

Type SCA50-CANopen



- Absolute Encoder - Ø 50 mm
- Shaft - ø 6 mm
- Singleturn or Multiturn
- CANopen Interface
- Enclosure Rating IP 65 or IP 67
- Supply voltage 9-30 V

Electrical Specifications

Code:	Absolute Multiturn – Magnetic
Interface:	CANopen according to CiA 301 Ver. 4.2.0. Supports the CiA 406 Profile for Absolute Encoders Ver. 4.1.0 Encoder Class 2.
Resolution:	Max. 15 bits (32768) revolutions Max. 14 bits (16384) steps per rev.
Accuracy:	± 0,35°
Device Addressing:	Settable over the CANopen interface. Default 32 (0x20).
Address Range:	1 to 127
Baud Rate:	All standard Baud rates from 20 Kbaud to 1Mbaud. Settable over the CANopen interface or over Autobaud functionality. Default 125 Kbaud.
Update Rate:	>2000 updates per second
Termination Resistor:	Switchable on/off over the CANopen interface.
Supply Voltage:	9 V min. to 30 V max.
Current Consumption:	55mA @ Vsup = 10 V (typical) 35mA @ Vsup = 24 V (typical)
Power consumption:	< 1 Watt
Electrical Protection:	Reverse polarity and transient overvoltage protected.
Noise Immunity and Emission:	Tested to EN61000-6-2 : 2019 (immunity: industrial environments) and EN 61000-6-4 : 2007 (emission: industrial environments).

Mechanical Specifications

Material:	Housing: Aluminum Cap: Electroplated Aluminum Shaft: Stainless Steel
Weight:	Encoder: ~ 148 gr (5,22 oz) Cable: 60 gr / meter (2,12 oz / meter)
Bearing Life:	> 1,9 x 10 ¹⁰ revolutions at rated load
Shaft Speed:	12.000 rpm (max.)
Starting Torque:	< 0,02 Nm (2,83 oz-in) at 25° C
Mass Moment of Inertia:	6,0 gcm ² (8,5 x 10 ⁻⁵ oz-in-sec ²)
Shaft Loads:	Axial: 150 N (33,75 lbs) max. Radial: 250 N (56 lbs) max.

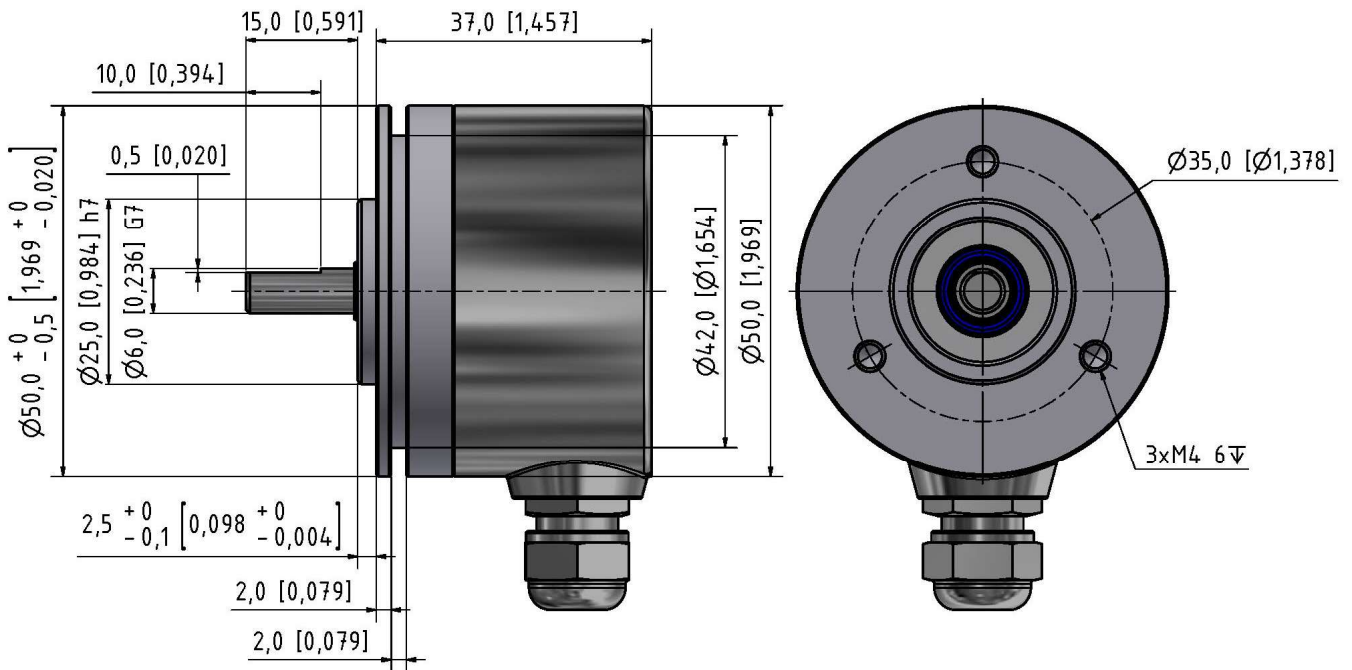
Environmental Specifications

Operating Temp.:	-40° to +85° C
Storage Temp.:	-40° to +85° C
Shock:	100 G @ 11 ms
Vibration:	10 G @ 10-2000 Hz
Bump:	10 G @ 16 ms (1000 x 3 axis)
Humidity:	98 % RH without condensation
IP Rating:	IP 65 / Nema 5 (approx.) IP 67 / Nema 6 (approx.) option

