



# Online Data sheet

## Encoder WDG 100H

[www.wachendorff-automation.com/wdg100h](http://www.wachendorff-automation.com/wdg100h)

### **Wachendorff Automation**

#### **... systems and encoders**

- Complete systems
- Industrial rugged encoders to suit your application
- Standard range and customer versions
- Maximum permissible loads
- 48-hour express production
- Made in Germany
- Worldwide distributor network

# Encoder WDG 100H (optical)



- Rugged and extremely thin thru-bore encoder for extension on power motors
- Thru-Bore, bore size max. 45 mm
- Full connection protection with 10 VDC up to 30 VDC
- Easy mounting
- Meets protection class IP54
- Up to 20,480 PPR
- Optional: -40 °C up to +80 °C  
Protection to IP55 all around

[www.wachendorff-automation.com/wdg100h](http://www.wachendorff-automation.com/wdg100h)

| Resolution                |                 |
|---------------------------|-----------------|
| Pulses per revolution PPR | up to 20480 PPR |

| Mechanical Data                |                                   |
|--------------------------------|-----------------------------------|
| Housing                        |                                   |
| Flange                         | hollow shaft (through-bored)      |
| Flange material                | aluminum                          |
| Housing cap                    | aluminum, powder coated           |
| Torque supports                | incl. 1 torque support WDGDS10001 |
| - 1. Spring plate compensation | axial: ±0.8 mm, radial: ±0.2 mm   |
| Housing                        | Ø 100 mm                          |

| Shaft(s)        |   |
|-----------------|---|
| Shaft material  | stainless steel                             |
| Starting torque | approx. 1.5 Ncm at ambient temperature      |
| Fixing          | 2 x M4, DIN 913;<br>Starting torque: 2,5 Nm |

|                                       |          |
|---------------------------------------|----------|
| Shaft                                 | Ø 25 mm  |
| Shaft length                          | L: 42 mm |
| Insertion depth min.                  | 52 mm    |
| Max. Permissible shaft loading radial | 200 N    |
| Max. Permissible shaft loading axial  | 100 N    |

|                                       |                      |
|---------------------------------------|----------------------|
| Shaft                                 | Ø 25.4 mm, Ø 1"      |
| Shaft length                          | L: 42 mm, L: 1.65 in |
| Insertion depth min.                  | 52 mm                |
| Max. Permissible shaft loading radial | 200 N, 20.39 kp      |
| Max. Permissible shaft loading axial  | 100 N, 10.197 kp     |

|                                       |          |
|---------------------------------------|----------|
| Shaft                                 | Ø 28 mm  |
| Shaft length                          | L: 42 mm |
| Insertion depth min.                  | 52 mm    |
| Max. Permissible shaft loading radial | 200 N    |
| Max. Permissible shaft loading axial  | 100 N    |

|                      |          |
|----------------------|----------|
| Shaft                | Ø 30 mm  |
| Shaft length         | L: 42 mm |
| Insertion depth min. | 52 mm    |

|                                       |       |
|---------------------------------------|-------|
| Max. Permissible shaft loading radial | 200 N |
|---------------------------------------|-------|

|                                      |       |
|--------------------------------------|-------|
| Max. Permissible shaft loading axial | 100 N |
|--------------------------------------|-------|

|       |         |
|-------|---------|
| Shaft | Ø 32 mm |
|-------|---------|

|              |          |
|--------------|----------|
| Shaft length | L: 42 mm |
|--------------|----------|

|                      |       |
|----------------------|-------|
| Insertion depth min. | 52 mm |
|----------------------|-------|

|                                       |       |
|---------------------------------------|-------|
| Max. Permissible shaft loading radial | 200 N |
|---------------------------------------|-------|

|                                      |       |
|--------------------------------------|-------|
| Max. Permissible shaft loading axial | 100 N |
|--------------------------------------|-------|

|       |         |
|-------|---------|
| Shaft | Ø 36 mm |
|-------|---------|

|              |          |
|--------------|----------|
| Shaft length | L: 42 mm |
|--------------|----------|

|                      |       |
|----------------------|-------|
| Insertion depth min. | 52 mm |
|----------------------|-------|

|                                       |       |
|---------------------------------------|-------|
| Max. Permissible shaft loading radial | 200 N |
|---------------------------------------|-------|

|                                      |       |
|--------------------------------------|-------|
| Max. Permissible shaft loading axial | 100 N |
|--------------------------------------|-------|

