



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

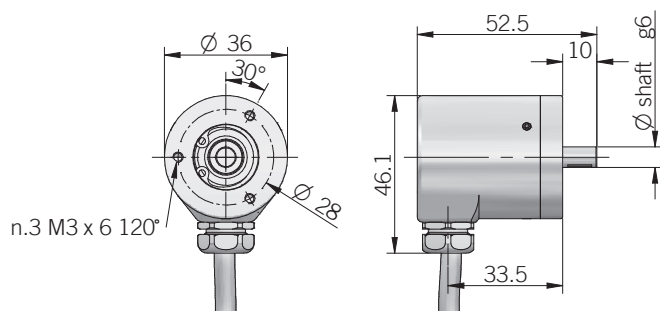


ORDERING CODE	EAM	36A	13	/	12	B	5	S	P	X	6	X	8	P	R	.XXX
SERIES magnetic multiturn absolute encoder series	EAM															
MODEL fixing flange ø 28 mm		36A														
MULTITURN RESOLUTION turns from			1													
SINGLETURN RESOLUTION from																
CODE TYPE binary gray																
POWER SUPPLY 5 V DC 8 ... 30 V DC																
ELECTRONIC INTERFACE Serial Synchronous Interface - SSI																
LOGIC positive																
OPTIONS to be reported if not used reset																
SHAFT DIAMETER mm																
ENCLOSURE RATING IP 67 cover side / IP 65 shaft side																
MAX ROTATION SPEED 8000 rpm																
OUTPUT TYPE cable (standard length 0,5 m)																
DIRECTION TYPE radial																
VARIANT custom version																

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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 μ s
SSI pause time (Tp)	> 35 μ s
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	$\pm 0,35^\circ$ typical
Counting direction	decreasing clockwise (shaft view)
Start-up time	150 ms
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

CONNECTIONS

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

MECHANICAL SPECIFICATIONS

Shaft diameter	\varnothing 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	$0,001 \times 10^{-6}$ 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)

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