

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



EnDra®
Technology

CANopen®

- EnDra® multiturn technology: 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

www.wachendorff-automation.de/wdga58ecan

Mechanical Data

Housing	
- Flange:	Aluminium
- Cap:	Aluminium, powder coated
- Torque Support:	
1. Spring plate Compensation:	Incl. 1 spring plate WDGDS10001 axial: max. 1.5 mm, radial: max. 0.1 mm
Max. operating speed:	6000 rpm
2. Cylinder pin Compensation:	up to max. protection rating +60 °C (Accessories) axial: max. 1 mm, radial: max. 0.3 mm
Max. operating speed:	3000 rpm
Hollow bore (blind)	
- Material:	stainless steel
- Diameter:	6, 12 or 14 mm
- Permitted load on shaft end:	8, 10 mm with adapter sleeve max. 80 N radial max. 50 N axial
- Starting torque:	approx. 1.6 Ncm at ambient temperature
- Attachment:	permanently attached clamping ring
Bearings	
- Type:	2 precision ball bearings
- 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
Weight:	
Connections:	approx. 220 g connector, radial
Protection class (EN 60529): IP67, shaft sealed to IP65	

Machinery Directive: basic data safety integrity level

MTTF _d :	1000 a
Mission time (T _M):	20 a
Normal service life (L _{10h}):	1 x 10 ¹¹ revs. at 6,000 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

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

Interface

Protocol:	CAN 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, Scaling, 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.)

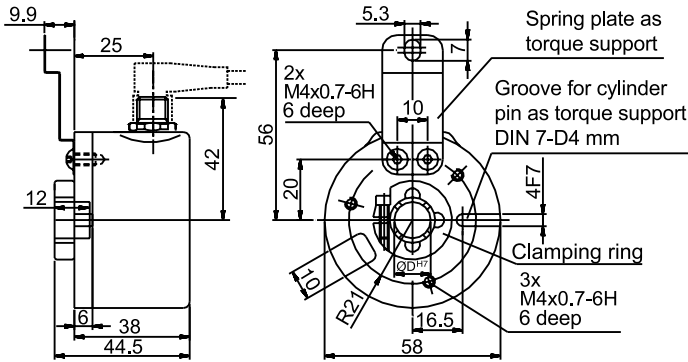
Electrical Data:

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

Electrical connections, radial, 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} / shield	1	

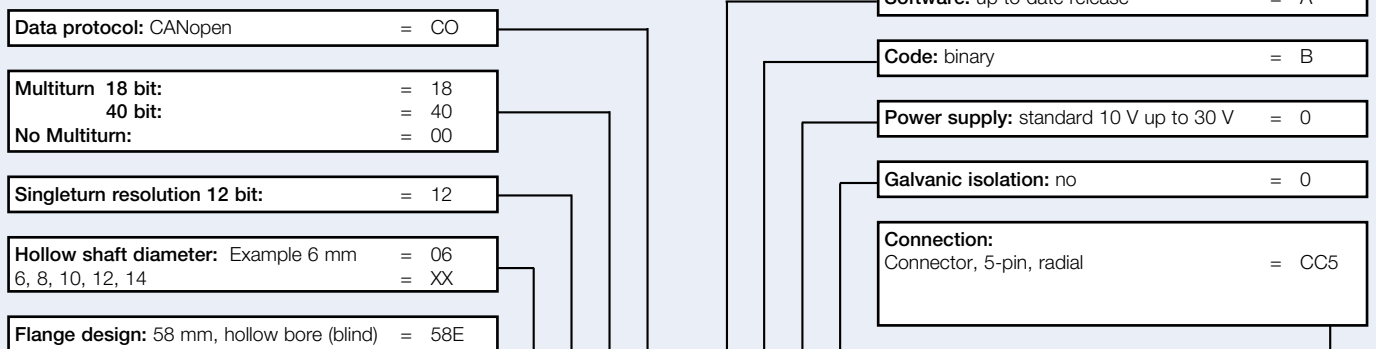
sConnector, M12 x 1, 5-pin. CC5



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	58E	06	12	18	CO	A	B	0	0	CC5
Your encoder	WDGA	58E		12		CO	A	B	0	0	CC5