



Online Data Sheet

Encoder WDGA 58E PROFIBUS-DP (cov)

www.wachendorff-automation.com/wdga58epbb

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 magnetic, with EnDra®- Technology



EnDra®
Technologie

PROFI
BUS

PIV CERTIFIED
PROFIBUS • PROFINET

- EnDra®: maintenance-free and environmentally friendly
- PROFIBUS-DP, Single-turn/Multi-turn
- Compact design with buscover
- 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 radial, 50 N axial
- Device Profile switchable, Class 1, 2, 3, 4

www.wachendorff-automation.com/wdga58epbb

Mechanical Data

Housing	
Flange	hollow shaft (blind-bored)
Flange material	aluminum
Housing cap	steel case chrome-plated, magnetic shielding
Connection cover	zinc-plated
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 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

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

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

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 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:	PROFIBUS-DP
Protocol:	PROFIBUS-DPV0/V2
Device Profile:	Class 1, 2, 3, 4
Line-Driver:	galvanic isolated
Baud rate:	max. 12 MBaud
Function:	Multiturn
Nodeaddressing:	by switches in buscover
Code:	binary, CW default, programable
Programmable Parameter:	steps per Revolution counts of revolution Preset Scale Counting direction

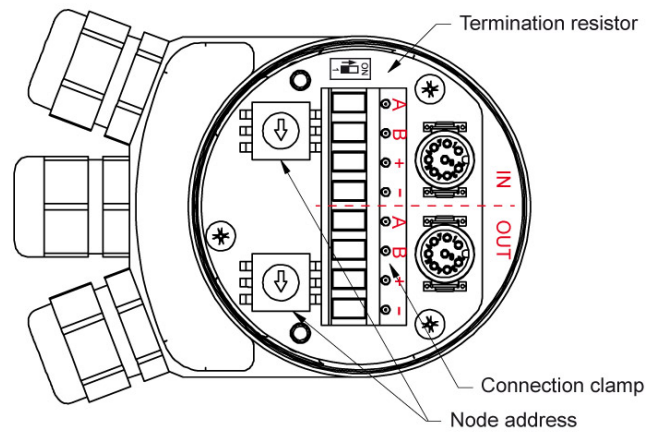
Diagnostics:	Position and parameter errors EnDra®-diagnosis
Status encoder	DUO-LED in bus cover
Status Bus	DUO-LED in bus cover

Termination resistors:



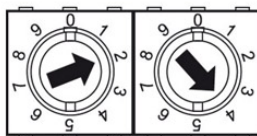
ON = last node
OFF = node X

View in bus cover:



Cable clamping value: Ø 4 mm - 9.5 mm

Node address:

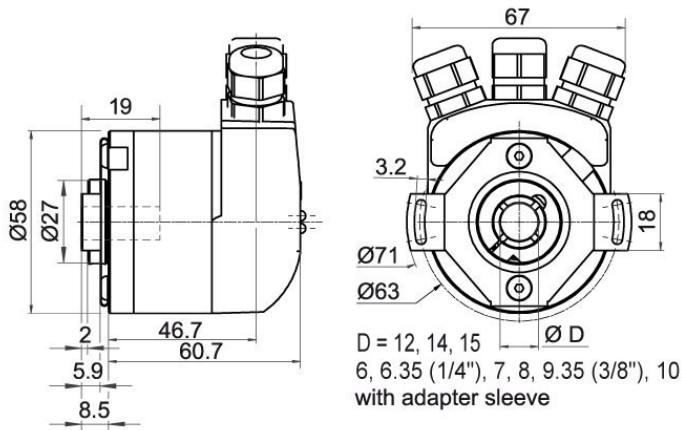


By switches
EG.: adress 24

General Data	
Weight	approx. 410 g, approx. 14.462 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	

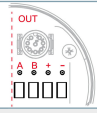
WDGA 58E PROFIBUS-DP, BP1, bus cover with 3x cable gland



Description

BP1 Bus cover with connection clamps (PG cable glands)

Assignments	
BP1	
	
A	1
B	2
(+) Vcc	3
GND	4

Assignments	
BP1	
	
A	5
B	6
(+) Vcc	7
GND	8

Example Order No.	Type	Your encoder	
WDGA 58E	WDGA 58E	WDGA 58E	
Shaft			
12	Ø 12 mm	12	12
Single-turn Resolution			
12	Single-turn resolution 1 up to 14 bit, e. g. 12 bit = 12	12	12
Multi-turn Resolution			
18	Multi-turn up to 39 bit, e. G. 18 bit = 18	18	18
Data protocol			
DP	PROFIBUS-DP (with bus cover)	DP	DP
Software			
A	up to date release	A	A
Code			
B	binary	B	B
Power supply			
0	10 V up to 32 V (standard)	0	0
Galvanic isolation			
1	yes	1	1
Electrical connections			
BP1	Connection cover:		BP1
	Bus cover with connection clamps (PG cable glands)	BP1	

Example Order No.	WDGA 58E	12	12	18	DP	A	B	0	1	BP1
--------------------------	----------	----	----	----	----	---	---	---	---	-----

WDGA 58E	12	12	18	DP	A	B	0	1	BP1	Your encoder
----------	----	----	----	----	---	---	---	---	-----	---------------------



For further information please contact our local distributor.
Here you find a list of our distributors worldwide.
<https://www.wachendorff-automation.com/>



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

