

EAM58-EU

ARTICLE PROPERTIES

TYPE	Standard absolute multiturn encoder
SIZE	Ø 58

TECHNICAL DATA

SHAFT DIAMETER	Ø 6g6 mm / Ø 8g6 mm / Ø 10g6 mm	STARTING TORQUE	< 0.01 N·m
HOLLOW SHAFT DIAMETER	Ø 8H7 mm / Ø 10H7 mm / Ø 12H7 mm / Ø 15H7 mm		
SPEED	6000 rpm	BODY MATERIAL	Aluminum
BEARING LIFE	10 ⁹ revolution	HOUSING MATERIAL	Aluminum
MOMENT OF INERTIA	1.8 x 10 ⁻⁶ kgm ²	WEIGHT	360 ... 750 g

ENVIRONMENTAL CONDITIONS

PROTECTION CLASS	IP65	OPERATING TEMPERATURE	-40 ... +80 °C
MAX LOAD CAPACITY OF THE SHAFT	80 N axial, 160 N radial	STORAGE TEMPERATURE	-45 ... +85 °C
SHOCK RESISTANCE (EN 60068-2-27)	50 g, 11 ms	RELATIVE HUMIDITY / CONDENSATION	90%, condensation not permitted
VIBRATION RESISTANCE (EN 60068-2-6)	10 g, 10 ... 2000 Hz		

ELECTRICAL PARAMETERS

OUTPUT CIRCUIT	SSI	PERMISSIBLE LOAD (CHANNEL)	± 20 mA
OUTPUT DRIVER	RS422	PULSE FREQUENCY	Max. 15 kHz
RESOLUTION	Max. 19 bits	SIGNAL LEVEL HIGH	Typ. 3.8 V
REVOLUTION	12 bits	SIGNAL LEVEL LOW	Max. 0.5 V
SUPPLY VOLTAGE	5 V DC / 10 ... 30 V DC	RISE TIME TR	Max. 100 ns
POWER CONSUMPTION (NO LOAD)	≤ 200 mA	FALL TIME TF	Max. 100 ns

STANDARDS AND DIRECTIVES

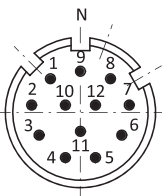
LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR	EN IEC 61000-6-2 EN IEC 61000-6-4
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APPROVALS



TERMINAL ASSIGNMENT (SSI)



M23 12pin layout (Male)

Signal	0 V	+U _B	+C	-C	+D	-D	ST*	V/R*	Shield
Color	WH	BN	GN	YE	GY	PK	BU	RD	\perp
12-pin	1	2	3	4	5	6	7	8	PH

C: Colck Signal

D: Data Signal

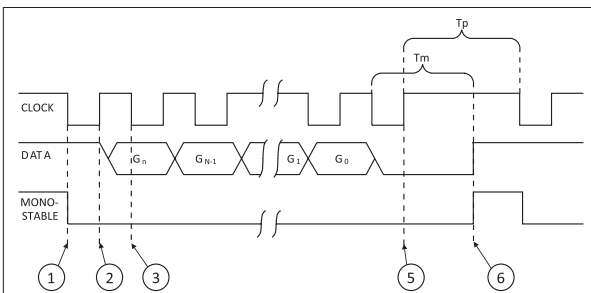
ST: SET input, the high level will last 2 s and this position will be stored as new zero position.

V/R: Up/down input, in the normally open state, the encoder’s counting function can be switched.

Observe the shaft end, in the normally closed state, the encoder’s counting will increase when the shaft turning clockwise, in the normally open state, the encoder’s counting will decrease when the shaft turning clockwise.

LH: LATCH input, freeze current value.

OPERATING PRINCIPLE



CLOCK Range of frequency from 100 KHz to 1 MHz

Tm: Time of monostable (10 ... 25 μs)

