



Type 2RMHD

- Shaft Encoder
- Shaft - $\varnothing 12$ and $\varnothing 15$ mm
- Resolution up to 7.500 ppr
- IP 65

Electrical Specifications

Code:	Incremental
Resolution:	1 to 7500 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:	20 mA max. load per output channel **
Frequency Response:	200 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:	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: Aluminum Cap: Aluminum Hollow Shaft: Aisi 303
Weight:	Encoder: ~ 715 gr (25,2 oz) Cable: 50 gr / meter (1,76 oz / meter)
Bearing Life:	> $1,9 \times 10^{10}$ revolutions at rated load
Shaft Speed:	3 000 rpm (max.)
Starting Torque:	< 0,1 Nm (14,2 oz-in) at 25° C
Mass Moment of Inertia:	40 gcm ² ($5,7 \times 10^{-4}$ oz-in-sec ²)
Shaft Loads:	Axial: 250 N (56 lbs) max. Radial: 500 N (112 lbs) max.

Environmental Specifications

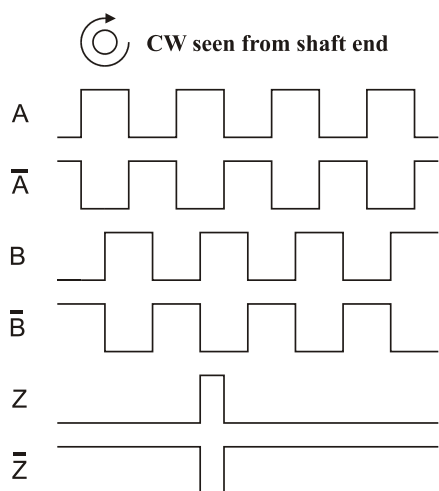
Operating Temp.:	-40° to +85° C
Storage Temp.:	-40° to +85° C
Shock:	100 G / 11 ms
Vibration:	10-2000 Hz / 10 G
Bump:	10 G / 16 ms (1000 x 3 axis)
Humidity:	98 % RH without condensation
IP Rating:	IP 65 / Nema 4 (approx.)

Connection Options

Cable:	8 leads (0,05 mm ² , 30 AWG) - Differential 5 leads (0,14 mm ² , 26 AWG) - Standard twisted pairs; shielded
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** = 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 (pluses per revolution)

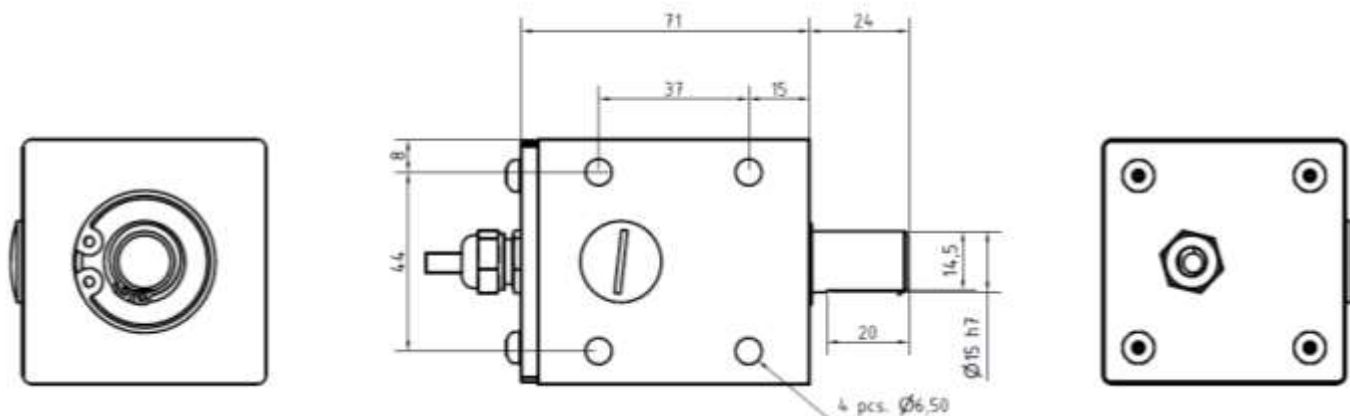
1	30	128	500	2500
4	36	150	512	3000
10	50	180	600	3600
11	60	200	1000	5000
12	64	250	1024	7500*
15	75	256	1250	
18	90	300	1800	
20	100	360	2000	
25	125	400	2048	

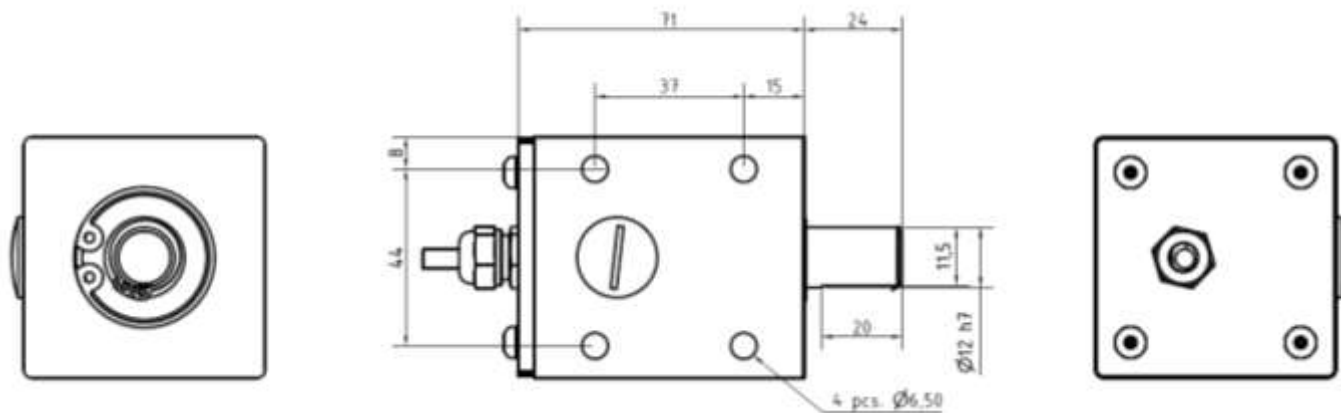
Other options on request

Pulses per revolution,
 min. 1 – max. 7.500

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

Mechanical Dimensions





Output Terminations

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

GND = Circuit Ground

