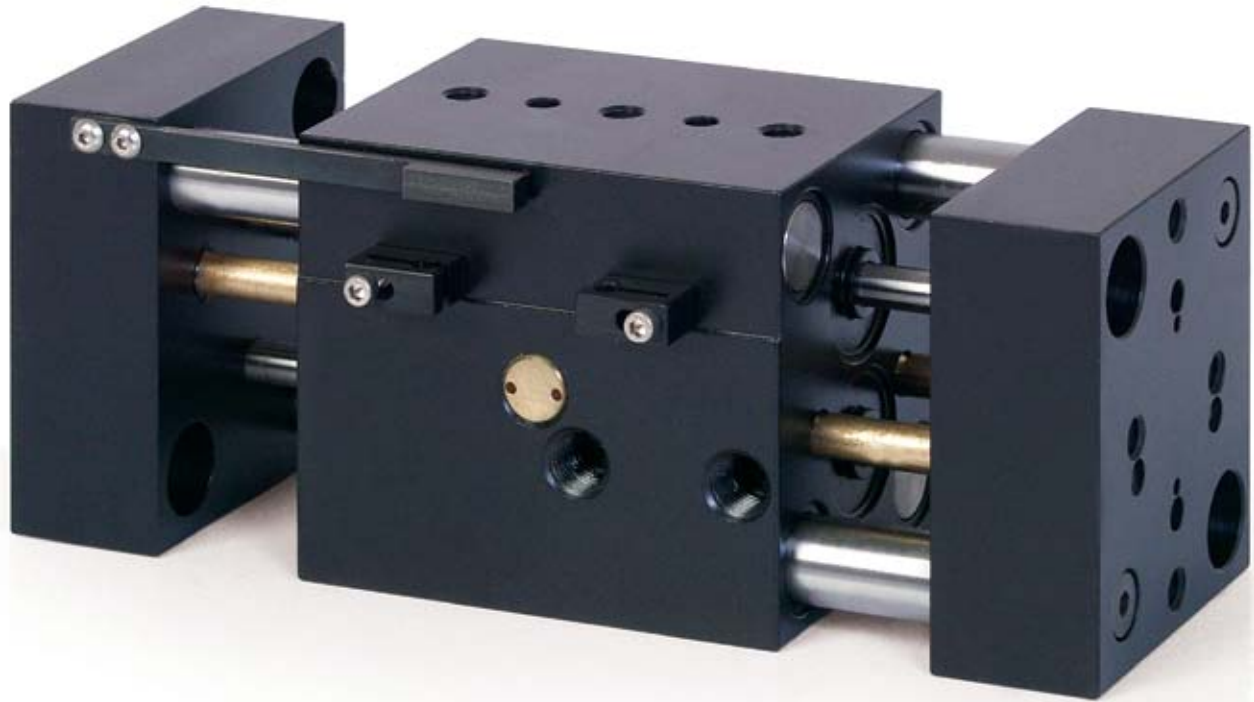


numatics®

WBG Series

Wide Body Grippers



www.numatics.com

WBG Series Parallel Grippers

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Gripper Summary of Operation

WBG-Series utilizes four independent pistons to power the jaws open and closed. Jaws utilize a rack and pinion for synchronization which are independent from force rods and support rods. Non-Synchronous operation is available.

A. Body

High Strength, Anodized aluminum.
Ultra high gripping force to weight ratio.

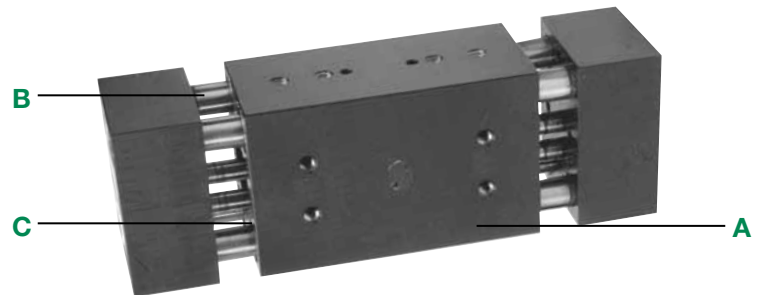
B. Support rods

Hardened steel support shafts are guided through the full width of the body. Wiper seals assist in keeping rods free of debris.

C. Seals

Piston seals are quad ring type for long service life.

- Pre-lubricated with our specially formulated oil based compound for extensive maintenance free performance.
- Proximity switches are available to monitor open and closed position of the jaws.



How to Order

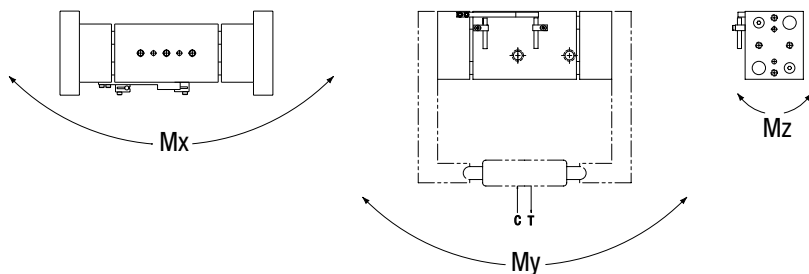
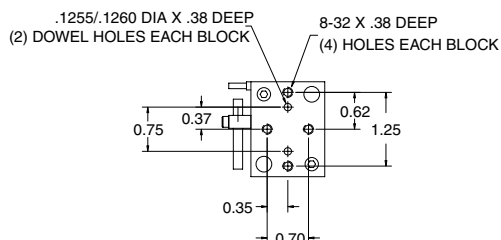
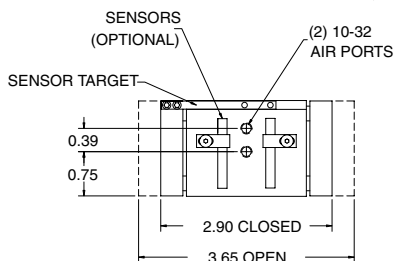
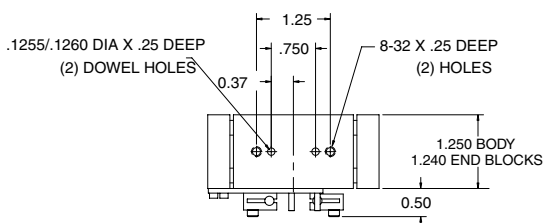
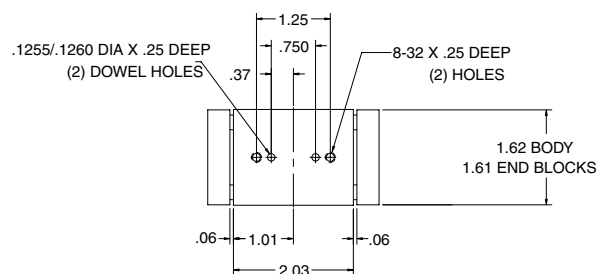
	WBG	S	60	S	1	W	C	X	
Gripper Stroke									Options
S = Short									X = Standard
L = Long									
X* = Extra Long									
*Only available in WBG 90 Series.									
Gripper Model Number									Sensing Position
60									A = Single Position Open
90									B = Single Position Closed
200									C = Two Position Sensing
300									D = No Sensing
Gripper Motion									Sensing Type
S = Synchronous									Standard Cord Set
C = Compliant									4 = Prox Switch - PNP (sourcing)
									5 = Prox Switch - NPN (sinking)
									6 = No Sensing
Seal Type									Quick Disconnect Cord Set
1 = Buna-N									W = Prox Switch - PNP (sourcing) Straight
2 = FKM									V = Prox Switch - NPN (sinking) Straight
									U = Prox Switch - PNP (sourcing) 90 Deg.
									T = Prox Switch - NPN (sinking) 90 Deg.
									Prox switches are 4 mm diameter.

