

# Encoders without bearings - incremental

Incremental encoder with optical sensing

Through hollow shaft  $\varnothing 65...85$  mm

250...2500 pulses per revolution

HG 18



HG 18

## Technical data - electrical ratings

Voltage supply	9...26 VDC 5 VDC $\pm 5$ %
Consumption w/o load	< 100 mA
Sensing method	Optical
Pulses per revolution	250...2500
Output stages	HTL TTL/RS422
Output signals	K1, K2, K0 + inverted
Reference signal	Zero pulse, width 90°
Output frequency	$\leq 120$ kHz
Phase shift	90° $\pm 20$ °
Scan ratio	40...60 %
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, RoHS, UL approval / E256710

## Features

- Large axial and radial displacement of the shaft permitted
- Fit for high operating speed
- Robust and wearless
- Max. 2500 pulses per revolution
- Logic level TTL with regulator UB 9...26 VDC

## Optional

- Electrical connection with flange connector and mating connector
- Redundant sensing (version M)

## Technical data - mechanical design

Size (flange)	$\varnothing 186$ mm
Axial tolerance	-0.5...1.5 mm (with zero pulse) -0.5...2.5 mm (without zero pulse)
Radial tolerance	$\pm 0.05$ mm (with zero pulse) $\pm 0.2$ mm (without zero pulse)
Shaft type	$\varnothing 65...85$ mm (through hollow shaft)
Protection DIN EN 60529	IP 54
Operating temperature	-30...+70 °C
Operating speed	$\leq 12000$ rpm
Rotor moment of inertia	21.2 kgcm <sup>2</sup>
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 100 g, 6 ms
Materials	Housing: aluminium Shaft: stainless steel
Connection	Terminal box (2x with option M) Flange connector M23, 12-pin (2x with option M)
Weight approx.	4.2 kg

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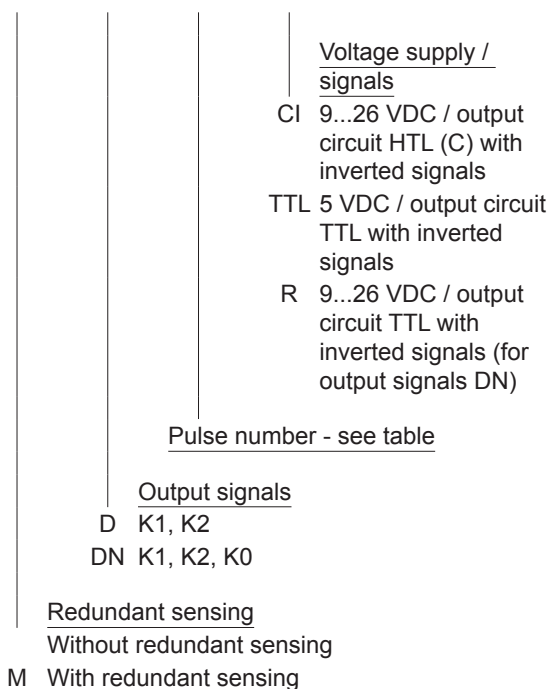
250...2500 pulses per revolution

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## Part number

HG 18 

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## Accessories

### Connectors and cables

HEK 8 Sensor cable for encoders

## Pulse number

250	512	1000	1080	2048
500	600	1024	1200	2500

Other pulse numbers on request.

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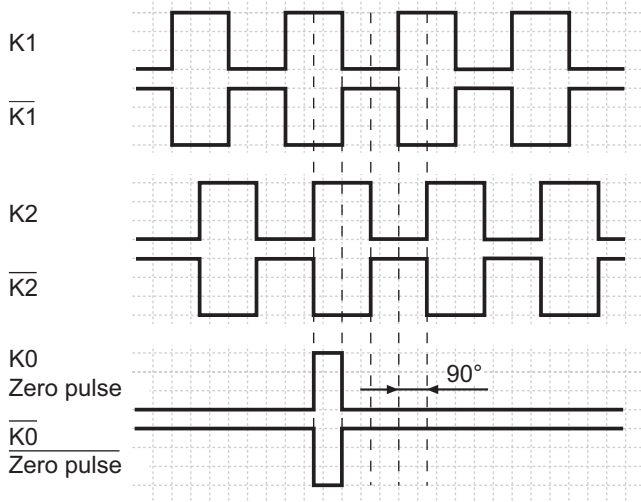
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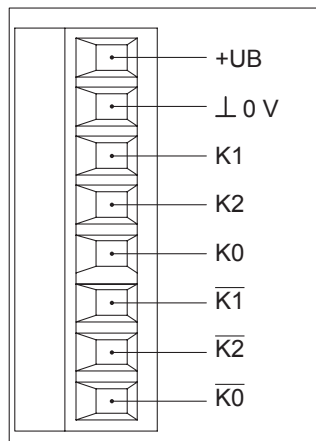
### Output signals

At positive rotating direction



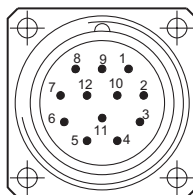
### Terminal assignment

View A - Connecting terminal in terminal box



View B - Option: Flange connector M23, 12 pin, male contacts, CW

Pin	Assignment
1	$\overline{K2}$ (K2 inv.)
2	Do not use
3	K0 (Zero pulse)
4	$\overline{K0}$ (Zero pulse inv.)
5	K1
6	$\overline{K1}$ (K1 inv.)
7	Do not use
8	K2
9	Do not use
10	0 V
11	Do not use
12	+UB



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## Dimensions

