



2REX-H-SA with cable or removable end cap

- Hollow Shaft Encoder - Ø 68 mm
- Hollow bore - Ø10 mm to Ø15 mm
- Resolution up to 10,000 ppr
- Delivered with cable or removable end cap option for on-site installation
- ATEX, IECEx, EAC Ex certified

Electrical Specifications

Code:	Incremental
Resolution:	1 to 10,000 ppr (pulses per revolution)
Supply Voltage:	4.5 Vdc min. to 30 Vdc max. ** (45 mA max. - no load)
Output Voltage:	Low: 500 mV max. at 10 mA High: ($V_{in} - 0.6$) at -10 mA ($V_{in} - 1.3$) at -25 mA
Output Current:	30 mA max. load per output channel **
Frequency Response:	300 kHz max. **
Output Format:	Two channel (A, B) quadrature with Index (Z) and optional complementary (A-, B-, Z-) outputs
Phase Sense:	A leads B clockwise (CW) from the mounting end of the encoder
Index:	Gated with Channels A and B high
Accuracy:	+/- 0.8 arc-min.
Outputs:	ASIC Push-pull and Differential OL7272 Push-pull and Differential Line Driver 26C31 Differential Line Driver 5V output (with 5V input)
Electrical Protection:	Output short circuit protected Reverse polarity protected
Noise Immunity:	EN 61000-6-2: 2005 (industrial environments) Electromagnetic compatibility (EMC) EN 61000-6-3: 2007 (residential, commercial, and light-industrial environments) for Electromagnetic compatibility (EMC)

Mechanical Specifications

Material:	Housing: Stainless steel AISI 316 (SA) Cap: Stainless steel AISI 316 (SA) Hollow Shaft: Stainless steel AISI 316 (SA)
Weight:	Encoder: Approx. 1325 gr (47.44 oz) Cable: 50 gr / meter (1.76 oz / meter)
Bearing Life:	> 1.9×10^{10} revolutions at rated load
Shaft Speed:	3,000 rpm continuous (max.) IP 67 T4
Starting Torque:	< 0.1 Nm (14.16 oz-in) at 25° C IP 67
Mass Moment of Inertia:	50 gcm ² (7.08×10^{-4} oz-in-sec ²)
Hollow Shaft Loads:	Axial 50 N (11.25 lbs) max. Radial 100 N (22.50 lbs) max.

Environmental Specifications

Operating Temp.:	-40° to +70° C
Storage Temp.:	-40° to +85° C
Shock:	100 G / 11 ms
Vibration:	10-2000 Hz / 10 G
Bump:	10 G / 16 ms (1000 x 3 axis)
Humidity:	98 % RH without condensation
Enclosure Rating:	IP 64 / Nema 4 (approx.) option IP 65 / Nema 4 (approx.) option IP 66 / Nema 6 (approx.) IP 67 / Nema 6 (approx.) option

Connection Options

Cable:	MUD resistant (NEK 606) & halogen free, shielded 4x2x0,14 mm ² , 26 AWG, 4 twisted pairs; See Table 2
Terminal Block: (Removable End Cap)	See Table 3

**= It is recommended user not to combine max. Value for all 3 parameters

Certifications

ATEX:	Certificate No.: ITS09ATEX16847X II 2 G Ex db IIC T5 II 2 D Ex tb IIIC T100°C Db -40°C < Tamb < +70°C
IECEX:	Certificate No.: IECEX ITS 10.0015X Ex db IIC T5 Gb Ex tb IIIC T100°C Db -40°C < Tamb < +70°C
EAC Ex:	НАННО «ЦСВЭ» No. EAЭС RU C-DK.AA87.B.00266/19 IEx db IIC T5 Gb X, Ex tb IIIC T100°C Db X -40°C < T.amb < +70°C

