



Solid mechanical construction
 Protection to IP 65, IP 66
 SMD technology
 Electronic preset
 Connection to fieldbus over suitable gateway



Absolut Encoder EAM 57 / EAMS 57 SSI

Optical absolute multiturn shaft encoders of high resolution

Resolution

Resolution (Steps/360°):

4096 = 12 bit 8192 = 13 bit 65536 = 16 bit

Measuring range

Measuring range

Multi-Turn 4096 = 12 bit
 16384 turns = 14 bit

Type explanation

EAM 57-30G-30-D-SC12

Encoder type	Absolute
Flange type	Servo- / Klemmflansch
Flange diameter	ø 58 mm
Case diameter	ø 58 mm
Number of bits	24 = 12 bits x 4096 turns 25 = 13 bits x 4096 turns 28 = 16 bits x 4096 turns 26 = 12 bits x 16384 turns 27 = 13 bits x 16384 turns 30 = 16 bits x 16384 turns
Multi-turn	Yes
Electronic adjustment	Yes
Supply voltage	30 = 10..30 VDC
Output driver	D-SSI DI
Position of connection	R S
Connector	C12 = 12 pins M23
Shaft diameter	ø 10 mm

Technical data

Mechanical data

Rotational speed	$\leq 6000 \text{ min}^{-1}$
Torque	$\leq 3 \text{ Ncm}$
Moment of inertia	30 g cm^2
Loading of bearings	110 N radial 40 N axial
Operational life of ball bearings	$> 2 \times 10^5 \text{ h}$ (1000 min^{-1} , EAMS 57) $> 1 \times 10^5 \text{ h}$ (1000 min^{-1} , EAM 57)
Weight	$\leq 0,35 \text{ kg}$

Environmental conditions

Vibration	100 m/s^2 (10 ... 1000 Hz)
Shock	300 m/s^2 (11 ms)
Operating temperature	-40 ... +85°C
Storage temperature	-40 ... +85°C
Atmospheric humidity	$\leq 98\% \text{ r.h.}$
Protection class	DIN 40050/IEC 144 optional

Electrical data

Scanning type	Optical, without contact
Transmitter, infrared	LED
Receiver	Photo-Array
Scanning frequency LSB	800 kHz
Measurement accuracy	$\pm \frac{1}{2} \text{ LSB}$ (12 bit) $\pm 1 \text{ LSB}$ (13 bit) $\pm 2 \text{ LSB}$ (16 bit)
Supply voltage	$V_{cc} = 10 \dots 30 \text{ VDC}$
Power consumption	$\leq 90 \text{ mA}$ ($V_{cc} = 24 \text{ V}$)

Electrical connections

SSI

Interface	RS485
Clock	Optocoupler

Incremental outputs

1024 pulses per revolution	AA+BB/90° RS422 (optional)
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Inputs

Rotational direction	CW/CCW
Electronic adjustment	RESET (optional)

Connector 12 pins M23

Connection	Signal
Pin 1	+Vcc
Pin 2	0 V GND
Pin 3	Clock+
Pin 4	Data+
Pin 5	RESET ¹⁾
Pin 6	Data-
Pin 7	Clock-
Pin 8	A+ ²⁾
Pin 9	CW/CCW
Pin 10	B+ ²⁾
Pin 11	B- ²⁾
Pin 12	A- ²⁾

1) optional

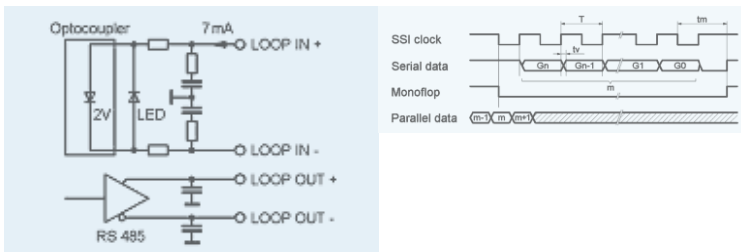
2) nur bei Ausgangstreiber "DI"

Cable

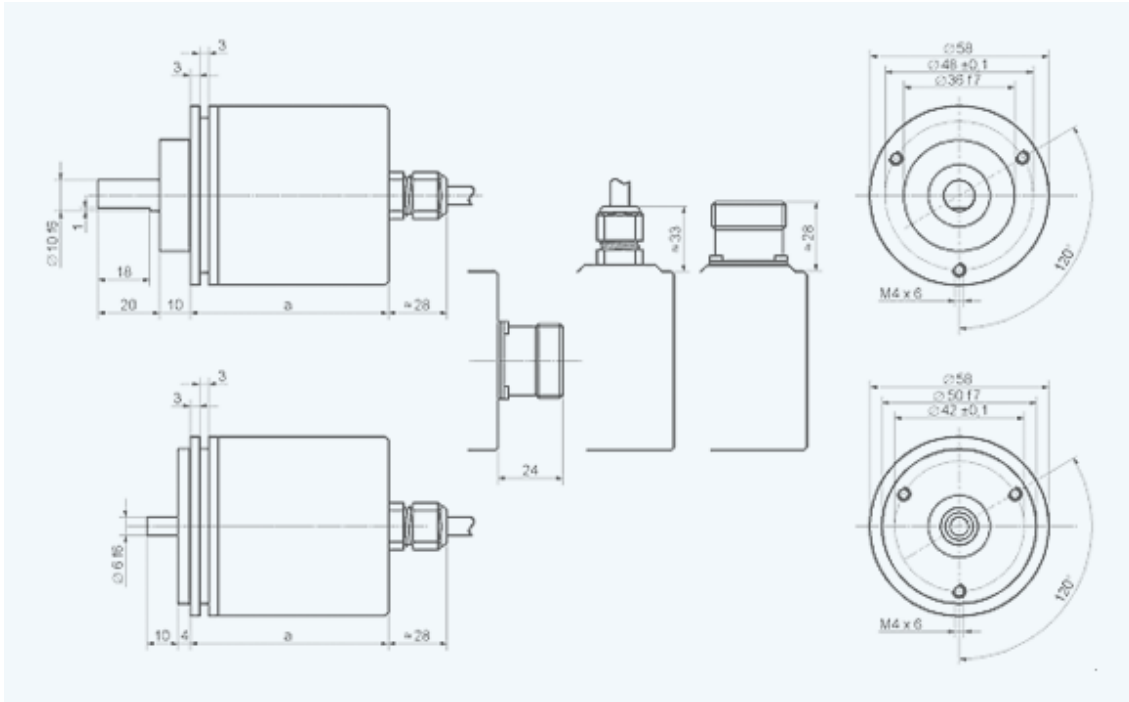
Wire colour	Signal
White	0 V GND
Brown	+Vcc
Green	Clock+
Yellow	Clock-
Grey	Data+
Pink	Data-
Red	CW/CCW
Black	RESET ¹⁾

1) optional

Channel schematic



Outline drawing



Version AE 565-311 · Subject to change

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