



Online Data sheet

Encoder WDGA 36A IO-Link

www.wachendorff-automation.com/wdga36a-io-link

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 36A absolute IO-Link magnetic, with EnDra®-Technology



EnDra®
Technologie

IO-Link

- EnDra®: maintenance-free and environmentally friendly
- IO-Link, Single-turn and Multi-turn
- Device Profile for encoder Smart Sensor Profile (SSP)
- Single-turn/Multi-turn (16 bit / 43 bit)
- Forward-looking technology with 32 Bit processor
- LED as indicator for operating condition and Error message
- Monitoring the power supply
- Cam switches for Position and Velocity with hysteresis

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Mechanical Data

Housing

Flange	servo flange
Flange material	aluminum
Housing cap	stainless steel
Housing	Ø 36 mm

Shaft(s)

Shaft material	stainless steel
Starting torque	approx. 0.3 Ncm at ambient temperature

Shaft	Ø 6 mm
Shaft length	L: 11.5 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

Shaft	Ø 6.35 mm
Shaft length	L: 11.5 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	50 N

Shaft	Ø 8 mm
Shaft length	L: 18 mm
Max. Permissible shaft loading radial	50 N
Max. Permissible shaft loading axial	50 N

Bearings

Bearings type	2 precision ball bearings
Nominal service life	1.4 x 10 ⁸ revs. at 100 % rated shaft load 2 x 10 ⁹ revs. at 40 % rated shaft load 1.7 x 10 ¹⁰ revs. at 20 % rated shaft load
Max. operating speed	12000 rpm

Machinery Directive: basic data safety integrity level

MTTF _d	1300 a
Mission time (TM)	20 a
Nominal service life (L10h)	1.7 x 10 ¹⁰ revs. at 20 % rated shaft load and 12000 rpm
Diagnostic coverage (DC)	0 %

Electrical Data

Power supply/Current consumption	18 VDC up to 30 VDC: typ. 20 mA
Power consumption	max. 0.5 W

Sensor data

Single-turn technology	innovative hall sensor technology
Single-turn resolution	65,536 steps/360° (16 bit)
Single-turn accuracy	± 0.0878° (12 bit)
Single-turn repeat accuracy	± 0.0878° (12 bit)
Internal cycle time	250 µs
Multi-turn technology	patented EnDra® technology no battery and no gear.
Multi-turn resolution	up to 32 bit with high precision value up to 43 bit.

Environmental data

ESD (DIN EN 61000-4-2):	4 kV
Burst (DIN EN 61000-4-4):	2 kV
includes EMC:	DIN EN 61000-6-2 DIN EN 61326-2-3 DIN EN 61131-9
Vibration: (DIN EN 60068-2-6)	300 m/s ² (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	5000 m/s ² (6 ms)
Design:	according DIN VDE 0160
Turn on time:	<1 s

Duty information

Customs tariff number:	90318020
Country of origin:	Germany

Interface

Interface:	IO-Link
Smart Sensor Profile (SSP):	<ul style="list-style-type: none"> • 2.8 Adjustable Switching Sensor, multi channel • 4.2.1 Measuring and Switching Sensor, high resolution, 1 channel • 4.2.2 Measuring and Switching Sensor, high resolution, 2 channel
Baud rate:	COM 3 230.4 kBit/s

Advice:	The standard settings and customer-specific adjustments in the parameterisation can be set using ISDUs, e.g. scaling, direction of rotation, etc.
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General Data

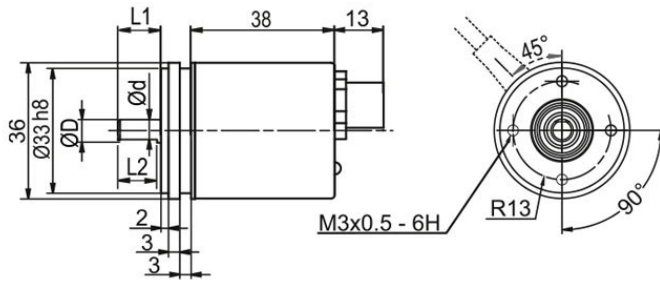
Weight	approx. 112 g
Connections	connector outlet
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +85 °C
Storage temperature	-40 °C up to +100 °C

More Information

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

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

Connector, M12x1 IB5 axial, 5-pin



D = 6 f7	L1 = 11.5	d = 5.3	L2 = 10
D = 6.35 (1/4") f7	L1 = 11.5	d = 5.3	L2 = 10
D = 8 f7	L1 = 18	d = 7	L2 = 14

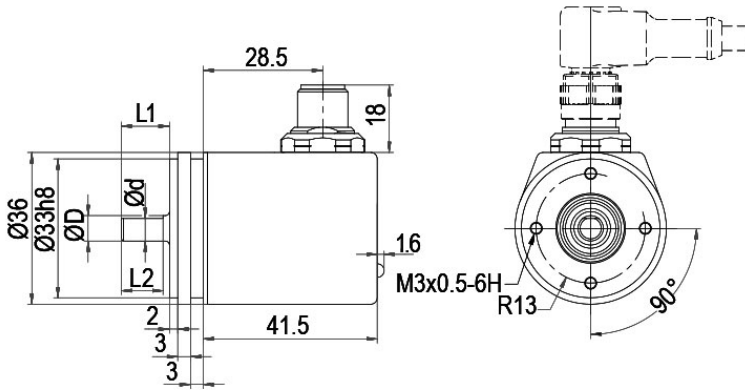
Description

IB5 axial, 5-pin, shield connected to encoder housing

Assignments

IB5	
L+	1
L-	3
C/Q	4
I	2
n. c.	5

Connector, M12x1 IC5 radial, 5-pin



D = 6 f7	L1 = 11.5	d = 5.3	L2 = 10
D = 6.35 (1/4") f7	L1 = 11.5	d = 5.3	L2 = 10
D = 8 f7	L1 = 18	d = 7	L2 = 14

Description

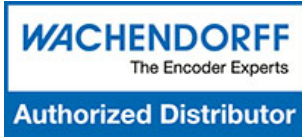
IC5 radial, 5-pin, shield connected to encoder housing

Assignments	
	IC5
L+	1
L-	3
C/Q	4
I	2
n. c.	5

Example Order No.	Type	Your encoder	
WDGA 36A	WDGA 36A	WDGA 36A	
	Shaft	Order key	
06	Ø 6 mm	06	
	Ø 6.35 mm	2Z	
	Ø 8 mm	08	
	Single-turn Resolution	Order key	
16	Single-turn resolution 1 bit up to 16 bit: (e. G. 6 bit)	16	
	Multi-turn Resolution	Order key	
43	Multi-turn resolution: (examples) 6 bit = 6 43 bit = 43 no Multiturn = 00	16	
	Data protocol	Order key	
IL	IO-Link	IL	
	Software	Order key	
A	up to date release	A	
	Code	Order key	
B	binary	B	
	Power supply	Order key	
3	18 V up to 30 V (standard)	3	
	Galvanic isolation	Order key	
0	no	0	
	Electrical connections	Order key	
IB5	Connector:		
	sensor-connector, M12x1, 5-pin, axial, shield connected to encoder housing	IB5	
	sensor-connector, M12x1, 5-pin, radial, shield connected to encoder housing	IC5	

Example Order No.	WDGA 36A	06	16	43	IL	A	B	3	0	IB5
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WDGA 36A											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/contact-sales-en/>

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