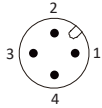


TM12 PTFE ANTI-INTERFERENCE SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Inductive sensor	CONNECTION TYPES (see table)
SIZE	M12x1	<ul style="list-style-type: none"> • Cable PVC, 0.25 mm², 2 m** • M12 connector, A-coded
RATED OPERATING DISTANCE	See table	
NUMBER OF CONDUCTORS	3-wire (see table)	

** Other cable lengths are available on request

MECHANICAL DATA

MOUNTING (mounting nuts included in delivery)	Flush (see table)
HOUSING	Threaded cylindrical
MATERIAL HOUSING	Brass nickel-plated (PTFE coated)
MATERIAL SENSING SURFACE	PBT (PTFE coated)
TIGHTENING TORQUE	10 N·m
LOCKING	
STANDARD TEST	FE360
ATTENUATION COEFFICIENT	St37 = 1, V2A = 0.7, Al = 0.3

ELECTRICAL DATA

OPERATING VOLTAGE	DC: 10 ... 30 V DC
RATED OPERATING CURRENT	3-wire: ≤ 200 mA
SWITCHING FREQUENCY	See table
SWITCHING OUTPUT	See table
FUNCTION INDICATOR	Yellow LED
HYSTERESIS	3 ... 15 %
TEMPERATURE DRIFT	±10 %
SHORT-CIRCUIT PROTECTION	Yes
OVERLOAD RESISTANCE	Yes
REVERSE POLARITY PROTECTION	Yes

ENVIRONMENTAL CONDITIONS

PROTECTION CLASS	IP67	VIBRATION RESISTANCE (EN 60068-2-6)	10 ... 55 Hz, 1 mm
AMBIENT TEMPERATURE	-25 ... +70 °C	SHOCK RESISTANCE (EN 60068-2-27)	30 g, 11 ms

STANDARDS AND DIRECTIVES

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

APPROVALS



TM12 PTFE ANTI-INTERFERENCE SERIES

DC 3-WIRE OUTPUT CABLE

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi3A-TM12-OP6L	flush	3 mm	PNP NO (WD7)	1000 Hz	see Fig. 1
Fi3A-TM12-ON6L	flush	3 mm	NPN NO (WD8)	1000 Hz	see Fig. 1
Fi3A-TM12-CP6L	flush	3 mm	PNP NC (WD9)	1000 Hz	see Fig. 1
Fi3A-TM12-CN6L	flush	3 mm	NPN NC (WD10)	1000 Hz	see Fig. 1
Fi4A-TM12-OP6L	flush	4 mm	PNP NO (WD7)	1000 Hz	see Fig. 1
Fi4A-TM12-ON6L	flush	4 mm	NPN NO (WD8)	1000 Hz	see Fig. 1
Fi4A-TM12-CP6L	flush	4 mm	PNP NC (WD9)	1000 Hz	see Fig. 1
Fi4A-TM12-CN6L	flush	4 mm	NPN NC (WD10)	1000 Hz	see Fig. 1

DC 3-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi3A-TM12-OP6L-Q12	flush	3 mm	PNP NO (WD7)	1000 Hz	see Fig. 2
Fi3A-TM12-ON6L-Q12	flush	3 mm	NPN NO (WD8)	1000 Hz	see Fig. 2
Fi3A-TM12-CP6L-Q12	flush	3 mm	PNP NC (WD9)	1000 Hz	see Fig. 2
Fi3A-TM12-CN6L-Q12	flush	3 mm	NPN NC (WD10)	1000 Hz	see Fig. 2
Fi4A-TM12-OP6L-Q12	flush	4 mm	PNP NO (WD7)	1000 Hz	see Fig. 2
Fi4A-TM12-ON6L-Q12	flush	4 mm	NPN NO (WD8)	1000 Hz	see Fig. 2
Fi4A-TM12-CP6L-Q12	flush	4 mm	PNP NC (WD9)	1000 Hz	see Fig. 2
Fi4A-TM12-CN6L-Q12	flush	4 mm	NPN NC (WD10)	1000 Hz	see Fig. 2

DIMENSIONS

Fig. 1 Inductive sensor with cable (flush)

