

Spindle Position Displays

Hollow shaft max. $\varnothing 25$ mm, manual format alignment

Display LCD two lines, interface RS485

N 140



N 140 with cable output

Features

- Electronic spindle position display
- Absolute multiturn measuring system
- Display: LCD backlit, two lines
- Actual value and target display
- Hollow shaft $\varnothing 20$ mm / $\varnothing 25$ mm
- Interface RS485
- Resolution: 2304 steps/revolution ± 4096 revolutions

Technical data - electrical ratings

| | |
|----------------------------|--|
| Voltage supply | 24 VDC ± 10 % |
| Current consumption | ≤ 30 mA |
| Display | LCD, 7-segment display, 2-lines, backlit |
| Measuring principle | Absolute multiturn measuring system |
| Measuring range | -999,99...+9999,99 mm -99.999...+999.999 inch |
| Steps per turn | 2304 |
| Number of turns | 4096 / 12 bit |
| Spindle pitch | ≤ 23 mm |
| Interface | RS485 (ASCII protocol) |
| Data memory | Parameter buffer: EEPROM Current value buffer: >10 years by integrated 3 V lithium battery |
| Programmable parameters | Display position horizontal/vertical Measuring unit mm/inch Counting direction Spindle pitch Spindle tolerance Positioning direction Direction arrows Tolerance window Round up/down |
| Standard DIN EN 61010-1 | Protection class II Overvoltage category II Pollution degree 2 |
| Emitted interference | DIN EN 61000-6-3 |
| Interference immunity | DIN EN 61000-6-2 |
| Approval | UL/cUL |

Technical data - mechanical design

| | |
|-------------------------|--|
| Hollow shaft | $\varnothing 20$ mm, $\varnothing 25$ mm |
| Operating speed | ≤ 600 rpm (short-term) |
| Protection DIN EN 60529 | IP 65 |
| Operating temperature | -10...+50 °C |
| Storing temperature | -20...+70 °C |
| Relative humidity | 80 % non-condensing |
| Torque support | Torque pin provided at housing |
| E-connection | - Cable output (30 cm) with male/female connector M16, 5-pin |
| Housing type | Surface-mount with hollow shaft |
| Dimensions W x H x L | 56 x 100 x 62.5 mm |
| Mounting | Surface-mount with hollow shaft |
| Weight approx. | 200 g |
| Material | Polycarbonate black, UL 94V-0 |

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Part number

N 140. 1 0 3 A 01

| | | | | | | |
|---|--|---|---|--|---|----------------------------------|
| | | | | | | |
| | | | | | | <u>Hollow shaft</u> |
| | | | | | A | Hollow shaft $\varnothing 25$ mm |
| | | | | | B | Hollow shaft $\varnothing 20$ mm |
| | | | | | | <u>Display</u> |
| | | | | | A | Inclined |
| | | | | | | <u>Voltage supply</u> |
| | | 3 | | | | 24 VDC |
| | | | | | | <u>E-connection</u> |
| | | | 0 | | | Cable output with M16 connector |
| | | | | | | <u>Interface</u> |
| 1 | | | | | | RS485 |

Description

N 140 spindle position display supports the editing engineer in manual spindle positioning operations. The principal benefits of the new electronic spindle position display is saving time in machine setup and editing as well as elimination of errors when aligning formats to new position values. The absolute measuring system captures any change in position even in powerless state. The backlit LCD display provides the editing engineer with all necessary information for efficient editing of new spindle positions. The two-line display shows both current value and target. A little arrow signalizes the editing engineer the direction the spindle must be turned to get to the new position. RS485 serial interface enables network of 32 spindle position displays with PC or PLC. For complete solutions also memory controllers as decentralized operating and memory terminals are available. Up to 100 format profiles can be stored by teach-in. Upon request the desired profile is recalled and retransmitted upon pressing a button to every spindle position and shown as target.

