

### MAIN FEATURES

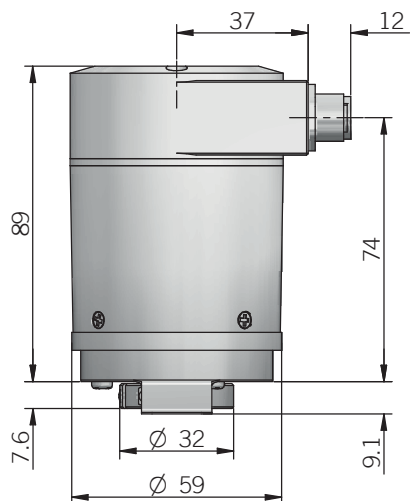
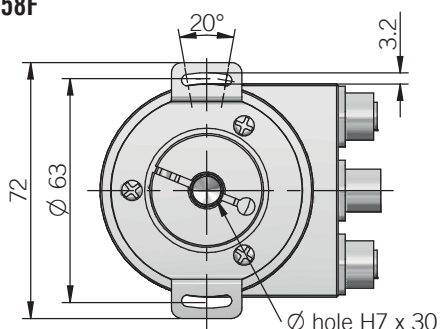
Industry standard multiturn absolute encoder for factory automation applications.

- 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>SOCKETS</b> sockets not included <b>.162</b> for sockets see Accessories														

58F



recommended mating shaft tolerance g6  
dimensions in mm

CONNECTIONS

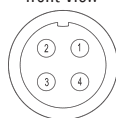
	Pin	Function
ECAT IN connector	1	Tx D+
	2	Rx D+
	3	Tx D-
	4	Rx D-
POWER connector	1	+V DC
	2	/
	3	0 V
	4	/
ECAT OUT connector	1	Tx D+
	2	Rx D+
	3	Tx D-
	4	Rx D-

socket connectors not included, please refer to Accessories

ECAT IN / OUT connector (4 pin)  
M12 D coded  
front view



POWER connector (4 pin)  
M12 A coded  
front view



ELECTRICAL SPECIFICATIONS

Multiturn resolution	1 ... 12 bit programmable during commissioning
Singleturn resolution	1 ... 13 bit programmable during commissioning
Power supply <sup>1</sup>	10 ... 30 V DC (reverse polarity protection)
Current consumption without load	< 200 mA
Electrical interface <sup>2</sup>	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	≥ 62,5 μs
Accuracy	± 0,044°
Start-up time	500 ms
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive

MECHANICAL SPECIFICATIONS

Bore diameter	ø 15 mm ø 12* / 10* mm * with optional shaft adapter, please refer to Accessories
Enclosure rating	IP 65 (IEC 60529)
Max rotation speed	6000 rpm
Max shaft load <sup>3</sup>	80 N (17,98 lbs) radial / 40 N (9 lbs) axial
Starting torque (at +20°C / +68°F)	< 0,05 Nm (7 Ozin)
Moment of inertia	approx 1,8 x 10 <sup>-6</sup> kgm <sup>2</sup>
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibrations	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Bearings life	10 <sup>9</sup> revolutions
Bearings	n° 2 ball bearings
Shaft material	stainless steel
Bearing stage / cover material	aluminium
Housing material	aluminium
Operating temperature <sup>4,5</sup>	-40° ... +80°C (-40° ... +176°F)
Storage temperature <sup>5</sup>	-40° ... +85°C (-40° ... +185°F)
Fixing torque for collar clamping	1,5 Nm (212 Ozin) recommended
Weight	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

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