



# Online Data Sheet

## Encoder WDG 40A

[www.wachendorff-automation.com/wdg40a](http://www.wachendorff-automation.com/wdg40a)

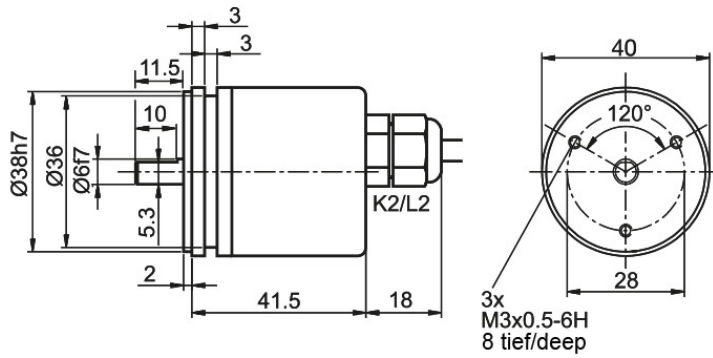
### Wachendorff Automation

#### ... 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



**Cable connection K2, L2 with 2 m cable**

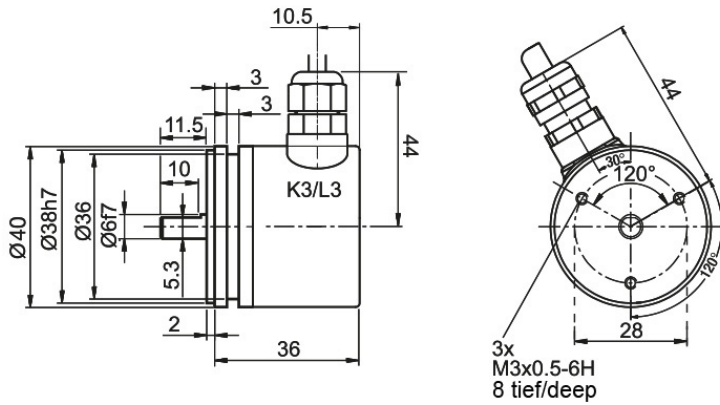


**Description**

**ABN inv. poss.**

<b>K2</b>	axial, shield not connected	•
<b>L2</b>	axial, shield connected to encoder housing	•

Assignments		
	<b>K2, L2</b>	<b>K2, L2</b>
<b>Circuit</b>	H05, H24	R05, R24
<b>GND</b>	WH	WH
<b>(+) Vcc</b>	BN	BN
<b>A</b>	GN	GN
<b>B</b>	YE	YE
<b>N</b>	GY	GY
<b>Light reserve warning</b>	-	-
<b>A inv.</b>	-	RD
<b>B inv.</b>	-	BK
<b>N inv.</b>	-	VT
<b>Shield</b>	flex	flex

**Cable connection K3, L3 with 2 m cabel**

**Description**

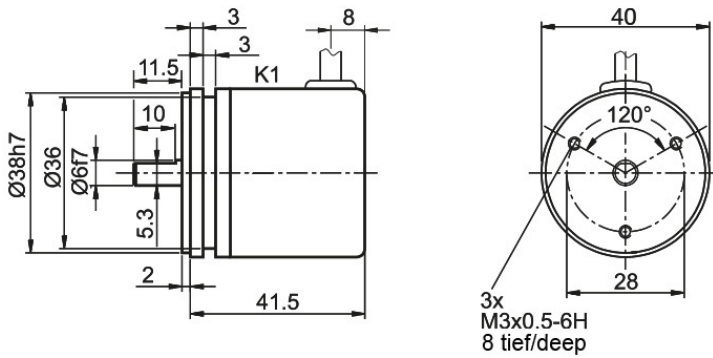
<b>K3</b>	radial, shield not connected
<b>L3</b>	radial, shield connected to encoder housing

**ABN inv. poss.**

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- 

Assignments		
	<b>K3, L3</b>	<b>K3, L3</b>
<b>Circuit</b>	H05, H24	R05, R24
<b>GND</b>	WH	WH
<b>(+) Vcc</b>	BN	BN
<b>A</b>	GN	GN
<b>B</b>	YE	YE
<b>N</b>	GY	GY
<b>Light reserve warning</b>	-	-
<b>A inv.</b>	-	RD
<b>B inv.</b>	-	BK
<b>N inv.</b>	-	VT
<b>Shield</b>	flex	flex