Connection Options

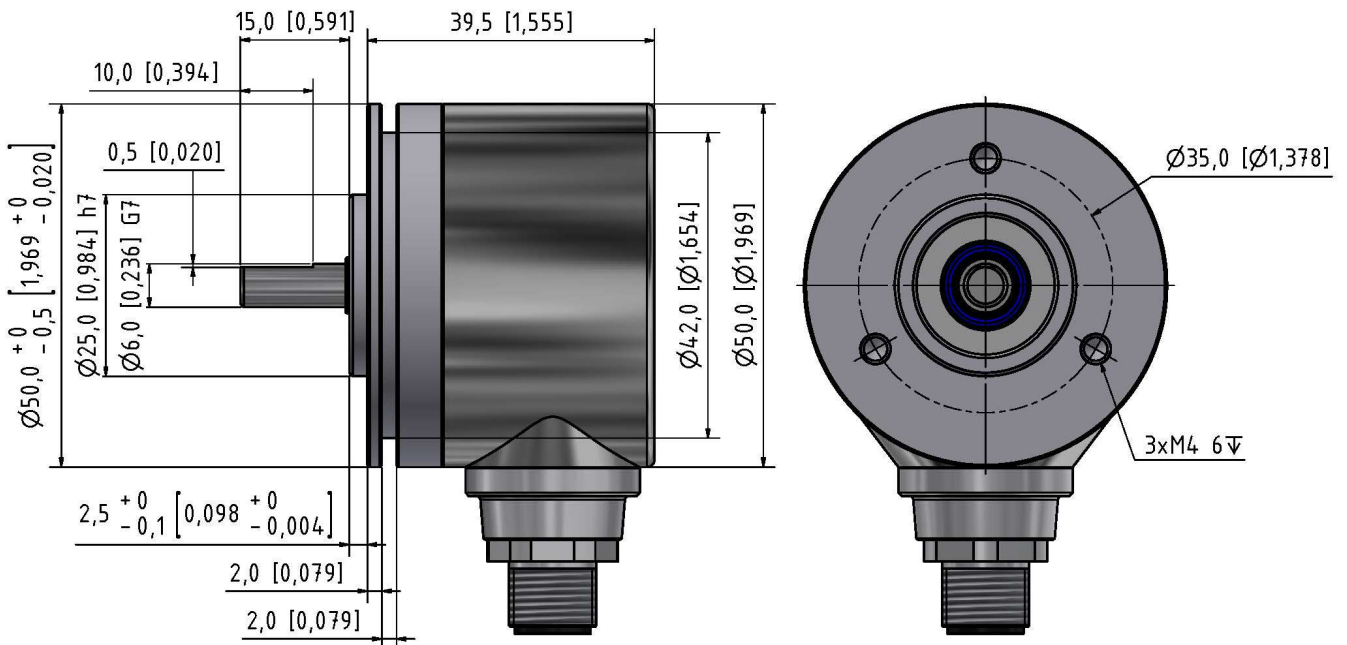
Cable:	8 leads (0,14 mm ² , 26 AWG) twisted pairs; shielded
Connector:	5-pin M12

Mechanical Dimensions



Standard Cable Gland

mm [inches]



M12 Connector

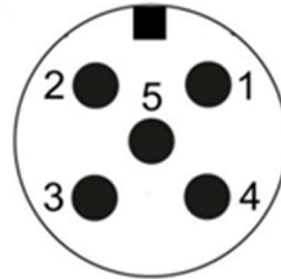
mm [inches]

Output Terminations

Cable	
Differential Input/output	
Signal	Wire Color
CAN High	White
CAN Low	Brown
CAN GND	Green
Vsup	Red
GND	Yellow
NC*	Pink
NC*	Gray
NC*	Blue

*Shield connected to case ground
 Wires marked * are not connected
 and can be cut off*

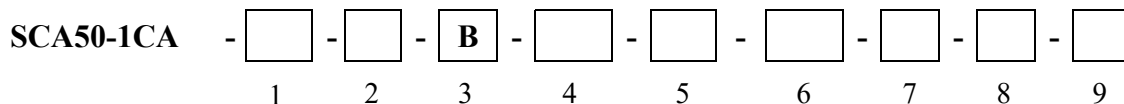
M12 Connector	
Pin	Signal
1	CAN GND
2	Vsup
3	Circuit GND
4	CAN High
5	CAN Low



*Shield must be connected to
 connector housing*

Ordering Code

Example: SCA50-1CA – 12-13 – B – 06 – 15 – 67 – 01 – S – 00



1. Revolutions

Singleturn..... **00**
 Multiturn 12 bits (4096)..... **12**
 Multiturn 13 bits (8192)..... **13**
 Multiturn 14 bits (16384).... **14**
 Multiturn 15 bits (32768).... **15**

2. Resolution

12 Bits (4096 steps/rev.)..... **12**
 13 Bits (8192 steps/rev.)..... **13**
 14 Bits (16384 steps/rev.).... **14**

3. Code

Binary **B**

4 & 5. Shaft diameter

6 mm x 15 mm

4. **5.**
06 x **15**

6. IP Rating

IP 65 **65**
 IP 67 **67**

7. Cable Length

Standard cable is 1m..... **01**
 Specify length..... **XX**
 No cable..... **00**

8. Cable Takeout

Cable
 Side radial..... **S**
Connector
 Side radial.....**S**

9. Connector

M12 5-pin **P5***
 No Connector..... **00**
 *Only side (radial) takeout