

Incremental encoders

Blind hollow shaft or cone shaft

300...2500 pulses per revolution

HOG 10



HOG 10 with axial terminal cover

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC \pm 5 %
Consumption w/o load	< 100 mA
Pulses per revolution	300...2500
Phase shift	90° \pm 20°
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	\leq 170 kHz
Output signals	K1, K2, K0 + inverted Error output (only EMS)
Output stages	HTL-P (power linedriver) TTL/RS422
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, RoHS, UL approval / E256710

Features

- TTL output driver for cable length up to 500 m
- Very high resistance to shock and vibrations
- Protection against inductive shaft current by hybrid bearing
- Big terminal box, turn by 180° or axial terminal cover

Optional

- Function control with EMS
(Enhanced Monitoring System)
- Redundant sensing with two terminal boxes
- With heating up to -50°C
- With earthing brushes

Technical data - mechanical design

Size (flange)	\varnothing 105 mm
Shaft type	\varnothing 12...20 mm (blind hollow shaft) \varnothing 17 mm (cone shaft 1:10)
Shaft loading	\leq 450 N axial \leq 600 N radial
Protection DIN EN 60529	IP 66
Operating speed	\leq 6000 rpm (mechanical)
Operating torque typ.	6 Ncm
Rotor moment of inertia	340 gcm ²
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-40...+100 °C -50...+100 °C (optional)
Resistance	IEC 60068-2-6 Vibration 20 g, 10-2000 Hz IEC 60068-2-27 Shock 300 g, 6 ms
Explosion protection	II 3 G Ex nA IIC T4 Gc (gas) II 3 D Ex tc IIIC T135°C Dc (dust)
Connection	Terminal box Terminal cover 2x terminal box (with option M)
Weight approx.	1.6 kg, 1.8 kg (with option M)

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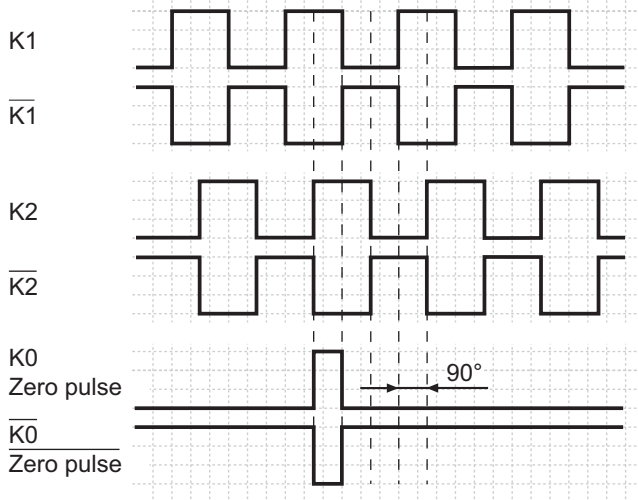
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Output signals

At positive rotating direction



Option EMS: LED status / Error output

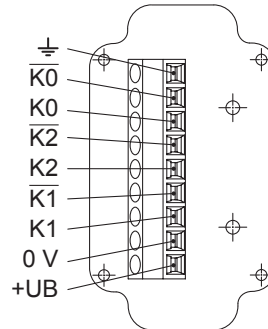
Flash light red*	Error of signal sequence, zero pulse or pulses (Error output = HIGH-LOW alternation)
Red	Overload output driver (Error output = LOW)
Flash light green	Encoder o.k., rotating (Error output = HIGH)
Green	Encoder o.k., stopped (Error output = HIGH)
No light	No output voltage connection or wrong connection (Error output = LOW)

