

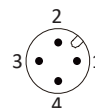
M18 METAL BARREL SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Capacitive sensor
SIZE	M18x1
RATED OPERATING DISTANCE	See table
NUMBER OF CONDUCTORS	3-wire / 4-wire (see table)

CONNECTION TYPES (see table)

- Cable PVC, 0.34 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
MATERIAL HOUSING	Brass nickel-plated
MATERIAL SENSING SURFACE	PBT
TIGHTENING TORQUE	10 N·m
LOCKING	
STANDARD TEST	FE360

ELECTRICAL DATA

OPERATING VOLTAGE	DC: 10 ... 30 V DC
RATED OPERATING CURRENT	3-wire: ≤ 200 mA 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	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



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DC 3-WIRE OUTPUT CABLE

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
FC5-M18-OP6L	flush	5 mm	PNP NO (WD5)	50 Hz	see Fig. 1
FC5-M18-ON6L	flush	5 mm	NPN NO (WD6)	50 Hz	see Fig. 1
FC5-M18-CP6L	flush	5 mm	PNP NC (WD7)	50 Hz	see Fig. 1
FC5-M18-CN6L	flush	5 mm	NPN NC (WD8)	50 Hz	see Fig. 1
NC8-M18-OP6L	non-flush	8 mm	PNP NO (WD5)	50 Hz	see Fig. 2
NC8-M18-ON6L	non-flush	8 mm	NPN NO (WD6)	50 Hz	see Fig. 2
NC8-M18-CP6L	non-flush	8 mm	PNP NC (WD7)	50 Hz	see Fig. 2
NC8-M18-CN6L	non-flush	8 mm	NPN NC (WD8)	50 Hz	see Fig. 2

DC 3-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
FC5-M18-OP6L-Q12	flush	5 mm	PNP NO (WD5)	50 Hz	see Fig. 3
FC5-M18-ON6L-Q12	flush	5 mm	NPN NO (WD6)	50 Hz	see Fig. 3
FC5-M18-CP6L-Q12	flush	5 mm	PNP NC (WD7)	50 Hz	see Fig. 3
FC5-M18-CN6L-Q12	flush	5 mm	NPN NC (WD8)	50 Hz	see Fig. 3
NC8-M18-OP6L-Q12	non-flush	8 mm	PNP NO (WD5)	50 Hz	see Fig. 4
NC8-M18-ON6L-Q12	non-flush	8 mm	NPN NO (WD6)	50 Hz	see Fig. 4
NC8-M18-CP6L-Q12	non-flush	8 mm	PNP NC (WD7)	50 Hz	see Fig. 4
NC8-M18-CN6L-Q12	non-flush	8 mm	NPN NC (WD8)	50 Hz	see Fig. 4

DC 4-WIRE OUTPUT CABLE

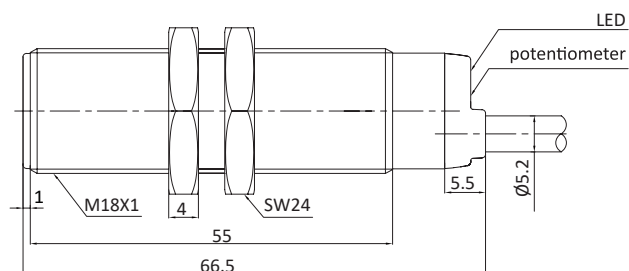
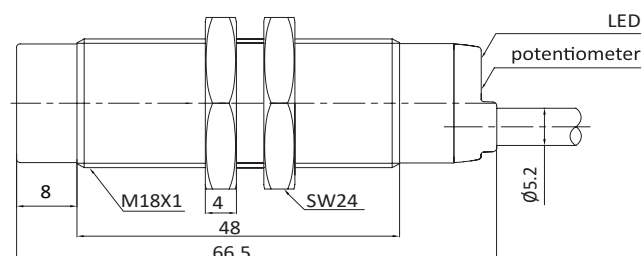
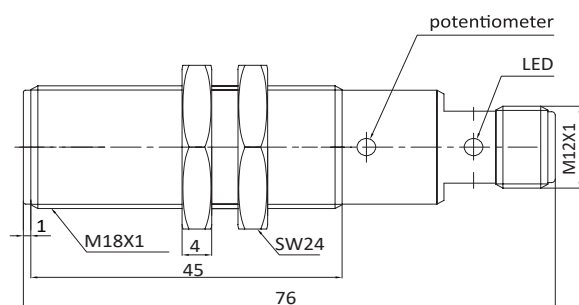
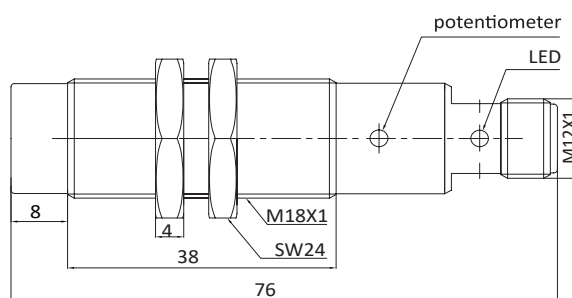
Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
FC5-M18-BP6L	flush	5 mm	PNP NO+NC (WD9)	50 Hz	see Fig. 1
FC5-M18-BN6L	flush	5 mm	NPN NO+NC (WD10)	50 Hz	see Fig. 1
NC8-M18-BP6L	non-flush	8 mm	PNP NO+NC (WD9)	50 Hz	see Fig. 2
NC8-M18-BN6L	non-flush	8 mm	NPN NO+NC (WD10)	50 Hz	see Fig. 2

