EAM 58 B / C - 63 A / D / E PROFIBUS

SOLID SHAFT MULTITURN ABSOLUTE ENCODER

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 10 mm
- Mounting by synchronous, clamping or centering 2,5" square flange

ORDERING CODE	EAM	63A	R	4096 / 4096	B	12/28	FXX	10	X	6	M12R	. 162	+XXX

SERIES
multiturn absolute encoder EAM

MODEL
synchronous flange ø 31.75 mm 63A
synchronous flange ø 50 mm 58B
clamping flange ø 36 mm 58C
centering square flange ø 31.75 mm 63D
centering square flange ø 50 mm 63E

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. 58 B) mm 6
(mod. 63 A / D) (3/8") 9,52 mm 9
(mod. 58 C - 63 A / D / E) mm 10

ENCLOSURE RATING
IP 54 X
IP 66 S

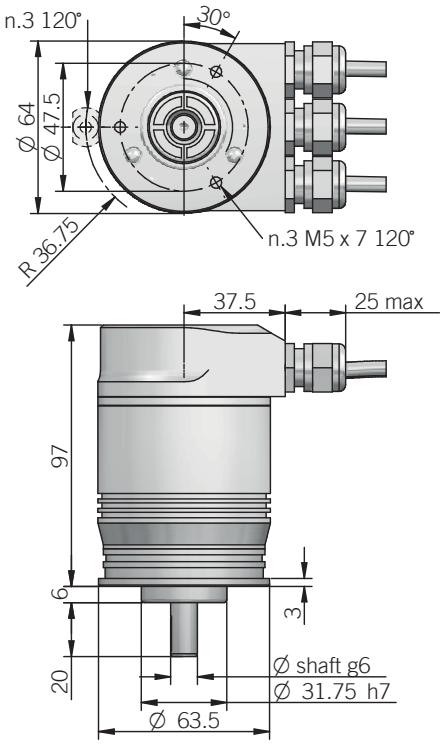
MAX ROTATION SPEED
(IP 66) 3000 rpm 3
(IP 54) 6000 rpm 6

OUTPUT TYPE
terminal box - radial cable glands P3R
radial M12 connectors M12R

SOCKETS
sockets not included .162
to be reported only with connectors output (eg. M12R.162), for sockets see Accessories

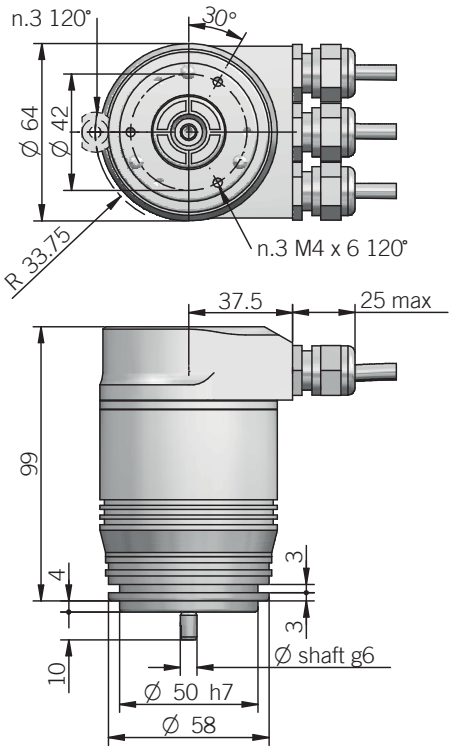
VARIANT
custom version XXX

63A



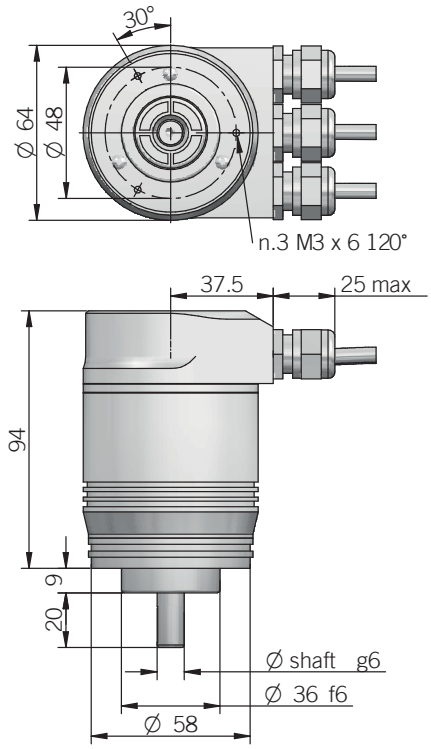
fixing clamps not included, please refer to Accessories

58B

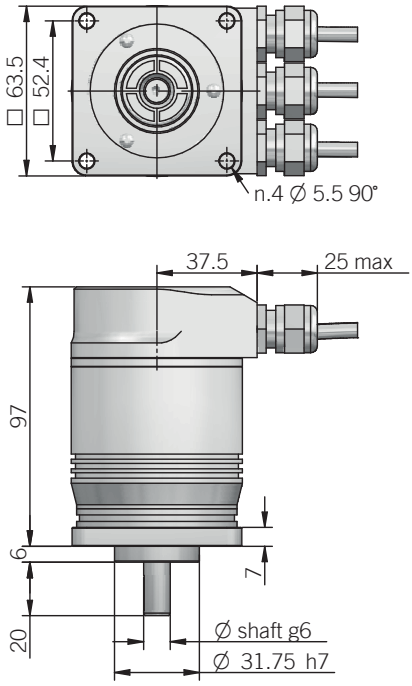


fixing clamps not included, please refer to Accessories

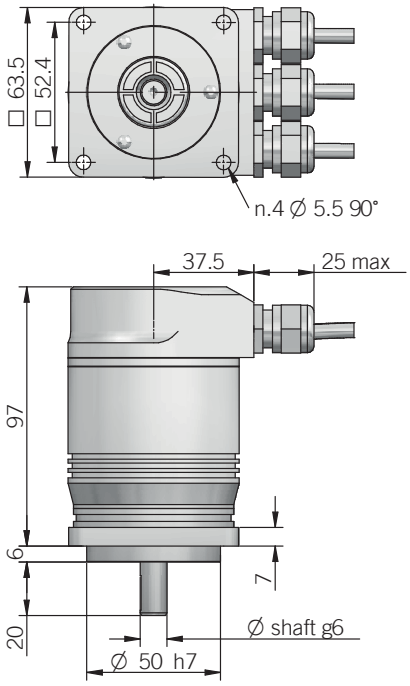
58C



63D



63E



recommended mating shaft tolerance H7
dimensions in mm

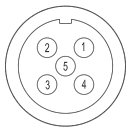
ELECTRICAL SPECIFICATIONS

Multiturn resolution	1 ... 4096 turns programmable during commissioning
Singleturn resolution	2 ... 4096 / 2 ... 8192 ppr programmable during commissioning
Power supply[1]	11,4 ... 29,4 V DC (reverse polarity protection)
Current consumption without load	300 mA
Electrical interface[2]	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 ($MTTF_d$)[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

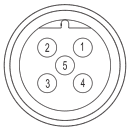
CONNECTIONS

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

MECHANICAL SPECIFICATIONS

Shaft diameter	ø 6 / 9,52 (3/8") / 10 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 load[4]	10 N (2,25 lbs) axial with ø 6 mm shaft 20 N (4,45 lbs) radial with ø 6 mm shaft 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} $lbft^2$)
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[6]	-15° ... +70°C (+5° ... +158°F)
Weight	650 g (22,93 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