When ordering additional switches:

Switch Description	Standard Part No.	Quick Disconnect Part No.
Prox Switch - PNP (Sourcing)	PROX-4FL2-P	PROX-4QDS-P
Prox Switch - NPN (Sinking)	PROX-4FL2-N	Not Available
Quick disconnect cable straight	–	PXCST
Quick disconnect cable 90 deg.	–	PXC90

Dimensions: Inches

WBG 60 Series



Specifications

Load Capacity	WBG60
Grip Force @ 100 psi	60 lbs
Stroke	0.75
Repeatability	+/- .001
Operating Temp.	
Buna-N	-30° to 180°F
FKM	-20° to 350°F
Max. Actuation Speed	0.3 sec
Displacement	0.29 cu. in.
Maximum Pressure	120 psi
Unit Weight	11 oz

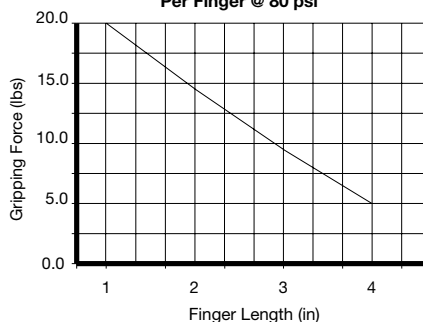
Static Condition

Load Capacity	WBG60
C-compression	50 lbs.
T-tension	50 lbs.
Mx	100 in.-lbs.
My	150 in.-lbs.
Mz	100 in.-lbs.

Dynamic Condition

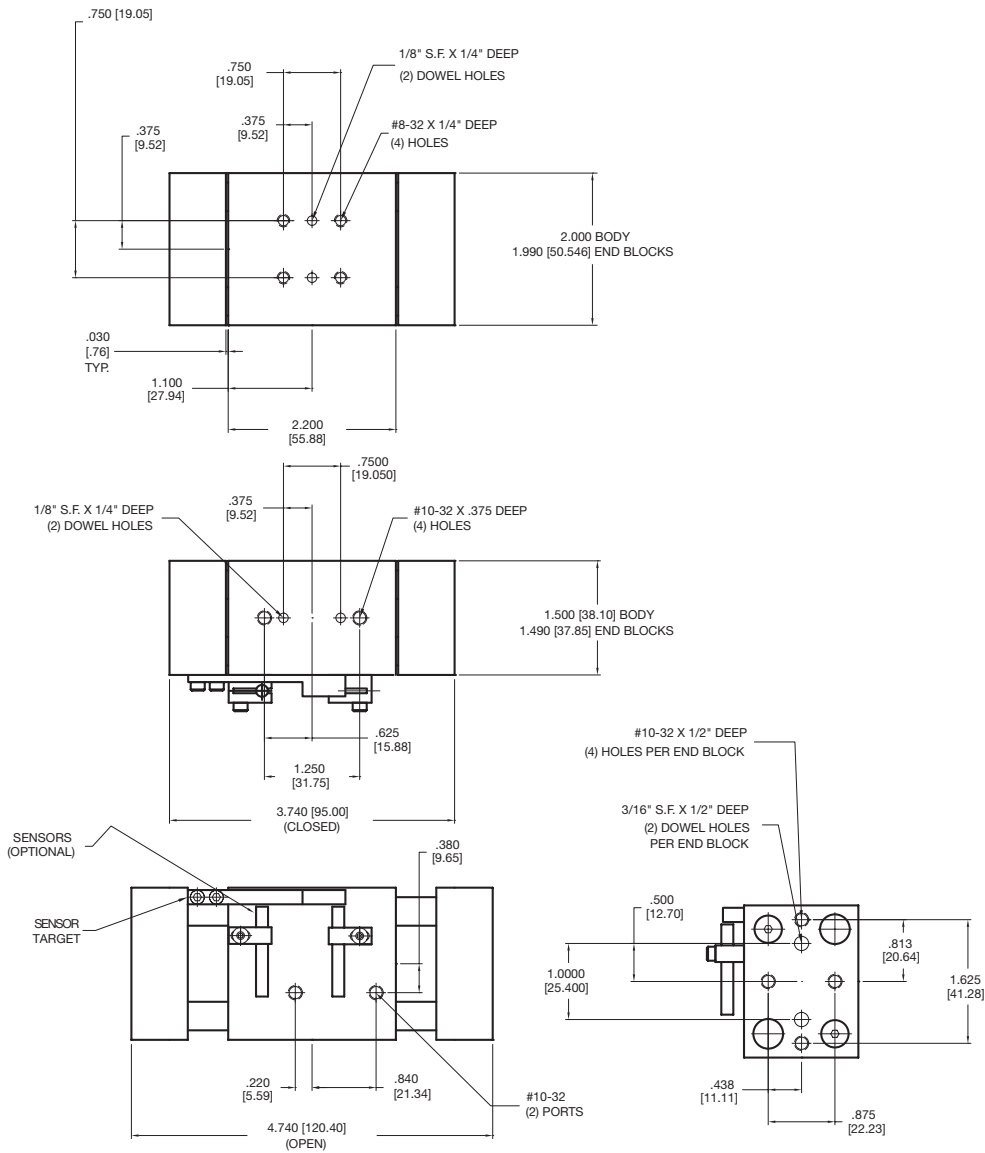
Load Capacity	WBG60
C-compression	10 lbs.
T-tension	10 lbs.
Mx	20 in.-lbs.
My	30 in.-lbs.
Mz	20 in.-lbs.

