



# Online Data sheet

## Encoder WDGA 58D CANopen LIFT galv. isolation

[www.wachendorff-automation.com/wdga58dcanliftgalv](http://www.wachendorff-automation.com/wdga58dcanliftgalv)

### 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 58D absolute CANopen LIFT galv. isolation, with EnDra®- Technology



Illustration similar

**EnDra®**  
Technologie

**CANopen LIFT**

**Heavy duty**

- EnDra® 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
- 2-colour-LED as indicator for operating condition and error message appropriate CiA 303-3
- High shaft load radial and axial 500 N [50.984 kp]

[www.wachendorff-automation.com/wdga58dcanliftgalv](http://www.wachendorff-automation.com/wdga58dcanliftgalv)

Mechanical Data	
Flange	clamping flange
Flange material	aluminum
Housing material	steel case chrome-plated, magnetic shielding
Flange diameter	Ø 58 mm [Ø 2.283"]
Shaft(s)	
Shaft material	stainless steel
Starting torque	approx. 1 Ncm [1.416 in-ozf] at ambient temperature
Shaft	Ø 12 mm [Ø 0.472"]
Shaft length	L: 25 mm [0.984"]
Max. Permissible shaft loading radial	500 N [50.984 kp]
Max. Permissible shaft loading axial	500 N [50.984 kp]
Bearings	
Bearings type	3 precision ball bearings
Nominale service life	2 x 10 <sup>8</sup> revs. at 100 % rated shaft load 3.5 x 10 <sup>9</sup> revs. at 40 % rated shaft load 2.5 x 10 <sup>10</sup> 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
Operating principle	magnetic
Sensor data	
Single-turn technology	innovative hall sensor technology
Single-turn resolution	65,536 steps/360° (16 bit)
Single-turn accuracy	± 0.0878° ( 12 bit)
Single-turn repeat accuracy	± 0.0878° ( 12 bit)
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	
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 DIN EN 61326-1
Vibration: (DIN EN 60068-2-6)	50 m/s <sup>2</sup> (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	5000 m/s <sup>2</sup> (6 ms)
Electrical Safety:	according DIN VDE 0160
Turn on time:	<1,5 s

Duty information	
Customs tariff number:	90318020
Country of origin:	Germany

Interface	
<b>Interface:</b>	<b>CAN</b>
Protocol:	CANopen <ul style="list-style-type: none"> <li>• Communication profil CiA 301</li> <li>• Application Profile CANopen LIFT CiA 417 V2.0</li> <li>• Up to three virtual devices <i>car position unit (configurable)</i></li> </ul>
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:	<b>Synchronous mode:</b> when a synchronisation telegram (SYNC) is received from another bus node, PDOs are transmitted independently. <b>Asynchronous mode:</b> a PDO message is triggered by an internal event. (e.g. change of measured valued, internal timer, etc.)
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General Data	
Connections	cable or connector outlet
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +85 °C [-40 °F up to 185 °F]

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Storage temperature	-40 °C up to +100 °C [-40 °F up to 212 °F]
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**More Information**

General technical data and safety instructions

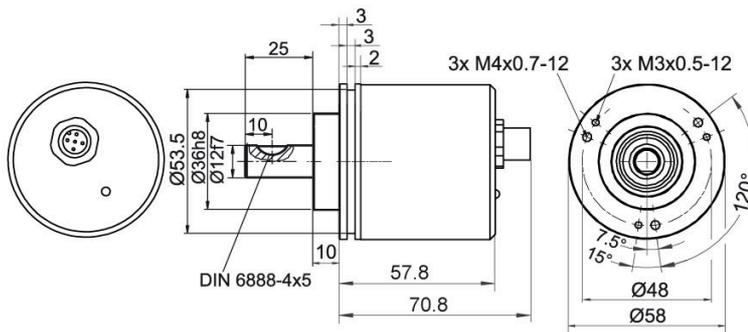
<http://www.wachendorff-automation.com/gtd>

