Absolute encoders - CANopen

End Hollow Shaft
Singleturn 12...16 bit
Multiturn 4...16 bit

FNC AC58E Series

Features

Encoder single or multiturn CANopen
Magnetic or optical sensing
Optical singleturn resolution: 12...16 bit
Magnetic singleturn resolution: 9...14 bit
Multiturn 4...16 bit
End hollow shaft
Permanent check of code continuity
Extreme resistance to shock and vibration

Technical data-electrical 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)	Magnetic : 13 bit Optic : 19 bit
Absolute accuracy	Magnetic: ± 0,1° Optic : ± 0,01°
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

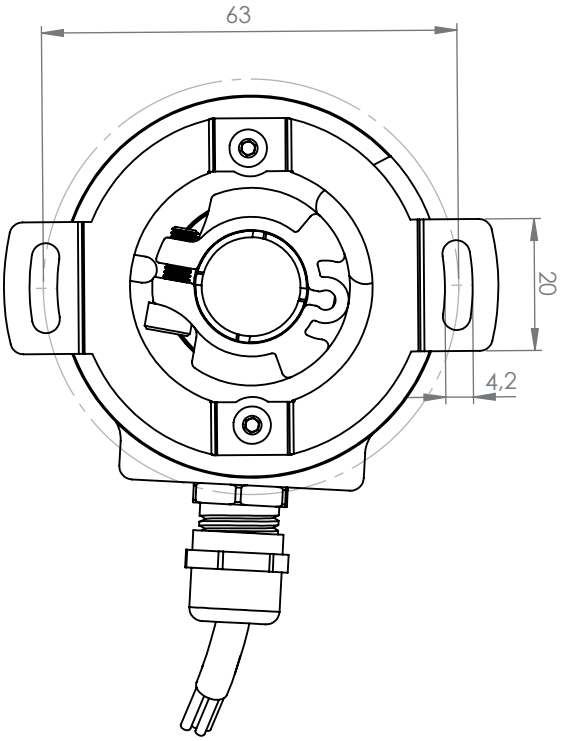
Technical data-mechanical ratings

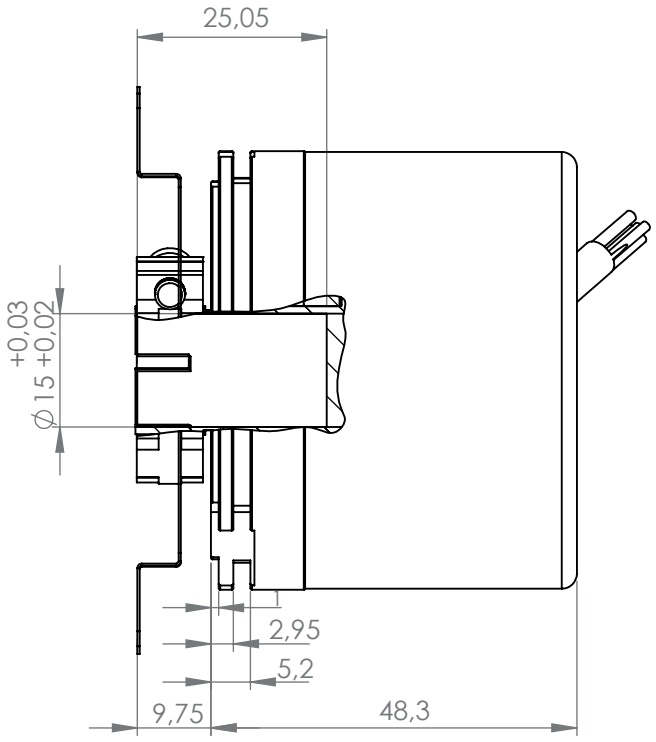
Dimensions (flange)	Ø58 mm
Shaft loading	≤40 N axial ≤40 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤10,000 rpm
Starting torque	≤0.025 Nm (IP65)
Materials	Housing: aluminum Shaft: stainless steel
Shaft diameter	6, 8, 10, 12, 14, 15 mm (other diameters on request)
Bearings lifetime	$2x10^9$ rev. at 100% of full rated shaft load (minimum)
Operating temperature	-40...+110°C
Storage temperature	-40°C up to +120°C
Weight approx.	250 g