WBG-60
Gripping Force Chart
Per Finger @ 80 psi



Dimensions: Inches (mm)

WBG 90 Series



Specifications

Load Capacity	WBG90
Grip Force @ 80 psi	36 lbs
Stroke	1 in.
Repeatability	+/- 0.002
Operating Temp.	-20°/180°F
Max. Actuation Speed	0.3 sec
Maximum Pressure	120 psi
Unit Weight	1.3 lbs

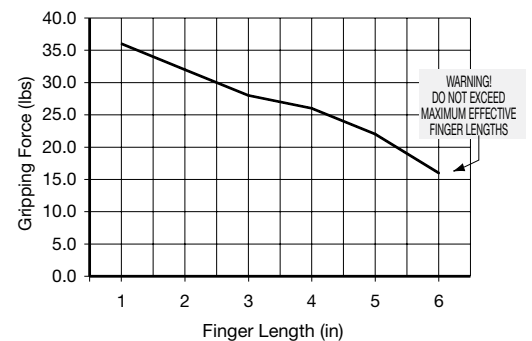
Static Condition

Load Capacity	WBG90
C-compression	100 lbs.
T-tension	100 lbs.
Mx	175 in.-lbs.
My	250 in.-lbs.
Mz	175 in.-lbs.

Dynamic Condition

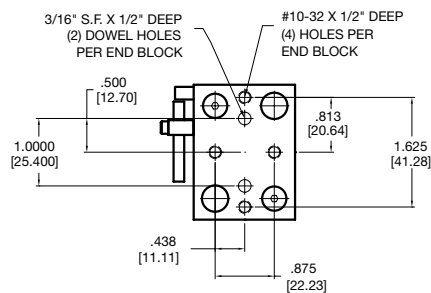
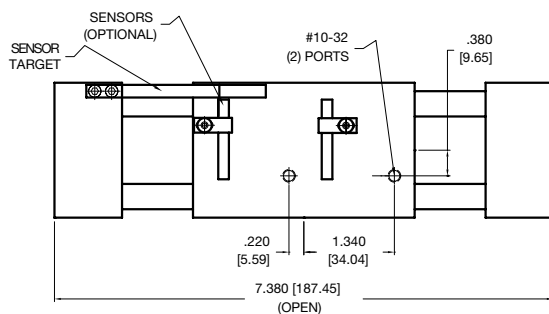
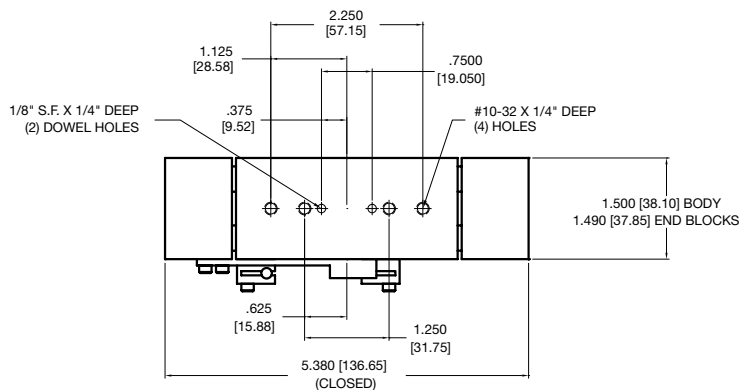
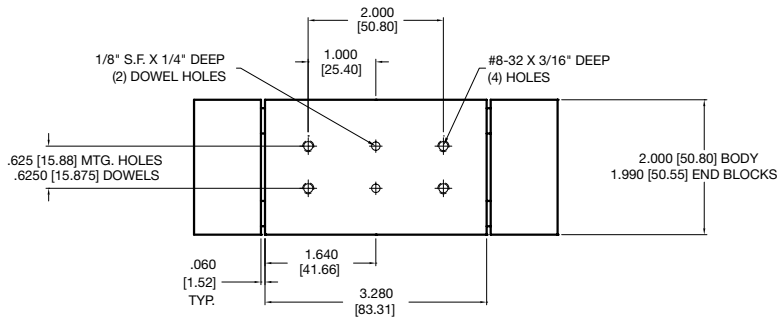
Load Capacity	WBG90
C-compression	20 lbs.
T-tension	20 lbs.
Mx	35 in.-lbs.
My	50 in.-lbs.
Mz	35 in.-lbs.

WBG-90

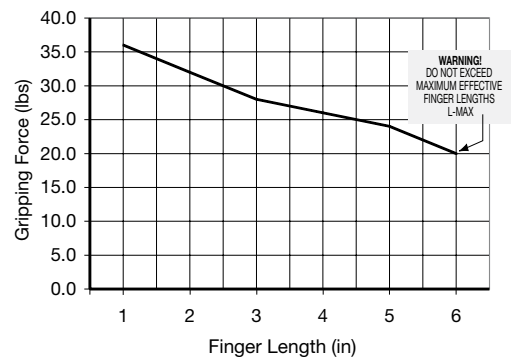


Dimensions: Inches (mm)

WBGL 90 Series



WBGL-90



Specifications

Load Capacity	WBGL90
Grip Force @ 80 psi	36 lbs
Stroke	2 in.
Repeatability	+/- 0.002
Operating Temp.	-20°/180°F
Max. Actuation Speed	0.3 sec
Maximum Pressure	120 psi
Unit Weight	2 lbs

Static Condition

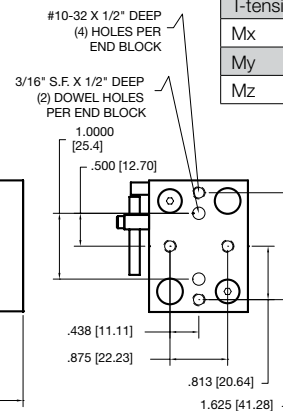
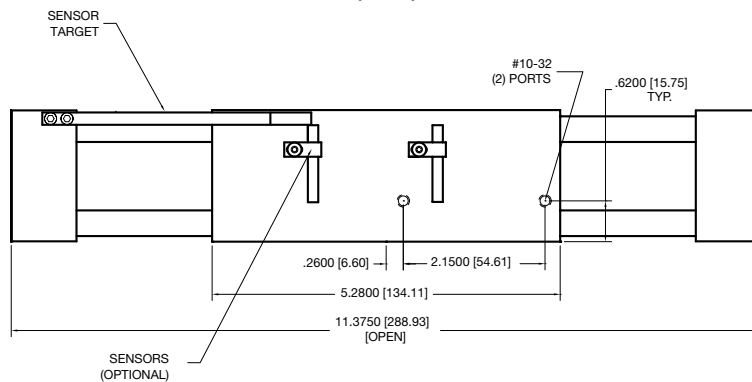
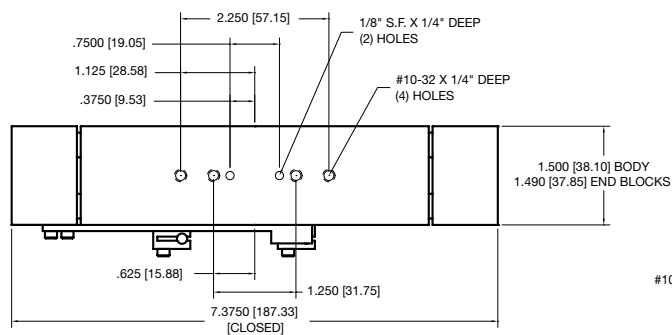
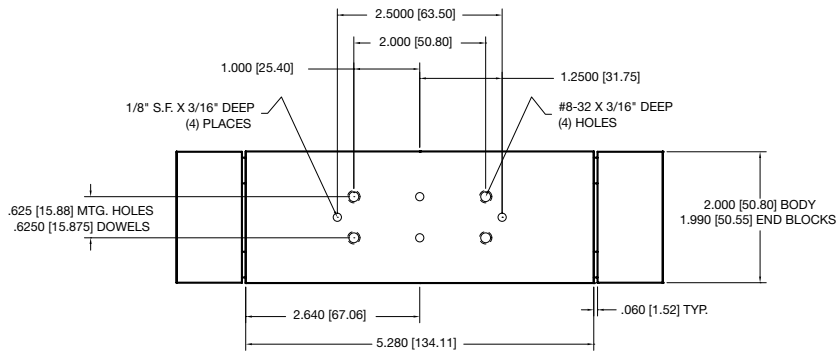
Load Capacity	WBGL90
C-compression	100 lbs.
T-tension	100 lbs.
Mx	175 in.-lbs.
My	250 in.-lbs.
Mz	175 in.-lbs.

