

Datasheet

With serial output for target value input or transmission of the actual value



Features at a glance



- Programmable electronic position indicator with through hollow shaft and fieldbus interface for accurate adjustment control of spindles.
- Evolution of mechanical indicators, with comparable dimensions and the same mounting system, for semi-automatic adjustment monitored by PLC on a vast range of machines and plants even in complex and heterogenous working conditions.
- LCD with two rows with backlight for target- and actual value.
- Suitable for semi-automatic and monitored adjustments of spindles.
- Freely programmable via keyboard operation with RS485 Modbus interface.
- RS485 Modbus for network connection with PLC or remote monitoring system.
- Allowing manual format changeover by the operator using a hand crank or hand wheel.
- User guidance via 2 signal LEDs (green/red) to indicate: position has been reached / not reached.
- Fieldbus connection via gateway interface: Profinet, Ethernet/IP, EtherCat and Powerlink.
- Battery lifetime: 6 to 8 years.
- Extensive accessories available: shaft clamping flange, reducing bushes, hand crank or hand wheel

Mechanical characteristics

Hallow shaft,VA	EP43RS EP46RS	Ø14 mm/ Ø12,7 mm (1/2") Ø20 mm/ Ø19,05 mm (3/4") / Ø25 mm
Weight		220 g (EP43RS); 250 g (EP46RS)
Display		LCD with backlight, digit height 7,5 mm
Display range		-99999; +99999
Speed		max. 1.000 rpm
Resolution, max.		EP43RS: 3.200 ppr EP46RS: 4.000 ppr
Operating temperature		0°C to +50°C
Relative humidity		35 to 85% (no condensation)
Protection class		IP65
Connection type /serial connection		T-connector, 4-pole plug + 4-pole socket M12x1 (A-coded) Y-connector, 2x 4-pin socket M12x1 (A-coded), optional
Power supply /serial output		Cable length 135 mm (with T-connector) Cable length 200 mm (with Y-connector)

Electrical characteristics

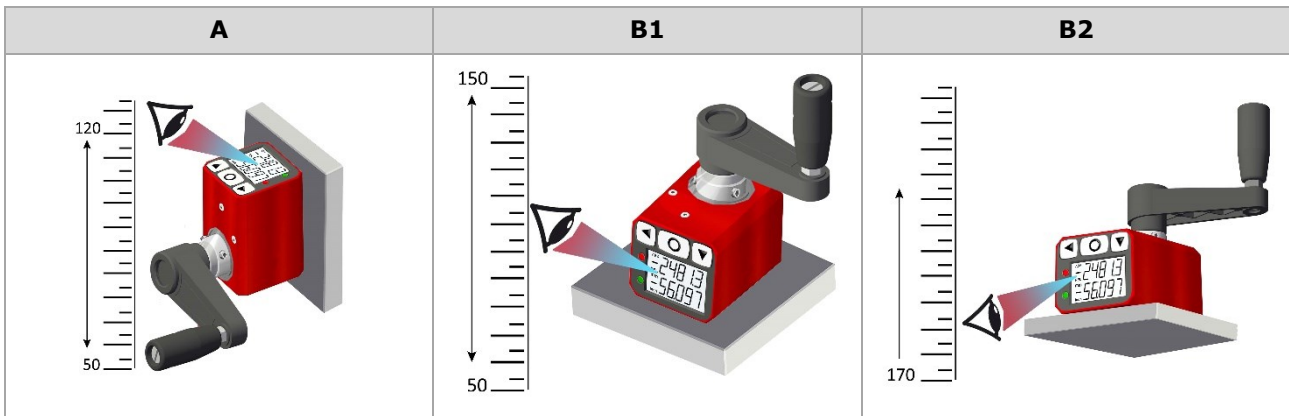
Power supply	10-30 VDC, max. 100 mA
Battery	3,6 V 1/2 AA, lifetime 6-8 years
Available functions	Reset, absolute / incremental value, mm / Inch conversation, offset
Keyboard	Frontside operation - 3 program and function keys
Interface /serial output	RS485 - Modbus RTU
Electromagnetic compatibility (EMC)	2014/30/UE
RoHS	2011/65/UE

