

Incremental encoders

Function control with EMS (Enhanced Monitoring System)

End shaft max. $\varnothing 20$ mm or cone shaft $\varnothing 17$ mm (1:10)

Resolution 100...2500 pulses

HOG 10.2



HOG 10.2 with axial terminal box

Features

- Function control with EMS (Enhanced Monitoring System)
- Operating status LED and error output
- Suitable to drive for lines max. 500 m (TTL)
- Opto ASIC
- Logic level TTL with regulator UB 9...30 VDC
- Logic level HTL with power linedriver
- End shaft max. $\varnothing 20$ mm or cone shaft $\varnothing 17$ mm (1:10)
- Protection against inductive shaft current by hybrid bearings

Technical data - electrical ratings

Voltage supply	5 VDC ± 5 % 9...30 VDC
Consumption w/o load	≤ 100 mA
Resolution (steps/turn)	100...2500
Phase shift	$90^\circ \pm 20^\circ$
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 120 kHz
Output signals	K1, K2, K0 + inverted
Output circuit	HTL (power linedriver) TTL (RS422)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	UL approval / E256710

Technical data - mechanical design

Dimensions (flange)	$\varnothing 105$ mm
Shaft	$\varnothing 12$...20 mm end shaft $\varnothing 17$ mm cone shaft 1:10
Shaft loading	≤ 250 N axial ≤ 400 N radial
Protection DIN EN 60529	IP 66
Operating speed	≤ 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
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 200 g, 6 ms
Explosion protection	II3G Ex nA IIC T4 Gc (gas) II3D Ex tc IIIC T135°C Dc (dust)
Connection	Terminal cover
Weight approx.	1.6 kg

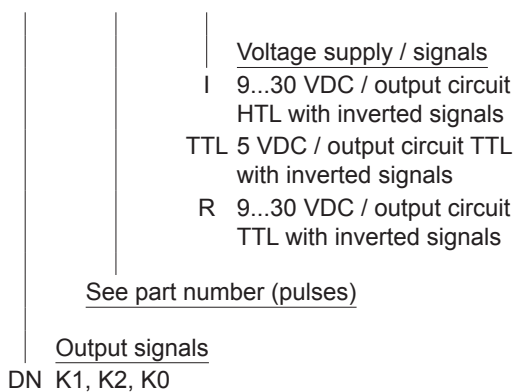
Incremental encoders

Function control with EMS (Enhanced Monitoring System)
End shaft max. \varnothing 20 mm or cone shaft \varnothing 17 mm (1:10)
Resolution 100...2500 pulses

HOG 10.2

Part number

HOG 10.2 **DN**



Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

Mounting accessories

DMS 6 Torque arm size M6

Diagnostic accessories

HENQ 1100 Analyzer for encoders

Part number (pulses)

100	200	400	900	2048
120	250	500	1000	2500
128	256	512	1024	
180	300	600	1200	
192	360	720	1250	

Other pulse numbers upon request.

Incremental encoders

Function control with EMS (Enhanced Monitoring System)

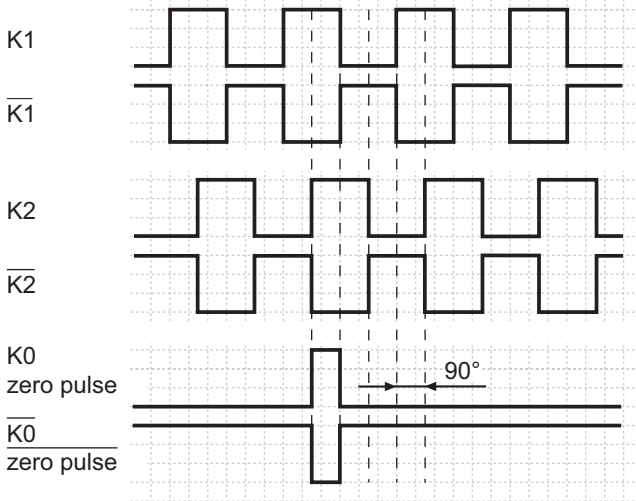
End shaft max. $\varnothing 20$ mm or cone shaft $\varnothing 17$ mm (1:10)

Resolution 100...2500 pulses

HOG 10.2

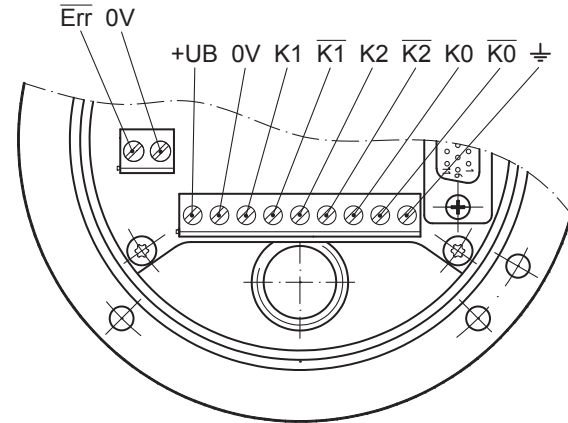
Output signals

at positive rotating direction



Terminal assignment

View A - Connecting terminal in axial terminal cover



LED status / error output

flash light red*	Error of signal sequence, zero pulse or cycles (Error output = high-low alternation)
red	Overload output transistors (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)

