



Online Data Sheet

Encoder WDGA 36E RS485

www.wachendorff-automation.com/wdga36e-rs485

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 36E absolut RS485 magnetic, with EnDra® Technology



EnDra®
Technologie

RS485

- EnDra® multiturn technology: maintenance-free and environmentally friendly
- RS485
- Single-turn/Multi-turn (max. 16 bit /32 bit)
- Forward-looking technology with 32 bit processor
- 2-colour-LED as indicator for operating condition
- CRC checksum

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Mechanical Data

Housing	
Flange	hollow shaft (blind-bored)
Flange material	aluminum
Housing cap	steel case chrome-plated, magnetic shielding
- 1. Spring plate compensation	axial: ±1.2 mm, radial: ±0.4 mm
Housing	Ø 36 mm

Shaft(s)	
Starting torque	approx. 1.6 Ncm at ambient temperature

Shaft	Ø 8 mm
Insertion depth min.	10 mm
Insertion depth max.	14.5 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

Shaft	Ø 10 mm
Insertion depth min.	10 mm
Insertion depth max.	14.5 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

Shaft	Ø 12 mm
Insertion depth min.	10 mm
Insertion depth max.	14.5 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

Shaft	Ø 14 mm
Insertion depth min.	10 mm
Insertion depth max.	14.5 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

Shaft	Ø 15 mm
Insertion depth min.	10 mm
Insertion depth max.	14.5 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	1000 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

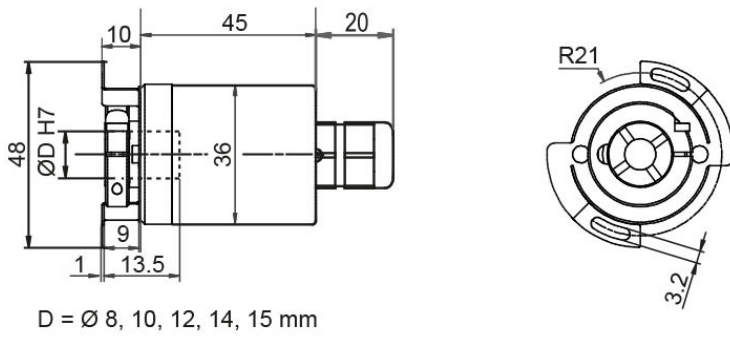
Power supply/Current consumption	10 VDC up to 32 VDC: typ. 50 mA
Power consumption	max. 0.5 W
Power supply/Current consumption	4,75 VDC up to 5,5 VDC: typ. 80 mA
Power consumption	max. 0.44 W

Sensor data

Single-turn technology	innovative hall sensor technology
Single-turn resolution	up to 65,536 steps/360° (16 bit)
Single-turn accuracy	< ±0.35°
Single-turn repeat accuracy	< ±0.20°
Internal cycle time	600 µs
Multi-turn technology	patented EnDra® technology no battery no gear.
Multi-turn resolution	up to 32 bit.

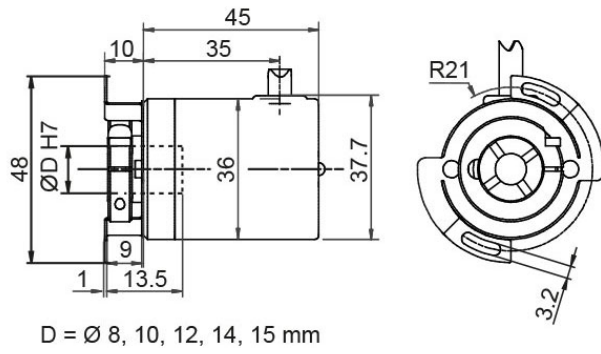
Environmental data

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)

Cable connection L2 with 2 m cable

Description

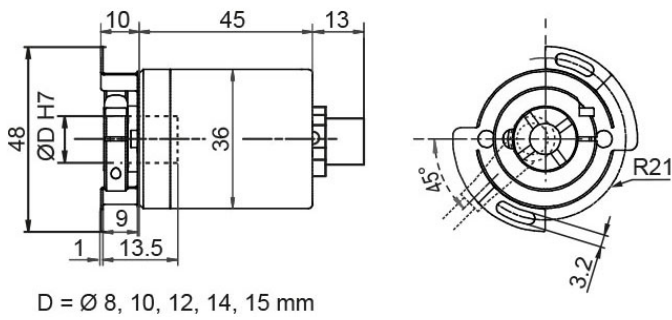
L2 axial, shield connected to encoder housing

Assignments	
	L2
S- (GND)	WH
S+ (DCin)	BN
A (DATA+)	GY
B (DATA-)	PK
PRESET	BU
DIR	RD
Shield	housing

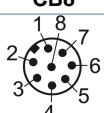
Cable connection, K1 with 2 m cable, IP40

Description

K1 radial, shield not connected

Assignments	
	K1
S- (GND)	WH
S+ (DCin)	BN
A (DATA+)	GY
B (DATA-)	PK
PRESET	BU
DIR	RD
Shield	housing n. c.

Connector, M12x1, CB8, axial, 8-pin

Description

CB8 axial, 8-pin, shield connected to encoder housing

Assignments	
	CB8 
S- (GND)	1
S+ (DCin)	2
A (DATA+)	5
B (DATA-)	6
PRESET	7
DIR	8
Shield	housing

Example Order No.	Type	Your encoder	
WDGA 36E	WDGA 36E	WDGA 36E	
	Shaft	Order key	
08	Ø 8 mm	08	
	Ø 10 mm	10	
	Ø 12 mm	12	
	Ø 14 mm	14	
	Ø 15 mm	15	
	Single-turn Resolution	Order key	
14	Single-turn resolution 1 bit up to 16 bit: (e. G. 14 bit)	14	
	Multi-turn Resolution	Order key	
18	Multi-turn up to 32 bit (e. G. 18 bit) (Single-turn + Multi-turn max. 32 bit) No Multi-turn: 00	18	
	Data protocol	Order key	
EI	RS485	EI	
	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	
	4.75 V up to 5.5 V	1	
	Galvanic isolation	Order key	
0	no	0	
	Electrical connections	Order key	
CB8	Cable:		
	axial, shield connected to encoder housing, with 2 m cable, IP67	L2	
	radial, shield not connected, with 2 m cable, IP40	K1	
	Connector:		
sensor-connector, M12x1, 8-pin, axial, IP67, shield connected to encoder housing	CB8		

Example Order No.	WDGA 36E	08	14	18	EI	A	B	0	0	CB8
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WDGA 36E										Example Order No.
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For further information please contact our local distributor.
Here you find a list of our distributors worldwide.
<https://www.wachendorff-automation.com/>



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