Datasheet

View



Mounting position



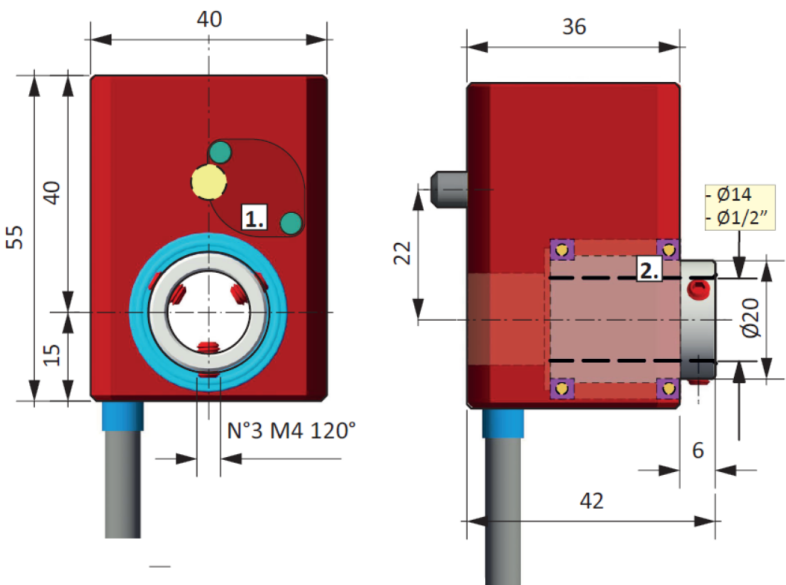
For optimal visibility, orient the device according to the viewing angle as shown.

- | | |
|-----------|--|
| A | For horizontal shaft. To be positioned at a height of 50 cm to 120 cm. |
| B1 | For vertical shaft. To be positioned at a height of 50 cm to 150 cm. |
| B2 | For vertical shaft. To be positioned at a height above 170 cm. |

