halogen free
			Color code	
			Insulation	A1.brown A2.blue A3.yellow/green
				B1.white B2.green B3.yellow B4.gray
			Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	WH		B1
BU		A2	GN		B2
YEGN		A3	YE		B3
			GY		B4
			PK		B5
			RD		B6

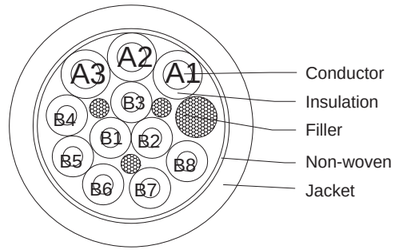
Type List	L1/E356	L200/E356	L300/E356	L500/E356
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A : 3C×AWG 19(0.7536mm²)	B:6C×AWG 22 (0.3266mm²)
Conductor		
Material	Bared Copper Stranded	
Size	150/0.08±0.008mm	65/0.08±0.008mm
O.D.（Ref）	1.13mm	0.76mm
Insulation		
Material	PP	PP
Min.average thickness	0.30mm	0.30mm
Min.thickness at any point	0.24mm	0.24mm
O.D.	1.90±0.10mm	1.60±0.10mm
Cabling		
Filler	Optional	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	8.80±0.30mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 27.4Ω/km B : 55.4Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue A3.yellow/green
	B1.white B2.green B3.yellow
	B4.gray B5.pink B6.red
Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	WH		B1
BU		A2	GN		B2
YEGN		A3	YE		B3
			GY		B4
			GYPK		B5
			RDBU		B6
			WHGN		B7
			BNGN		B8

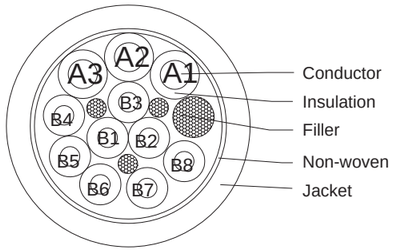
Type List	L1/E351	L200/E351	L300/E351	L500/E351
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A : 3C×AWG 19(0.7536mm²)	B:8C×AWG 22 (0.3266mm²)
Conductor		
Material	Bared Copper Stranded	
Size	150/0.08±0.008mm	65/0.08±0.008mm
O.D.（Ref）	1.13mm	0.76mm
Insulation		
Material	PP	PP
Min.average thickness	0.30mm	0.30mm
Min.thickness at any point	0.24mm	0.24mm
O.D.	1.90±0.10mm	1.60±0.10mm
Cabling		
Filler	Cotton	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	9.60±0.40mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 27.4Ω/km B : 55.4Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue A3.yellow/green
	B1.white B2.green B3.yellow B4.gray
	B5.gray/pink B6.red/blue
	B7.white/green B8.brown/green
Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	WH		B1
BU		A2	GN		B2
YEGN		A3	YE		B3
			GY		B4
			PK		B5
			RD		B6
			BK		B7
			VI		B8

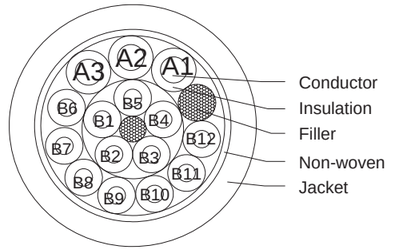
Type List	L1/E353	L200/E353	L300/E353	L500/E353
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A: 3C×AWG 19(0.7536mm²)	B:8C×AWG 22(0.3266mm²)
Conductor		
Material	Bared Copper Stranded	
Size	150/0.08±0.008mm	65/0.08±0.008mm
O.D.（Ref）	1.13mm	0.76mm
Insulation		
Material	PP	PP
Min.average thickness	0.30mm	0.30mm
Min.thickness at any point	0.24mm	0.24mm
O.D.	1.90±0.10mm	1.60±0.10mm
Cabling		
Filler	Cotton	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	9.60±0.40mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 27.4Ω/km B : 55.4Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue A3.yellow/green
	B1.white B2.green B3.yellow B4.gray
	B5.pink B6.red B7.blackB8.violet
Jacket	Gray

I/O Cable - PUR(for Distribution Box)



