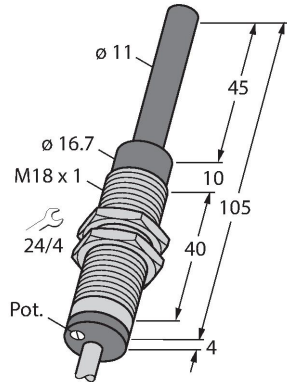


# WI40-M18-LIU5

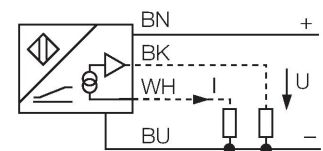
## Inductive Sensor – With Analog Output



### Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Potentiometer to adjust the characteristic
- Actuated via short-circuiting ring, blind hole or the like
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 4...20 mA
- Cable connection

### Wiring diagram

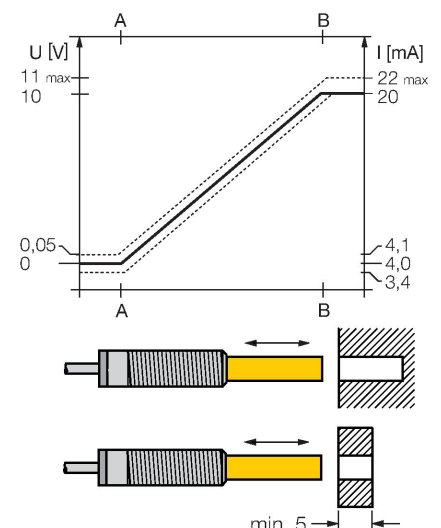


### Technical data

|                                           |                                       |
|-------------------------------------------|---------------------------------------|
| Type                                      | WI40-M18-LIU5                         |
| ID                                        | 1536603                               |
| <b>General data</b>                       |                                       |
| Measuring range                           | 0...40 mm                             |
| Mounting conditions                       | Non-flush                             |
| Secured operating distance                | $\leq (0.81 \times S_n)$ mm           |
| Repeatability                             | $\leq 1$ % of measuring range [A - B] |
|                                           | 0.5 %, after warm-up 0.5 h            |
| Linearity deviation                       | $\leq 2$ %                            |
| Temperature drift                         | $\leq \pm 0.06$ %/K                   |
| <b>Electrical data</b>                    |                                       |
| Operating voltage                         | 15...30 VDC                           |
| Residual ripple                           | $\leq 10$ % $U_{ss}$                  |
| No-load current                           | 8 mA                                  |
| Isolation test voltage                    | $\leq 0.5$ kV                         |
| Short-circuit protection                  | yes                                   |
| Wire breakage/Reverse polarity protection | no / Complete                         |
| Output function                           | 4-wire, Analog output                 |
| Voltage output                            | 0...10 V                              |
| Current output                            | 4...20 mA                             |
| Load resistance voltage output            | $\geq 4.7$ k $\Omega$                 |
| Load resistance current output            | $\leq 0.4$ k $\Omega$                 |
| Measuring sequence frequency              | 40 Hz                                 |
| <b>Mechanical data</b>                    |                                       |
| Design                                    | Threaded barrel, M18 x 1              |
| Dimensions                                | 109 mm                                |

### Functional principle

Simple control tasks can be solved with the inductive linear position sensors of the WI series from Turck. They are selectively operated with a non-ferrous metal ring or blind hole and provide a distance proportional, analog output signal.



Technical data

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| Probe length                          | 45 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, PVC rigid, black                 |
| End cap                               | Plastic, PUR, black                       |
| Max. tightening torque of housing nut | 25 Nm                                     |
| Electrical connection                 | Cable                                     |
| Cable quality                         | Ø 5.2 mm, Gray, LifYY, PVC, 2 m           |
| Core cross-section                    | 4 x 0.34 mm <sup>2</sup>                  |
| Environmental conditions              |                                           |
| Ambient temperature                   | -25...+70 °C                              |
| Vibration resistance                  | 55 Hz (1 mm)                              |
| Shock resistance                      | 30 g (11 ms)                              |
| Protection class                      | IP67                                      |
| MTTF                                  | 751 years acc. to SN 29500 (Ed. 99) 40 °C |
| Included in delivery                  | brass ring                                |

Mounting instructions

Mounting instructions/Description

|                        |         |
|------------------------|---------|
| Distance D             | 72 mm   |
| Distance W             | 2 x B   |
| Distance T             | 5 x B   |
| Distance S             | 1 x B   |
| Distance G             | 3 x B   |
| Distance N             | 55 mm   |
| Diameter active area B | Ø 18 mm |

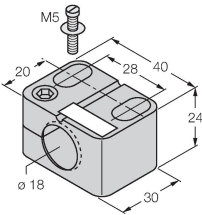
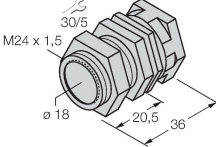
Use non-ferrous metals for ring or blind hole only.

The diameter of the blind hole depends on its wall thickness and the material.

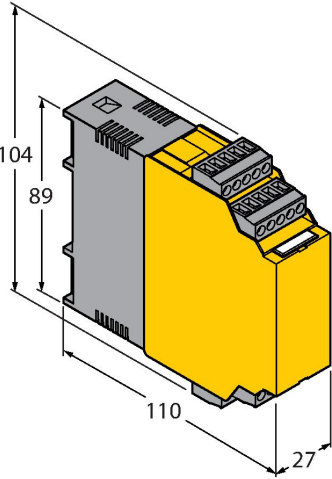
Only the use of the NF-ring, which is included in the delivery, ensures that the values stated in the data sheet are observed.

In case of non-observance or use of a blind hole, the measuring range may be reduced.

Accessories

|                                                                                   |         |                                                                                              |                                                                                    |         |                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BST-18B                                                                           | 6947214 | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6                    | QM-18                                                                              | 6945102 | Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets. |
|  |         |                                                                                              |  |         |                                                                                                                                                                                              |
| MW-18                                                                             | 6945004 | Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304) | BSS-18                                                                             | 6901320 | Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene                                                                                                               |
|  |         |                                                                                              |  |         |                                                                                                                                                                                              |

Accessories

| Dimension drawing                                                                   | Type       | ID      |                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | IM43-13-SR | 7540041 | Trip amplifier; 1-channel; input 0/4... 20 mA or 0/2...10 V; supply of 2- or 3-wire transmitters/sensors; limit value adjustment via teach button; three relay outputs with one NO contact each; removable terminal blocks; 27 mm wide; universal voltage supply 20...250 VUC; further Limit value indicators are described in our "Interface Technology" catalog. |