FNC AC58E Series

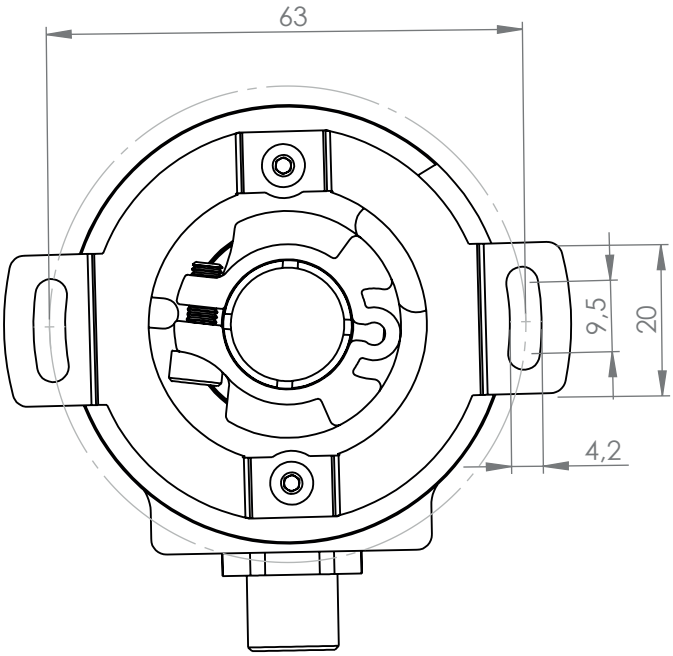
Mechanical Dimensions

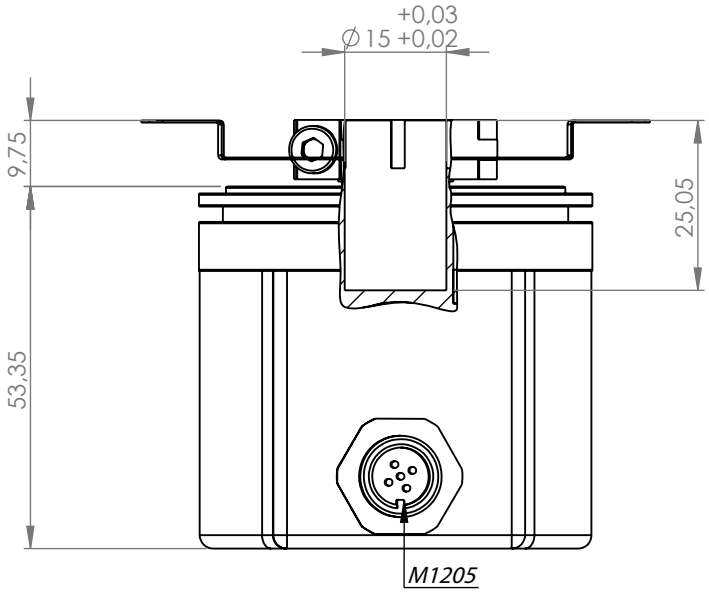
Cable, NGL463 Spring Version





M1205 Connector, NGL463 Spring Version





Absolute encoders

Cable / Connector Wiring, Part Number

FNC AC58E Series

Terminal Significance

Bus protocol	CANopen
Device profile	CANopen - CiA DS 406
Operating models	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 / Connector Connection

Function	Description	Color	Renk	Farbe	M1205
+Vs	Supply Voltage	Brown	Kahve	Braun	pin 2
0V	Supply Voltage	White	Beyaz	Weiß	pin 3
CAN_H	Bus (Dominant High)	Green	Yeşil	Grün	pin 4
CAN_L	Bus (Dominant Low)	Yellow	Sarı	Gelb	pin 5
CAN_GND	CAN Ground	Gray	Gri	Grau	pin 1

Encoder Part Number