Output waveform

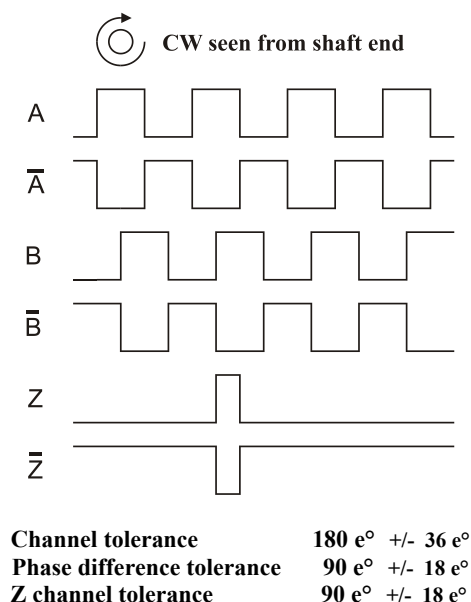


Table 1. Disk Resolutions (pulses per revolution)

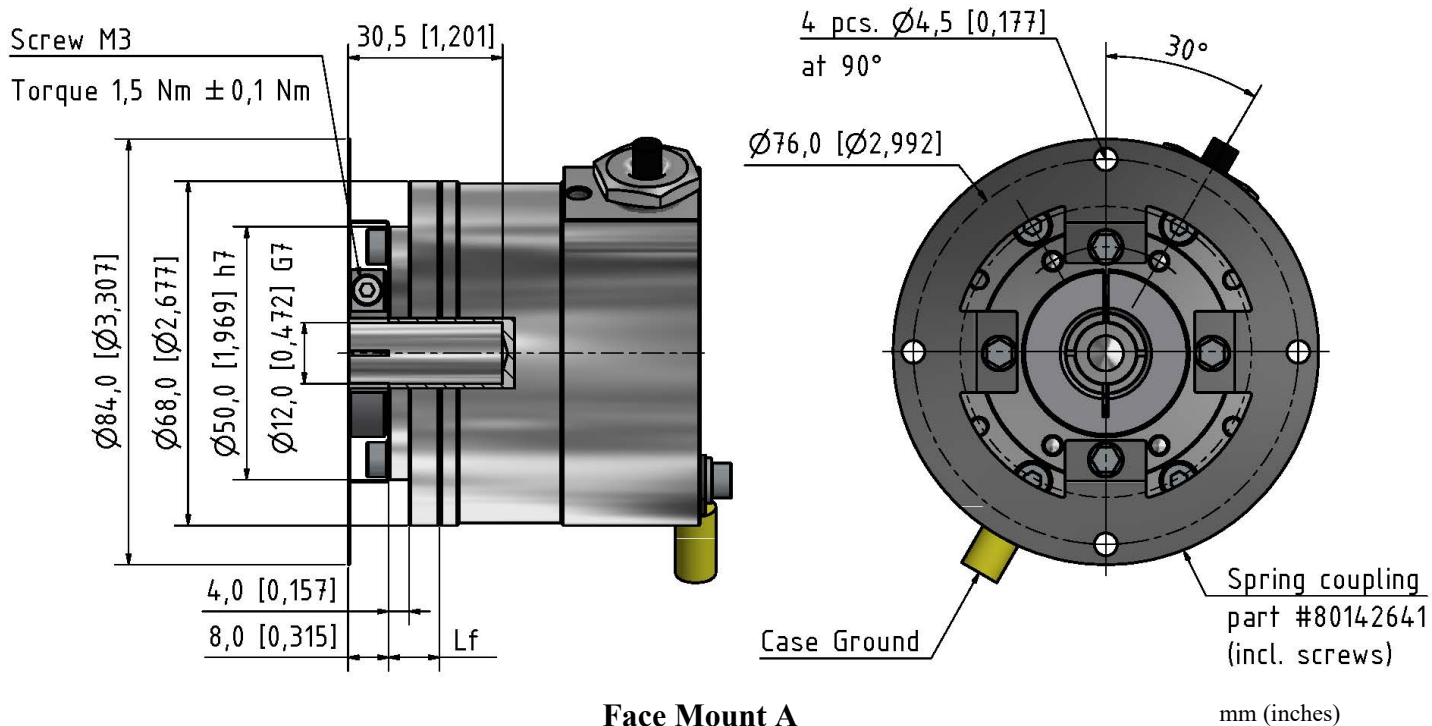
1	32	125	720	3000
2	36	150	800	3072
5	40	180	1000	3600
6	45	200	1000	4000
7	47	250	1024	4096
8	50	256	1131	5000
10	60	300	1200	8192
12	64	360	1250	9000*
15	70	400	1270	10000*
16	75	455	1500	
18	80	500	2000	
20	90	512	2048	
25	100	600	2400	
30	120	635	2500	