|       |         |
|-------|---------|
| Shaft | Ø 38 mm |
|-------|---------|

|              |          |
|--------------|----------|
| Shaft length | L: 42 mm |
|--------------|----------|

|                      |       |
|----------------------|-------|
| Insertion depth min. | 52 mm |
|----------------------|-------|

|                                       |       |
|---------------------------------------|-------|
| Max. Permissible shaft loading radial | 200 N |
|---------------------------------------|-------|

|                                      |       |
|--------------------------------------|-------|
| Max. Permissible shaft loading axial | 100 N |
|--------------------------------------|-------|

|       |         |
|-------|---------|
| Shaft | Ø 40 mm |
|-------|---------|

|              |          |
|--------------|----------|
| Shaft length | L: 42 mm |
|--------------|----------|

|                      |       |
|----------------------|-------|
| Insertion depth min. | 52 mm |
|----------------------|-------|

|                                       |       |
|---------------------------------------|-------|
| Max. Permissible shaft loading radial | 200 N |
|---------------------------------------|-------|

|                                      |       |
|--------------------------------------|-------|
| Max. Permissible shaft loading axial | 100 N |
|--------------------------------------|-------|

|       |         |
|-------|---------|
| Shaft | Ø 42 mm |
|-------|---------|

|              |          |
|--------------|----------|
| Shaft length | L: 42 mm |
|--------------|----------|

|                      |       |
|----------------------|-------|
| Insertion depth min. | 52 mm |
|----------------------|-------|

|                                       |       |
|---------------------------------------|-------|
| Max. Permissible shaft loading radial | 200 N |
|---------------------------------------|-------|

|                                      |       |
|--------------------------------------|-------|
| Max. Permissible shaft loading axial | 100 N |
|--------------------------------------|-------|

|       |         |
|-------|---------|
| Shaft | Ø 45 mm |
|-------|---------|

|              |          |
|--------------|----------|
| Shaft length | L: 42 mm |
|--------------|----------|

|                      |       |
|----------------------|-------|
| Insertion depth min. | 52 mm |
|----------------------|-------|

|                                       |       |
|---------------------------------------|-------|
| Max. Permissible shaft loading radial | 200 N |
| Max. Permissible shaft loading axial  | 100 N |

### Bearings

|                       |  |
|-----------------------|--|
| Bearings type         | 2 precision ball bearings  |
| Nominale service life | 3 x 10 <sup>10</sup> revs. at 100 % rated shaft load<br>1 x 10 <sup>11</sup> revs. at 40 % rated shaft load<br>1 x 10 <sup>12</sup> revs. at 20 % rated shaft load |
| Max. operating speed  | 3500 rpm   |

### Machinery Directive: basic data safety integrity level

|                              |  |
|------------------------------|--|
| MTTF <sub>d</sub>            | 200 a  |
| Mission time (TM)            | 25 a   |
| Nominale service life (L10h) | 1 x 10 <sup>12</sup> revs. at 20 % rated shaft load and 3500 rpm |
| Diagnostic coverage (DC)     | 0 %  |

### Electrical Data

|                                  |   |
|----------------------------------|---|
| Power supply/Current consumption | 4,75 VDC up to 5,5 VDC: typ. 100 mA   |
| Power supply/Current consumption | 5 VDC up to 30 VDC: typ. 70 mA  |
| Power supply/Current consumption | 10 VDC up to 30 VDC: typ. 100 mA  |
| Output circuit                   | TTL<br>TTL, RS422 compatible, inv.<br>HTL<br>HTL, inv.<br>1 Vpp sin/cos   |
| Pulse frequency                  | TTL 5000 ppr: max. 200 kHz<br>HTL 5000 ppr: max. 200 kHz<br>TTL more than 1200 ppr: max. 2 MHz<br>HTL more than 1200 ppr: max. 600 kHz<br>1 Vpp sin/cos: max. 100 kHz |
| Channels                         | AB<br>ABN<br>and inverted signals   |
| Load                             | max. 40 mA / channel<br>@ 1 Vpp sin/cos: min. 120 Ohm   |
| Circuit protection               | circuit type H24 and R24 only   |

### Accuracy

|                    |  |
|--------------------|--|
| Phase offset       | 90° ± max. 7.5 % of the period duration  |
| pulse-/pause-ratio | 5000 ppr: 50 % ± max. 7 %<br>Output circuits F24, P24, F05, P05, 645: 50 % ± max. 10 % |

