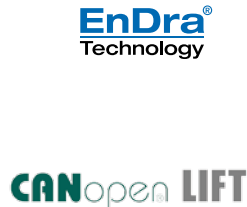


Encoder WDGA 58E absolute CANopen LIFT magnetic, with EnDra® - Technology



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
Max. operating speed:	Accessory WDGDS10005 necessary axial: max. 1 mm, radial: max. 0.3 mm
3000 rpm	
Hollow bore (blind)	
- Material:	stainless steel
- Diameter:	6, 12 or 14 mm
	8, 10 mm with adapter sleeve
- Permitted load on shaft end:	max. 80 N radial
- Starting torque:	max. 50 N axial
Attachment:	approx. 1.6 Ncm at ambient temperature 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:	approx. 220 g
Connections:	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

- EnDra® multiturn technology: maintenance-free and environmentally friendly
- CANopen LIFT, Single- and Multiturn
- Communication Profile according to CiA 301
- Application Profile CANopen Lift CiA 417
- Single-/Multiturn (14 bit/40 bit)
- Future-oriented technology with 32 Bit processor

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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
	- Application Profile CANopen LIFT CiA 417 V2.0
	- Up to three virtual devices <i>car position unit</i> (configurable)
Node number:	0 up to 127 (default 4)
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.)

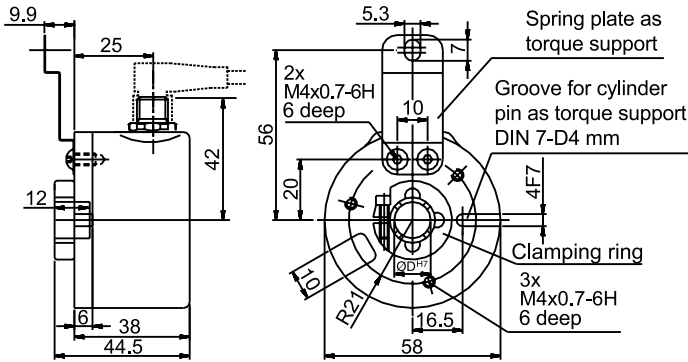
Electrical Data:

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	

WDGA 58E: Connector, M12 x 1, 5-pin. CC5



All dimensional specifications in mm.

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