DC 4-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
FC5-M18-BP6L-Q12	flush	5 mm	PNP NO+NC (WD9)	50 Hz	see Fig. 3
FC5-M18-BN6L-Q12	flush	5 mm	NPN NO+NC (WD10)	50 Hz	see Fig. 3
NC8-M18-BP6L-Q12	non-flush	8 mm	PNP NO+NC (WD9)	50 Hz	see Fig. 4
NC8-M18-BN6L-Q12	non-flush	8 mm	NPN NO+NC (WD10)	50 Hz	see Fig. 4

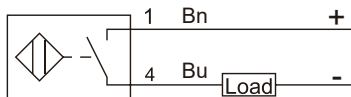
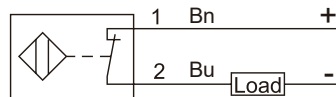
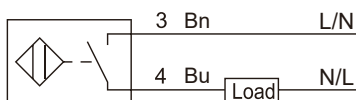
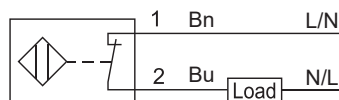
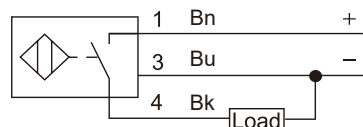
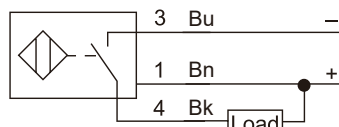
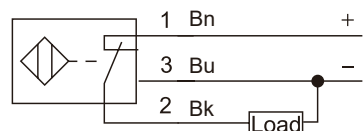
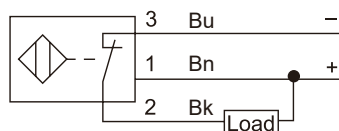
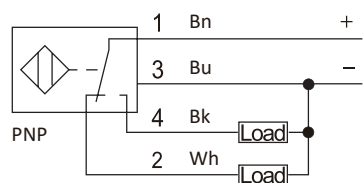
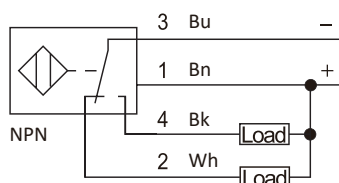
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DIMENSIONS

Fig. 1 Capacitive sensor with cable (flush)**Fig. 2** Capacitive sensor with cable (non-flush)**Fig. 3** Capacitive sensor with M12 connector (flush)**Fig. 4** Capacitive sensor with M12 connector (non-flush)

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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** DC 3-wire PNP NO**WD6** DC 3-wire NPN NO**WD7** DC 3-wire PNP NC**WD8** DC 3-wire NPN NC**WD9** DC 4-wire PNP NO + NC**WD10** DC 4-wire NPN NO + NC

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