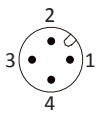


M18 LONG SENSING SERIES

ARTICLE PROPERTIES

<b>SENSOR TYPE</b>	Inductive sensor	<b>CONNECTION TYPES</b> (see table)	
<b>SIZE</b>	M18x1	<ul style="list-style-type: none"> <li>• cable PVC, 0.34 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>	2-wire / 3-wire / 4-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>	brass nickel-plated
<b>MATERIAL SENSING SURFACE</b>	PBT
<b>TIGHTENING TORQUE LOCKING</b>	20 Nm
<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 ... 30 V DC AC: 20 ... 250 V AC AC/DC: 20 ... 250 V AC/DC
<b>RATED OPERATING CURRENT</b>	2-wire DC: ≤ 100 mA 2-wire AC: ≤ 200 mA 3-wire: ≤ 200 mA 4-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>	IP67	<b>VIBRATION RESISTANCE (EN 60068-2-27)</b>	55 Hz, 1 mm
<b>AMBIENT TEMPERATURE</b>	-25 ... 70 °C	<b>SHOCK RESISTANCE (EN 60068-2-6)</b>	30g/11 ms

STANDARDS AND DIRECTIVES

<b>LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR</b>	DIN EN IEC 60947-5-2:2021-04
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APPROVALS



## M18 LONG SENSING SERIES

## DC 2-WIRE OUTPUT CABLE

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-OD6L	flush	8 mm	DC NO (WD1)	500 Hz	see Fig. 1
Fi8-M18-CD6L	flush	8 mm	DC NC (WD2)	500 Hz	see Fig. 1
Ni12-M18-OD6L	non-flush	12 mm	DC NO (WD1)	350 Hz	see Fig. 2
Ni12-M18-CD6L	non-flush	12 mm	DC NC (WD2)	350 Hz	see Fig. 2

## DC 2-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-OD6L-Q12	flush	8 mm	DC NO (WD1)	500 Hz	see Fig. 5
Fi8-M18-CD6L-Q12	flush	8 mm	DC NC (WD2)	500 Hz	see Fig. 5
Ni12-M18-OD6L-Q12	non-flush	12 mm	DC NO (WD1)	350 Hz	see Fig. 6
Ni12-M18-CD6L-Q12	non-flush	12 mm	DC NC (WD2)	350 Hz	see Fig. 6

## AC 2-WIRE OUTPUT CABLE

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-OSA3L	flush	8 mm	AC NO (WD3)	40 Hz	see Fig. 3
Fi8-M18-CSA3L	flush	8 mm	AC NC (WD4)	40 Hz	see Fig. 3
Ni12-M18-OSA3L	non-flush	12 mm	AC NO (WD3)	40 Hz	see Fig. 4
Ni12-M18-CSA3L	non-flush	12 mm	AC NC (WD4)	40 Hz	see Fig. 4

## AC 2-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-OSA3L-Q12	flush	8 mm	AC NO (WD3)	40 Hz	see Fig. 8
Fi8-M18-CSA3L-Q12	flush	8 mm	AC NC (WD4)	40 Hz	see Fig. 8
Ni12-M18-OSA3L-Q12	non-flush	12 mm	AC NO (WD3)	40 Hz	see Fig. 9
Ni12-M18-CSA3L-Q12	non-flush	12 mm	AC NC (WD4)	40 Hz	see Fig. 9

## M18 LONG SENSING SERIES

## AC/DC 2-WIRE OUTPUT CABLE

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-OA41L	flush	8 mm	AC/DC NO (WD5)	20/500 Hz	see Fig. 3
Fi8-M18-CA41L	flush	8 mm	AC/DC NC (WD6)	20/500 Hz	see Fig. 3
Ni12-M18-OA41L	non-flush	12 mm	AC/DC NO (WD5)	20/500 Hz	see Fig. 4
Ni12-M18-CA41L	non-flush	12 mm	AC/DC NC (WD6)	20/500 Hz	see Fig. 4