### Environmental data

|                                  |   |
|----------------------------------|---|
| ESD (DIN EN 61000-4-2):          | 8 kV                                      |
| Burst (DIN EN 61000-4-4):        | 2 kV                                      |
| includes EMC:                    | DIN EN 61000-6-2<br>DIN EN 61000-6-3      |
| Vibration:<br>(DIN EN 60068-2-6) | 50 m/s <sup>2</sup> (10 Hz up to 2000 Hz) |
| Shock:<br>(DIN EN 60068-2-27)    | 1000 m/s <sup>2</sup> (6 ms)              |
| Design:                          | according DIN VDE 0160                    |

### Duty information

|                        |          |
|------------------------|----------|
| Customs tariff number: | 90318020 |
| Country of origin:     | Germany  |

### General Data

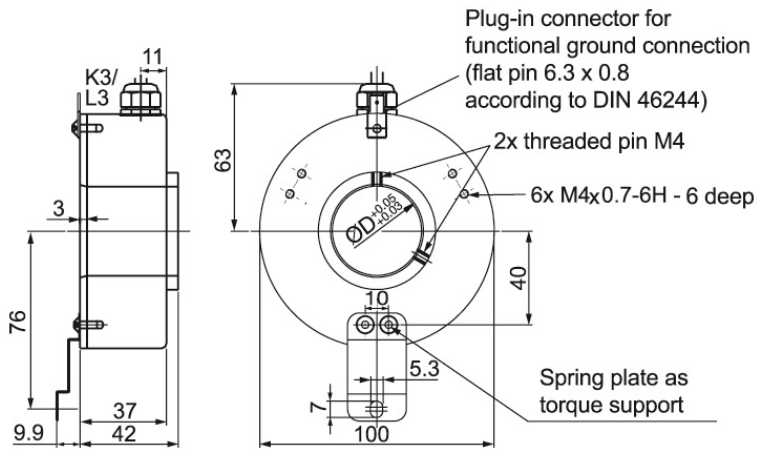
|                              |   |
|------------------------------|---|
| Weight                       | approx. 720 g                                     |
| Connections                  | cable or connector, radial                        |
| Protection rating (EN 60529) | IP54  |
| Operating temperature        | -20 °C up to +80 °C<br>1 Vpp: -10 °C up to +70 °C |
| Storage temperature          | -30 °C up to +80 °C                               |

### More Information

General technical data and safety instructions  
<http://www.wachendorff-automation.com/gtd>

Options  
<http://www.wachendorff-automation.com/acc>

**Cable connection K3, L3 with 2 m cable**



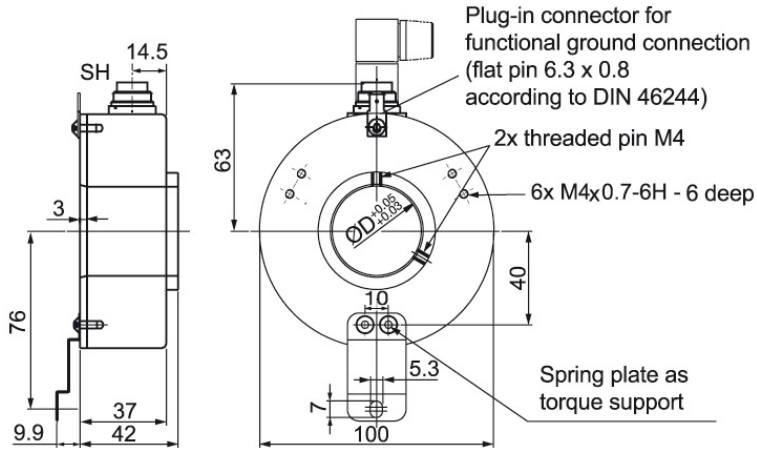
**Description**

**ABN inv. poss.**

|           |   |   |
|-----------|---|---|
| <b>K3</b> | radial, shield not connected                | • |
| <b>L3</b> | radial, shield connected to encoder housing | • |

