

Datasheet

Features at a glance

- Programmable electronic position indicator with through hollow shaft $\varnothing 20$ mm or $\varnothing 25$ mm, for measuring and setting distance and angle adjustments in mechanical engineering.
- The compact design and simple mounting directly on the machine shaft enable numerous application possibilities.
- The electronics are built into an elegant and sturdy plastic housing.
- The hollow shaft in burnished steel features ball bearings.
- The display with a digit height of 10 mm offers excellent readability, also from a distance.
- All device parameters can be easily programmed via 3 function keys.
- The current measured value is stored even when the machine shaft is at a standstill.
- Powered by long battery lifetime, easy replacement from the front (without loss of measured value and parameters).
- Accessories available: shaft clamping flange, reducing bushes, hand crank or hand wheel.
- **EP-RS** with external power supply 10-25 VDC and two internal rechargeable batteries (back-up), serial output RS485 with Modbus RTU protocol for communication with remote units.
- **EP-RS-MAN** designed for manual positioning (for example manual shape change): the control unit (PLC, computer) transmits the value to each position indicator and the operator moves the axis by hand to reach this value. The correct set point is transmitted to each axis. The axes can thus be set very quickly (less production waste).



Mechanical characteristics

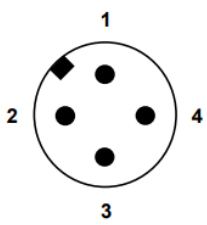
Dimensions Hollow shaft	EP20RS, EP20RS-MAN: $\varnothing 20$ mm H7, EP25RS, EP25RS-MAN: $\varnothing 25$ mm H7
Material Hollow shaft Housing	Burnished steel, has ball bearings Plastic, black or orange
Weight	approx. 350 g
Display	LCD; 6-digits; digit high 10 mm
Display range	-999999; +999999
Revolution	max. 1.000 rpm
Resolution	4.000 impulses/revolution
Operating temperature	+0°C to +50°C
Relative humidity	30% to +90% (non-condensing)
Protection class	IP54 (according to DIN 40050)
Electromagnetic compatibility	2004/108/EC
RoHS	2011/65/UE

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Electrical characteristics

Power supply	10...25 VDC max. 100 mA; 2 alkaline batteries 1.5 V type AA (back-up, for an operating period of 6 months without external power supply)
Battery lifetime	6 months
Function keys	3 for programming or function
Functions (freely programmable)	Reset/preset, absolute/incremental measuring value, mm/Inch conversion, angle display in degrees, 3 different zero points for dimensional correction by using different tools and an offset function for compensation of tool wear, setting of the value for each revolution of the hollow shaft, measuring direction, number of decimal points.
Serial port output electrical connection	RS485 Modbus RTU protocol 2 connector M12x1-male, 4-pin

Electrical connection Connector M12x1-male, 4-pin

	PIN	Signal	Function
	1	+10...25 VDC	positive power supply
	2	GND	negative power supply
	3	RS+	positive RS485 serial port
	4	RS-	negative RS485 serial port