Dynamic Condition

Load Capacity	WBGL90
C-compression	20 lbs.
T-tension	20 lbs.
Mx	35 in.-lbs.
My	50 in.-lbs.
Mz	35 in.-lbs.

Dimensions: Inches (mm)

WBGX 90 Series



Specifications

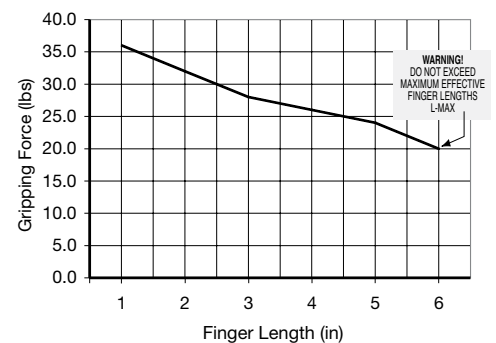
Load Capacity	WBGX90
Grip Force @ 80 psi	36 lbs
Stroke	4 in.
Repeatability	+/- 0.002
Operating Temp.	-20°/180°F
Max. Actuation Speed	0.6 sec
Maximum Pressure	120 psi
Unit Weight	3.2 lbs

Static Condition

Load Capacity	WBGX90
C-compression	100 lbs.
T-tension	100 lbs.
Mx	175 in.-lbs.
My	250 in.-lbs.
Mz	175 in.-lbs.

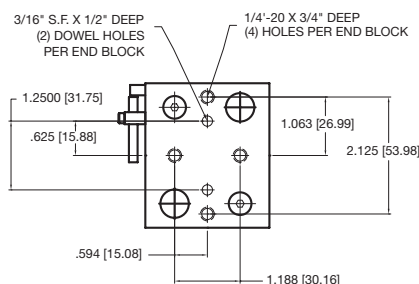
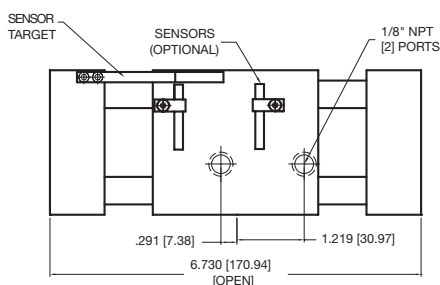
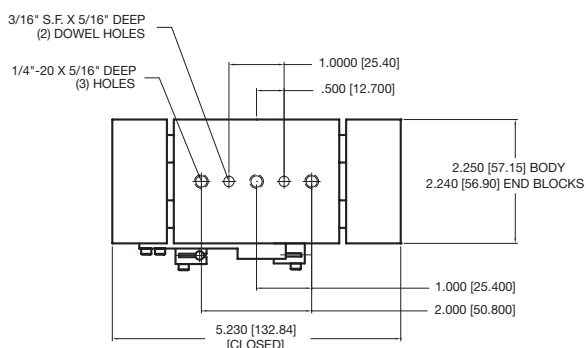
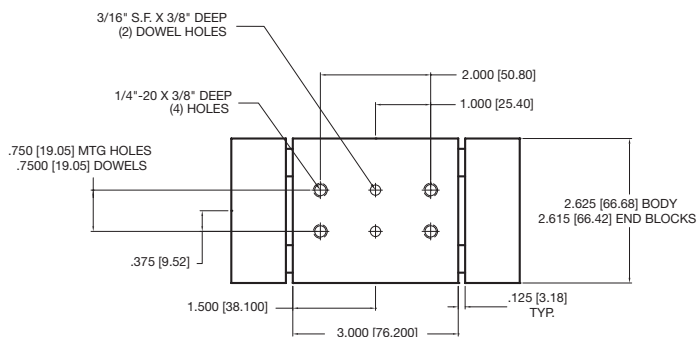
Dynamic Condition

Load Capacity	WBGX90
C-compression	20 lbs.
T-tension	20 lbs.
Mx	35 in.-lbs.
My	50 in.-lbs.
Mz	35 in.-lbs.

WBGX-90

Dimensions: Inches (mm)

WBG S 200 Series



Specifications

Load Capacity	WBG S200
Grip Force @ 80 psi	84 lbs
Stroke	1.5 in.
Repeatability	+/- 0.002
Operating Temp.	-20°/180°F
Max. Actuation Speed	0.3 sec
Maximum Pressure	120 psi
Unit Weight	3 lbs

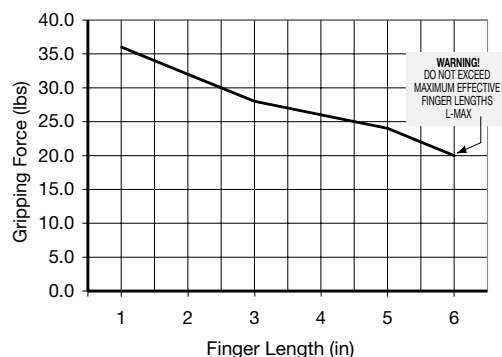
Static Condition

Load Capacity	WBG S200
C-compression	500 lbs.
T-tension	500 lbs.
Mx	500 in.-lbs.
My	750 in.-lbs.
Mz	500 in.-lbs.

