Encoder WDGA 58D EtherCAT (cov)
www.wachendorff-automation.com/wdga58decb

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 58D absolute EtherCAT magnetic, with bus cover and with EnDra® Technology

- **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
- 2 colour-duo LED’s as indicator for operating condition and bus status and 2 L/A LED’s
- High shaft load up to 400 N radial, 400 N axial
- CoE, FoE, EoE

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**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
- Shaft: Ø 12 mm
- Shaft length: L: 25 mm
- Max. Permissible shaft loading radial: 400 N
- Max. Permissible shaft loading axial: 400 N

**Bearings**
- Bearings type: 3 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**
- MTTFd: 300 a
- Mission time (TM): 20 a
- Nominale service life (L10h): 1 x 10^9 revs. at 20 % rated shaft load and 8000 rpm
- Diagnostic coverage (DC): 0 %

**Environmental data**

**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/s² (10 Hz up to 1000 Hz)
- Shock: (DIN EN 60068-2-27): 5000 m/s² (6 ms)
- Design: according DIN VDE 0160
- Turn on time: <1,5 s

**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
- Connections: bus cover
- Protection rating (EN 60529): Housing: IP65, IP67; shaft sealed: IP65

**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
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>-40 °C up to +85 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C up to +100 °C</td>
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**More Information**

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

Options
http://www.wachendorff-automation.com/acc
Description
BI2 Bus cover with 3x M12x1

<table>
<thead>
<tr>
<th>Assignments</th>
<th>BI2</th>
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<th>Assignments</th>
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<tbody>
<tr>
<td>Female connector (Port1) IN</td>
<td>M12x1, 4-pin, D-coded</td>
<td>connector (Power)</td>
<td>M12x1, 4-pin, A-coded</td>
<td>Female connector (Port2) OUT</td>
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<td>Tx+</td>
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<td>GND</td>
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<td>Rx-</td>
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<td>n. c.</td>
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<td>Rx-</td>
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<td>Single-turn Resolution</td>
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<tr>
<td>WDGA 58D</td>
<td></td>
<td>12 Ø 12 mm</td>
<td>12</td>
<td>13 Single-turn resolution 1 up to 16 bit, e.g. 12 bit = 12</td>
<td>12</td>
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</tbody>
</table>
For further information please contact our local distributor. Here you find a list of our distributors worldwide.
https://www.wachendorf-automation.com/