Absolute Shaft Encoder EPR-WG

User Information *English translation*

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Correct Use

The EPR-WG is a robust absolute shaft encoder for heavy duty applications in connection with our programmable cam-controllers EPR/EPC.

Features

- Resolution of 360 steps / revolution, others on request
- Binary or Gray-Excess-76-Code
- PNP/NPN transistor outputs
- Outputs absolutely short circuit proof
- Direct connection to EPR16, EPR48, EPC16, EPC48
- Counting direction over up/down-input reversibly
- Mechanical robust

Function

An absolute numerical value is assigned to each angle in the Binary- or Gray-code. A point of reference as with incremental shaft encoder is not necessary therefore.

The code disc is scanned opto-electronically wear-free. All output signals are absolutely short circuit proof. The transistor outputs of the individual channels permit a switching to the load to supply voltage or to 0V.

Due to ball bearings and the durable mechanical structure the shaft encoder is suitable also for high numbers of revolutions.

Installation

Mounted with 3 srews M4 at the front of the shaft encoder. The shaft is to be connected via an appropriate coupling (see accessories).

Damage to the product could be caused by the following:

- Electrostatic discharge when touching the electronic
- Forces on the shaft are to strong
- Impact and shock
- Chemical fluids
- Extreme temperature
- Strong vibration and shocks

Electrical Connection

The shaft encoders are available with axial or radial plug-in connection. Suitable cable connections and clutches are likewise available.

Pin 12pol EPR-WG	*Pin 25pol EPR*	*Signal*	*cable colour*
1	*1,14*	*0V*	*blue*
2	*2*	*2^0 / G^0 b*	*brown*
3	*15*	*2^1 / G^1*	*green*
4	*3*	*2^2 / G^2*	*black*
5	*16*	*2^3 / G^3*	*grey*
6	*4*	*2^4 / G^4*	*white*
7	*17*	*2^5 / G^5*	*rose*
8	*13,25*	*+10..24V*	*red*
9	*5*	*2^6 / G^6*	*violet*
10	*18*	*2^7 / G^7*	*red/blue*
11	*6*	*2^8 / G^8*	*yellow*
12	*10*	*up/down*	*grey/rose*
	case	*PE*	

Pin assignment EPR-WG

The cable color refers to the cables supplied by us. PE is grounded on one side.

Safety Precautions

- The installation and operation must be carried out by qualified personnel only,
- The safe function of the device during machine operation cannot be guaranteed in case of wrong connection or improper operation. This may lead to fatal injuries.
- Pay attention to country specific regulations.
- The electrical installation must be performed after disconnecting the device and the machine from the mains supply.
- The wiring must be carried out according to the instructions of this operating manual.
- Opening the device, any manipulation of the device and the avoidance of the safety facilities are not permitted.
- All relevant safety regulations and standards must be attended to.
- Non-observance of the safety regulations may cause death, severe injuries or substantial damage to property.
- Before use, please, read the operating instructions and keep it in a safe place. Make sure that the operating instructions are always available for installation, initial operation and maintenance.

Non-observance of the instructions above will cause the loss of warranty.

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E61-205-00

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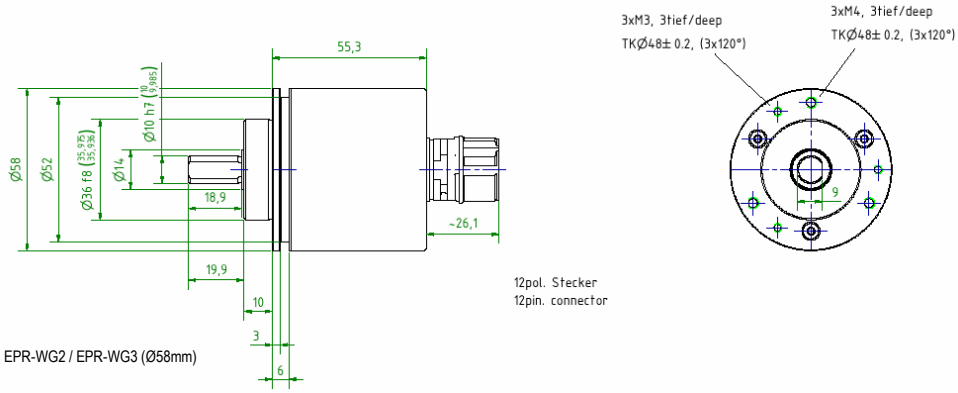
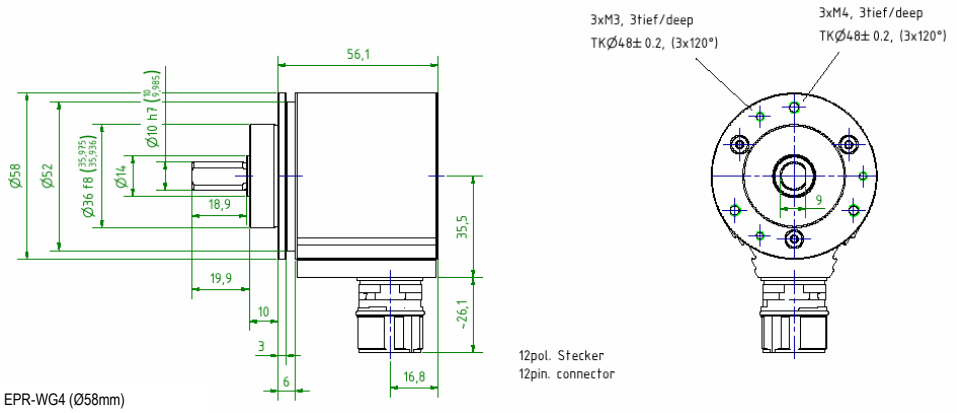
Techn. Data

