

Combination

Twin encoder with two electrically separated systems

Blind hollow shaft or cone shaft

300...5000 pulses per revolution

HOG 10 G



HOG 10 G

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC \pm 5 %
Consumption w/o load	\leq 100 mA
Pulses per revolution	300...5000
Phase shift	90° \pm 20°
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Output frequency	\leq 120 kHz \leq 300 kHz (on request)
Output signals	K1, K2, K0 + inverted Error output (only EMS)
Output stages	HTL-P (power linedriver) TTL/RS422
Sensing method	Optical
Shaft insulation	2.8 kV
Transmission length	\leq 350 m at 100 kHz (HTL-P) \leq 550 m at 100 kHz (TTL)
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, UL approval / E256710

Features

- Twin encoder featuring two separate systems
- TTL output driver for cable length up to 550 m
- Very high resistance to shock and vibrations
- Hybrid bearing for extended lifetime
- Shaft insulation up to 2.8 kV
- Big terminal boxes, turn by 180°

Optional

- Function control with EMS
(Enhanced Monitoring System)
- Redundant sensing with two terminal boxes for each system

Technical data - mechanical design

Size (flange)	\varnothing 105 mm
Shaft type	\varnothing 16...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 -25...+100 °C (>3072 pulses per revolution)
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	2x terminal box 4x terminal box (with option M)
Weight approx.	2.9 kg, 3.3 kg (with option M)

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Part number

Incremental twin encoder

HOG10

	G		DN			/	DN			
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Shaft diameter
16H7 Blind hollow shaft ø16 mm
20H7 Blind hollow shaft ø20 mm
17K Cone shaft ø17 mm (1:10)

Sealing system
LR Dust protection
SR Damp protection

Voltage supply / signals
I 9...30 VDC / output circuit HTL with inverted signals
TTL 5 VDC / output circuit TTL with inverted signals
R 9...30 VDC / output circuit TTL with inverted signals

Pulse number - see table

Output signals
DN K1, K2, K0

Voltage supply / signals
I 9...30 VDC / output circuit HTL with inverted signals
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Pulse number - see table

Output signals
DN K1, K2, K0

Redundant sensing
Without redundant sensing
M With redundant sensing

EMS - Enhanced Monitoring System
Without EMS
.2 With EMS

Pulse number

300	1000	2048	4096
500	1024	2500	5000
512	1200	3072	

Other pulse numbers on request.

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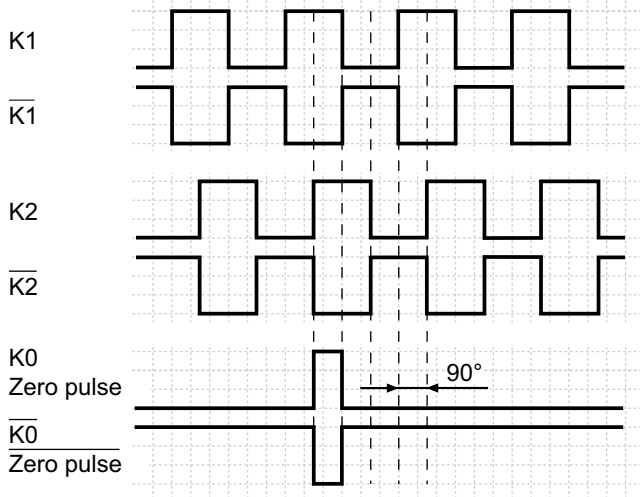
Blind hollow shaft or cone shaft

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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

Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

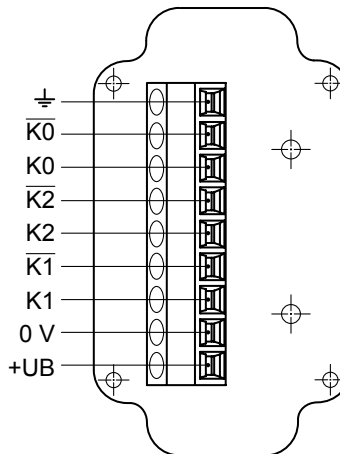
Mounting accessories

DMS 6	Torque arm size M6
11077197	Mounting kit for torque arm size M6 and earthing strap
11077087	Mounting and dismantling set