## AC/DC 2-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-OA41L-Q12	flush	8 mm	AC/DC NO (WD5)	20/500 Hz	see Fig. 8
Fi8-M18-CA41L-Q12	flush	8 mm	AC/DC NC (WD6)	20/500 Hz	see Fig. 8
Ni12-M18-OA41L-Q12	non-flush	12 mm	AC/DC NO (WD5)	20/500 Hz	see Fig. 9
Ni12-M18-CA41L-Q12	non-flush	12 mm	AC/DC NC (WD6)	20/500 Hz	see Fig. 9

## DC 3-WIRE OUTPUT CABLE

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-OP6L	flush	8 mm	PNP NO (WD7)	500 Hz	see Fig. 1
Fi8-M18-ON6L	flush	8 mm	NPN NO (WD8)	500 Hz	see Fig. 1
Fi8-M18-CP6L	flush	8 mm	PNP NC (WD9)	500 Hz	see Fig. 1
Fi8-M18-CN6L	flush	8 mm	NPN NC (WD10)	500 Hz	see Fig. 1
Ni12-M18-OP6L	non-flush	12 mm	PNP NO (WD7)	350 Hz	see Fig. 2
Ni12-M18-ON6L	non-flush	12 mm	NPN NO (WD8)	350 Hz	see Fig. 2
Ni12-M18-CP6L	non-flush	12 mm	PNP NC (WD9)	350 Hz	see Fig. 2
Ni12-M18-CN6L	non-flush	12 mm	NPN NC (WD10)	350 Hz	see Fig. 2

## DC 3-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-OP6L-Q12	flush	8 mm	PNP NO (WD7)	500 Hz	see Fig. 5
Fi8-M18-ON6L-Q12	flush	8 mm	NPN NO (WD8)	500 Hz	see Fig. 5
Fi8-M18-CP6L-Q12	flush	8 mm	PNP NC (WD9)	500 Hz	see Fig. 5
Fi8-M18-CN6L-Q12	flush	8 mm	NPN NC (WD10)	500 Hz	see Fig. 5
Ni12-M18-OP6L-Q12	non-flush	12 mm	PNP NO (WD7)	350 Hz	see Fig. 7
Ni12-M18-ON6L-Q12	non-flush	12 mm	NPN NO (WD8)	350 Hz	see Fig. 7
Ni12-M18-CP6L-Q12	non-flush	12 mm	PNP NC (WD9)	350 Hz	see Fig. 7
Ni12-M18-CN6L-Q12	non-flush	12 mm	NPN NC (WD10)	350 Hz	see Fig. 7

## M18 LONG SENSING SERIES

## DC 4-WIRE OUTPUT CABLE

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-BP6L	flush	8 mm	PNP NO+NC (WD11)	500 Hz	see Fig. 1
Fi8-M18-BN6L	flush	8 mm	NPN NO+NC (WD12)	500 Hz	see Fig. 1
Ni12-M18-BP6L	non-flush	12 mm	PNP NO+NC (WD11)	350 Hz	see Fig. 2
Ni12-M18-BN6L	non-flush	12 mm	NPN NO+NC (WD12)	350 Hz	see Fig. 2

## DC 4-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi8-M18-BP6L-Q12	flush	8 mm	PNP NO+NC (WD11)	500 Hz	see Fig. 5
Fi8-M18-BN6L-Q12	flush	8 mm	NPN NO+NC (WD12)	500 Hz	see Fig. 5
Ni12-M18-BP6L-Q12	non-flush	12 mm	PNP NO+NC (WD11)	350 Hz	see Fig. 7
Ni12-M18-BN6L-Q12	non-flush	12 mm	NPN NO+NC (WD12)	350 Hz	see Fig. 7

M18 LONG SENSING SERIES

DIMENSIONS

Fig. 1 Inductive sensor with cable (flush)

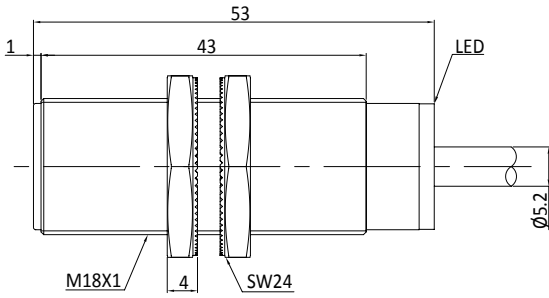


Fig. 2 Inductive sensor with cable (non-flush)

