



Online Data Sheet

엠플루트 CANOpen LIFT 통신 마그네틱 로터리 엔코더 WDGA 58A 시리즈 - 갈바닉 절연 타입 (Galvanic isolation)

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 58A absolute CANopen LIFT galv. isolation, magnetic, with EnDra®- Technology



EnDra®
Technologie

CANopen LIFT

1. **CANopen LIFT** 프로토콜 절대형 로터리 엔코더 - 산업 표준 58mm
- 통신 프로파일 CiA301
- 어플리케이션 프로파일 CANopen Lift CiA 417

2. **EnDra®** 기술을 활용한 멀티턴 분해능
- 최대 39bit 대응
- 위치 기억을 위한 배터리, 기어 불필요

3. 갈바닉 절연 타입(**Galvanic isolation**)
- 노이즈내성, 전기적 쇼크내성, 과전류 방지

4. **IP67**의 보호 기능 - 방수/방진 로터리 엔코더
- **Shaft sealing** - **IP65** ****IP67**선택 가능

Mechanical Data	
Housing	
Flange	synchro flange
Flange material	aluminum
Housing cap	steel case chrome-plated, magnetic shielding
Housing	Ø 58 mm
Shaft(s)	
Shaft material	stainless steel
Starting torque	approx. 1 Ncm at ambient temperature, approx. 1.416 in-ozf at ambient temperature
Shaft Ø 6 mm	
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 8 mm	
Shaft	Ø 8 mm
Advice	Attention: No option AAS = full IP67 version
Shaft length	L: 19 mm
Max. Permissible shaft loading radial	125 N
Max. Permissible shaft loading axial	120 N
Shaft Ø 10 mm	
Shaft	Ø 10 mm
Shaft length	L: 20 mm
Max. Permissible shaft loading radial	220 N
Max. Permissible shaft loading axial	120 N
Shaft Ø 9.525 mm, Ø 3/8"	
Shaft	Ø 9.525 mm, Ø 3/8"
Advice	Attention: No option AAS = full IP67 version
Shaft length	L: 20 mm, L: 0.787 in
Max. Permissible shaft loading radial	220 N, 22.434 kp
Max. Permissible shaft loading axial	120 N, 12.237 kp
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	8000 rpm

Electrical Data	
Power supply/Current consumption	10 VDC up to 32 VDC: typ. 100 mA
Power consumption	max. 1 W

Sensor data	
Single-turn technology	innovative hall sensor technology
Single-turn resolution	16,384 steps/360° (14 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 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 <i>car position unit (configurable)</i>
Node number:	1 up to 127 (default 4)
Baud rate:	50 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

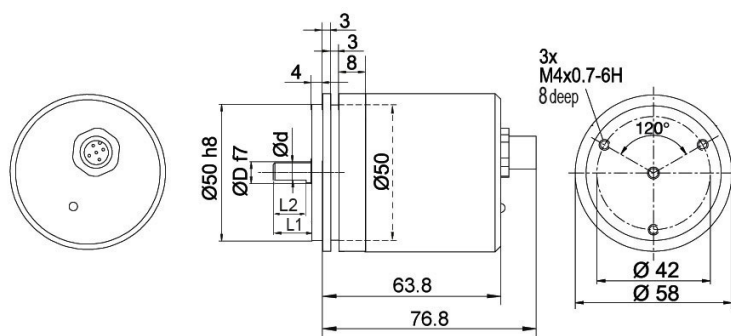
Connections	connector outlet
Protection rating (EN 60529)	IP67, shaft sealed to IP65
Operating temperature	-40 °C up to +85 °C, -40 °F up to +176 °F
Storage temperature	-40 °C up to +100 °C, -40 °F up to +212 °F

More Information

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

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

WDGA 58A CANopen LIFT, galv. isolation, with M12x1, axial CB5, 5-pin



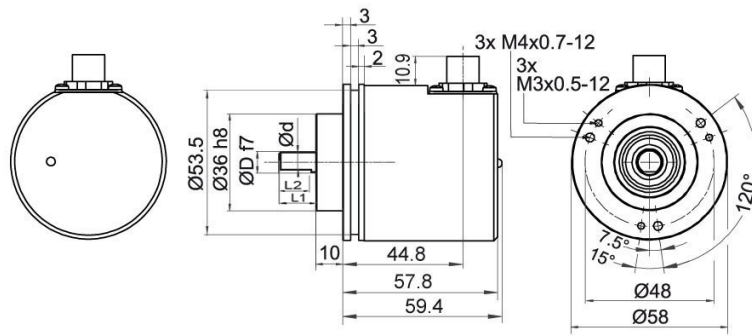
D = 6,	L1 = 12,	d = 5.3,	L2 = 10	shaft with flat
D = 8,	L1 = 19,	d = 7.5,	L2 = 15	shaft with flat
D = 10,	L1 = 20			shaft with out flat*
D = 3/8",	L1 = 20,	d = 8.3,	L2 = 10	shaft with flat

