

POG 10

Solid shaft with EURO flange B10
 300...5000 pulses per revolution

Overview

- TTL output driver for cable length up to 550 m
- High resistance to shock and vibrations
- EURO flange B10 / solid shaft $\varnothing 11$ mm
- Large terminal box, turn by 180°



Technical data

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC $\pm 5\%$
Consumption w/o load	≤ 100 mA
Pulses per revolution	300 ... 5000
Phase shift	$90^\circ \pm 20^\circ$
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 Error output (option EMS)
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
Admitted shaft load	≤ 300 N axial ≤ 450 N radial

Technical data - mechanical design

Flange	EURO flange B10
Protection EN 60529	IP 66
Operating speed	≤ 12000 rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	212 gcm ²
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-40...+100 °C -25...+100 °C (>3072 pulses) -50...+100 °C (optional)
Resistance	IEC 60068-2-6 Vibration 20 g, 10-2000 Hz IEC 60068-2-27 Shock 200 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 IIIC T135°C Dc (dust) (only with option ATEX)
Connection	Terminal box 2x terminal box (with option M)
Weight approx.	1.9 kg 2.1 kg (with option M)

Optional

- Function control with EMS
- Redundant sensing with two terminal boxes
- Second shaft end / Housing foot (B3)
- With heating up to -50°C

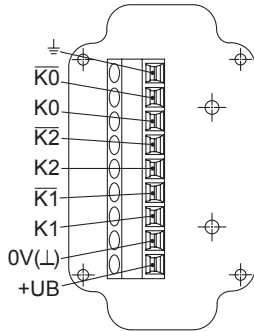
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Terminal assignment

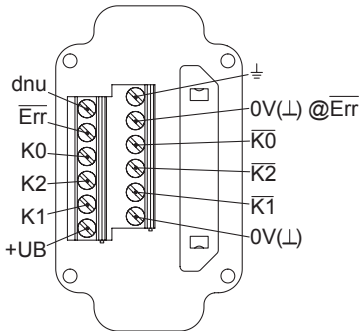
View A (see dimension)

Connecting terminal box, radial



Option EMS: View A (see dimension)

Connecting terminal box, radial



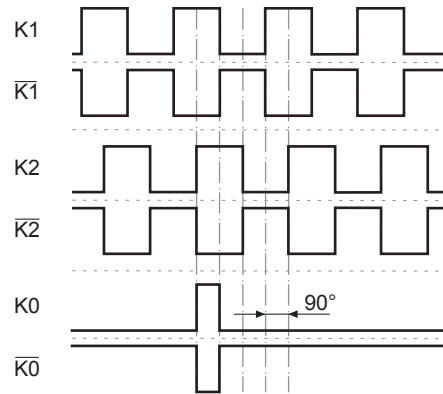
Terminal significance

+UB	Voltage supply
0V (L)	Ground
⊥	Earth ground (housing)
K1	Output signal channel 1
K1	Output signal channel 1 inverted
K2	Output signal channel 2 (offset by 90° to channel 1)
K2	Output signal channel 2 inverted
K0	Zero pulse (reference signal)
K0	Zero pulse inverted
Err	Error output (option EMS)
dnu	Do not use

Output signals

HTL/TTL

At positive rotating direction (see dimension)