Operation voltage	DC 11-27V
Power consumption without load	80 mA
Outputs	20 mA, short circuit proof
Vibration	100 m/s^2 (100 Hz sinusoidally)
Permissible number of revolutions	6000 U/min
Permissible accerlation	1000 m/s^2
Protection	IP65
Connection	Plug connector IP54
Temperature range	0 - 55^{0}C
Weight	approx. 300 g

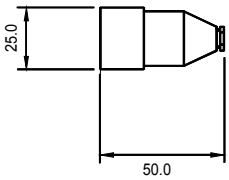
Dimension Drawing



EPR-WG2 / EPR-WG3 (Ø58mm)



EPR-WG4 (Ø58mm)



Kabelstecker

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Variants

Order No. 585480	EPR-WG2 360/U Gray-Excess.-76-Code, axial
Order No. 585482	EPR-WG3 360/U Binary code, plug axial
Order No. 585471	EPR-WG4 360/U Binary code, plug radial
Order No. 585487	Connection plug EPR-WG/EPS-WG
Order No. 585494	Cable 3m EPR-WG2/3/4 with plug
Order No. 585495	Cable 10m EPR-WG2/3/4 with plug
Order No. 585496	Cable 5m EPR-WG2/3/4 with plug
Order No. 585498	each additional meter cable
Order No. 585470	Coupling WGK, length 32 mm

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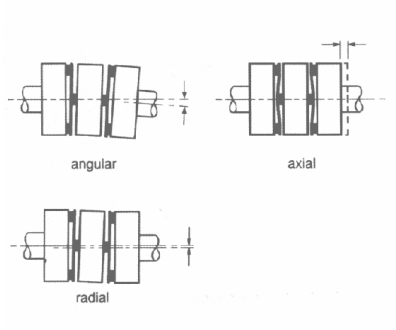
Accessories

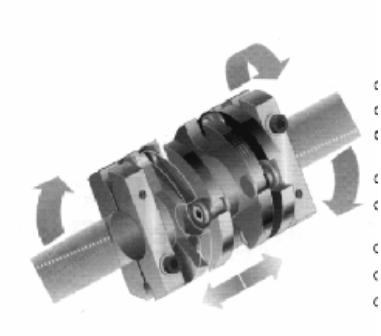
Flexible coupling WGK

High precision coupling with almost unlimited life expectancy and outstanding kinematic characteristics. They protect the ZANDER shaft encoders reliably from unwanted radial – and axial shocks/vibrations.

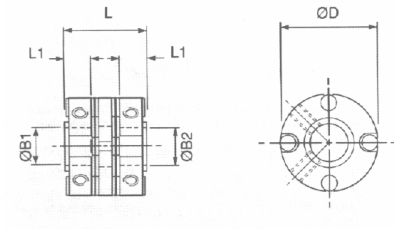
Features

WGK can be used up to 25000 r.p.m. and outlasts an almost unlimited number of misalignment load cycles.





Dimension Drawing



Techn. Data

Dimension	L = 32,1mm, L1 = 10.0 mm
Drillings	B1/B2 = 10 mm
Mass-moment of inertia	80 kgm^2 x 10^{-7}
Impact moment	5.6 Nm
Max. wave misalignment	angular +/-3^0;
	radially +/- 0.2 mm;
	axially +/- 0.2 mm
Weight	52 g

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