* Option full IP67 version: (only D = Ø 10 mm)
D = 10, L1 = 20, d = 9, L2 = 15 shaft with flat

Description

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

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

WDGA 58A CANopen LIFT, galv. isolation, with M12x1, CC5, radial, 5-pin


D = 6, L1 = 12, d = 5.3, L2 = 10 shaft with flat
 D = 8, L1 = 19, d = 7.5, L2 = 15 shaft with flat
 D = 10, L1 = 20 shaft with out flat*
 D = 3/8", L1 = 20, d = 8.3, L2 = 10 shaft with flat

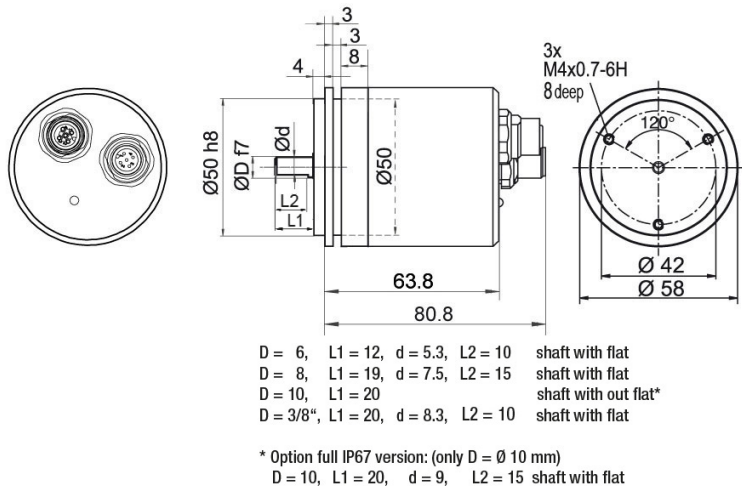
* Option full IP67 version: (only D = Ø 10 mm)

D = 10, L1 = 20, d = 9, L2 = 15 shaft with flat

Description

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

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

WDGA 58A CANopen LIFT, galv. isolation, with 2x M12x1, axial DB5**Description****DB5** axial, 5-pin, shield connected to encoder housing

Assignments	
	DB5
Female connector	M12x1, 5-pin
(+) Vcc	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1

Assignments	
	DB5
Connector	M12x1, 5-pin
(+) 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 58A CANopen LIFT galv. isolation can be supplied in a full IP67 version. **AAS**

Max. RPM: 3500 min⁻¹

Permitted Shaft-Loading: axial 100 N; radial 110 N

Starting-torque: approx. 4 Ncm at ambient temperature

120 Ohm terminating resistor

Order key

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

AEO

Example Order No.	Type	Your encoder	
WDGA 58A	WDGA 58A	WDGA 58A	
	Shaft	Order key	
06	Ø 6 mm Attention: No option AAS = full IP67 version	06	
	Ø 8 mm Attention: No option AAS = full IP67 version	08	
	Ø 10 mm	10	
	Ø 9.525 mm Ø 3/8" Attention: No option AAS = full IP67 version	4Z	
	Single-turn Resolution	Order key	
12	Single-turn resolution 1 bit up to 14 bit: (e. G. 12 bit)	12	
	Multi-turn Resolution	Order key	
18	Multi-turn resolution 18 bit	18	
	Data protocol	Order key	
CL	CANopen LIFT (galv. isolation)	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	
1	yes	1	
	Electrical connections	Order key	
CB5	Connector:		
	sensor-connector, M12x1, 5-pin, axial, IP67, shield connected to encoder housing	CB5	
	sensor-connector, M12x1, 5-pin, radial, IP67, shield connected to encoder housing	CC5	
	sensor-connector/female connector, 2x M12x1, 5-pin, axial, IP67, shield connected to encoder housing	DB5	
	Options	Order key	
	Without option	Empty	
	Shafts sealed to IP67, only with 10 mm shaft with flat	AAS	
	120 Ohm terminating resistor	AEO	

Example Order No.	WDGA 58A	06	12	18	CL	A	B	0	1	CB5	
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WDGA 58A											Example Order No.
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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

CREKEN

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