Standard Absolute Multiturn Encoder EAM58

Description:

Standard absolute multi-turn encoder EAM58 series, good performance against mechanical damage, and can withstand higher axial and radial load. By using gear suite with unique algorithm to realize the compact structure and hollow shaft diameter up to Φ15mm. The special processing chip with high accuracy and high stability is adopted, to ensure the single-turn resolution up to 19bit and meet the high-precision control requirement of the field.

Features:

- ■ Various flanges available
- ■ Metal housing for shock resistance
- ■ Mechanical multi-turn design
- ■ Protection class IP65
- ■ Waterproof seal promotes IP level
- ■ Output cable or connector available
- ■ Hollow shaft diameter up to Φ15mm
- ■ Various revolutions and resolutions available

Mechanical Characteristics

Shaft diameter（mm）	Φ6g6/Φ8g6/Φ10g6
Hollow shaft diameter（mm）	Φ8H7/Φ10H7/Φ12H7/Φ15H7
Protection acc. to EN 60529	IP65
Speed（r/m）	6000
Max load capacity of the shaft	
Axial load capacity	80N
Radial load capacity	160N
Shock resistance	50G/11ms
Vibration resistance	10G 10~2000Hz
Bearing life	10^9revolution
Rotor moment of inertia	$1.8\times10^{-6}kgm^2$
Starting torque	<0.01Nm
Body material	AL-alloy
Housing material	ZnAL-alloy
Operating temperature	-40°C~~+80°C
Storage temperature	-45°C~~+85°C
Weight	360g--750g

Electrical Characteristics

Output circuit	SSI	SSI
Output driver	RS422	RS422
Resolution	Max.19bits	Max.19bits
Revolution	12bits	12bits
Supply voltage（V DC）	10-30V	5V
Power consumption (no load)	≤200mA	≤200mA
Permissible load (channel)	±20mA	±20mA
Pulse frequency	Max15kHz	Max15kHz
Signal level high	Typ.3.8V	Typ.3.8V
Signal level low	Max0.5V	Max0.5V
Rise timeTr	Max 100ns	Max 100ns
Fall timeTf	Max 100ns	Max 100ns

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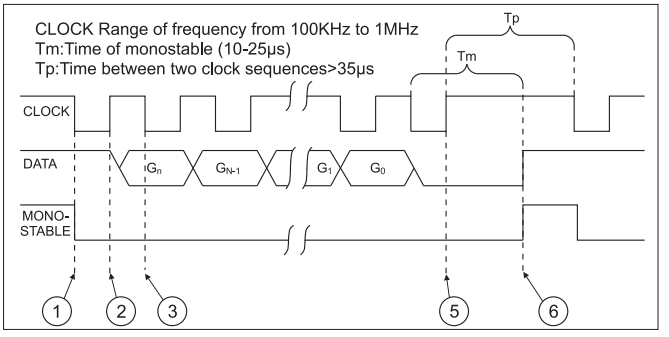
Terminal Assignment

SSI

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

ST: Reset input, the current position value is stored as new zero position

VR:Up/down input, as this input is active, decreasing code values are transmitted when shaft turning clockwise.



Operating principle

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

1. On the first CLOCK signal descent front, the mono-stable is activated and the parallel valuepresent at the input to the P/S converter is memorized in the shift register.

2. On the CLOCK signal ascent front, the most significant bit (MSB) is placed in the output on the DATA line.

3. 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.

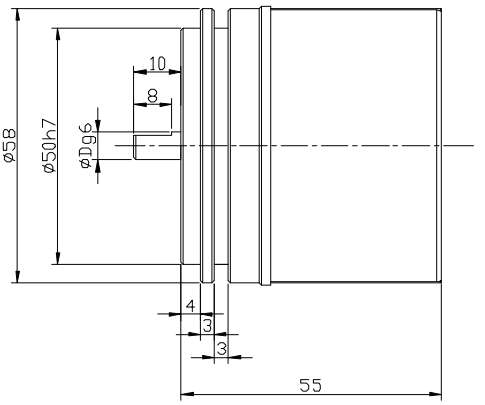
4. On each further ascent front of the CLOCK impulse sequence, the successive bits up to the least significant one are place in the output on the DATA line and acquired by the control on the descent front.

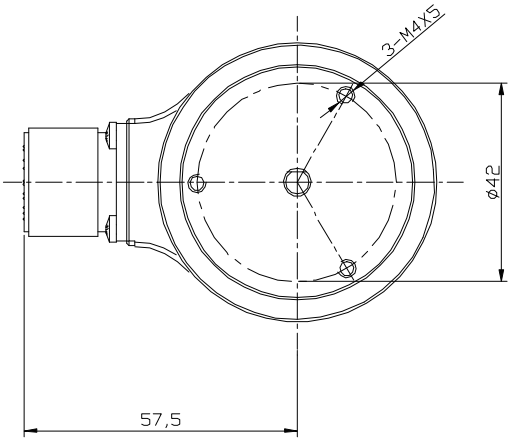
5. At the end of the CLOCK impulse sequence when the external control has also acquired the value of the least significant (LSB) the CLOCK impulse
sequence is interrupted and therefore the mono-stable is no longer re-activated.

