

# Online Data Sheet

## Encoder WDG 58A

[www.wachendorff-automation.com/wdg58a](http://www.wachendorff-automation.com/wdg58a)

### **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

**IndustrieROBUST**

# Encoder WDG 58A



- Robust construction for industrial use
- Up to 25000 PPR by use of high grad electronics
- Protection to IP67, shaft sealed to IP65
- High electrical immunity
- 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/wdg58a](http://www.wachendorff-automation.com/wdg58a)

## Resolution

Max. pulses per revolution up to 25000 PPR  
PPR

## Mechanical Data

### Housing

|                 |                          |
|-----------------|--------------------------|
| Flange          | synchro flange           |
| Flange material | aluminium                |
| Housing cap     | aluminium, powder coated |
| Housing         | Ø 58 mm                  |
| Cam mounting    | pitch 69 mm              |

### Shaft(s)

|                 |                                        |
|-----------------|----------------------------------------|
| Shaft material  | stainless steel                        |
| Starting torque | approx. 0.5 Ncm at ambient temperature |

|                                       |          |
|---------------------------------------|----------|
| Shaft                                 | Ø 6 mm   |
| Shaft length                          | L: 12 mm |
| Max. Permissible shaft loading radial | 125 N    |
| Max. Permissible shaft loading axial  | 70 N     |

### Bearings

|                      |                                                                                                                                                                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bearings type        | 2 precision ball bearings                                                                                                                                        |
| Nominal service life | 3 x 10 <sup>8</sup> revs. at 100 % rated shaft load<br>5 x 10 <sup>9</sup> revs. at 40 % rated shaft load<br>4 x 10 <sup>10</sup> revs. at 20 % rated shaft load |
| Max. operating speed | 10000 rpm                                                                                                                                                        |

## Machinery Directive: basic data safety integrity level

|                             |                                                                   |
|-----------------------------|-------------------------------------------------------------------|
| MTTF <sub>d</sub>           | 200 a                                                             |
| Mission time (TM)           | 25 a                                                              |
| Nominal service life (L10h) | 4 x 10 <sup>10</sup> revs. at 20 % rated shaft load and 10000 rpm |
| Diagnostic coverage (DC)    | 0 %                                                               |

## Electrical Data

|                                  |                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Power supply/Current consumption | 4,75 VDC up to 5,5 VDC: max. 100 mA<br>5 VDC up to 30 VDC: max. 70 mA<br>10 VDC up to 30 VDC: max. 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 5000 ppr: max. 2 MHz<br>HTL more than 5000 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 F24, G24, H24, I24, P24, R24 only                                                                                                                            |

## Accuracy

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

## General Data

|                              |                                                   |
|------------------------------|---------------------------------------------------|
| Weight                       | approx. 230 g                                     |
| Connections                  | cable or connector outlet                         |
| Protection rating (EN 60529) | IP67, shaft sealed to IP65                        |
| 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

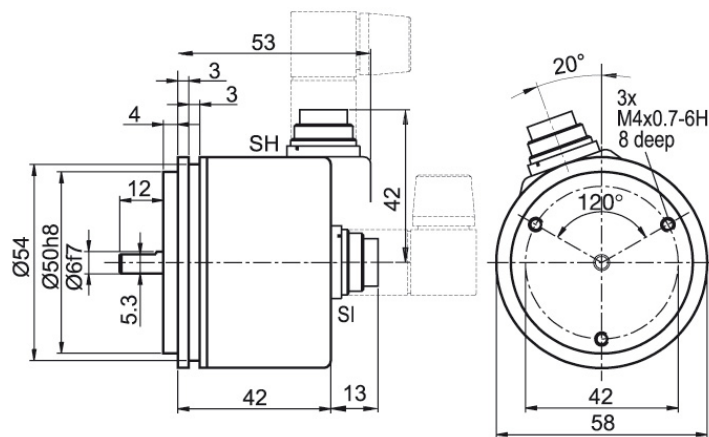
<http://www.wachendorff-automation.com/gtd>

