

Characteristics

- Heavy Duty Encoder with Shaft
- Shaft: Ø12 mm or Ø15 mm
- Resolution up to 7.500 ppr
- IP65



Mechanical data

Weight: Encoder	~715 gr
Cable	60 gr / Meter
Material: Housing	Aluminium
Shaft	Stainless Steel (AISI 303)
Cap	Aluminium
Bearing Life	>1,9 x 10 ¹⁰ revolutions at rated load
Shaft Loads	axial: max. 250 N radial: max. 500 N
Shaft Speed	max. 3.000 rpm
Starting Torque	< 0,1 Nm at 25°C
Mass Moment of Inertia	40 gcm ²
Operating Temp.	-40°C to +85°C
Storage Temp.	-40°C to +85°C
Shock	100 G / 11 ms
Vibration	10 - 2.000 Hz / 10 G
Bump	10 G / 16 ms (1.000 x 3 axis)
Humidity	98% RH without condensation
IP Rating	IP65

Electrical data

Output	Incremental	
Resolution (pulses per revolution) operating temperature: -20°C to 50°C	min. 1, 4, 10, 11, 12, 15, 20, 25, 30, 36, 50, 60, 64, 75, 90, 100, 125, 128, 150, 180, 200, 250, 256, 300, 360, 400, 500, 512, 600, 1.000, 1.024, 1.250, 1.800, 2.000, 2.048, 2.000, 2.048, 2.500, 3.000, 3.600, 5.000, max. 7.500*(other options on request)	
Supply Voltage	4,5 VDC to 30 VDC (35 mA max. - no load)	
Outputs Voltage	High	V _{in} -0,6 at -10 mA V _{in} -1,3 at -25 mA
	Low	500 mV max. at 10 mA
Output current	max. 20 mA load per output channel	
Frequency Response	200 kHz max.	
Output Format	Two channel (A, B) quadrature with Index (Z) and optional complementary ($\bar{A}$, $\bar{B}$, $\bar{Z}$) outputs	
Phase Sense	A leads B clockwise 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 (5 V Input)
Electrical Protection	Reverse polarity and output short circuit protected	
Noise Immunity	EN 61000-6-2 (2005)	
	EN 61000-6-3 (2007)	

Connection Option

Cable	5 leads (0,14 mm ² , 26 AWG); Standard, twisted pairs, shielded 8 leads (0,05 mm ² , 30AWG); Differential
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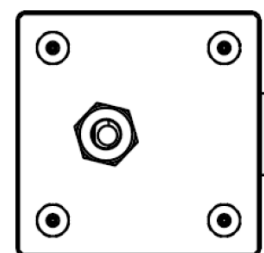
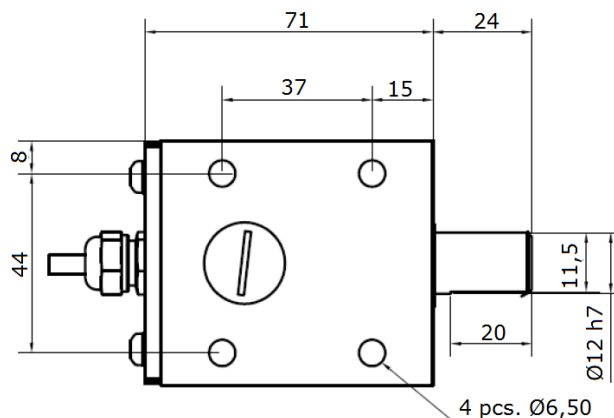
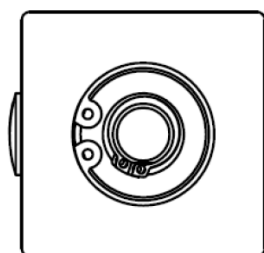
Output Terminations

Channel	Standard Cable	
	Standard Output	Differential Output
	Wire color	
A	green	pink
$\bar{A}$	NC	grey
B	yellow	green
$\bar{B}$	NC	yellow
Z	grey	white
$\bar{Z}$	NC	brown
V _{SUP}	brown	red
GND	white	blue

