



Online Data sheet

Encoder WDGA 58E PROFIBUS-DP (con)

www.wachendorff-automation.com/wdga58epbs

Discontinued product

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 58E absolute PROFIBUS-DP, with EnDra®- Technology



Illustration similar

EnDra®
Technologie

PROFI
BUS

PIV CERTIFIED
PROFIBUS • PROFINET

- EnDra®: maintenance-free and environmentally friendly
- PROFIBUS-DP, Single-turn/Multi-turn
- Single-turn/Multi-turn (max. 14 bit/39 bit)
- forward-looking technology with 32 Bit processor
- 2 colour-duo LED's as indicator for operating condition and bus status
- High shaft load up to 80 N [8.157 kp] radial, 50 N [5.098 kp] axial
- Device Profile switchable, Class 3, 4

www.wachendorff-automation.com/wdga58epbs

Mechanical Data

Flange	hollow shaft (blind-bored)
Flange material	aluminum
Housing material	steel case chrome-plated, magnetic shielding
Torque supports	incl. 1 torque support WDGDS10019
- 1. Spring plate compensation	axial: ±1.2 mm [0.0472"], radial: ±0.2 mm [0.0079"]
- Max. operating speed	6000 rpm up to max. protection rating +80 °C
Flange diameter	Ø 58 mm [Ø 2.283"]

Shaft(s)

Shaft material	stainless steel
Starting torque	approx. 1.6 Ncm [2.266 in-ozf] at ambient temperature
Fixing	permanently attached clamping ring

Shaft	Ø 6 mm [Ø 0.236"]
Advice	with adapter sleeve
Shaft length	L: 17 mm [0.669"]
Insertion depth min.	10 mm [0.394"]
Insertion depth max.	19 mm [0.748"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	50 N [5.098 kp]

Shaft	Ø 6.35 mm [Ø 1/4"] Order No: 2Z
Advice	with adapter sleeve
Shaft length	L: 17 mm [0.669"]
Insertion depth min.	10 mm [0.394"]
Insertion depth max.	19 mm [0.748"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	50 N [5.098 kp]

Shaft	Ø 7 mm [Ø 0.276"]
Advice	with adapter sleeve
Shaft length	L: 17 mm [0.669"]
Insertion depth min.	10 mm [0.394"]
Insertion depth max.	19 mm [0.748"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	50 N [5.098 kp]

Shaft	Ø 8 mm [Ø 0.315"]
Advice	with adapter sleeve
Shaft length	L: 17 mm [0.669"]
Insertion depth min.	10 mm [0.394"]
Insertion depth max.	19 mm [0.748"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	50 N [5.098 kp]

Shaft	Ø 9.525 mm [Ø 3/8"] Order No: 4Z
Advice	with adapter sleeve
Shaft length	L: 17 mm [0.669"]
Insertion depth min.	10 mm [0.394"]
Insertion depth max.	19 mm [0.748"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	50 N [5.098 kp]

Shaft	Ø 10 mm [Ø 0.394"]
Advice	with adapter sleeve
Shaft length	L: 17 mm [0.669"]
Insertion depth min.	10 mm [0.394"]
Insertion depth max.	19 mm [0.748"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	50 N [5.098 kp]

Shaft	Ø 12 mm [Ø 0.472"]
Shaft length	L: 17 mm [0.669"]
Insertion depth min.	10 mm [0.394"]
Insertion depth max.	19 mm [0.748"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	50 N [5.098 kp]

Shaft	Ø 14 mm [Ø 0.551"]
Shaft length	L: 17 mm [0.669"]
Insertion depth min.	10 mm [0.394"]
Insertion depth max.	19 mm [0.748"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	50 N [5.098 kp]

Shaft	Ø 15 mm [Ø 0.591"]
Shaft length	L: 17 mm [0.669"]
Insertion depth min.	10 mm [0.394"]
Insertion depth max.	19 mm [0.748"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	50 N [5.098 kp]

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. 100 mA (24 VDC)
Power consumption	max. 2.5 W
Operating principle	magnetic

Sensor data

Single-turn technology	innovativ hall sensor technology
Single-turn resolution	up to 16,384 steps/360° (14 bit)
Single-turn accuracy	< ±0.35°
Single-turn repeat accuracy	< ±0.20°
Internal cycle time	600 µs
Multi-turn technology	patented EnDra® technology no battery and no gear.
Multi-turn resolution	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 bis 2000 Hz)
Shock: (DIN EN 60068-2-27)	1000 m/s ² (6 ms)
Electrical Safety:	according DIN VDE 0160
Turn on time:	<1,5 s