Color code	Color	Core	Color code	Color	Core
BN		A1	RDBU		B8
BU		A2	WHGN		B9
YEGN		A3	BNGN		B10
WH		B1	WHYE		B11
GN		B2	YEBN		B12
YE		B3			
GY		B4			
PK		B5			
RD		B6			
GYPK		B7			

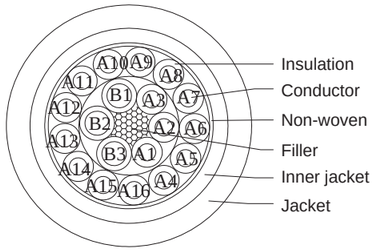
Type List	L1/E357	L200/E357	L300/E357	L500/E357
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	A: 3C×AWG 19(0.7536mm²)	B:12C×AWG 22(0.3266mm²)
Conductor		
Material	Bared Copper Stranded	
Size	150/0.08±0.008mm	65/0.08±0.008mm
O.D.（Ref）	1.13mm	0.76mm
Insulation		
Material	PP	PP
Min.average thickness	0.30mm	0.30mm
Min.thickness at any point	0.24mm	0.24mm
O.D.	1.90±0.10mm	1.60±0.10mm
Cabling		
Filler	Cotton	
Material	Non-woven	
Jacket		
Material	PUR	
Min.average thickness	0.76mm	
Min.thickness at any point	0.61mm	
O.D.	10.00±0.40mm	

Electrical characteristic	
Rated voltage	300V
Rated temperature	-40～80℃
Max. DC conductor resistance(at 20℃)	A : 27.4Ω/km B : 55.4Ω/km
Voltage withstand test	AC 2.0kV/1min
Oil Resistant Condition(IRM 902)	100℃×24hrs
Tensile strength	≥60% of original
Elongation(%)	≥60% of original
Physical properties	
Tensile strength	≥10.3MPa
Elongation	≥100%
Aged condition	113±1℃×168h
Percent of original tensile strength	≥70%
Percent of original elongation	≥65%
Flame test	FT1, IEC 60332-1
Chain test	20times/minute, distance：1.0m，
Bending radius	100mm ≥5 million times
	Halogen free
Color code	
Insulation	A1.brown A2.blue A3.yellow/green
	B1.white B2.green B3.yellow B4.gray
	B5.pink B6.red B7.gray/pink
	B8.red/blue B9.white/green
	B10.brown/green B11.white/yellow
	B12.yellow/brown
Jacket	Gray

I/O Cable - PUR(for Distribution Box)



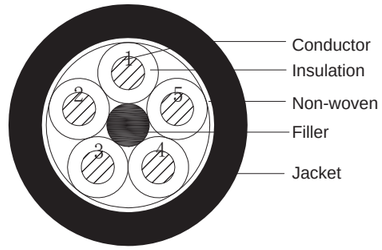
Color code	Color	Core	Color code	Color	Core
GN		A1	YEBN		A11
WHGN		A2	RD		A12
YE		A3	WHGY		A13
BNGN		A4	BK		A14
PKGY		A5	GYBN		A15
WH		A6	VI		A16
RDBU		A7	YEGN		B1
GY		A8	BN		B2
WHYE		A9	BU		B3
PK		A10			

Type List	L1/E362	L200/E362	L300/E362	L500/E362
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	3C×AWG 19(0.7536mm²)	16C×AWG 22 (0.3266mm²)	Electrical characteristic	
Conductor			Rated voltage	300V
Material	Bared Copper Stranded		Rated temperature	-40～80℃
Size	150/0.08±0.008mm	65/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	A:55.4Ω/km B：27.1Ω/km
O.D.（Ref）	1.13mm	0.76mm	Voltage withstand test	AC 2.0kV/1min
Insulation			Min.bending radius	Flexing 10×OD
Material	PP	PP		Flxed 5×OD
Min.average thickness	0.23mm	0.30mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	0.24mm	Tensile strength	≥60% of original
O.D.	1.60±0.10mm	1.40±0.10mm	Elongation(%)	≥60% of original
Cabling			Physical properties	
Filler	Cotton		Tensile strength	≥10.3MPa
Separator	Non-woven		Elongation	≥100%
Assembly	16C×0.34mm²+3Cx0.75mm²+M		Aged condition	113±1℃×168h
Inner Jacket			Percent of original tensile strength	≥70%
Material	PUR		Percent of original elongation	≥65%
Min.average thickness	0.80mm		Flame test	FT1, IEC 60332-1
Min.thickness at any point	0.64mm		Chain test	20times/minute, distance：1.0m，
O.D.	10.00±0.35mm		Bending radius	100mm ≥5 million times
				Halogen free
			Color code	
			Insulation	A1.Green A2.White/green A3.Yellow
				A4.Brown/green A5.Pink/gray A6.White
				A7.Red/blue A8.Gray A9.White/yellow
				A10.Pink A11.Yellow/brown A12.Red,
				A13.White/gray A14.Black,
				A15.Gray/brown A16.Purple
				B1.Yellow/green B2.Brwon B3.Blue
			Jacket	Gray

