

Encoder WDG 145H



- Thru-Bore encoder for direct installation on large electric motors
- Maximum mechanical and electrical safety
- Highly interference-resistant when used with frequency converters
- Meets protection class IP54, optional full version of protection class IP64
- Full connection protection with 10 VDC up to 30 VDC
- With light reserve warning

www.wachendorff-automation.com/wdg145h

Available PPR up to 2500 PPR

Mechanical Data

Housing

- Flange: Aluminium
- Cap: Aluminium
- Torque Support:
 - 1. Spring plate Incl. 3 spring plates WDGDS10001
 - Compensation: axial: max. 2 mm
 - radial: max. 0.15 mm
- Max. operating speed: 1600 rpm
- 2. Cylinder pin (Accessories)
- Compensation: axial: max. 1 mm
- radial: max. 0.3 mm
- Max. operating speed: 800 rpm

Thru-Bore

- Material: stainless steel
- Diameter: 45, 48, 50, 55, 60, 65, 72 mm
- Permitted load on shaft end: max. 200 N radial
- max. 100 N axial
- Starting torque: approx. 1.5 Ncm at ambient temperature
- Attachment: permanently attached clamping ring

Bearings

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

Weight:

1700 g up to 2500 g

Connections:

cable or connector, radial

Protection rating:

IP54

(EN 60529)

Operating temperature: -20 °C up to +80 °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

Nominale service life 3 x 10¹² revs. at 1600 rpm and 20 % rated

(L_{10h}): shaft load

Diagnostic coverage (DC): 0 %

Electrical Data

Power supply/ 4.75 VDC up to 5.5 VDC: max. 70 mA

Open circuit current 10 VDC up to 30 VDC: max. 70 mA

consumption:

Output circuit: TTL, RS422 compatible

HTL

Pulse frequency: TTL up to 2500 PPR: max. 200 kHz

HTL up to 2500 PPR: max. 200 kHz

Channels: AB, ABN and inverted signals

Load: max. 40 mA/channel,

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

Accuracy: Phase offset: 90° ± max. 7.5 %

of the pulse length

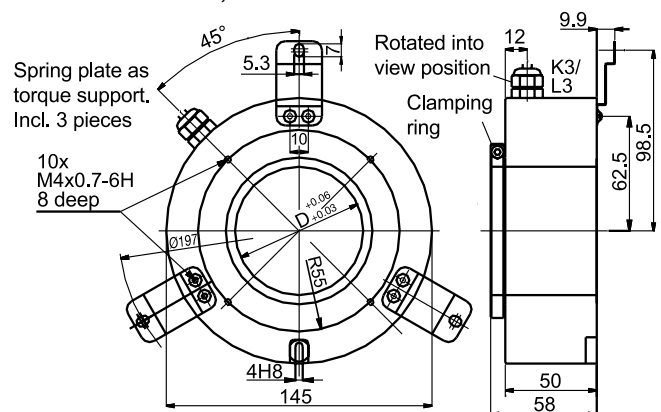
pulse-/pause-ratio: 50 % ± max. 7 %

Further technical information on:

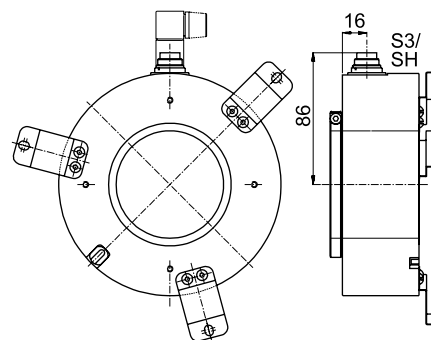
www.wachendorff-automation.com/gtd

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

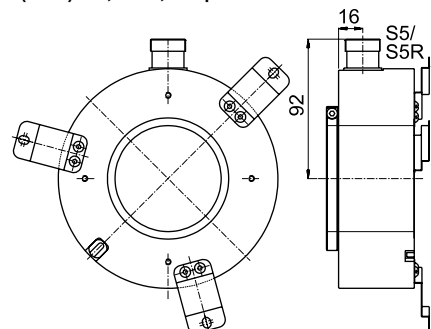
Cable connection K3, L3 with 2 m cable



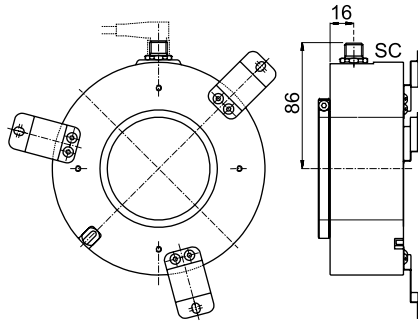
Connector (M16x0.75) SH, 5-, 6-, 8-, 12-pin, S3, 7-pin



Connector (M23) S5, S5R, 12-pin



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



All dimensional specifications in mm.

Options:

Cable length:

The encoder WDG 145H 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

Full version of protection rating IP64:

The encoder WDG 145H can be supplied in a full IP64 version. When ordering please add the suffix code - AEK.

Max. RPM	Starting-torque
500 rpm	approx. 5 Ncm

Amended specifications for full IP64 version.

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
1024, 2500	4.75 - 5.5	TTL	•	G05
		TTL, RS422 comp., inverted	-	H05
	10 - 30	HTL	•	G24
		HTL inverted	-	H24
			•	I24
			-	R24

Channels: AB, ABN

Pulses per revolution PPR:
1024, 2500
Other PPRs on request

Bore size:
45, 48, 50, 55, 60, 65, 72
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	•

Options:
Empty = Without option
AEK = Full version of protection rating IP64
In decimetres = Cable length

Order No.:

Example	WDG 145H	65	1024	ABN	G24	K3	
Your encoder	WDG 145H						