6.Once the mono-stable time (Tm) has elapsed, the DATA line returns to a high logical level and the mono-stable disables itself.

Dimensions

EAM58B

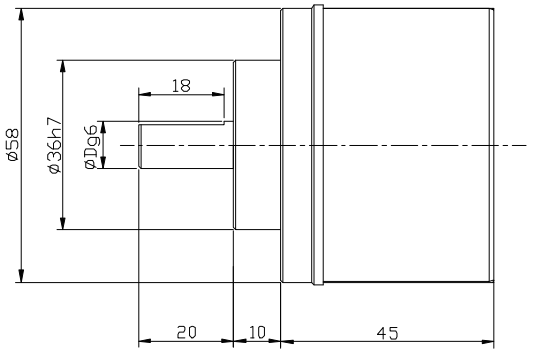


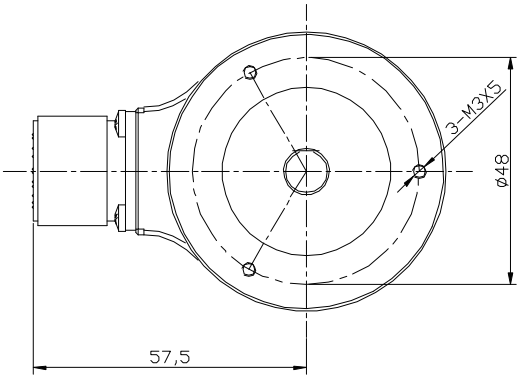


Standard Absolute Multiturn Encoder EAM58

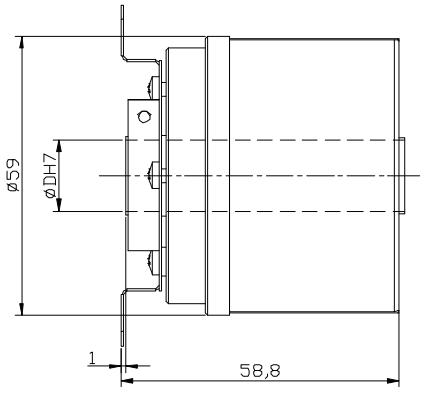
Dimensions

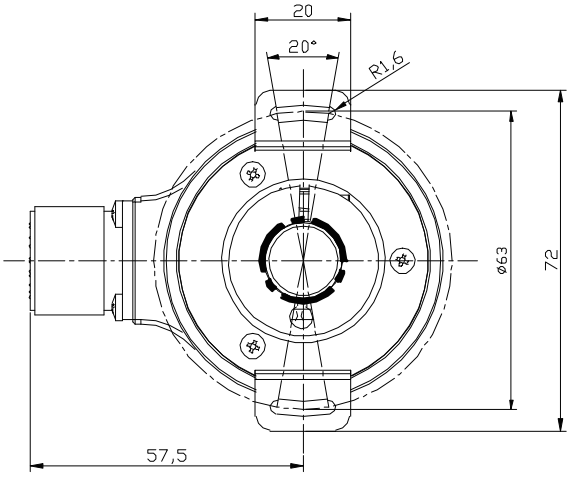
EAM58C





EAM58W





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Order Code

EAM 58 C 10 — G S6 X PC R — 4096/8192 EUND

Series
EAM=standard absolute multiturn

Housing diameter
58=Φ58

Flange type
B=synchro flange,shaft length 10mm
C=Φ36clamping flange,shaft length 20mm
W=blind hollow shaft flange,double-winged spring leaf installation

Shaft/Hollow Shaft diamter
Only for flange type 58B、58C
6=Φ6g6mm
8=Φ8g6mm
10=Φ10g6mm
Only for flange type 58W
8=Φ8H7mm
10=Φ10H7mm
12=Φ12H7mm
15=Φ15H7mm

Code type
G=Gray
B=Binary

Output&Supply voltage
S6=SSI(synchro serial interface) 10~30V DC
S5=SSI(synchro serial interface) 5V DC

Output logic
X=nonsense(SSI)

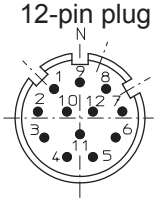
Type of connection
PC=12-core cable(SSI),standard length 1.5m
T=M23,12-pin connector(SSI)

Outlets direction
R=radial

Resolution
revolution/singleturn resolution
revolution:12bits
resolution:max 19bits

standard absolute multiturn

12-pin plug



Connection accessories
Connection matching with“T”wiring
Ordering code:TMSP1612F

This sample is for reference only,take products as the standard