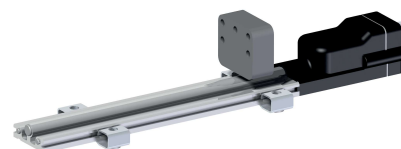


MAIN CHARACTERISTICS

The EMSPB is an absolute linear magnetostrictive transducer with analogue interface. Thanks to the absence of electrical contact on the housing, there is no problem of wear and deterioration during its working life. Magnetostrictive technology guarantees high performance in terms of speed and accuracy. The compact size and robust housing ensure high reliability and ease of installation, even in applications with mechanical stresses, shocks or high levels of contamination.

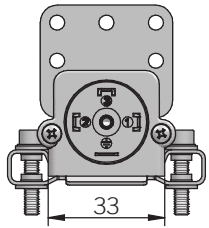


ORDERING CODE

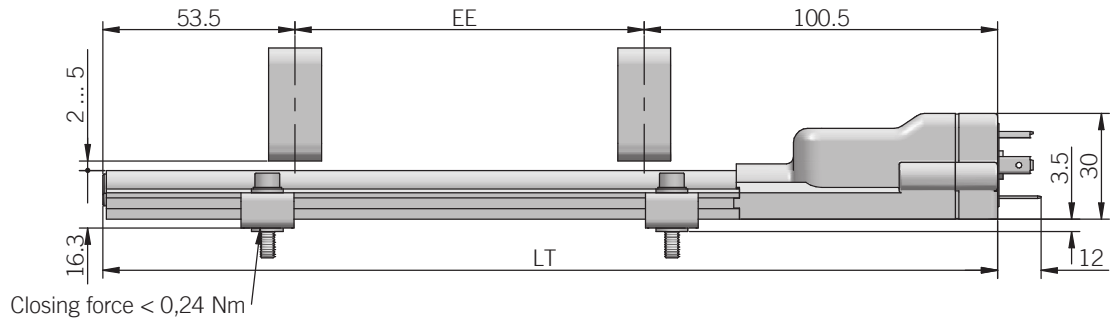
EMSPB 1000 S 10S 10 C4 A

SERIES linear magnetostrictive transducer with analogue output EMSPB						
STROKE mm from 50 to 1500 see table for stroke availability						
ENCLOSURE RATING IP 65 S						
OUTPUT SIGNAL 0,1 ... 10,1 V DC / 1 cursor (standard) 10S 4 ... 20 mA / 1 cursor 20S						
TRAVEL SPEED max 10 m/s 10						
OUTPUT TYPE EN 175301-803 form A (DIN 43650-A) 4 pin connector C4 M12 5 pin connector S5						
OUTPUT DIRECTION axial A						

EMSPB



dimensions in mm



Closing force < 0,24 Nm

· brackets, cursors and socket connector not included, please refer to Accessories

ELECTRICAL SPECIFICATIONS

Resolution	virtually infinite limited only by electrical noise 5 mVpp	
Output signal	0,1 ... 10,1 V DC	4 ... 20 mA
Output alarm value in absence of cursor	10,5 V DC	21 mA
Output value max	12 V DC	30 mA
Power supply¹	19,2 ... 28,8 V DC	
Power ripple	1 Vpp max	
Current consumption	35 mA max	60 mA max
Output load	≥ 10 kΩ	50 ... 500 Ω
Independent linearity	± 0,04 % FS max (min ± 0,09 mm)	
Repeatability	≤ 0,01 mm (typical)	
Hysteresis	≤ 0,02 mm (typical)	
Sampling time	1 ms (50 ... 600) 1,5 ms (650 ... 900) 2 ms (1000 ... 1300) 3 ms (1400 ... 1500)	
Protection against overvoltage	yes	
Protection against polarity inversion	yes	
Protection against power supply on output	yes	
Electrical insulation	500 V DC	
Electromagnetic compatibility	according to 2014/30/EU directive	
RoHS	according to 2011/65/EU directive	

¹ as measured at the transducer without cable influences

^{2,3} measured on transducer

³ condensation not allowed

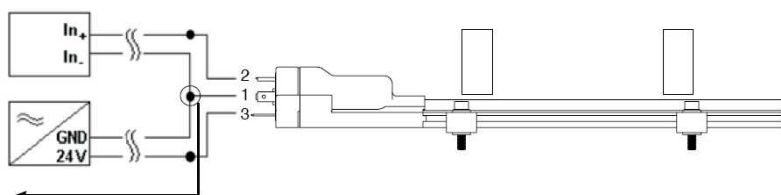
INSTALLATION NOTES

For a multi-cursor model, the cursors must operate under the same conditions of distance and temperature. The cursors must be mounted on a non-magnetic material support (such as brass, aluminium or AISI316 stainless steel).

The kit includes two screws, two nuts and two washers (all brass).

The cursor must be installed with maximum attention to horizontal alignment with the transducer axis (maximum tolerance ± 2 mm), the distance from the transducer surface must be within the range of 2 to 5 mm.

APPLICATION EXAMPLE (CURRENT OUTPUT)



Note: connect as close as possible to the transducer

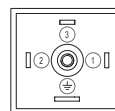
MECHANICAL SPECIFICATIONS

Stroke	50 - 100 - 150 - 200 - 225 - 300 - 350 - 400 - 450 - 500 - 600 - 700 - 800 - 900 - 1000 - 1100 - 1200 - 1300 - 1400 - 1500 mm
Electric stroke (EE)	see stroke (mm)
Overall dimension (LT)	EE + 154 mm
Enclosure rating	IP 67 (IEC 60529)
Detected measurement	displacement
Travel speed	10 m/s max
Acceleration	100 m/s ² max
Shock	100 G, 11 ms, single shot (IEC 68000-2-27)
Vibration	12 G, 10 ... 2000 Hz (IEC 68000-2-6)
Housing material	anodized aluminium / Nylon 66 G 25
Cursor type	floating cursor
Temperature coefficient	≤ 0,01 % FS / °C (min. 0,015 mm / °C)
Operating temperature^{2,3}	-20° ... +75°C (-4° ... +167°F)
Storage temperature³	-40° ... +100°C (-40° ... +212°F)

CONNECTIONS

Function	4 pin C4	M12 5 pin S5
+V DC	3	5
0 V	1	4
OUTPUT	2	1
0 V output	/	2
NC	/	3
⏏	4	housing

C4 connector (4 pin)
EN 175301-803 form A
front view



M12 connector (5 pin)
M12 A coded
front view

