

The contact-free, magnet-based position sensor with integrated evaluation electronics is used whenever high position accuracy and dynamic, smooth movements are essential.

The analog position sensor can also be used when safely reduced speed is requested (See page 55).

The system consists of a sensor and a strip on which magnetic information is stored. Both components are firmly connected to the module. The motor's internal position sensor achieves a repeat accuracy of

± 0.05 mm and an absolute accuracy deviation of between 0.1% and 0.4% (depending on the drive unit). If these values are not accurate enough, we recommend an external position sensor.

Advantages:

- High repeatability and absolute accuracy
- Dynamic and smooth movements
- Minimisation of control noises



Type	Order number
Position sensor for EDM 20 EL	
Position sensor for EDM 20-050 EL digital	520.540
Position sensor for EDM 20-050 EL analog, safely reduced speed	520.533
Position sensor for EDM 20-100 EL digital	520.541
Position sensor for EDM 20-100 EL analog, safely reduced speed	520.534
Position sensor for EDM 20-200 EL digital	520.542
Position sensor for EDM 20-200 EL analog, safely reduced speed	520.535
Position sensor for EDM 20-300 EL digital	520.543
Position sensor for EDM 20-300 EL analog, safely reduced speed	520.536
Position sensor for EDM 25 EL	
Position sensor for EDM 25 EL digital	520.544
Position sensor for EDM 25 EL analog, safely reduced speed	520.537
Position sensor for EDM 30 EL	
Position sensor for EDM 30-050 EL digital	520.647
Position sensor for EDM 30-050 EL analog, safely reduced speed	520.646
Position sensor for EDM 30-100 EL digital	520.649
Position sensor for EDM 30-100 EL analog, safely reduced speed	520.648
Position sensor for EDM 30-200 EL digital	520.651
Position sensor for EDM 30-200 EL analog, safely reduced speed	520.650
Position sensor for EDM 30-300 EL digital	520.653
Position sensor for EDM 30-300 EL analog, safely reduced speed	520.652
Position sensor for EDM 30-400 EL digital	520.655
Position sensor for EDM 30-400 EL analog, safely reduced speed	520.654
Position sensor for EDM 30-500 EL digital	520.657
Position sensor for EDM 30-500 EL analog, safely reduced speed	520.656
Position sensor for PM 25 EL	
Position sensor for PM 25 EL digital	520.545
Position sensor for PM 25 EL analog, safely reduced speed	520.538
Position sensor for PM 30 EL	
Position sensor for PM 30 EL digital	520.229
Position sensor for PM 30 EL analog, safely reduced speed	520.539

Technical data	Position sensor analog	Position sensor digital
Measuring principle	Incremental	Incremental
Resolution	0.001 mm	0.001 mm
Repeat accuracy	± 0,001 mm	± 0,001 mm
System accuracy (at 20°C)	± 10 µm	± (0.025 + 0.01 × length [m])
Temperature coefficient strip	(16 ± 1) × 10 ⁻⁶ 1/K	(16 ± 1) × 10 ⁻⁶ 1/K
Max. distance sensor - strip	0.1 mm	0.2 mm
Protection class	IP 67	IP 67
Operating temperature	0 ... 50°C	0 ... 50°C
Output level	sin/cos 1 V _{ss}	5 V Line Driver RS422
Input voltage	5 V	5 V
Max. cable length	15 m	20 m
Pole pitch strip	1 mm	5 mm
Connection	9- or 15-pin D-sub	9- or 15-pin D-sub
Suitable for:	Safely reduced speed High-precision applications	Applications with increased accuracy
Cable length	8 m	8 m