

### MAIN FEATURES

Industry standard singleturn absolute encoder for factory automation applications.

- Optical sensor technology (OptoASIC)
- Resolution up to 13 bit (8192 ppr)
- Power supply up to +28 V DC with Profibus DP as electrical interface
- Cable gland or M12 connector output
- Solid shaft diameter up to 11 mm
- Mounting by synchronous or REO-444 flange



### ORDERING CODE

EA 90A 4096 B 12/28 FXX 10 X 6 P3R .XXX

**SERIES**  
singleturn absolute encoder EA

**MODEL**  
synchronous flange ø 40 mm 90A  
REO-444 flange 115A

**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

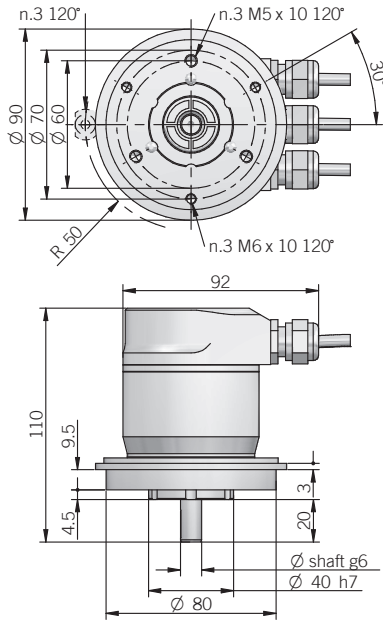
**MAX ROTATION SPEED**  
(IP 66) 3000 rpm 3  
(IP 54) 6000 rpm 6

**OUTPUT TYPE**  
terminal box - radial cable glands P3R  
radial M12 connector M12R

female connector included, without female please add 162 as variant code

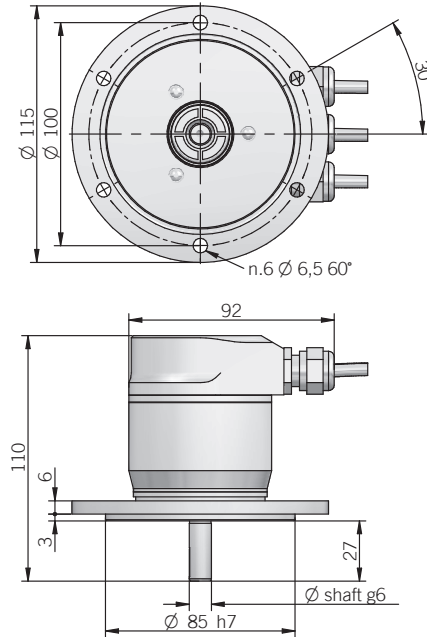
**VARIANT**  
custom version XXX

90 A



fixing clamps not included, please refer to Accessories section  
dimensions in mm

115 A



ELECTRICAL SPECIFICATIONS

<b>Resolution</b>	2 ... 4096 / 2 ... 8192 ppr programmable during commissioning
<b>Power supply</b>	11,4 ... 29,4 V DC
<b>Current consumption without load</b>	300 mA
<b>Output type</b>	RS 485 galvanically isolated
<b>Max bus frequency</b>	12 Mbaud
<b>Diagnostic features</b>	frequency warning position warning / alarm please refer to installation manual for more informations
<b>Max frequency</b>	max 25 kHz LSB
<b>Accuracy</b>	± 1/2 LSB
<b>Counting direction</b>	programmable during commissioning
<b>Start-up time</b>	500 ms
<b>Electromagnetic compatibility</b>	according to 2014/30/EU directive
<b>RoHS</b>	according to 2011/65/EU directive
<b>UL / CSA</b>	certificate n. E212495

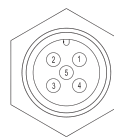
CONNECTIONS

Function	Pin M12A male	Pin M12B female	Pin M12B male
+ V DC	2		
0 V	4		
signal A (out)		2	
signal B (out)		4	
signal A (in)			2
signal B (in)			4

MECHANICAL SPECIFICATIONS

<b>Shaft diameter</b>	ø 9,52 (3/8") / 10 / 11 mm
<b>Enclosure rating</b>	X = IP 54 (IEC 60529) S = IP 66 (IEC 60529)
<b>Max rotation speed</b>	IP 54 - 6000 rpm IP 66 - 3000 rpm
<b>Max shaft load</b>	100 N axial / radial
<b>Shock</b>	50 G, 11 ms (IEC 60068-2-27)
<b>Vibration</b>	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
<b>Moment of inertia</b>	1,5 x 10 <sup>-6</sup> kgm <sup>2</sup> (36 x 10 <sup>-6</sup> lbf <sup>2</sup> )
<b>Starting torque (at +20°C / +68°F)</b>	< 0,02 Nm (2,83 Ozin) IP 54 < 0,06 Nm (8,50 Ozin) IP 66
<b>Bearing stage material</b>	EN-AW 2011 aluminum
<b>Shaft material</b>	1.4305 / AISI 303 stainless steel
<b>Housing material</b>	painted aluminium
<b>Bearings</b>	2 ball bearings
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Operating temperature</b>	0° ... +60°C (+32° ... +140°F)
<b>Storage temperature</b>	-15° ... +70°C (+5° ... +158°F)
<b>Weight</b>	750 g (26,46 oz)

S3 connector (M12 5 pins A coded) power supply view solder side FV



S3 connector (M12 5 pins B coded) line out - female view solder side FV



S3 connector (M12 5 pins B coded) line in - male view solder side MV