* Only at rotating encoder

Terminal assignment

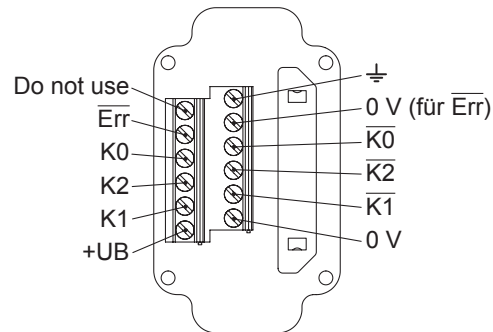
View A

Connecting terminal in radial terminal box



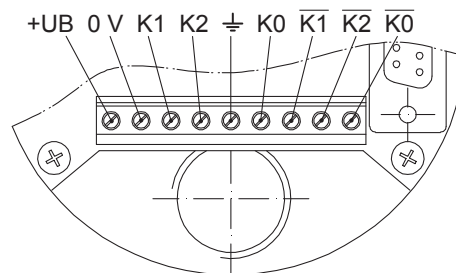
Option EMS: View A

Connecting terminal in radial terminal box



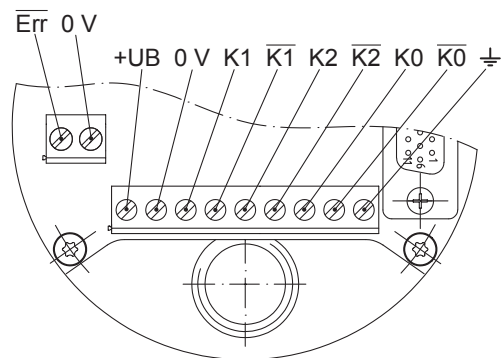
View B

Connecting terminal in axial terminal cover



Option EMS: View B

Connecting terminal in axial terminal cover



Incremental encoders

