

Encoder WDGI 36S

www.wachendorff-automation.com/wdgi36s

Wachendorff Automation

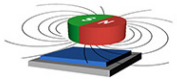
... systems and encoders

- 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

IndustrieROBUST

Encoder WDGI 36S (magnetic)





- Compact and robust
- All pulse numbers from 1 to 1,024 I/U available
- Robust construction for industrial use
- Protection to IP67, shaft sealed to IP65

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Resolution	
Pulses per revolution PPR	up to 1024 PPR

Mechanical Data	
Housing	
Flange	screw flange
Starting torque nut	max. 10 Nm
Flange material	aluminum, incl. nut M20 x 1.5
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

Bearings	
Bearings type	2 precision ball bearings
Nominale 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	
$MTTF_d$	3620 a
Mission time (TM)	25 a
Nominale 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	5 VDC up to 30 VDC: typ. 40 mA
Output circuit	HTL (TTL at 5 VDC) HTL, inv. (TTL/RS422 comp. at 5 VDC)
Pulse frequency	≤ 1024 ppr: max. 200 kHz
Channels	ABN and inverted signals
Load	max. 40 mA / channel
Circuit protection	no

Accuracy	
Phase offset	90° ± max. 7.5 % of the period duration
pulse-/pause-ratio	at 1 ppr up to 128 ppr: 50 % ± max. 7 % 129 ppr - 256 ppr: 50 % ± max. 9 % 257 ppr - 512 ppr: 50 % ± max. 13 % 513 ppr - 1024 ppr: 50 % ± max. 18 %

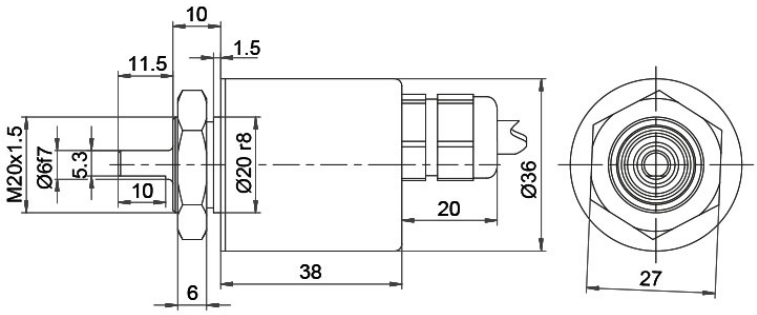
Environmental data	
ESD (DIN EN 61000-4-2):	8 kV
Burst (DIN EN 61000-4-4):	2 kV
includes EMC:	DIN EN 61000-6-2 DIN EN 61000-6-3
Vibration: (DIN EN 60068-2-6)	50 m/s^2 (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	1000 m/s^2 (6 ms)
Design:	according DIN VDE 0160

Duty information	
Customs tariff number:	90318020
Country of origin:	Germany

General Data	
Weight	approx. 130 g
Connections	cable or connector outlet
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65; cable outlet K1: IP40
Operating temperature	Connector: -40 °C up to +85 °C, cable: -20 °C up to +80 °C, (Option ACA: -40 °C up to +85 °C)
Storage temperature	Connector: -40 °C up to +85 °C, cable: -30 °C up to +80 °C (option ACA: -40 °C up to +85 °C)

More Information
General technical data and safety instructions **http://www.wachendorff-automation.com/gtd**
Options **http://www.wachendorff-automation.com/acc**

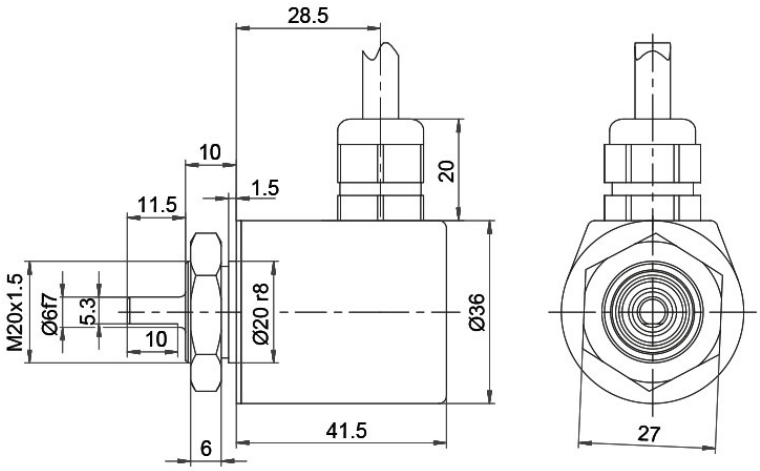
Cable connection L2 axial with 2 m cable



Description		ABN inv. poss.
L2	axial, shield connected to encoder housing	•

Assignments		
	L2	**L2**
Circuit	N35	M35
GND	WH	WH
(+) Vcc	BN	BN
A	GN	GN
B	YE	YE
N	GY	GY
Light reserve warning	-	-
A inv.	-	RD
B inv.	-	BK, (BU at ACA)
N inv.	-	VT
Shield	flex	flex

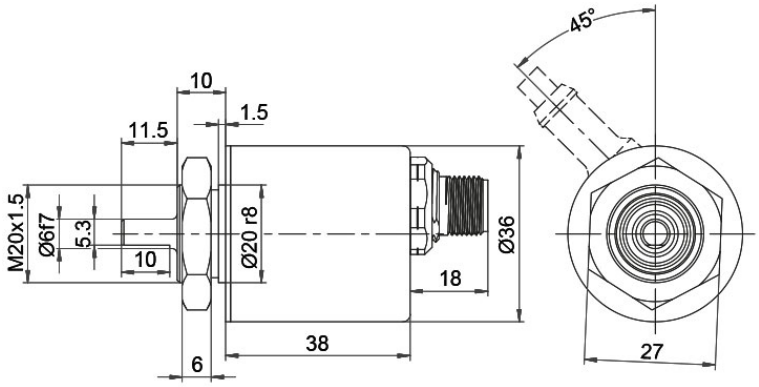
Cable connection L3 radial with 2 m cabel



