



Online Data Sheet

엠플루트 CANopen LIFT 통신 마그네틱 로터리 엔코더 WDGA 58B 시리즈

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 58B CANopen LIFT
www.wachendorff-automation.com/wdga58bcanlift

IndustrieROBUST

Encoder WDGA 58B absolute CANopen LIFT 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. 높은 축 강도의 견고한 엔코더
 - **Radial 220N, Axial 120N**
4. **IP67**의 보호 기능 - 방수/방진 로터리 엔코더
 - **Shaft sealing - IP65 **IP67선택 가능**

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
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

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 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	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:	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.)
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General Data

Weight	approx. 202 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 and safety instructions
<http://www.wachendorff-automation.com/gtd>

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

Technical drawing of the M3000 motor showing side and front views with dimensions.

Side View Dimensions:

- Shaft diameter: $\varnothing 12$
- Shaft length: L
- Motor body diameter: $\varnothing 54$
- Motor body length: $h8$
- Motor body diameter: $\varnothing 36$
- Motor body length: $h7$
- Motor body diameter: $\varnothing d$
- Motor body length: 6
- Motor body length: 10
- Motor body length: 42
- Motor body length: 13

Front View Dimensions:

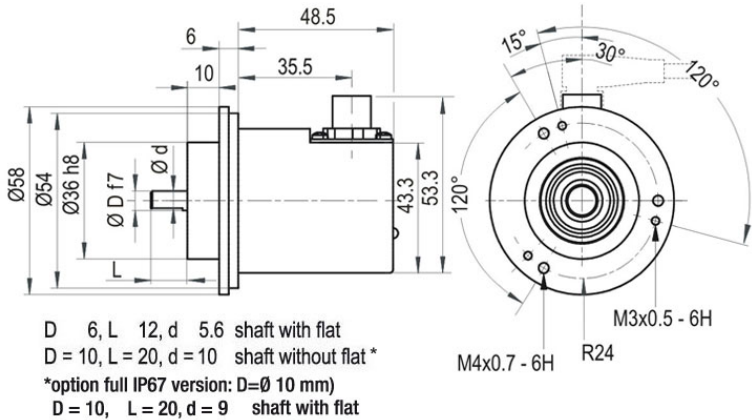
- Motor body diameter: $\varnothing 54$
- Motor body length: $h8$
- Motor body diameter: $\varnothing 36$
- Motor body length: $h7$
- Motor body diameter: $\varnothing d$
- Motor body length: 6
- Motor body length: 10
- Motor body length: 42
- Motor body length: 13

Motor Specifications:

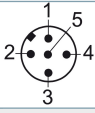
- D 6, L 12, d 5.6 shaft with flat
- D = 10, L = 20, d = 10 shaft without flat *
- *option full IP67 version: D=10 mm
- D = 10, L = 20, d = 9 shaft with flat

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

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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

Options

Shafts sealed to IP67, only with 10 mm shaft with flat		Order key
The encoder WDG 58B CANopen LIFT 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	

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 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	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	
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	
	Options	Order key	
	Without option	Empty	
	Shafts sealed to IP67, only with 10 mm shaft with flat	AAS	

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

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