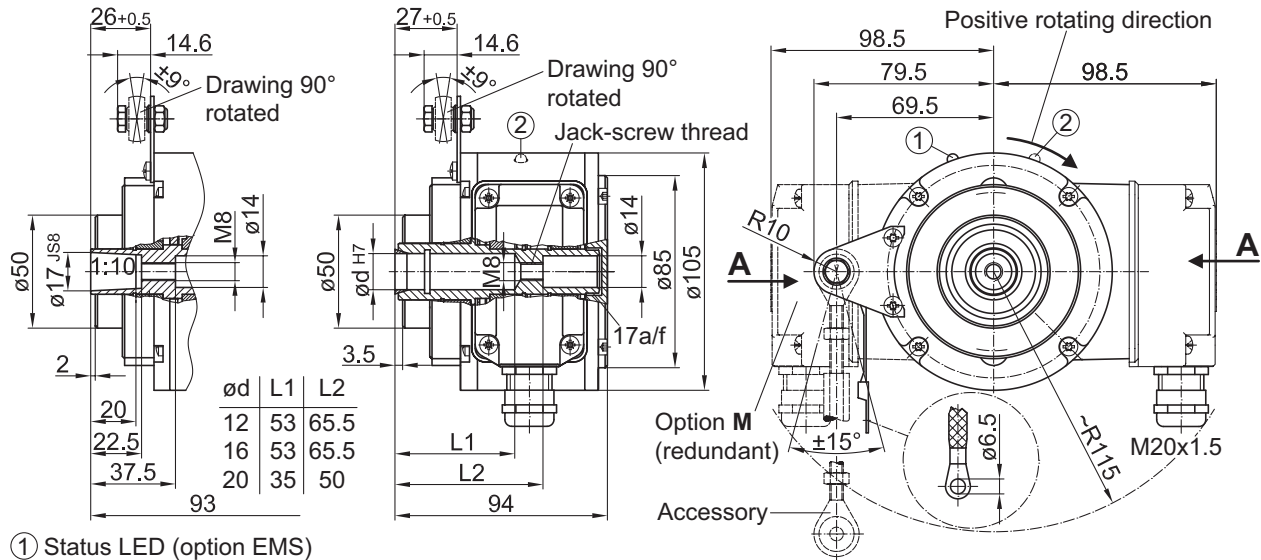
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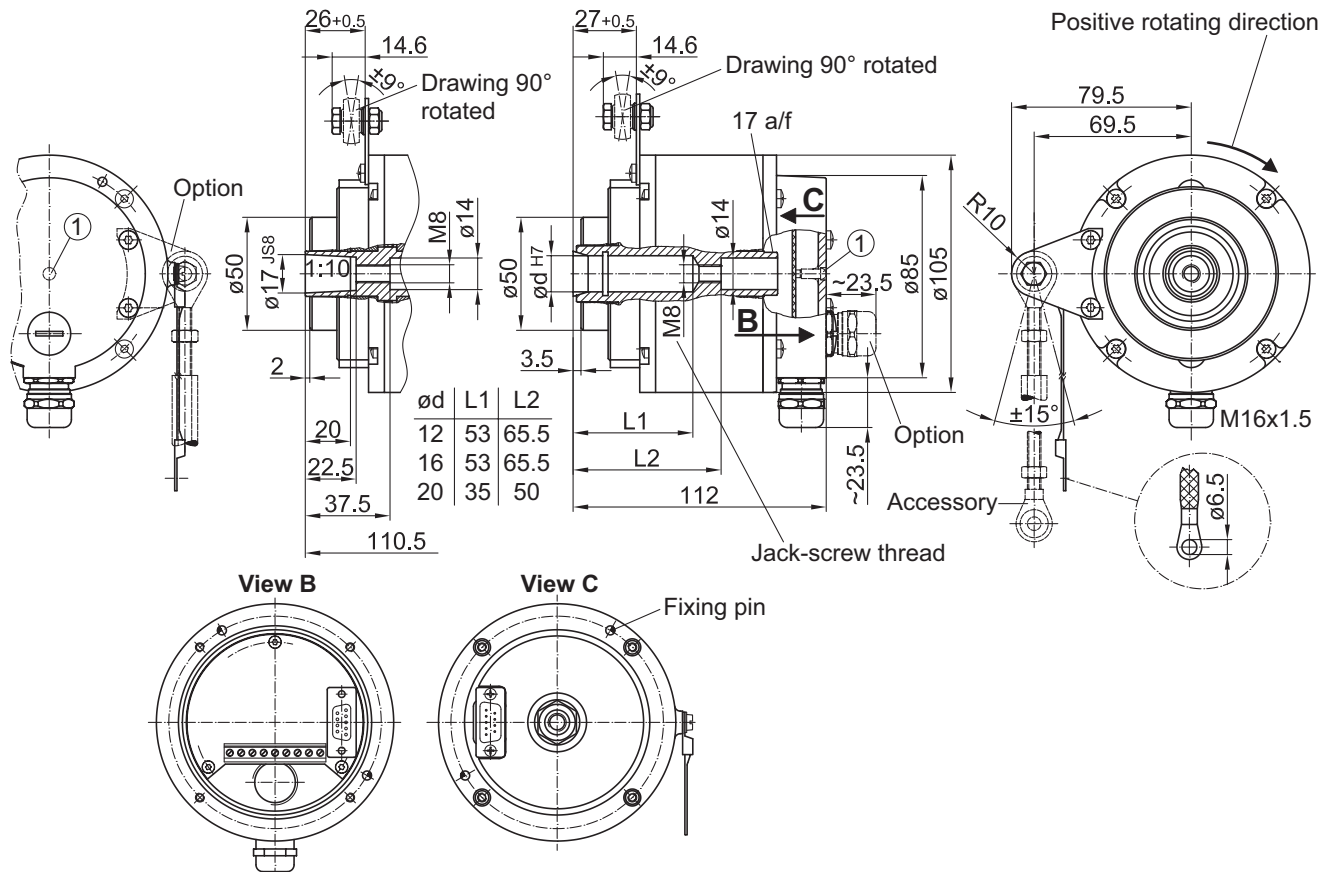
Dimensions

HOG 10 (HOG 10.2, HOG 10 M, HOG 10.2 M) - Version with radial terminal box



- ① Status LED (option EMS)
- ② Status LED (option M (redundant) and EMS)

HOG 10 (HOG 10.2) - Version with axial terminal cover



- ① Status LED (Option EMS)

Subject to modification in technic and design. Errors and omissions excepted.