

# Incremental encoders

## Solid shaft with EURO flange B10

### 300...5000 pulses per revolution

#### POG 9



POG 9

#### Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC $\pm$ 5 %
Consumption w/o load	$\leq$ 100 mA
Pulses per revolution	300...5000
Phase shift	90° $\pm$ 20°
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	$\leq$ 120 kHz $\leq$ 300 kHz (on request)
Output signals	K1, K2, K0 + inverted Error output (only EMS)
Output stages	HTL-P (power linedriver) TTL/RS422
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, UL approval / E256710

#### Features

- Encoder with solid shaft  $\varnothing$ 11 mm
- Optical sensing method
- EURO flange B10
- Very high resistance to shock
- Output stage HTL or TTL
- TTL output driver for cable length up to 500 m

#### Optional

- Function control with EMS  
(Enhanced Monitoring System)
- Second shaft end

#### Technical data - mechanical design

Size (flange)	$\varnothing$ 115 mm
Shaft type	$\varnothing$ 11 mm solid shaft
Admitted shaft load	$\leq$ 250 N axial $\leq$ 350 N radial
Flange	EURO flange B10
Protection DIN EN 60529	IP 56
Operating speed	$\leq$ 12000 rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	200 gcm <sup>2</sup>
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+100 °C -25...+100 °C (>3072 pulses per revolution)
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 300 g, 1 ms
Corrosion protection	IEC 60068-2-52 Salt mist Complies to ISO 12944-5:1998 Protective paint systems (C4)
Explosion protection	II 3 G Ex nA IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust)
Connection	Terminal box
Weight approx.	1.4 kg

Subject to modification in technic and design. Errors and omissions excepted.

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## Solid shaft with EURO flange B10

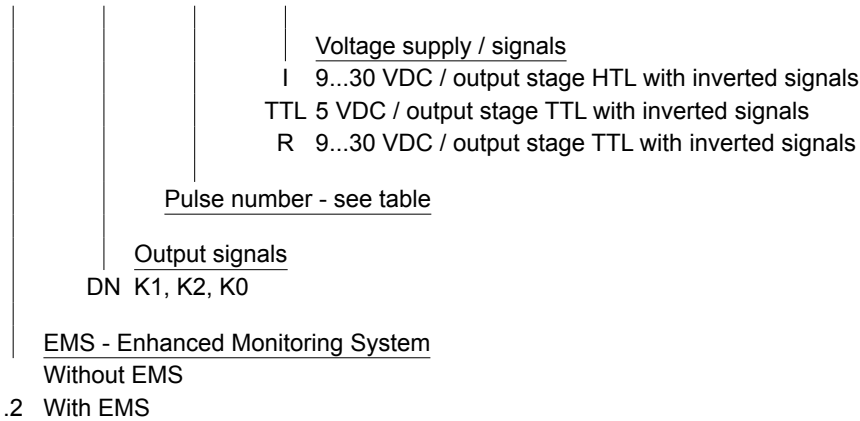
### 300...5000 pulses per revolution

POG 9

#### Part number

#### Incremental encoder

POG9   **DN**



#### Pulse number

300	1000	2048	4096
500	1024	2500	5000
512	1200	3072	

Other pulse numbers on request.

#### Accessories

##### Connectors and cables

HEK 8 Sensor cable for encoders

##### Mounting accessories

K 35 Spring washer coupling for solid shaft  $\varnothing$ 6...12 mm

K 50 Spring washer coupling for solid shaft  $\varnothing$ 11...16 mm

K 60 Spring washer coupling for solid shaft  $\varnothing$ 11...22 mm

##### Diagnostic accessories

HENQ 1100 Analyzer for encoders

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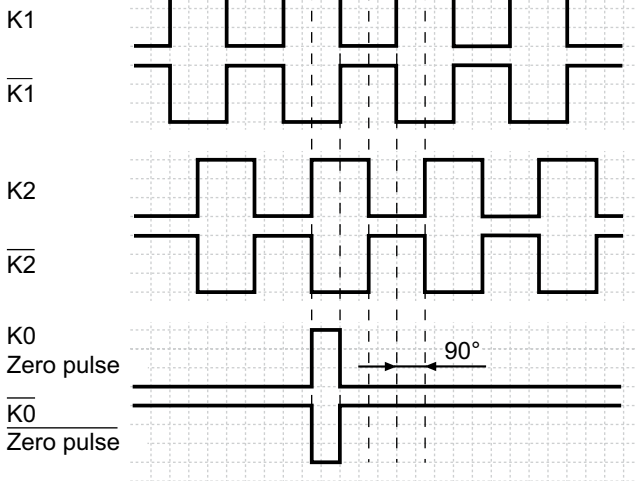
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### Output signals

