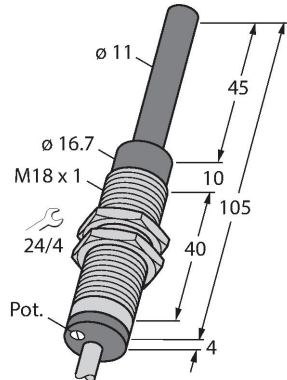


# WI40-M18-LIU5

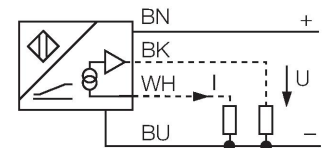
## Inductive Sensor – With Analog Output



### Features

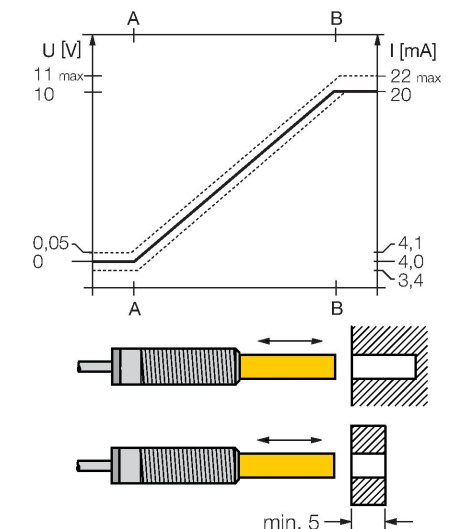
- Threaded barrel, M18 x 1
- Chrome-plated brass
- Potentiometer to adjust the characteristic
- Actuated via short-circuiting ring, blind hole or the like
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 4...20 mA
- Cable connection

### Wiring diagram



### 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.



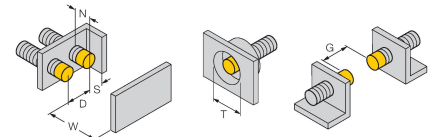
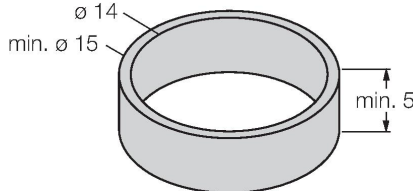
### Technical data

|                                        |                                        |
|----------------------------------------|----------------------------------------|
| Type                                   | WI40-M18-LIU5                          |
| ID                                     | 1536603                                |
| General data                           |                                        |
| 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                      | $\leq \pm 0.06 \%/K$                   |
| Electrical data                        |                                        |
| Operating voltage $U_B$                | 15...30 VDC                            |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$                |
| No-load current                        | $\leq 8$ mA                            |
| Isolation test voltage                 | 0.5 kV                                 |
| Short-circuit protection               | yes                                    |
| Wire break/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                                  |
| Mechanical data                        |                                        |
| Design                                 | Threaded barrel, M18 x 1               |
| Dimensions                             | 109 mm                                 |
| Probe length                           | 45 mm                                  |

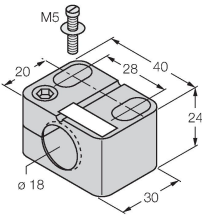
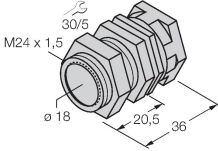
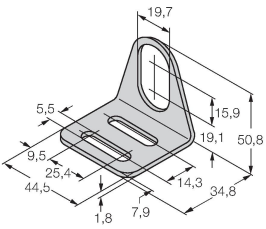
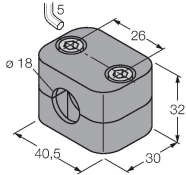
Technical data

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| 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                                |

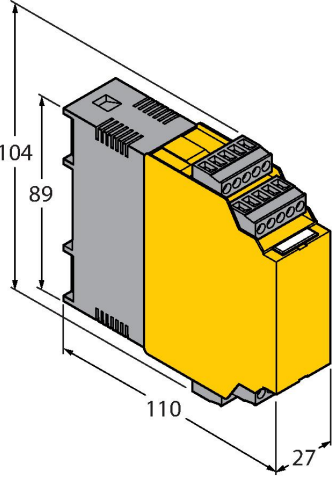
Mounting instructions

| Mounting instructions/Description                                                                                              |                               |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|                                             | Distance D72 mm               |
|                                                                                                                                | Distance W2 x B               |
|                                            | Distance T5 x B               |
|                                                                                                                                | Distance S1 x B               |
|                                                                                                                                | Distance G3 x B               |
|                                                                                                                                | Distance N55 mm               |
|                                                                                                                                | Diameter active area BØ 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. |
|  |         |                                                                                              |  |         |                                                                                                                                                                                              |
| MW18                                                                              | 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. |