Options

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



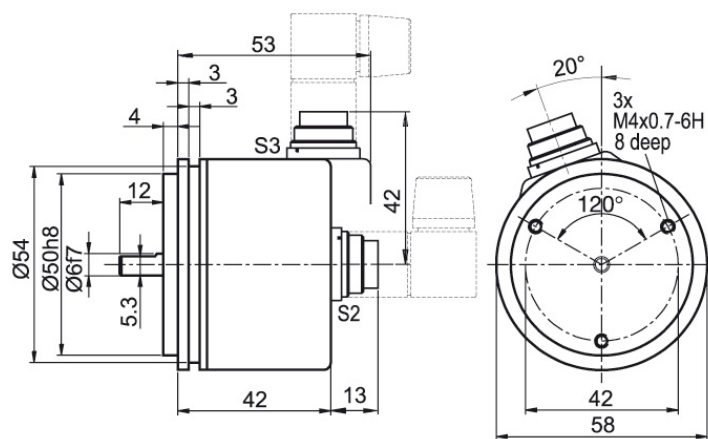
# Connector (M16x0.75) SI, SH, 5-, 6-, 8-, 12-pin



| Description                                                        | ABN inv. poss. |
|--------------------------------------------------------------------|----------------|
| <b>SI5</b> axial, 5-pin, Connector connected to encoder housing    | -              |
| <b>SH5</b> radial, 5-pin, Connector connected to encoder housing   | -              |
| <b>SI6</b> axial, 6-pin, Connector connected to encoder housing    | -              |
| <b>SH6</b> radial, 6-pin, Connector connected to encoder housing   | -              |
| <b>SI8</b> axial, 8-pin, Connector connected to encoder housing    | •              |
| <b>SH8</b> radial, 8-pin, Connector connected to encoder housing   | •              |
| <b>SI12</b> axial, 12-pin, Connector connected to encoder housing  | •              |
| <b>SH12</b> radial, 12-pin, Connector connected to encoder housing | •              |

| Assignments                  |                                                                                                                |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                                          |                                                                                            |                                                                                                  |                                                                                                                  |                                                                                                        |                                                                                                                            |                                                                                              |
|------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
|                              | SI5, SH5                                                                                                       | SI6, SH6                                                                                        | SI6, SH6                                                                                                       | SI8, SH8                                                                                                       | SI8, SH8                                                                                                                 | SI8, SH8                                                                                   | SI12, SH12                                                                                       | SI12, SH12                                                                                                       | SI12, SH12                                                                                             | SI12, SH12                                                                                                                 | SI12, SH12                                                                                   |
|                              | 5-pin                                                                                                          | 6-pin                                                                                           | 6-pin                                                                                                          | 8-pin                                                                                                          | 8-pin                                                                                                                    | 8-pin                                                                                      | 12-pin                                                                                           | 12-pin                                                                                                           | 12-pin                                                                                                 | 12-pin                                                                                                                     | 12-pin                                                                                       |
| <b>Circuit</b>               | <br>F05, H05, F24, H24, H30 | <br>G05, G24 | <br>F05, H05, F24, H24, H30 | <br>F05, H05, F24, H24, H30 | <br>P05, R05, P24, R24, R30, 245, 645 | <br>SIN | <br>G05, G24 | <br>F05, H05, F24, H24, H30 | <br>I05, I24, 524 | <br>P05, R05, P24, R24, 245, 645, R30 | <br>SIN |
| <b>GND</b>                   | 1                                                                                                              | 6                                                                                               | 6                                                                                                              | 1                                                                                                              | 1                                                                                                                        | 1                                                                                          | K, L                                                                                             | K, L                                                                                                             | K, L                                                                                                   | K, L                                                                                                                       | K, L                                                                                         |
| <b>+UB</b>                   | 2                                                                                                              | 1                                                                                               | 1                                                                                                              | 2                                                                                                              | 2                                                                                                                        | 2                                                                                          | M, B                                                                                             | M, B                                                                                                             | M, B                                                                                                   | M, B                                                                                                                       | M, B                                                                                         |
| <b>A</b>                     | 3                                                                                                              | 2                                                                                               | 2                                                                                                              | 3                                                                                                              | 3                                                                                                                        | 3                                                                                          | E                                                                                                | E                                                                                                                | E                                                                                                      | E                                                                                                                          | E                                                                                            |
| <b>B</b>                     | 4                                                                                                              | 4                                                                                               | 4                                                                                                              | 4                                                                                                              | 4                                                                                                                        | 4                                                                                          | H                                                                                                | H                                                                                                                | H                                                                                                      | H                                                                                                                          | H                                                                                            |
| <b>N</b>                     | 5                                                                                                              | 3                                                                                               | 3                                                                                                              | 5                                                                                                              | 5                                                                                                                        | -                                                                                          | C                                                                                                | C                                                                                                                | C                                                                                                      | C                                                                                                                          | -                                                                                            |
| <b>Light reserve warning</b> | -                                                                                                              | 5                                                                                               | -                                                                                                              | -                                                                                                              | -                                                                                                                        | -                                                                                          | G                                                                                                | -                                                                                                                | G                                                                                                      | -                                                                                                                          | -                                                                                            |
| <b>A inv.</b>                | -                                                                                                              | -                                                                                               | -                                                                                                              | -                                                                                                              | 6                                                                                                                        | 6                                                                                          | -                                                                                                | -                                                                                                                | F                                                                                                      | F                                                                                                                          | F                                                                                            |
| <b>B inv.</b>                | -                                                                                                              | -                                                                                               | -                                                                                                              | -                                                                                                              | 7                                                                                                                        | 7                                                                                          | -                                                                                                | -                                                                                                                | A                                                                                                      | A                                                                                                                          | A                                                                                            |
| <b>N inv.</b>                | -                                                                                                              | -                                                                                               | -                                                                                                              | -                                                                                                              | 8                                                                                                                        | -                                                                                          | -                                                                                                | -                                                                                                                | D                                                                                                      | D                                                                                                                          | -                                                                                            |
| <b>n. c.</b>                 | -                                                                                                              | -                                                                                               | 5                                                                                                              | 6, 7, 8                                                                                                        | -                                                                                                                        | 5, 8                                                                                       | A, D, F, J                                                                                       | A, D, F, G, J                                                                                                    | J                                                                                                      | G, J                                                                                                                       | D, G, J                                                                                      |
| <b>Shield</b>                | -                                                                                                              | -                                                                                               | -                                                                                                              | -                                                                                                              | -                                                                                                                        | -                                                                                          | -                                                                                                | -                                                                                                                | -                                                                                                      | -                                                                                                                          | -                                                                                            |

