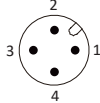


TM30 PTFE ANTI-INTERFERENCE SERIES

ARTICLE PROPERTIES

|                                 |                             |   |
|---------------------------------|-----------------------------|---|
| <b>SENSOR TYPE</b>              | Inductive sensor            | <b>CONNECTION TYPES</b> ( <i>see table</i> )  |
| <b>SIZE</b>                     | M30x1.5                     | <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>     | 3-wire ( <i>see table</i> ) |   |

\*\* Other cable lengths are available on request

MECHANICAL DATA

|   |                                   |
|---|-----------------------------------|
| <b>MOUNTING</b><br>(mounting nuts included in delivery) | Flush ( <i>see table</i> )        |
| <b>HOUSING</b>  | Threaded cylindrical              |
| <b>MATERIAL HOUSING</b>                                 | Brass nickel-plated (PTFE coated) |
| <b>MATERIAL SENSING SURFACE</b>                         | PBT (PTFE coated)                 |
| <b>TIGHTENING TORQUE</b>                                | 40 N·m                            |
| <b>LOCKING</b>  |                                   |
| <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 |
| <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>    | IP67           | <b>VIBRATION RESISTANCE</b><br>(EN 60068-2-6) | 10 ... 55 Hz, 1 mm |
| <b>AMBIENT TEMPERATURE</b> | -25 ... +70 °C | <b>SHOCK RESISTANCE</b><br>(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



TM30 PTFE ANTI-INTERFERENCE SERIES

**DC 3-WIRE OUTPUT CABLE**

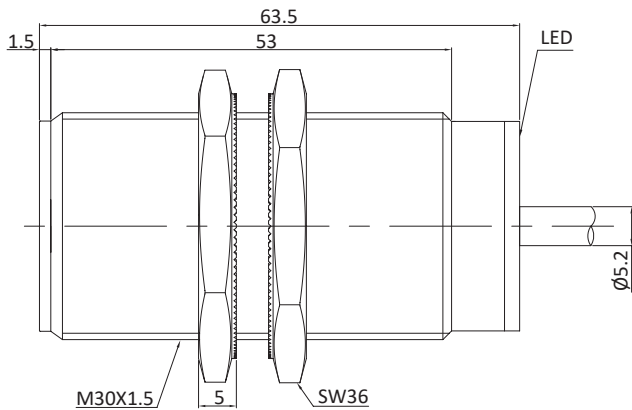
| Article number  | Mounting | Rated operating distance Sn | Switching output (wiring diagram) | Switching frequency | Dimensions |
|-----------------|----------|-----------------------------|-----------------------------------|---------------------|------------|
| Fi10A-TM30-OP6L | flush    | 10 mm                       | PNP NO (WD7)                      | 400 Hz              | see Fig. 1 |
| Fi10A-TM30-ON6L | flush    | 10 mm                       | NPN NO (WD8)                      | 400 Hz              | see Fig. 1 |
| Fi10A-TM30-CP6L | flush    | 10 mm                       | PNP NC (WD9)                      | 400 Hz              | see Fig. 1 |
| Fi10A-TM30-CN6L | flush    | 10 mm                       | NPN NC (WD10)                     | 400 Hz              | see Fig. 1 |

**DC 3-WIRE OUTPUT M12 CONNECTOR**

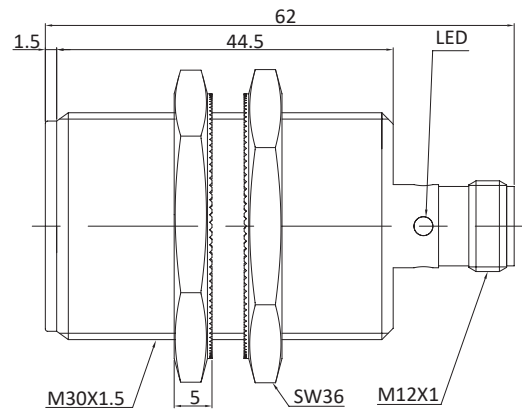
| Article number      | Mounting | Rated operating distance Sn | Switching output (wiring diagram) | Switching frequency | Dimensions |
|---------------------|----------|-----------------------------|-----------------------------------|---------------------|------------|
| Fi10A-TM30-OP6L-Q12 | flush    | 10 mm                       | PNP NO (WD7)                      | 400 Hz              | see Fig. 2 |
| Fi10A-TM30-ON6L-Q12 | flush    | 10 mm                       | NPN NO (WD8)                      | 400 Hz              | see Fig. 2 |
| Fi10A-TM30-CP6L-Q12 | flush    | 10 mm                       | PNP NC (WD9)                      | 400 Hz              | see Fig. 2 |
| Fi10A-TM30-CN6L-Q12 | flush    | 10 mm                       | NPN NC (WD10)                     | 400 Hz              | see Fig. 2 |