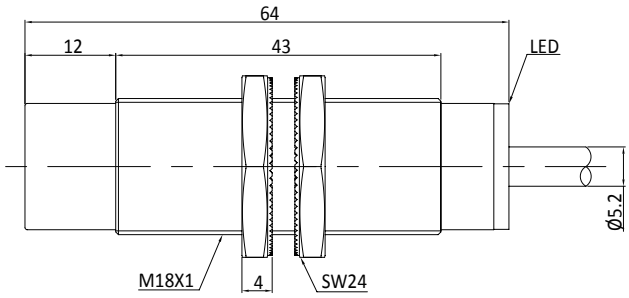


Fig. 3 Inductive sensor with cable (flush)

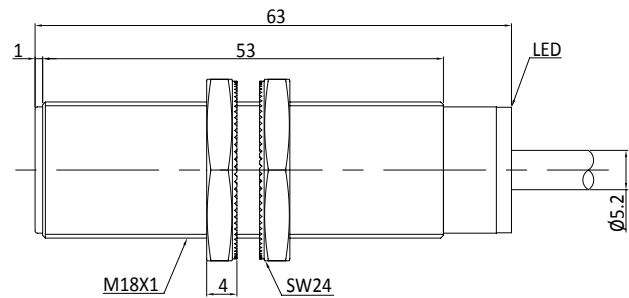


Fig. 4 Inductive sensor with cable (non-flush)

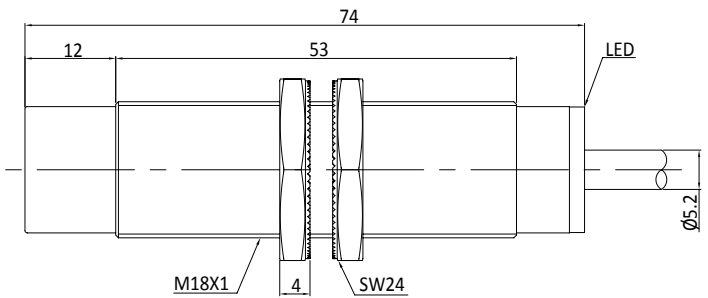


Fig. 5 Inductive sensor with M12 connector (flush)

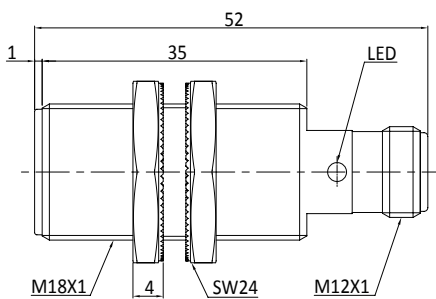


Fig. 6 Inductive sensor with M12 connector (non-flush)

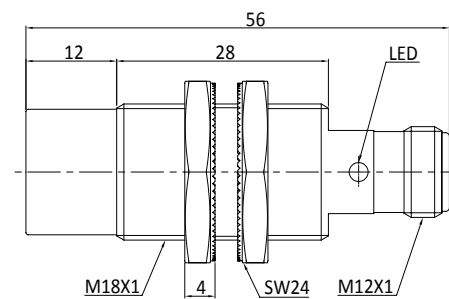


Fig. 7 Inductive sensor with M12 connector (non-flush)

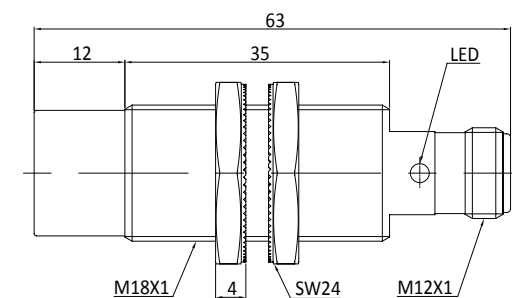
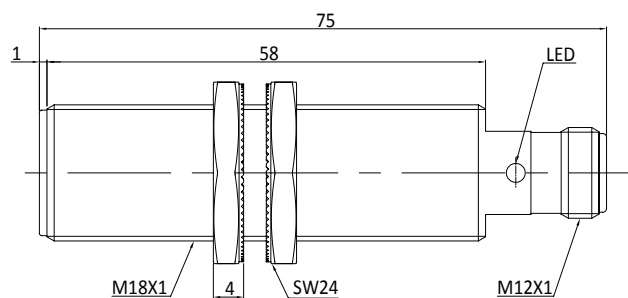


