


**ATEX**

EN 60079



## Type 2REX-H

- EX-Proof Hollow Shaft Encoder -  $\phi$  68
- Hollow bore -  $\phi$  10 mm to  $\phi$  14 mm
- Resolution up to 10,000 ppr
- IP 66 (IP 67 option)
- 22 micron Anodization - "Seawater-proof"
- ATEX certified EX II 2 G Ex d IIC T4 Gb  
ATEX certified EX II 2 D Ex tb IIIB Db IP6\*

### Electrical Specifications

<b>Code:</b>	Incremental
<b>Resolution:</b>	1 to 10,000 ppr (pulses per revolution)
<b>Supply Voltage:</b>	4.5 Vdc min. to 30 Vdc max. (45 mA max. - no load)
<b>Output Voltage:</b>	Low: 500 mV max. at 10 mA High: ( $V_{in} - 0.6$ ) at -10 mA ( $V_{in} - 1.3$ ) at -25 mA
<b>Output Current:</b>	30 mA max. load per output channel
<b>Frequency Response:</b>	300 kHz max.
<b>Output Format:</b>	Two channel (A, B) quadrature with Index (Z) and optional complementary (A-, B-, Z-) outputs
<b>Phase Sense:</b>	A leads B clockwise (CW) from the mounting end of the encoder
<b>Index:</b>	Gated with Channels A and B high
<b>Accuracy:</b>	+/- 0.8 arc-min.
<b>Outputs:</b>	ASIC Push-pull and Differential OL7272 Push-pull and Differential Line Driver 26C31 Differential Line Driver 5V output (with 5V input)
<b>Electrical Protection:</b>	Reverse polarity and output short circuit protected
<b>Noise Immunity:</b>	Tested to EN61000-6-2 : 2005 (industrial environments) Electromagnetic compatibility (EMC) and EN 61000-6-3 : 2007 (residential, commercial, and light-industrial environments) for Electromagnetic compatibility (EMC)

### Mechanical Specifications

<b>Material:</b>	Housing: Aluminum Cap: Aluminum Hollow Shaft: Stainless steel (AISI 303)
<b>Weight:</b>	Encoder: Approx. 540 gr (19 oz) Cable: 50 gr / meter (1.76 oz / meter)
<b>Bearing Life:</b>	> $1.9 \times 10^{10}$ revolutions at rated load
<b>Shaft Speed:</b>	3,000 rpm continuous (max.) IP 67 T4
<b>Starting Torque:</b>	< 0.1 Nm (14.16 oz-in) at 25° C IP 67
<b>Mass Moment of Inertia:</b>	50 gcm <sup>2</sup> ( $7.08 \times 10^{-4}$ oz-in-sec <sup>2</sup> )
<b>Shaft Loads:</b>	Axial 50 N (11.25 lbs) max. Radial 100 N (22.50 lbs) max.

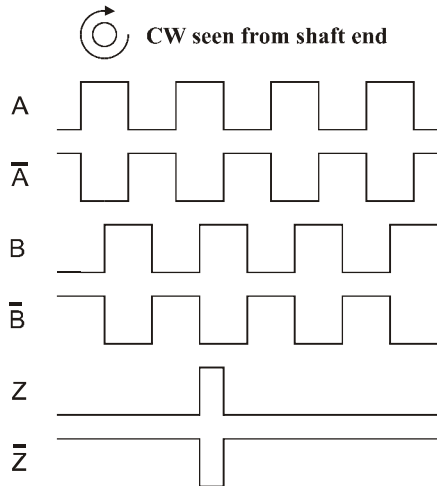
### Environmental Specifications

<b>Operating Temp.:</b>	-40° to +70° C
<b>Storage Temp.:</b>	-40° to +85° C
<b>Shock:</b>	100 G / 11 ms
<b>Vibration:</b>	10-2000 Hz / 10 G
<b>Bump:</b>	10 G / 16 ms (1000 x 3 axis)
<b>Humidity:</b>	98 % RH without condensation
<b>Enclosure Rating:</b>	IP 66 / Nema 6 (approx.) IP 67 / Nema 6 (approx.) - option
<b>Certification</b>	ATEX EX II 2 G Ex d IIC T4 Gb ATEX EX II 2 D Ex tb IIIB IP6*  (See website for Certifications)

### Connection Options

<b>Cable:</b>	8 leads (0.14 mm <sup>2</sup> , 26 AWG) twisted pairs; shielded; halogen free
<b>Cable Glands:</b>	9-position terminal block (inside cap) M20 cable gland (fits cable $\phi$ 11 - 14.5 mm)

