

Online Data Sheet

Encoder WDGA 58D PROFIBUS-DP (cov)

www.wachendorff-automation.com/wdga58dpbb

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 58D absolute PROFIBUS-DP magnetic, with bus cover and with EnDra® - Technology


EnDra®
Technologie

PROFI
BUS
PIV CERTIFIED
PROFIBUS • PROFINET

Heavy duty

- EnDra®: maintenance-free and environmentally friendly
- PROFIBUS-DP, Single-turn/Multi-turn
- Compact design with bus cover
- 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 400 N radial, 400 N axial
- Device Profile switchable, Class 1, 2, 3, 4

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Mechanical Data

Housing	
Flange	clamping flange
Flange material	aluminum
Housing cap	steel case chrome-plated, magnetic shielding
Connection cover	zinc-plated
Housing	Ø 58 mm

Shaft(s)	
Shaft material	stainless steel
Starting torque	approx. 1 Ncm at ambient temperature

Shaft	Ø 12 mm
Shaft length	L: 25 mm
Max. Permissible shaft loading radial	400 N
Max. Permissible shaft loading axial	400 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. 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 262,144 revolutions (18 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 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

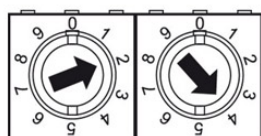
Status Bus DUO-LED in bus cover

Termination resistors:



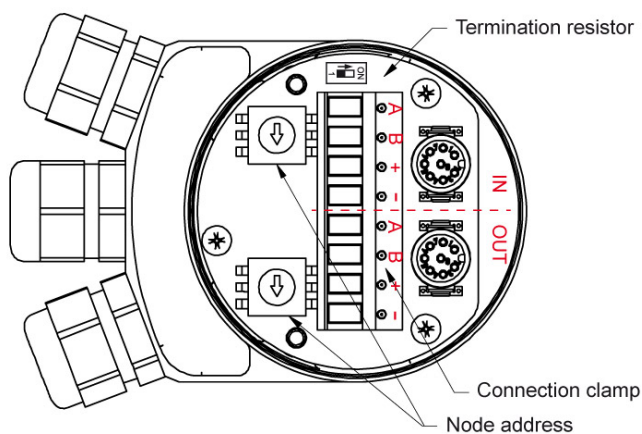
ON = last node
OFF = node X

Node address:



By switches
EG.: address 24

View in bus cover:



Cable clamping value: Ø 4 mm - 9.5 mm

General Data

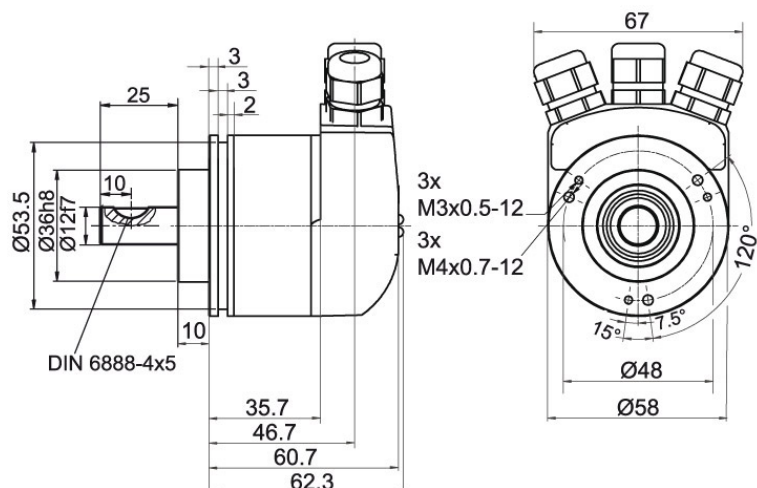
Weight	approx. 700 g
Connections	bus cover
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +85 °C
Storage temperature	-40 °C up to +100 °C

More Information

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

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

WDGA 58D PROFIBUS-DP, BP1, bus cover with 3x PG cable glands



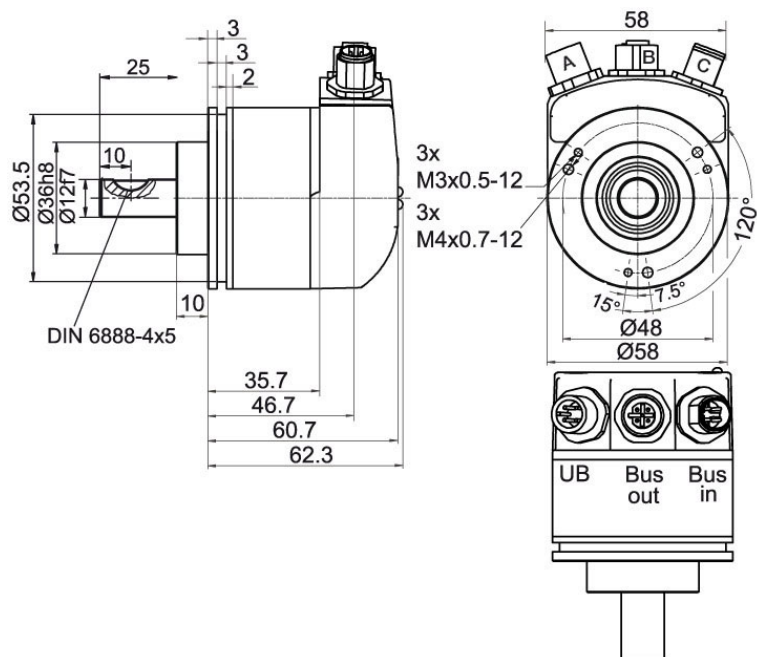
Description

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

WDGA 58D, PROFIBUS-DP, BP2, bus cover with 3x M12x1



Description

BP2 Bus cover with 3x M12x1

Assignments	
	BP2
connector (A)	M12x1, 4-pin, A-coded
(+) Vcc	1
n. c.	2
GND	3
n. c.	4

Assignments	
	BP2
Female connector (B)	M12x1, 5-pin, B-coded
BUS	OUT
n. c.	1
A	2
n. c.	3
B	4
n. c.	5

Assignments	
	BP2
connector (C)	M12x1, 5-pin, B-coded
BUS	IN
n. c.	1
A	2
n. c.	3
B	4
n. c.	5

Example Order No.	Type	Your encoder	
WDGA 58D	WDGA 58D	WDGA 58D	
	Shaft	Order key	
12	Ø 12 mm	12	
	Single-turn Resolution	Order key	
13	Single-turn resolution 1 up to 14 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	
DP	PROFIBUS-DP (with 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	
BP1	Connection cover:		
	Bus cover with connection clamps (PG cable glands)	BP1	
	Bus cover with 3x M12x1	BP2	

Example Order No.	WDGA 58D	12	13	12	DP	A	B	0	1	BP1
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WDGA 58D										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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