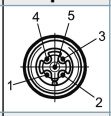
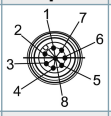
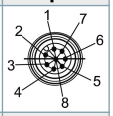
Description		ABN inv. poss.
L3	radial, shield connected to encoder housing	•

Assignments		
	L3	**L3**
Circuit	N35	M35
GND	WH	WH
(+) Vcc	BN	BN
A	GN	GN
B	YE	YE
N	GY	GY
Light reserve warning	-	-
A inv.	-	RD
B inv.	-	BK, (BU at ACA)
N inv.	-	VT
Shield	flex	flex

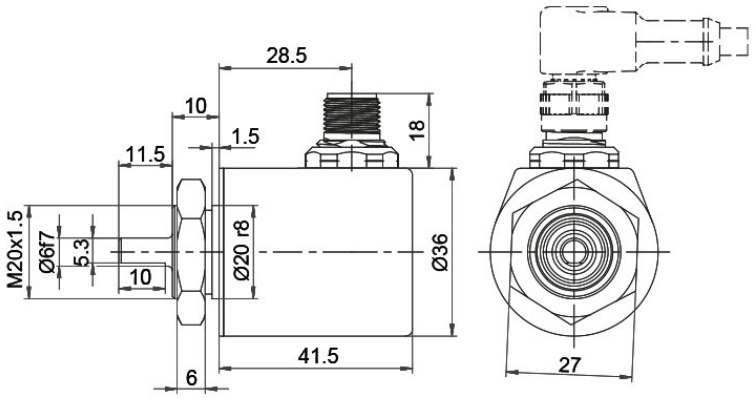
Sensor connector (M12x1) SB axial, 5-, 8-, 12-pin



Description		ABN inv. poss.
SB5	axial, 5-pin, Connector connected to encoder housing	-
SB8	axial, 8-pin, Connector connected to encoder housing	•

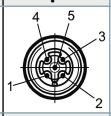
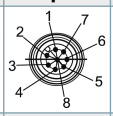
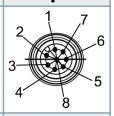
Assignments			
	SB5	**SB8**	**SB8**
	5-pin	**8-pin**	**8-pin**
			
Circuit	N35	N35	M35
GND	3	1	1
(+) Vcc	1	2	2
A	4	3	3
B	2	4	4
N	5	5	5
Light reserve warning	-	-	-
A inv.	-	-	6
B inv.	-	-	7
N inv.	-	-	8
n. c.	-	6, 7, 8	-
Shield	-	-	-

Sensor-connector (M12x1) SC radial, 5-, 8-pin



Description		ABN inv. poss.
SC5	radial, 5-pin, Connector connected to encoder housing	-
SC8	radial, 8-pin, Connector connected to encoder housing	•

Assignments

	SC5	SC8	SC8
	5-pin	8-pin	8-pin
			
Circuit	N35	N35	M35
GND	3	1	1
(+) Vcc	1	2	2
A	4	3	3
B	2	4	4
N	5	5	5
Light reserve warning	-	-	-
A inv.	-	-	6
B inv.	-	-	7
N inv.	-	-	8
n. c.	-	6, 7, 8	-
Shield	-	-	-

Options

Low temperature	Order key
The encoder WDGI 36S with the output circuit types N35, M35 is also available with the extended temperature range -40 °C up to +85 °C [-40 °F up to +185 °F] (measured at the flange).	**ACA**

Cable length	Order key
The encoder WDGI 36S can be supplied with more than 2 m cable. The maximum cable length depends on the supply voltage and the frequency; see www.wachendorff-automation.com/atd Please extend the standard order code with a three figure number, specifying the cable length in decimetres. Example: 5 m cable = 050	**XXX = Decimeter**

Example Order No.	Type						Your encoder
WDGI 36S	WDGI 36S						WDGI 36S
	Shaft						
06	06						
	Pulses per revolution PPR:						
1-1024	1-1024						1-1024
	Channels:						
AB	AB, ABN						
	Output circuit						
N35	**Resolution PPR**	**Power supply VDC**	**Output circuit**		**Light reserve warning**	**Order key**	
	up to 1024	5 - 30	HTL (TTL at 5 VDC)		-	N35	
		5 - 30	HTL, inv. (TTL/RS422 comp. at 5 VDC)		-	M35	
	Electrical connections						
L2	**Description**				**ABN inv. poss.**	**Order key**	
	Cable: length (2 m standard, WDG 58T: 1 m)						
	axial, shield connected to encoder housing				•	L2	
	radial, shield connected to encoder housing				•	L3	
	Connector: (shield connected to encoder housing)						
	sensor-connector, M12x1, 5-pin, axial				-	SB5	
	sensor-connector, M12x1, 5-pin, radial				-	SC5	
	sensor-connector, M12x1, 8-pin, axial				•	SB8	
	sensor-connector, M12x1, 8-pin, radial				•	SC8	
	Options						
	Description				**Order key**		
	Low temperature				ACA		
	Cable length				Cable lenght		
	Without option				Empty		

Example Order No.=	WDGI 36S	06	1-1024	AB	N35	L2	

WDGI 36S		1-1024					Your encoder



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/

WACHENDORFF

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