Options

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

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

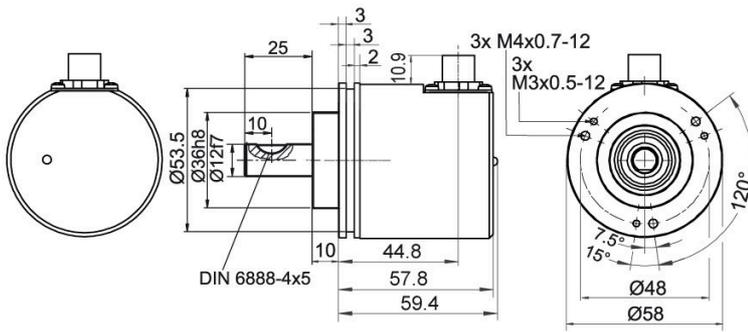


### Description

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

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

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

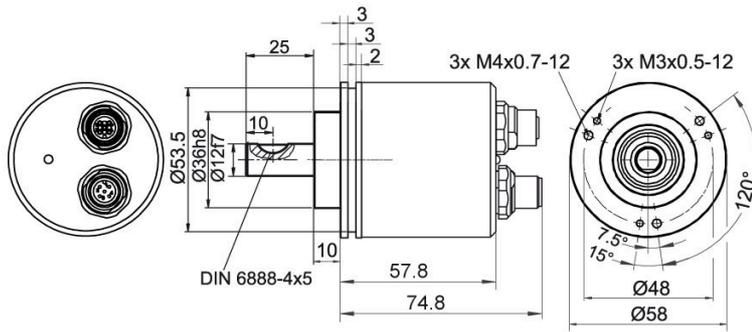


**Description**

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

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

**WDGA 58D CANopen LIFT, galv. isolation, with 2x M12x1, axial DB5**



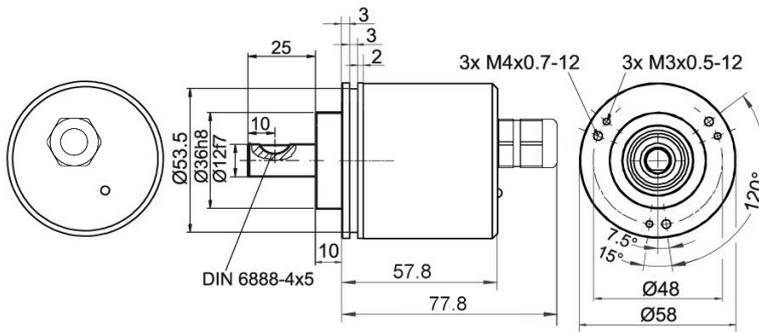
**Description**

**DB5** axial, 5-pin, shield connected to encoder housing

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

Assignments	
<b>Connector</b>	M12x1, 5-pin
<b>(+) Vcc</b>	2
<b>GND</b>	3
<b>CANHigh</b>	4
<b>CANLow</b>	5
<b>CANGND shield</b>	1

**WDGA 58D CANopen LIFT, galv. isolation, cable connection, L2 axial with 2 m cable**

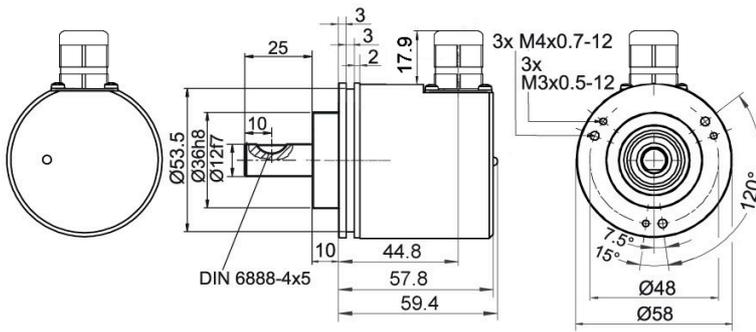


**Description**

**L2** axial, shield connected to encoder housing

Assignments	
	<b>L2</b>
<b>(+) Vcc</b>	BN
<b>GND</b>	WH
<b>CANHigh</b>	GN
<b>CANLow</b>	YE
<b>CANGND shield</b>	shield

**WDGA 58D CANopen LIFT, galv. isolation, cable connection, L3 radial with 2 m cable**



**Description**

**L3** radial, shield connected to encoder housing

Assignments	
	<b>L3</b>
<b>(+) Vcc</b>	BN
<b>GND</b>	WH
<b>CANHigh</b>	GN
<b>CANLow</b>	YE
<b>CANGND shield</b>	shield

## Options

### Low-friction bearings

The encoder WDGA 58D CANopen LIFT galv. isolation is also available as a particularly smooth-running low-friction encoder. The starting torque is thereby changed to 0.5 Ncm [0.708 in-ozf] and the protection class at the shaft input to IP50.

### Order key

**AAC**

### 120 Ohm terminating resistor

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

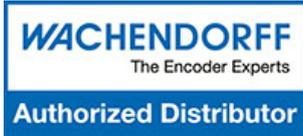
### Order key

**AEO**

Example Order No.	Type	Your encoder	
WDGA 58D	WDGA 58D	WDGA 58D	
	<b>Shaft</b>	<b>Order key</b>	
12	Ø 12 mm [Ø 0.472"]	12	
	<b>Single-turn Resolution</b>	<b>Order key</b>	
12	Single-turn resolution 1 bit up to 16 bit, recommended min. 6 bit (e. G. 12 bit)	12	
	<b>Multi-turn Resolution</b>	<b>Order key</b>	
18	Multi-turn resolution 1 bit up to 32 bit: (e. G. 18 bit) (Single-turn + Multi-turn max. 32 bit)	18	
	<b>Data protocol</b>	<b>Order key</b>	
CL	CANopen LIFT (galv. isolation)	CL	CL
	<b>Software</b>	<b>Order key</b>	
A	up to date release	A	A
	<b>Code</b>	<b>Order key</b>	
B	binary	B	B
	<b>Power supply</b>	<b>Order key</b>	
0	10 V up to 32 V (standard)	0	0
	<b>Galvanic isolation</b>	<b>Order key</b>	
1	yes	1	1
	<b>Electrical connections</b>	<b>Order key</b>	
CB5	<b>Cable:</b>		
	axial, shield connected to encoder housing, with 2 m cable	L2	
	radial, shield connected to encoder housing, with 2 m cable	L3	
	<b>Connector:</b>		
	sensor-connector, M12x1, 5-pin, axial, shield connected to encoder housing	CB5	
sensor-connector, M12x1, 5-pin, radial, shield connected to encoder housing	CC5		
sensor-connector/female connector, 2x M12x1, 5-pin, axial, shield connected to encoder housing	DB5		
	<b>Options</b>	<b>Order key</b>	
	Low-friction bearings	AAC	
	120 Ohm terminating resistor	AEO	
	Without option	Empty	

<b>Example Order No.</b>	WDGA 58D	12	12	18	CL	A	B	0	1	CB5	
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WDGA 58D				CL	A	B	0	1			<b>Your encoder</b>
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For further information please contact our local distributor.  
Here you find a list of our distributors worldwide.  
<https://www.wachendorff-automation.com/>

# WACHENDORFF

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