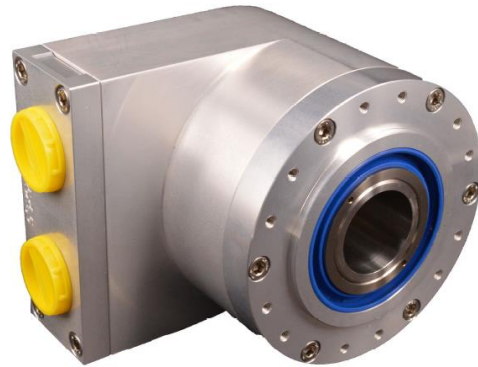


Datasheet

- Absolute Encoder: Ø108 mm
- Hollow Shaft: Ø25 mm to Ø1 ¼ inch
- Material:
Aluminium (TCP surface)
- IP-Rating: IP66, IP67 or IP68
- ATEX, IECEx, Russian and North American
Class I DIV.1 certifications



Mechanical Data

Dimension: Encoder Hollow Shaft Cable	Ø108 mm Ø25 or Ø30 mm Ø1 inch or Ø1 ¼ inch AWG26-16 0,14 mm2 (solid) 0,14 mm2 – 1,5 mm2 (standard) 0,25 mm2 – 1,5 mm2 (standard with ferrule)
Material: Housing Hollow Shaft Cap	Aluminium or Stainless Steel (AISI 303) Stainless Steel (AISI 303) Aluminium or Stainless Steel (AISI 303)
Wight: Encoder	~2400 g Aluminium ~5500 g Stainless Steel (AISI 303)
Bearing Life	>1,9 x 10 ¹⁰ Revolution (with load)
Shaft Loads	axial <250 N (56 lbs) radial <500 N (112 lbs)
Shaft Speed	<3.000 U/min ⁻¹ IP67
Starting Torque	<0,1 Nm (142 oz-in) at 25 °C
Mass Moment of Inertia	180 gcm ² (25,5 x 10 ⁻³ oz-in ²)
Humidity	98% (not condensed)
Storage Temperature	-40° ... +85°C
Operating Temperature	-40° ... +70°C
Shock	100 G / 11 ms
Vibration	10 G / 10-2000 Hz
Bump	10 G / 16 ms (1000 x 3 axis)
ATEX	Certificate number: CML 15ATEX1142X II 2 G Ex d IIB+H2 T5 Gb, II 2 D Ex tb IIIC T100°C Db, -40°C ≤ Tamb. ≤ +70°C
IECEx	Certificate number: IECEx QPS 15.0015X Ex d IIB+H2 T5 Gb, Ex tb IIIC T100°C Db, -40°C ≤ Tamb. ≤ +70°C
North America	Certificate number: LR1192-3 Class I, Division 1, Groups CD T5/ Class I, Division 2, Groups BCD T5/ Class II, Division 1, Groups EFG/ Class II, Division 2, Groups FG, Ex d IIB+H2 T5 Gb, Ex tb IIIC T100°C Db/ Class I, Zone 1, Group IIB T5/ Zone 21, Group IIIC/ AEx d IIB+H2 T5 Gb, AEx tb IIIC T100°C Db, Tamb= -40 °C to +70 °C
EAC Ex	Certificate No. RU No. 0249626 НАННО «ЦСБЭ» No.TC RU C- DK.ГБ05.В.00974 1Ex d IIC T5 Gb X Ex tb IIIC T100°C Db X -40°C<T.amb<+70°C
IP-Rating	IP66 Nema 6 IP67 Nema 6 IP68 Nema

