

User Information

English translation

Correct Use

The EPS-WG is an incremental shaft encoder in mechanical durable quality, particularly suitable in connection with our programmable electronic sequential logic controller EPRS.

Features

- Push-pull outputs
- outputs absolutely short circuit proof and protected against wrong polarity
- direct connection at EPR16S, EPR48S
- 2 clock signals, 1 zero signal
- mechanical very solid



Function

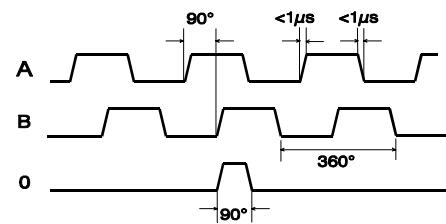
Two 90° phase-shifted clock signals are available as output signals as well as a zero signal. The direction of rotation is recognized by the phaseshifted clock signals, the zero signal serves as the point of reference, which synchronizes the controller after each full revolution with the shaft encoder. As a standard the shaft encoder is delivered with 180 pulses/revolution.

Due to the pulse doubling in our programmable electronic sequential logic controllers a resolution of 1° can be achieved. Other pulse numbers are available on request.

The code disc is scanned opto-electronically, contactlessly and wear-free. All output signals are absolutely short circuit proof and protected against wrong polarity. Each connection can be put to each potential of supply voltage, without to destroy a component. The push-pull output stage of the individual channels permits a switching of the load to the supply voltage or to 0V.

Due to the ball bearing shaft and durable mechanical structure the shaft encoder is suitable even for high revolutionspeed.

Suitable connecting cables or couplings are also available.



Pulse diagram

Installation

Mounted with 3 screws 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 EPS-WG	Pin 25pol EPRS	Signal	Cable colour
3	15	Zero (0)	white
5	2	Tact1 (A)	yellow
8	20	Tact2 (B)	rose
10	1,14	0V	blue
12	13,25	+10...30V	red
	case	PE	

Pin assignment EPS-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.

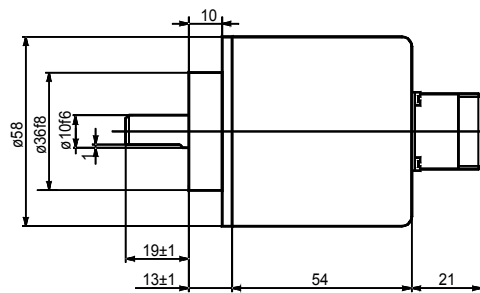
Non-observance of the instructions above will cause the loss of warranty.

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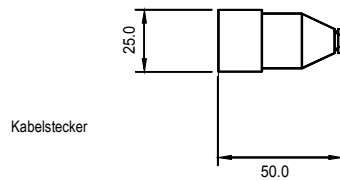
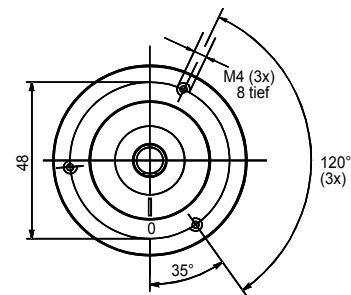
Techn. Data

Supply voltage	DC 10-30V
Power consumption without load	120 mA
Outputs	20 mA, short circuit proof
Pulse frequency	max. 20 kHz
Vibration	100 m/s ² (100 Hz sinusoidal)
Permissible number of revolutions	6000 r.p.m.
Permissible acceleration	2000 m/s ²
Protection	IP65
Connection	Plug connector IP54
Temperature range	0 - 55°C
Weight	approx. 300 g

Dimension Drawing



EPS-WG2 (Stecker axial)



Kabelstecker



Variants

Order No. 585490	EPS-WG2 180 pulses/revolution, 360 or 500 on request
Order No. 585497	Cable 5 m EPS-WG2 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

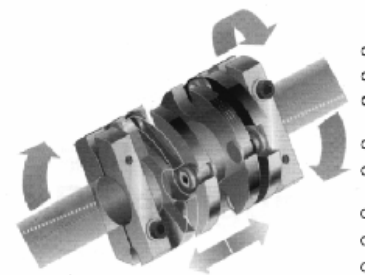
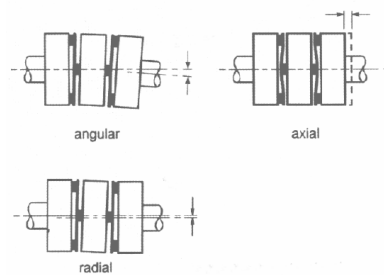
High precision coupling with almost unlimited life expectancy and outstanding kinematic characteristics. They protect the ZANDER shaft encoders reliably from unwanted radial – and axial shocks/vibrations.

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

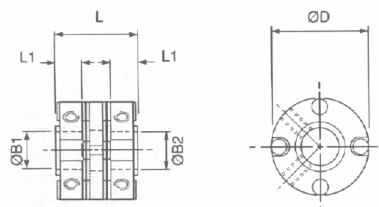


Features

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Dimension Drawing



Techn. Data

Dimension	L = 32.1 mm, 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 (angular) +/- 3°; radially +/- 0.2 mm; axially +/- 0.2 mm
Weight	52 g