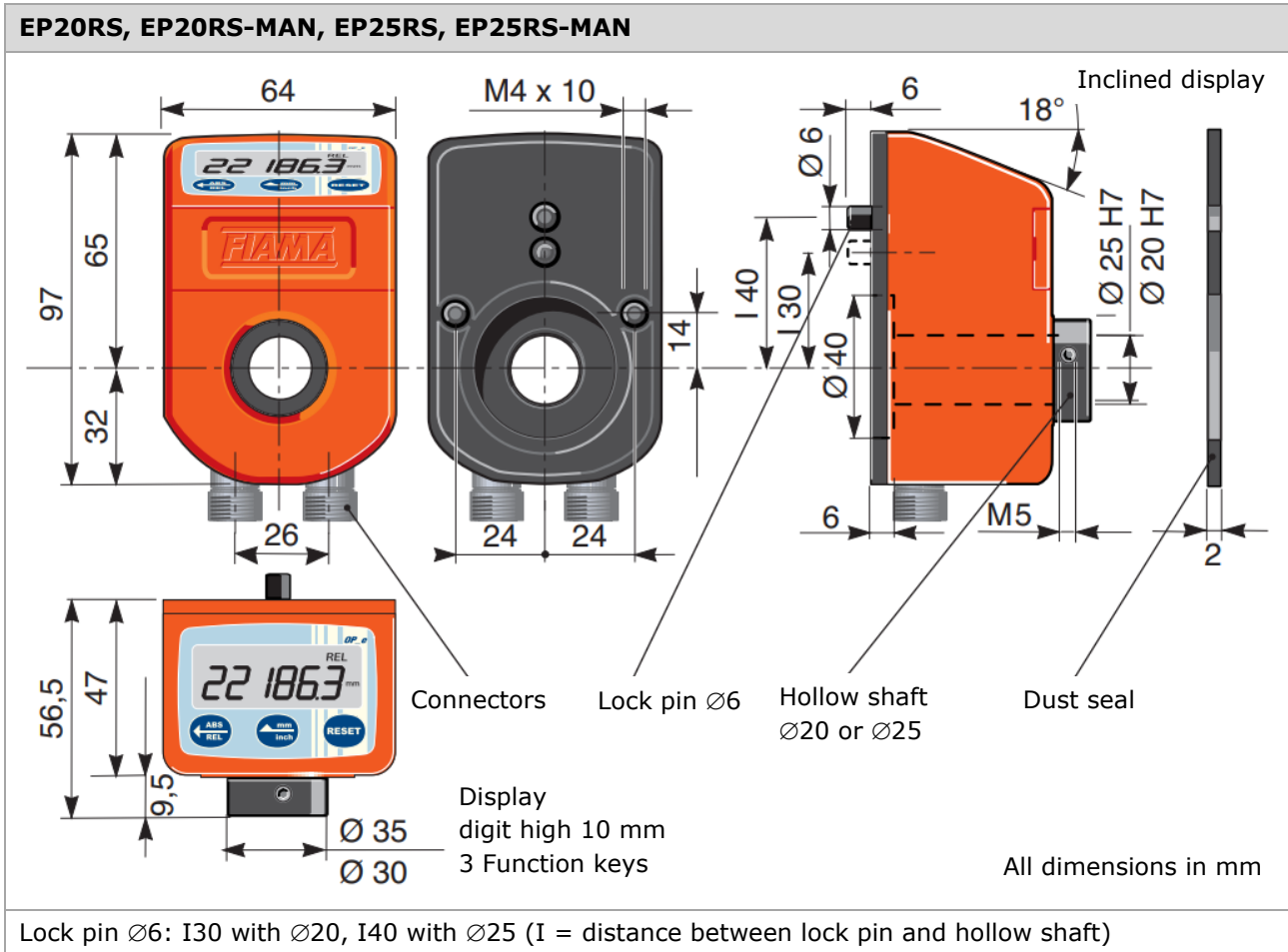
Please pay attention: a wrong electrical connection could damage the device.