Other Options on request

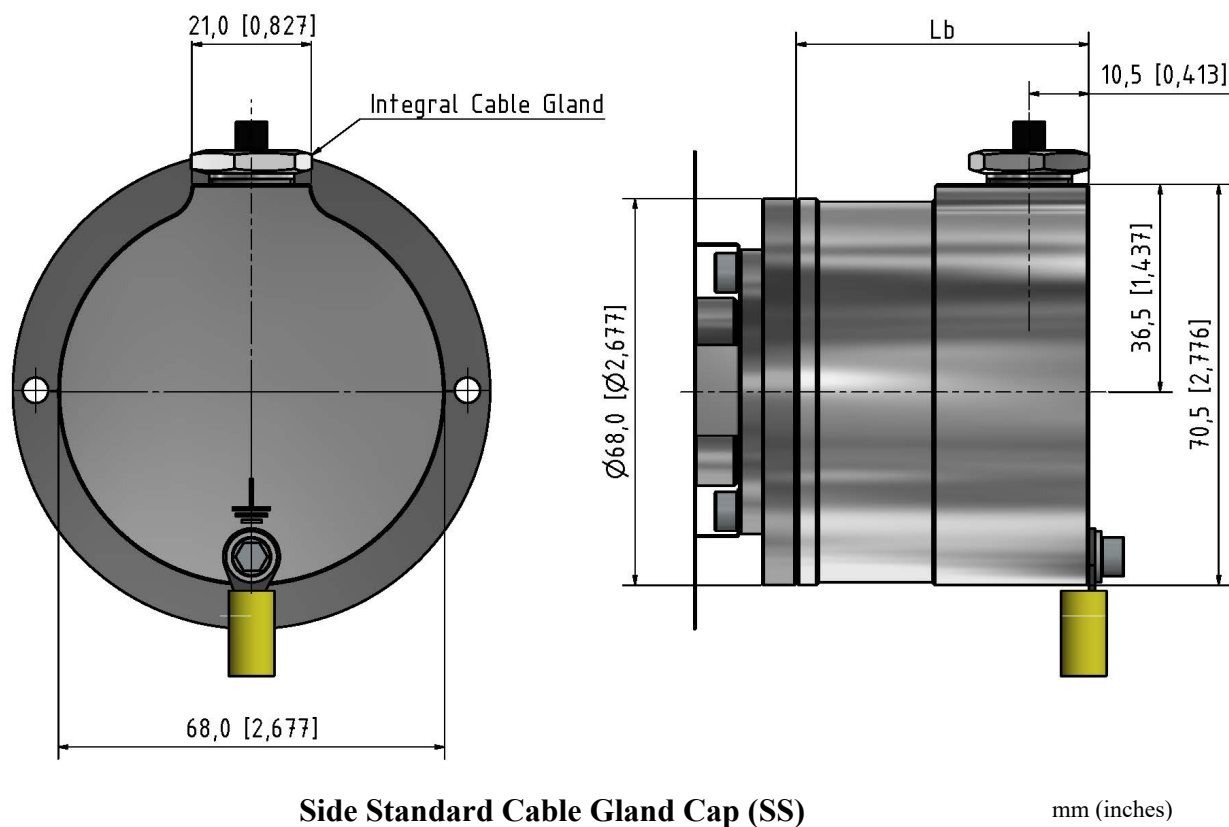
Pulses per revolution,
Min. 1 – Max. 10.000

* Operating temperature: -20° C to 50° C

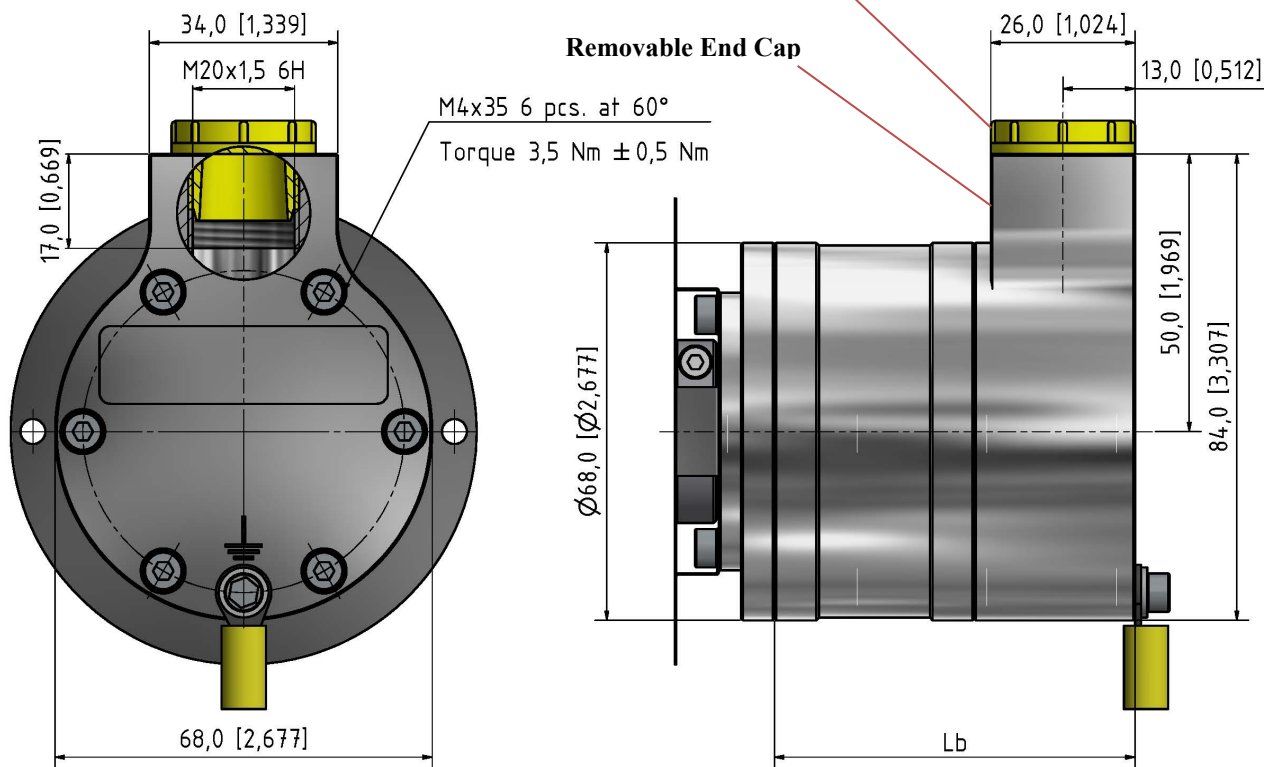
Face Mount



Caps with Cable and Removable End Cap



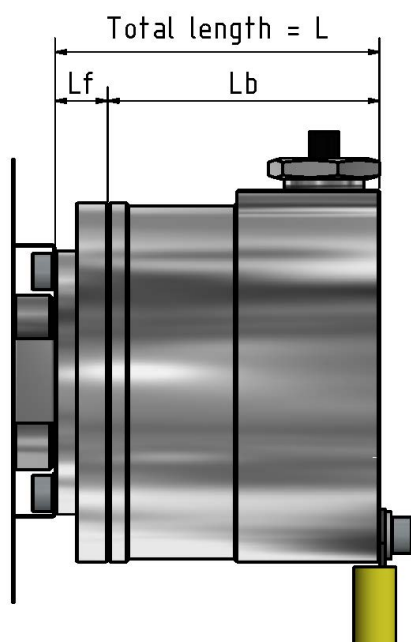
Plastic screw plug is for cable outlet protection during shipping and storage.
 Plug must be replaced by a suitably certified cable gland prior to use.



