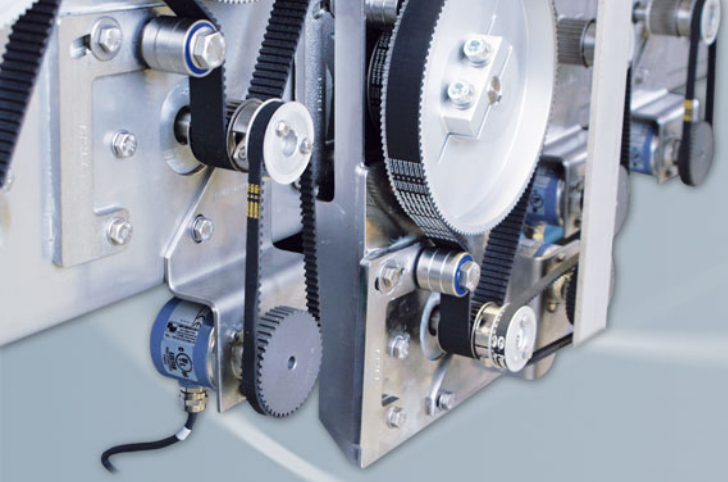


WACHENDORFF
Automation GmbH & Co. KG

Online Data Sheet

Encoder WDGA 58E CANopen LIFT

www.wachendorff-automation.com/wdga58ecanlift

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

- 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 / 39 bit)
- Future-oriented technology with 32 Bit processor

www.wachendorff-automation.com/wdga58ecanlift

Mechanical Data	
Housing	
Flange	hollow shaft (blind-bored)
Flange material	aluminium
Housing cap	steel case chrome-plated, magnetic shielding
Torque supports	incl. 1 torque support WDGDS10001
- 1. Spring plate compensation	axial: ±0.8 mm, radial: ±0.2 mm
- Max. operating speed	6000 rpm up to max. protection rating +60 °C
- 2. Cylinder pin 4 mm	needs accessories WDGDS10005
- Compensation	axial: ±0.5 mm, radial: ±1.5 mm, Max. operating speed: 3000 rpm
Housing	Ø 58 mm
Shaft(s)	
Shaft material	stainless steel
Starting torque	approx. 1.6 Ncm at ambient temperature
Fixing	permanently attached clambing ring
Shaft	Ø 6 mm
Advice	with adapter sleeve
Shaft length	L: 12 mm
Insertion depth min.	11 mm
Insertion depth max.	15 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 6.35 mm
Advice	with adapter sleeve
Shaft length	L: 12 mm
Insertion depth min.	11 mm
Insertion depth max.	15 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 7 mm
Advice	with adapter sleeve
Shaft length	L: 12 mm
Insertion depth min.	11 mm
Insertion depth max.	15 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 8 mm
Advice	with adapter sleeve
Shaft length	L: 12 mm
Insertion depth min.	11 mm
Insertion depth max.	15 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 3/8", 9.525 mm, Ø 3/8"
Advice	with adapter sleeve
Shaft length	L: 12 mm
Insertion depth min.	11 mm
Insertion depth max.	15 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 10 mm
Advice	with adapter sleeve
Shaft length	L: 12 mm
Insertion depth min.	11 mm
Insertion depth max.	15 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 12 mm
Shaft length	L: 12 mm
Insertion depth min.	11 mm
Insertion depth max.	15 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 14 mm
Shaft length	L: 12 mm
Insertion depth min.	11 mm
Insertion depth max.	15 mm
Max. Permissible shaft loading radial	80 N

Max. Permissible shaft loading axial	50 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	6000 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 6000 rpm
Diagnostic coverage (DC)	0 %

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

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 revolution (18 bit) with high precision value up to 39 bit.

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)	50 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

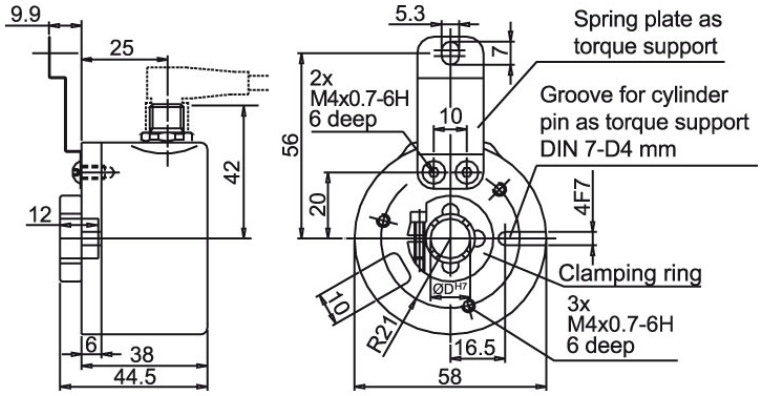
Interface	
Interface:	**CAN**
Protocol:	CANopen • Communication profil CiA 301 • Application Profile CANopen LIFT CiA 417 V2.0 • Up to three virtual devices *car position unit (configurable)*
Node number:	1 up to 127 (default 4)
Baud rate:	10 kBaud up to 1 MBaud with automatic bit rate detection.
Advice:	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. 220 g
Connections	connector outlet
Protection rating (EN 60529)	IP67, shaft sealed to IP65
Operating temperature	-40 °C up to +85 °C
Storage temperature	-40 °C up to +100 °C

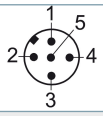
More Information
General technical data **http://www.wachendorff-automation.com/gtd**
Options **http://www.wachendorff-automation.com/acc**

Connector, M12x1, radial, CC5, 5-pin



Description

CC5 radial, 5-pin, shield connected to encoder housing

Assignments	
	CC5
	
(+) Vcc	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1

Example Order No.	Type		Your encoder
WDGA 58E	WDGA 58E		WDGA 58E
	Shaft	**Order key**	
06	Ø 6 mm with adapter sleeve	06	
	Ø 6.35 mm with adapter sleeve	2Z	
	Ø 7 mm with adapter sleeve	07	
	Ø 8 mm with adapter sleeve	08	
	Ø 3/8", 9.525 mm Ø 3/8" with adapter sleeve	4Z	
	Ø 10 mm with adapter sleeve	10	
	Ø 12 mm	12	
	Ø 14 mm	14	
	Singleturn Resolution	**Order key**	
12	Singleturn resolution 1 Bit up to 14 Bit: (e. G. 12 Bit)	12	
	Multiturn Resolution	**Order key**	
18	Multiturn resolution 18 Bit	18	
	Data protocol	**Order key**	
CL	CANopen LIFT	CL	
	Software	**Order key**	
A	up to date release	A	
	Code	**Order key**	
B	binary	B	
	Power supply	**Order key**	
0	10 V up to 32 V (standard)	0	
	Galvanic isolation	**Order key**	
0	no	0	
	Electrical connections	**Order key**	
	Connector:		
CC5	sensor-connector, M12x1, 5-pin, radial, IP67, shield connected to encoder housing	CC5	

Example Order No.	WDGA 58E	06	12	18	CL	A	B	0	0	CC5

	WDGA 58E										Example Order No.

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

WACHENDORFF

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

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