

## Encoder WDG 58H



- Rugged industrial standard encoder
- Up to 25000 PPR by use of high grad electronics
- Thru-Bore
- High protection class IP65, with oil seal
- Maximum mechanical and electrical safety
- High noise immunity
- Full connection protection with 10 VDC up to 30 VDC
- With light reserve warning
- Optional: -40 °C up to +80 °C

[www.wachendorff-automation.com/wdg58h](http://www.wachendorff-automation.com/wdg58h)

**Available PPR** up to 25000 PPR

### Mechanical Data

**Housing**  
- Flange: Aluminium  
- Cap: Aluminium, powder coated  
- Torque Support:  
1. Spring plate Incl. 1 spring plate WDGDS10001  
Compensation: axial: max. 1.5 mm, radial: max. 0.1 mm  
Max. operating speed: 6000 rpm  
up to max. protection rating +60 °C  
2. Cylinder pin (Accessories)  
Compensation: axial: max. 1 mm, radial: max. 0.3 mm  
Max. operating speed: 3000 rpm

### Thru-Bore

- Material: stainless steel  
- Diameter: 8, 10, 12 oder 14 mm, H7  
- Permitted load on shaft end: max. 80 N radial  
max. 60 N axial  
- Starting torque: approx. 2.2 Ncm at ambient temperature  
Attachment: permanently attached clamping ring

### Bearings

- Type: 2 precision ball bearings  
- Service life: 1 x 10<sup>9</sup> revs. at 100 % rated shaft load  
1 x 10<sup>10</sup> revs. at 40 % rated shaft load  
1 x 10<sup>11</sup> revs. at 20 % rated shaft load

### Weight:

approx. 220 g

### Connections:

cable or connector, radial

Protection rating: IP65  
(EN 60529)

Operating temperature: -20 °C up to +80 °C, 1 Vss: -10 °C up to +70 °C

Storage temperature: -30 °C up to +80 °C

### Electrical Data

Power supply/ 4.75 VDC up to 5.5 VDC: max. 100 mA  
Open circuit current 5 VDC up to 30 VDC: max. 70 mA  
consumption: 10 VDC up to 30 VDC: max. 100 mA

Output circuit: TTL, RS422 compatible, HTL, 1 Vss Sin/Cos

Pulse frequency: TTL ≤ 5000 PPR: max. 200 kHz  
HTL ≤ 5000 PPR: max. 200 kHz  
TTL > 5000 PPR: max. 2 MHz  
HTL > 5000 PPR: max. 600 kHz  
1 Vss Sin/Cos: max. 100 kHz

Channels: AB, ABN and inverted signals

Load: max. 40 mA/channel,  
@ 1 Vss Sin/Cos: 120 Ohm termination

Circuit protection: circuit type F24, G24, H24, I24, P24, R24 only

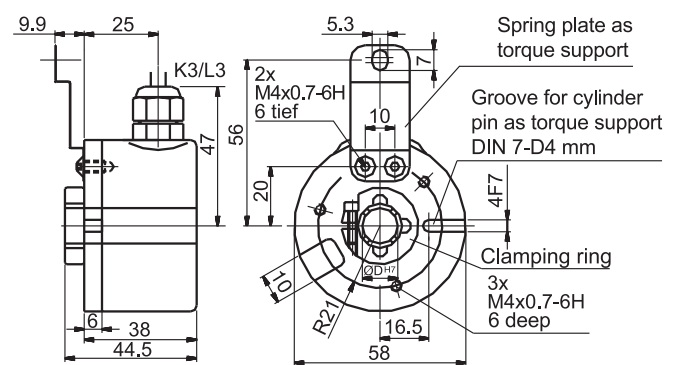
Accuracy: Phase offset: 90° ± max. 7.5 %  
of the pulse length  
pulse-/pause-ratio: 50 % ± max. 7 %

### Further technical information on:

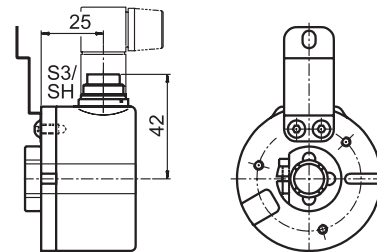
[www.wachendorff-automation.com/gtd](http://www.wachendorff-automation.com/gtd)

