

### MAIN FEATURES

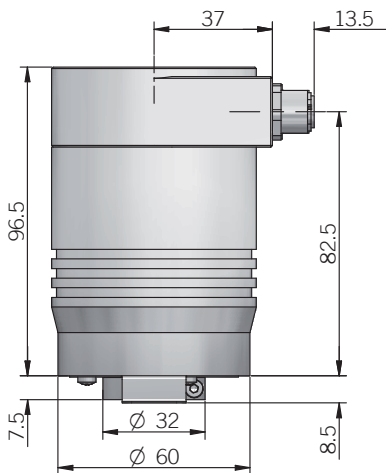
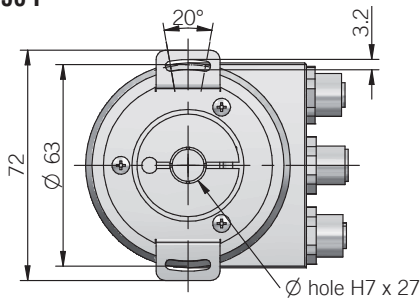
Industry standard multiturn absolute encoder for factory automation applications.

- Optical sensor technology (OptoASIC + gears)
- 25 bit total resolution (13 bit single turn + 12 bit multiturn )
- Power supply up to +30 V DC with Profinet IO 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	12 / 13	B	10/30	PFN	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>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> PROFINET IO <b>PFN</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											

58 F



recommended mating shaft tolerance g6  
dimensions in mm

**CONNECTIONS**

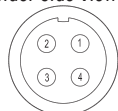
	Pin	Function
PORT 1 Connector	1	Tx D+
	2	Rx D+
	3	Tx D-
	4	Rx D-
POWER connector	1	+V DC
	2	/
	3	0 V
	4	/
PORT 2 Connector	1	Tx D+
	2	Rx D+
	3	Tx D-
	4	Rx D-



PORT 1 / 2 connector (4 pin)  
M12 D coded  
solder side view MV



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



female connectors not included, please refer to Accessories

**ELECTRICAL SPECIFICATIONS**

Multiturn resolution	1 ... 12 bit programmabile during commissioning
Singleturn resolution	1 ... 13 bit programmabile 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>	PROFINET IO RT Class 1 / Conformance Class B
Hardware features	Ertec 200 auto-negotiation auto-polarity auto-crossover diagnostic LEDs
Code type	binary
Max bus frequency	100 Mbit/s
Cycle time	≤ 1 ms
Accuracy	± 0,04°
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 radial / 40 N axial
Starting torque (at +20°C / +68°F)	< 0,05 Nm
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	1.4305 / AISI 303 stainless steel
Bearing stage / cover material	EN-AW 2011 aluminium
Housing material	painted aluminium
Flange material	EN-AW 2011 aluminium
Operating temperature <sup>4,5</sup>	-40° ... +80°C (-40° ... +176°F)
Storage temperature <sup>5</sup>	-40° ... +85°C (-40° ... +185°F)
Weight	600 g (21 oz)

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

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

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

<sup>4</sup> measured on the transducer flange

<sup>5</sup> condensation not allowed