**Cable K1 (IP40) with 2 m cable**



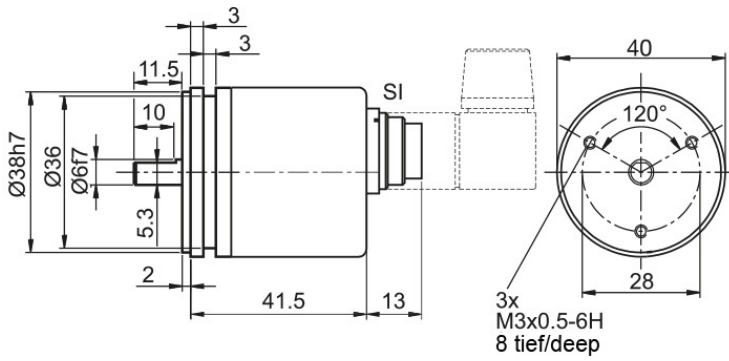
**Description**

**ABN inv. poss.**





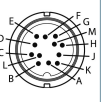
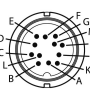
**K1** radial, shield not connected (IP40)

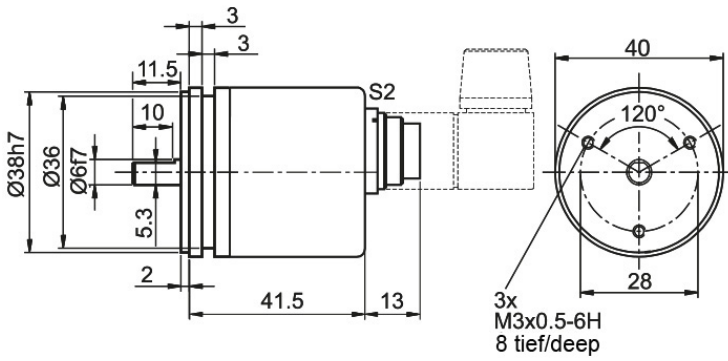
•

Assignments		
	<b>K1</b>	<b>K1</b>
<b>Circuit</b>	H05, H24	R05, R24
<b>GND</b>	WH	WH
<b>(+) Vcc</b>	BN	BN
<b>A</b>	GN	GN
<b>B</b>	YE	YE
<b>N</b>	GY	GY
<b>Light reserve warning</b>	-	-
<b>A inv.</b>	-	RD
<b>B inv.</b>	-	BK
<b>N inv.</b>	-	VT
<b>Shield</b>	flex	flex

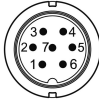
**Connector (M16x0,75) SI, 5-, 6-, 8-, 12-pin**


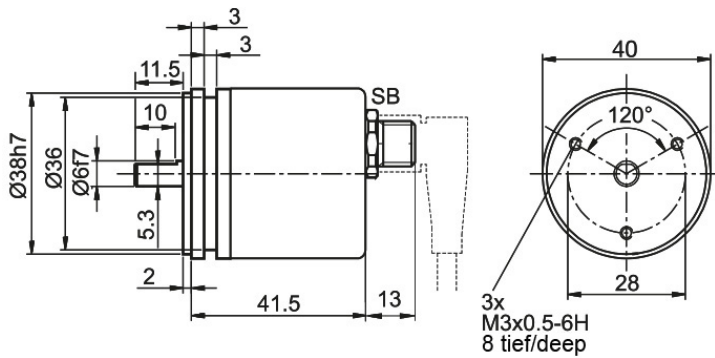
Description	ABN inv. poss.
<b>SI5</b> axial, 5-pin, Connector connected to encoder housing	-
<b>SI6</b> axial, 6-pin, Connector connected to encoder housing	-
<b>SI8</b> axial, 8-pin, Connector connected to encoder housing	•
<b>SI12</b> axial, 12-pin, Connector connected to encoder housing	•

Assignments						
	<b>SI5</b>	<b>SI6</b>	<b>SI8</b>	<b>SI8</b>	<b>SI12</b>	<b>SI12</b>
	5-pin	6-pin	8-pin	8-pin	12-pin	12-pin
						
<b>Circuit</b>	H05, H24	H05, H24	H05, H24	R05, R24	H05, H24	R05, R24
<b>GND</b>	1	6	1	1	K, L	K, L
<b>(+) Vcc</b>	2	1	2	2	M, B	M, B
<b>A</b>	3	2	3	3	E	E
<b>B</b>	4	4	4	4	H	H
<b>N</b>	5	3	5	5	C	C
<b>Light reserve warning</b>	-	-	-	-	-	-
<b>A inv.</b>	-	-	-	6	-	F
<b>B inv.</b>	-	-	-	7	-	A
<b>N inv.</b>	-	-	-	8	-	D
<b>n. c.</b>	-	5	6, 7, 8	-	A, D, F, G, J	G, J
<b>Shield</b>	-	-	-	-	-	-

**Connector (M16x0.75) S2, 7-pin**

**Description**
**ABN inv. poss.**
**S2** axial, 7-pin, Connector connected to encoder housing

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Assignments	
	<b>S2</b>
	<b>7-pin</b>
	
<b>Circuit</b>	H05, H24
<b>GND</b>	1
<b>(+) Vcc</b>	2
<b>A</b>	3
<b>B</b>	4
<b>N</b>	5
<b>Light reserve warning</b>	-
<b>A inv.</b>	-
<b>B inv.</b>	-
<b>N inv.</b>	-
<b>n. c.</b>	6, 7
<b>Shield</b>	-

