

**MAIN FEATURES**

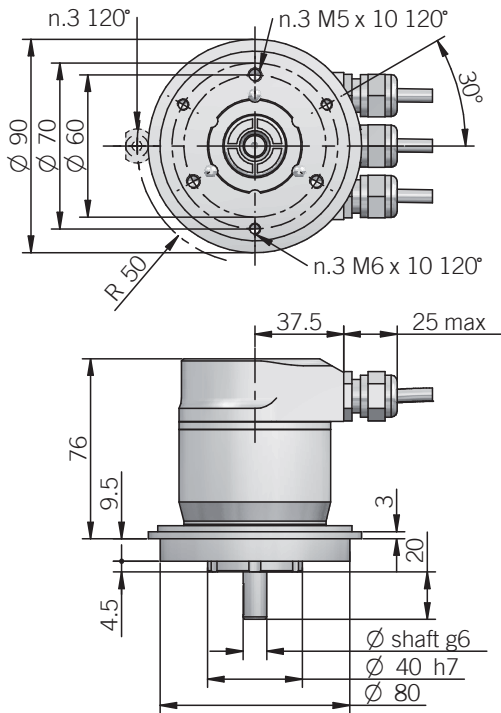
Industry standard singleturn absolute encoder for factory automation applications.

- 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

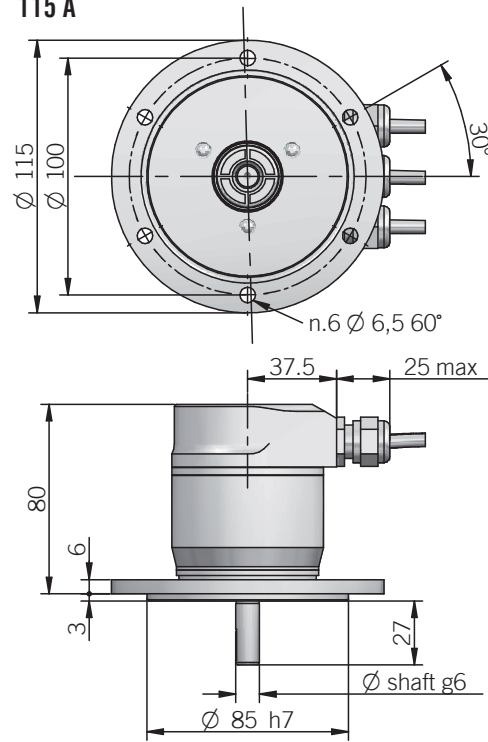


ORDERING CODE	EA	90A	4096	B	12/28	FX	10	X	6	M12R	.162	+XXX
<b>SERIES</b> singleturn absolute encoder EA												
<b>MODEL</b> synchronous flange ø 40 mm 90A REO-444 flange 115A												
<b>RESOLUTION</b> ppr 4096 / 8192												
<b>CODE TYPE</b> binary B												
<b>POWER SUPPLY</b> 12 ... 28 V DC 12/28												
<b>ELECTRICAL INTERFACE</b> PROFIBUS DP V0 CLASS 2 FX												
<b>SHAFT DIAMETER</b> (mod. 90) (3/8") 9,52 mm 9 mm 10 (mod. 115) mm 11												
<b>ENCLOSURE RATING</b> IP 54 X (mod. 90) IP 66 S												
<b>MAX ROTATION SPEED</b> (IP 66) 3000 rpm 3 (IP 54) 6000 rpm 6												
<b>OUTPUT TYPE</b> terminal box - radial cable glands P3R radial M12 connectors M12R												
<b>MATING CONNECTORS</b> mating connectors not included .162 to be reported only with connector output (eg. M12R.162), for mating connectors see Accessories												
<b>VARIANT</b> custom version XXX												

90 A



115 A



recommended mating shaft tolerance H7  
dimensions in mm

fixing clamps not included, please refer to Accessories

ELECTRICAL SPECIFICATIONS

<b>Resolution</b>	2 ... 4096 / 2 ... 8192 ppr programmable during commissioning
<b>Power supply<sup>1</sup></b>	11,4 ... 29,4 V DC (reverse polarity protection)
<b>Current consumption without load</b>	300 mA
<b>Electrical interface<sup>2</sup></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>Code type</b>	binary
<b>Counting direction</b>	programmable during commissioning
<b>Start-up time</b>	500 ms
<b>Accuracy</b>	± 1/2 LSB
<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

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<sup>3</sup></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>	n.2 ball bearings
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Operating temperature<sup>4,5</sup></b>	0° ... +60°C (+32° ... +140°F)
<b>Storage temperature<sup>5</sup></b>	-15° ... +70°C (+5° ... +158°F)
<b>Weight</b>	750 g (26,46 oz)

<sup>1</sup> as measured at the transducer without cable influences

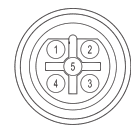
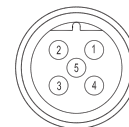
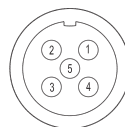
<sup>2</sup> for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

<sup>3</sup> maximum load for static usage

<sup>4</sup> measured on the transducer flange

<sup>5</sup> condensation not allowed

POWER connector (5 pin) M12 A coded view solder side FV      BUS OUT - female (5 pin) M12 B coded solder side view FV      BUS IN - male (5 pin) M12 B coded solder side view MV



CONNECTIONS

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