

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

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 (Accessories)
 2. Cylinder pin
 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 10⁹ revs. at 100 % rated shaft load
1 x 10¹⁰ revs. at 40 % rated shaft load
1 x 10¹¹ 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

Machinery Directive: basic data safety integrity level

- MTTF_d: 200 a
- Mission time (T_M): 25 a
- Nominal service life (L_{10h}): 1 x 10¹¹ revs. at 6000 rpm and 20 % rated shaft load
- Diagnostic coverage (DC): 0 %

Electrical Data

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

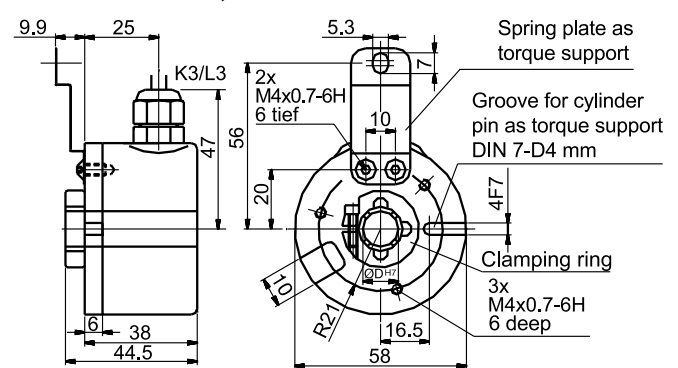
Phase offset:	90° ± max. 7.5 % of the pulse length
pulse-/pause-ratio:	50 % ± max. 7 %

Further technical information on:

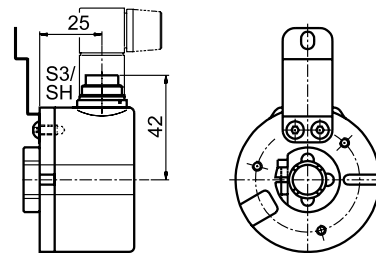
www.wachendorff-automation.com/gtd

Matching accessories on: www.wachendorff-automation.com/acs

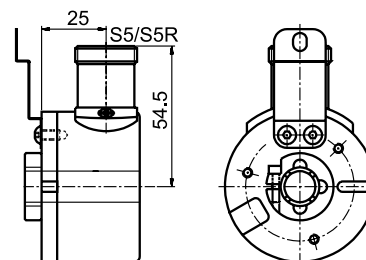
Cable connection K3, L3 with 2 m cable



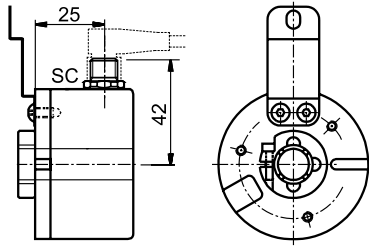
Connector (M16x0.75) SH, 5-, 6-, 8-, 12-pin, S3, 7-pin



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

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

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
				-	H24
			HTL inverted	•	I24
10000 up to 25000	4,75 - 5,5	TTL	-	F05	
		TTL, RS422 comp., inv.	-	P05	
	10 - 30	HTL		-	F24
				-	P24
			TTL, RS422 comp., inv.	-	645
	1024 2048	4,75 - 5,5	1 Vss Sin/Cos	-	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

Electrical connections:			
Order key	Outgoing	Description	ABN inv.
Cable: (Length 2 m standard)			
K3	radial	shield not connected	•
L3		shield connected to encoder housing	•
Connector:			
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/	radial	12-pin, connector	•
S5R		(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

Order No.:

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