**Sensor connector (M12x1) SB, 4-, 5-, 8-, 12-pin**

**Description**
**ABN inv. poss.**

<b>SB4</b>	axial, 4-pin, Connector connected to encoder housing	-
<b>SB5</b>	axial, 5-pin, Connector connected to encoder housing	-
<b>SB8</b>	axial, 8-pin, Connector connected to encoder housing	•
<b>SB12</b>	axial, 12-pin, Connector connected to encoder housing	•

**Assignments**

	<b>SB4</b> 4-pin	<b>SB5</b> 5-pin	<b>SB8</b> 8-pin	<b>SB8</b> 8-pin	<b>SB12</b> 12-pin	<b>SB12</b> 12-pin
<b>Circuit</b>	H05, H24	H05, H24	H05, H24	R05, R24	H05, H24	R05, R24
<b>GND</b>	3	3	1	1	3	3
<b>(+) Vcc</b>	1	1	2	2	1	1
<b>A</b>	2	4	3	3	4	4
<b>B</b>	4	2	4	4	6	6
<b>N</b>	-	5	5	5	8	8
<b>Light reserve warning</b>	-	-	-	-	-	-
<b>A inv.</b>	-	-	-	6	-	9
<b>B inv.</b>	-	-	-	7	-	7
<b>N inv.</b>	-	-	-	8	-	10
<b>n. c.</b>	-	-	6, 7, 8	-	2, 5, 7, 9, 10, 11, 12	2, 5, 11, 12
<b>Shield</b>	-	-	-	-	-	-



## Options

### Low-friction bearings

The encoder WDG 40A is also available as a particularly smooth-running low-friction encoder. The starting torque is thereby changed to 0.1 Ncm and the protection class at the shaft input to IP50.

### Order key

**AAC**

### IP67 all around

The encoder WDG 40A can be supplied in a full IP67 version.

### Order key

**AAO**

Max. RPM: 3500 rpm

Permitted Shaft-Loading, axial: 30 N

Permitted Shaft-Loading, radial: 45 N

Max. PPR: 1500 ppr

Starting-torque: approx. 1.2 Ncm at ambient temperature

### Low temperature

The encoder WDG 40A with the output circuit types H24, R24 is also available with the extended temperature range -40 °C up to +80 °C (measured at the flange).

### Order key

**ACA**

### Cable length

The encoder WDG 40A 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](http://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
WDG 40A	WDG 40A				WDG 40A
<b>Pulses per revolution PPR:</b>					
2048	4, 9, 10, 20, 25, 28, 30, 36, 40, 50, 60, 90, 100, 125, 128, 150, 160, 200, 235, 250, 314, 318, 360, 400, 500, 600, 635, 720, 900, 1000, 1024, 1080, 1200, 1250, 1500, 1800, 2000, 2048, 2500 Other PPRs on request				
<b>Channels:</b>					
ABN	AB, ABN bis 2048 I/U				
<b>Output circuit</b>					
H24	<b>Resolution PPR</b>	<b>Power supply VDC</b>	<b>Output circuit</b>	<b>Light reserve warning</b>	<b>Order key</b>
	up to 2500	4.75 - 5.5	TTL	-	H05
		4.75 - 5.5	TTL, RS422 comp., inverted	-	R05
		10 - 30	HTL	-	H24
10 - 30		HTL inverted	-	R24	
<b>Electrical connections</b>					
K2	<b>Description</b>			<b>ABN inv. poss.</b>	<b>Order key</b>
	<b>Cable: length (2 m standard, WDG 58T: 1 m)</b>				
	radial, shield not connected (IP40)			•	K1
	axial, shield not connected			•	K2
	axial, shield connected to encoder housing			•	L2
	radial, shield not connected			•	K3
	radial, shield connected to encoder housing			•	L3
	<b>Connector: (shield connected to encoder housing)</b>				
	connector, M16x0.75, 5-pin, axial			-	SI5
	connector, M16x0.75, 6-pin, axial			-	SI6
	connector, M16x0.75, 8-pin, axial			•	SI8
	connector, M16x0.75, 12-pin, axial			•	SI12
	connector, M16x0.75, 7-pin, axial			-	S2
	sensor-connector, M12x1, 4-pin, axial			-	SB4
	sensor-connector, M12x1, 5-pin, axial			-	SB5
sensor-connector, M12x1, 8-pin, axial			•	SB8	
sensor-connector, M12x1, 12-pin, axial			•	SB12	
<b>Options</b>					
	<b>Description</b>			<b>Order key</b>	
	Low-friction bearings			AAC	
	IP67			AAO	
	Low temperature			ACA	
	Without option			Empty	
	Cable length			XXX = Decimeter	

Example Order No.=	WDG 40A	2048	ABN	H24	K2		WDG 40A					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/>



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