



Online Data Sheet

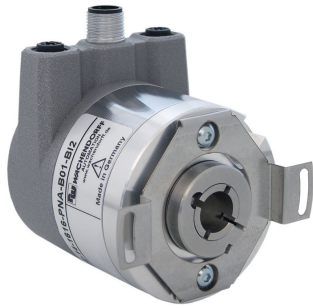
엠플루트 PROFINET-IO 통신 마그네틱 로터리 엔코더 (COV) WDGA 58E 시리즈

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Encoder WDGA 58E absolute PROFINET-IO magnetic, with EnDra® - Technology



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1. PROFINET-IO 프로토콜 절대형 로터리 엔코더 - 중공축 타입

- 인터페이스 : **Industrial Ethernet**
- 프로토콜 : **PROFINET-IO(CC-C - Class C)**
- 디바이스 프로파일 : **V4.1, Class 3, 4**
- 전송속도 : **100BASE-TX**
- **Bus Cover** 설정

2. EnDra® 기술을 활용한 멀티턴 분해능

- 최대 **43bit** 대응
- 위치 기억을 위한 **배터리**, 기어 불필요

3. IP67의 보호 기능 - 방수/방진 로터리 엔코더

- **Shaft sealing - IP65 **IP67선택 가능**

Preliminary

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 clamping 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
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	6000 rpm

Machinery Directive: basic data safety integrity level

MTTF _d	300 a
Mission time (TM)	20 a
Nominal 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	innovative 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

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)	100 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:	Industrial Ethernet
Protocol:	PROFINET-IO (CC-C)
Device Profile:	V4.1, Class 3, 4

Data Transfer:	100BASE-TX
Cycle time:	250 µs, applicable for up to 125 µs
Function:	Multiturn
Code:	binary, CW default, programmable
Programmable Parameter:	steps per revolution counts of revolution preset scale counting direction MRPD MRP LLDP IRT
Diagnostics: (LED)	Traffic and connection management: L/A1: Port 1 L/A2: Port 2
Status LED:	STAT, MOD: status of encoder and bus

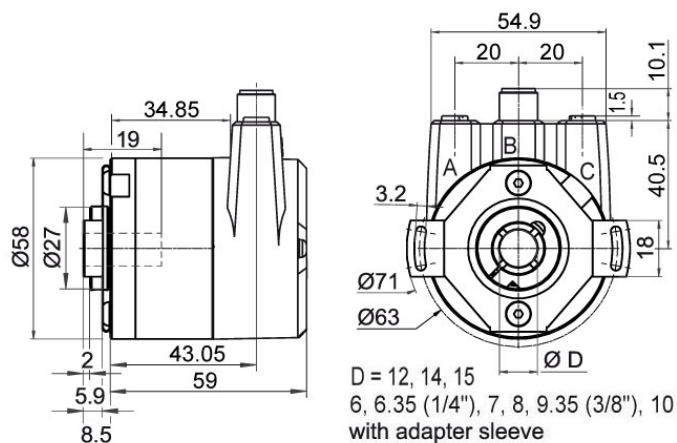
General Data

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>



Assignments	
	B12 
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
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
PN	PROFINET-IO (with bus cover)	PN
	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	13	12	PN	U	B	0	1	BI2
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WDGA 58E										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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경기도 성남시 중원구 사기막골로 124
SKn테크노파크 메가동 514호 우편번호:13207

Phone: 031) 608-3200 Fax: 031) 776-2320
E-Mail: sales@creken.co.kr
www.creken.co.kr



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

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