| Assignments                  |                         |                                   |           |           |
|------------------------------|-------------------------|-----------------------------------|-----------|-----------|
|                              | <b>K3, L3</b>           | <b>K3, L3</b>                     | <b>L3</b> | <b>L3</b> |
| <b>Circuit</b>               | F05, H05, F24, H24, H30 | P05, R05, P24, R24, 245, 645, R30 | SIN       | SIF       |
| <b>GND</b>                   | WH                      | WH                                | WH        | WH        |
| <b>(+) Vcc</b>               | BN                      | BN                                | BN        | BN        |
| <b>A</b>                     | GN                      | GN                                | GN        | GN        |
| <b>B</b>                     | YE                      | YE                                | GY        | GY        |
| <b>N</b>                     | GY                      | GY                                | BK        | BK        |
| <b>Light reserve warning</b> | -                       | -                                 | -         | RD        |
| <b>A inv.</b>                | -                       | RD                                | YE        | YE        |
| <b>B inv.</b>                | -                       | BK, (BU at ACA)                   | PK        | PK        |
| <b>N inv.</b>                | -                       | VT                                | VT        | VT        |
| <b>Shield</b>                | flex                    | flex                              | flex      | flex      |

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



**Description**

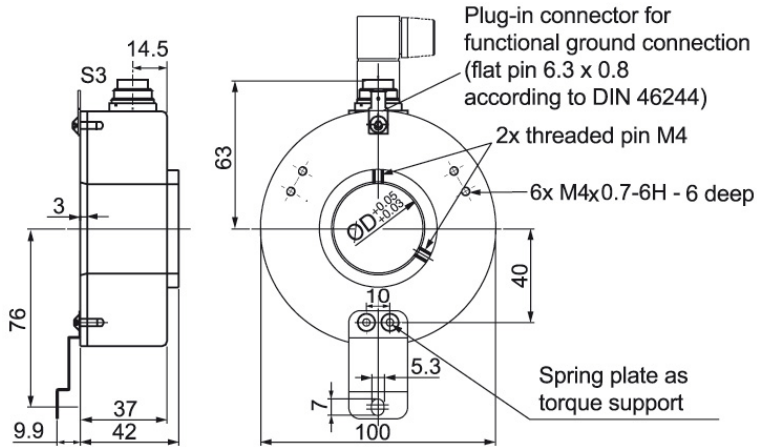
**ABN inv. poss.**

|             |  |   |
|-------------|--|---|
| <b>SH5</b>  | radial, 5-pin, Connector connected to encoder housing  | - |
| <b>SH6</b>  | radial, 6-pin, Connector connected to encoder housing  | - |
| <b>SH8</b>  | radial, 8-pin, Connector connected to encoder housing  | • |
| <b>SH12</b> | radial, 12-pin, Connector connected to encoder housing | • |

**Assignments**

|                              | <b>SH5</b>              | <b>SH6</b>              | <b>SH8</b>              | <b>SH8</b>                        | <b>SH8</b>   | <b>SH12</b>                       | <b>SH12</b>             | <b>SH12</b>   |
|------------------------------|-------------------------|-------------------------|-------------------------|-----------------------------------|--------------|-----------------------------------|-------------------------|---------------|
|                              | <b>5-pin</b>            | <b>6-pin</b>            | <b>8-pin</b>            | <b>8-pin</b>                      | <b>8-pin</b> | <b>12-pin</b>                     | <b>12-pin</b>           | <b>12-pin</b> |
|                              |                         |                         |                         |                                   |              |                                   |                         |               |
| <b>Circuit</b>               | F05, H05, F24, H24, H30 | F05, H05, F24, H24, H30 | F05, H05, F24, H24, H30 | P05, R05, P24, R24, R30, 245, 645 | SIN          | P05, R05, P24, R24, 245, 645, R30 | F05, H05, F24, H24, H30 | SIN           |
| <b>GND</b>                   | 1                       | 6                       | 1                       | 1                                 | 1            | K, L                              | K, L                    | K, L          |
| <b>(+) Vcc</b>               | 2                       | 1                       | 2                       | 2                                 | 2            | M, B                              | M, B                    | M, B          |
| <b>A</b>                     | 3                       | 2                       | 3                       | 3                                 | 3            | E                                 | E                       | E             |
| <b>B</b>                     | 4                       | 4                       | 4                       | 4                                 | 4            | H                                 | H                       | H             |
| <b>N</b>                     | 5                       | 3                       | 5                       | 5                                 | 5            | C                                 | C                       | C             |
| <b>Light reserve warning</b> | -                       | -                       | -                       | -                                 | -            | -                                 | -                       | -             |
| <b>A inv.</b>                | -                       | -                       | -                       | 6                                 | 6            | F                                 | -                       | F             |
| <b>B inv.</b>                | -                       | -                       | -                       | 7                                 | 7            | A                                 | -                       | A             |
| <b>N inv.</b>                | -                       | -                       | -                       | 8                                 | 8            | D                                 | -                       | D             |
| <b>n. c.</b>                 | -                       | 5                       | 6, 7, 8                 | -                                 | -            | G, J                              | A, D, F, G, J           | G, J          |
| <b>Shield</b>                | -                       | -                       | -                       | -                                 | -            | -                                 | -                       | -             |