# Connector (M16x0.75) S2, S3, 7-pin



## Description

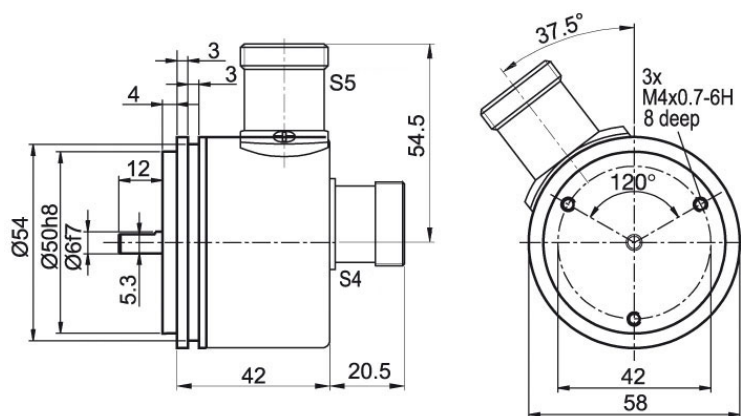
ABN inv. poss.

|           |                                                       |   |
|-----------|-------------------------------------------------------|---|
| <b>S2</b> | axial, 7-pin, Connector connected to encoder housing  | - |
| <b>S3</b> | radial, 7-pin, Connector connected to encoder housing | - |

## Assignments

|                                  | S2, S3<br>7-pin | S2, S3<br>7-pin               |
|----------------------------------|-----------------|-------------------------------|
|                                  |                 |                               |
| <b>Circuit</b>                   | G05, G24        | F05, H05,<br>F24, H24,<br>H30 |
| <b>GND</b>                       | 1               | 1                             |
| <b>+UB</b>                       | 2               | 2                             |
| <b>A</b>                         | 3               | 3                             |
| <b>B</b>                         | 4               | 4                             |
| <b>N</b>                         | 5               | 5                             |
| <b>Light reserve<br/>warning</b> | 6               | -                             |
| <b>A inv.</b>                    | -               | -                             |
| <b>B inv.</b>                    | -               | -                             |
| <b>N inv.</b>                    | -               | -                             |
| <b>n. c.</b>                     | 7               | 6, 7                          |
| <b>Shield</b>                    | -               | -                             |

## Connector (M23) S4, S5, 12-pin



### Description

ABN inv. poss.

