Encoder WDGA 58B CANopen

www.wachendorff-automation.com/wdga58bcan

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

IndustrieROBUST

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

- EnDra®: maintenance-free and environmentally friendly
- CANopen, Single-turn/Multi-turn
- Communication Profile according to CiA 301
- Device Profile for encoder CiA 406 V3.2 class C2
- Single-turn/Multi-turn (16 bit/43 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/wdga58bcan

Mechanical Data	
Housing	
Flange	clamping flange
Flange material	aluminum
Housing cap	steel case chrome-plated, magnetic shielding
Housing	Ø 58 mm
Cam mounting	pitch 69 mm
Shaft(s)	
Shaft material	stainless steel
Starting torque	approx. 1 Ncm at ambient temperature
Shaft	Ø 6 mm
Advice	Attention: No option AAS = full IP67 version
Shaft length	L: 12 mm
Max. Permissible shaft loading radial	125 N
Max. Permissible shaft loading axial	120 N
Shaft	Ø 10 mm
Shaft length	L: 20 mm
Max. Permissible shaft loading radial	220 N
Max. Permissible shaft loading axial	120 N
Bearings	
Bearings type	2 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	
$MTTF_d$	1000 a
Mission time (TM)	20 a
Nominale service life (L10h)	1 x 10'11 revs. at 20 % rated shaft load and 8000 rpm
Diagnostic coverage (DC)	0 %

Electrical Data	
Power supply/Current consumption	10 VDC up to 32 VDC: typ. 50 mA
Power consumption	max. 0.5 W

Sensor data	
Single-turn technology	innovative hall sensor technology
Single-turn resolution	65,536 steps/360° (16 bit)
Single-turn accuracy	< ±0.35°
Single-turn repeat accuracy	< ±0.20°
Internal cycle time	≤ 600 µs
Multi-turn technology	patented EnDra® technology no battery and no gear.
Multi-turn resolution	up to 32 bit with high precision value up to 43 bit.

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)	300 m/s^2 (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	1000 m/s^2 (6 ms)
Design:	according DIN VDE 0160
Turn on time:	<1,5 s

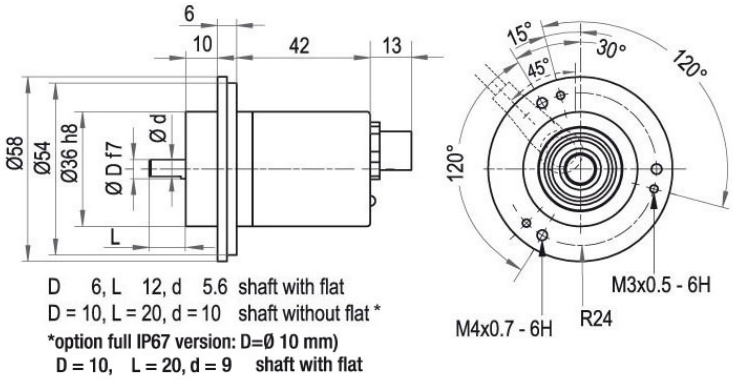
Interface	
Interface:	**CAN**
Protocol:	CANopen • Communication profil CiA 301 • Device Profile for encoder CiA 406 V3.2 class C2
Node number:	1 up to 127 (default 127)
Baud rate:	10 kBaud up to 1 MBaud with automatic bit rate detection.
Advice:	The standard settings as well as any customization in the 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:	**Sychronous 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.)

General Data	
Weight	approx. 202 g
Connections	connector outlet
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65; cable outlet L1: IP40
Operating temperature	-40 °C up to +85 °C
Storage temperature	-40 °C up to +100 °C

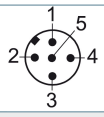
More Information
General technical data and safety instructions **http://www.wachendorff-automation.com/gtd**
Options **http://www.wachendorff-automation.com/acc**

Connector, M12x1 CB5, 5-pin



Description

CB5 axial, 5-pin, shield connected to encoder housing

Assignments	
	CB5
	
(+) Vcc	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1

Options

Shafts sealed to IP67, only with 10 mm shaft with flat	Order key
The encoder WDG 58B CANopen can be supplied in a full IP67 version. Max. RPM: 3500 min'-1 Permitted Shaft-Loading: axial 100 N; radial 110 N Starting-torque: approx. 4 Ncm at ambient temperature	**AAS**

120 Ohm terminating resistor	Order key
The encoder WDGA 58B CANopen is also available with fixed 120 Ohm terminating resistor.	**AEO**

Example Order No.	Type		Your encoder
WDGA 58B	WDGA 58B		WDGA 58B
	Shaft	**Order key**	
06	Ø 6 mm Attention: No option AAS = full IP67 version	06	
	Ø 10 mm	10	
	Single-turn Resolution	**Order key**	
12	Single-turn resolution 1 bit up to 16 bit: (e. G. 12 bit)	12	12
	Multi-turn Resolution	**Order key**	
13	Multi-turn resolution: (examples) 18 bit = 18 43 bit = 43 no Multiturn = 00	13	13
	Data protocol	**Order key**	
CO	CANopen	CO	CO
	Software	**Order key**	
A	up to date release	A	A
	Code	**Order key**	
B	binary	B	B
	Power supply	**Order key**	
0	10 V up to 32 V (standard)	0	0
	Galvanic isolation	**Order key**	
0	no	0	0
	Electrical connections	**Order key**	
	Connector:		
CB5	sensor-connector, M12x1, 5-pin, axial, IP67, shield connected to encoder housing	CB5	CB5
	Options	**Order key**	
	Shafts sealed to IP67, only with 10 mm shaft with flat	AAS	
	120 Ohm terminating resistor	AEO	
	Without option	Empty	

Example Order No.	WDGA 58B	06	12	13	CO	A	B	0	0	CB5	
	WDGA 58B		12	13	CO	A	B	0	0	CB5		Your encoder

For further information please contact our local distributor.
Here you find a list of our distributors worldwide.
https://www.wachendorff-automation.com/

Wachendorff Automation GmbH & Co. KG
Industriestrasse 7 • 65366 Geisenheim
Germany

Phone: +49 67 22 / 99 65 25
Fax: +49 67 22 / 99 65 70
E-Mail: wdg@wachendorff.de
www.wachendorff-automation.de