



EN 60079



Type REXM-H-SA

- EX-Proof Stainless Steel Hollow Shaft Encoder for Mining Applications - $\varnothing$ 68 mm
- Hollow bore - $\varnothing$ 10 mm to $\varnothing$ 15 mm
- IP 66 (IP 67 option)
- ATEX certified EX-Proof
IECEx certified EX-Proof
EACEx certified EX-Proof

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 (ASIC and MP (OL7272) output only)
Noise Immunity:	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)

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

Mechanical Specifications

Material:	Housing: AISI 316 Cap: AISI 316 Hollow Shaft: AISI 316
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)
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 66 / Nema 6 (approx.) IP 67 / Nema 6 (approx.) - option

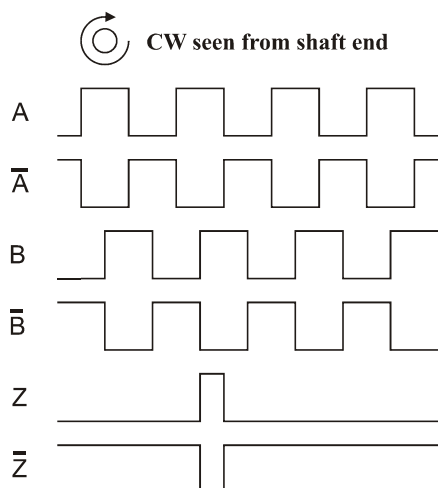
Connection Options

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

Certifications

ATEX:	Certificate No.: ITS09ATEX16846X I M2 Ex d I Mb II 2 G Ex d IIC T5 Gb II 2 D Ex tb IIIC T100°C Db -40° to +70°C
IECEX:	Certificate No.: IECEX ITS 10.0014X Ex d I Mb Ex d IIC T5 Gb Ex tb IIIC T100°C Db -40°C to +70°C
EACEx:	Certificate No.: RU No. 0249626 НАННО «ИЦБЭ» No.TC RU C-DK.ГБ05.В.00974 PB Ex db I Mb X 1Ex d IIC T5 Gb X Ex tb IIIC T100°C Db X -40°C<T.amb<+70°C

Output waveform



Channel tolerance 180 e° +/- 36 e°
Phase difference tolerance 90 e° +/- 18 e°
Z channel tolerance 90 e° +/- 18 e°

Disk Resolutions (pulses per revolution)

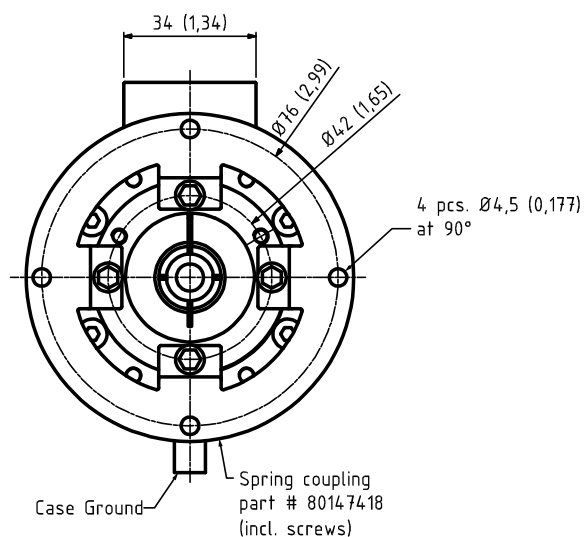
1	30	100	512	2048
2	32	120	600	2400
5	36	125	635	2500
6	40	150	720	3000
7	45	180	800	3072
8	47	200	1000	3600
10	50	250	1000	4000
12	60	256	1024	4096
15	64	300	1131	5000
16	70	360	1200	8192
18	75	400	1270	9000*
20	80	455	1500	10000*
25	90	500	2000	

Other Options on request

Pulses per revolution,
 Min. 1 – Max. 10.000

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

mm (inches)

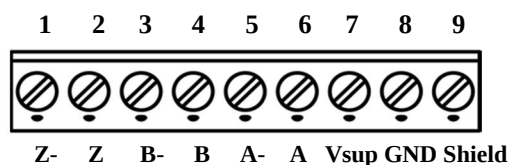


mm (inches)

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

Channel	Standard Cable	
	Standard Output	Differential Output
	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

Ordering Code

Example: REXM – H – 1024 – SA – D – 12 – 30 – 67 – 01 – SS – A – 05

Type

REXM - H			SA			30				A																									
Pulses per Revolution	Composition		Output	Hollow Shaft Dia.	Hollow Shaft Length	IP Rating	Cable Length	Cable Takeout or End Cap	Flange	Spring Coupling																									
See table	Stainless Steel (AISI 316) SA		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Standard</td><td>N</td></tr> <tr><td>Differential</td><td>D</td></tr> <tr><td>26C31 Line Driver 5V only</td><td>L</td></tr> <tr><td>OL 7272 Line Driver</td><td>M</td></tr> </table>	Standard	N	Differential	D	26C31 Line Driver 5V only	L	OL 7272 Line Driver	M	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>IP 66</td><td>66</td></tr> <tr><td>IP 67</td><td>67</td></tr> </table>	IP 66	66	IP 67	67	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Standard is 1 meter</td><td>01</td></tr> <tr><td>Specify length</td><td>XX</td></tr> <tr><td>No Cable (End Cap)</td><td>00</td></tr> </table>	Standard is 1 meter	01	Specify length	XX	No Cable (End Cap)	00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Side (Standard)</td><td>SS</td></tr> <tr><td>Back (Standard)</td><td>BS</td></tr> <tr><td>End Cap (M20 x 1.5 cable gland)</td><td>EC01</td></tr> </table>	Side (Standard)	SS	Back (Standard)	BS	End Cap (M20 x 1.5 cable gland)	EC01	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>80142641 Face SA</td><td>05</td></tr> <tr><td>No spring coupling</td><td>00</td></tr> </table>	80142641 Face SA	05	No spring coupling	00
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See Accessories for drawings

Other options on request:
Please contact Scancon A/S