

Encoder WDGA 58S absolute CANopen magnetic, with EnDra® - Technology

**Salt mist IEC 60068-2-11
High pressure / steam cleaning**



EnDra®
Technology

CANopen®

Specifications:

Mechanical Data

Housing: steel case chrome-plated, magnetic shield
Shaft: stainless steel
Flange: Aluminium, anodized natur

Shaft: Ø 10 mm, length 20 mm
- Material: stainless steel
- Permitted load on shaft end: max. 100 N radial
- Starting torque: approx. 1 Ncm at ambient temperature

Bearings

- Type: 2 precision ball bearings
- Service life: 1 x 10⁹ revs. at 100 % rated shaft load
1 x 10¹⁰ revs. at 40 % rated shaft load
1 x 10¹¹ revs. at 20 % rated shaft load

Max. operating speed: 3,600 min⁻¹
Weight: approx. 200 g

Machinery Directive:

basic data safety integrity level

MTTF_d: 1000 a
Mission time (T_M): 20 a
Normal service life (L_{10h}): 1 x 10¹¹ revs. at 3,600 min⁻¹ and 20 % rated shaft load
Diagnostic coverage (DC): 0

Sensor data

Singleturn technology: innovative hall sensor technology
Singleturn resolution: 16,384 steps/360° (14 bit)
Singleturn accuracy: < ± 0.35°
Singleturn-repeat accuracy: < ± 0.20°
intern cycle time: ≤ 600 µs
Multiturn Technology: patented EnDra® technology
no battery and no gear
Multiturn resolution: up to 262,144 revolutions (18 bit) with high precision value up to 40 bit

Environmental data

Operating temperature: -40 °C up to +80 °C
Storage temperature: -40 °C up to +100 °C
Protection rating: IP67 all around and IP69K
(EN 60529) Resistance to salt mist (IEC 60068-2-11) after 672 hours

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: 50 m/s² (10-2000 Hz)
(DIN EN 60068-2-6)
Shock: 1000 m/s² (6 ms)
(DIN EN 60068-2-27)
Design: appropriate DIN VDE 0160

- Resistance to salt mist (IEC 60068-2-11) succeeded
- Protection: IP67 + IP69k (high pressure / steam cleaning)
- EnDra®: maintenance-free and environmentally friendly
- CANopen, Single- and Multiturn
- Communication Profile according to CiA 301
- Device Profile for encoder CiA 406 V3.2 class C2
- Single-/Multiturn (14 bit / 40 bit)
- Forward-looking technology with 32 Bit processor
- 2-colour-LED as indicator for operating condition and error message appropriate CiA 303-3

www.wachendorff-automation.com/wdga58scan

Interface

Protocol: CANopen
- Communication profil CiA 301
- Device Profile for encoder CiA 406 V3.2 class C2

Node number: 0 up to 127 (default 127)
Baud rate: 10 kBaud up to 1 MBaud with automatic bit rate detection

The standard settings as well as any customization in the software can be changed via LSS (CiA 305) and the SDO protocol, e. g. PDOs, Scaleing, Heartbeat, Node-ID, Baud rate, etc.

Programmable CAN transmission modes

- **Synchronous mode:** when a synchronisation telegram (SYNC) is received from another bus node, PDOs are transmitted independently.
- **Asynchronous mode:** a PDO message is triggered by an internal event. (e.g. change of measured valued, internal timer, etc.)

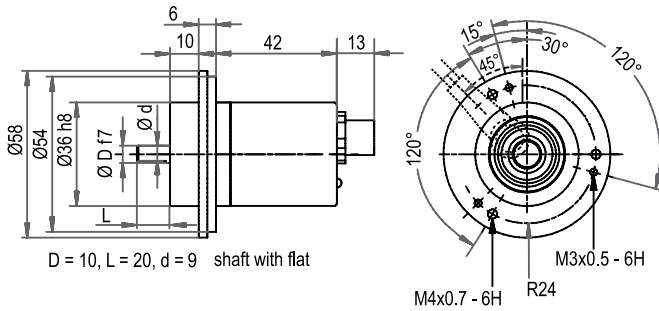
Electrical Data:

Supply voltage: 10 VDC up to 30 VDC
max. 50 mA
Power consumption: max. 0.5 W

Electrical connections axial, M12x1

| Definition | connector pin (connector-encoder) | Sensor connector pin assignment 5-pin |
|-----------------------------|-----------------------------------|---------------------------------------|
| U _B | 2 | |
| Ground (GND) | 3 | |
| CAN _{High} | 4 | |
| CAN _{Low} | 5 | |
| CAN _{GND} / Schirm | 1 | |

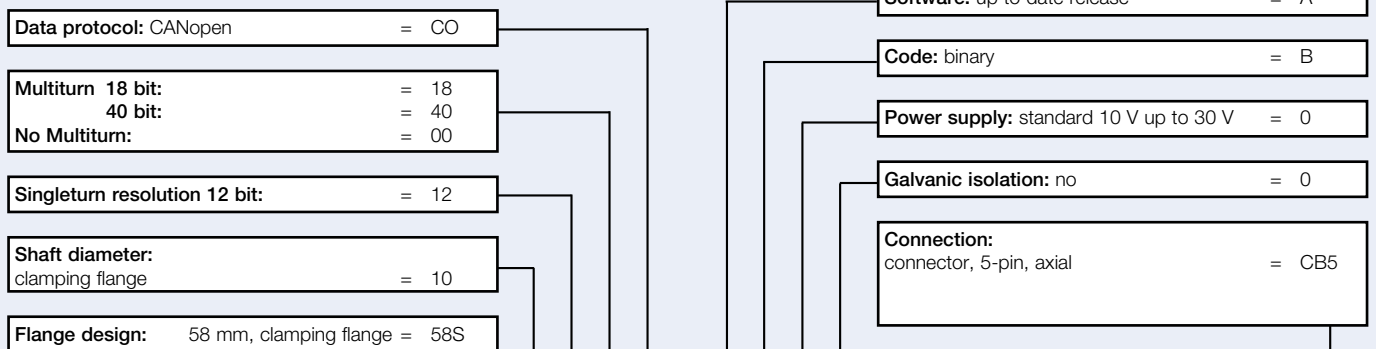
Connector, M12 x 1, 5-pol. CB5



All dimensional specifications in mm.

Suitable accessories for encoders WDGA absolute CANopen can be found on our website:
www.wachendorff-automation.com/wdgaacc

Ordering information:



Order-No.:

| | | | | | | | | | | | |
|--------------|------|-----|----|----|----|----|---|---|---|---|-----|
| Example | WDGA | 58S | 10 | 12 | 18 | CO | A | B | 0 | 0 | CB5 |
| Your encoder | WDGA | 58S | 10 | 12 | | CO | A | B | 0 | 0 | CB5 |