

Encoder WDGA 58E Universal IE (cov)

www.wachendorff-automation.com/wdga58euie

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

IndustrieROBUST

Encoder WDGA 58E absolute Universal IE magnetic, with EnDra®- Technology



- EnDra®: maintenance-free and environmentally friendly
- Universal IE, Single-turn/Multi-turn
- Compact design with buscover
- 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 80 N radial, 50 N axial

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Mechanical Data	
Housing	
Flange	hollow shaft (blind-bored)
Flange material	aluminum
Housing cap	steel case chrome-plated, magnetic shielding
Connection cover	die cast aluminum, powder coated
Torque supports	incl. 1 torque support WDGDS10019
- 1. Spring plate compensation	axial: ±1.2 mm, radial: ±0.2 mm
- Max. operating speed	6000 rpm up to max. protection rating +80 °C
Housing	Ø 58 mm
Shaft(s)	
Shaft material	stainless steel
Starting torque	approx. 1.6 Ncm at ambient temperature, approx. 2.226 in-ozf at ambient temperature
Fixing	permanently attached clambing ring
Shaft	Ø 6 mm
Advice	with adapter sleeve
Shaft length	L: 17 mm
Insertion depth min.	10 mm
Insertion depth max.	19 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 6.35 mm, Ø 1/4"
Advice	with adapter sleeve
Shaft length	L: 17 mm, L: 0.669 in
Insertion depth min.	10 mm, 0.394 in
Insertion depth max.	19 mm, 0.748 in
Max. Permissible shaft loading radial	80 N, 8.158 kp
Max. Permissible shaft loading axial	50 N, 5.099 kp
Shaft	Ø 7 mm
Advice	with adapter sleeve
Shaft length	L: 17 mm
Insertion depth min.	10 mm
Insertion depth max.	19 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 8 mm
Advice	with adapter sleeve
Shaft length	L: 17 mm
Insertion depth min.	10 mm
Insertion depth max.	19 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 9.525 mm, Ø 3/8"
Advice	with adapter sleeve
Shaft length	L: 17 mm, L: 0.669 in
Insertion depth min.	10 mm, 0.394 in
Insertion depth max.	19 mm, 0.748 in
Max. Permissible shaft loading radial	80 N, 8.158 kp
Max. Permissible shaft loading axial	50 N, 5.099 kp
Shaft	Ø 10 mm
Advice	with adapter sleeve
Shaft length	L: 17 mm
Insertion depth min.	10 mm
Insertion depth max.	19 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 12 mm
Shaft length	L: 17 mm
Insertion depth min.	10 mm
Insertion depth max.	19 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N
Shaft	Ø 14 mm
Shaft length	L: 17 mm
Insertion depth min.	10 mm
Insertion depth max.	19 mm
Max. Permissible shaft loading radial	80 N

Max. Permissible shaft loading axial	50 N

Shaft	Ø 15 mm
Shaft length	L: 17 mm
Insertion depth min.	10 mm
Insertion depth max.	19 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

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	6000 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 6000 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

Environmental data	
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

Interface	
Interface:	**Universal Industrial Ethernet**
Protocol:	selectable (PROFINET-IO, EtherCAT)
Data Transfer:	100BASE-TX
Function:	Multiturn
Code:	binary, CW default, programable

Programmable Parameter:	steps per revolution counts of revolution preset scale counting direction
Diagnostics: (LED)	Traffic and connection management: L/A1: Port 1 L/A2: Port 2
Status LED:	STAT, MOD: status of encoder and bus

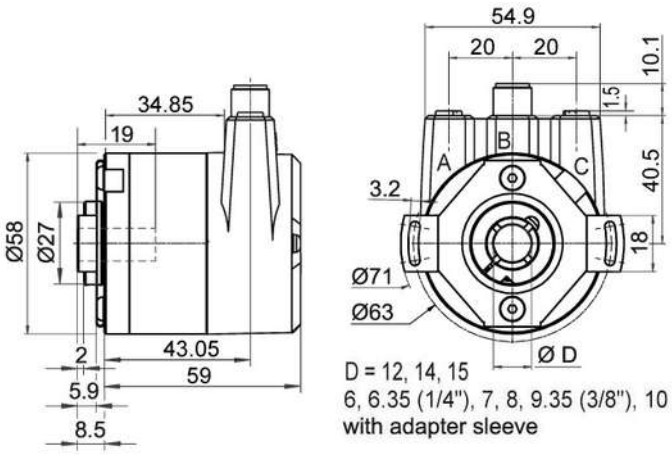
General Data	
Weight	approx. 410 g, approx. 14.462 oz
Connections	bus cover
Protection rating (EN 60529)	IP65 all around
Operating temperature	-40 °C up to +85 °C, -40 °F up to +176 °F
Storage temperature	-40 °C up to +100 °C, -40 °F up to +212 °F

More Information

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

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

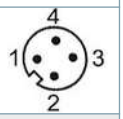
WDGA 58E Universal IE, BI2, bus cover with 3x M12x1



Description

BI2 Bus cover with 3x M12x1

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

Example Order No.	Type		Your encoder
WDGA 58E	WDGA 58E		WDGA 58E
	Shaft	**Order key**	
12	Ø 6 mm with adapter sleeve	06	
	Ø 6.35 mm Ø 1/4" with adapter sleeve	2Z	
	Ø 7 mm with adapter sleeve	07	
	Ø 8 mm with adapter sleeve	08	
	Ø 9.525 mm Ø 3/8" with adapter sleeve	4Z	
	Ø 10 mm with adapter sleeve	10	
	Ø 12 mm	12	
	Ø 14 mm	14	
	Ø 15 mm	15	
	Single-turn Resolution	**Order key**	
16	Single-turn resolution 16 bit	16	
	Multi-turn Resolution	**Order key**	
43	Multi-turn 43 bit	43	
	Data protocol	**Order key**	
IE	Universal IE (with bus cover)	IE	
	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**	
BI2	**Connection cover:**		
	Bus cover with 3x M12x1	BI2	

Example Order No.	WDGA 58E	12	16	43	IE	U	B	0	1	BI2

WDGA 58E										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/

WACHENDORFF

Wachendorff Automation GmbH & Co. KG
Industriestrasse 7 • 65366 Geisenheim
Germany

Phone: +49 67 22 / 99 65 25
Fax: +49 67 22 / 99 65 70
E-Mail: wdg@wachendorff.de
www.wachendorff-automation.de