**Connector (M16x0.75) S3, 7-pin**




**Description**

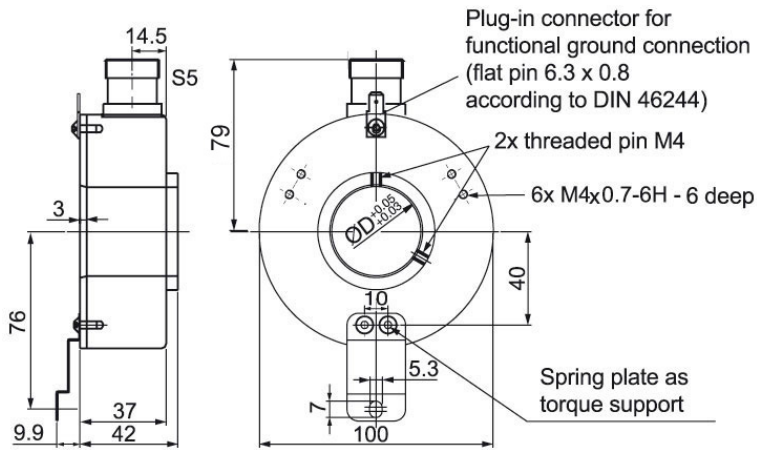
**ABN inv. poss.**

**S3** radial, 7-pin, Connector connected to encoder housing

-

| Assignments                  |   |
|------------------------------|---|
|                              | <b>S3</b>   |
|                              | <b>7-pin</b>  |
|                              |  |
| <b>Circuit</b>               | F05, H05, F24, H24, H30   |
| <b>GND</b>                   | 1   |
| <b>(+) Vcc</b>               | 2   |
| <b>A</b>                     | 3   |
| <b>B</b>                     | 4   |
| <b>N</b>                     | 5   |
| <b>Light reserve warning</b> | -   |
| <b>A inv.</b>                | -   |
| <b>B inv.</b>                | -   |
| <b>N inv.</b>                | -   |
| <b>n. c.</b>                 | 6, 7  |
| <b>Shield</b>                | -   |

**Connector (M23) S5, 12-pin**



**Description**

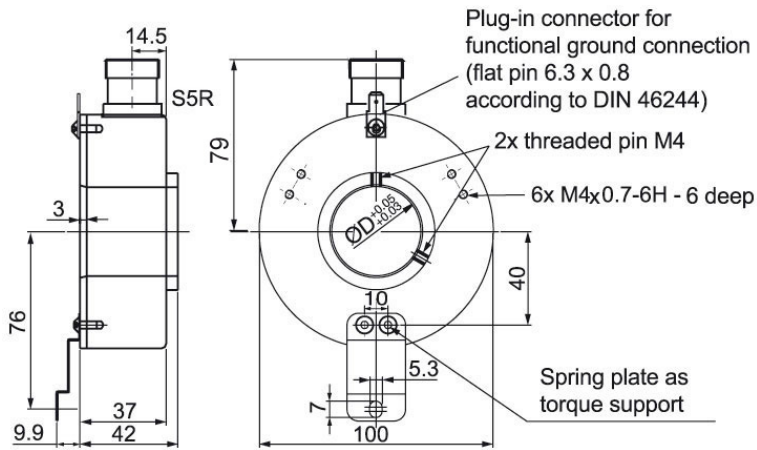
ABN inv. poss.

