BiSS Protocol Encoder for High-speed Motor

Description:

The high-speed motor-specific absolute single-turn encoder EAC50 series have good mechanical damage resistance and can withstand high axial and radial loads.The product is designed with a unique mechanical structure that can carry mechanical load generated by the high-speed motor. It uses advanced signal processing technology to achieve accurate signal output at 10,000 rpm. With high-precision optical sensing technology, its resolution is up to 18bits.

Type: EAC50P13T-BI5XPR-0017

Features:

- Taper shaft mounting realizes high speed operation
- Running speed up to 10000rpm
- Can operate at 110 ° C
- Metal casting housing with excellent performance of impact resistance
- IP65 available for kinds of application environments
- Compact design saves installation space

Mechanical Characteristics:

Howllow shaft diameter (mm)	Φ13.4 --1:10 taper
Protection grade	IP65
Max. speed (r/m)	12000
Max. load capacity of the shaft	
Axial load capacity	40N
Radial load capacity	80N
Shock resistance	50G/11ms
Vibration resistance	10G 10~2000Hz
Rotational inertia	Approx.6×10^{-6}kgm^2
Starting torque	<0.03Nm
Body material	AL alloy
Housing material	Zn alloy
Operating temperature	-20°C~~+110°C
Storage temperature	-25°C~~+115°C
Weight	Approx. 400g

Electrical Characteristics

Output circuit	Absolute	Absolute
Output type	BiSS-C	BiSS-C
Output and driver	RS422	RS422
Resolution	Singleturn 17bit	Singleturn 17bit
Power supply (Vdc)	5V	10~30V
Power consumption (no load)	≤200mA	≤200mA
Max. load current	±20mA	±20mA
BiSS-C clock frequency	Max.10MHz	Max.10MHz
Update rate of code value	≤10μs,depends on resolution	≤10μs,depends on resolution
Signal level high	Typical 3.8V	Typical 3.8V
Signal level low	Max. 0.5V	Max. 0.5V
Rise time Tr	Max 100ns	Max 100ns
Fall time Tf	Max 100ns	Max 100ns

Note: it's bi-directional BiSS; programmable parameters: resolution, code system, reset
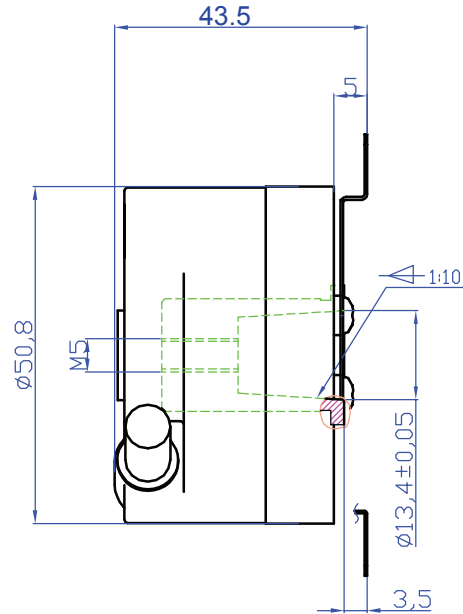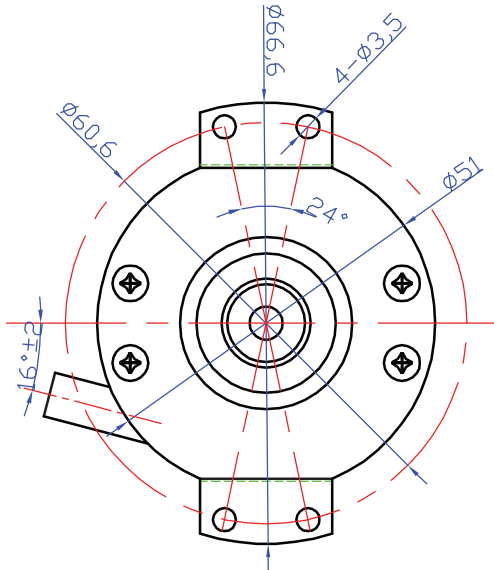
Terminal Configuration:

BiSS Synchronous Serial Port Wiring

Signal	0V	+U$_b$	+C	-C	+D	-D	ST[*]	V/R[*]	Shield
Color	WH	BN	GN	YE	GY	PK	BU	RD	⏚

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Dimensions

EAC50P13T-BI5XPR-0017

Order Code

| EAC | 50 | P | 13T | — | B | I5 | X | P | R | — | 0017 | XXXX |

XXXX=Special code

Outlets direction
R=Radial

Hollow shaft diameter
13T=Φ13.4mm
Taper 1:10

Resolution
Singleturn17bit, Max.18bit

Type of connection
P=Standard cable outlet 0.5m

Flange type
P=Double-wing fixing plate

Output logic
X=without any purpose (BiSS)

Output & supply voltage
I5=BiSS-C 5Vdc
I6=BiSS-C 10~30Vdc

Housing dimension
50=Φ50

Series
EAC＝absolute singleturn

Output code type
B=Binary