

Type 2RK-SA IP69K



- Shaft Encoder - \varnothing 58 mm
- Shaft: \varnothing 1/4" to \varnothing 10 mm
- Resolution up to 12.500 ppr
- Standard IP69K
- Stainless Steel: AISI316L / EN 1.4404

Electrical Specifications

Code:	Incremental
Resolution:	1 to 12.500 ppr (pulses per revolution)
Supply Voltage:	4,5 Vdc min. to 30 Vdc max. (35 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. / $\pm 0,013^\circ$
Outputs:	ASIC Push pull and Differential OL7272 Push-pull and Differential Line Driver 26C31 Differential Line Driver 5V output (with 5V input)
Electrical Protection:	Reverse polarity and output short circuit protected
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)

Mechanical Specifications

Material:	Housing: AISI316 Cap: AISI316 Shaft: Stainless steel AISI 316
Weight:	Encoder: ~ 190 gr (6,7 oz) Cable: 60 gr / meter (2,12 oz / meter)
Bearing Life:	> $1,9 \times 10^{10}$ revolutions at rated load
Shaft Speed:	4.500 rpm (max. sustained) IP 65 3.000 rpm (max. sustained) IP 66 / IP 67
Starting Torque:	< 0,02 Nm (2,83 oz-in) at 25° C
Mass Moment of Inertia:	6,0 gcm ² ($8,5 \times 10^{-5}$ oz-in-sec ²)
Shaft Loads:	Axial: 150 N (33,75 lbs) max. Radial: 250 N (56 lbs) max.

Environmental Specifications

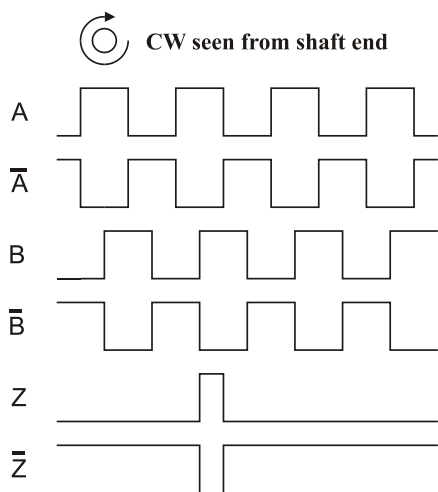
Operating Temp.:	-40° to +85° C
Storage Temp.:	-40° to +85° C
Shock:	100 G / 11 ms
Vibration:	10-2000 Hz / 10 G
Bump:	10 G / 16 ms (1000 x 3 axis)
Humidity:	98 % RH without condensation
IP Rating:	IP 69K / Nema 4X (approx.)

Connection Options

Cable:	8 leads (0,14 mm ² , 26 AWG) twisted pairs; shielded
Connector:	5-pin M12 8-pin M12 9-pin M23 12-pin M23

** = It is recommended user not to combine max. values for all 3 parameter

Output waveform



Channel tolerance $180\text{ e}^\circ \pm 36\text{ e}^\circ$
Phase difference tolerance $90\text{ e}^\circ \pm 18\text{ e}^\circ$
Z channel tolerance $90\text{ e}^\circ \pm 18\text{ e}^\circ$

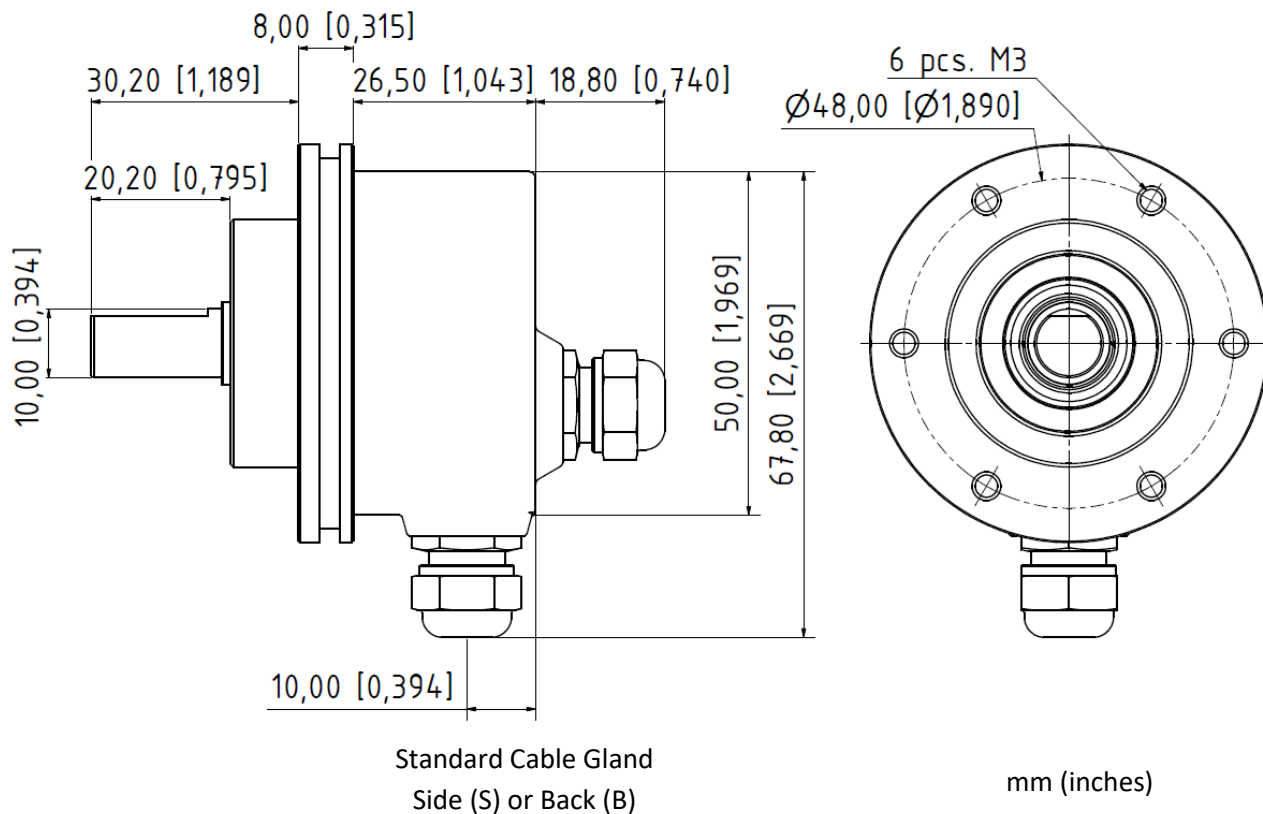
Disk Resolutions (Pulses per revolution)