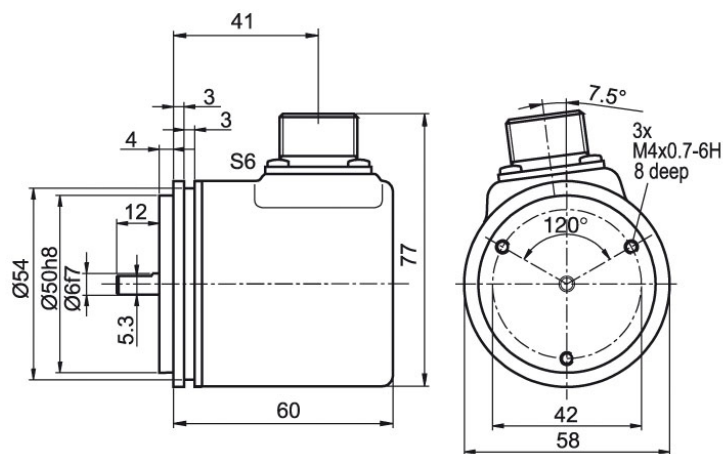
|           |                                                        |   |
|-----------|--------------------------------------------------------|---|
| <b>S4</b> | axial, 12-pin, Connector connected to encoder housing  | • |
| <b>S5</b> | radial, 12-pin, Connector connected to encoder housing | • |

### Assignments

|                                  | S4, S5<br>12-pin              | S4, S5<br>12-pin | S4, S5<br>12-pin                           | S4, S5<br>12-pin     |
|----------------------------------|-------------------------------|------------------|--------------------------------------------|----------------------|
|                                  |                               |                  |                                            |                      |
| <b>Circuit</b>                   | F05, H05,<br>F24, H24,<br>H30 | I05, I24,<br>524 | P05, R05,<br>P24, R24,<br>245, 645,<br>R30 | SIN                  |
| <b>GND</b>                       | 10                            | 10               | 10                                         | 10                   |
| <b>+UB</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                                          | -                    |
| <b>Light reserve<br/>warning</b> | -                             | 11               | -                                          | -                    |
| <b>A inv.</b>                    | -                             | 6                | 6                                          | 6                    |
| <b>B inv.</b>                    | -                             | 1                | 1                                          | 1                    |
| <b>N inv.</b>                    | -                             | 4                | 4                                          | -                    |
| <b>n. c.</b>                     | 1, 2, 4, 6,<br>7, 9, 11       | 2, 7, 9          | 2, 7, 9, 11                                | 2, 3, 4, 7,<br>9, 11 |
| <b>Shield</b>                    | -                             | -                | -                                          | -                    |



# MIL-connector S6, 6-pin



## Description

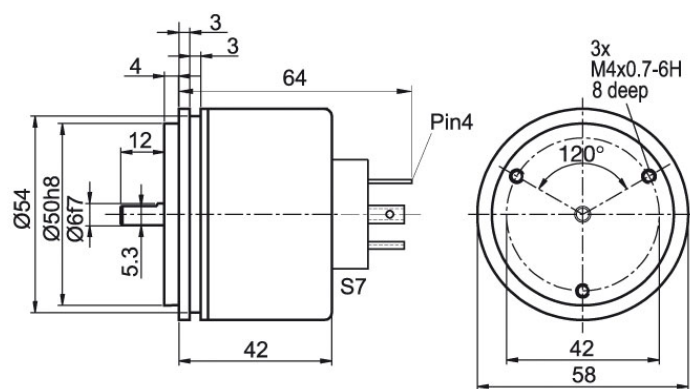
ABN inv. poss.

S6 radial, 6-pin,

-

| Assignments              |             |                               |
|--------------------------|-------------|-------------------------------|
|                          | S6<br>6-pin | S6<br>6-pin                   |
|                          |             |                               |
| Circuit                  | G05, G24    | F05, H05,<br>F24, H24,<br>H30 |
| GND                      | A           | A                             |
| +UB                      | F           | F                             |
| A                        | C           | C                             |
| B                        | B           | B                             |
| N                        | D           | D                             |
| Light reserve<br>warning | E           | -                             |
| A inv.                   | -           | -                             |
| B inv.                   | -           | -                             |
| N inv.                   | -           | -                             |
| n. c.                    | -           | E                             |
| Shield                   | -           | -                             |

