

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



EnDra®
Technology

CANopen®

- 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
- High shaft load up to 220 N radial, 120 N axial

www.wachendorff-automation.com/wdga58acan

Specifications:

Mechanical Data

Housing:	steel case chrome-plated, magnetic shielding
Flange type:	synchro
Flange material:	Aluminium
Shaft material:	stainless steel
Shaft Ø:	6/10 mm
Shaft length:	12/20 mm
Permissible shaft loading:	125/220 N radial 120 N axial
Starting torque: (at ambient temperature)	< 1 Ncm
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
Operating speed max.:	8,000 min ⁻¹
Weight:	224 g
Connection:	connector

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 8,000 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
Protection class (EN 60529):	IP67, shaft sealed to IP65

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

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, Scaling, Heartbeat, Node-ID, Baud rate, etc.

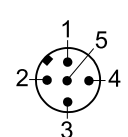
Programmable CAN transmission modes

- **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.)

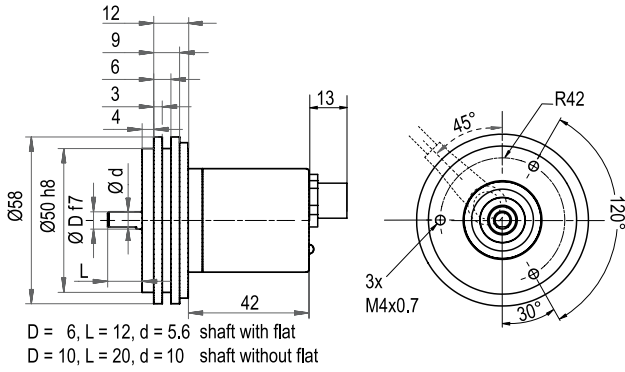
Electrical Data:

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

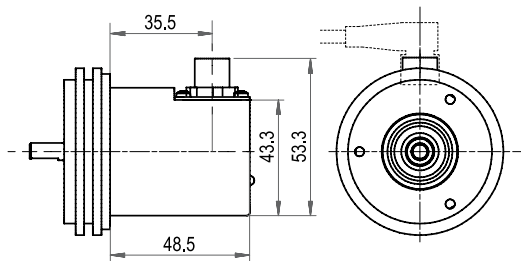
Electrical connections, axial or radial, M12x1

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	

Connector, M12 x 1, 5-pol. CB5

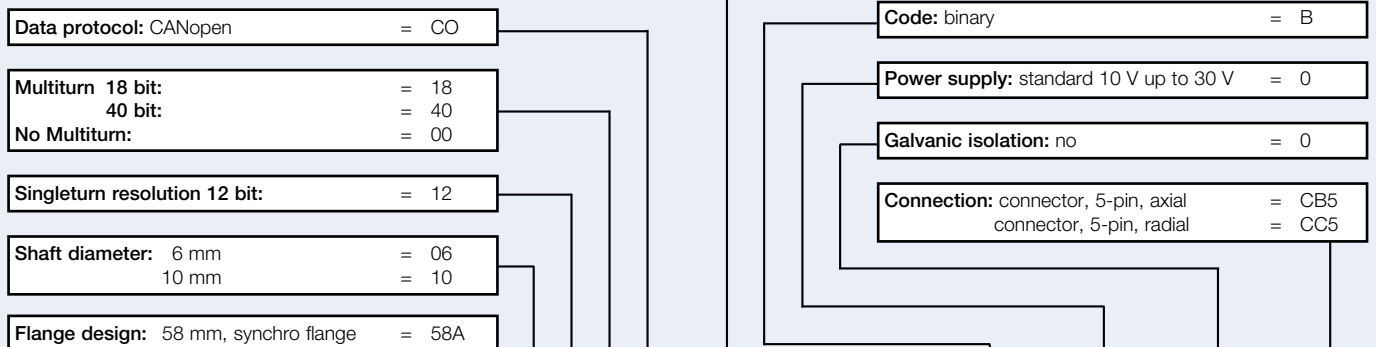


Connector, M12 x 1, 5-pol. CC5



All dimensional specifications in mm.

Ordering information:



Order-No.:

