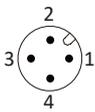


ZG12 SERIES

ARTICLE PROPERTIES

<b>SENSOR TYPE</b>	Inductive sensor	<b>CONNECTION TYPES</b> (see table)
<b>SIZE</b>	M12x1	<ul style="list-style-type: none"> <li>• Cable PUR, 0.25 mm<sup>2</sup>, 2 m**</li> <li>• M12 connector, A-coded</li> </ul>
<b>RATED OPERATING DISTANCE</b>	See table	
<b>NUMBER OF CONDUCTORS</b>	3-wire (see table)	

\*\* Other cable lengths are available on request

MECHANICAL DATA

<b>MOUNTING</b> (mounting nuts included in delivery)	Flush / non-flush (see table)
<b>HOUSING</b>	Threaded cylindrical
<b>MATERIAL HOUSING</b>	Stainless steel
<b>MATERIAL SENSING SURFACE</b>	PBT
<b>TIGHTENING TORQUE LOCKING</b>	25 N·m
<b>STANDARD TEST</b>	FE360
<b>ATTENUATION COEFFICIENT</b>	St37 = 1, V2A = 0.7, Al = 0.3

ELECTRICAL DATA

<b>OPERATING VOLTAGE</b>	DC: 10 ... 60 V DC
<b>RATED OPERATING CURRENT</b>	3-wire: ≤ 200 mA
<b>SWITCHING FREQUENCY</b>	See table
<b>SWITCHING OUTPUT</b>	See table
<b>FUNCTION INDICATOR</b>	Yellow LED
<b>HYSTERESIS</b>	3 ... 15 %
<b>TEMPERATURE DRIFT</b>	±10 %
<b>SHORT-CIRCUIT PROTECTION</b>	Yes
<b>OVERLOAD RESISTANCE</b>	Yes
<b>REVERSE POLARITY PROTECTION</b>	Yes

ENVIRONMENTAL CONDITIONS

<b>PROTECTION CLASS</b>	IP68	<b>VIBRATION RESISTANCE</b> (EN 60068-2-6)	10 ... 55 Hz, 1 mm
<b>AMBIENT TEMPERATURE</b>	-40 ... +85 °C	<b>SHOCK RESISTANCE</b> (EN 60068-2-27)	30 g, 11 ms

STANDARDS AND DIRECTIVES

<b>EMC DIRECTIVE 2014/30/EU</b>	EN IEC 60947-5-2
<b>ROHS DIRECTIVE 2011/65/EU</b>	EN IEC 63000

APPROVALS



ZG12 SERIES

**DC 3-WIRE OUTPUT CABLE**

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi4-ZG12-OP6L	flush	4 mm	PNP NO (WD7)	650 Hz	see Fig. 1
Fi4-ZG12-CP6L	flush	4 mm	PNP NC (WD9)	650 Hz	see Fig. 1
Fi4-ZG12-ON6L	flush	4 mm	NPN NO (WD8)	650 Hz	see Fig. 1
Fi4-ZG12-CN6L	flush	4 mm	NPN NC (WD10)	650 Hz	see Fig. 1
Ni6-ZG12-OP6L	non-flush	6 mm	PNP NO (WD7)	600 Hz	see Fig. 2
Ni6-ZG12-CP6L	non-flush	6 mm	PNP NC (WD9)	600 Hz	see Fig. 2
Ni6-ZG12-ON6L	non-flush	6 mm	NPN NO (WD8)	600 Hz	see Fig. 2
Ni6-ZG12-CN6L	non-flush	6 mm	NPN NC (WD10)	600 Hz	see Fig. 2

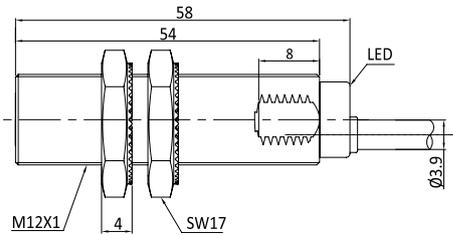
**DC 3-WIRE OUTPUT M12 CONNECTOR**

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi4-ZG12-OP6L-Q12	flush	4 mm	PNP NO (WD7)	650 Hz	see Fig. 3
Fi4-ZG12-CP6L-Q12	flush	4 mm	PNP NC (WD9)	650 Hz	see Fig. 3
Fi4-ZG12-ON6L-Q12	flush	4 mm	NPN NO (WD8)	650 Hz	see Fig. 3
Fi4-ZG12-CN6L-Q12	flush	4 mm	NPN NC (WD10)	650 Hz	see Fig. 3
Ni6-ZG12-OP6L-Q12	non-flush	6 mm	PNP NO (WD7)	600 Hz	see Fig. 4
Ni6-ZG12-CP6L-Q12	non-flush	6 mm	PNP NC (WD9)	600 Hz	see Fig. 4
Ni6-ZG12-ON6L-Q12	non-flush	6 mm	NPN NO (WD8)	600 Hz	see Fig. 4
Ni6-ZG12-CN6L-Q12	non-flush	6 mm	NPN NC (WD10)	600 Hz	see Fig. 4