**DIMENSIONS**

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



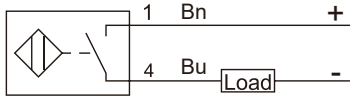
**Fig. 2** Inductive sensor with M12 connector (flush)



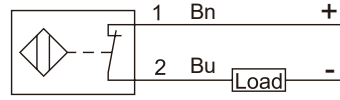
TM30 PTFE ANTI-INTERFERENCE SERIES

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

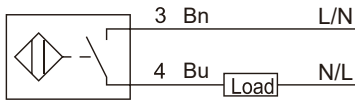
**WD1 DC 2-wire NO**



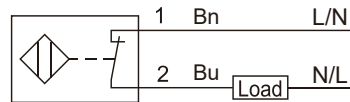
**WD2 DC 2-wire NC**



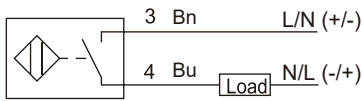
**WD3 AC 2-wire NO**



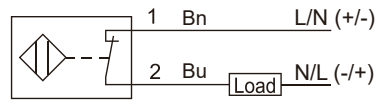
**WD4 AC 2-wire NC**



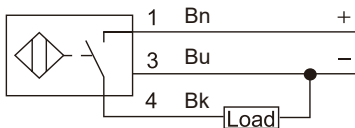
**WD5 AC / DC 2-wire NO**



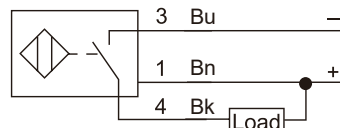
**WD6 AC / DC 2-wire NC**



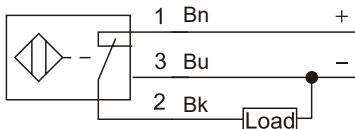
**WD7 DC 3-wire PNP NO**



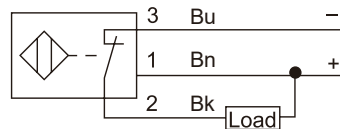
**WD8 DC 3-wire NPN NO**



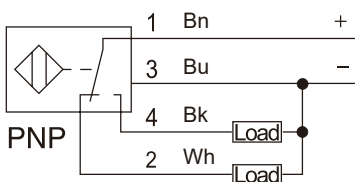
**WD9 DC 3-wire PNP NC**



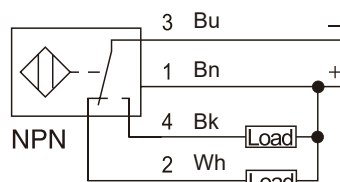
**WD10 DC 3-wire NPN NC**



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



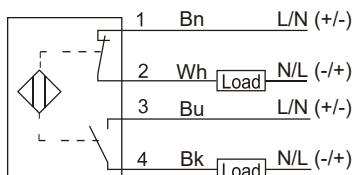
**WD12 DC 4-wire NPN NO + NC**



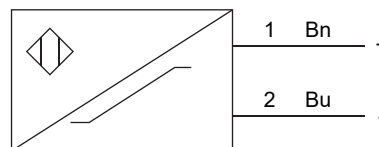
TM30 PTFE ANTI-INTERFERENCE SERIES

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

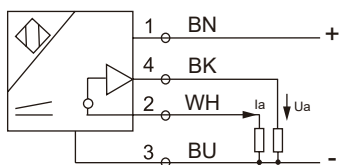
**WD13 AC/DC 4-wire NO+NC**



**WD14 NAMUR 2-wire NC**



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



## TM30 PTFE ANTI-INTERFERENCE SERIES

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