

# Incremental encoders

Hollow shaft  $\varnothing 20$  to  $\varnothing 75$  mm

Resolution 250...5000 pulses

## HOG 16, HOG 163



HOG 163

### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5$ % 9...26 VDC 9...30 VDC
Consumption w/o load	$\leq 100$ mA
Phase shift	$90^\circ \pm 20^\circ$
Scan ratio	40...60 %
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output frequency	$\leq 120$ kHz
Output signals	K1, K2, K0 + inverted
Output circuit	TTL (RS422) HTL (power line driver)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	UL approval / E256710

### HOG 16

Resolution (steps/turn)	250...2500
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### HOG 163

Resolution (steps/turn)	250...5000
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### Features

- Encoder with hollow shaft  $\varnothing 20$ -75 mm
- Optical sensing
- Robust light-metal housing
- Logic level TTL with regulator UB 9...26 VDC
- Logic level HTL with power line driver
- Special protection against corrosion
- Big terminal box, pivotable through  $180^\circ$

### Optional

- Redundant configuration
- Heating for applications of min.  $-50^\circ\text{C}$  (HOG 163, no explosion protection)

### Technical data - mechanical design

Housing	$\varnothing 158$ mm
Operating speed	$\leq 6000$ rpm (mechanical)
Materials	Housing: aluminium alloy Shaft: stainless steel

### HOG 16

Shaft	$\varnothing 20$ ...38 mm hollow shaft
Admitted shaft load	$\leq 400$ N axial, $\leq 600$ N radial
Protection DIN EN 60529	IP 66
Operating torque typ.	15 Ncm
Rotor moment of inertia	$4.9$ kgcm <sup>2</sup> ( $\varnothing 25$ )
Operating temperature	$-20$ ... $+100^\circ\text{C}$
Resistance	DIN EN 60068-2-6 Vibration 15 g, 10-2000 Hz DIN EN 60068-2-27 Shock 300 g, 6 ms
Explosion protection	II3G Ex nA T4 X (gas) II3D Ex tD IP66 A22 T135°C X (dust)
Weight approx.	4 kg

### HOG 163

Shaft	$\varnothing 38$ ...75 mm hollow shaft
Admitted shaft load	$\leq 350$ N axial, $\leq 500$ N radial
Protection DIN EN 60529	IP 56
Operating torque typ.	17 Ncm
Rotor moment of inertia	$28.5$ kgcm <sup>2</sup> ( $\varnothing 50$ )
Operating temperature	$-30$ ... $+85^\circ\text{C}$
Resistance	DIN EN 60068-2-6 Vibration 10 g, 10-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms
Explosion protection	II3G Ex nA T4 X (gas) II3D Ex tD IP56 A22 T135°C X (dust)
Weight approx.	4.3 kg ( $\varnothing 48$ ), 3.2 kg ( $\varnothing 75$ )



# Incremental encoders

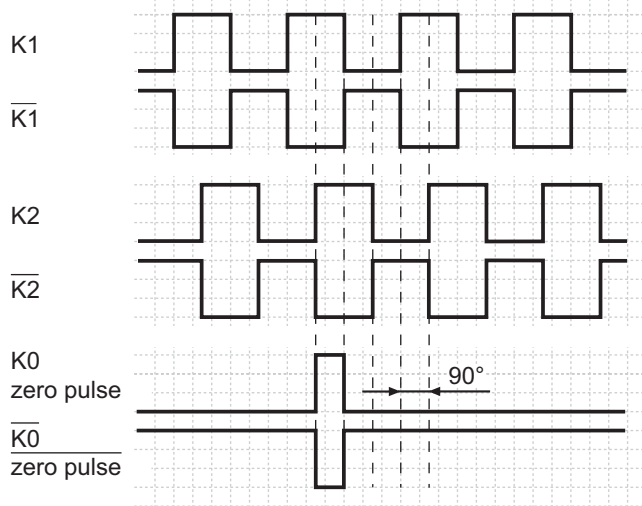
Hollow shaft  $\varnothing 20$  to  $\varnothing 75$  mm

Resolution 250...5000 pulses

## HOG 16, HOG 163

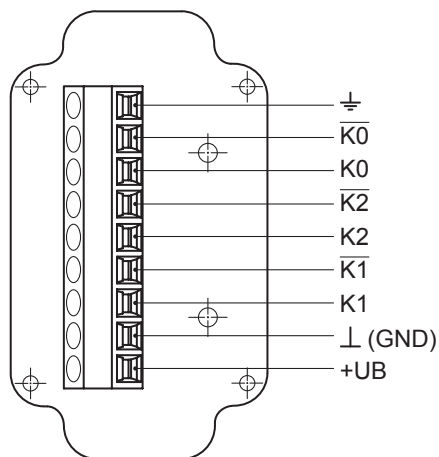
### Output signals

at positive direction of rotation



### Terminal assignment

View A - Connecting terminal in terminal box



# Incremental encoders

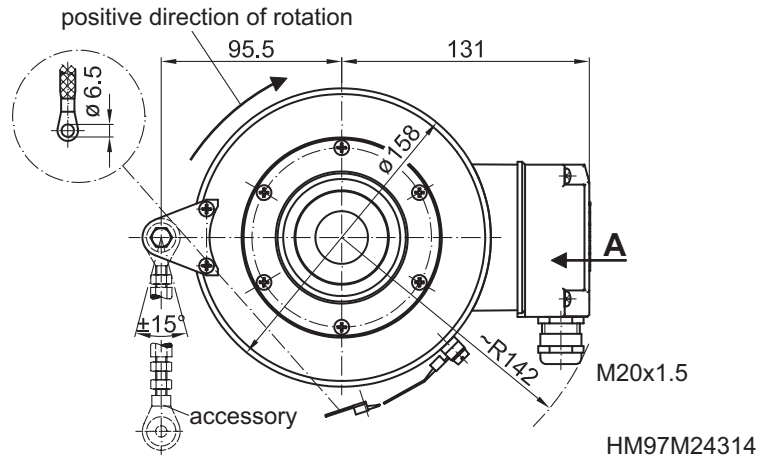
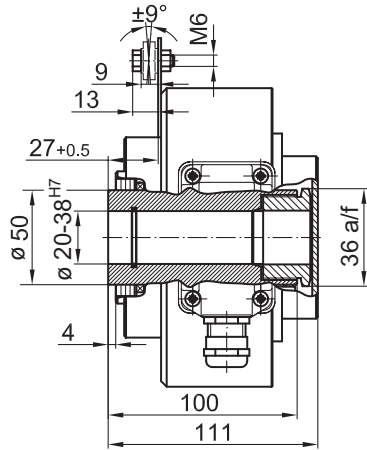
Hollow shaft  $\varnothing 20$  to  $\varnothing 75$  mm

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HOG 16, HOG 163

## Dimensions

### HOG 16



### HOG 163