Accessories

| Connectors and cables (page %S) | |
|--|--|
| Z 165.B01 | Mating connector M16, 5-pin, less cable |
| Z 165.AW1 | Cable connector M16, 5-pin, less cable with integrated terminating resistor 120 Ω |
| Z 165.D05 | Data and supply cable M16, Master to N 140, N 141 and N 142, 5 m |
| Z 165.S01 | Cable connector M16, 5-pin, less cable |
| Z 165.V01 | Coupling cable between M16 and M16, 1 m |

Spindle Position Displays

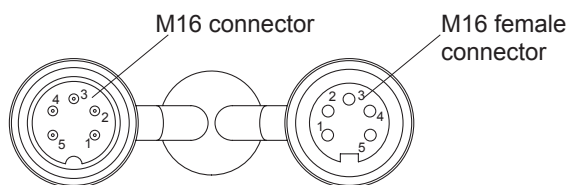
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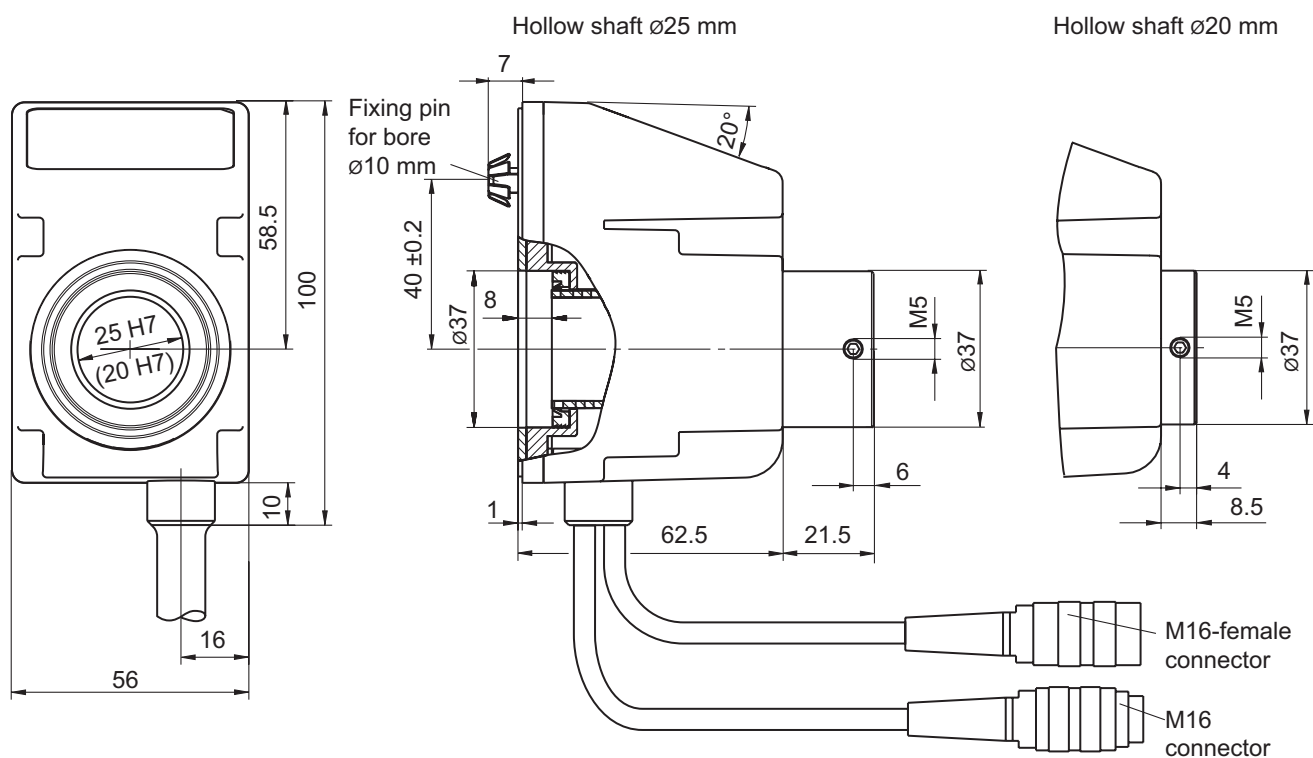
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Terminal assignment

| Connector | Assignment |
|-----------|---------------------|
| Pin 1 | Sensor supply +24 V |
| Pin 2 | Sensor supply 0 V |
| Pin 3 | – |
| Pin 4 | Tx/Rx+, RS485 |
| Pin 5 | Tx/Rx-, RS485 |



Dimensions



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