# **Absolute encoders - CANopen**

**End Hollow Shaft - Through Hollow Shaft** Single turn 12...19 bit, Multi turn 4...32bit





### Features

- Encoder single or multiturn / CANopen
- Magnetic Sensing (Optional optical sensing)
- Optical Single turn Resolution: 12...19 bit (optional)
- Magnetic Single turn Resolution: 9...13bit
- Multi turn 4...32bit
- Clamping flange or synchro flange
- Extreme resistance to shock and vibration
- Permanent check of code continuity

Technical data - mechanical design

Resolution end zero point programmable

Technical data - electri	cal ratings
Voltage supply	5.5VDC to 30VDC 4.75VDC to 5.5VDC
Protection:	Output short circuit protection. Reverse polarity protection ( except 5V version )
Consumption w/o load	≤100 mA (24 VDC)
Interface	CANopen CiA DSP 301 V4.01, DSP 305 V1.0, DSP 406 V3.1
Resolution (steps/turn)	up to 13bit
Absolute accuracy	±0.035°
Sensing method	Magnetic
Code	Binary
Code sequance	CW default, programmable
Programmable paramaters	Operating modes Total resolution Scaling Rotation speed monitoring
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	CE

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Dimensions (flange)	ø58 mm	
Shaft loading	≤40 N axial ≤60 N radial	
Protection DIN EN 60529	IP54, IP65	
Operating speed	≤10000 rpm	
Starting torque	≤0.025 Nm (IP 65)	
Materials	Housing, Flange : Aluminium Shaft : Stainless steel	
Shaft diameter:	6, 8, 10, 12, 14 mm ( other diameters on request	
Bearings lifetime:	2x10 <sup>9</sup> rev. at 100% of full rated shaft load (minimum)	
Operating temperature	-40+110 °C -40 °C up to +120 °C (Storage)	
Weight approx.	250 g	

#### Accessories

**Connectors and cables** CRM2312R M23 12 poles female connector or see page 160

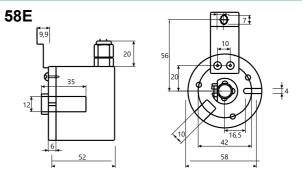
Mounting coupling See page 158

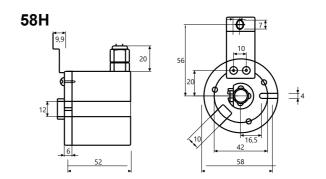
Mounting accessories YY TEO spring or see page 156-157





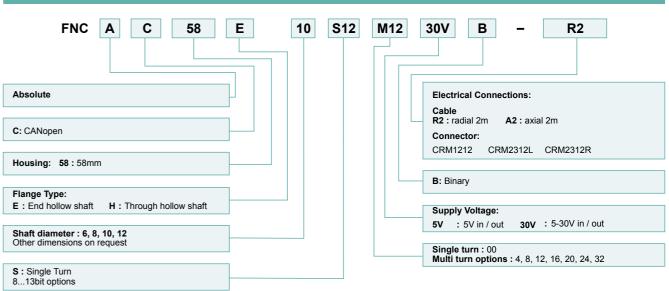
### Mechanical Dimensions





Terminal assignment				
2	Connec	ctor M12		
	Conn.	Signals	Description	
3 ( (((• • •)))) 1	Pin 1	n.c.	-	
5	Pin 2	+Vs	Supply voltage	
4	Pin 3	CAN_GND	CAN Ground	
	Pin 4	CAN_H	Bus (dominant High)	
	Pin 5	CAN_L	Bus (dominant Low)	

#### Encoder Part Number



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# **Absolute encoders - CANopen**

## **Mechanical Dimensions** Cable/Connector Wiring, Part Number

# **FNC AC 58E Series**

CANopen® features				
Bus protocol	CANopen			
Device profile	CANopen - CiA DS 406			
Operating modes	- Event-triggered / Time-triggered - Sync (cyclic)			
Preset	Parameter for setting the encoder to a requested position value assigned to a defined shaft position of the system. The offset of encoder zero point and mechanical zero point is stored in the encoder.			
Rotating direction	The rotating direction in which there have to be ascending or descending position values can be defined. Default setting: Ascending position values when looking at the flange and rotating the shaft clockwise.			
Scaling	Parameter defining the steps per turn as well as the total resolution.			
Diagnosis	The encoder supports the following error warnings: - Position error - Lithium battery voltage (multiturn)			
Node Monitoring	Heartbeat			
Default	125 kbit/s, Node ID 1			

#### Cable

Core colour	Signals	Description
white	0 V	Supply voltage
brown	+Vs	Supply voltage
green	CAN_H	Bus (dominant High
yellow	CAN_L	Bus (dominant Low)

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