Power Cable - PVC



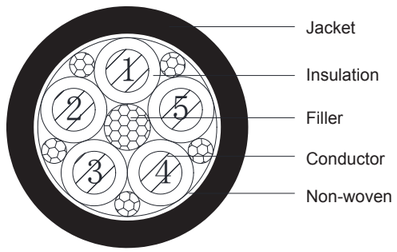
Color code	Color	Core
BN		1
WH		2
BU		3
BK		4
GY		5

Type List	L50/E536	L100/E536
Specification	50m/reel	100m/reel

Technical parameters

Construction		Electric Performance	
Conductor	Bared Copper Stranded	Voltage rating	600V
Cross section	1.5mm²	Rated Temperature	105℃
Construction	30/0.254mm	Max.conductor DC resistance（20℃）	13.7Ω/km
Strand Dia.	1.61mm	Dielectric Strength AC	4.0kV/1min
Insulation	PVC	Mechanical Performance	
Nom.Thickness	0.38mm		Jacket
Min.Thickness	0.33mm	Material	PVC
Insulation Dia.	2.50±0.10mm	Tensile strength	≥10.3MPa
Insulation colour	1.brown 2.white 3.blue 4. black 5.gray	Elongation	≥100%
Assembly	5C×1.5mm²+W	Aged condition	136±1℃×168h
Material	Non wove	Percent of original tensile strength	≥70%
Filler	optional	Percent of original elongation	≥65%
Jacket	PVC	Cold Bend(-40±1℃X4hrs)	NO Crack
Nom.Thickness	0.76mm		
Min.Thickness	0.61mm		
Outer Dia.	8.70±0.30mm		
Colour	black		

Power Cable - PUR



Color code	Color	Core
BN		1
BU		2
BK		3
WH		4
GY		5

Type List	L50/E635	L100/E635
Specification	50m/reel	100m/reel

Technical parameters			
Construction	5C×1.5mm²+W	Electric Performance	
Conductor	Bare copper stranded	Voltage rating	600V
Cross section	1.5mm²	Rated Temperature	-40~80℃
Construction	192/0.10mm	Max.conductor DC resistance（20℃）	13.7Ω/km
Strand Dia.	1.60mm	Dielectric Strength AC	2.0kV/1min
Insulation	PP	Min bending radius	Flexing 10*OD Flxed 7.5*OD
Nom.Thickness	0.38mm	Rated current	12A
Min.Thickness	0.33mm	Mechanical Performance	
Insulation Dia.	2.40±0.10mm		Jacket
Insulation colour	1.brown 2.blue 3.black 4.white 5.gray	Material	PUR
Assembly	5C×1.5mm²+W	Tensile strength	≥10.3MPa
Material	Non wove	Elongation	≥100%
Filler	Cotton	Aged condition	113±1℃×168h
Jacket	PUR（Oil resistance）	Percent of original tensile strength	≥70%
Nom.Thickness	0.76mm	Percent of original elongation	≥65%
Min.Thickness	0.61mm	Chain test	20times/minute, distance：1.0m
Outer Dia.	8.70±0.20mm	bending radius	100mm ≥5 million times
Colour	black	Oil resistance	IRM 902：100℃×24hrs
		Tensile strength of original	≥60%
		Elongation of original	≥60%

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