



eloProg rotational speed modules 485EPS

The speed modules monitor standstill, maximum speed, a defined speed range and the rotation direction. In addition, up to 4 switching thresholds can be configured per axis.

The various modules are compatible with encoders with HTL, TTL or sine/cosine signals.

Technical specifications

- Various modules for the connection of 1 or 2 HTL, TTL or sine/cosine encoders
- Additional inputs for up to 2 proximity sensors per module
- 4 switching thresholds can be configured per axis
- Rotational speed monitoring up to PLe
- Pre-assembled T-connector (proprietary 5-way bus) for connection to the base module and other expansion modules simplifies wiring and saves space in the switch cabinet

Technical drawing

IMAGE 1/1



Product options

IMAGE 1/1

ORDERING KEY

| 485EP | S | | Module for rotational speed monitoring |
|-------|---|----|--|
| | | 2N | Connection of 2 proximity sensors |
| | | 1T | Connection of 1 TTL encoder |
| | | 2T | Connection of 2 TTL encoders |
| | | 1H | Connection of 1 HTL encoder |
| | | 2H | Connection of 2 HTL encoders |
| | | 1S | Connection of 1 sin/cos encoder |
| | | 2S | Connection of 2 sin/cos encoders |

Article characteristics

| Attribute | 485EPS1H | 485EPS1S | 485EPS1T | 485EPS2H | 485EPS2N | 485EPS2S ▶ |
|---------------------------------------|-------------------------------|-----------------|-----------------|-----------------|-------------------------------|-------------------------------|
| Operating voltage min. | 19.2 V DC | | | | | |
| Operating voltage max. | 28.8 V DC | | | | | |
| Power consumption | 3 W | | | | | |
| LED display | No | | | | | |
| encoder interface | HTL | sin/cos | TTL | HTL | - | sin/cos |
| Encoder connections | RJ45 | | | | - | RJ45 |
| Rated insulation voltage encoder | 250 V | | | | - | 250 V |
| Overvoltage category encoder | II | | | | - | II |
| Nominal pulse voltage encoder | 4 kV | | | | - | 4 kV |
| Max. number of encoders | 1 | | | 2 | - | 2 |
| Max. frequency of encoder | 300 kHz | 500 kHz | | 300 kHz | - | 500 kHz |
| Adjustable threshold range encoder | 1 Hz - 450 kHz | | | | - | 1 Hz - 450 kHz |
| Initiators category | PNP/NPN - 3/4 Drähte | | | | | |
| Initiators connections | via connection terminals | | | | | |
| Adjustable threshold range initiators | 1 Hz - 4 kHz | | | | | |
| Max. number of initiators | 2 | | | | | |
| Max. frequency of initiators | 5 kHz | | | | | |
| Max. number of axes | 2 | | | | | |
| Standstill/overspeed gap | > 10 Hz | | | | | |
| Min. gap between thresholds | > 5 % | | | | | |
| PL acc. to EN ISO 13849-1 | e | | | | | |
| SIL acc. to IEC 61508 | 3 | | | | | |
| SIL CL acc. to IEC 62061 | 3 | | | | | |
| PFHD according to IEC 61508 | 8,2 x 10-9 1/h | 9,43 x 10-9 1/h | 8,58 x 10-9 1/h | 8,92 x 10-9 1/h | 7,48 x 10-9 1/h | 1,14 x 10-9 1/h |
| Operating life | 20 Tm | | | | | |
| Category acc. to EN ISO 13849-1 | 4 | | | | | |
| Dimensions | 108 x 22,5 x 114,5 mm (H/B/T) | | | | 109 x 22,5 x 114,5 mm (H/B/T) | 108 x 22,5 x 114,5 mm (H/B/T) |

Article characteristics

| Attribute | 485EPS1H | 485EPS1S | 485EPS1T | 485EPS2H | 485EPS2N | 485EPS2S ▶ |
|---------------------------------|--|----------|----------|----------|-----------|------------|
| Housing material | PA | | | | | |
| Housing colour | Gehäuse schwarz Frontplatte gelb | | | | | |
| Protection class, housing | IP20 DIN EN 60529 | | | | | |
| Operating temperature min. | -10 °C | | | | | |
| Max. operating temperature | 55 °C | | | | | |
| Max. storage temperature | 85 °C | | | | | |
| Relative humidity | 10...95 % | | | | 10...96 % | 10...95 % |
| Mounting type | Mounting rail | | | | | |
| Torque for connection terminals | 0.6 N m | | | | | |
| Weight | 150 g | | | | | |
| Connection to base module | proprietary 5-way bus (T-connector) | | | | | |
| Screw terminals | yes | | | | | |
| Pluggable connection terminals | yes | | | | | |
| Min. connection cross section | 0.5 mm² | | | | | |
| Max. connection cross section | 2.5 mm² | | | | | |
| Certified in accordance with | EN ISO 13849-1 IEC 61508 IEC 62061 UL 508 / CSA 22.2 | | | | | |
| CE label | yes | | | | | |

Article characteristics

| Attribute | 485EPS2T |
|---------------------------------------|----------------------------------|
| Operating voltage min. | 19.2 V DC |
| Operating voltage max. | 28.8 V DC |
| Power consumption | 3 W |
| LED display | No |
| encoder interface | TTL |
| Encoder connections | RJ45 |
| Rated insulation voltage encoder | 250 V |
| Overvoltage category encoder | II |
| Nominal pulse voltage encoder | 4 kV |
| Max. number of encoders | 2 |
| Max. frequency of encoder | 500 kHz |
| Adjustable threshold range encoder | 1 Hz - 450 kHz |
| Initiators category | PNP/NPN - 3/4 Drähte |
| Initiators connections | via connection terminals |
| Adjustable threshold range initiators | 1 Hz - 4 kHz |
| Max. number of initiators | 2 |
| Max. frequency of initiators | 5 kHz |
| Max. number of axes | 2 |
| Standstill/overspeed gap | > 10 Hz |
| Min. gap between thresholds | > 5 % |
| PL acc. to EN ISO 13849-1 | e |
| SIL acc. to IEC 61508 | 3 |
| SIL CL acc. to IEC 62061 | 3 |
| PFHD according to IEC 61508 | 9,68 x 10 ⁻⁹ 1/h |
| Operating life | 20 Tm |
| Category acc. to EN ISO 13849-1 | 4 |
| Dimensions | 108 x 22,5 x 114,5 mm (H/B/T) |
| Housing material | PA |
| Housing colour | Gehäuse schwarz Frontplatte gelb |

Article characteristics

| Attribute | 485EPS2T |
|---------------------------------|--|
| Protection class, housing | IP20 DIN EN 60529 |
| Operating temperature min. | -10 °C |
| Max. operating temperature | 55 °C |
| Max. storage temperature | 85 °C |
| Relative humidity | 10...95 % |
| Mounting type | Mounting rail |
| Torque for connection terminals | 0.6 N m |
| Weight | 150 g |
| Connection to base module | proprietary 5-way bus (T-connector) |
| Screw terminals | yes |
| Pluggable connection terminals | yes |
| Min. connection cross section | 0.5 mm ² |
| Max. connection cross section | 2.5 mm ² |
| Certified in accordance with | EN ISO 13849-1 IEC 61508 IEC 62061 UL 508 / CSA 22.2 |
| CE label | yes |