## Output waveform



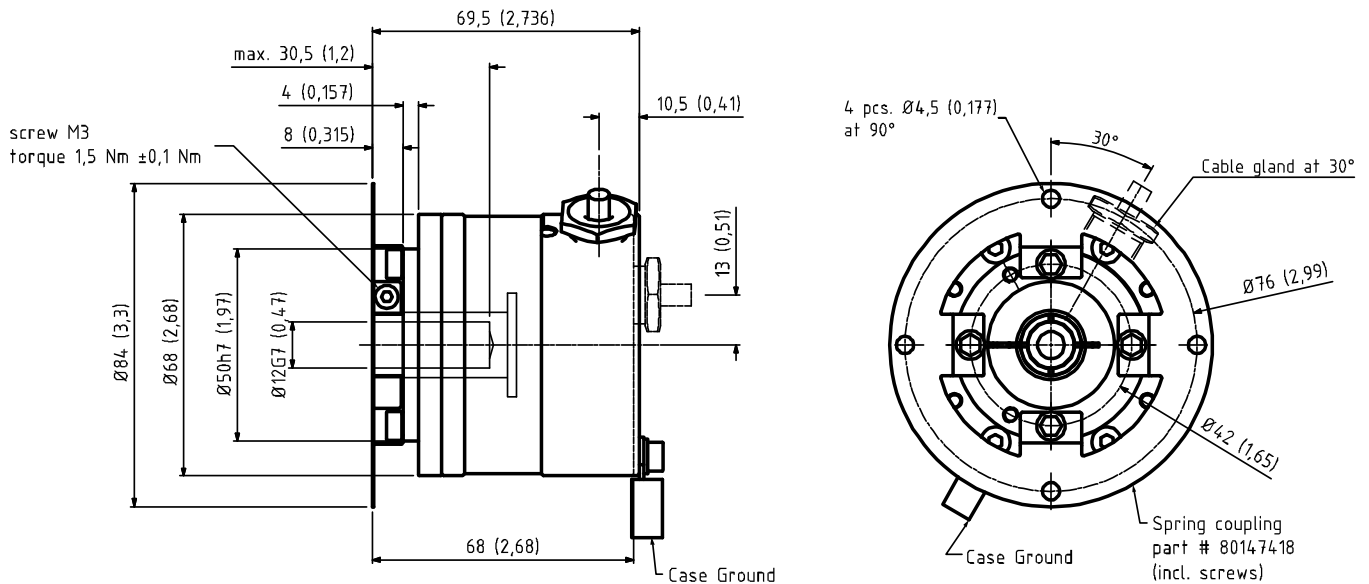
Channel tolerance  $180^\circ \pm 36^\circ$   
 Phase difference tolerance  $90^\circ \pm 18^\circ$   
 Z channel tolerance  $90^\circ \pm 18^\circ$

## Disk Resolutions (pulses per revolution)

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

Z channel not available for resolutions above 5000 ppr

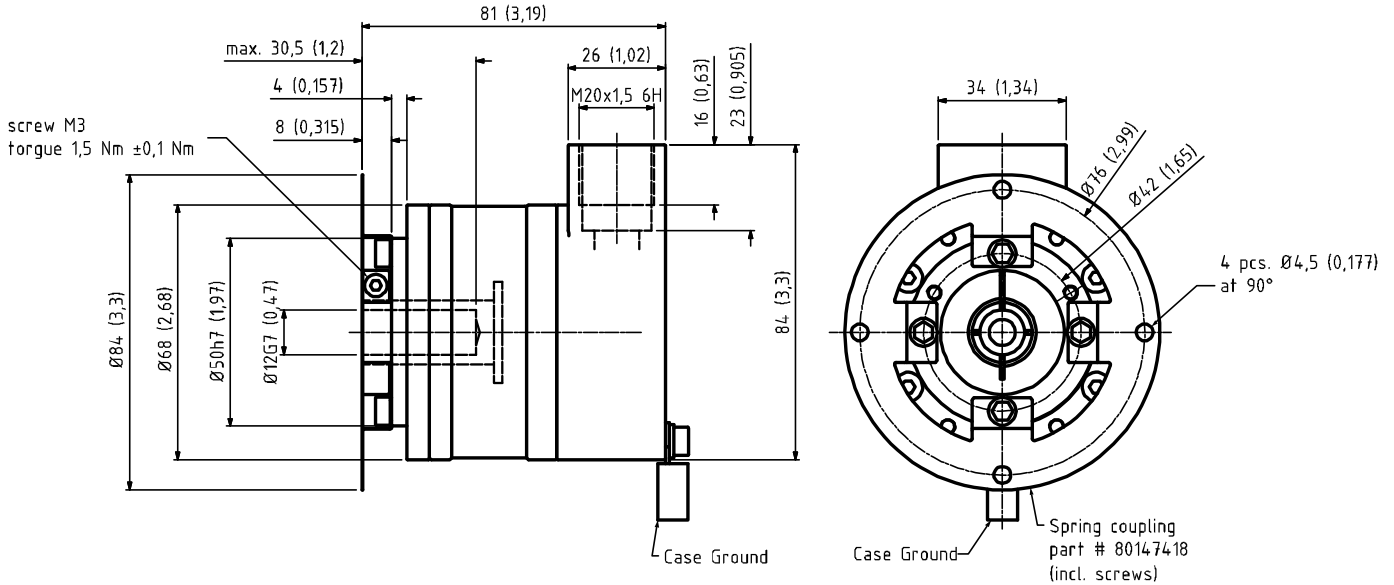
## Mechanical Dimensions



Flange A option

Standard Cable Gland; Side (SS) or Back (BS)

mm (inches)



Flange A option

Removable End Cap (EC01)

mm (inches)

## Output Terminations

### Removable End Cap

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

\* Do not attach any wires to terminal block

GND = Circuit Ground Shield = Case Ground