Dynamic Condition

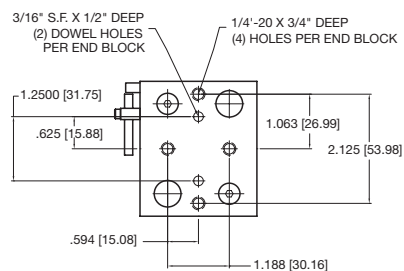
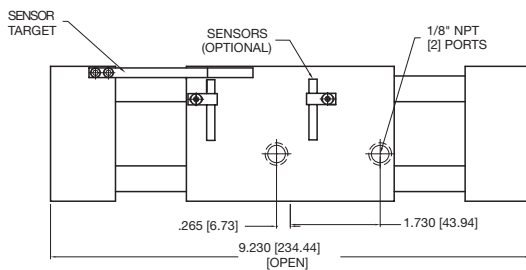
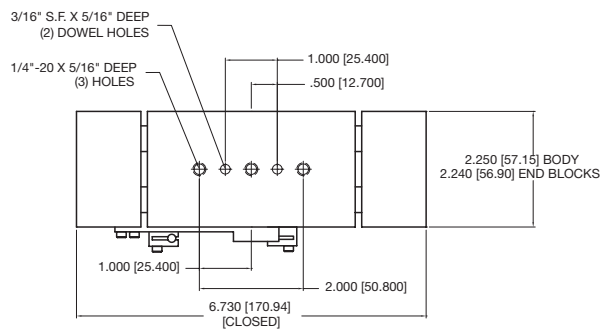
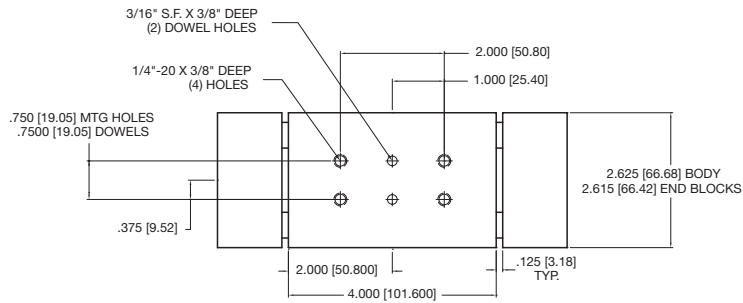
Load Capacity	WBG S200
C-compression	50 lbs.
T-tension	50 lbs.
Mx	50 in.-lbs.
My	75 in.-lbs.
Mz	50 in.-lbs.

WBG S-200



Dimensions: Inches (mm)

WBGL 200 Series



Specifications

Load Capacity	WBGL200
Grip Force @ 80 psi	84 lbs
Stroke	2.5 in.
Repeatability	+/- 0.002
Operating Temp.	-20°/180°F
Max. Actuation Speed	0.3 sec
Maximum Pressure	120 psi
Unit Weight	4 lbs

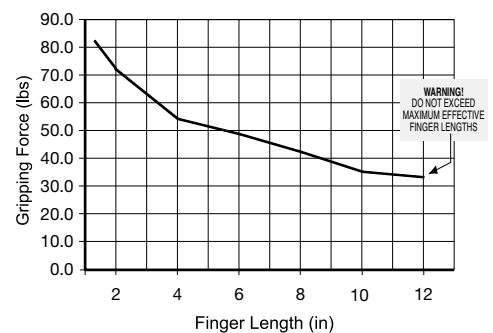
Static Condition

Load Capacity	WBGL200
C-compression	500 lbs.
T-tension	500 lbs.
Mx	500 in.-lbs.
My	750 in.-lbs.
Mz	500 in.-lbs.

Dynamic Condition

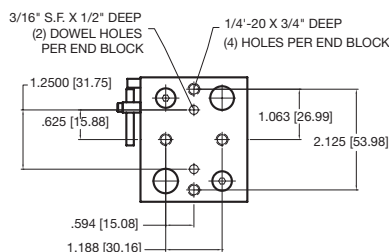
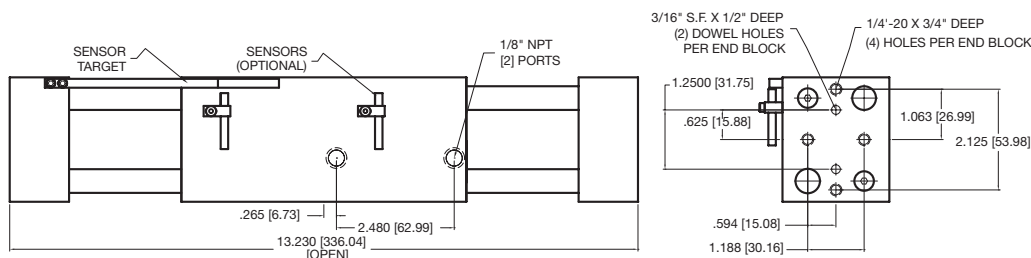
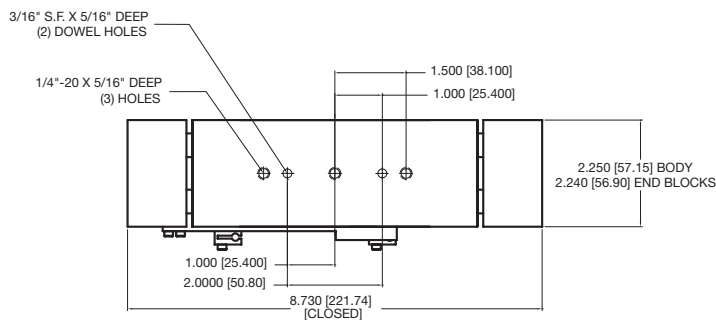
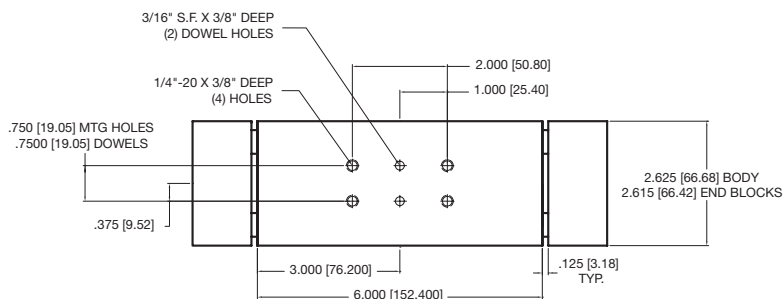
Load Capacity	WBGL200
C-compression	50 lbs.
T-tension	50 lbs.
Mx	50 in.-lbs.
My	75 in.-lbs.
Mz	50 in.-lbs.

WBGL-200



Dimensions: Inches (mm)

WBGX 200 Series



Specifications

Load Capacity	WBGX200
Grip Force @ 80 psi	84 lbs
Stroke	4 in.
Repeatability	+/- 0.002
Operating Temp.	-20°/180°F
Max. Actuation Speed	0.5 sec
Maximum Pressure	120 psi
Unit Weight	6 lbs

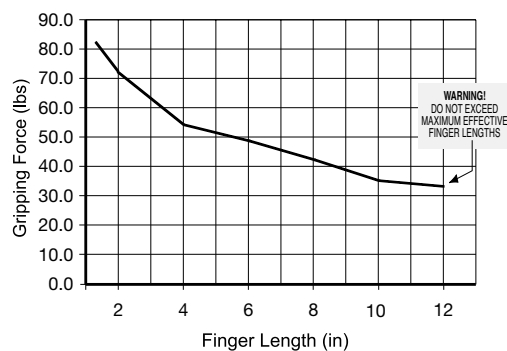
Static Condition

Load Capacity	WBGX200
C-compression	500 lbs.
T-tension	500 lbs.
Mx	500 in.-lbs.
My	750 in.-lbs.
Mz	500 in.-lbs.