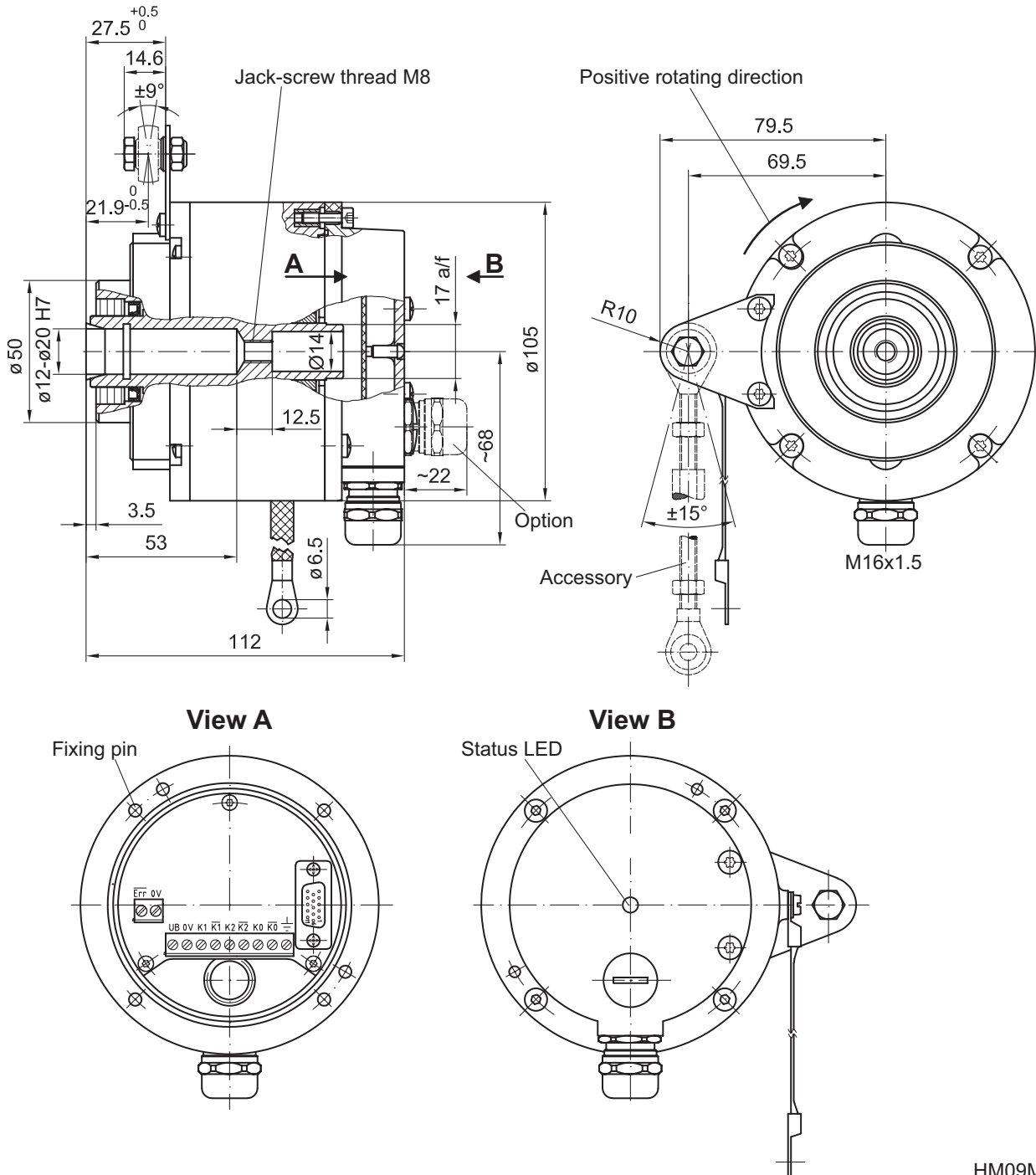
* only at rotating encoder

Incremental encoders

Function control with EMS (Enhanced Monitoring System)
 End shaft max. $\varnothing 20$ mm or cone shaft $\varnothing 17$ mm (1:10)
 Resolution 100...2500 pulses

HOG 10.2

Dimensions



HM09M29004