S5 radial, 12-pin, Connector connected to encoder housing

•

| Assignments                  |                         |                                   |             |          |
|------------------------------|-------------------------|-----------------------------------|-------------|----------|
|                              | S5                      | S5                                | S5          | S5       |
|                              | 12-pin                  | 12-pin                            | 12-pin      | 12-pin   |
|                              |                         |                                   |             |          |
| <b>Circuit</b>               | F05, H05, F24, H24, H30 | P05, R05, P24, R24, 245, 645, R30 | SIN         | SIF      |
| <b>GND</b>                   | 10                      | 10                                | 10          | 10       |
| <b>(+) Vcc</b>               | 12                      | 12                                | 12          | 12       |
| <b>A</b>                     | 5                       | 5                                 | 5           | 5        |
| <b>B</b>                     | 8                       | 8                                 | 8           | 8        |
| <b>N</b>                     | 3                       | 3                                 | 3           | 3        |
| <b>Light reserve warning</b> | -                       | -                                 | -           | 7        |
| <b>A inv.</b>                | -                       | 6                                 | 6           | 6        |
| <b>B inv.</b>                | -                       | 1                                 | 1           | 1        |
| <b>N inv.</b>                | -                       | 4                                 | 4           | 4        |
| <b>n. c.</b>                 | 1, 2, 4, 6, 7, 9, 11    | 2, 7, 9, 11                       | 2, 7, 9, 11 | 2, 9, 11 |
| <b>Shield</b>                | -                       | -                                 | -           | -        |

**Connector (M23) S5R, 12-pin (clockwise)**

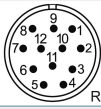
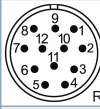
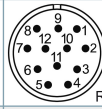
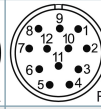


**Description**

ABN inv. poss.

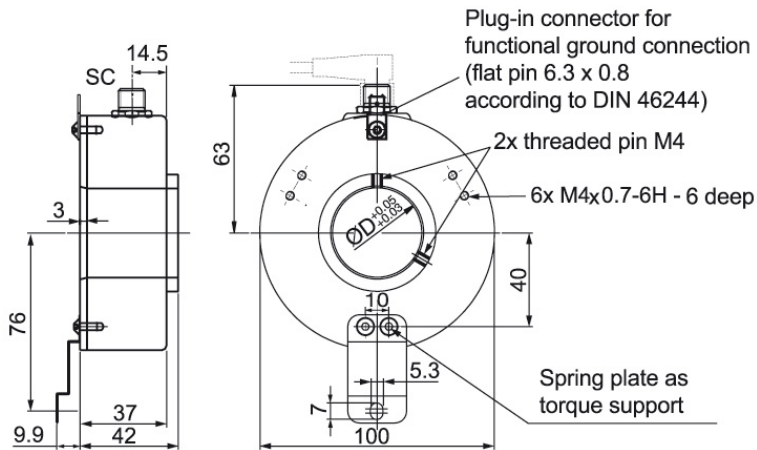
S5R radial, 12-pin, Connector connected to encoder housing

•

| Assignments                  |   |   |   |   |
|------------------------------|---|---|---|---|
|                              | S5R   | S5R   | S5R   | S5R   |
|                              | 12-pin  | 12-pin  | 12-pin  | 12-pin  |
|                              |  |  |  |  |
| <b>Circuit</b>               | F05, H05, F24, H24, H30   | P05, R05, P24, R24, 245, 645, R30   | SIN   | SIF   |
| <b>GND</b>                   | 10  | 10  | 10  | 10  |
| <b>(+) Vcc</b>               | 12  | 12  | 12  | 12  |
| <b>A</b>                     | 5   | 5   | 5   | 5   |
| <b>B</b>                     | 8   | 8   | 8   | 8   |
| <b>N</b>                     | 3   | 3   | 3   | 3   |
| <b>Light reserve warning</b> | -   | -   | -   | 7   |
| <b>A inv.</b>                | -   | 6   | 6   | 6   |
| <b>B inv.</b>                | -   | 1   | 1   | 1   |
| <b>N inv.</b>                | -   | 4   | 4   | 4   |
| <b>n. c.</b>                 | 1, 2, 4, 6, 7, 9, 11  | 2, 7, 9, 11   | 2, 7, 9, 11   | 2, 9, 11  |
| <b>Shield</b>                | -   | -   | -   | -   |



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



**Description**

**ABN inv. poss.**

|             |  |   |
|-------------|--|---|
| <b>SC4</b>  | radial, 4-pin, Connector connected to encoder housing  | - |
| <b>SC5</b>  | radial, 5-pin, Connector connected to encoder housing  | - |
| <b>SC8</b>  | radial, 8-pin, Connector connected to encoder housing  | • |
| <b>SC12</b> | radial, 12-pin, Connector connected to encoder housing | • |

