



Type SCH88BEX –Profibus

- Hollow Shaft Encoder – $\varnothing$ 89 mm ($\varnothing$ 3.46 in.)
- Through Hollow Shaft: $\varnothing$ 25 mm to $\varnothing$ 30 mm (1.18 in.)
- IP 66/67/68 (~ Nema 6) Environmental Protection
- Aluminium (Chromital TCP surface treatment)
- Material option Stainless Steel (AISI 316)
- ATEX, IECEx, Russian and North American Class I Div. 1 certifications



Electrical Specifications

Code:	Absolute - Binary
Interface:	Profibus DP-V0 Supports the Profibus Profile for Absolute Encoders Vers. 1.1 class 1 and class 2
Resolution:	Max. 15 bit (32768) revolutions Max. 16 bit (65536) steps per rev.
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	>1500 updates per second
Termination Resistors:	Built inside removable end cap Switchable on/off
Supply Voltage	9 V min. to 30 V max.
Current Consumption	80 mA @ $V_{sup} = 10$ V (typical) 40mA @ $V_{sup} = 24$ V (typical)
Power consumption	< 1.2 Watt
Electrical Protection:	Reverse polarity protected
Noise Immunity:	EN61000-6-2 : 2005 and EN61000-6-3 : 2007

Mechanical Specifications

Material:	Housing: Aluminum or Stainless Steel Cap: Aluminum or Stainless Steel Hollow Shaft: Stainless Steel
Weight:	Aluminum: ~ 2400 gr (84.65oz) Stainless Steel: ~ 5500 gr (194 oz)
Bearing Life:	> $1,9 \times 10^{10}$ revolutions at rated load
Hollow Shaft Speed:	3.000 rpm continuous (max.) IP 67
Starting Torque:	< 0,1 Nm (142 oz-in) at 25° C
Mass Moment of Inertia:	180g-cm ² ($25,5 \times 10^{-3}$ oz-in ²)
Shaft Loads:	Axial: 250 N (56 lbs) max. Radial: 500 N (112 lbs) max.
Shock:	100 G @ 11 ms
Vibration:	10 G @ 10-2000 Hz
Bump:	10 G @ 16 ms (1000 x 3 axis)

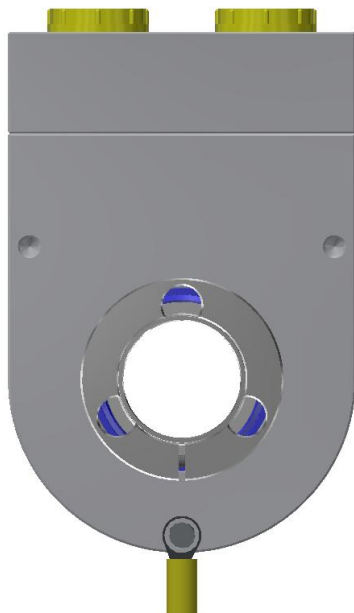
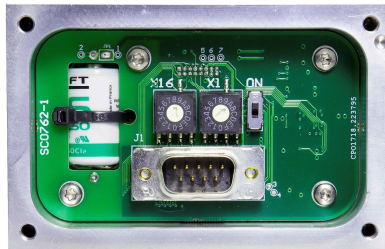
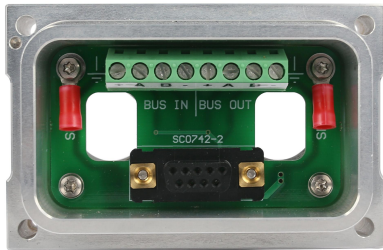
Environmental Specifications

Operating Temp.:	-40° to +70° C
Storage Temp.:	-40° to +85° C
Humidity:	98 % RH without condensation
Enclosure Rating:	IP 66 / Nema 6 (approx.) IP 67 / Nema 6 (approx.) IP 68 / Nema (approx.) /1 meter/1 hour

Certifications

ATEX:	Certificate number: CML 19ATEX1099X II 2 G Ex db IIC T5 Gb, II 2 D Ex tb IIIC T100°C Db, -40°C ≤ Tamb. ≤ +70°C
IECEX:	Certificate number: IECEX QPS 19.0003X Ex db IIC T5 Gb, Ex tb IIIC T100°C Db, -40°C ≤ Tamb. ≤ +70°C
North America:	Certificate number: LR1192-6 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 db IIC T5 Gb, Ex tb IIIC T100°C Db; Class I Zone 1, AEx db IIC T5 Gb; Zone 21, AEx tb IIIC T100°C Db; Tamb= -40 °C to +70 °C

Output Terminations in removable end cap



Terminal Block

Bus In	Bus Out	Function
+	+	Supply Voltage
A	A	Negative data for Profibus Interface
B	B	Positive data for Profibus Interface
-	-	Circuit Ground (GND)

Connect shield to red cable shoe(s) – see below:

- Access to termination, address setting switches and termination switch after end cap has been removed.
- **The internal earth connection** (red cable shoes) is 22-16 AWG.
La connexion à la terre interne (Borne rouge) est en 22-16 AWG.
- **The terminal block** is intended for installation a cable with wire size:
 - a) solid 0,14 mm² – 2,5 mm².
 - b) flexible 0,14 mm² - 1,5 mm²
 - c) stranded with ferrule 0,25 mm² - 1,5 mm².

