

OG 9

Solid shaft with EURO flange B10
25...5000 pulses per revolution

Overview

- Encoder with solid shaft $\varnothing 11$ mm
- Optical sensing method
- EURO flange B10
- Output stage HTL with power linedriver
- Output stage TTL with regulator UB 9...26 VDC
- Operating temperature up to +100 °C



Technical data

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC ± 5 % 9...26 VDC
Consumption w/o load	≤ 100 mA
Pulses per revolution	25 ... 5000
Phase shift	90 ° ± 20 °
Duty cycle	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 120 kHz ≤ 300 kHz (on request)
Output signals	K1, K2, K0 + inverted
Output stages	HTL-P (power linedriver) TTL/RS422
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE UL approval / E217823

Technical data - mechanical design

Size (flange)	$\varnothing 115$ mm
Shaft type	$\varnothing 11$ mm solid shaft

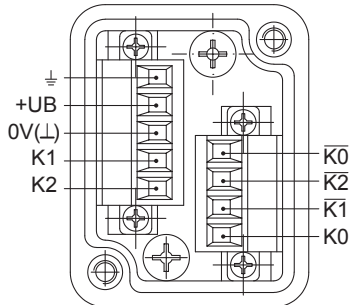
Technical data - mechanical design

Admitted shaft load	≤ 250 N axial ≤ 350 N radial
Flange	EURO flange B10
Protection EN 60529	IP 55
Operating speed	≤ 12000 rpm (mechanical)
Operating torque typ.	1 Ncm
Rotor moment of inertia	280 gcm ²
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+100 °C -25...+100 °C (>3072 pulses)
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 100 g, 6 ms
Corrosion protection	IEC 60068-2-52 Salt mist for ambient conditions C4 according to ISO 12944-2
Explosion protection	II 3 G Ex ec IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust) (only with option ATEX)
Connection	Terminal box
Weight approx.	980 g

Terminal assignment

View A (see dimension)

Connecting terminal terminal box



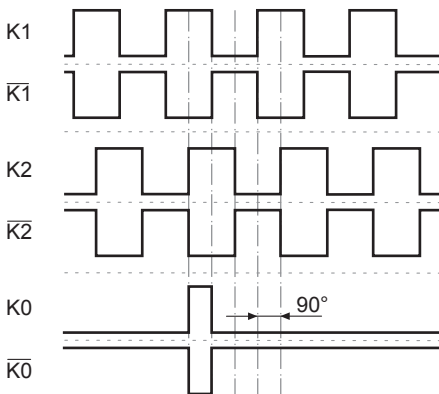
Terminal significance

+UB	Voltage supply
0V (L)	Ground
⊥	Earth ground (housing)
K1	Output signal channel 1
$\overline{K1}$	Output signal channel 1 inverted
K2	Output signal channel 2 (offset by 90° to channel 1)
$\overline{K2}$	Output signal channel 2 inverted
K0	Zero pulse (reference signal)
$\overline{K0}$	Zero pulse inverted

Output signals

HTL/TTL

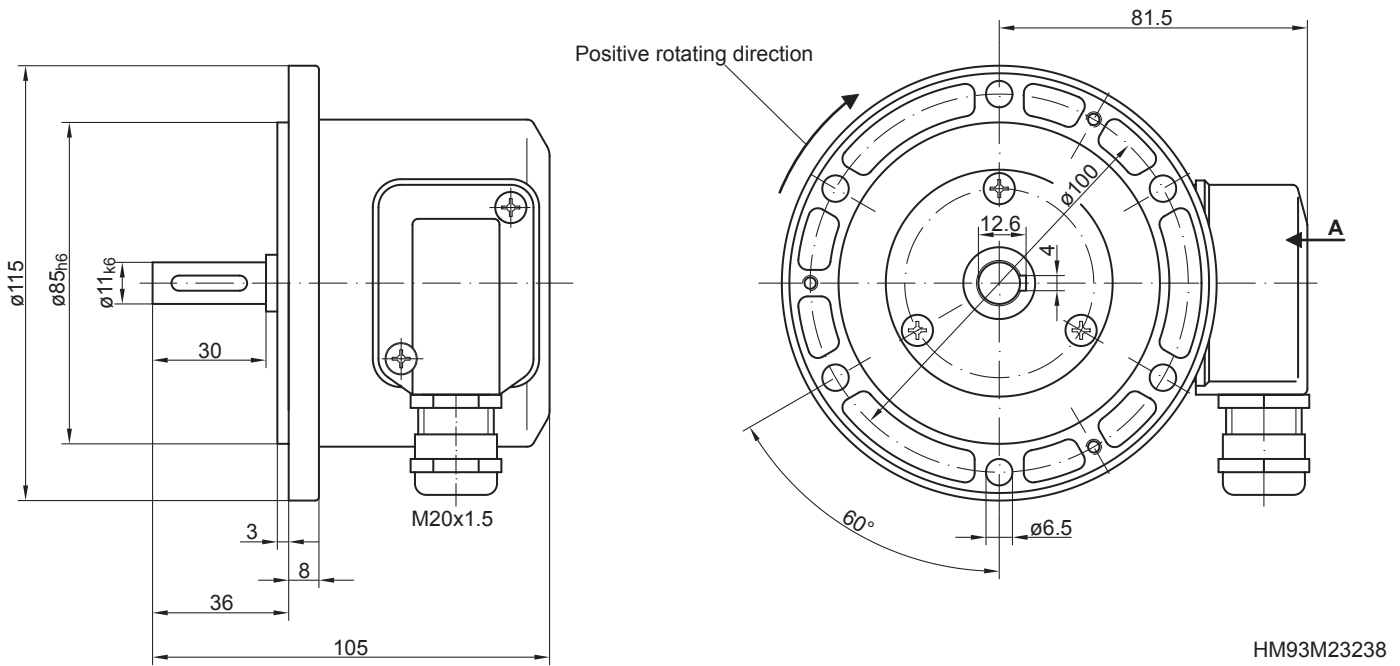
At positive rotating direction (see dimension)



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Dimensions



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Ordering reference

	OG9	DN	###	###
Product				
Incremental encoder	OG9			
Output signals				
K1, K2, K0		DN		
Pulse number⁽¹⁾				
25				25
120				120
128				128
180				180
256				256
360				360
500				500
512				512
720				720
1000				1000
1024				1024
1250				1250
2048				2048
2500				2500
3072				3072
4096				4096
5000				5000

Voltage supply / output stage

9...30 VDC / output stage HTL with inverted signals	I
5 VDC / output stage TTL with inverted signals	TTL
9...30 VDC / output stage TTL with inverted signals	R

(1) Other pulse numbers on request.

Accessories

Mounting accessories

- Spring disk coupling K 35 (shaft \varnothing 6...12 mm)
- Spring disk coupling K 50 (shaft \varnothing 11...16 mm)
- Spring disk coupling K 60 (shaft \varnothing 11...22 mm)