Ordering example

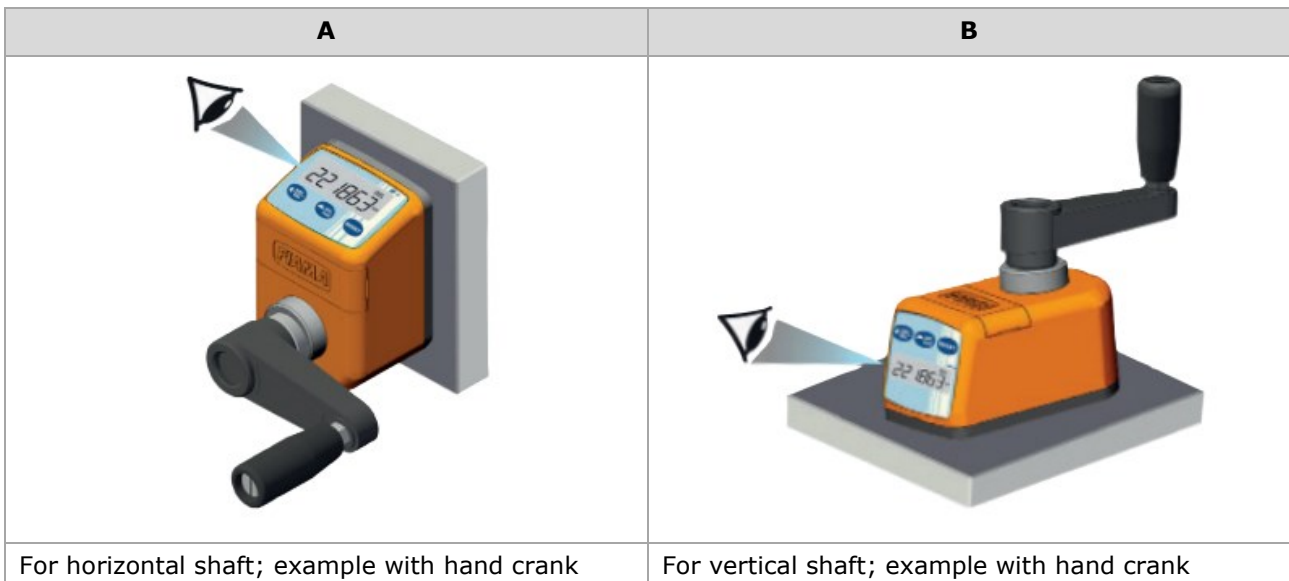
Type	EP20RS - MAN - A - R - FL-B F20 - D12
EP20RS	= with RS485 interface
EP25RS	= with RS485 interface
For manual positioning	
MAN	= manual positioning
View/Mounting position	
A	= View A: for horizontal shaft
B	= View B: for vertical shaft
Housing colour	
R	= orange
G	= black
Shaft clamping flange (accessory optional)	
FL-B F20	= Shaft clamping flange Ø20 mm for EP20RS
FL-B F25	= Shaft clamping flange Ø25 mm for EP25RS
Reducing bushes (accessory optional)	
D	= Reducing bushes Ø10; Ø12 ; Ø14; Ø15; Ø16; Ø17; Ø18 mm

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Dimensions Spindle position indicator

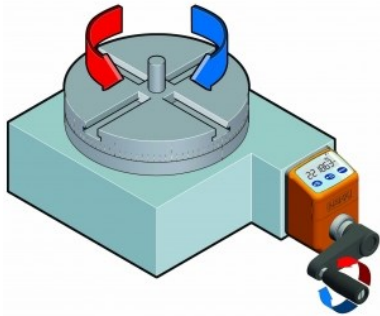
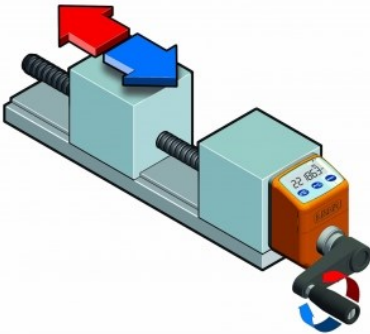
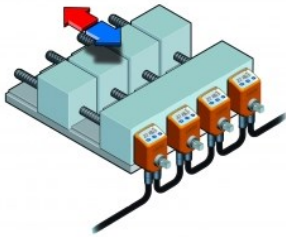


View/Mounting position

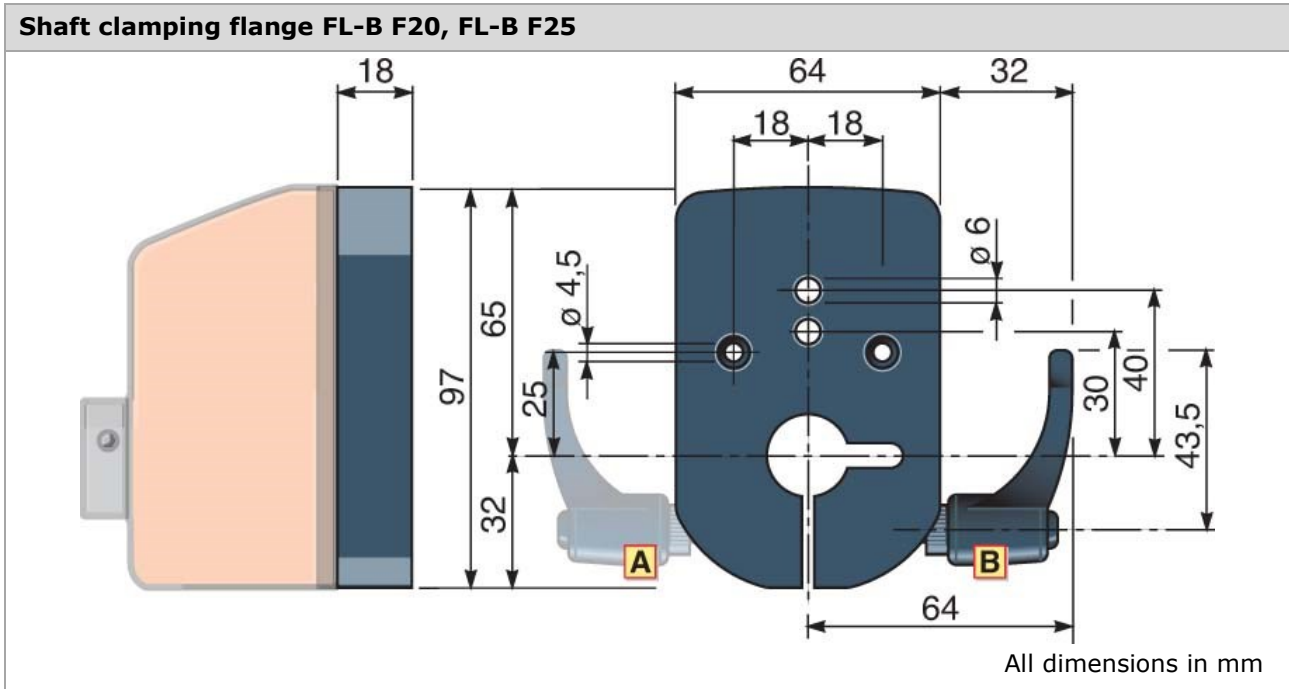


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Application examples

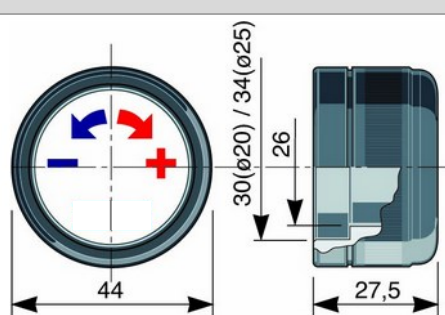
		
<p>For manuel angle adjustment</p>	<p>For manuel distance adjustment</p>	<p>Distance adjustment via serial port and remote control unit</p>

Dimensions Shaft clamping flange


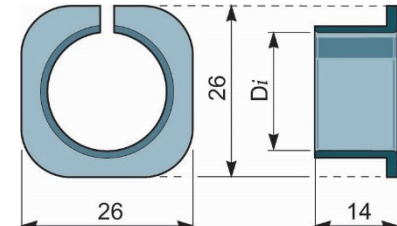


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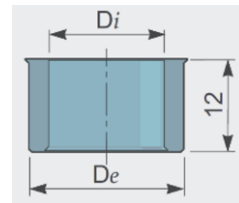
Dimensions Rotary knob

Rotary knob PM	
<p>Sticker on the front of the rotary knob in anodised aluminium indicating the rotary direction (+) increase or (-) decrease of the measuring value.</p>	

Dimensions Reducing bushes for shaft clamping flange

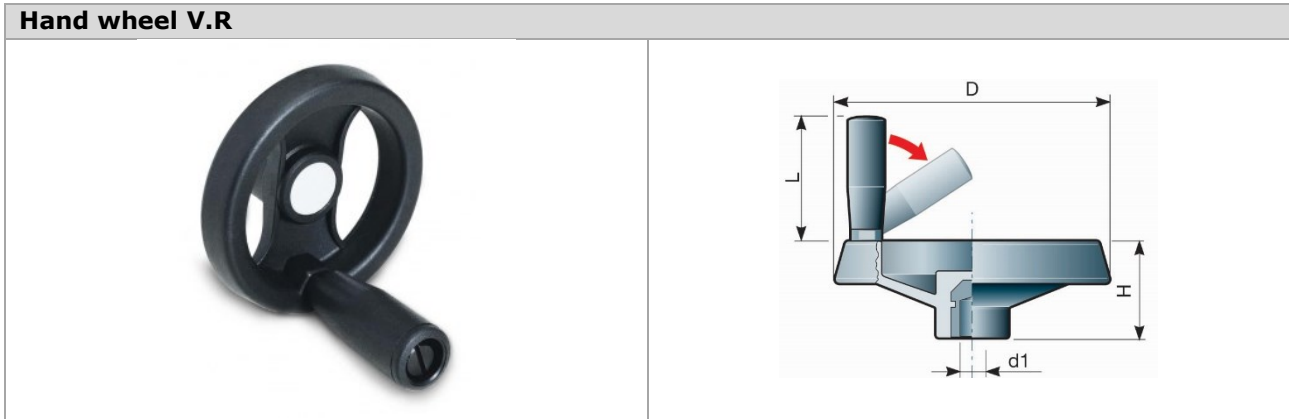
Reducing bushes for shaft clamping flange FLB-Ø14, FLB-Ø20	
	