Matching accessories on: [www.wachendorff-automation.com/acs](http://www.wachendorff-automation.com/acs)

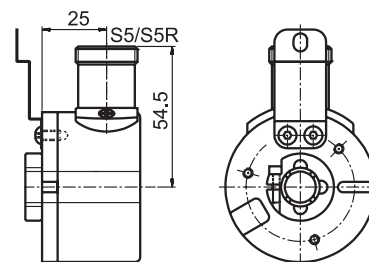
### Cable connection K3, L3 with 2 m cable



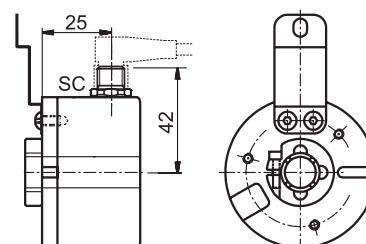
### Connector (M16x0.75) SH, 5-, 6-, 8-, 12-pin, S3, 7-pin



### Connector (M23) S5, S5R, 12-pin



### Sensor-connector (M12x1) SC, 4-, 5-, 8-, 12-pin



All dimensional specifications in mm.

**Options:**

**Low-temperature:**

The encoder WDG 58H with the output circuit types F24, G24, H24, I24, P24, R24, F05, G05, I05, P05, 245 and 645 is also available with the extended temperature range -40 °C up to +80 °C (measured at the flange). When ordering please add the suffix code - ACA.

**Cable length:**

The encoder WDG 58H can be supplied with more than 2 m cable. The maximum cable length depends on the supply voltage and the frequency; see "General Technical Data":







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

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

Example: 3 m cable = 030

**Ordering information:**

Please see our general technical data at: [www.wachendorff-automation.com/gtd](http://www.wachendorff-automation.com/gtd)

Output circuit:					
Resolution PPR	Power supply VDC	Output circuit	Light reserve warning	Order Key	
up to 1024	5 - 30	 HTL	-	H30	
		HTL inverted	-	R30	
up to 5000	4,75 - 5,5	 TTL	●	G05	
			-	H05	
		TTL, RS422 comp., inverted	●	I05	
	10 - 30		HTL	●	G24
			HTL inverted	●	I24
			TTL, RS422 comp., inv.	●	245
10000 up to 25000	4,75 - 5,5	 TTL	-	F05	
		TTL, RS422 comp., inv.	-	P05	
	10 - 30		HTL	-	F24
			HTL inverted	-	P24
up to 2048	4,75 - 5,5		-	SIN	

**Channels:** AB, ABN (SIN: AB)

**Pulses per revolution PPR:**  
 4, 6, 10, 32, 36, 50, 60, 64, 100, 120, 125, 127, 150, 180, 200, 216, 240, 250, 254, 256, 300, 314, 360, 400, 500, 512, 600, 625, 720, 750, 768, 800, 810, 900, 1000, 1024, 1200, 1250, 1270, 1440, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 5000, 10000, 12500, 20000, 25000.  
 1 Vss Sin/Cos 1024 PPR and 2048 PPR only  
 Other PPRs on request

**Bore size:** 8, 10, 12, 14  
 Other diameters on request

**Order No.:**

Example	WDG 58H	14	1024	ABN	G24	K3	
Your encoder	WDG 58H						

Electrical connections:			ABN inv.
Order key	Outgoing	Description	
<b>Cable:</b> (Length 2 m standard)			
K3	radial	shield not connected	●
L3		shield connected to encoder housing	●
<b>Connector:</b>			
SH5	radial	5-pin, connector	-
SH6	radial	6-pin, connector	-
SH8	radial	8-pin, connector	●
SH12	radial	12-pin, connector	●
S3	radial	7-pin, connector	-
S5/ S5R	radial	12-pin, connector (R = clockwise pin count)	●
SC4	radial	4-pin, M12-sensor-connector	-
SC5	radial	5-pin, M12-sensor-connector	-
SC8	radial	8-pin, M12-sensor-connector	●
SC12	radial	12-pin, M12-sensor-connector	●

**Options:**  
 Empty = Without option  
 ACA = Low-temperature -40 °C up to +80 °C  
 In decimetres = Cable length