Datasheet

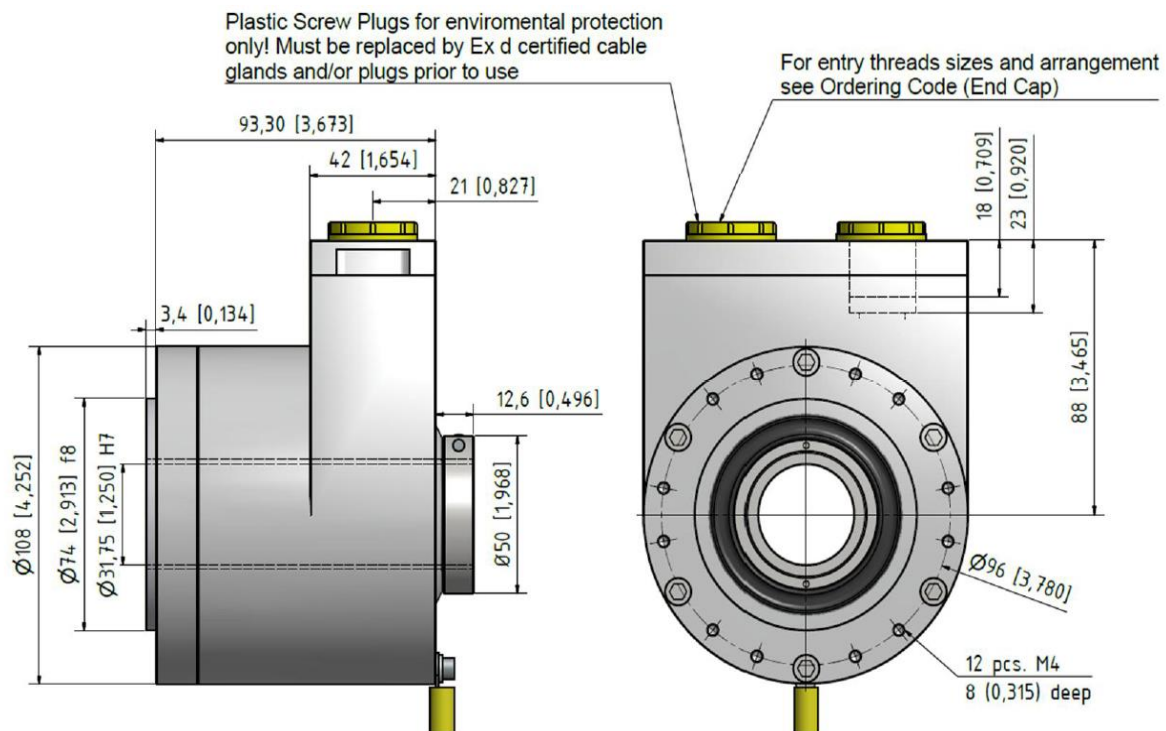
Electrical Data

Code	absolute binary
Supply Voltage	9 ... 30 VDC
Consumption	150 mA -> 10 VDC 70 mA -> 24 VDC <2,0 W
Resolution	<15 bit (32768) revolution <16 bit (65536) steps pro revolution
Interface	Profibus DP-V0 supports the profibus profile for absolute encoders Vers. 1.1 class 1 and class2
Device Addressing	Adjustable by rotary switches in the removable end cap and through the Change Station Address function over the Profibus interface
Address Range	1 to 126
Baud Rate	All standard Baud rates from 9.600 baud to 12 Mbaud
Update Rate	2000 updates per secinf
Termination Resistors	Built inside removable end cap switchable on / off
Electrical Protection	Reverse polarity output protected
Noise Imunity	Tested to EN61000-6-2: 2005 (industrial environments) Electromagnetic compatibility (EMC) an EN 61000-6-3: 2007 (residential, commercial, and light-industrial environments) for Electromagnetic compatibility (EMC)

Dimensions

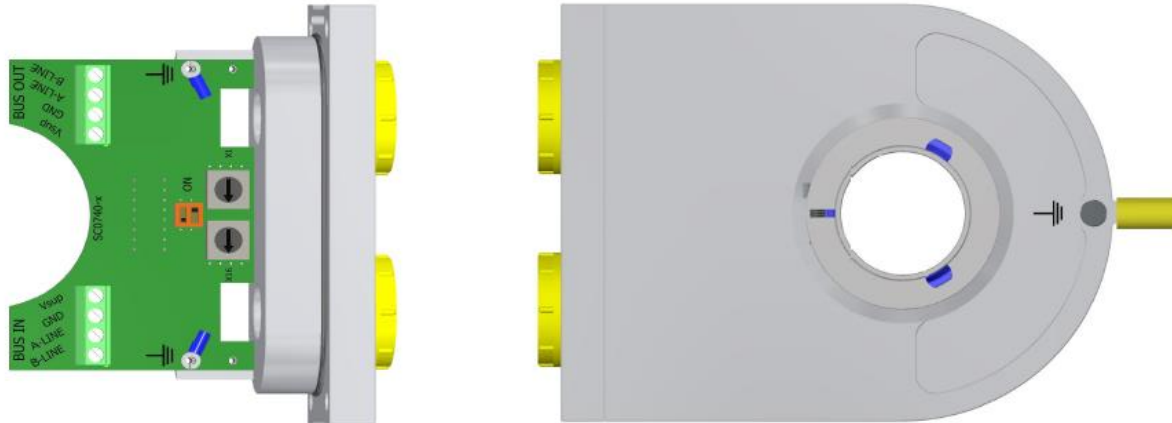
Standard Version

mm (inch)



Datasheet

Connector Pin Assignment



Assignment – Terminal Block	
BUS IN (Input)	BUS OUT (Output)
V _{sup}	power supply
GND	circuit ground (0 Volt)
A-Line	negative data for Profibus Interface
B-Line	positive data for Profibus Interface

Implementation

During the initial set-up and installation of the encoder, it is possible to set the direction of rotation and preset the encoder to zero.

Setting of Direction

The connection designed "Direction" is used to set the direction of rotation. If the line is open or connected to 5 VDC, the value will increase when the shaft is rotated clockwise when seen from the shaft end. If the line is connected to GND the value will increase when the shaft is rotated counter clockwise when seen from the shaft end.

Notice also, that the encoder must not be powered when the direction of rotation is set/changed. Notice also, that the encoder will change its position value when the direction of rotation is changed.

Preset to Zero

The connection designated "Preset" is used to preset the encoder to zero. If the line is open or connected to 5 VDC, the encoder will not be preset to zero. If the line is connected to GND, the encoder will be preset to zero. The encoder will be held at zero as long at the line is connected to GND, even though the shaft is turned. The line must be connected to GND for at least 100 mSec. for the preset to take effect. The new zero point will be stored permanently in the encoder.

Notice that the encoder must be powered when it is preset to zero.

Datasheet

Ordering Example

Type **SCH108BEX** - **1416** - **SA** - **DP** - **04-00** - **67** - **EC03** - **A** - **00**

Resolution/
Steps per Revolution
Singleturn
00 = 0

Multiturn
12 = 12 bits (4096)
14 = 14 bits (16384)
15 = 15 bits (32768)

Resolution/
Steps per Revolution
12 = 12 bits (4096 / 0,09°)
13 = 13 bits (8192 / 0,04°)
16 = 16 bits (65536 / 0,005°)

Material
AL = Aluminium
SA = Stainless Steel

Protocol
DP = Profibus

Hollow Shaft Diameter/
-Length
01-00 = 25 mm x 0
02-00 = 1 inch x 0
03-00 = 30 mm x 0
04-00 = 1 ¼ inch x
0

IP-Rating
66 = IP66
67 = IP67
68 = IP68

End Cap
EC01 = 2x ½ inch NPT
EC02 = 2x M20x1,5 deep
EC03 = 2x M14x1,5 deep
EC04 = 3x M20x15 deep

Montage Version
A = Montage A

Torque Arm
01 = 172 mm(6,8 inch)
02 = 200 mm (7,9 inch)
03 = 250 mm (9,8 inch)
01 = 290 mm (11,4 inch)
00 = without Torque arm