# Valve-connector S7, 4-pin



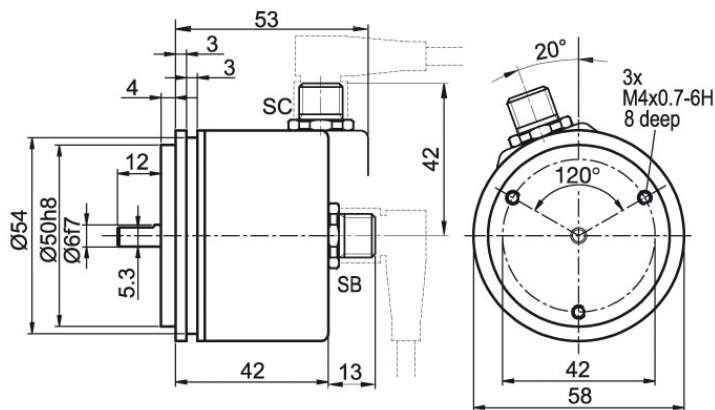
## Description

ABN inv. poss.

**S7** axial, 4-pin, Connector connected to encoder housing

-

| Assignments                  |                                                                                    |
|------------------------------|------------------------------------------------------------------------------------|
|                              | <b>S7</b>                                                                          |
|                              | <b>4-pin</b>                                                                       |
|                              |  |
| <b>Circuit</b>               | F05, H05, F24, H24, H30                                                            |
| <b>GND</b>                   | 1                                                                                  |
| <b>+UB</b>                   | 2                                                                                  |
| <b>A</b>                     | 3                                                                                  |
| <b>B</b>                     | 4                                                                                  |
| <b>N</b>                     | -                                                                                  |
| <b>Light reserve warning</b> | -                                                                                  |
| <b>A inv.</b>                | -                                                                                  |
| <b>B inv.</b>                | -                                                                                  |
| <b>N inv.</b>                | -                                                                                  |
| <b>n. c.</b>                 | -                                                                                  |
| <b>Shield</b>                | -                                                                                  |

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


| Description                                                        | ABN inv. poss. |
|--------------------------------------------------------------------|----------------|
| <b>SB4</b> axial, 4-pin, Connector connected to encoder housing    | -              |
| <b>SC4</b> radial, 4-pin, Connector connected to encoder housing   | -              |
| <b>SB5</b> axial, 5-pin, Connector connected to encoder housing    | -              |
| <b>SC5</b> radial, 5-pin, Connector connected to encoder housing   | -              |
| <b>SB8</b> axial, 8-pin, Connector connected to encoder housing    | •              |
| <b>SC8</b> radial, 8-pin, Connector connected to encoder housing   | •              |
| <b>SB12</b> axial, 12-pin, Connector connected to encoder housing  | •              |
| <b>SC12</b> radial, 12-pin, Connector connected to encoder housing | •              |

