

Large Hollow Shaft Absolute Multiturn Encoder EAM90L



Description

Large hollow shaft absolute multiturn encoder EAM90L series delivers good performance in withstanding mechanical damages and higher axial and radial loads. Its unique hollow shaft structure, various types of shafts diameters are available for different applications. It is equipped with resolution up to 16384 (14 bit) and the RESET function.

Features

- Gray or Binary available
- Space-saver hollow shaft design, "C" ring lock
- Durable stainless steel shaft $\Phi 12\sim\Phi 28\text{mm}$
- Waterproof seal provides higher IP level
- Metal housing can withstand higher axial and radial loads.
- Resolution up to 16384
- Protection class IP65
- Equipped with short-circuit and reverse connection protection
- Output cables or connectors are available for easy maintenance

Mechanical Characteristics

Shaft diameter (mm)	$\Phi 12\text{H}7/\Phi 15\text{H}7/\Phi 20\text{H}7/\Phi 24\text{H}7/\Phi 28\text{H}7/$ $\Phi (5/8)''\text{H}7/\Phi 1''\text{H}7/\Phi 12\text{g}6\text{X}30$
Protection acc. to EN 60529	IP65
Speed (r/m)	6000
Max load capacity of the shaft	
axial	40N
radial	80N
Shock resistance	50G/ 11ms
Vibration resistance	10G 10...2000Hz
Bearing life	10^9 revolution
Moment of inertia	$1.8 \times 10^{-6} \text{ kgm}^2$
Starting torque	<0.1Nm max.
Body material	AL-alloy
Housing material	AL-alloy
Operating temperature	-20°C...+80°C
Storage temperature	-25°C...+85°C
Weight	600g

Available conventional resolution:

Resolution per turn:

1024, 2048, 4096, 8192, 16384

Number of turns:

1024, 2048, 4096, 8192

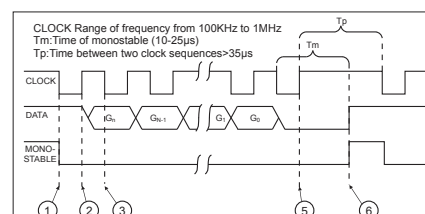
Electrical Characteristics

Output circuit	SSI
Output driver	RS422
Resolution	14 Bits
Supply voltage (Vdc)	10-30V
Power consumption (no load)	$\leq 200\text{mA}$
Permissible load (channel)	$\pm 20\text{mA}$
Pulse of frequency	Max. 1MHz
Signal level high	Typ. 3.8V
Signal level low	Max. 0.5V
Rise time T_r	Max 100ns
Fall time T_f	Max 100ns

Terminal Configuration

SSI Wiring Guide

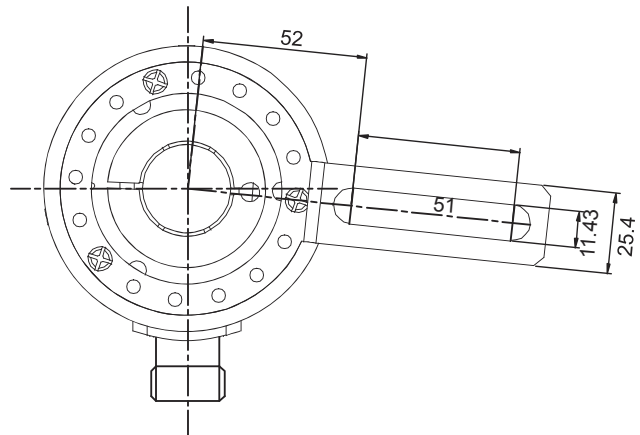
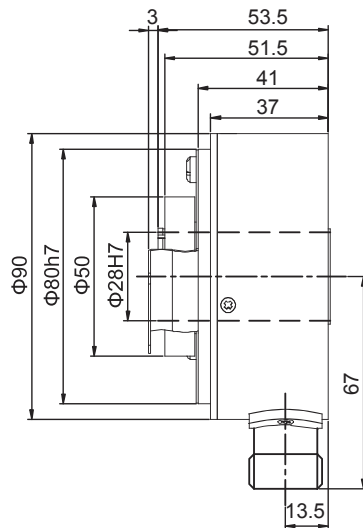
Signal	0V	+Ub	+C	-C	+D	-D	ST*	VR*	$\frac{1}{2}$
Color	WH	BN	GN	YE	GY	PK	BU	RD	
12-pin	1	2	3	4	5	6	7	8	PH



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Dimension (mm)

EAM90L
Accessories
E41350087



Order Code

EAM 90 P 20 - G S4 X PC R - 4096/8192 SS . XXXX

XXXX=Special code

Customized cable length
CN00XX= cable length
e.g. CN0010=1m
CN0020=2m

Large Hollow Shaft Absolute Encoder

Resolution

resolution max. 16384 (14 bits)
revolution 4096 (12 bits)

Outlet direction

R=radial

Types of connection

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

Output logic

X= N/A (SSI)

Interface and Power Supply

S4=SSI (synchro serial interface) 5...30Vdc

Code type

G=Gray
B=Binary

Housing diameter

90mm =housing dimension

Flange type

L=long tether arm

Shaft/ Hollow
shaft diameter

12 = Φ12mm mmhollow shaft
15 = Φ15mm mmhollow shaft
20 = Φ20mm mmhollow shaft
24 = Φ24mm mmhollow shaft
28 = Φ28mm mmhollow shaft
15.9 = Φ5/8"mm mmhollow shaft

Series

EAM=standard absolute multiturn