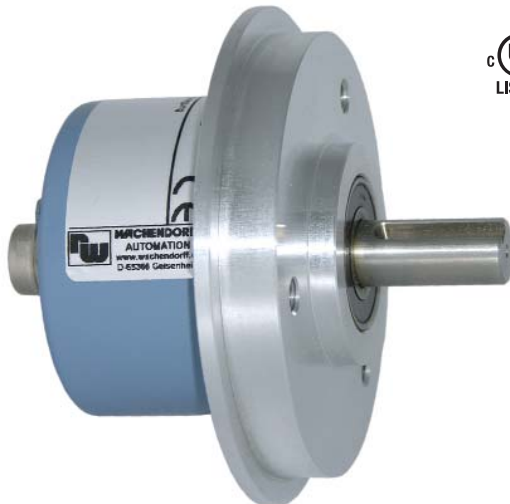


## Encoder WDG 90B



- Rugged industrial standard encoder
  - Protection to IP67, shaft sealed to IP65
  - Maximum mechanical and electrical safety
  - With control output
  - Optional: -40°C ... +80°C
- [www.wachendorff.de/wdg90b-engl](http://www.wachendorff.de/wdg90b-engl)

### Application field

Electric motors, machine tools, weigh scales, conveyors, printing machines, drives, textile machines, production lines, injection-moulding machines, test machines, elevators/lifts, doors and gates.

**Available PPR** up to 5000

### Mechanical Data

#### Housing

- Clamping flange: Aluminium
- Housing: Aluminium, powder coated

#### Shaft

- Material: stainless steel
- Load on shaft end: max. 200 N radial  
max. 150 N axial
- Starting torque: approx. 1 Ncm at ambient temperature

#### Bearings

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

Operating speed: 8.000 rpm

Weight: approx. 380 g

Connections: Shielded cable or connector

Protection rating: IP67, shaft sealed to IP65  
(EN 60529)

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

Storage temperature: -30... +80°C

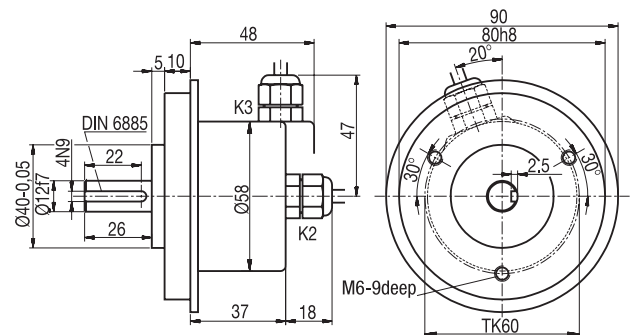
### Electrical Data

Power supply	Output circuit	Key	Output circuit*	Key
10-30 VDC	HTL	G24	HTL, inv.	I24
5 VDC	TTL	G05	RS422, TTL comp.	I05
5-30 VDC	HTL	H30	HTL, inv.	R30
10-30 VDC	-	-	RS422, TTL comp.	245
5 VDC	-	-	1 Vss Sin./Cos.	SIN

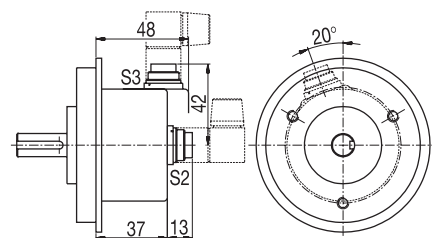
\*Only for cable or connector:

