

Absolute encoders - CANopen

Shaft with clamping or synchro flange
 Singleturn 12...16 bit
 Multiturn 4...16 bit



FNC AC 58B Series



Features

- Encoder single or multiturn / CANopen
- Magnetic & optical sensing
- Optical singleturn resolution 12...16 bit
- Magnetic singleturn resolution 12...14 bit
- Multiturn resolution 4...16 bit
- Clamping flange or synchro flange
- Permanent check of code continuity,
- Extreme resistance to shock and vibration
- Resolution end zero point programmable

Technical data - electrical ratings

Voltage supply	8VDC to 30VDC
Protection:	Output short circuit protection. Reverse polarity protection (except 5V version)
Consumption w/o load	≤80 mA (24 VDC)
Interface	CANopen CiA DSP 301 V4.01, DSP 305 V1.0, DSP 406 V3.1
Resolution (steps/turn)	Magnetic 14 bit Optic 16 bit
Absolute accuracy	Magnetic: ±0,1° Optic: ±0,01°
Sensing method	Magnetic & Optic
Code	Binary
Code sequence	CW default, programmable
Programmable paramaters	Operating modes Total resolution Scaling Rotation speed monitoring Node ID Baud Rate
Note:	All paramaters change via microchip interface
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	CE

Technical data - mechanical design

Dimensions (flange)	Ø58 mm
Shaft loading	≤40 N axial ≤80 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤10000 rpm
Starting torque	≤0.001Nm (IP 65)
Materials	Housing, Flange : Aluminium Shaft : Stainless steel
Shaft diameter:	6, 8, 10 mm (other diameters on request)
Bearings lifetime:	2x10 ⁹ rev. at 100% of full rated shaft load (minimum)
Operating temperature	-40...+90 °C -40 °F ...+180 °F
Weight approx.	350 g

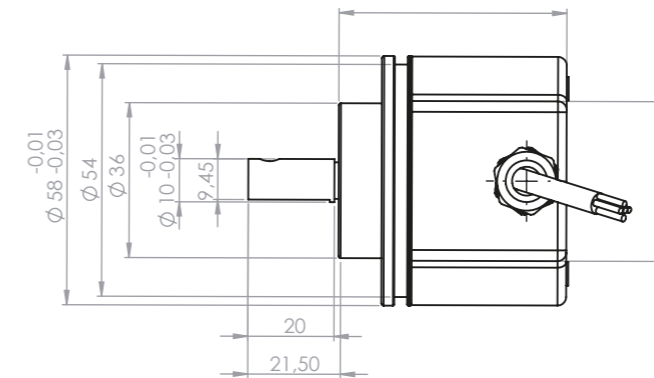
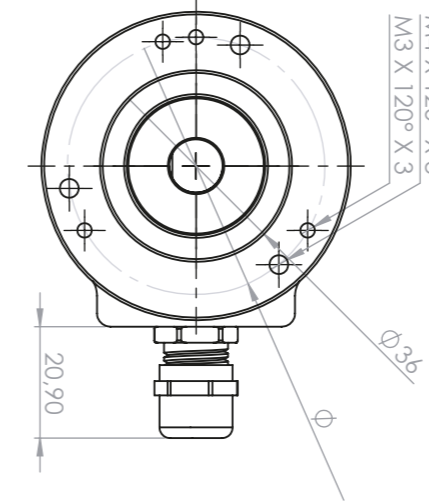
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Mechanical Dimensions
 Cable/Connector Wiring, Part Number



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Mechanical Dimensions



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

Terminal assignment

Core colour	Connector	Signals
Brown	Pin 1	GND
White	Pin 2	UB
Blue	Pin 3	CAN_GND
Black	Pin 4	CAN_H
Gray	Pin 5	CAN_L

Encoder Part Number

FNC **A** **C** **O** **58** **B** **10** **S16** **M16** **30V** **B** - **R2**

Absolute	Electrical Connections: Cable R2 : radial 2m A2 : axial 2m Connector: R1212 R2312L R2312R B: Binary Supply Voltage: 5V : 5V in / out 30V : 5-30V in / out Multi turn options M16 : 16 bit
C: CANopen	
O: Optic M: Magnetic	
Housing 58 : 58 mm	
Flange Type: S : Servo flange B : Clamping flange E : End hollow shaft H : Through hollow shaft	
Shaft diameter : 6, 8, 10, 12 Other dimensions on request	
S : Single Turn S16 : up to 16 bit	