| Assignments                  | SB4, SC4                                                                            | SB5, SC5                                                                            | SB8, SC8                                                                            | SB8, SC8                                                                            | SB8, SC8                                                                            | SB12, SC12                                                                           | SB12, SC12                                                                            | SB12, SC12                                                                            | SB12, SC12                                                                            |
|------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                              | 4-pin                                                                               | 5-pin                                                                               | 8-pin                                                                               | 8-pin                                                                               | 8-pin                                                                               | 12-pin                                                                               | 12-pin                                                                                | 12-pin                                                                                | 12-pin                                                                                |
| <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                                                                                 | G05, G24                                                                             | F05, H05, F24, H24, H30                                                               | I05, I24, 524                                                                         | P05, R05, P24, R24, 245, 645, R30                                                     |
| <b>GND</b>                   | 3                                                                                   | 3                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 3                                                                                    | 3                                                                                     | 3                                                                                     | 3                                                                                     |
| <b>+UB</b>                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 1                                                                                    | 1                                                                                     | 1                                                                                     | 1                                                                                     |
| <b>A</b>                     | 2                                                                                   | 4                                                                                   | 3                                                                                   | 3                                                                                   | 3                                                                                   | 4                                                                                    | 4                                                                                     | 4                                                                                     | 4                                                                                     |
| <b>B</b>                     | 4                                                                                   | 2                                                                                   | 4                                                                                   | 4                                                                                   | 5                                                                                   | 6                                                                                    | 6                                                                                     | 6                                                                                     | 6                                                                                     |
| <b>N</b>                     | -                                                                                   | 5                                                                                   | 5                                                                                   | 5                                                                                   | -                                                                                   | 8                                                                                    | 8                                                                                     | 8                                                                                     | 8                                                                                     |
| <b>Light reserve warning</b> | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   | 5                                                                                    | -                                                                                     | 5                                                                                     | -                                                                                     |
| <b>A inv.</b>                | -                                                                                   | -                                                                                   | -                                                                                   | 6                                                                                   | 4                                                                                   | -                                                                                    | -                                                                                     | 9                                                                                     | 9                                                                                     |
| <b>B inv.</b>                | -                                                                                   | -                                                                                   | -                                                                                   | 7                                                                                   | 6                                                                                   | -                                                                                    | -                                                                                     | 7                                                                                     | 7                                                                                     |
| <b>N inv.</b>                | -                                                                                   | -                                                                                   | -                                                                                   | 8                                                                                   | -                                                                                   | -                                                                                    | -                                                                                     | 10                                                                                    | 10                                                                                    |
| <b>n. c.</b>                 | -                                                                                   | -                                                                                   | 6, 7, 8                                                                             | -                                                                                   | 7, 8                                                                                | 2, 7, 9, 10, 11, 12                                                                  | 2, 5, 7, 9, 10, 11, 12                                                                | 2, 11, 12                                                                             | 2, 5, 11, 12                                                                          |
| <b>Shield</b>                | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                    | -                                                                                     | -                                                                                     | -                                                                                     |

## Options

### Low temperature

#### Order key

The encoder WDG 58A with the output circuit types F24, G24, H24, I24, P24, R24, F05, G05, I05, P05, 245, 524, 645 is also available with the extended temperature range -40 °C up to +80 °C [-40 °F up to +176 °F] (measured at the flange).

**ACA**

### Low-friction bearings

#### Order key

The encoder WDG 58A is also available as a particularly smooth-running low-friction encoder. The starting torque is thereby changed to  $\leq 0.25$  Ncm and the protection class at the shaft input to IP50.

**AAC**

### Cable length

#### Order key

The encoder WDG 58A 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)

**XXX = Decimeter**

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

Example: 3 m cable = 030

| Example Order No. | Type                                                                                                                                                                                                                                                                                                                                                                                                                          |                  |                            |                       |           | Your encoder |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------------|-----------------------|-----------|--------------|
| WDG 58A           | WDG 58A                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |                            |                       |           | WDG 58A      |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |                            |                       |           |              |
|                   | Pulses per revolution PPR I/U (PPR):                                                                                                                                                                                                                                                                                                                                                                                          |                  |                            |                       |           |              |
| 5000              | 2, 5, 10, 15, 20, 24, 25, 30, 36, 40, 48, 50, 60, 64, 72, 87, 90, 100, 120, 125, 127, 128, 150, 160, 180, 200, 216, 236, 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, 10000, 12500, 20000, 25000<br>1 Vss Sin/Cos only 1024, 2048<br>Other PPRs on request |                  |                            |                       |           |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |                            |                       |           |              |
|                   | Channels:                                                                                                                                                                                                                                                                                                                                                                                                                     |                  |                            |                       |           |              |
| ABN               | AB, ABN (SIN: AB)                                                                                                                                                                                                                                                                                                                                                                                                             |                  |                            |                       |           |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |                            |                       |           |              |
|                   | Output circuit                                                                                                                                                                                                                                                                                                                                                                                                                |                  |                            |                       |           |              |
| G24               | Resolution PPR                                                                                                                                                                                                                                                                                                                                                                                                                | Power supply VDC | Output circuit             | Light reserve warning | Order key |              |
|                   | up to 2500                                                                                                                                                                                                                                                                                                                                                                                                                    | 5 - 30           | HTL                        | -                     | H30       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 5 - 30           | HTL inverted               | -                     | R30       |              |
|                   | up to 5000                                                                                                                                                                                                                                                                                                                                                                                                                    | 4.75 - 5.5       | TTL                        | •                     | G05       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.75 - 5.5       | TTL                        | -                     | H05       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.75 - 5.5       | TTL, RS422 comp., inverted | •                     | I05       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.75 - 5.5       | TTL, RS422 comp., inverted | -                     | R05       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 - 30          | HTL                        | •                     | G24       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 - 30          | HTL                        | -                     | H24       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 - 30          | HTL inverted               | •                     | I24       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 - 30          | HTL inverted               | -                     | R24       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 - 30          | TTL, RS422 comp., inverted | •                     | 524       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 - 30          | TTL, RS422 comp., inverted | -                     | 245       |              |
|                   | 10000 up to 25000                                                                                                                                                                                                                                                                                                                                                                                                             | 4.75 - 5.5       | TTL                        | -                     | F05       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.75 - 5.5       | TTL, RS422 comp., inverted | -                     | P05       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 - 30          | HTL                        | -                     | F24       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 - 30          | HTL inverted               | -                     | P24       |              |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 - 30          | TTL, RS422 comp., inverted | -                     | 645       |              |
|                   | 1024, 2048                                                                                                                                                                                                                                                                                                                                                                                                                    | 4.75 - 5.5       | 1 Vpp sin/cos              | -                     | SIN       |              |