Tp: Time between two clock sequences > 35 μs

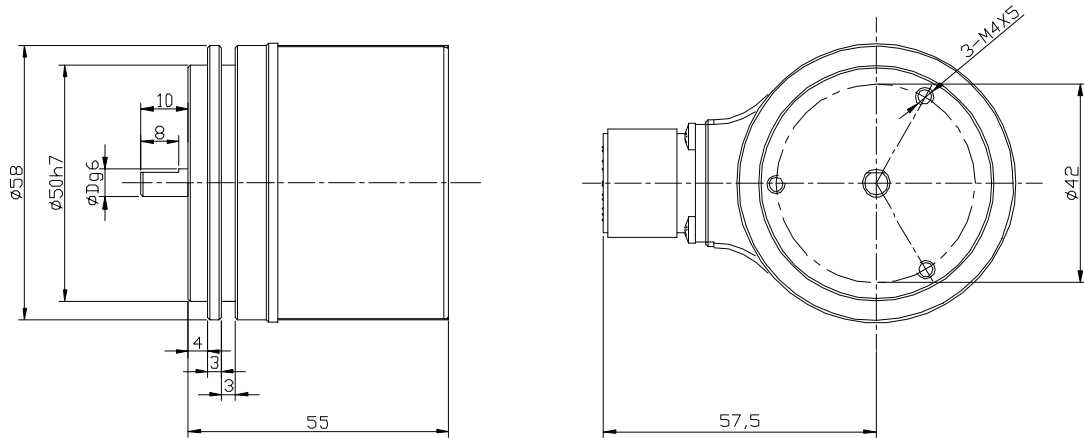
In rest conditions, the CLOCK and DATA lines are at a high logical level and the mono-stable circuit is disabled (high level).

- On the first CLOCK signal descent front, the mono-stable is activated and the parallel value present at the input to the P/S converter is memorized in the shift register.
- On the CLOCK signal ascent front, the most significant bit (MSB) is placed in the output on the DATA line.
- On the CLOCK descent front when the signal is stable the controller acquires the level from the DATA line, which is the value of the most significant bit (MSB), the mono-stable is re-activated.
- On each further ascent front of the CLOCK impulse sequence, the successive bits up to the least significant one are placed in the output on the DATA line and acquired by the control on the descent front.
- At the end of the CLOCK impulse sequence when the external control has also acquired the value of the least significant (LSB) the CLOCK impulse sequence is interrupted and therefore the mono-stable is no longer re-activated.
- Once the mono-stable time (Tm) has elapsed, the DATA line returns to a high logical level and the mono-stable disables itself.

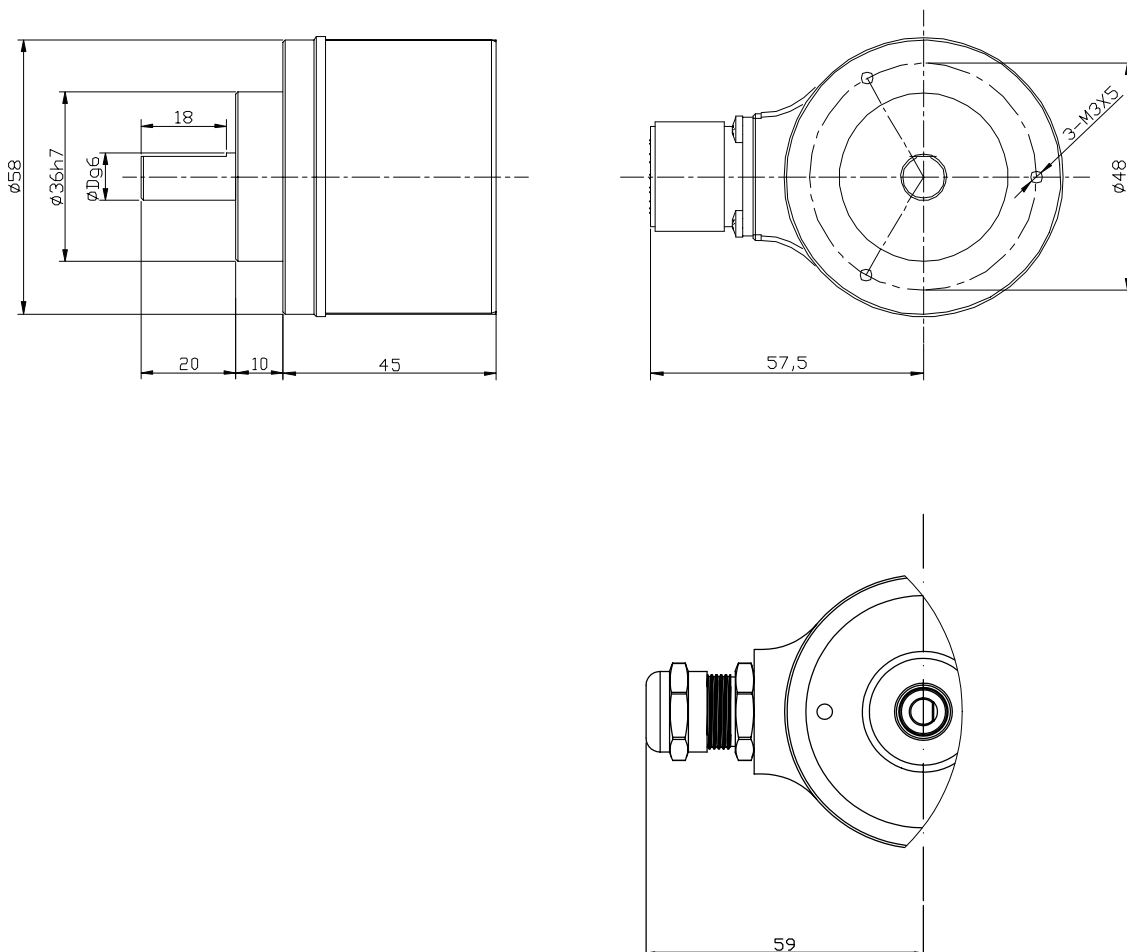
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DIMENSIONS (mm)

