



## Standard Encoder EEL 58/90

Optical incremental shaft encoder

### Resolution

#### Resolution (Pulses/Revolution):

1 - 6000	7000	7200	7500
8000	8192	9000	9144
10000			

Every other resolution up to 500 000 on request

### Type explanation

#### EEL 58/90-6-1250-30-P-SC12

Encoder type	Incremental
Flange diameter	ø 90 mm
Case diameter	ø 58 mm
Number of channels	3 = A + B + M 6 = AA + BB + MM
Resolutions	xxxx = Impulse pro Umdrehung
Supply voltage	05 = 5 VDC ± 5% 30 = 10..30 VDC
Output driver	D-RS422 P S
Position of connection	R S
Connector	C07 = 7 pins Binder C12 = 12 pins M23 M10 = 10 pins MIL
Shaft diameter	ø 10 mm

## Technical data

### Mechanical data

Rotational speed	? 12000 min <sup>-1</sup>
Torque	? 0,3 Ncm
Breakaway torque	? 1 Ncm
shaft loading	? 20 N radial ? 10 N axial
Angular acceleration	? 10 <sup>4</sup> rad/sec <sup>2</sup>
Weight	? 0,6 kg

### Environmental conditions

Vibration	200 ms <sup>-2</sup> (20 ... 2000 Hz)
Shock	2000 ms <sup>-2</sup> (11 ms)
Operating temperature	0 .. +80°C standard -20 .. +110°C optional -42 .. +110°C optional
Atmospheric humidity	? 85% r.h.
Protection class	IP 65 (DIN 40050/IEC 144) IP 68 (optional)

### Electrical data

Scanning type	Optical, without contact
Transmitter, infrared	LED
Receiver	Photo-Transistor
Measurement accuracy	± 1° standard
Isolation resistance	± 10" optional
Supply voltage	V <sub>cc</sub> = 5 VDC ±5% V <sub>cc</sub> = 10...30 VDC
Power consumption	200 mA max.
Output frequency	? 300 kHz (Output D) ? 160 kHz (Output P, S)
Signal level	High > V <sub>cc</sub> -2 V (Output D, P) Low < 0,5 V (Output D, P) Analog 1 V <sub>ss</sub> (Output S)
Load capacity of the outputs	20 mA

### Cable 3 channels

Wire colour	Signal
Brown	+Vcc
Grey	0 V GND
Green	Signal A
White	Signal B
Yellow	Signal M
Shield	N.C.

### Cable 6 channels

Wire colour	Signal
Brown 0,5 mm <sup>2</sup>	+Vcc
Blue	+Vcc Sense <sup>1)</sup>
White 0,5 mm <sup>2</sup>	0 V GND
White	0 V Sense
Brown	Signal A+
Green	Signal A-
Grey	Signal B+
Pink	Signal B-
Red	Signal M+
Black	Signal M-
Shield	N.C.

1) nur bei Vcc = 5 VDC TTL

### Connector 7 pins Binder

Connection	Signal
Pin 1	0 V GND
Pin 2	N.C.
Pin 3	Signal A
Pin 4	Signal B
Pin 5	+Vcc
Pin 6	Signal M
Pin 7	Shield

### Connector 12 pins M23

Connection	Signal
Pin 1	Signal B- <sup>1)</sup>
Pin 2	+Vcc Sense <sup>2)</sup>
Pin 3	Signal M
Pin 4	Signal M- <sup>1)</sup>
Pin 5	Signal A
Pin 6	Signal A- <sup>1)</sup>
Pin 7	N.C.
Pin 8	Signal M+
Pin 9	Shield
Pin 10	0 V GND
Pin 11	0 V Sense
Pin 12	+Vcc

1) nur bei 6 Ausgangskanälen

2) nur bei Vcc = 5 VDC TTL