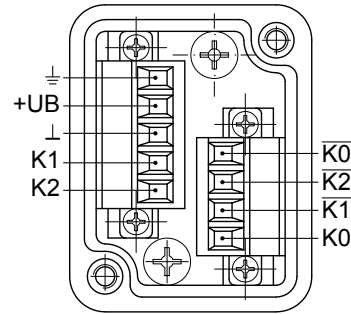
At positive rotating direction



### Terminal assignment

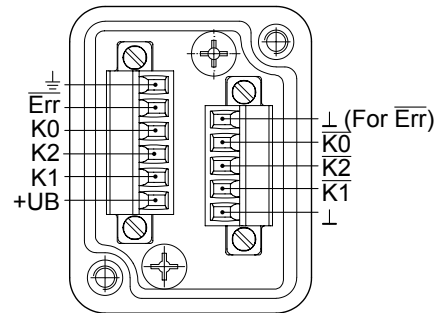
#### View A

Connecting terminal terminal box



#### Option EMS: View A

Connecting terminal terminal box



#### Option EMS: LED status / Error output

Flash light red*	Error of signal sequence, zero pulse or pulses (Error output = HIGH-LOW alternation)
Red	Overload output driver (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)

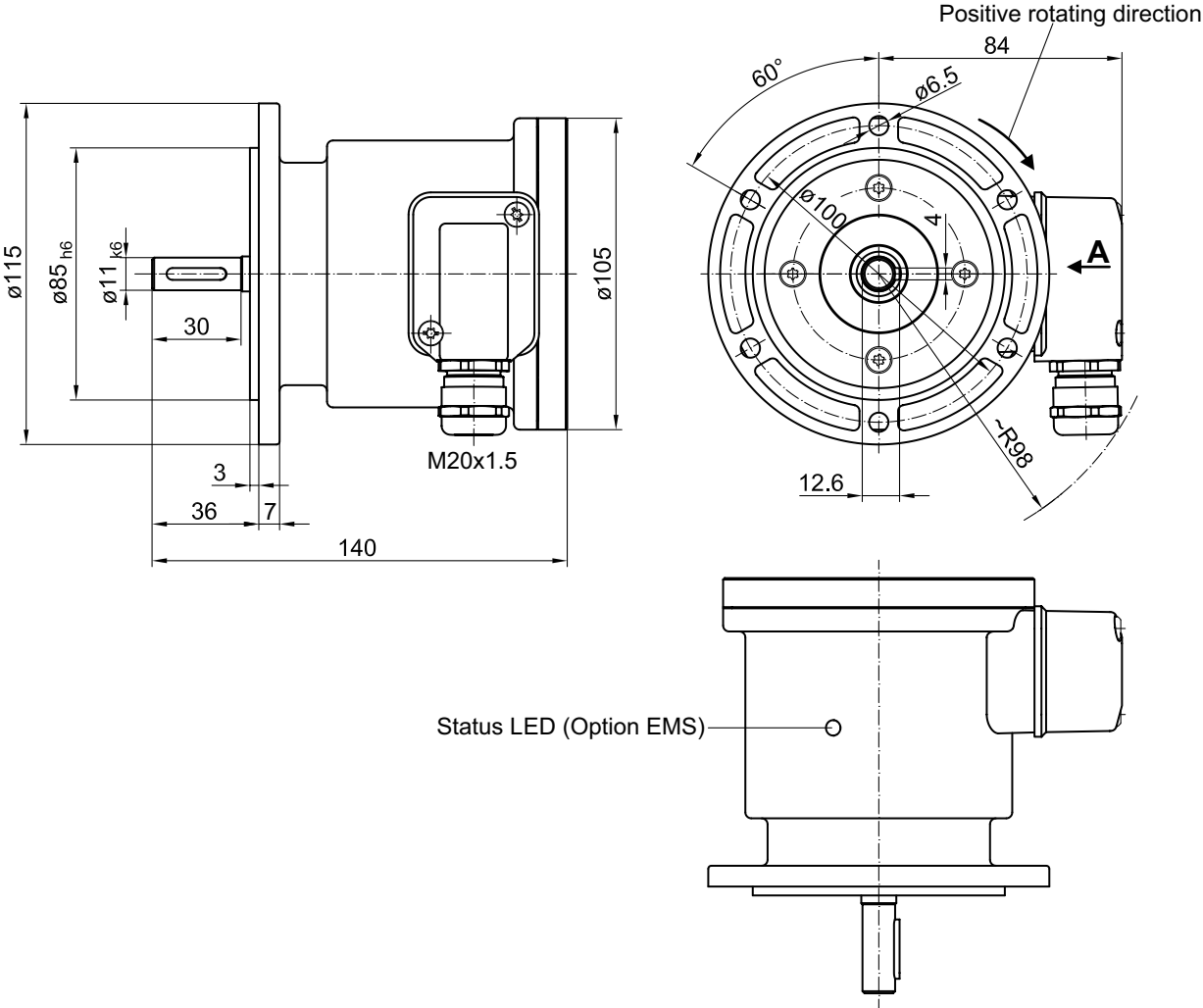
\* Only at rotating encoder

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**Dimensions**



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