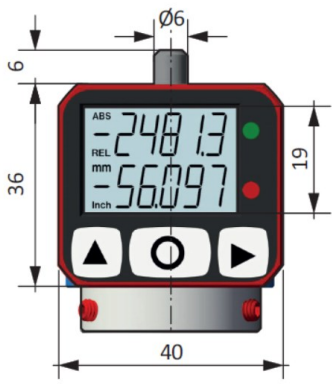
Datasheet

Dimensions

EP43RS



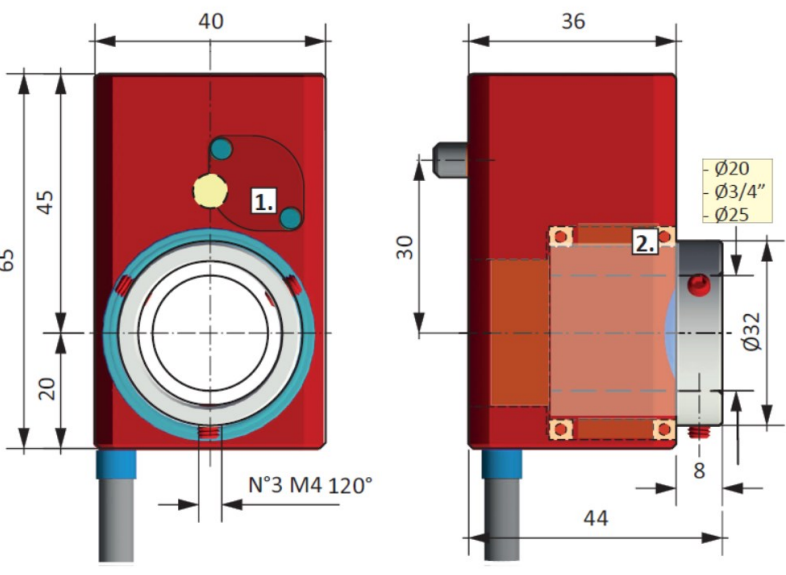
Top view



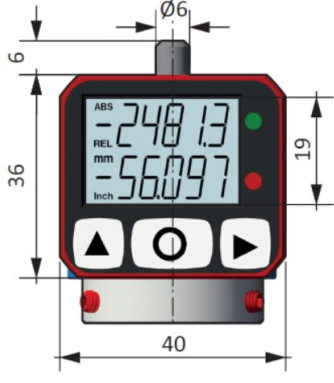
All dimensions in mm

1. Battery compartment, 2. Ball bearing

EP46RS



Top view



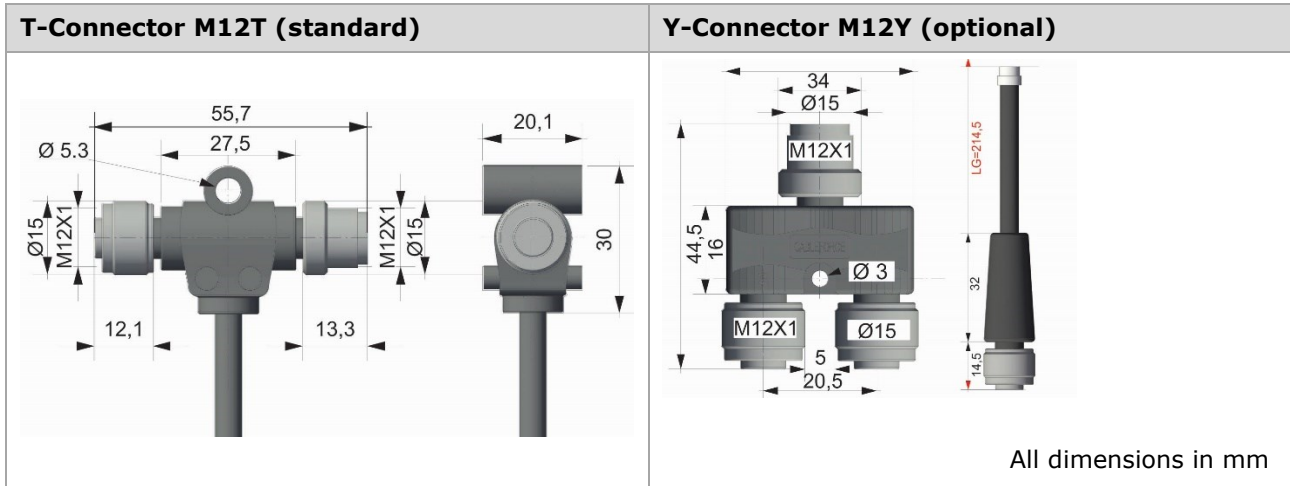
All dimensions in mm

1. Battery compartment, 2. Ball bearing

EP43RS-EP46RS DB 2021-11-16 EN

Datasheet

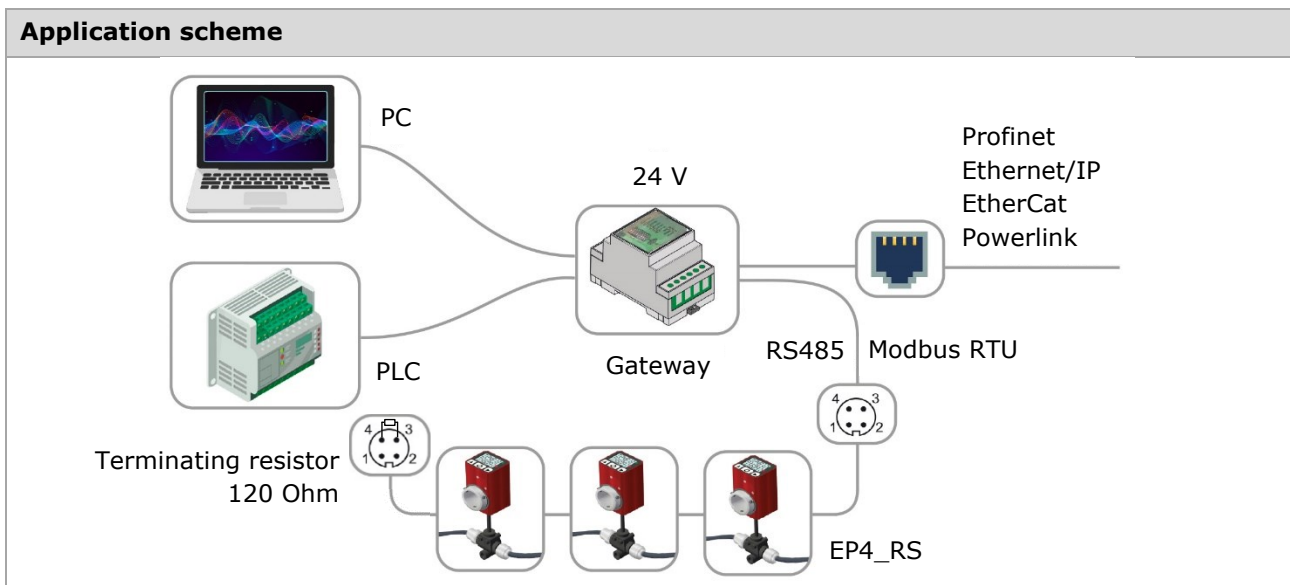
Dimensions Connector



Fieldbus connectivity

Protocol gateway for EP4_RS and F4RS

GATEWAY-EP4-F4
 Protocol converter which connects the EP4_RS and F4RS position indicators to fieldbus networks.



Datasheet

Accessories

Shaft clamping flange	Reducing bushes	Hand crank, Hand wheel
FL-B-EP43, FL-B-EP46	Position indicator/Hollow shaft BF	Hand crank V.M Hand wheel V.R

Dimensions Shaft clamping flange

Shaft clamping flange FL-B-EP43, FL-B-EP46		FL-B-EP43	FL-B-EP46
<p>All dimensions in mm</p>	<p>Compatible with EP43</p>	<p>Compatible with EP46</p>	
	$\text{ØA} = 14 - 12,7 (1/2")$	$\text{ØA} = 20 - 19,05 (3/4") - 25$	
	B = 55	B = 65	
	C = 22	C = 30	

Dimensions for Position indicator/Hollow shaft

Reducing bushes BF		
	<p>D_i = inner diameter D_e = outer diameter</p> <p>All dimensions in mm</p>	

