

EAM 36 B SSI

SOLID SHAFT MAGNETIC MULTITURN ABSOLUTE ENCODER

MAIN FEATURES

Miniaturised multiturn absolute encoder for applications with limited space.

- · Non-contact proprietary magnetic sensing technology (ASIC + energy harvesting)
- · Up to 58 bit as total resolution (18 bit singleturn + 40 bit multiturn)
- · Power supply up to +30 V DC with SSI as electrical interface
- · Code reset for easy setup
- · Cable or M12 output, other connectors available at cable end
- · 6 mm diameter solid shaft
- · Mounting by syncronous flange

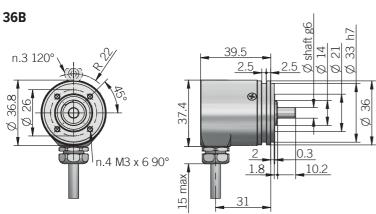




ORDERING CODE	EAM	36B	12	/ 1	3	G	8/30	S	Р	X	6	X	8	M12R	. 162	+XXX
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custom version XXX





recommended mating shaft tolerance H7

fixing clamps not included, please refer to Accessories

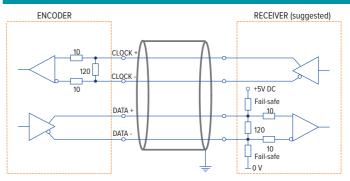
dimensions in mm	117
ELECTRICAL SPECIFICA	TIONS
Multiturn resolution	1 to 17 bit for multiturn resolution > 17 bit please contact our offices
Singleturn resolution	1 to 18 bit
Power supply ¹	5 = 4,75 5,25 V DC 8/30 = 7,6 30 V DC (reverse polarity protection)
Power draw without load	< 0,4 W
Electrical interface ²	RS-422 (THVD1451 or similar)
Auxiliary inputs (U/D - RESET)	active high (+V DC) connect to 0 V if not used / RESET t _{min} 150 ms
Clock frequency	100 kHz 1 MHz
Code type	binary or gray
SSI monostable time (Tm)	20 μs
SSI pause time (Tp)	> 35 µs
SSI frame	tree format MSB LSB up to 12 bit multiturn = length 25 bit (12MT + 13ST) 14 bit multiturn = length 32 bit (14MT + 18ST) 15 to 17 bit multiturn = length 32 bit (17MT + 15ST)
SSI status and parity bit	on request
Counting direction	decreasing clockwise (shaft view)
Start-up time	150 ms
Accuracy (at +20°C / +68°F)	± 0,20°
Mean time to dangerous failure (MTTF _d) ³ according to EN ISO 13849-1	183 years
Mission time (Tm) ³	20 years
Diagnostic coverage (DC) ³	0%
Cable type	shielded - fixed installation conductors section 0,14 mm²/AWG 26 bending radius min 60 mm
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	file n. E212495

CONNECTIONS						
Function	Cable	8 pin M12				
+ V DC	red	8				
0 V	black	5				
DATA +	green	3				
DATA -	brown or grey	2				
CLOCK +	yellow	4				
CLOCK -	orange	6				
U/D	red / blue	7				
RESET	white	1				
÷	shield	housing				

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 load⁴	20 N (4,5 lbs) 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 (0,02 x 10 ⁻⁶ lbft ²)			
Starting torque (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin)			
Bearing stage material	aluminum			
Shaft material	stainless steel			
Housing material	chrome plated steel			
Bearings	n.2 ball bearings			
Bearings life	10 ⁹ revolutions			
Operating temperature ^{5, 6}	-30° +100°C (-22° +212°F) -25° +85°C (-13° +185°F) with M12 connector			
Storage temperature ⁶	-25° +85°C (-13° +185°F)			
Weight	150 g (5,29 oz)			

¹ as measured at the transducer without cable influences

SSI ELECTRICAL INTERFACE



M12 connector (8 pin) M12 A coded front view





 $^{^{\}rm 2}$ for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ this product is not a safety component, for further details refer to TECHNICAL BASICS section

⁴ maximum load for static usage

⁵ measured on the transducer flange

⁶ condensation not allowed