Spindle Position Displays

Hollow shaft max. ø14 mm, with infrared interface

Format alignment by power tool, interface RS485

N 153

N 153 with cable output

Features

- **Infrared interface for format alignment by power tool**
- **Absolute multiturn measuring system**
- **Display: LCD backlit, two lines**
- **Actual value and target display**
- **LED status display**
- **Interface RS485**
- **Resolution: 1440 steps/revolution ±4096 revolutions**
- **Two operating keys for format alignment touch by touch**

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	-99.99...+999.99 mm -9.999...+99.999 inch
Steps per turn	1440
Number of turns	4096 / 12 bit
Spindle pitch	≤14 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 Connected to power tool by infrared interface
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	ø14 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	- Male/female connector M8, 4-pin - Cable output (30/15 cm) with male/female connector M8, 4-pin
Operation / keypad	Membrane with two keys
Housing type	Surface-mount with hollow shaft
Dimensions W x H x L	37 x 75 x 45 mm
Mounting	Surface-mount with hollow shaft
Weight approx.	120 g
Material	Polyamide black, UL 94V-0

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Part number

N 153. | 1 | | 3 | A | A | 01 |

- Hollow shaft
  - A Hollow shaft ø14 mm
- Display
  - A Inclined
- Voltage supply
  - 3 24 VDC
- E-connection
  - 0 Connector output M8
  - 1 Cable output M8
- Interface
  - 1 RS485

Accessories

Connectors and cables (page %S)

Z 178.A01	Adaptor cable between cable connector M8 and female M16, 1 m
Z 178.AW1	Cable connector M8, 4-pin, less cable with integrated terminating resistor 120 Ω
Z 178.B01	Mating connector M8, 4-pin, less cable
Z 178.D05	Data and supply cable M8, Master to N 150 and N 155, 5 m
Z 178.S01	Cable connector M8, 4-pin, less cable
Z 178.V01	Coupling cable 1 m between M8 and M8

Description

multicon AccuDrive is an economical system for mobile, motive format alignment. By AccuDrive positioning of shafts to the desired format is quick, accurate and less fussy hand crank operations. Saving setup times and avoiding editing errors are consequently the most convincing arguments.
The electrically commutated professional power tool ASMIR serves as mobile actuator that communicates with N 153 spindle position displays by infrared interface. Red and green status LEDs provided at the position display indicate the operator which shafts require alignment. A flashing LED indicates the positioning order.
The power tool is a vital help in aligning the respective shafts to the new format. Select the desired positioning direction by aid of the two pushbuttons provided at the power tool. Press and hold the start button to start the positioning operation at slow speed with increasing acceleration. This way, the operator is able to proceed the positioning operation in direct sight with an accuracy of ±1/100 mm.
Any shaft positions once effected can be filed under a parameter profile in the control to be recalled any time. By serial interface maximum 32 spindle position displays may be networked to PC or PLC. Through solutions are realized by memory controller N 242 as memory and operating terminal where max. 100 format profiles can be entered and saved by Teach-in.

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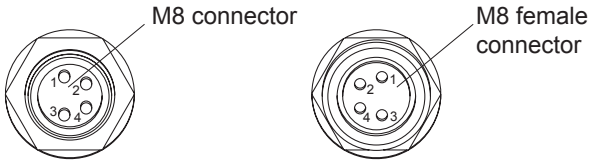
Terminal assignment

SPA – connector and female connector, 4-pin

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



Dimensions