

Encoder WDG 58E



NEW!
15 mm Hollow bore (blind) encoder

- Rugged industrial standard hollow bore (blind) encoder
- Up to 25000 PPR by use of high grad electronics
- Maximum mechanical and electrical safety
- High protection according to IP67, shaft sealed to IP65, high noise immunity
- End-Hollow-Shaft
- 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/wdg58e

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
Compensation: axial: max. 1 mm, radial: max. 0.3 mm
Max. operating speed: 3000 rpm

Hollow bore (blind)

- Material: stainless steel
- Diameter: 8, 10, 12 or 15 mm, H7
- Permitted load on shaft end: max. 80 N radial
max. 60 N axial
- Starting torque: approx. 1.6 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:

IP67, shaft sealed to 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

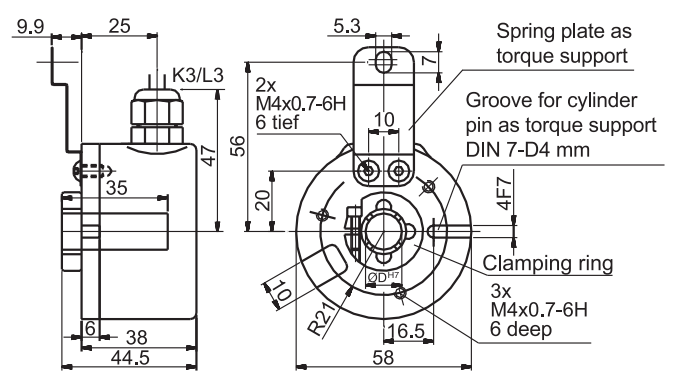
- Accuracy: Phase offset: 90° ± max. 7.5 % of the pulse length
pulse-/pause-ratio: 50 % ± max. 7 %

Further technical information on:

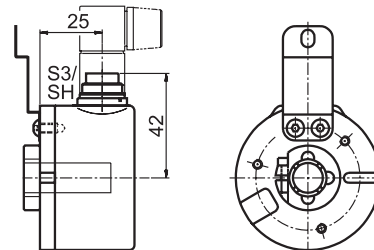
www.wachendorff-automation.com/gtd

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

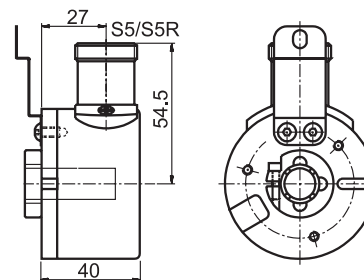
Cable connection K3, L3 with 2 m cable



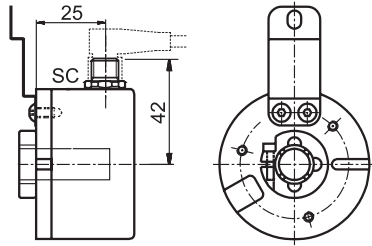
Connector (M16x0.75) SH, 5-, 6-, 8-, 12-pin, S3, 7-pin



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 58E with the output circuit types F24, G24, H24, I24, P24, R24, F05, G05, H05, I05, P05, R05, 245, 524 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 58E 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 2500	5 - 30	HTL	-	H30	
		HTL inverted	-	R30	
up to 5000	4,75 - 5,5	TTL	•	G05	
		TTL, RS422 comp., inverted	-	H05	
			•	I05	
			-	R05	
	10 - 30	HTL		•	G24
				-	H24
			HTL inverted	•	I24
				-	R24
		TTL, RS422 comp., inverted	•	524	
			-	245	
10000 up to 25000	4,75 - 5,5	TTL	-	F05	
		TTL, RS422 comp., inv.	-	P05	
	10 - 30	HTL		-	F24
			HTL invertiert	-	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, 15
 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/ 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

Order No.:

Example	WDG 58E	10	1024	ABN	G24	K3	
Your encoder	WDG 58E						