Dynamic Condition

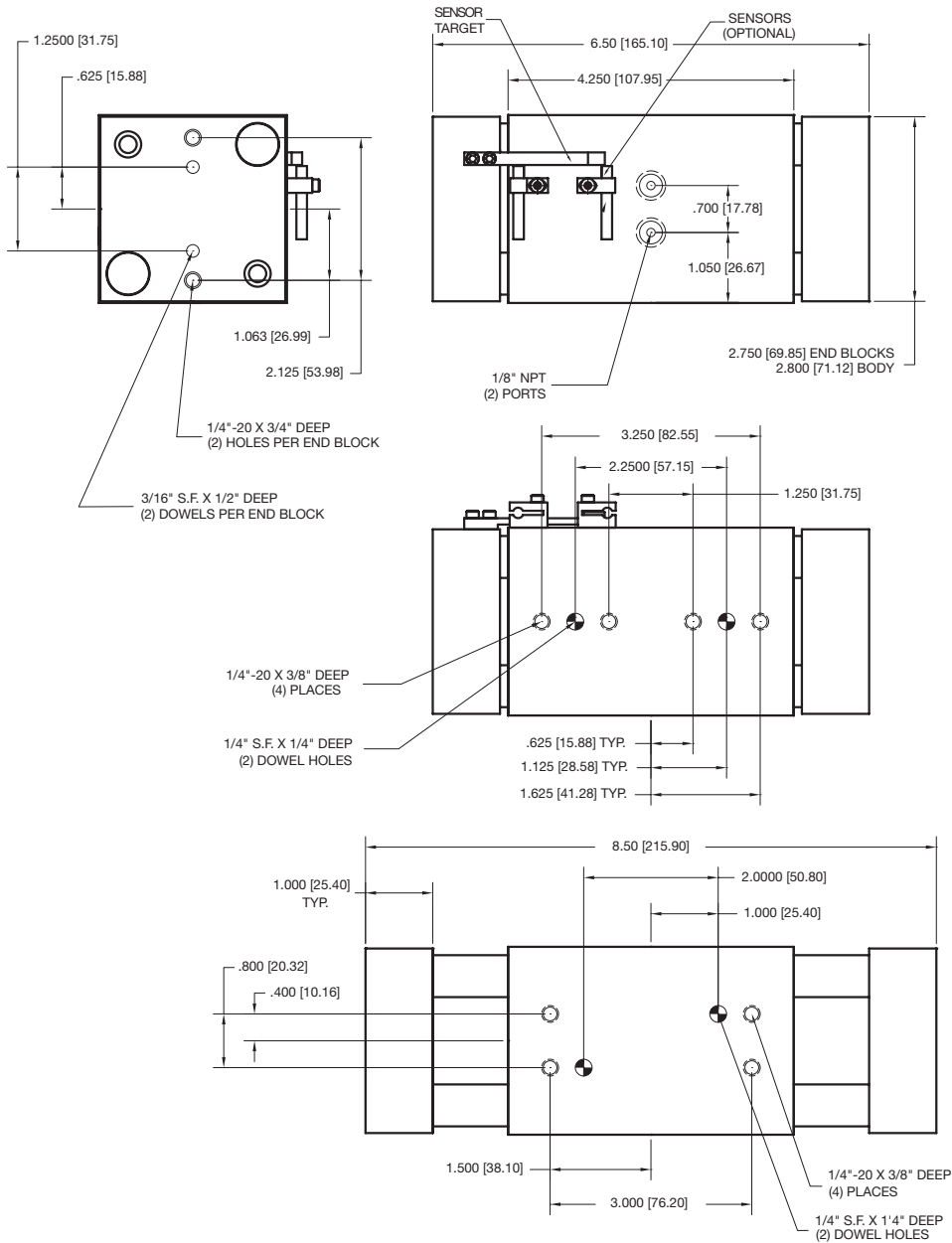
Load Capacity	WBGX200
C-compression	50 lbs.
T-tension	50 lbs.
Mx	50 in.-lbs.
My	75 in.-lbs.
Mz	50 in.-lbs.

WBGX-200



Dimensions: Inches (mm)

WBG 300 Series



Specifications

Load Capacity	WBG300
Grip Force @ 80 psi	130 lbs
Stroke	2 in.
Repeatability	+/- 0.002
Operating Temp.	-20°/180°F
Max. Actuation Speed	0.3 sec
Maximum Pressure	120 psi
Unit Weight	6.3 lbs

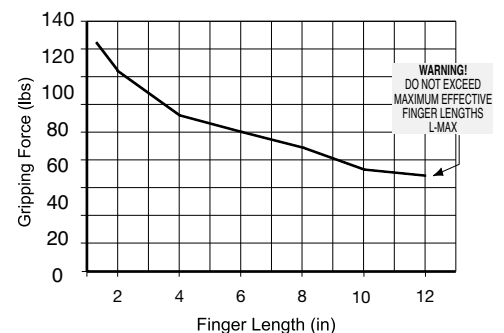
Static Condition

Load Capacity	WBG300
C-compression	1300 lbs.
T-tension	1300 lbs.
Mx	1100 in.-lbs.
My	1500 in.-lbs.
Mz	1100 in.-lbs.

Dynamic Condition

Load Capacity	WBG300
C-compression	150 lbs.
T-tension	150 lbs.
Mx	120 in.-lbs.
My	130 in.-lbs.
Mz	120 in.-lbs.

WBG-300



Dimensions: Inches (mm)