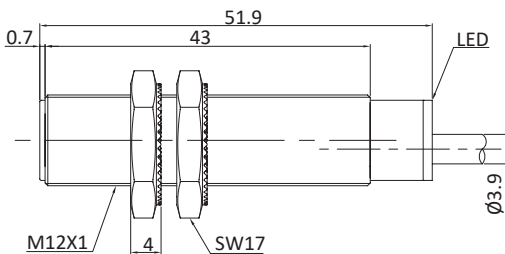
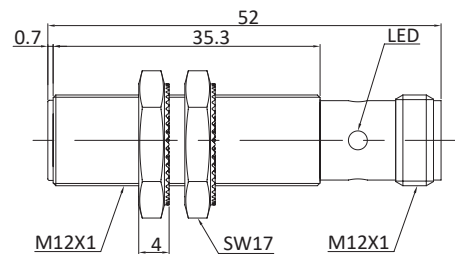


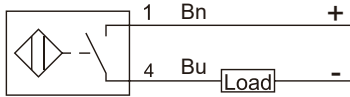
Fig. 2 Inductive sensor with M12 connector (flush)



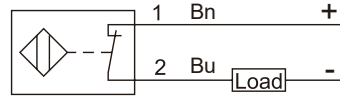
TM12 PTFE ANTI-INTERFERENCE SERIES

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

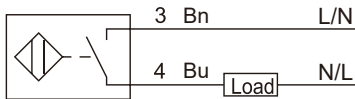
WD1 DC 2-wire NO



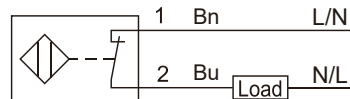
WD2 DC 2-wire NC



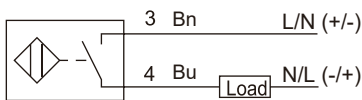
WD3 AC 2-wire NO



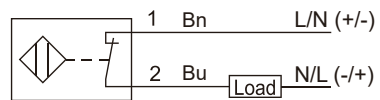
WD4 AC 2-wire NC



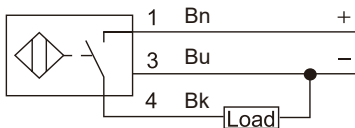
WD5 AC / DC 2-wire NO



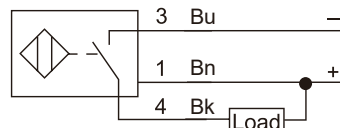
WD6 AC / DC 2-wire NC



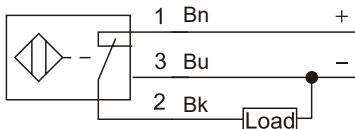
WD7 DC 3-wire PNP NO



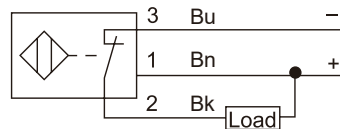
WD8 DC 3-wire NPN NO



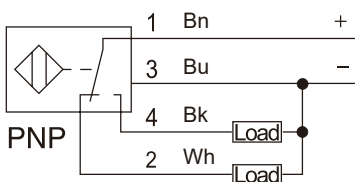
WD9 DC 3-wire PNP NC



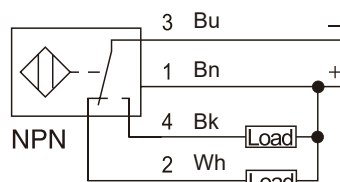
WD10 DC 3-wire NPN NC



WD11 DC 4-wire PNP NO + NC



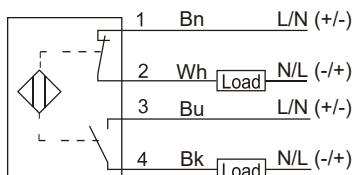
WD12 DC 4-wire NPN NO + NC



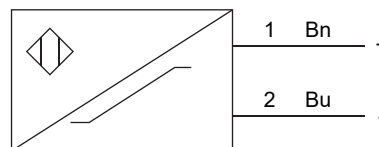
TM12 PTFE ANTI-INTERFERENCE SERIES

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

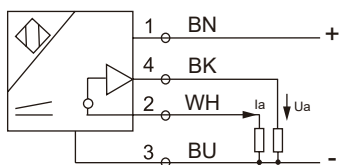
WD13 AC/DC 4-wire NO+NC



WD14 NAMUR 2-wire NC



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



TM12 PTFE ANTI-INTERFERENCE SERIES

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