**Assignments**

|                              | <b>SC4</b>              | <b>SC5</b>              | <b>SC8</b>              | <b>SC8</b>                        | <b>SC8</b>   | <b>SC12</b>             | <b>SC12</b>                       |
|------------------------------|-------------------------|-------------------------|-------------------------|-----------------------------------|--------------|-------------------------|-----------------------------------|
|                              | <b>4-pin</b>            | <b>5-pin</b>            | <b>8-pin</b>            | <b>8-pin</b>                      | <b>8-pin</b> | <b>12-pin</b>           | <b>12-pin</b>                     |
|                              |                         |                         |                         |                                   |              |                         |                                   |
| <b>Circuit</b>               | F05, H05, F24, H24, H30 | F05, H05, F24, H24, H30 | F05, H05, F24, H24, H30 | P05, R05, P24, R24, R30, 245, 645 | SIN          | F05, H05, F24, H24, H30 | P05, R05, P24, R24, 245, 645, R30 |
| <b>GND</b>                   | 3                       | 3                       | 1                       | 1                                 | 1            | 3                       | 3                                 |
| <b>(+) Vcc</b>               | 1                       | 1                       | 2                       | 2                                 | 2            | 1                       | 1                                 |
| <b>A</b>                     | 2                       | 4                       | 3                       | 3                                 | 3            | 4                       | 4                                 |
| <b>B</b>                     | 4                       | 2                       | 4                       | 4                                 | 5            | 6                       | 6                                 |
| <b>N</b>                     | -                       | 5                       | 5                       | 5                                 | 7            | 8                       | 8                                 |
| <b>Light reserve warning</b> | -                       | -                       | -                       | -                                 | -            | -                       | -                                 |
| <b>A inv.</b>                | -                       | -                       | -                       | 6                                 | 4            | -                       | 9                                 |
| <b>B inv.</b>                | -                       | -                       | -                       | 7                                 | 6            | -                       | 7                                 |
| <b>N inv.</b>                | -                       | -                       | -                       | 8                                 | 8            | -                       | 10                                |
| <b>n. c.</b>                 | -                       | -                       | 6, 7, 8                 | -                                 | -            | 2, 5, 7, 9, 10, 11, 12  | 2, 5, 11, 12                      |
| <b>Shield</b>                | -                       | -                       | -                       | -                                 | -            | -                       | -                                 |

**Options****Low temperature**

The encoder WDG 100H with the output circuit types F24, H24, P24, R24, F05, H05, P05, R05, 245, 645 is also available with the extended temperature range -40 °C up to +80 °C (measured at the flange).

**Order key****ACA****IP55 all around (not 1 Vpp Sin/Cos)**

The encoder WDG 100H can be supplied in a full IP55 version.

**Order key****ACP**

Max. RPM: 1500 rpm

Permitted Shaft-Loading, axial: 100 N, 12.237 kp

Permitted Shaft-Loading, radial: 120 N, 22.434 kp

Max. PPR: 20480 ppr

Starting-torque: approx. 5 Ncm at ambient temperature, approx. 1.416 in-ozf at ambient temperature

**Cable length**

The encoder WDG 100H can be supplied with more than 2 m cable. The maximum cable length depends on the supply voltage and the frequency; see [www.wachendorff-automation.com/atd](http://www.wachendorff-automation.com/atd)

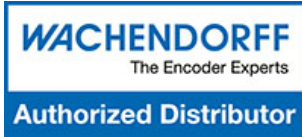
**Order key****XXX = Decimeter**

Please extend the standard order code with a three figure number, specifying the cable length in decimetres.