WBGL 300 Series

Specifications

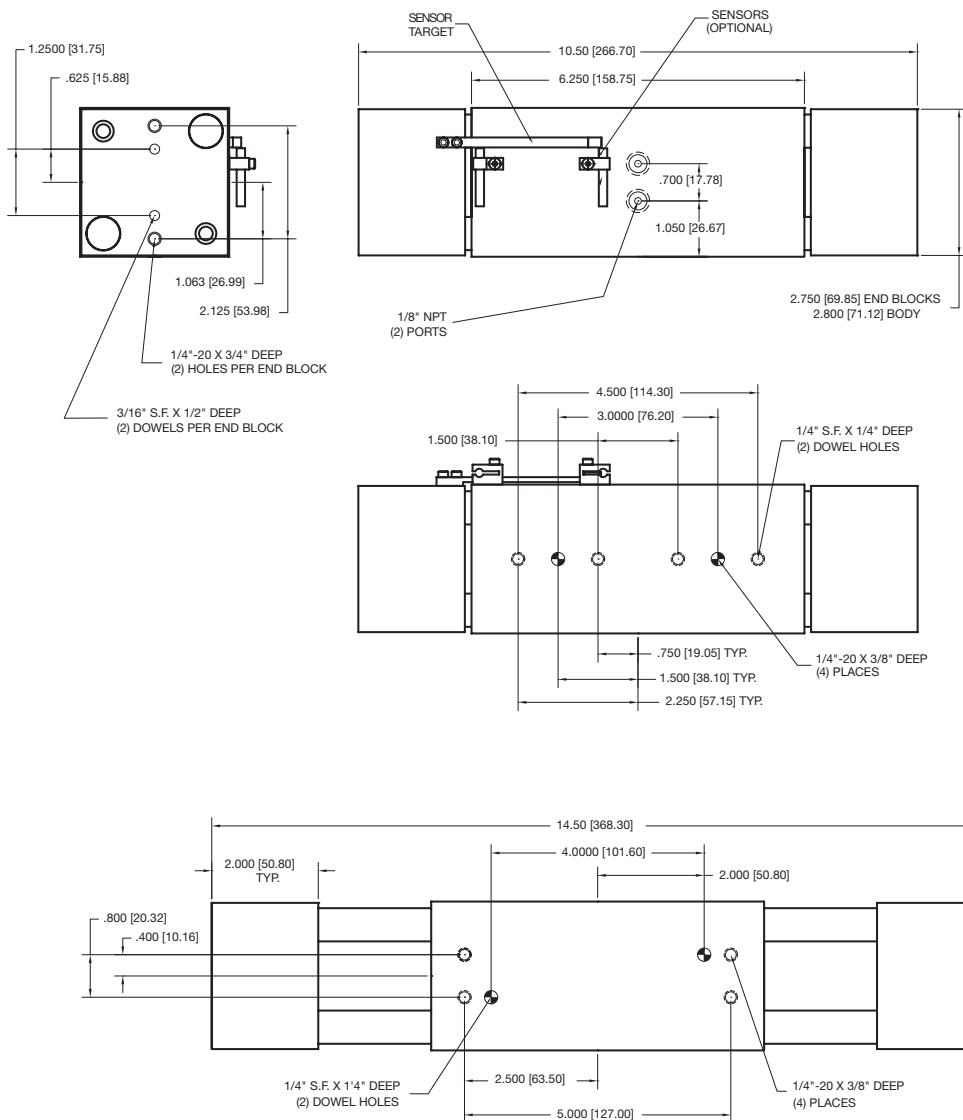
Load Capacity	WBGL300
Grip Force @ 80 psi	130 lbs
Stroke	4 in.
Repeatability	+/- 0.002
Operating Temp.	-20°/180°F
Max. Actuation Speed	0.3 sec
Maximum Pressure	120 psi
Unit Weight	8 lbs

Static Condition

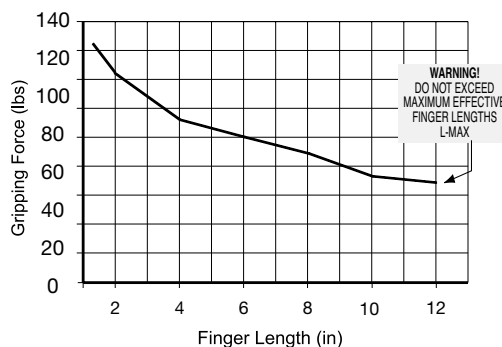
Load Capacity	WBGL300
C-compression	1300 lbs.
T-tension	1300 lbs.
Mx	1100 in.-lbs.
My	1500 in.-lbs.
Mz	1100 in.-lbs.

Dynamic Condition

Load Capacity	WBGL300
C-compression	150 lbs.
T-tension	150 lbs.
Mx	120 in.-lbs.
My	130 in.-lbs.
Mz	120 in.-lbs.

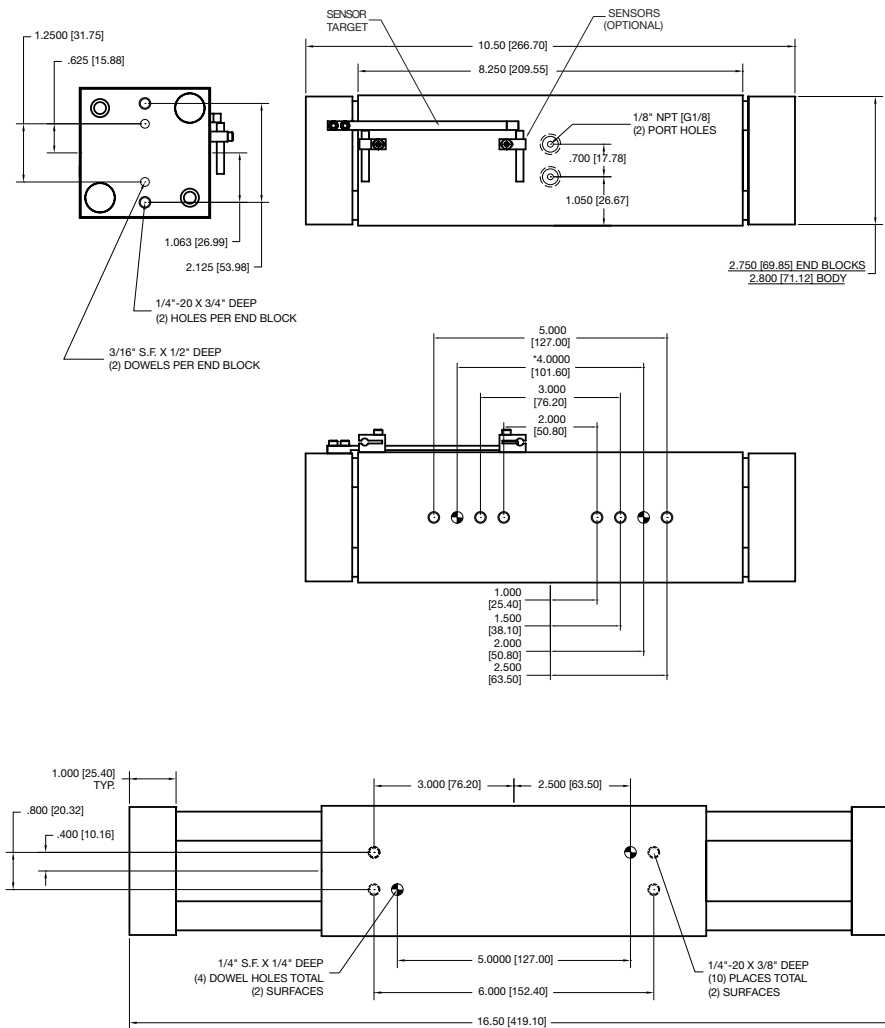


WBGL-300



Dimensions: Inches (mm)

WBGX 300 Series



Specifications

Load Capacity	WBGX300
Grip Force @ 80 psi	130 lbs
Stroke	6 in.
Repeatability	+/- 0.002
Operating Temp.	-20°/180°F
Max. Actuation Speed	0.3 sec
Maximum Pressure	120 psi
Unit Weight	9.7 lbs

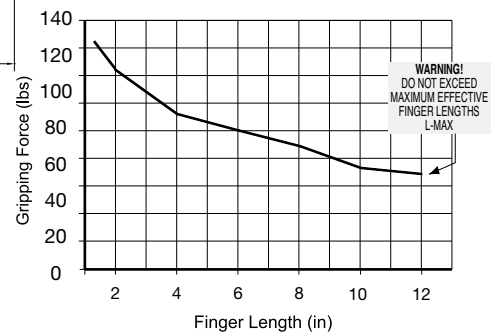
Static Condition

Load Capacity	WBGX300
C-compression	1300 lbs.
T-tension	1300 lbs.
Mx	1100 in.-lbs.
My	1500 in.-lbs.
Mz	1100 in.-lbs.

