EAM 36 A
SSI
SOLID SHAFT MAGNETIC MULTITURN ABSOLUTE ENCODER

MAIN FEATURES

Miniaturized multiturn absolute encoder for limited size applications.

- Magnetic sensor technology without contact (Magnetic ASIC + Energy Harvesting)
- Sturdy construction thanks to separated chambers
- Up to 51 bit as total resolution (12 bit single turn + 39 bit multiturn)
- Power supply up to +30 VDC with SSI as electronic interface
- Code reset for easy setup
- Cable output, connectors available on cable end
- 6 mm diameter solid shaft
- Mounting by fixing flange

ORDERING CODE	EAM	36A	13	/	12	B	5	S	P	X	6	X	8	P	R	. XXX

SERIES
magnetic multiturn absolute encoder series EAM

MODEL
fixing flange ø 28 mm 36A

MULTITURN RESOLUTION
turns from 1 to 39 bit

SINGLETURN RESOLUTION
from 1 to 12 bit

CODE TYPE
binary B
gray G

POWER SUPPLY
5 V DC 5
8 ... 30 V DC 8/30

ELECTRONIC INTERFACE
Serial Synchronous Interface - SSI S

LOGIC
positive P

OPTIONS
to be reported if not used X
reset ZE

SHAFT DIAMETER
mm 6

ENCLOSURE RATING
IP 67 cover side / IP 65 shaft side X

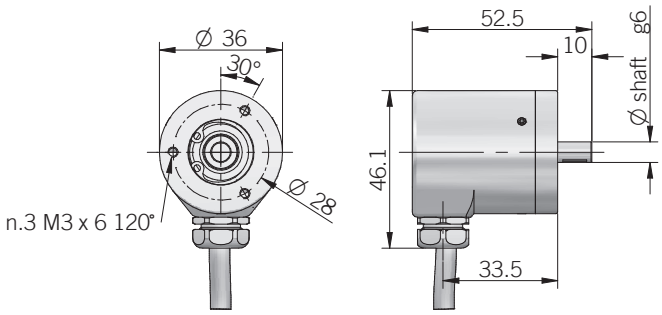
MAX ROTATION SPEED
8000 rpm 8

OUTPUT TYPE
cable (standard length 0,5 m) P

DIRECTION TYPE
radial R

VARIANT
custom version XXX

EAM 36 A



dimensions in mm

ELECTRICAL SPECIFICATIONS

Multiturn resolution	turns from 1 to 39 bit
Singleturn resolution	ppr from 1 to 12 bit
Power supply	5 = 4,75 ... 5,25 V DC 8/30 = 7,6 ... 30 V DC (reverse polarity protection)
Power draw without load	< 400 mW
Output type	RS-422
Code type	binary or gray
Auxiliary inputs (U/D - Reset)	active high (+Vdc) *connect to 0V if not used / Reset t_{min} 150 ms*
Clock frequency	100 kHz ... 1 MHz
SSI monostable time (Tm)	20 µs
SSI pause time (Tp)	> 35 µs
SSI frame	Tree format (MSB ... LSB) up to 12 bit multiturn = lenght 25 bit (12MT + 12ST+'0') 13 to 14 bit multiturn = lenght 27 bit (14MT + 12ST + '0') 15 to 19 bit multiturn = lenght 32 bit (19MT + 12ST + '0')
Accuracy	± 0,35° typical
Counting direction	decreasing clockwise (shaft view)
Start-up time	150 ms
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

MECHANICAL SPECIFICATIONS

Shaft diameter	ø 6 mm
Enclosure rating	IP 67 cover side / IP 65 shaft side (IEC 60529)
Rotation speed	8000 rpm continuous / 10000 rpm max
Max shaft load	20 N axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	0,001 x 10^{-6} kgm^2
Starting torque (at +20°C / +68°F)	< 0,01 Nm
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	AISI 420 stainless steel
Bearing stage material	EN-AW 2011 aluminium
Bearings	2 ball bearings
Bearings life	10^9 revolutions
Operating temperature	-20° ... +85°C (-4° ... +185°F)
Storage temperature	-20° ... +85°C (-4° ... +185°F)
Weight	150 g (5,29 oz)

CONNECTIONS

Function	Cable output
+ Vdc	red
0 Volt	black
data +	green
data -	brown
clock +	yellow
clock -	orange
U / D	red / blue
RESET	white
⏚	shield

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