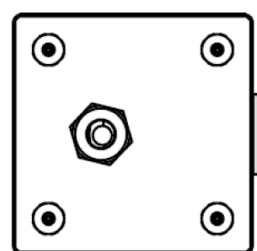
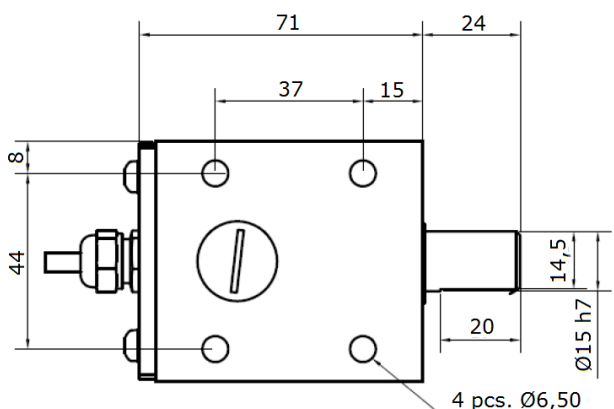
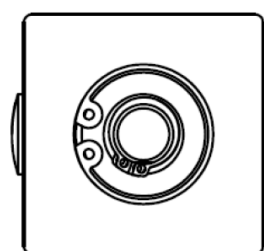
GND = Circuit Ground

Dimension

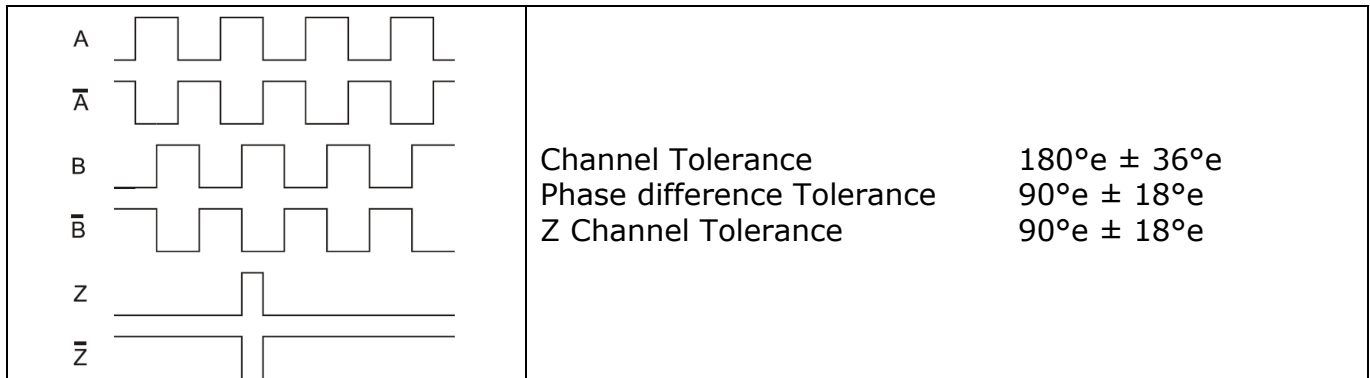
2RMHD (Shaft: Ø12 h7)



2RMHD (Shaft: Ø15 h7)



Output waveform



Ordering example

Type	2RMHD	-	<u>100</u>	-	<u>D</u>	-	<u>12-24</u>	-	<u>65</u>	-	<u>01</u>	-	<u>S</u>	-	<u>00</u>
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Pulse per Revolution

see table

Output

D = Differential
N = Standard
L = 26C31 Line Driver 5V/5V only
M = OL2727 Line Driver
NON = open collector NPN
NOP = open collector PNP

Shaft Dia. - Shaft Length

12-24 = 12 - 24 mm
15-24 = 15 - 24mm

IP

65 = IP65

Cable Length

01 = 1 m
XX = specify length
00 = no cable

Takeout

Cable
B = axial

Connector

00 = no Connector