Option EMS: Status LED / error output

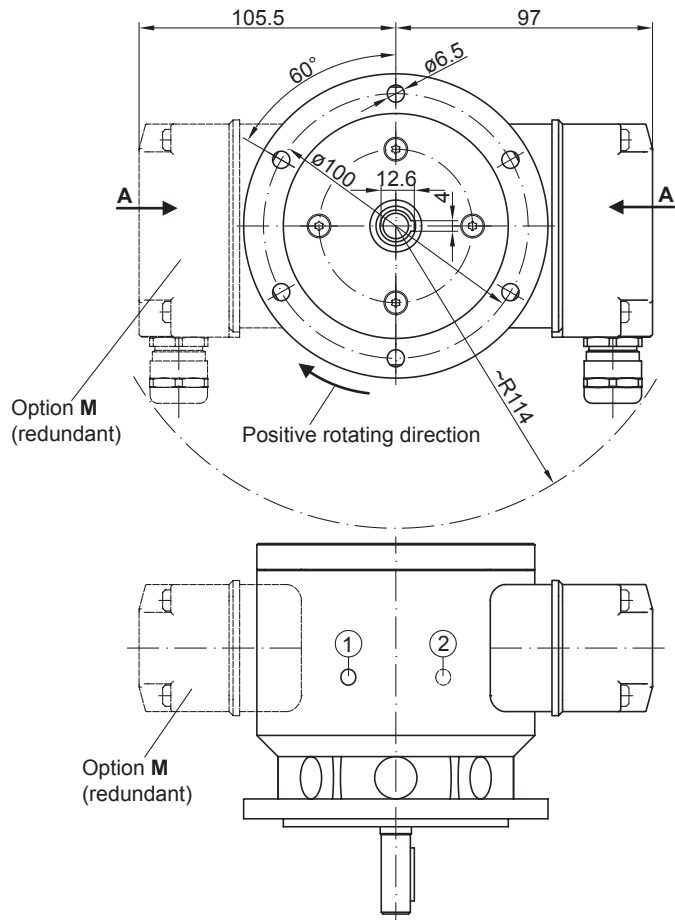
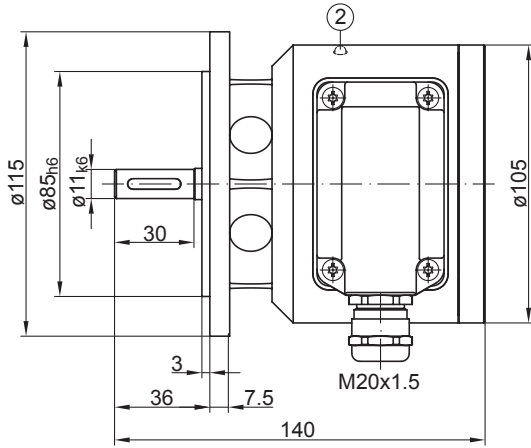
Flash light red*	Error of signal sequence, zero pulse or pulses (Error output = HIGH-LOW alternation)
Red	Overload output transistors (Error output = LOW)
Flash light green	Device o.k., rotating (Error output = HIGH)
Green	Device o.k., stopped (Error output = HIGH)
No light	No voltage supply connection or wrong connection (Error output = LOW)

* Only at rotating device

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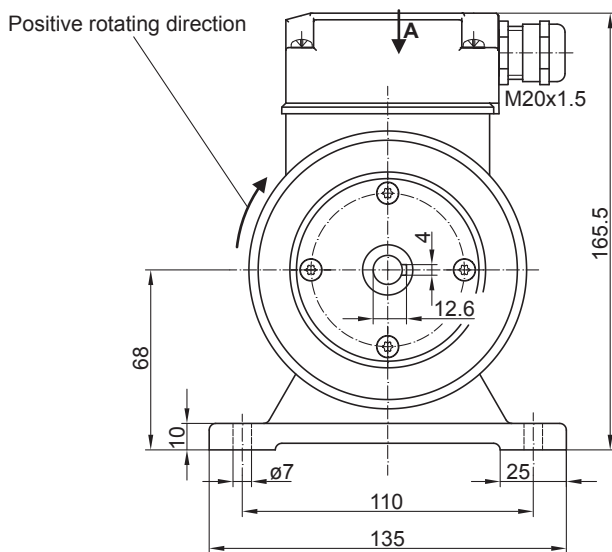
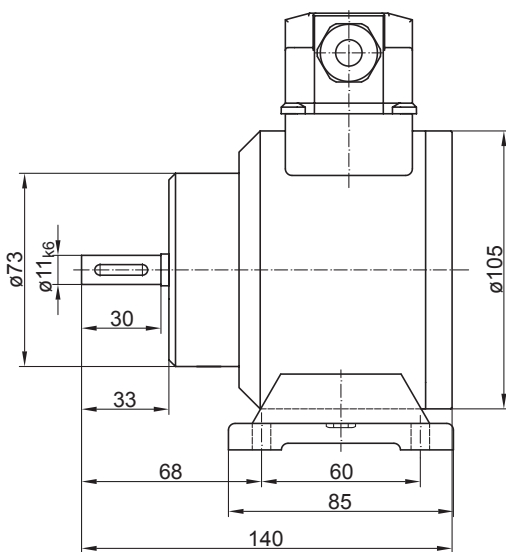
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Dimensions



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

EURO flange B10



Housing foot B3

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Ordering reference

	POG10	DN	###	##	####	#####	#
Product	POG10						
Incremental encoder							
Output signals							
K1, K2, K0		DN					
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
EMS - Enhanced Monitoring System							
Without EMS							
With EMS							.2
Pulse number							
300							300
500							500
512							512
1000							1000
1024							1024
1200							1200
2048							2048
2500							2500
3072							3072
4096							4096
5000							5000
Mounting type							
EURO flange B10							
Housing foot B3							B3
Redundant sensing							
Without redundant sensing							
With redundant sensing							M

(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)