Pin Assignment Connector: 4-pole plug M12x1 (the assignments of the two connectors are equal)

	PIN	Signal/Function	
	1	$U_V = +10 \text{ to } 24 \text{ VDC}$	Power supply
	2	-GND	Negative voltage
	3	RS+	Positive RS485 serial interface
	4	RS-	Negative RS485 serial interface

Datasheet

Ordering examples

Type EP43RS - A - F14 - M12T
EP46RS

Mounting position

A = For horizontal shaft (positioned at a height of 50 cm to 120 cm)
B1 = For vertical shaft (positioned at a height of 50 cm to 150 cm)
B2 = For vertical shaft (positioned at a height above 170 cm)

Hollow shaft diameter

(EP43RS):
F12.7 = 12,7 mm (1/2")
F14 = 14 mm
(EP46RS):
F19.05 = 19,05 mm (3/4")
F20 = 20 mm
F25 = 25 mm

Connection type

M12T = T-connector, 4-pole plug + 4-pole socket M12x1 (A-coded)
M12Y = Y-connector, 2x 4-pin socket M12x1 (A-coded), optional

Fieldbus connectivity (optional)

Type GATEWAY-EP4-F4 - PROFINET
GATEWAY-EP4-F4 = Gateway for position indicators EP43RS, EP46RS

Fieldbus

PROFINET = Profinet
ETHERNETIP = EtherNet/IP
ETHERCAT = EtherCat
POWERLINK = Ethernet Powerlink

Accessories (optional)

Type FL-B-EP43 - F14
FL-B-EP43 = Shaft clamping flange EP43
FL-B-EP46 = Shaft clamping flange EP46

Hollow shaft diameter

(EP43RS):
F12.7 = 12,7 mm (1/2")
F14 = 14 mm
(EP46RS):
F19.05 = 19,05 mm (3/4")
F20 = 20 mm
F25 = 25 mm