Removable End Cap Side Standard (EC01)

mm (inches)

Encoder Length



Total Encoder Length $L = L_b + L_f$

Cap	Face mount A
SS	61,5 mm (2,42 in)
EC01	75,0 mm (2,95 in)

Cap + Face Mount = Total Encoder Length

Table 2. Cable Output

Channel	Standard Cable	
	Standard Output	Differential Output
Channel	Wire Color	Wire Color
A	Pink	Pink
A -	Gray*	Gray
B	Green	Green
B -	Yellow*	Yellow
Z	White	White
Z -	Brown*	Brown
Vsup	Red	Red
GND	Blue	Blue

* Gray, Yellow, and Brown are internally connected to Circuit Ground

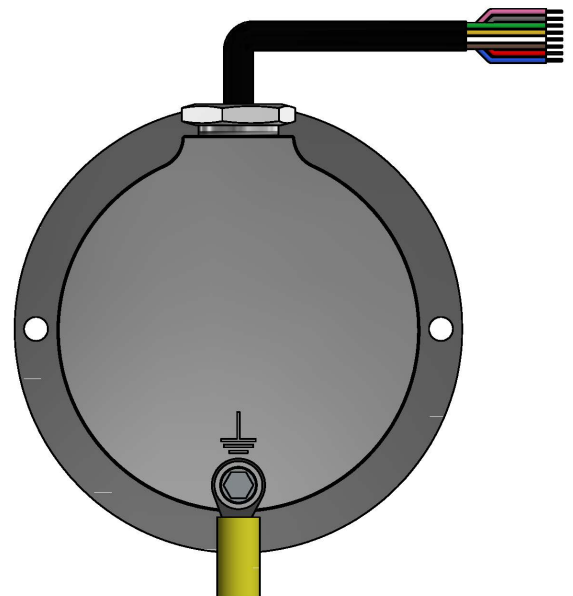
GND = Circuit Ground

Shield connected to Case Ground

Cable: **MUD resistant (NEK 606) & halogen free, shielded**

4x2x0,14 mm², 26 AWG, 4 twisted pairs;

Yellow cable shoe: AWG 12-10


Table 3. Terminal Block Outputs (Removable End Cap)

Position	Standard Output	Differential Output
	Channel	Channel
1	NC	Z -
2	Z	Z
3	NC	B -
4	B	B
5	NC	A -
6	A	A
7	Vsup	Vsup
8	GND	GND
9	NC	NC

GND = Circuit Ground

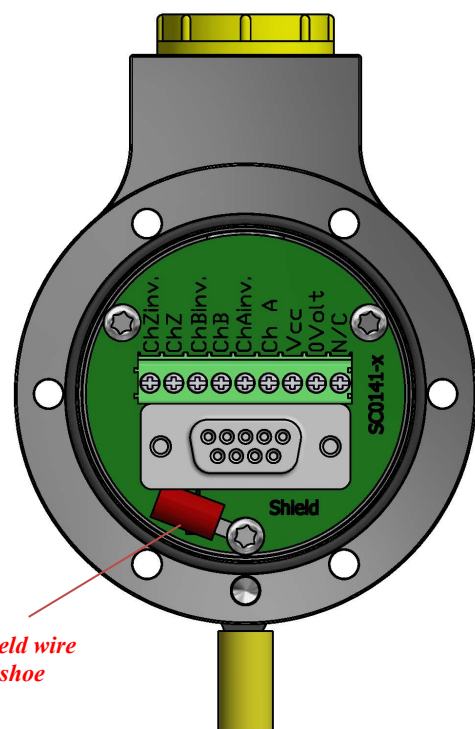
Shield = Case Ground

Connect shield wire to the cable shoe

Wire conductor size: AWG 26 to 16
0.14 mm² to 1.5 mm²

Red cable shoe: AWG 22-16

Yellow cable shoe: AWG 12-10



Connect shield wire to the cable shoe

Example: 2REX - H - 1024 - SA - D - 12 - 30 - 67 - 01 - SS - A - 05