WACHENDORFF
The Encoder Experts

Security for your machine

Redundant encoders in 58 mm housing

WARRANTY 5 JAHRE YEARS GARANTIE

wachendorff-automation.com/encoders-redundant

Robust redundancy industrial encoder
2 full-fledged encoders in one housing
Diversity through 2 measuring principles
High performance level achievable

c UL us LISTED

Industrie ROBUST

Security for your machine
Redundant encoders in 58 mm housing

Wachendorff Automation combines its core competencies of optical and magnetic sensor technology in a 58 mm housing.

Security for your machine
- Robust redundancy industrial encoder
- Protection class IP67, at the shaft IP65
- High interference immunity
- High bearing loads: up to 220 N radial / 120 N axial
- 2 full-fledged encoders in one housing
- Diversity through 2 measuring principles - optical / magnetic
- High performance level achievable in combination with safe controllers or e.g. safe speed monitors

Diversity- and yet perfectly matched to each other

By using our sensor systems, which have been tried and tested over many years and developed in-house, we focus on extreme reliability. For more than 20 years we have experience in the development of incremental optical encoders and for 10 years we have been developing magnetic incremental and absolute encoders.

This enables us to produce not only one redundant encoder, but a variety of redundant encoders that are perfectly matched to each other. Diversity means that we specifically increase reliability by using different measuring principles and as few identical components as possible. The basic idea behind this approach is that the different sensor platforms also react with different sensitivities or insensitively to disturbances of any kind and therefore do not fail simultaneously, so that the post connected electronics can reliably detect this possible failure.

High performance levels and lower costs

For the implementation of a safety function in accordance with e.g. Performance Level d or SIL 3, not all components necessarily have to meet the safety requirements directly. Often the required safety level can be achieved with redundant information and the appropriate control system. In concrete terms, our redundant standard encoders provide diverse (magnetic and optical) signals that are generated completely independently of each other, but can still be correlated with each other. Even the supply voltage is available separately for each sensor unit. Almost all safety-related control or monitoring systems have conventional inputs. This makes it possible to use inexpensive standard components with high-quality redundant encoders from a process-controlled assembly and to achieve the required safety level cost-effectively.

MTTFd - for your planning

In order to be able to use non-SIL-certified devices in your application to fulfil safety-related tasks, you must be aware of a few things. When making the mechanical connection, for example, you must ensure that the two shafts to be connected to each other are positively locked to reliably prevent slippage. Furthermore, the MTTFd value must be included in your planning.
As the MTTFd value of our systems is e.g. between 200 years and 1000 years, it is limited to 100 years for calculation according to the standard to avoid overcompensation of another worse channel. This results in a total MTTFd value of 133 years for our systems. This MTTFd value is rated as „high“ according to the standard, so it is possible to achieve Performance Level D (PLd) even with a low diagnostic coverage (DC = 60% to < 90%). Don‘t be misled by the DC = 0% of our encoder, with the right control and even little effort you can achieve the required coverage level (low) in the overall evaluation of the system. (e.g. correlating position values in the controller, checking whether the direction of rotation of the encoder matches the expected direction of rotation of the motor, etc...).

Available encoders:

WDGR 58B	WDGE 58B
incremental magnetic - **incremental** optical magnetic up to 1024 ppr, optical up to 5000 ppr Signal shape: magnetic square-wave, optical square-wave or sine/cosine	**absolute** magnetic - **incremental** optical
Clamping flange: Ø 58 mm, shaft: Ø 6 mm, Ø 8 mm / Ø 10 mm / Ø 9,525 mm, protection housing to IP65, IP67, shaft sealed to IP65	
www.wachendorff-automation.com/WDGR58B	www.wachendorff-automation.com/WDGE58B

Any Questions? Just call us at +49 (0) 67 22 / 99 65 414, send us an E-Mail to support-wa@wachendorff.de or call your local distributor: **www.wachendorff-automation.com/distri**

WACHENDORFF
The Encoder Experts

Wachendorff Automation GmbH & Co. KG
Industriestrasse 7 • D-65366 Geisenheim

Tel.: +49 (0) 67 22 / 99 65 - 25
E-Mail: wdg@wachendorff.de
www.wachendorff-automation.com

2024

Your distributor: