



Online Data sheet

Encoder WDGA 58B EtherCAT (cov)

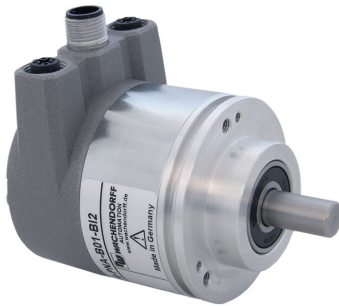
www.wachendorff-automation.com/wdga58becb

Wachendorff Automation

... systems and encoders

- Complete systems
- Industrial rugged encoders to suit your application
- Standard range and customer versions
- Maximum permissible loads
- 48-hour express production
- Made in Germany
- Worldwide distributor network

Encoder WDGA 58B absolute EtherCAT magnetic, with bus cover and with EnDra®- Technology



EtherCAT
Conformance tested

EnDra
Technologie

- EnDra®: maintenance-free and environmentally friendly
- EtherCAT, Single-turn/Multi-turn
- Compact design with bus cover
- Single-turn/Multi-turn (max. 16 bit/43 bit)
- Forward-looking technology
- 2 colour-duo LED's as indicator for operating condition and bus status and 2 L/A LED's
- High shaft load up to 220 N radial, 120 N axial
- CoE, FoE, EoE

www.wachendorff-automation.com/wdga58becb

Mechanical Data

Housing

| | |
|------------------|--|
| Flange | clamping flange |
| Flange material | aluminum |
| Housing cap | steel case chrome-plated, magnetic shielding |
| Connection cover | die cast aluminum, powder coated |
| Housing | Ø 58 mm |

Shaft(s)

| | |
|-----------------|---|
| Shaft material | stainless steel |
| Starting torque | approx. 1 Ncm at ambient temperature, approx. 1.416 in-ozf at ambient temperature |

| | |
|---------------------------------------|--|
| Shaft | Ø 6 mm |
| Advice | Attention: No option AAO = full IP67 version |
| Shaft length | L: 12 mm |
| Max. Permissible shaft loading radial | 125 N |
| Max. Permissible shaft loading axial | 120 N |

| | |
|---------------------------------------|--|
| Shaft | Ø 8 mm |
| Advice | Attention: No option AAO = full IP67 version |
| Shaft length | L: 19 mm |
| Max. Permissible shaft loading radial | 125 N |
| Max. Permissible shaft loading axial | 120 N |

| | |
|---------------------------------------|----------|
| Shaft | Ø 10 mm |
| Shaft length | L: 20 mm |
| Max. Permissible shaft loading radial | 220 N |
| Max. Permissible shaft loading axial | 120 N |

| | |
|---------------------------------------|--|
| Shaft | Ø 9.525 mm, Ø 3/8" |
| Advice | Attention: No option AAO = full IP67 version |
| Shaft length | L: 20 mm, L: 0.787 in |
| Max. Permissible shaft loading radial | 220 N, 22.434 kp |
| Max. Permissible shaft loading axial | 120 N, 12.237 kp |

Bearings

| | |
|-----------------------|---|
| Bearings type | 2 precision ball bearings |
| Nominale service life | 1 x 10 ⁹ revs. at 100 % rated shaft load 1 x 10 ¹⁰ revs. at 40 % rated shaft load 1 x 10 ¹¹ revs. at 20 % rated shaft load |
| Max. operating speed | 8000 rpm |

Machinery Directive: basic data safety integrity level

| | |
|------------------------------|--|
| MTTF _d | 300 a |
| Mission time (TM) | 20 a |
| Nominale service life (L10h) | 1 x 10 ¹¹ revs. at 20 % rated shaft load and 8000 rpm |
| Diagnostic coverage (DC) | 0 % |

Electrical Data

| | |
|----------------------------------|----------------------------------|
| Power supply/Current consumption | 10 VDC up to 32 VDC: typ. 125 mA |
| Power consumption | typ. 3 W |

Sensor data

| | |
|-----------------------------|--|
| Single-turn technology | innovativ hall sensor technology |
| Single-turn resolution | up to 65,536 steps/360° (16 bit) |
| Single-turn accuracy | ± 0.0878° (12 bit) |
| Single-turn repeat accuracy | ± 0.0878° (12 bit) |
| Internal cycle time | 50 µs |
| Multi-turn technology | patented EnDra® technology no battery and no gear. |
| Multi-turn resolution | 43 bit |

Integrated web server:

| | |
|--------------|--|
| Configurable | IP address Subnet mask Gateway address |
| Readable | Encoder parameters |
| Update | Firmware |