The rated wire size is AWG 26-14.

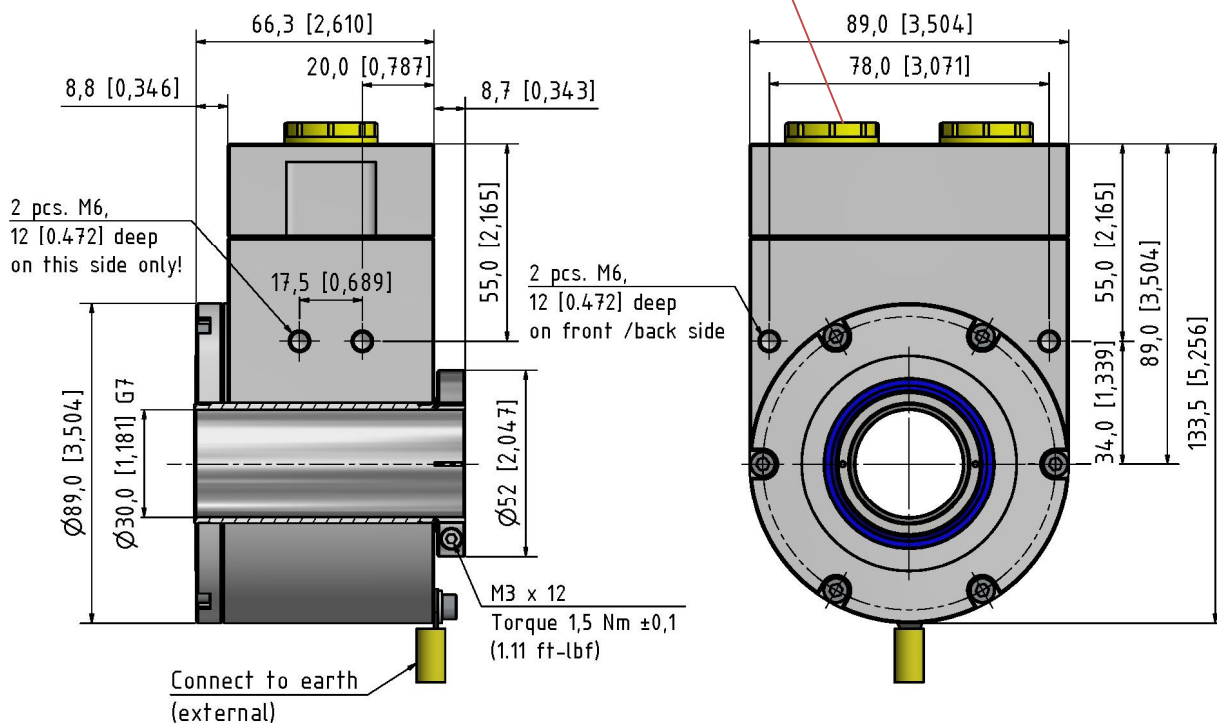
- **Le bornier** est conçu pour une installation d'un câble à la taille du fil:
 - a) rigide de 0,14 mm² - 2,5 mm²
 - b) flexible 0,14 mm² - 1,5 mm²
 - c) souple avec embout 0,25 mm² - 1,5 mm².

La taille de fil nominale est AWG 26-16.

- **The external earth connection (yellow cable shoe) is 12-10 AWG.**
La connexion de terre externe (Borne jaune) est en 12-10 AWG.

Mechanical Dimensions

**Plastic screw plugs are for cable outlet protection during shipping and storage.
Plugs must be replaced by a suitably certified cable glands prior to use.**



Standard End Cap Type EC02

mm (inches)

Ordering Code

Example: SCH88BEX-01P- 12-13 – AL – DP – 03 – 00 – 67 – EC02 – A

SCH88BEX-01P - - - - DP - - 00 - - - A

1 2 3 4 5 6 7 8

1. Revolution

Singleturn**00**
 Multiturn 12 bits (4096) **12**
 Multiturn 14 bits (16384)..... **14**
 Multiturn 15 bits (32468)..... **15**

2. Resolution

12 Bits (4096 steps; 0,09°)**12**
 13 Bits (8192 steps; 0,04°)**13**
 16 Bits (65536 steps; 0,005°)..**16**

3. Composition

Aluminum **AL**

4. Output

Profibus **DP**

6. IP Rating

IP 66 **66**
 IP 67 **67**
 IP 68*..... **68**

*1 meter/1hour

8. Flange

A..... **A**

5. Hollow Shaft (diameter)

25 mm**01**
 1 inch**02**
 30 mm**03**

7. End Cap

M20x1,5 2 threaded outlets **EC02**

See **Accessories** for Anti-rotation devices (Springs/Torque Arms) and mounting examples.