

# EAM 36 A SSI

## SOLID SHAFT MAGNETIC MULTITURN ABSOLUTE ENCODER



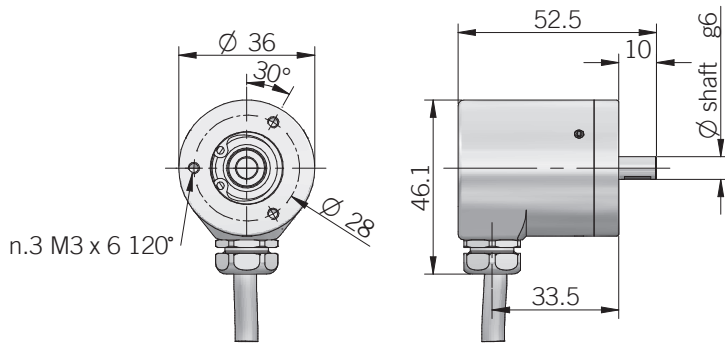
### Specifications

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 multi-turn)
- 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
	<b>SERIES</b> magnetic multiturn absolute encoder series <b>EAM</b>															
	<b>MODEL</b> fixing flange $\varnothing$ 28 mm <b>36A</b>															
	<b>MULTITURN RESOLUTION</b> turns from 1 to 39 bit															
	<b>SINGLETURN RESOLUTION</b> from 1 to 12 bit															
	<b>CODE TYPE</b> binary <b>B</b> gray <b>G</b>															
	<b>POWER SUPPLY</b> 5 V DC <b>5</b> 8 ... 30 V DC <b>8/30</b>															
	<b>ELECTRONIC INTERFACE</b> Serial Synchronous Interface - SSI <b>S</b>															
	<b>LOGIC</b> positive <b>P</b>															
	<b>OPTIONS</b> to be reported if not used <b>X</b> reset <b>ZE</b>															
	<b>SHAFT DIAMETER</b> mm <b>6</b>															
	<b>ENCLOSURE RATING</b> IP 67 cover side / IP 65 shaft side <b>X</b>															
	<b>MAX ROTATION SPEED</b> 8000 rpm <b>8</b>															
	<b>OUTPUT TYPE</b> cable (standard length 0,5 m) <b>P</b>															
	<b>DIRECTION TYPE</b> radial <b>R</b>															
	<b>VARIANT</b> custom version <b>XXX</b>															

## EAM 36 A



### ELECTRICAL SPECIFICATIONS

<b>Multiturn resolution</b>	turns from 1 to 39 bit
<b>Singleturn resolution</b>	ppr from 1 to 12 bit
<b>Power supply</b>	5 = 4,75 ... 5,25 V DC 8/30 = 7,6 ... 30 V DC (reverse polarity protection)
<b>Power draw without load</b>	< 400 mW
<b>Output type</b>	RS-422
<b>Code type</b>	binary or gray
<b>Auxiliary inputs (U/D - Reset)</b>	active high (+Vdc) connect to 0V if not used / Reset $t_{min}$ 150 ms
<b>Clock frequency</b>	100 kHz ... 1 MHz
<b>SSI monostable time (Tm)</b>	20 $\mu$ s
<b>SSI pause time (Tp)</b>	> 35 $\mu$ s
<b>SSI frame</b>	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')
<b>Accuracy</b>	$\pm 0,35^\circ$ typical
<b>Counting direction</b>	decreasing clockwise (shaft view)
<b>Start-up time</b>	150 ms
<b>Electromagnetic compatibility</b>	IEC 61000-6-2 IEC 61000-6-4

### MECHANICAL SPECIFICATIONS

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