

Online Data Sheet

Encoder WDGA 58D CANopen galv. isolation

www.wachendorff-automation.com/wdga58dcangalv

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 galv. isolation, magnetic, with EnDra®- Technology



EnDra®
Technologie

CANopen®

Heavy duty

- EnDra®: maintenance-free and environmentally friendly
- CANopen, Single- and Multiturn
- Galvanic isolation
- Communication Profile according to CiA 301
- Device Profile for encoder CiA 406 V3.2 class C2
- Single-/Multiturn (14 bit/39 bit)
- Forward-looking technology with 32 Bit processor
- 2-colour-LED as indicator for operating condition and error message appropriate CiA 303-3
- High shaft load up to 400 N radial, 400 N axial

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Mechanical Data

Housing	
Flange	clamping flange
Flange material	aluminium
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

Shaft	Ø 12 mm
Shaft length	L: 25 mm
Max. Permissible shaft loading radial	400 N
Max. Permissible shaft loading axial	400 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

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

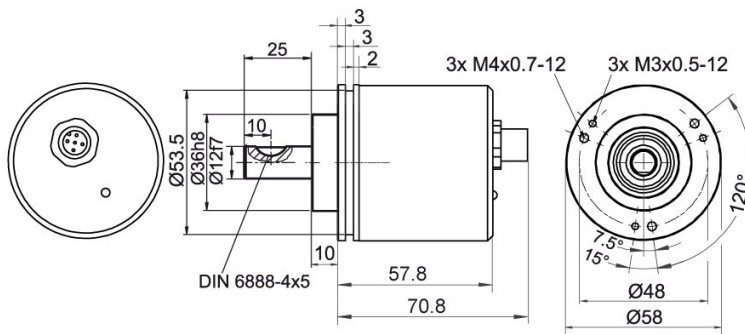
Interface:	CAN
Protocol:	CANopen <ul style="list-style-type: none"> • Communication profil CiA 301 • Device Profile for encoder CiA 406 V3.2 class C2
Node number:	1 up to 127 (default 127)
Baud rate:	50 kBaud up to 1 MBaud with automatic bit rate detection.
Advice:	The standard settings as well as any 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.)

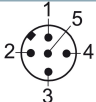
General Data

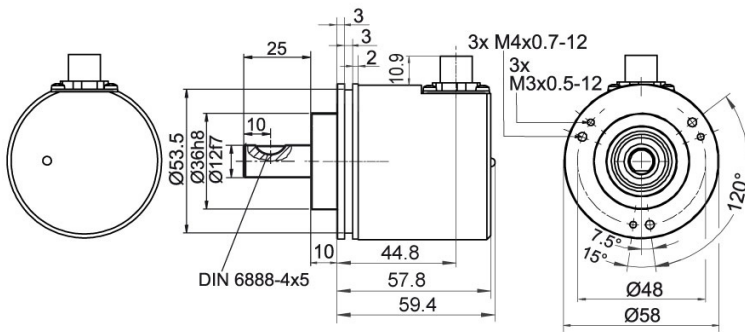
Connections	connector outlet
Protection rating (EN 60529)	IP67, shaft sealed to IP65
Operating temperature	-40 °C up to +85 °C
Storage temperature	-40 °C up to +100 °C

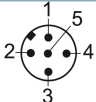
More Information

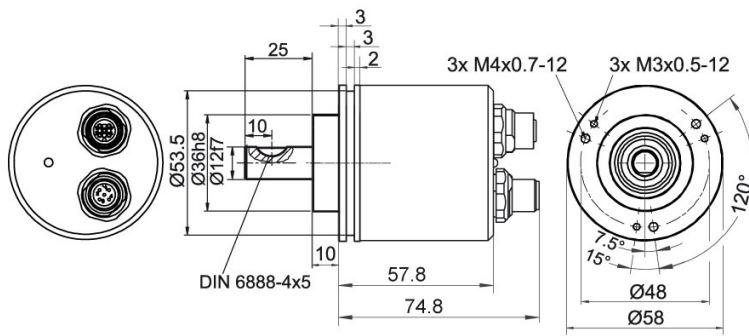
General technical data	http://www.wachendorff-automation.com/gtd
Options	http://www.wachendorff-automation.com/acc

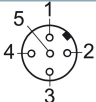
WDGA 58D CANopen, galv. isolation, with M12x1, axial CB5, 5-pin

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

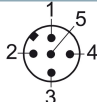
Assignments	
	CB5 
(+) Vcc	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1

WDGA 58D CANopen, galv. isolation, with M12x1, CC5, radial, 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

WDGA 58D CANopen, 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

120 Ohm terminating resistor

Order key

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

Example Order No.	Type	Your encoder	
WDGA 58D	WDGA 58D	WDGA 58D	
	Shaft	Order key	
12	Ø 12 mm	12	
	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: (examples) 18 bit = 18 39 bit = 39 no Multiturn = 00	18	
	Data protocol	Order key	
CO	CANopen (galv. isolation)	CO	
	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	
	120 Ohm terminating resistor	AEO	

Example Order No.	WDGA 58D	12	12	18	CO	A	B	0	1	CB5	
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WDGA 58D											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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