



Online Data Sheet

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

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 58F absolute PROFINET-IO magnetic, with bus cover and with EnDra® - Technology, 'extremely' compact



EnDra®
Technologie

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1. PROFINET-IO 프로토콜 절대형 로터리 엔코더

- 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. 클램핑 플랜지, 컴팩트한 사이즈

4. IP67의 보호 기능 - 방수/방진 로터리 엔코더

- Shaft sealing - IP65 **IP67선택 가능

Preliminary

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	
Shaft	Ø 6 mm
Shaft length	L: 12 mm
Max. Permissible shaft loading radial	60 N
Max. Permissible shaft loading axial	50 N
Shaft Ø 8 mm	
Shaft	Ø 8 mm
Shaft length	L: 19 mm
Max. Permissible shaft loading radial	60 N
Max. Permissible shaft loading axial	50 N
Shaft Ø 10 mm	
Shaft	Ø 10 mm
Shaft length	L: 20 mm
Max. Permissible shaft loading radial	60 N
Max. Permissible shaft loading axial	50 N
Shaft Ø 9.525 mm	
Shaft	Ø 9.525 mm
Shaft length	L: 19 mm
Max. Permissible shaft loading radial	60 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	8000 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 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

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, programable
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

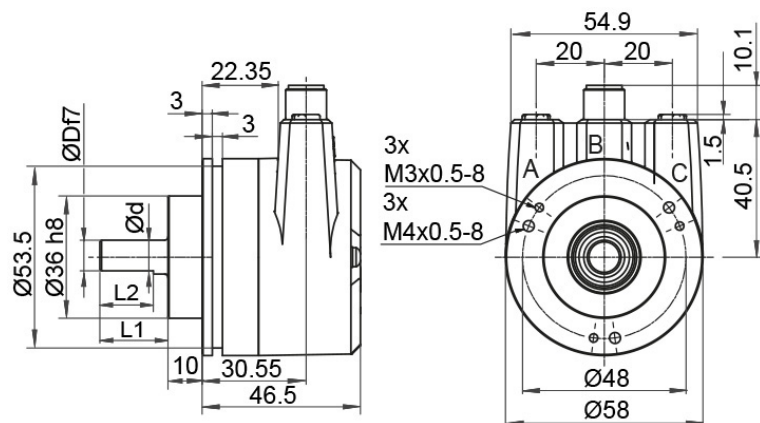
Weight	approx. 700 g, approx. 24.7 oz
Connections	bus cover
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +85 °C, -40 °F up to +176 °F
Storage temperature	-40 °C up to +100 °C, -40 °F up to +212 °F

More Information

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

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

WDGA 58F, PROFINET-IO, BI2, bus cover with 3x M12x1



D = 6, L1 = 12, d = 5.3, L2 = 10 shaft with flat
 D = 8, L1 = 19, d = 7.5, L2 = 15 shaft with flat
 D = 10, L1 = 20 shaft with out flat
 D = 3/8", L1 = 20, d = 8.3, L2 = 10 shaft with flat

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 58F	WDGA 58F	WDGA 58F	
	Shaft	Order key	
10	Ø 6 mm	06	
	Ø 8 mm	08	
	Ø 10 mm	10	
	Ø 9.525 mm	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	
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 58F	10	13	12	PN	U	B	0	1	BI2
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WDGA 58F										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

CREKEN

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