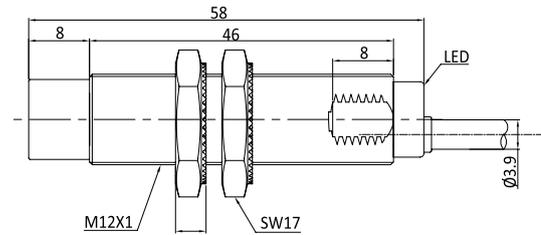
ZG12 SERIES

DIMENSIONS

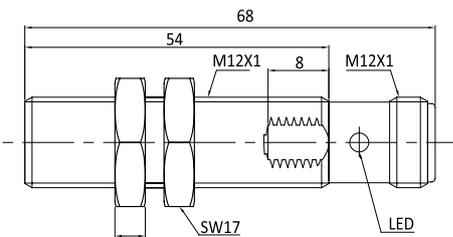
**Fig. 1** Inductive sensor with cable (flush)



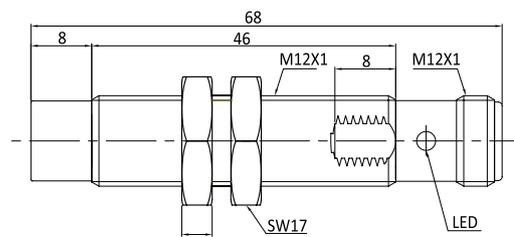
**Fig. 2** Inductive sensor with cable (non-flush)



**Fig. 3** Inductive sensor with M12 connector (flush)



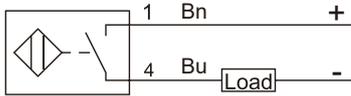
**Fig. 4** Inductive sensor with M12 connector (non-flush)



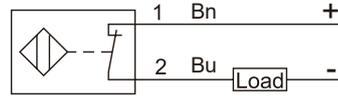
ZG12 SERIES

WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

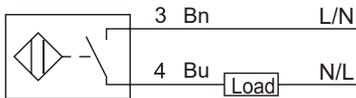
**WD1 DC 2-wire NO**



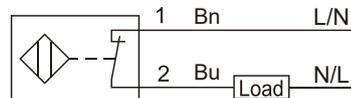
**WD2 DC 2-wire NC**



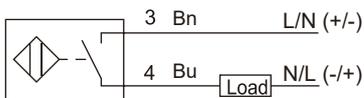
**WD3 AC 2-wire NO**



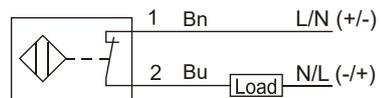
**WD4 AC 2-wire NC**



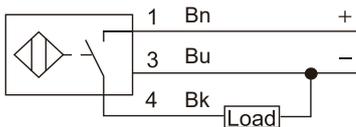
**WD5 AC / DC 2-wire NO**



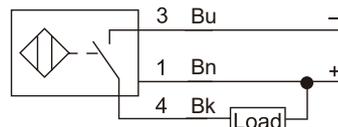
**WD6 AC / DC 2-wire NC**



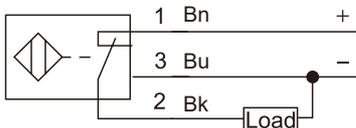
**WD7 DC 3-wire PNP NO**



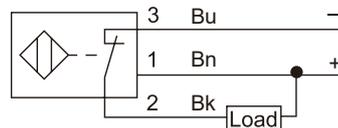
**WD8 DC 3-wire NPN NO**



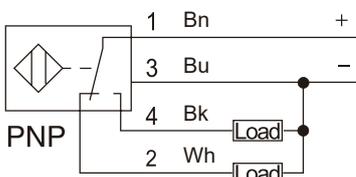
**WD9 DC 3-wire PNP NC**



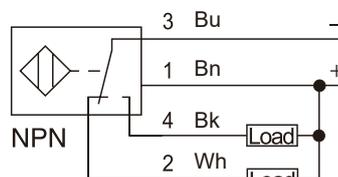
**WD10 DC 3-wire NPN NC**



**WD11 DC 4-wire PNP NO + NC**



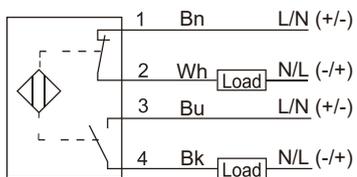
**WD12 DC 4-wire NPN NO + NC**



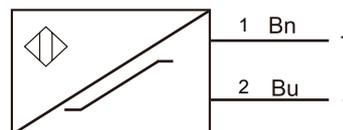
ZG12 SERIES

WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

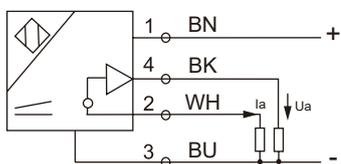
**WD13 AC/DC 4-wire NO+NC**



**WD14 NAMUR 2-wire NC**



**WD15 DC 4-wire 0-10V+0-20mA**



## ZG12 SERIES

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