K2, L2, K3, L3, S4, S5, SB8, SC8, SB12, SC12

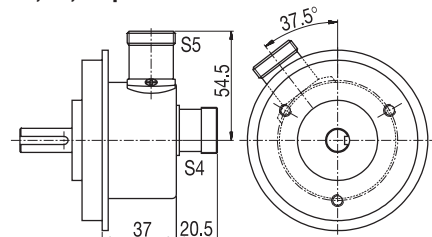
### Cable connection K2, K3



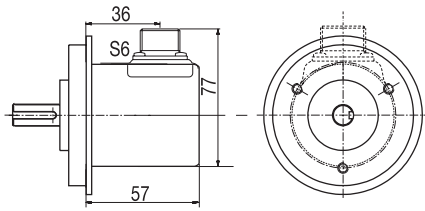
### Connector S2, S3, 7-pin



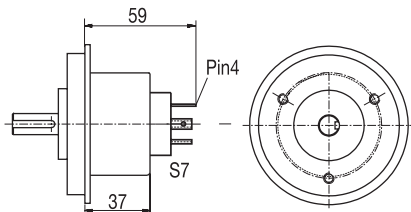
### Connector S4, S5, 12-pin



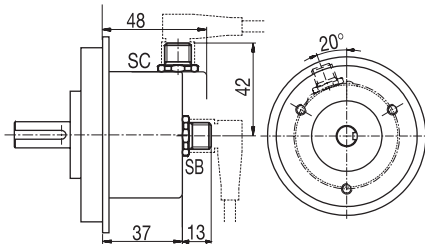
### MIL-connector S6, 6-pin



### Valve-connector S7, 4-pin



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



### Options:

#### Low-temperature:

The encoder WDG 90B with the output switches G24, I24, G05, I05 and 245 is also available with the extended temperature range -40°C...+80°C (measured at the flange). When ordering please add the suffix code - ACA.

#### Shafts sealed to IP67:

The encoder WDG 90B can be supplied in a full IP67 version. When ordering please add the suffix code - AAO.

Max. RPM	Permitted Shaft-Loading		Max. PPR (no 1Vss)	Starting-torque
	axial	radial		
3.200	110N	110N	2.500	ca. 5 Ncm

Amended specifications for shaft sealed to IP67.

#### Cable length:

The encoder WDG 90B can be supplied with more than 2 m cable. Please extend the standard order code with a three figure number, specifying the cable length in decimetres.

All dimensional specifications in mm.

Further technical information on [www.wachendorff.de/gtd](http://www.wachendorff.de/gtd)  
 Matching accessories on [www.wachendorff.de/acs](http://www.wachendorff.de/acs)

### Ordering information:

<b>Output circuit:</b> G24 = 10-30 VDC, HTL G05 = 5 VDC, TTL H30 = 5-30 VDC, HTL	<b>Output circuit inv.:</b> I24 = 10-30 VDC, HTL I05 = 5 VDC, RS422 TTL comp. R30 = 5-30 VDC, HTL 245 = 10-30 VDC, RS422 TTL comp. SIN = 5 V, 1 Vss Sinus (only to 1024 and 2048 PPR)
Inverted only for cable or connector: K2, L2, K3, L3, S4, S5, SB8, SC8, SB12, SC12	

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

**Pulses per revolution:**  
 2, 10, 15, 20, 24, 36, 40, 48, 50, 60, 64, 72, 87, 90, 100, 120, 125, 127, 128, 150, 160, 180, 200, 216, 240, 250, 254, 256, 300, 314, 320, 360, 400, 500, 512, 571, 600, 625, 720, 750, 768, 800, 810, 900, 1000, 1024, 1200, 1250, 1270, 1440, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 4685, 5000.  
 Other PPR's on request

<b>Electrical connections:</b> <b>Cable:</b> K2 = axial, 2 m, shield not connected (standard) L2 = axial, 2 m, shield connected to encoder housing K3 = radial, 2 m, shield not connected (standard) L3 = radial, 2 m, shield connected to encoder housing	
<b>Connector:</b> S2 = 7-pin axial S3 = 7-pin radial S4 = 12-pin axial S5 = 12-pin radial S6 = 6-pin radial S7 = 4-pin axial SB4 = 4-pin axial SC4 = 4-pin radial SB5 = 5-pin axial SC5 = 5-pin radial SB8 = 8-pin axial SC8 = 8-pin radial SB12 = 12-pin axial SC12 = 12-pin radial	
Please note the connection configuration under "General technical data", Page 122	

<b>Options:</b> Empty = without option Low-temperature -40°C...+80°C = ACA Shaft sealed to IP 67 = AAO Cable length = in decimetres	
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#### Order No.:

Example	WDG 90B	500	ABN	G24	K3	
Your encoder	WDG 90B					