Duty information

Customs tariff number:	90318020
Country of origin:	Germany

Interface

Interface:	PROFIBUS-DP
Protocol:	PROFIBUS-DPV2
Device Profile:	Class 3, 4
Line-Driver:	galvanic isolated

Baud rate:	max. 12 MBaud
Function:	Multiturn
Nodeaddressing:	adjustable via software
Termination resistor:	non-existent
Code:	binary, CW default, programable
Programmable Parameter:	steps per revolution counts of revolution Preset Scale Counting direction
Diagnostics:	Position and parameter errors EnDra®-diagnosis
Status encoder:	DUO-LED
Status bus:	DUO-LED

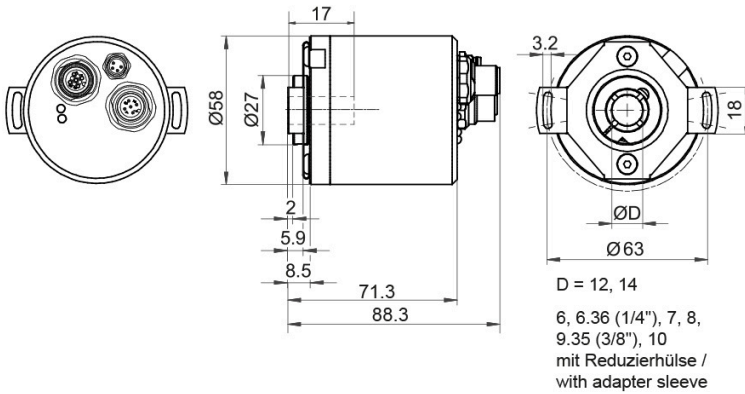
General Data

Weight	approx. 410 g [14.462 oz]
Connections	connector outlet
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +85 °C [-40 °F up to 185 °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 PROFIBUS-DP with 1x M8, 2x M12, axial DB4



Description

DB4 axial, 1x M8, 4-pin; 1x M12, 5-pin; 1x M12, 4-pin,

Assignments	
connector (A)	M8x1, 4-pin
(+) Vcc	1
n. c.	2
GND	3
GND	4

Assignments	
Female connector (B)	M12x1, 5-pin, B-coded
BUS	OUT
5 V DP	1
A	2
GND DP	3
B	4
n. c.	5

Assignments	
connector (C)	M12x1, 4-pin, B-coded
BUS	IN
n. c.	1
A	2
n. c.	3
B	4

Discontinued product

Options**Low-friction bearings****Order key**

The encoder WDGA 58E PROFIBUS-DP (con) is also available as a particularly smooth-running low-friction encoder. The starting torque is thereby changed to 0.5 Ncm [0.708 in-ozf] and the protection class at the shaft input to IP50.

AAC

Discontinued product

Example Order No.	Type	Your encoder
WDGA 58E	WDGA 58E	WDGA 58E
	Shaft	Order key
12	Ø 6 mm [Ø 0.236"] with adapter sleeve	06
	Ø 6.35 mm [Ø 1/4"] Order No: 2Z with adapter sleeve	2Z
	Ø 7 mm [Ø 0.276"] with adapter sleeve	07
	Ø 8 mm [Ø 0.315"] with adapter sleeve	08
	Ø 9.525 mm [Ø 3/8"] Order No: 4Z with adapter sleeve	4Z
	Ø 10 mm [Ø 0.394"] with adapter sleeve	10
	Ø 12 mm [Ø 0.472"]	12
	Ø 14 mm [Ø 0.551"]	14
	Ø 15 mm [Ø 0.591"]	15
	Single-turn Resolution	Order key
12	Single-turn resolution 1 up to 14 bit, e. g. 12 bit = 12	12
	Multi-turn Resolution	Order key
18	Multi-turn up to 39 bit, e. G. 18 bit = 18	18
	Data protocol	Order key
DP	PROFIBUS-DP (without bus cover)	DP
	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
DB4	Connector:	
	connector, 1x M8, 4-pin; 1x M12, 5-pin; 1x M12, 4-pin, axial	DB4
	Options	Order key
	Low-friction bearings	AAC

Example Order No.	WDGA 58E	12	12	18	DP	A	B	0	1	DB4	
--------------------------	----------	----	----	----	----	---	---	---	---	-----	--

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/>

Discontinued product

WACHENDORFF

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

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