| Electrical connections |                                                         |                 |           |
|------------------------|---------------------------------------------------------|-----------------|-----------|
| K2                     | Description                                             | ABN inv. poss.  | Order key |
|                        | <b>Cable: length (2 m standard, WDG 58T: 1 m)</b>       |                 |           |
|                        | axial, shield not connected                             | •               | K2        |
|                        | axial, shield connected to encoder housing              | •               | L2        |
|                        | 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, axial                       | -               | SI5       |
|                        | connector, M16x0.75, 5-pin, radial                      | -               | SH5       |
|                        | connector, M16x0.75, 6-pin, axial                       | -               | SI6       |
|                        | connector, M16x0.75, 6-pin, radial                      | -               | SH6       |
|                        | connector, M16x0.75, 8-pin, axial                       | •               | SI8       |
|                        | connector, M16x0.75, 8-pin, radial                      | •               | SH8       |
|                        | connector, M16x0.75, 12-pin, axial                      | •               | SI12      |
|                        | connector, M16x0.75, 12-pin, radial                     | •               | SH12      |
|                        | connector, M16x0.75, 7-pin, axial                       | -               | S2        |
|                        | connector, M16x0.75, 7-pin, radial                      | -               | S3        |
|                        | connector, M23, 12-pin, axial                           | •               | S4        |
|                        | connector, clockwise pin count, M23, 12-pin, axial      | •               | S4R       |
|                        | connector, M23, 12-pin, radial                          | •               | S5        |
|                        | connector, clockwise pin count, M23, 12-pin, radial     | •               | S5R       |
|                        | connector, MIL, 6-pin, radial                           | -               | S6        |
|                        | connector, Valve, 4-pin, axial                          | -               | S7        |
|                        | sensor-connector, M12x1, 4-pin, axial                   | -               | SB4       |
|                        | sensor-connector, M12x1, 4-pin, radial                  | -               | SC4       |
|                        | sensor-connector, M12x1, 5-pin, axial                   | -               | SB5       |
|                        | sensor-connector, M12x1, 5-pin, radial                  | -               | SC5       |
|                        | sensor-connector, M12x1, 8-pin, axial                   | •               | SB8       |
|                        | sensor-connector, M12x1, 8-pin, radial                  | •               | SC8       |
|                        | sensor-connector, M12x1, 12-pin, axial                  | •               | SB12      |
|                        | sensor-connector, M12x1, 12-pin, radial                 | •               | SC12      |
| Options                |                                                         |                 |           |
|                        | Description                                             | Order key       |           |
|                        | Without option                                          | Empty           |           |
|                        | Low temperature                                         | ACA             |           |
|                        | Low-friction bearings                                   | AAC             |           |
|                        | Cable length                                            | XXX = Decimeter |           |

|                            |         |      |     |     |    |  |         |  |  |  |  |  |                     |
|----------------------------|---------|------|-----|-----|----|--|---------|--|--|--|--|--|---------------------|
| <b>Example Order No. =</b> | WDG 58A | 5000 | ABN | G24 | K2 |  | WDG 58A |  |  |  |  |  | <b>Your encoder</b> |
|----------------------------|---------|------|-----|-----|----|--|---------|--|--|--|--|--|---------------------|



For further information please contact our local distributor.  
Here you find a list of our distributors worldwide.  
[http://www.wachendorff-automation.com/distributors\\_worldwide.html](http://www.wachendorff-automation.com/distributors_worldwide.html)



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