

Spindle position displays

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

Display LCD two lines, interface RS485

N 142



N 142 with cable output

Features

- Automated format alignment
- Two keys for format alignment touch by touch
- Hollow shaft $\varnothing 20$ mm / $\varnothing 25$ mm
- Resolution: 2304 steps/revolution ± 4096 revolutions
- Display: LCD backlit, two lines
- Absolute multiturn measuring system
- Actual value and target display
- Interface RS485

Technical data - electrical ratings

Voltage supply	24 VDC ± 10 %
Current consumption	≤ 40 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
Motive positioning	Two softkeys for format alignment Direct motor connection to N 142 by motor cable
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 approval / E63076

Technical data - mechanical design

Shaft	$\varnothing 20$ mm hollow shaft $\varnothing 25$ mm hollow shaft
Operating speed	≤ 600 rpm (short-term)
Protection DIN EN 60529	IP 65 (housing), IP 40 (connector)
Operating temperature	-10...+50 °C
Storing temperature	-20...+70 °C
Relative humidity	80 % non-condensing
Torque support	Torque pin provided at housing
Connection	- Cable output (30 cm) with male/female connector M16, 5-pin - Motor cable with female connector M16, 12-pin
Operation / keypad	Membrane with two keys
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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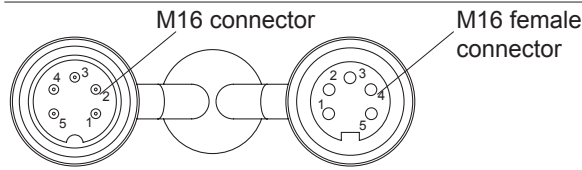
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Terminal assignment

SPA connector and female connector, 5-pin

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



Motor connector, 12-pin

Connector	Assignment
Pin A	–
Pin B	Motor left
Pin C	Motor right
Pin D	Speed
Pin E	–
Pin F	Key 1 external
Pin G	Key 2 external
Pin H	–
Pin J	–
Pin K	Error signal
Pin L	Speed
Pin M	GND



Circuit diagram

