

### MAIN FEATURES

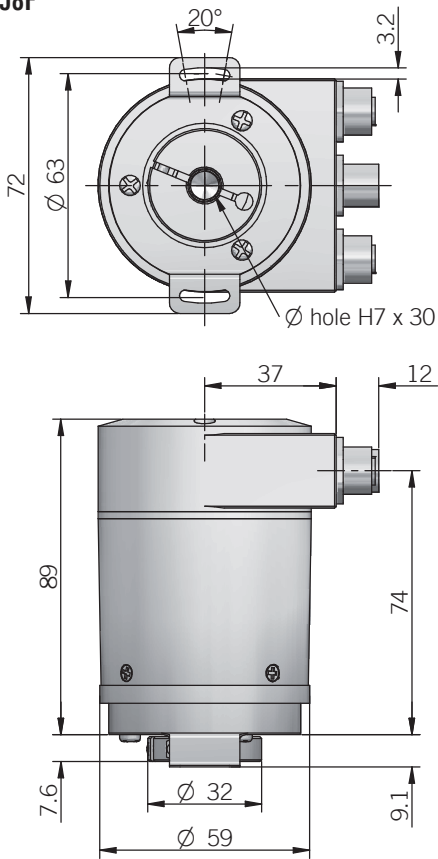
Industry standard multiturn absolute encoder for factory automation applications.

- 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
- Blind hollow shaft diameter up to 15 mm
- Mounting by stator coupling
- Operating temperature -40° ... +80°C (-40° ... +176°F)



ORDERING CODE	AAM	58F	R	12	/	13	B	10/30	ETC	15	X	X	M12R	.162
<b>SERIES</b> absolute multiurn encoder <b>AAM</b>														
<b>MODEL</b> blind hollow shaft with stator coupling <b>58F</b>														
<b>REVISION</b> to be reported <b>R</b>														
<b>MULTITURN RESOLUTION</b> bit <b>12</b>														
<b>SINGLETURN RESOLUTION</b> bit <b>13</b>														
<b>CODE TYPE</b> binary <b>B</b>														
<b>POWER SUPPLY</b> 10 ... 30 V DC <b>10/30</b>														
<b>ELECTRICAL INTERFACE</b> ETHERCAT <b>ETC</b>														
<b>BORE DIAMETER</b> mm <b>15</b> diameters 10 / 12 mm with optional shaft adapter, see Accessories														
<b>ENCLOSURE RATING</b> IP 65 <b>X</b>														
<b>OPTIONS</b> to be reported <b>X</b>														
<b>OUTPUT TYPE</b> radial M12 connectors <b>M12R</b>														
<b>MATING CONNECTORS</b> mating connectors not included <b>.162</b> for mating connectors see Accessories														

58F



recommended mating shaft tolerance g6  
dimensions in mm

**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

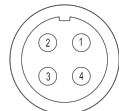


ECAT IN POWER ECAT OUT

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



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



**ELECTRICAL SPECIFICATIONS**

<b>Multiturn resolution</b>	1 ... 12 bit programmabile during commissioning
<b>Singleturn resolution</b>	1 ... 13 bit programmabile during commissioning
<b>Power supply<sup>1</sup></b>	10 ... 30 V DC (with reverse polarity protection)
<b>Current consumption without load</b>	< 200 mA
<b>Electrical interface<sup>2</sup></b>	Ethercat
<b>Profile</b>	CoE (CANopen over EtherCAT, DS-301+DS-406)
<b>Programming functions</b>	Resolution Preset Counting direction
<b>Code type</b>	binary
<b>Max bus frequency</b>	100 Mbit/s
<b>Cycle time</b>	≥ 62,5 μs
<b>Accuracy</b>	± 0,04°
<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

**MECHANICAL SPECIFICATIONS**

<b>Bore diameter</b>	∅ 15 mm ∅ 12* / 10* mm * with optional shaft adapter, please refer to Accessories
<b>Enclousure rating</b>	IP 65 (IEC 60529)
<b>Max rotation speed</b>	6000 rpm
<b>Max shaft load<sup>3</sup></b>	80 N radial / 40 N axial
<b>Starting torque (at +20°C / +68°F)</b>	< 0,05 Nm
<b>Moment of inertia</b>	approx 1,8 x 10 <sup>-6</sup> kgm <sup>2</sup>
<b>Shock</b>	50 G, 11 ms (IEC 60068-2-27)
<b>Vibrations</b>	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Bearings</b>	n° 2 ball bearings
<b>Shaft material</b>	1.4305 / AISI 303 stainless steel
<b>Bearing stage and cover material</b>	EN-AW 2011 aluminium
<b>Housing material</b>	EN-AW 6060 aluminium
<b>Operating temperature<sup>4,5</sup></b>	-40° ... +80°C (-40° ... +176°F)
<b>Storage temperature<sup>5</sup></b>	-40° ... +85°C (-40° ... +185°F)
<b>Fixing torque for collar clamping</b>	1,5 Nm (212 Ozin) recommended
<b>Weight</b>	600 g (21 oz)

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

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

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

<sup>4</sup> measured on encoder flange

<sup>5</sup> condensation not allowed

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