Environmental data

| | |
|-------------------------------|--|
| ESD (DIN EN 61000-4-2): | 8 kV |
| Burst (DIN EN 61000-4-4): | 2 kV |
| includes EMC: | DIN EN 61000-6-2 DIN EN 61000-6-3 |
| Vibration: (DIN EN 60068-2-6) | 200 m/s ² (10 Hz up to 1000 Hz) |
| Shock: (DIN EN 60068-2-27) | 5000 m/s ² (6 ms) |

| | |
|---------------|------------------------|
| Design: | according DIN VDE 0160 |
| Turn on time: | <1,5 s |

Duty information

| | |
|------------------------|----------|
| Customs tariff number: | 90318020 |
| Country of origin: | Germany |

Interface

| | |
|-------------------------|---|
| Interface: | Industrial Ethernet |
| Protocol: | EtherCAT |
| Device Profile: | CiA DS-406 V4.0.2, Class 3 |
| Data Transfer: | 100BASE-TX |
| Cycle time: | up to 50 µs |
| Function: | Multiturn |
| Code: | binary, CW default, programable |
| Programmable Parameter: | steps per revolution counts of revolution preset scale counting direction 2x 8 cam switches DC-Mode |
| Diagnostics: (LED) | Traffic and connection management: L/A1: Port 1 (IN) L/A2: Port 2 (OUT) |
| Status LED: | STAT, MOD: status of encoder and bus |

General Data

| | |
|------------------------------|--|
| Weight | approx. 700 g, approx. 24.7 oz |
| Connections | bus cover |
| Protection rating (EN 60529) | Housing: IP65, IP67; shaft sealed: IP65 |
| Operating temperature | -40 °C up to +85 °C, -40 °F up to +176 °F |
| Storage temperature | -40 °C up to +100 °C, -40 °F up to +212 °F |

More Information

General technical data and safety instructions
<http://www.wachendorff-automation.com/gtd>

Options
<http://www.wachendorff-automation.com/acc>

Options**Shafts sealed to IP67, only with shaft Ø 10 mm****Order key**

The encoder WDGA 58B EtherCAT (cov) can be supplied in a full IP67 version.

AAO

Max. RPM: 3500 min⁻¹

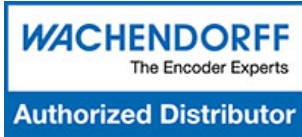
Permitted Shaft-Loading: axial 100 N; radial 110 N

Starting-torque: approx. 4 Ncm at ambient temperature

| Example Order No. | Type | Your encoder | |
|-------------------|--|------------------|----|
| WDGA 58B | WDGA 58B | WDGA 58B | |
| | Shaft | Order key | |
| 10 | Ø 6 mm Attention: No option AAO = full IP67 version | 06 | |
| | Ø 8 mm Attention: No option AAO = full IP67 version | 08 | |
| | Ø 10 mm | 10 | |
| | Ø 9.525 mm Ø 3/8" Attention: No option AAO = full IP67 version | 4Z | |
| | Single-turn Resolution | Order key | |
| 12 | Single-turn resolution 1 up to 16 bit, e. g. 12 bit = 12 | 12 | |
| | Multi-turn Resolution | Order key | |
| 18 | Multi-turn 18 bit: e. G. 18 bit = 18 e. G. 39 bit = 39 | 18 | |
| | Data protocol | Order key | |
| EC | EtherCAT (with bus cover) | EC | EC |
| | Software | Order key | |
| U | up to date release | U | U |
| | Code | Order key | |
| B | binary | B | B |
| | Power supply | Order key | |
| 0 | 10 V up to 32 V (standard) | 0 | 0 |
| | Galvanic isolation | Order key | |
| 1 | yes | 1 | 1 |
| | Electrical connections | Order key | |
| | Options | Order key | |
| | Shafts sealed to IP67, only with shaft Ø 10 mm | AAO | |
| | Without option | Empty | |

| | | | | | | | | | | | |
|--------------------------|----------|----|----|----|----|---|---|---|---|--|--|
| Example Order No. | WDGA 58B | 10 | 12 | 18 | EC | U | B | 0 | 1 | | |
|--------------------------|----------|----|----|----|----|---|---|---|---|--|--|

| | | | | | | | | | | | | |
|----------|--|--|--|--|----|---|---|---|---|--|--|---------------------|
| WDGA 58B | | | | | EC | U | B | 0 | 1 | | | Your encoder |
|----------|--|--|--|--|----|---|---|---|---|--|--|---------------------|



For further information please contact our local distributor.
Here you find a list of our distributors worldwide.
<https://www.wachendorff-automation.com/contact-sales-en/>

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