

### MAIN FEATURES

EPLB is an absolute linear potentiometer transducer.

Mechanical mounting is made simpler by the presence of two spherical joints on the two sides and by the enclosure's cylindrical shape.

The main characteristic is the absence of variations on the electrical output signal outside of the theoretical electrical stroke.

Thanks to its robustness and precision EPLB represents a great solution in most mechanical application for automation.



### ORDERING CODE

**EPLB 300 S 5 P R**

**SERIES**  
cylindrical linear potentiometer model **EPLB**

**STROKE**  
mm from **50** to **750**  
see table for stroke availability

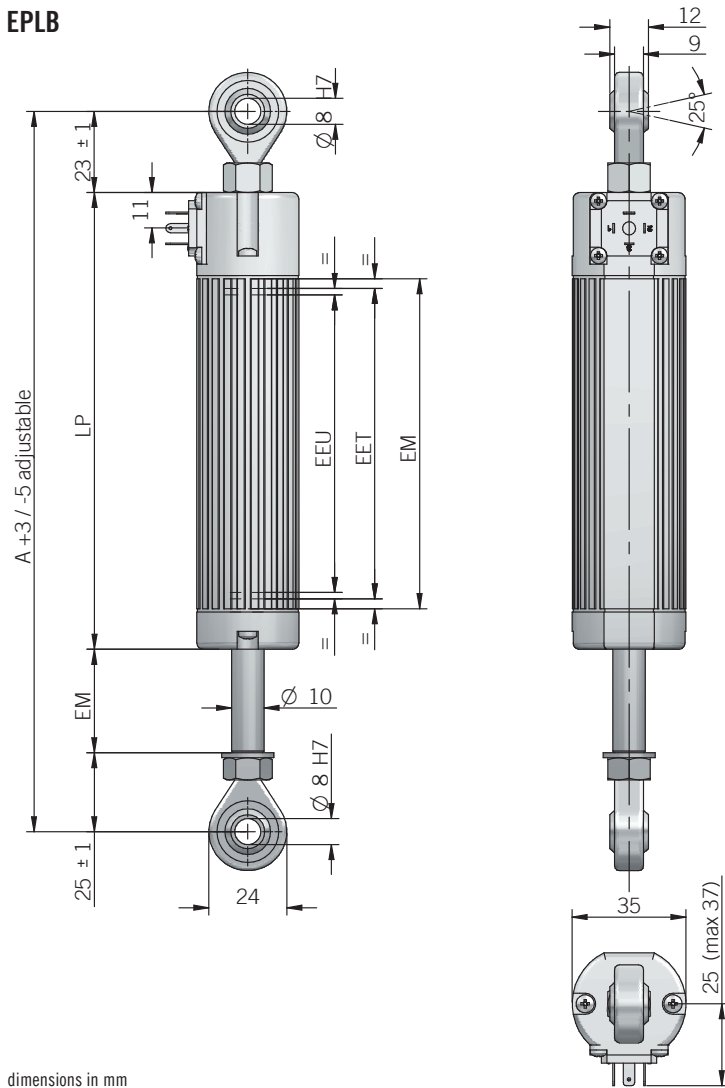
**ENCLOSURE RATING**  
IP 65 **S**

**TRAVEL SPEED**  
max 5 m/s **5**

**OUTPUT TYPE**  
cable (standard length 1 m) **P**  
3 pin connector **C3**  
DIN 43650-C 4 pin connector **C4**  
M16 DIN 43322 5 pin connector **C5**

**OUTPUT DIRECTION**  
radial **R**

EPLB



dimensions in mm

CONNECTIONS

Function	Cable	3 pin C3	4 pin C4	5 pin C5
+	blue	3	3	3
-	brown	1	1	1
OUTPUT	yellow	2	2	2
NC	/	/	/	/
NC	/	/	/	/
⊖	shield	/	⊖	/

C3 connector (3 pin)

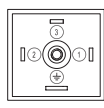
C4 connector (4 pin)

C5 connector (5 pin)

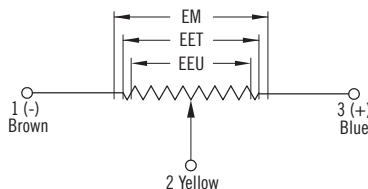
solder side view FV

solder side view FV

solder side view FV



· female connector not included, please refer to Accessories



ELECTRICAL SPECIFICATIONS

Resolution	virtually infinite
Independent linearity	± 0,05 %
Repeatability	0,01 mm
Resistance tolerance	± 20 %
Recommended cursor current	< 0,1 µA
Output voltage temperature coefficient	≤ 1,5 ppm / °C
Power dissipation	3 W at 40 °C / 0 W at 120 °C
Max cursor current	10 mA
Applicable voltage	60 V max
Electrical insulation	> 100 MΩ, 500 V DC, 1 bar, 2 s
Dielectric strenght	< 100 µA, 500 V AC, 50 Hz, 1 bar, 2 s
RoHS	according to 2015/863/EU directive

Important: data are valid if the transducer is used as a ratiometric device with a maximum applicable current ≤ 0,1 µA

MECHANICAL SPECIFICATIONS

Stroke	50 - 100 - 150 - 200 - 300 - 400 - 450 - 500 - 600 - 750 mm
Useful electric stroke (EEU) (+3/-0 mm)	see model (mm)
Theoretical electric stroke (EET) (±1 mm)	EEU + 3 mm (50 ... 150), EEU + 4 mm (200 ... 300), 406 mm (400), 457 mm (450), 508 mm (500), 609 mm (600), 762 mm (750)
Mechanical stroke (EM)	EEU + 9 mm (50 ... 150), EEU + 10 mm (200 ... 300), 412 mm (400), 463 mm (450), 518 mm (500), 619 mm (600), 772 mm (750)
Resistance (on the EET)	5 kΩ (50 ... 600) 10 kΩ (750)
Case length (LP)	EEU + 130,5 mm (50 ... 150), EEU + 131,5 mm (200 ... 300), 539,5 mm (400), 590,5 mm (450), 665,5 mm (500), 766,5 mm (600), 919,5 mm (750)
Minimum interaxis length (A)	EEU + 177 mm (50 ... 150), EEU + 178 mm (200 ... 300), 586 mm (400), 637 mm (450), 712 mm (500), 813 mm (600), 966 mm (750)
Travel speed	5 m/s max
Enclosure rating	IP 65 (IEC 60529)
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 5 ... 2000 Hz (IEC 60068-2-6)
Displacement force	≤ 15 N
Moving angle	± 25° max
Housing material	anodized aluminium / Nylon 66 G
Rod material	1.4305 / AISI 303 stainless steel
Mounting	2 selfloading and selfaligning ball-joints
Life	> 25 x 10 <sup>6</sup> m strokes or > 100 x 10 <sup>6</sup> manoeuvres
Operating temperature <sup>1,2</sup>	-30° ... +100°C (-22° ... +212°F)
Storage temperature <sup>2</sup>	-50° ... +120°C (-58° ... +248°F)

<sup>1</sup> measured on transducer

<sup>2</sup> condensation not allowed

Installation warning instructions:

- connect the transducer according to the reported connections
- DO NOT use it as a variable resistance
- the transducer calibration has to be done setting the stroke in order to have an output signal between 1 % and 99 % of the voltage level