EAM58B



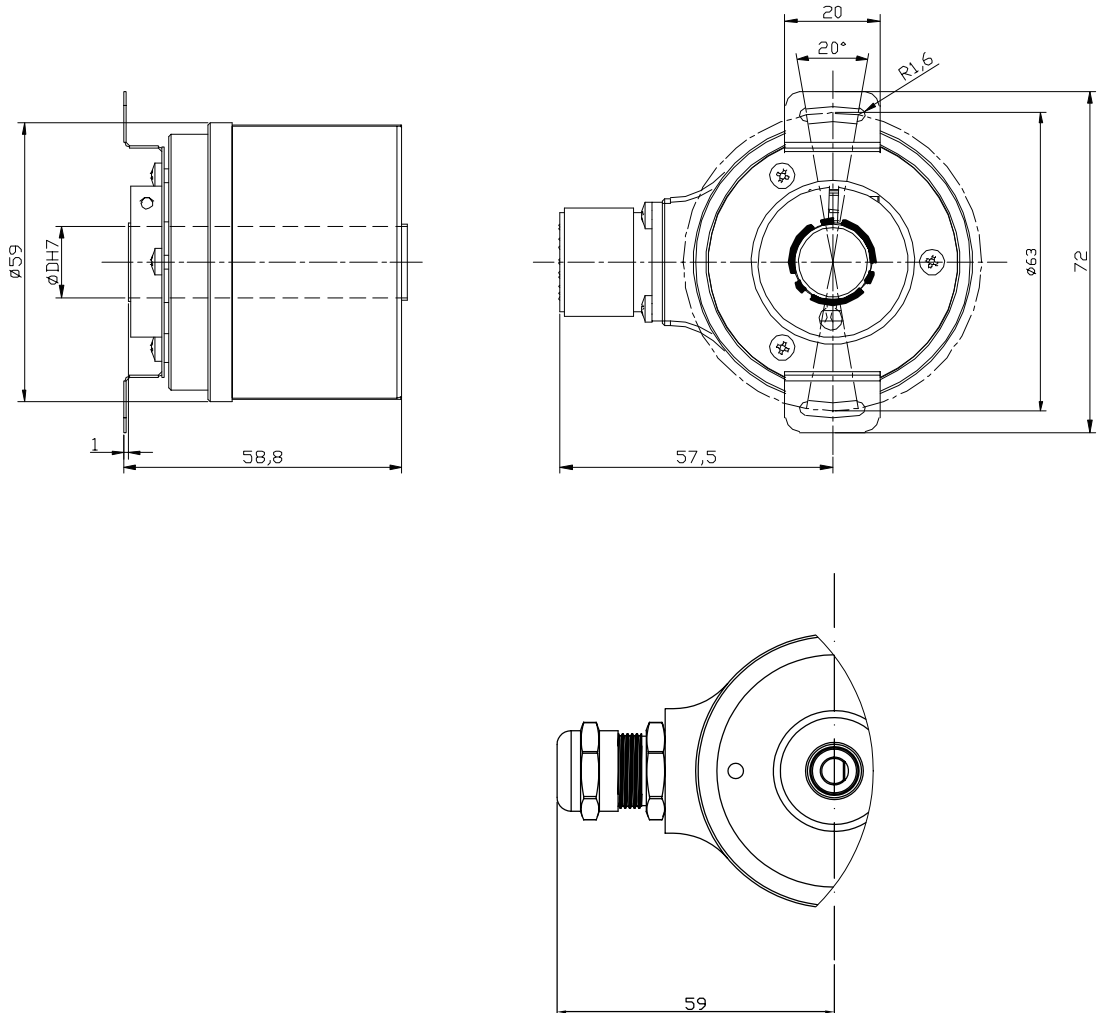
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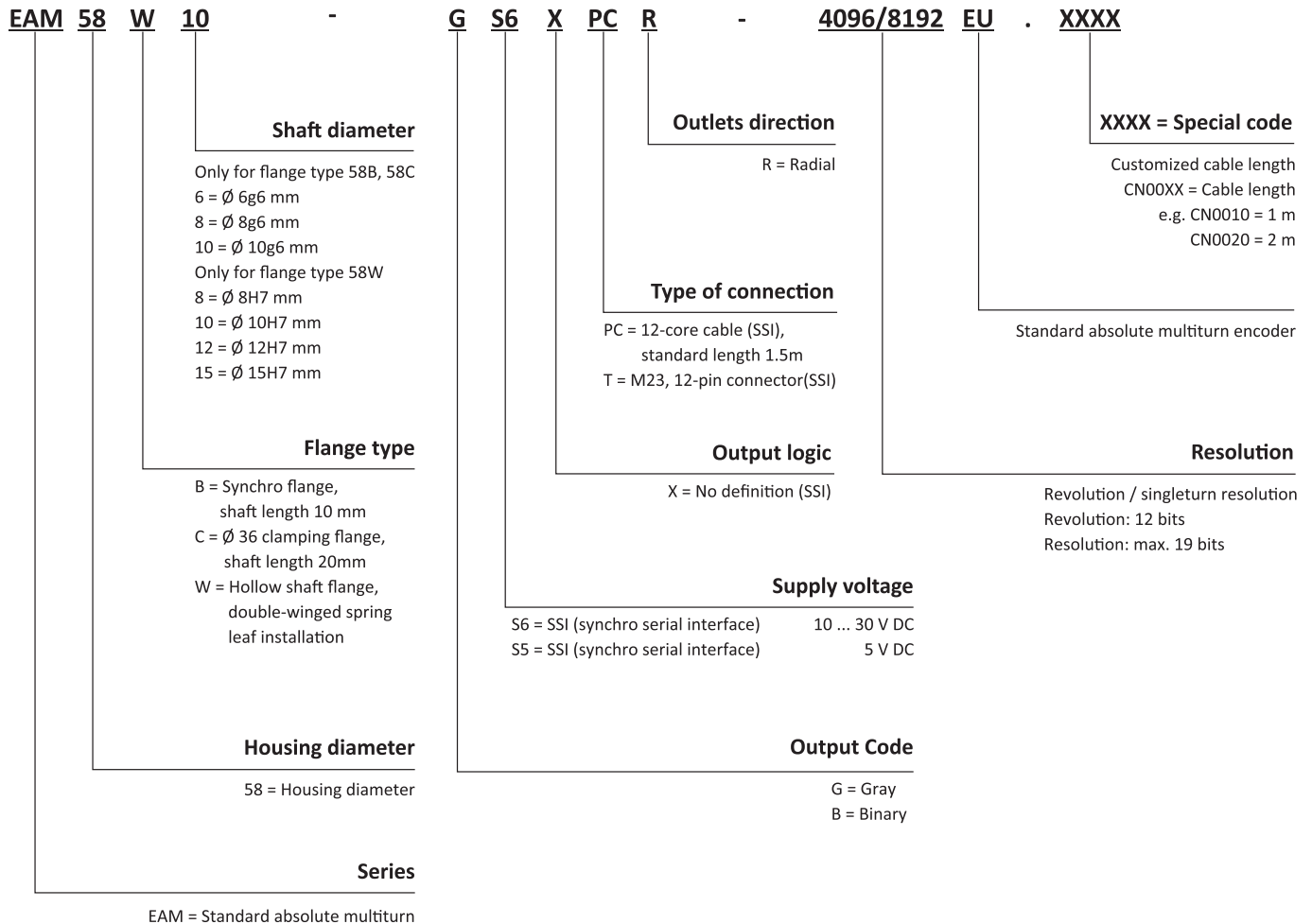
DIMENSIONS (mm)

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ORDER CODE



Matched connector: For connection type "T": TMSP1612F

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SALES AND SERVICE

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