Terminal assignment

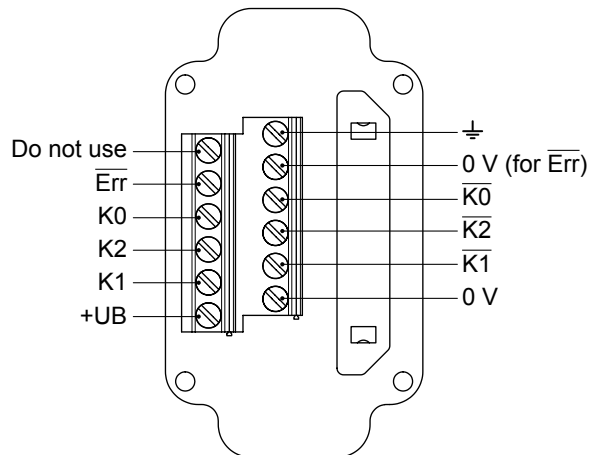
View A

Connecting terminal in terminal box



Option EMS: View A

Connecting terminal in terminal box



Option EMS: LED status / Error output

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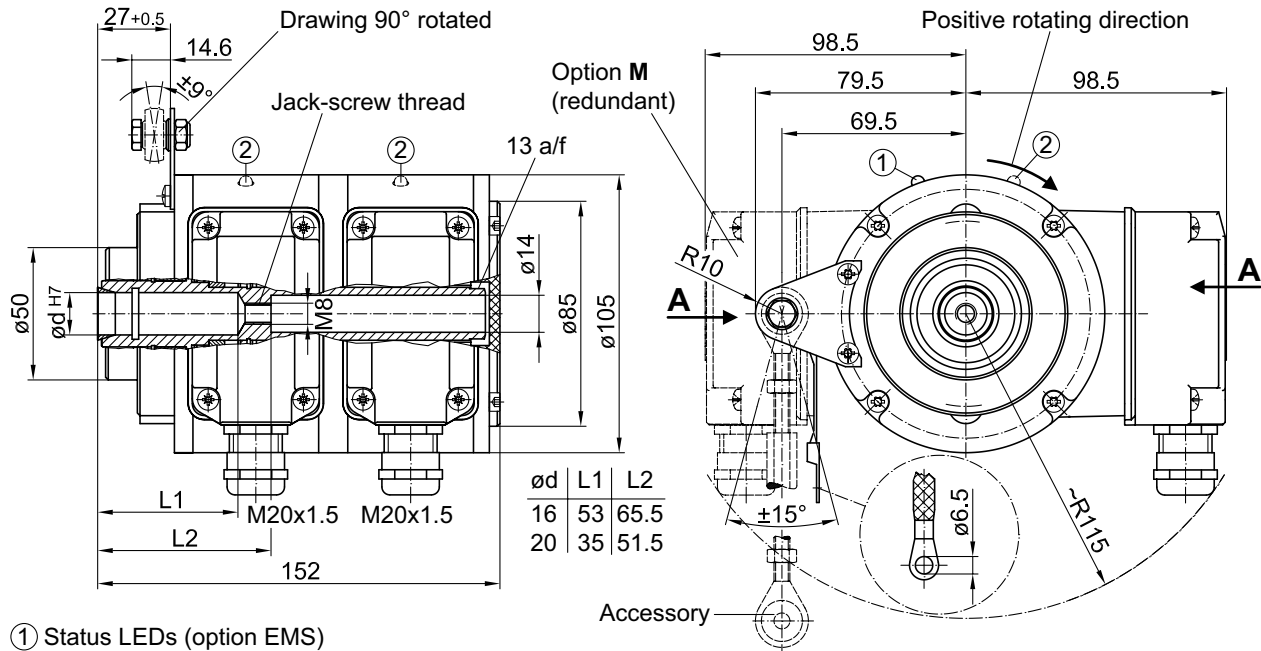
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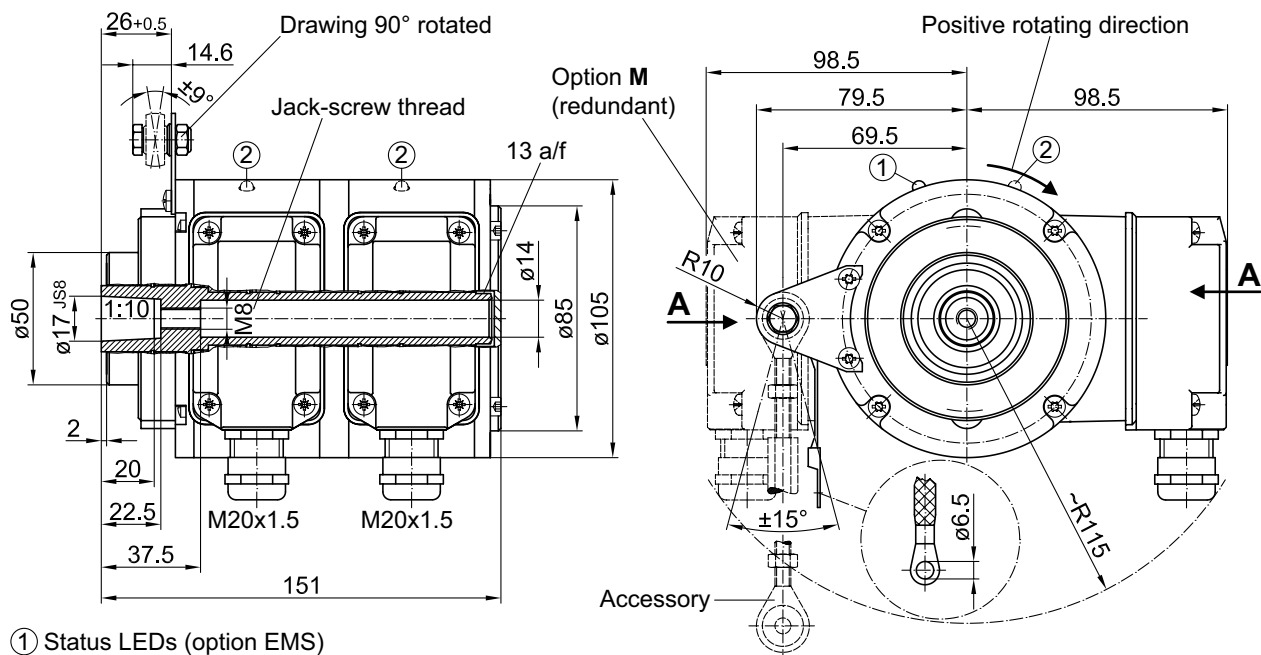
Dimensions

HOG 10 G (HOG 10.2 G, HOG 10 G M, HOG 10.2 G M) - Version with blind hollow shaft



- ① Status LEDs (option EMS)
- ② Status LEDs (option **M** (redundant) and EMS)

HOG 10 G (HOG 10.2 G, HOG 10 G M, HOG 10.2 G M) - Version with cone shaft



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