

MAIN FEATURES

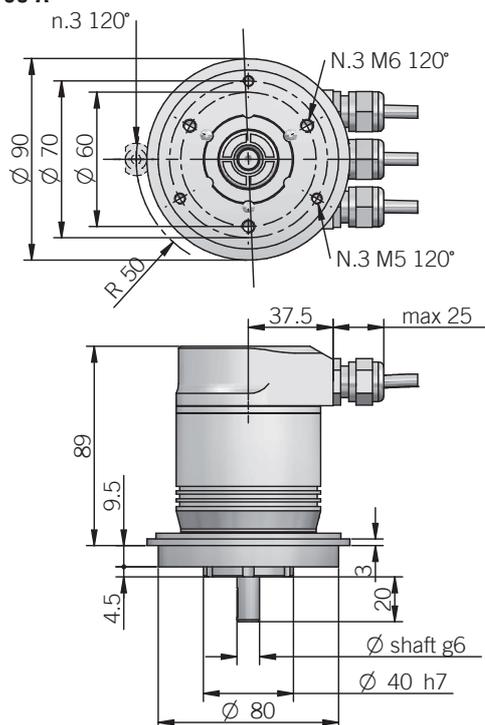
Industry standard multiturn absolute encoder for factory automation applications.

- Optical sensor technology (OptoASIC + gears)
- 25 bit total resolution (13 bit single turn (8192 ppr) + 12 bit multiturn (4096 turns))
- Power supply up to +28 V DC with Profibus DP as electrical interface
- Intelligent status leds
- Terminal box or M12 connector for fast setup
- Solid shaft diameter up to 11 mm
- Mounting by synchronous or REO-444 flange

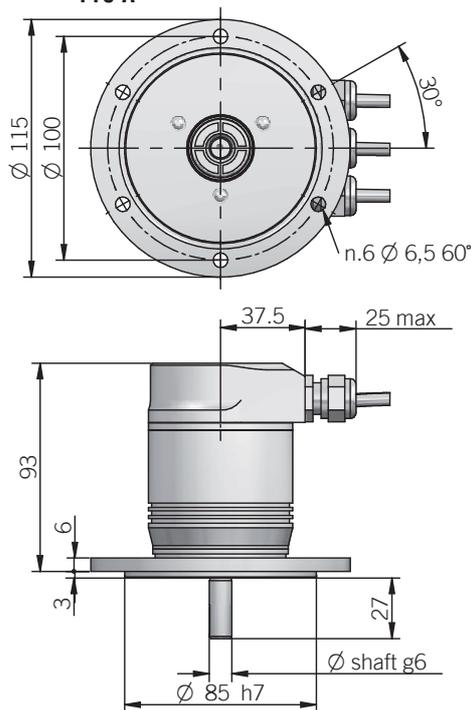


ORDERING CODE	EAM	90A	R	4096 / 4096	B	12/28	FXX	8	X	6	P3R	.XXX
SERIES multiturn absolute encoder EAM												
MODEL synchronous flange ø 40 mm 90A REO444 flange 115A												
rev. 2.0 R												
MULTITURN RESOLUTION turns 4096												
SINGLETURN RESOLUTION ppr 4096 / 8192												
CODE TYPE binary B												
POWER SUPPLY 12 ... 28 V DC 12/28												
ELECTRICAL INTERFACE PROFIBUS DP V0 CLASS 2 FXX												
SHAFT DIAMETER (mod. 90) (3/8") 9,52 mm 9 mm 10 (mod. 115) mm 11												
ENCLOSURE RATING IP 54 X (mod. 90) IP 66 S												
MAX ROTATION SPEED (IP 66) 3000 rpm 3 (IP 54) 6000 rpm 6												
OUTPUT TYPE terminal box - radial cable glands P3R radial M12 connectors M12R												
mating connectors included, without mating connectors please add 162 as variant code												
												VARIANT custom version XXX

90 A



115 A



dimensions in mm

fixing clamps not included, please refer to Accessories

ELECTRICAL SPECIFICATIONS

Multiturn resolution	1 ... 4096 turns programmable during commissioning
Singleturn resolution	2 ... 4096 / 2 ... 8192 ppr programmable during commissioning
Power supply¹	11,4 ... 29,4 V DC
Current consumption without load	300 mA
Electrical interface²	RS 485 galvanically isolated
Max bus frequency	12 Mbaud
Diagnostic features	frequency warning position warning / alarm please refer to installation manual for more informations
Max frequency	max 25 kHz LSB
Code type	binary
Counting direction	programmable during commissioning
Start-up time	500 ms
Accuracy	± 1/2 LSB
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2015/863/EU directive
UL / CSA	certificate n. E212495

MECHANICAL SPECIFICATIONS

Shaft diameter	∅ 9,52 / 10 / 11 mm
Enclosure rating	X = IP 54 (IEC 60529) S = IP 66 (IEC 60529)
Max rotation speed	IP 54 - 6000 rpm IP 66 - 3000 rpm
Max shaft load³	100 N axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	1,5 x 10 ⁻⁶ kgm ² (36 x 10 ⁻⁶ lbfft ²)
Starting torque (at +20°C / +68°F)	< 0,02 Nm (2,83 Ozin) IP 54 < 0,06 Nm (8,50 Ozin) IP 66
Bearing stage material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	painted aluminium
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature^{4,5}	0° ... +60°C (+32° ... +140°F)
Storage temperature⁵	-15° ... +70°C (+5° ... +158°F)
Weight	750 g (26,46 oz)

¹ as measured at the transducer without cable influences

² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ maximum load for static usage

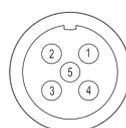
⁴ measured on the transducer flange

⁵ condensation not allowed

CONNECTIONS

Function	POWER	LINE OUT	LINE IN
+ V DC	2		
0 V	4		
A		2	
B		4	
A			2
B			4

POWER connector (5 pin)
M12 A coded
view solder side FV



LINE OUT - female (5 pin)
M12 B coded
solder side view FV



LINE IN - male (5 pin)
M12 B coded
solder side view MV