1	32	125	720	3072
2	36	150	800	3600
5	40	180	1000	4000
6	45	200	1024	4096
7	47	250	1131	5000
8	50	256	1200	8192
10	60	300	1250	9000*
12	64	360	1270	10000*
15	70	400	1500	12500*
16	75	455	2000	
18	80	500	2048	
20	90	512	2400	
25	100	600	2500	
30	120	635	3000	

Other options on request
 Pulses per revolution,
 min. 1 – max. 12.500

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

Mechanical Dimensions



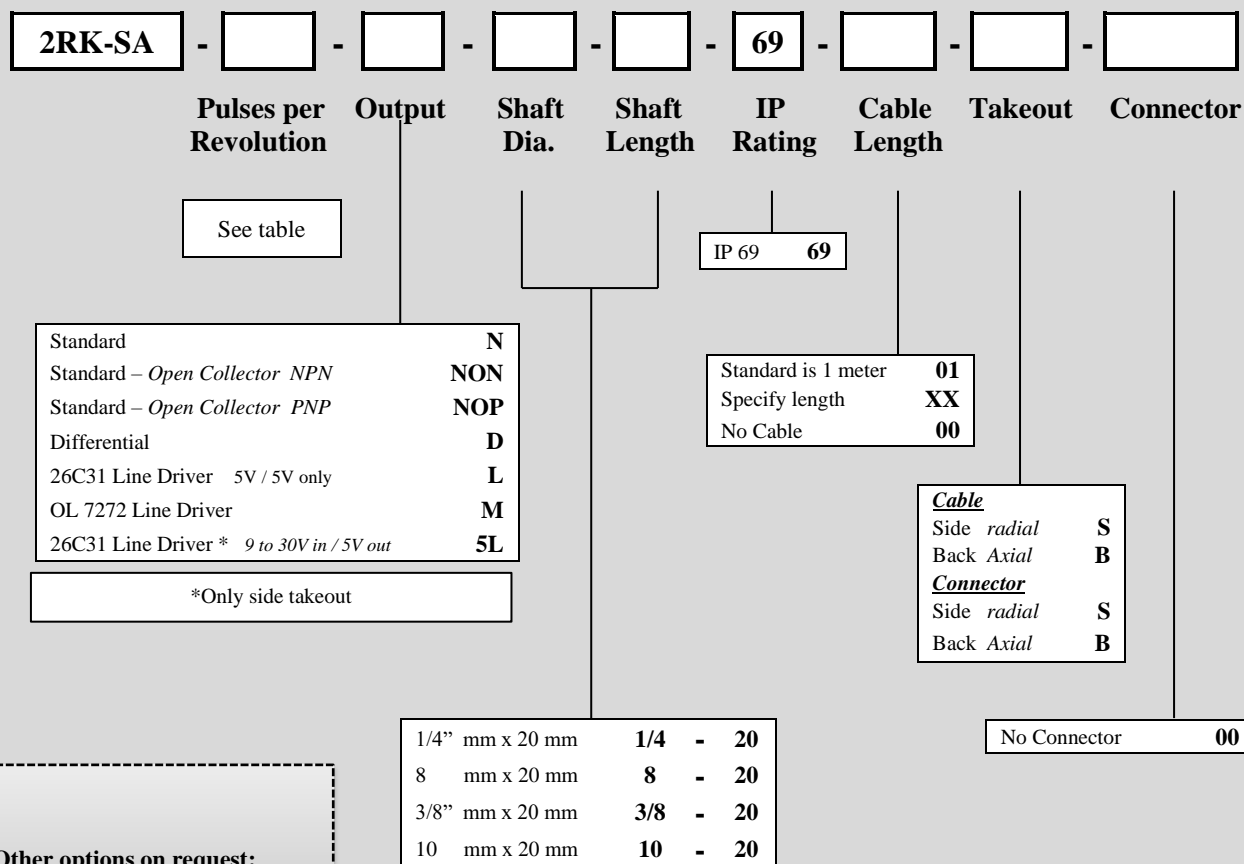
Output Terminations

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

* Internally connected to GND

Ordering Code

Example: 2RK - SA- 1024 - D - 8 - 20 - 69 - 01 - S - 00



Other options on request:
Please contact Scancon A/S

See Accessories for drawings