

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

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



EnDra®
Technologie

CANopen LIFT

- EnDra® multiturn technology: maintenance-free and environmentally friendly
- CANopen LIFT, Single-turn/Multi-turn
- Communication Profile according to CiA 301
- Application Profile CANopen Lift CiA 417
- Single-turn/Multi-turn (16 bit / 32 bit)
- Future-oriented technology with 32 Bit processor

www.wachendorff-automation.com/wdga58ecanlift

Mechanical Data

Housing

Flange	hollow shaft (blind-bored)
Flange material	aluminum
Housing cap	Aluminum die cast, powder coated; Integrated 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 clamping 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 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
Shaft	Ø 15 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
Nominal 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
Nominal 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: 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

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 <ul style="list-style-type: none"> • Communication profil CiA 301 • Application Profile CANopen LIFT CiA 417 V2.0 • Up to three virtual devices <i>car position unit (configurable)</i>

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:	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.)

General Data

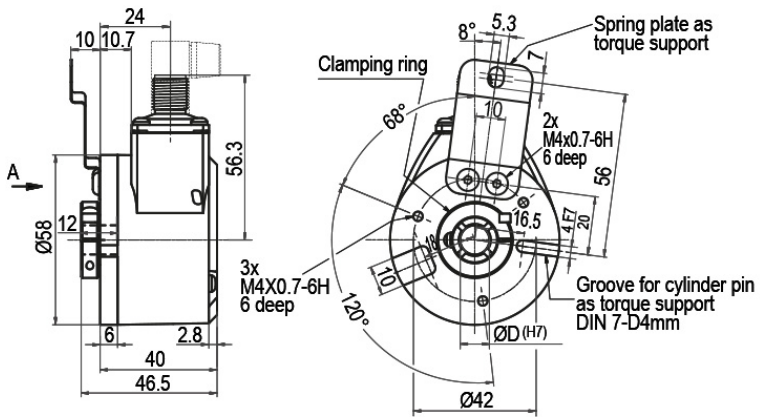
Weight	approx. 220 g
Connections	connector outlet
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +85 °C
Storage temperature	-40 °C up to +100 °C

More Information

General technical data and safety instructions
<http://www.wachendorff-automation.com/gtd>

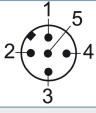
Options
<http://www.wachendorff-automation.com/acc>

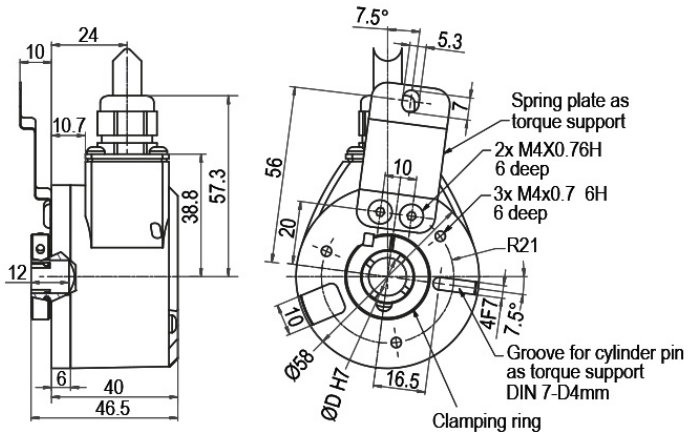
Connector, M12x1, radial, CC5, 5-pin



Description

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

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

Cable connection, L3 radial with 2 m cable

Description

L3 radial, shield connected to encoder housing

Assignments	
	L3
(+) Vcc	BN
GND	WH
CANHigh	GN
CANLow	YE
CANGND shield	shield

Options

120 Ohm terminating resistor

Order key

The encoder WDGA 58E CANopen LIFT is also available with fixed 120 Ohm terminating resistor.

AEO

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 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
	Ø 15 mm	15
	Single-turn Resolution	Order key
12	Single-turn resolution 1 bit up to 16 bit: (e. G. 12 bit)	12
	Multi-turn Resolution	Order key
18	Multi-turn resolution 1 bit up to 32 bit: (e. G. 18 bit) (Single-turn + Multi-turn max. 32 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
CC5	Cable: radial, shield connected to encoder housing, with 2 m cable, IP67	L3
	Connector: sensor-connector, M12x1, 5-pin, radial, IP67, shield connected to encoder housing	CC5
	Options	Order key
	120 Ohm terminating resistor	AEO

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.
<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

