

Encoder WDGA 58B EtherCAT (cov)

www.wachendorff-automation.com/wdga58becb

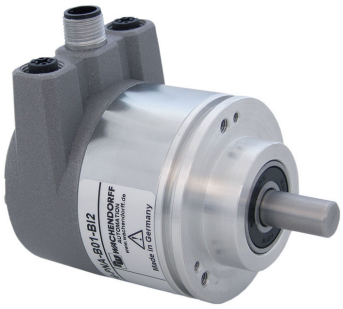
Wachendorff Automation

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- 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

IndustrieROBUST

Encoder WDGA 58B absolute EtherCAT magnetic, with bus cover and with EnDra®- Technology



- EnDra®: maintenance-free and environmentally friendly
- EtherCAT, Single-turn/Multi-turn
- Compact design with bus cover
- Single-turn/Multi-turn (max. 16 bit/43 bit)
- Forward-looking technology
- 2 colour-duo LED´s as indicator for operating condition and bus status and 2 L/A LED´s
- High shaft load up to 220 N radial, 120 N axial
- CoE, FoE, EoE

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Mechanical Data	
Housing	
Flange	clamping flange
Flange material	aluminum
Housing cap	steel case chrome-plated, magnetic shielding
Connection cover	die cast aluminum, powder coated
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
Advice	Attention: No option AAO = 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
Advice	Attention: No option AAO = 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 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"
Advice	Attention: No option AAO = 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
Nominale 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	
$MTTF_d$	300 a
Mission time (TM)	20 a
Nominale 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. 125 mA
Power consumption	typ. 3 W

Sensor data	
Single-turn technology	innovativ hall sensor technology
Single-turn resolution	up to 65,536 steps/360° (16 bit)
Single-turn accuracy	± 0.0878° (≤ 12 bit)
Single-turn repeat accuracy	± 0.0878° (≤ 12 bit)
Internal cycle time	50 µs
Multi-turn technology	patented EnDra® technology no battery and no gear.
Multi-turn resolution	43 bit

Integrated web server:	
Configurable	IP address Subnet mask Gateway address
Readable	Encoder parameters
Update	Firmware

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)	200 m/s^2 (10 Hz up to 1000 Hz)
Shock: (DIN EN 60068-2-27)	5000 m/s^2 (6 ms)

Design:	according DIN VDE 0160
Turn on time:	<1,5 s

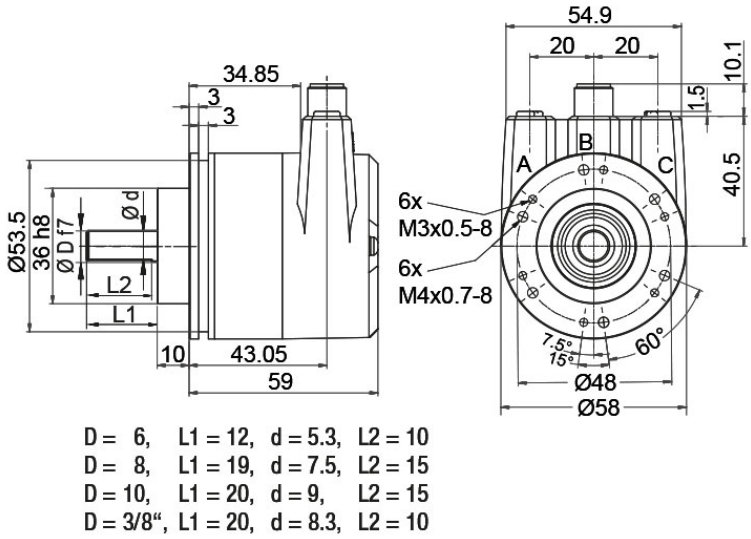
Duty information	
Customs tariff number:	90318020
Country of origin:	Germany

Interface	
Interface:	**Industrial Ethernet**
Protocol:	EtherCAT
Device Profile:	CiA DS-406 V4.0.2, Class 3
Data Transfer:	100BASE-TX
Cycle time:	up to 50 µs
Function:	Multiturn
Code:	binary, CW default, programable
Programmable Parameter:	steps per revolution counts of revolution preset scale counting direction 2x 8 cam switches DC-Mode
Diagnostics: (LED)	Traffic and connection management: L/A1: Port 1 (IN) L/A2: Port 2 (OUT)
Status LED:	STAT, MOD: status of encoder and bus

General Data	
Weight	approx. 700 g, approx. 24.7 oz
Connections	bus cover
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: 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 58B, EtherCAT, BI2, bus cover with 3x M12x1

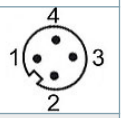


D = 6, L1 = 12, d = 5.3, L2 = 10
D = 8, L1 = 19, d = 7.5, L2 = 15
D = 10, L1 = 20, d = 9, L2 = 15
D = 3/8“, L1 = 20, d = 8.3, L2 = 10

Description

BI2 Bus cover with 3x M12x1

Assignments	
	BI2
	
Female connector (Port1) IN	M12x1, 4-pin, D-coded
Tx+	1
Rx+	2
Tx-	3
Rx-	4

Assignments	
	BI2
	
connector (Power)	M12x1, 4-pin, A-coded
(+) Vcc	1
n. c.	2
GND	3
n. c.	4

Assignments	
	BI2
	
Female connector (Port2) OUT	M12x1, 4-pin, D-coded
Tx+	1
Rx+	2
Tx-	3
Rx-	4

Options

Shafts sealed to IP67, only with shaft Ø 10 mm		Order key
The encoder WDGA 58B EtherCAT (con) can be supplied in a full IP67 version.		**AAO**
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**	
10	Ø 6 mm Attention: No option AAO = full IP67 version	06	
	Ø 8 mm Attention: No option AAO = full IP67 version	08	
	Ø 10 mm	10	
	Ø 9.525 mm Ø 3/8" Attention: No option AAO = full IP67 version	4Z	
	Single-turn Resolution	**Order key**	
13	Single-turn resolution 1 up to 16 bit, e. g. 12 bit = 12	12	
	Multi-turn Resolution	**Order key**	
12	Multi-turn 18 bit: e. G. 18 bit = 18 e. G. 39 bit = 39	18	
	Data protocol	**Order key**	
EC	EtherCAT (with bus cover)	EC	
	Software	**Order key**	
U	up to date release	U	
	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**	
	Connection cover:		
BI2	Bus cover with 3x M12x1	BI2	
	Options	**Order key**	
	Without option	Empty	
	Shafts sealed to IP67, only with shaft Ø 10 mm	AAO	

Example Order No.	WDGA 58B	10	13	12	EC	U	B	0	1	BI2	
	WDGA 58B										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/contact-sales-en/

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