



Online Data sheet

Encoder WDGI 36C

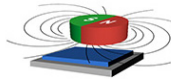
www.wachendorff-automation.com/wdgi36c

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 WDGI 36C (magnetic)



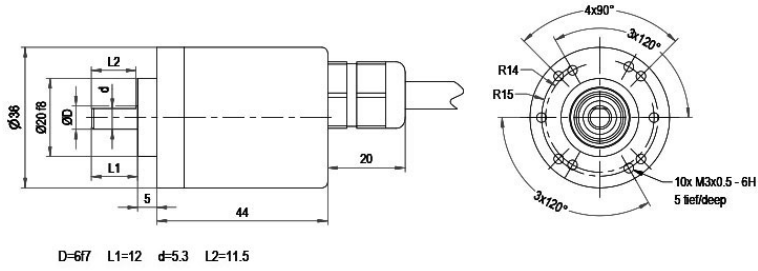
- Compact and robust
- All pulse numbers from 1 to 1,024 I/U available
- Robust construction for industrial use
- Protection to IP67, shaft sealed to IP65

www.wachendorff-automation.com/wdgi36c

Resolution	
Pulses per revolution PPR	up to 1024 PPR
Mechanical Data	
Housing	
Flange	round 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: 12 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	12000 rpm
Machinery Directive: basic data safety integrity level	
MTTF _d	3620 a
Mission time (TM)	25 a
Nominale service life (L10h)	1 x 10 ¹¹ 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. 125 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

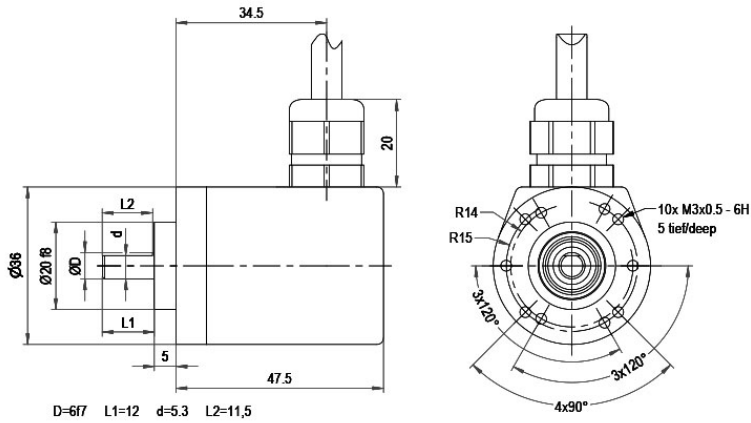
ABN inv. poss.

L2 axial, shield connected to encoder housing

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

Cable connection L3 radial with 2 m cabel



Description

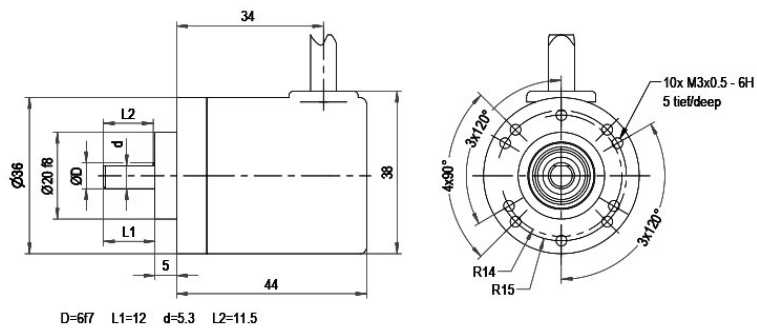
ABN inv. poss.

L3 radial, shield connected to encoder housing

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

Cable K1 (IP40) radial with 2 m cable



Description

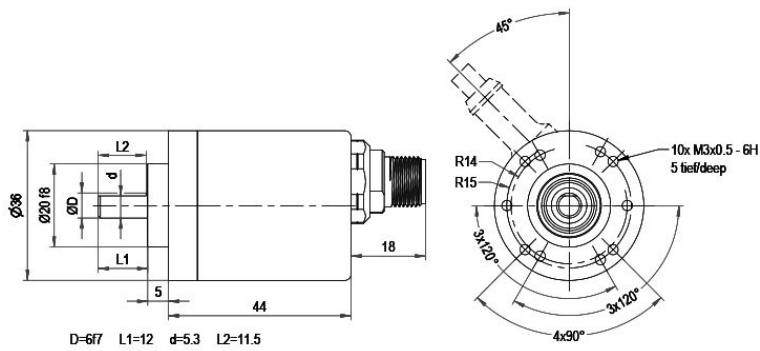
ABN inv. poss.

K1 radial, shield not connected (IP40)

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Assignments		
	K1	K1
Circuit	N35	M35
GND	WH	WH
(+) Vcc	BN	BN
A	GN	GN
B	YE	YE
N	GY	GY
-	-	-
A inv.	-	RD
B inv.	-	BK
N inv.	-	VT
Shield	flex	flex

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



D=67 L1=12 d=5.3 L2=11.5

Description

ABN inv. poss.

SB5 axial, 5-pin, Connector connected to encoder housing

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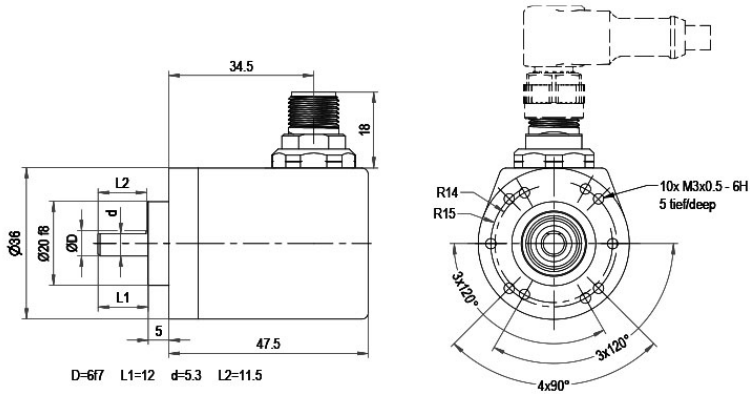
SB8 axial, 8-pin, Connector connected to encoder housing

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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
-	-	-	-
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
-	-	-	-
A inv.	-	-	6
B inv.	-	-	7
N inv.	-	-	8
n. c.	-	6, 7, 8	-
Shield	-	-	-

Options**Low temperature**

The encoder WDG1 36C 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).

Order key**ACA****Cable length**

The encoder WDG1 36C 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

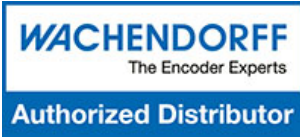
Please extend the standard order code with a three figure number, specifying the cable length in decimetres.

Example: 5 m cable = 050

Order key**XXX = Decimeter**

Example Order No.	Type					Your encoder	
WDGI 36C	WDGI 36C					WDGI 36C	
Shaft							
06	06						
Pulses per revolution PPR:							
1024	1-1024 Other PPRs on request						
Channels:							
ABN	ABN						
Output circuit							
M35	Resolution PPR	Power supply VDC	Output circuit	-	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)						
	radial, shield not connected (IP40)			•	K1		
	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				
Without option			Empty				
Cable length			XXX = Decimeter				

Example Order No.=	WDGI 36C	06	1024	ABN	M35	L2		WDGI 36C							Your encoder
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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/>

WACHENDORFF

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