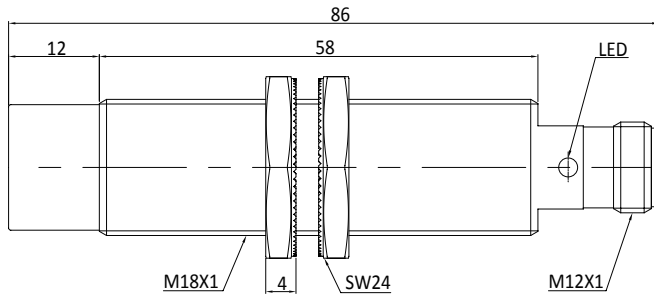
Fig. 8 Inductive sensor with M12 connector (flush)



M18 LONG SENSING SERIES

DIMENSIONS

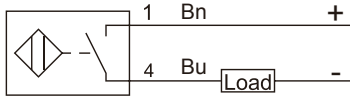
**Fig. 9** Inductive sensor with M12 connector (non-flush)



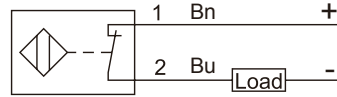
M18 LONG SENSING SERIES

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

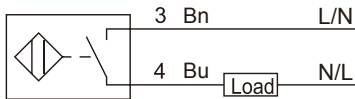
**WD1 DC 2-wire NO**



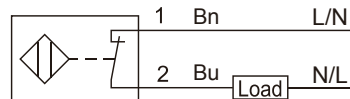
**WD2 DC 2-wire NC**



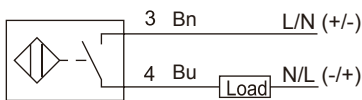
**WD3 AC 2-wire NO**



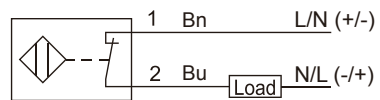
**WD4 AC 2-wire NC**



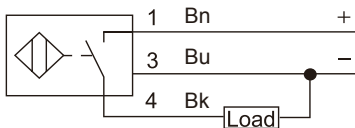
**WD5 AC / DC 2-wire NO**



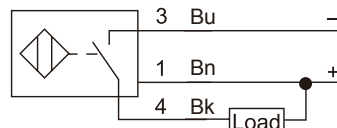
**WD6 AC / DC 2-wire NC**



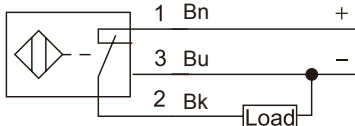
**WD7 DC 3-wire PNP NO**



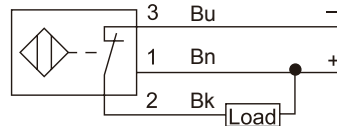
**WD8 DC 3-wire NPN NO**



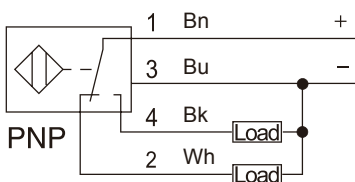
**WD9 DC 3-wire PNP NC**



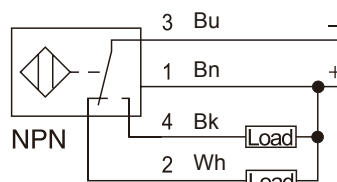
**WD10 DC 3-wire NPN NC**



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



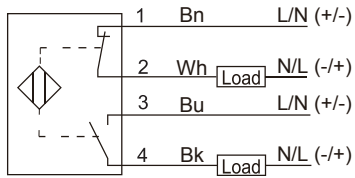
**WD12 DC 4-wire NPN NO + NC**



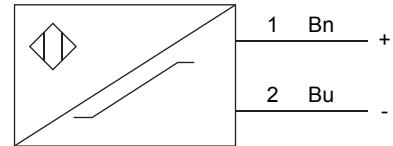
M18 LONG SENSING SERIES

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**