<p>Technopolymer reducing bushes for shaft clamping flange</p>	
Type	Diameter D_i = inner diameter (mm)
FLB-14	8.1 10.1 12.1 5.5 -
FLB-20	14.1 15.1 16.1 17.1 18.1

Dimensions Reducing bushes

Reducing bushes D	
	
<p>Technopolymer reducing bushes</p>	
Type	Diameter D_i = inner diameter, D_e = outer diameter, hollow shaft (mm)
D14	6 8 10 12
D20	10 12 14 15 16 16 18

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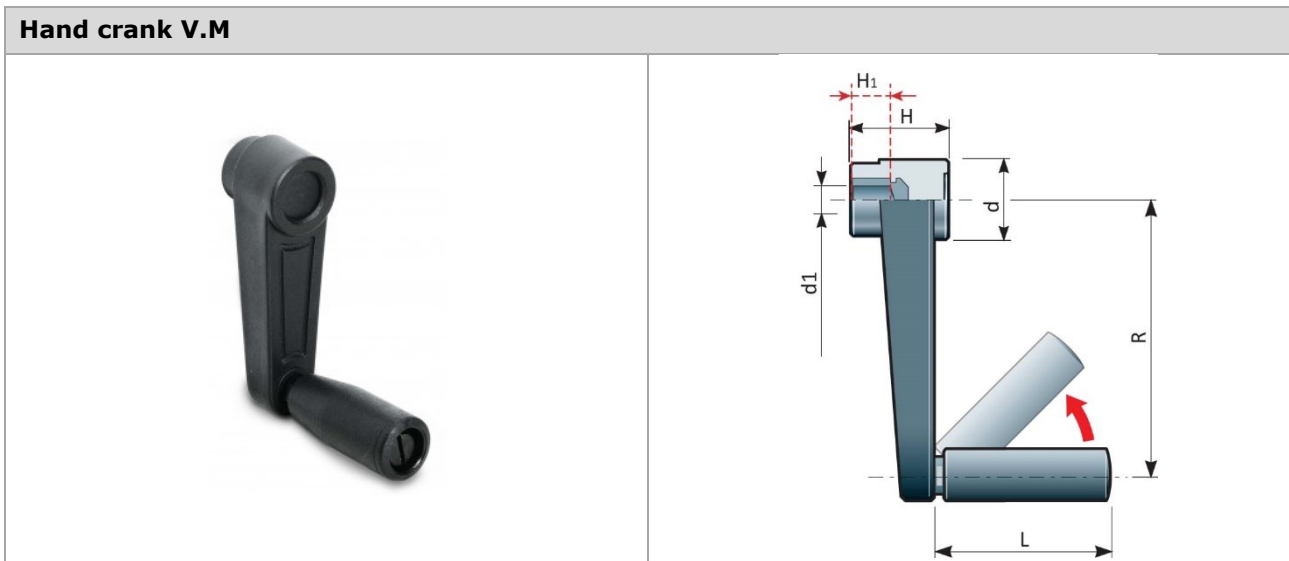
Dimensions Hand wheel



Thermoplastic hand wheel, steel bush

Type	Dimensions (mm)			
	D	H	d1	L
V.R-80	80	34	∅10	56
V.R-130	130	50	∅12	76
V.R-160	160	56	∅14	86

Dimensions Hand crank



Thermoplastic hand wheel, steel bush

Type	Dimensions (mm)					
	R	H	d	d1	L	H1
V.M-65	65	29	27	∅10	56	20
V.M-110	110	39	34	∅12	76	28
V.M-140	140	49	43	∅14	86	30

Without prior notice, the products may be subject to modifications that the Manufacturer reserves to introduce as deemed necessary for their improvement.

Manufacturer:  **FIAMA** since 1913