

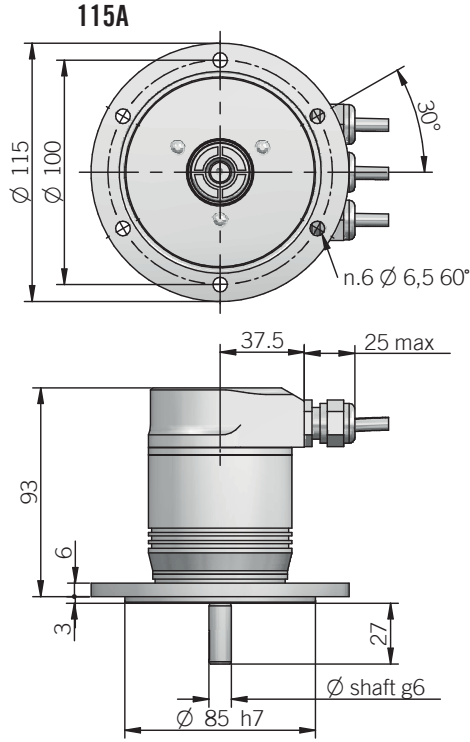
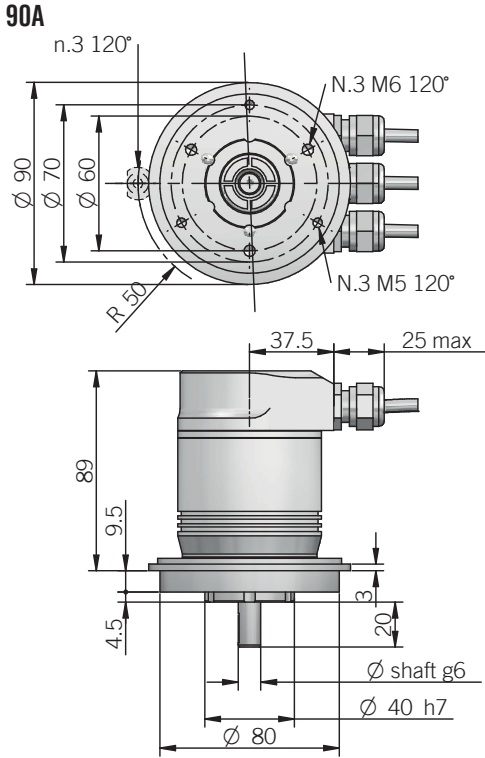
MAIN FEATURES

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	FX	10	X	6	M12R	.162	+XXX
SERIES multiturn absolute encoder	EAM												
MODEL synchronous flange ø 40 mm REO444 flange		90A 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							FX						
SHAFT DIAMETER (mod. 90) (3/8") 9,52 mm mm (mod. 115) mm								9 10 11					
ENCLOSURE RATING IP 54 (mod. 90) IP 66								X S					
MAX ROTATION SPEED (IP 66) 3000 rpm (IP 54) 6000 rpm								3 6					
OUTPUT TYPE terminal box - radial cable glands radial M12 connectors										P3R M12R			
SOCKETS sockets not included											.162		
to be reported only with connectors output (eg. M12R.162), for sockets see Accessories													
VARIANT custom version													



fixing clamps not included, please refer to Accessories

recommended mating shaft tolerance H7
dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	2 ... 4096 / 2 ... 8192 ppr programmable during commissioning
Power supply¹	11,4 ... 29,4 V DC (reverse polarity protection)
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
Mean time to dangerous failure (MTTF)³ according to EN ISO 13849-1	years
Mission time (Tm)³	20 years
Diagnostic coverage (DC)³	0%
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	file n. E212495

MECHANICAL SPECIFICATIONS

Shaft diameter	∅ 9,52 (3/8") / 10 / 11 mm
Enclosure rating IEC 60529	X = IP 54 S = IP 66
Max rotation speed	6000 rpm with X enclosure rating 3000 rpm with S enclosure rating
Max shaft load⁴	100 N (22,48 lbs) 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 lbf ²)
Starting torque (at +20°C / +68°F)	< 0,02 Nm (2,83 Ozin) with X enclosure rating < 0,06 Nm (8,50 Ozin) with S enclosure rating
Bearing stage material	aluminum
Shaft material	stainless steel
Housing material	painted aluminium
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature^{5, 6}	0° ... +60°C (+32° ... +140°F)
Storage temperature	-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 this product is not a safety component, for further details refer to TECHNICAL BASICS section

⁴ maximum load for static usage

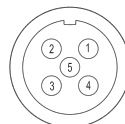
⁵ measured on the transducer flange

⁶ condensation not allowed

CONNECTIONS

Function	POWER	BUS OUT	BUS 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



BUS OUT - socket (5 pin)
M12 B coded
front view



BUS IN - plug (5 pin)
M12 B coded
solder side view MV