Type BF - 14/12
BF = Reducing bush for position indicator/hollow shaft

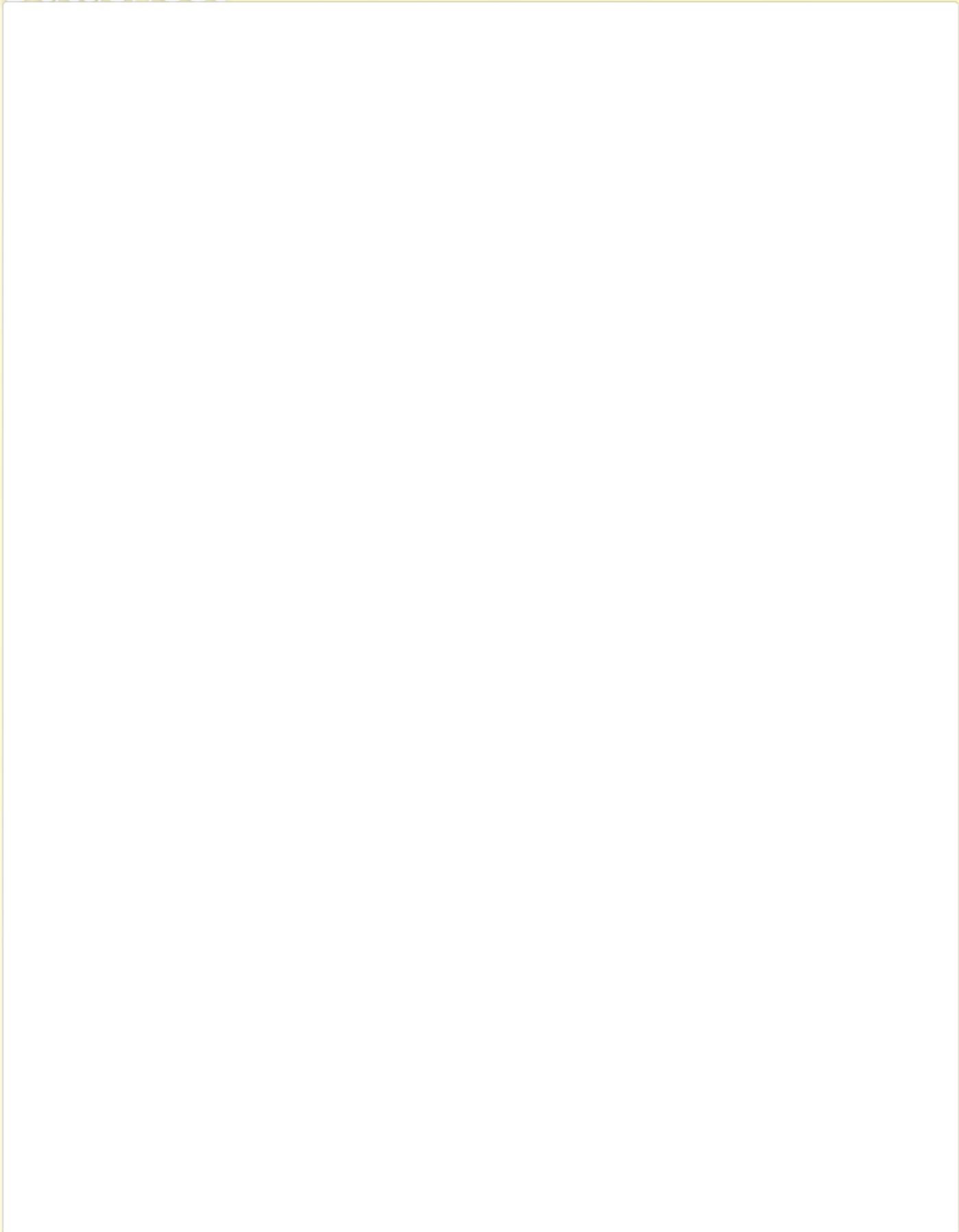
Hollow shaft diameter

(EP43RS):
14/12 = 12 mm
14/10 = 10 mm
14/8 = 8 mm
14/6 = 6 mm
(EP46RS):
20/18 = 18 mm
20/16 = 16 mm
20/15 = 15 mm
20/14 = 14 mm
20/12 = 12 mm

Manufacturer:



Datasheet



EP43RS-EP46RS DB 2021-11-16 EN