Dynamic Condition

Load Capacity	WBGX300
C-compression	150 lbs.
T-tension	150 lbs.
Mx	120 in.-lbs.
My	130 in.-lbs.
Mz	120 in.-lbs.

WBGX-300



WBG Series Gripper

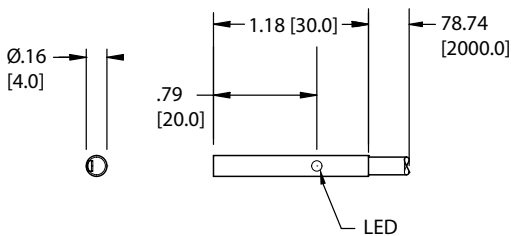
Bore	Bracket P/N
WBG	CT-500



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-4FL2-P	PROX-4QDS-P
Prox NPN	PROX-4FL2-N	Not Available

See page 19 for sensor specifications

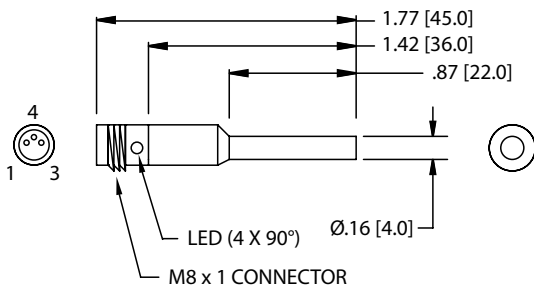
Prox Switch (NPN NO) Flying Lead - PROX-4FL2-N Prox Switch (PNP NO) Flying Lead - PROX-4FL2-P



PNP N/O	Electrical Design
1 → BN	Output
4 → BK	Operating Voltage
3 → BU	Current Rating
	Short Circuit Protection
	Overload Protection
NPN N/O	Reverse Polarity Protection
1 → BN	Voltage Drop
4 → BK	Current Consumption
3 → BU	Real Sensing Range
	Switching Frequency
	Ambient Temperature
	Protection
	Switch-Point Drift
	Hysteresis
	Operating Distance
	Correction Factor
	Housing Material
	Function Display Switching Status
	Connection

3-Wire DC PNP/NPN
Normally Open
10-36 VDC
100 mA
Yes (Non-Latching)
Yes
Yes
< 2.5V
< 15 mA @ 24V
.8mm ± 10%
> 2000 Hz
-25°C to 70°C
IP 65, III
-10 - 10% OF Sr
1 - 15% OF Sr
0 - .65mm
Mild Steel=.1, Stainless Steel=.7,
Brass=.5, Alum.=.4, Copper=.3
Housing; Stainless Steel: POM
Yellow LED
PVC Cable, 2m, 3 x .14mm2

Prox Switch (PNP NO), 8 mm connector - PROX-4QDS-P



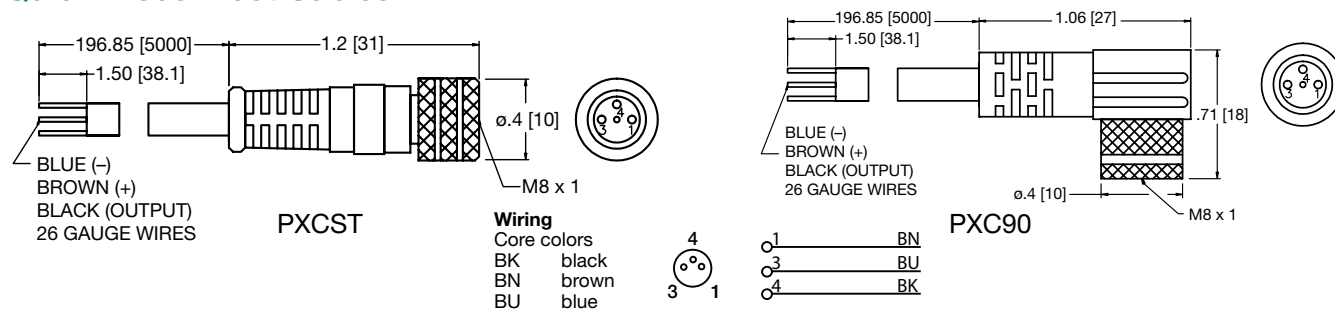
Electrical Design
Output
Operating Voltage
Current Rating
Short-Circuit Protection
Overload Protection
Reverse Polarity Protection
Voltage Drop
Current Consumption
Real Sensing Range
Switching Frequency
Ambient Temperature
Protection
Switch-Point Drift
Hysteresis
Operating Distance
Correction Factor
Housing Material
Function Display Switching Status
Connection
Remarks
Accessories
Agency Approvals

3-Wire DC PNP
Normally Open
10-36 VDC
100 mA
Yes (Non Latching)
Yes
Yes
< 2.5 V
< 15 mA @ 24V
8mm ± 10%
> 2000 Hz
-25°C to 70°C
IP 67*, III
-10 - 10% OF Sr
1 - 15% OF Sr
0 - .65mm
Mild Steel=.1, Stainless Steel=.7,
Brass=.5, Alum.=.4, Copper=.3
Housing: Stainless; POM
Red LED (4 X 90°)
M8 Connector
cULus- Class 2 Source Required
Mounting Clamp



*Switches are not designed for wet environments. Please see your distributor for additional information.

Quick Disconnect Cables



Order Code	Type	Operating Voltage	Current Rating	Cable Material	Protection	Connector
PXCST	Straight 5 m Cable (3 x 26 Gauge wire)	60 AC/75 DC	3 A	PUR	IP 68, III	M8
PXC90	90° 5 m Cable (3 x 26 Gauge wire)	60 AC/75 DC	3 A	PUR	IP 68, III	M8



World Class Supplier of Pneumatic Components



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F: 248-596-3201

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F: 519-758-5540

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P: 52 55 58 09 56 40 (DF y Area metropolitana)
P: 01 800 000 ASCO (2726) (Interior de la República)
F: 52 55 58 09 56 60

Brazil Ascoval Ind.e Comercio Ltda

P: (55) 11-4208-1700
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