DATA SHEET INDUCTIVE SENSOR V1.3

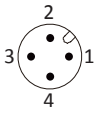
M12 ANALOG OUTPUT SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Inductive sensor
SIZE	M12x1
RATED OPERATING DISTANCE	*see table*
NUMBER OF CONDUCTORS	4-wire *(see table)*

CONNECTION TYPES (*see table*)

- cable — PVC, 0.14 mm², 2 m**
- M12 connector, A-coded



** other cable lengths are available on request

MECHANICAL DATA

MOUNTING (mounting nuts included in delivery)	flush/non-flush (*see table*)
HOUSING	threaded cylindrical
LINEARITY ERROR	≤ 3 %
MATERIAL HOUSING	brass nickel-plated
MATERIAL SENSING SURFACE	PBT
TIGHTENING TORQUE LOCKING	10 Nm
STANDARD TEST	FE360
ATTENUATION COEFFICIENT	St37 = 1, V2A = 0.7, Al = 0.3

ELECTRICAL DATA

OPERATING VOLTAGE	DC: 15 ... 30 V DC
RATED OPERATING CURRENT	4-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
AMBIENT TEMPERATURE	-25 ... 70 °C
VIBRATION RESISTANCE (EN 60068-2-27)	55 Hz, 1 mm
SHOCK RESISTANCE (EN 60068-2-6)	30*g*/11 ms

STANDARDS AND DIRECTIVES

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR	DIN EN IEC 60947-5-2:2021-04

APPROVALS

CE

M12 ANALOG OUTPUT SERIES

DC 4-WIRE OUTPUT CABLE

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi2-M12-LIU	flush	0.4 ... 2.0 mm	0 ... 10 VDC/0 ... 20 mA (WD15)	1000 Hz	*see Fig. 1*
Ni4-M12-LIU	non-flush	0.8 ... 4.0 mm	0 ... 10 VDC/0 ... 20 mA (WD15)	800 Hz	*see Fig. 2*

DC 4-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi2-M12-LIU-Q12	flush	0.4 ... 2.0 mm	0 ... 10 VDC/0 ... 20 mA (WD15)	1000 Hz	*see Fig. 3*
Ni4-M12-LIU-Q12	non-flush	0.8 ... 4.0 mm	0 ... 10 VDC/0 ... 20 mA (WD15)	800 Hz	*see Fig. 4*

DIMENSIONS

Fig. 1 Inductive sensor with cable (flush)

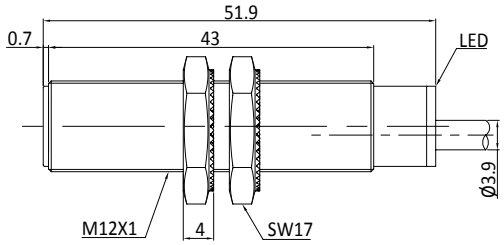


Fig. 2 Inductive sensor with cable (non-flush)

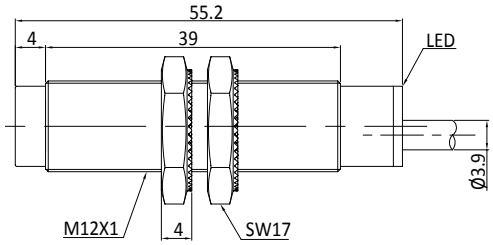


Fig. 3 Inductive sensor with M12 connector (flush)

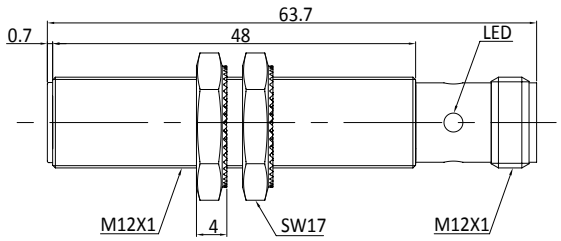
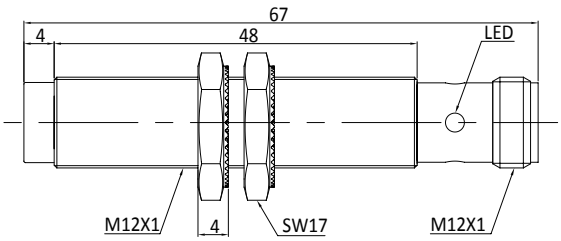
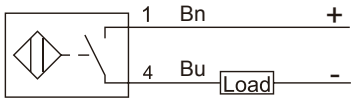


Fig. 4 Inductive sensor with M12 connector (non-flush)

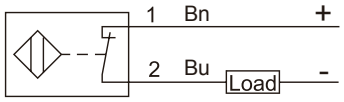


WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

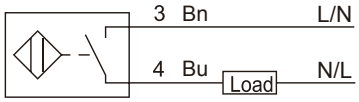
WD1 DC 2-wire NO



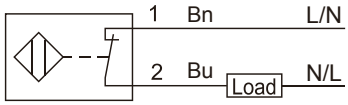
WD2 DC 2-wire NC



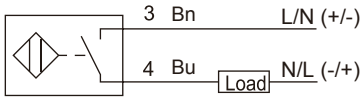
WD3 AC 2-wire NO



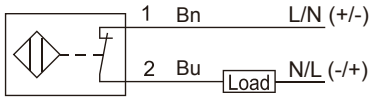
WD4 AC 2-wire NC



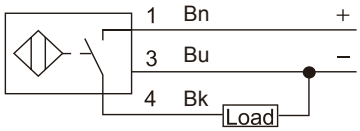
WD5 AC / DC 2-wire NO



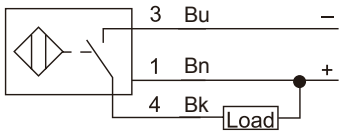
WD6 AC / DC 2-wire NC



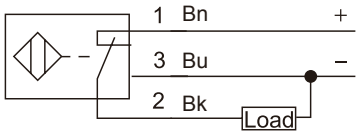
WD7 DC 3-wire PNP NO



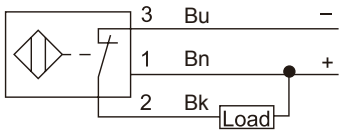
WD8 DC 3-wire NPN NO



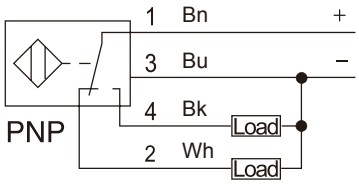
WD9 DC 3-wire PNP NC



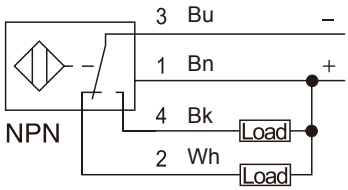
WD10 DC 3-wire NPN NC



WD11 DC 4-wire PNP NO + NC

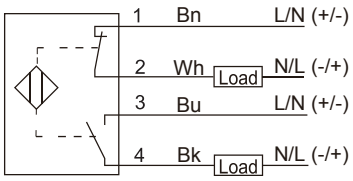


WD12 DC 4-wire NPN NO + NC

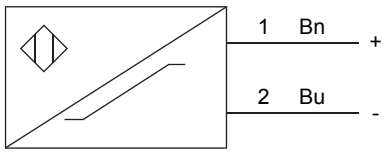


WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

WD13 AC/DC 4-wire NO+NC



WD14 NAMUR 2-wire NC



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