Eltra® *focused on motion*
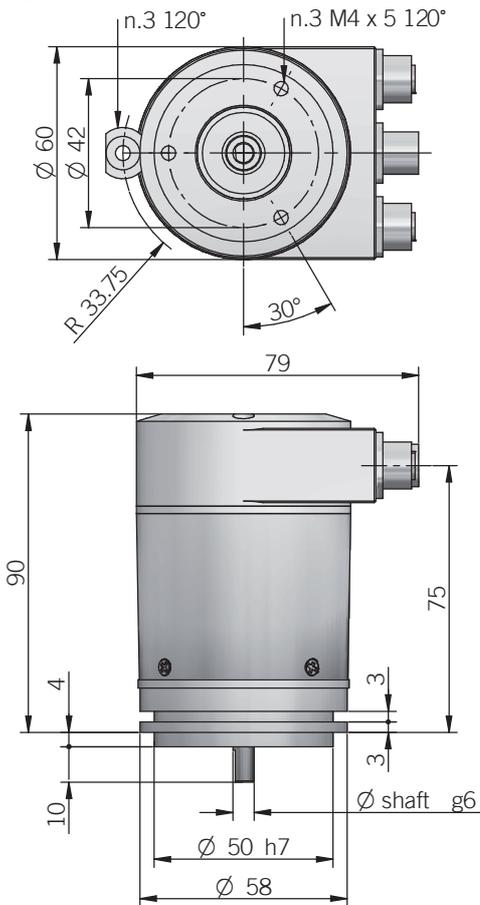
EtherCAT® · RoHS · CE · c UL us

MAIN FEATURES

Industry standard multiturn absolute encoder for factory automation applications.

· Optical sensor technology (OptoASIC + gears)
· 25 bit total resolution (13 bit single turn + 12 bit multiturn)
· Power supply up to +30 V DC with EtherCAT as electrical interface
· Intelligent status leds
· M12 connector for fast setup
· Solid shaft diameter up to 10 mm
· Mounting by synchronous or clamping flange
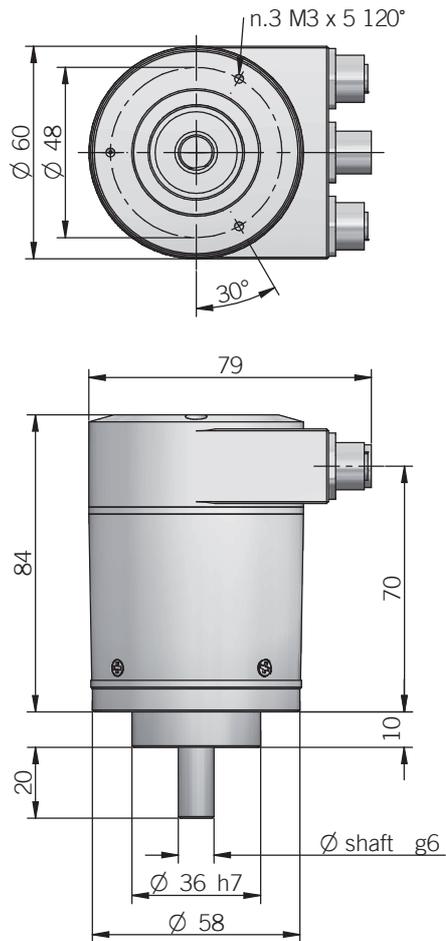· Operating temperature -40° ... +80°C (-40° ... +176°F)

ORDERING CODE	AAM	58B	R	12	/	13	B	10/30	ETC	6	X	X	M12R	.162

SERIES
absolute multiturn encoder AAM

MODEL
synchronous flange ø 50 mm 58B
clamping flange ø 36 mm 58C

REVISION
to be reported R

MULTITURN RESOLUTION
bit 12

SINGLETURN RESOLUTION
bit 13

CODE TYPE
binary B

POWER SUPPLY
10 ... 30 V DC 10/30

ELECTRICAL INTERFACE
ETHERCAT ETC

SHAFT DIAMETER
(mod. 58B) mm 6
(mod. 58C) mm 10

ENCLOSURE RATING
IP 65 X

OPTIONS
to be reported X

OUTPUT TYPE
radial M12 connectors M12R

VARIANT
without mating connectors 162

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eltra@eltra.it

58B

n.3 120°   n.3 M4 x 5 120°
Ø 60   Ø 42
R 33.75   30°

79
90   75
4   3
3
10   Ø shaft g6
Ø 50 h7
Ø 58

for fixing clamps please refer to Accessories
dimensions in mm

58C

n.3 M3 x 5 120°
Ø 60   Ø 48
30°

79
84   70
20   10
Ø shaft g6
Ø 36 h7
Ø 58

ELECTRICAL SPECIFICATIONS

Multiturn resolution	1 ... 12 bit programmabile during commissioning
Singleturn resolution	1 ... 13 bit programmabile during commissioning
Power supply[1]	10 ... 30 V DC (with reverse polarity protection)
Current consumption without load	< 200 mA
Electrical interface[2]	Ethercat
Profile	CoE (CANopen over EtherCAT, DS-301+DS-406)
Programming functions	Resolution Preset Counting direction
Code type	binary
Max bus frequency	100 Mbit/s
Cycle time	$\geq$ 62,5 µs
Accuracy	± 0,04°
Start-up time	500 ms
Electromagnetic compatibility	according to 2014/30/EU directive
RoHs	according to 2015/863/EU directive

[1] as measured at the encoder without cable influences
[2] for further details refer to TECHNICAL BASICS section
[3] maximum load for static usage
[4] measured on encoder flange
[5] condensation not allowed

MECHANICAL SPECIFICATIONS

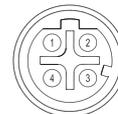|	
Shaft diameter	ø 6 mm (mod. 58B) ø 10 mm (mod. 58C)
Enclousure rating	IP 65 (IEC 60529)
Max rotation speed	6000 rpm
Max shaft load[3]	80 N radial / 40 N axial
Starting torque (at +20°C / 68°F)	< 0,05 Nm
Moment of inertia	approx 1,8 x 10^{-6} kgm^2
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibrations	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Bearings life	10^9 revolutions
Bearings	2 ball bearings
Shaft material	1.4305 / AISI 303 stainless steel
Bearing stage and cover material	EN-AW 2011 aluminium
Housing material	EN-AW 6060 aluminium
Operating temperature[4, 5]	-40° ... +80°C (-40° ... +176°F)
Storage temperature[5]	-40° ... +85°C (-40° ... +185°F)
Weight	600 g (21 oz)

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CONNECTIONS

	Pin	Function
ECAT IN connector	1	Tx D+
	2	Rx D+
	3	Tx D-
	4	Rx D-
POWER connector	1	+V DC
	2	/
	3	0 V
	4	/
ECAT OUT connector	1	Tx D+
	2	Rx D+
	3	Tx D-
	4	Rx D-

female connectors not included, please refer to Accessories

EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

ECAT IN / OUT connector (4 pin)
M12 D coded
solder side view MV

POWER connector (4 pin)
M12 A coded
solder side view FV

ECAT IN   POWER   ECAT OUT

eltra@eltra.it