Example: 5 m cable = 050

| Example Order No. | Type   |                               |                                      |                              | Your encoder     |
|-------------------|--|-------------------------------|--------------------------------------|------------------------------|------------------|
| WDG 100H          | WDG 100H   |                               |                                      |                              | WDG 100H         |
|                   | <b>Bore size</b>   |                               |                                      |                              |                  |
| 25                | 25; 1Z= Ø 25.4 mm, Ø 1"; 28; 30; 32; 36; 38; 40; 42; 45  |                               |                                      |                              |                  |
|                   | <b>Pulses per revolution PPR:</b>  |                               |                                      |                              |                  |
| 1024              | 512, 1024, 2048, 2500, 3600, 4096, 4500, 5000, 8192, 10240, 16384, 20480<br>1 Vpp Sin/Cos only 1024, 2048<br>Other PPRs on request |                               |                                      |                              |                  |
|                   | <b>Channels:</b>   |                               |                                      |                              |                  |
| ABN               | AB, ABN  |                               |                                      |                              |                  |
|                   | <b>Output circuit</b>  |                               |                                      |                              |                  |
| H24               | <b>Resolution PPR</b>  | <b>Power supply VDC</b>       | <b>Output circuit</b>                | <b>Light reserve warning</b> | <b>Order key</b> |
|                   | up to 2500   | 5 - 30                        | HTL (TTL at 5 VDC)                   | -                            | H30              |
|                   |  | 5 - 30                        | HTL, inv. (TTL/RS422 comp. at 5 VDC) | -                            | R30              |
|                   | up to 5000   | 4.75 - 5.5                    | TTL                                  | -                            | H05              |
|                   |  | 4.75 - 5.5                    | TTL, RS422 comp., inverted           | -                            | R05              |
|                   |  | 10 - 30                       | HTL                                  | -                            | H24              |
|                   |  | 10 - 30                       | HTL inverted                         | -                            | R24              |
|                   | 8192 up to 20480   | 10 - 30                       | TTL, RS422 comp., inverted           | -                            | 245              |
|                   |  | 4.75 - 5.5                    | TTL                                  | -                            | F05              |
|                   |  | 4.75 - 5.5                    | TTL, RS422 comp., inverted           | -                            | P05              |
|                   |  | 10 - 30                       | HTL                                  | -                            | F24              |
|                   | 1024, 2048   | 10 - 30                       | HTL inverted                         | -                            | P24              |
|                   |  | 10 - 30                       | TTL, RS422 comp., inverted           | -                            | 645              |
|                   |  | 4.75 - 5.5                    | 1 Vpp sin/cos                        | •                            | SIF              |
|                   |  | 4.75 - 5.5                    | 1 Vpp sin/cos                        | -                            | SIN              |
|                   |  | <b>Electrical connections</b> |                                      |                              |                  |
| K3                | <b>Description</b>   |                               |                                      | <b>ABN inv. poss.</b>        | <b>Order key</b> |
|                   | <b>Cable: length (2 m standard, WDG 58T: 1 m)</b>  |                               |                                      |                              |                  |
|                   | radial, shield not connected   |                               |                                      | •                            | K3               |
|                   | radial, shield connected to encoder housing  |                               |                                      | •                            | L3               |
|                   | <b>Connector: (shield connected to encoder housing)</b>  |                               |                                      |                              |                  |
|                   | connector, M16x0.75, 5-pin, radial   |                               |                                      | -                            | SH5              |
|                   | connector, M16x0.75, 6-pin, radial   |                               |                                      | -                            | SH6              |
|                   | connector, M16x0.75, 8-pin, radial   |                               |                                      | •                            | SH8              |
|                   | connector, M16x0.75, 12-pin, radial  |                               |                                      | •                            | SH12             |
|                   | connector, M16x0.75, 7-pin, radial   |                               |                                      | -                            | S3               |
|                   | connector, M23, 12-pin, radial   |                               |                                      | •                            | S5               |
|                   | connector, clockwise pin count, M23, 12-pin, radial  |                               |                                      | •                            | S5R              |
|                   | sensor-connector, M12x1, 4-pin, radial   |                               |                                      | -                            | SC4              |
|                   | sensor-connector, M12x1, 5-pin, radial   |                               |                                      | -                            | SC5              |
|                   | sensor-connector, M12x1, 8-pin, radial   |                               |                                      | •                            | SC8              |
|                   | sensor-connector, M12x1, 12-pin, radial  |                               |                                      | •                            | SC12             |
|                   | <b>Options</b>   |                               |                                      |                              |                  |
|                   | <b>Description</b>   |                               |                                      | <b>Order key</b>             |                  |
|                   | Low temperature  |                               |                                      | ACA                          |                  |
|                   | IP55   |                               |                                      | ACP                          |                  |
|                   | Without option   |                               |                                      | Empty                        |                  |
|                   | Cable length   |                               |                                      | XXX = Decimeter              |                  |

|                           |          |    |      |     |     |    |  |          |  |  |  |  |  |                     |
|---------------------------|----------|----|------|-----|-----|----|--|----------|--|--|--|--|--|---------------------|
| <b>Example Order No.=</b> | WDG 100H | 25 | 1024 | ABN | H24 | K3 |  | WDG 100H |  |  |  |  |  | <b>Your encoder</b> |
|---------------------------|----------|----|------|-----|-----|----|--|----------|--|--|--|--|--|---------------------|



For further information please contact our local distributor.  
Here you find a list of our distributors worldwide.  
<https://www.wachendorff-automation.com/contact-sales-en/>

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