

Encoder WDG 80H



- Rugged and economical encoder
- High protection class IP65
- Thru-Bore 10 mm up to 25 mm
- Full connection protection with 10 VDC up to 30 VDC
- With light reserve warning
- Easy mounting
- Optional: -40 °C up to +80 °C

www.wachendorff-automation.com/wdg80h

Available PPR up to 3840 PPR

Mechanical Data

Housing

- Flange: Aluminium
- Cap: Aluminium, powder coated
- Torque Support: Spring plate
Incl. 1 spring plate WDGDS10001
Compensation: axial: max. 2 mm, radial: max. 0.15 mm
Max. operating speed: 3500 rpm

Thru-Bore

- Material: stainless steel
- Diameter: 10, 12, 15, 18, 20, 25 mm
- Attachment: 2 x M4, DIN 913
- Starting torque: 2.5 Nm
- Permitted load on shaft end: max. 200 N radial
max. 100 N axial
- Starting torque: approx. 6 Ncm at ambient temperature

Bearings

- Type: 2 precision ball bearings
- Service life: 3 x 10¹⁰ revs. at 100 % rated shaft load
1 x 10¹¹ revs. at 40 % rated shaft load
1 x 10¹² revs. at 20 % rated shaft load
approx. 600 g

Weight:

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 10¹² revs. at 3500 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. 70 mA

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

- Pulse frequency: TTL up to 3840 PPR: max. 200 kHz
HTL up to 3840 PPR: max. 200 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 G24, H24, I24 R24 only

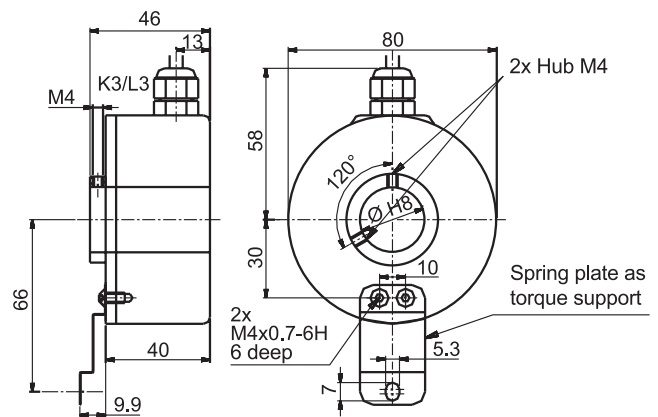
- Accuracy: Phase offset: 90° ± max. 7.5 % of the pulse length
pulse-/pause-ratio: 50 % ± max. 7 %

Further technical information on:

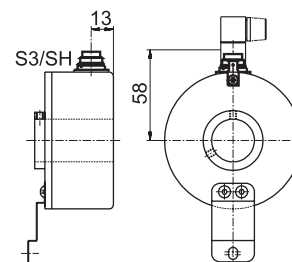
www.wachendorff-automation.com/gtd

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

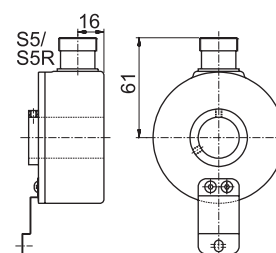
Cable connection K3, L3 with 2 m cable



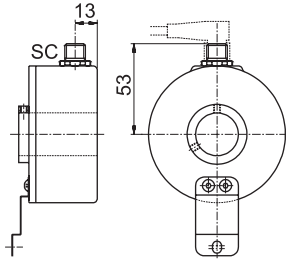
Connector (M16x0.75) SH, 5-, 6-, 8-, 12-pin, S3, 7-pin



Connector (M23) S5, S5R, 12-pin



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



All dimensional specifications in mm.

Options:

Low-temperature:

The encoder WDG 80H with the output circuit types G24, I24, G05, I05 and 245 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 80H 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 3840	4.75 - 5.5	TTL	•	G05
			-	H05
		TTL, RS422 comp., inverted	-	I05
	5 - 30	HTL	-	H30
			HTL inverted	-
	10 - 30	HTL	•	G24
-			H24	
HTL inverted		•	I24	
TTL, RS422 comp., inv.		•	245	
up to 1024	4.75 - 5.5	1 Vss Sin/Cos	•	SIN

Channels: AB, ABN

Pulses per revolution PPR:
 50, 100, 250, 500, 720, 1000, 1024, 1920, 3840
 1 Vss Sin/Cos 1024 PPR only
 Other PPRs on request

Bore size: 10, 12, 14, 15, 18, 20, 25

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/ 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	•

Options:

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

Order No.:

Example WDG 80H 25 1024 ABN G24 K3

Your encoder WDG 80H