



Online Data Sheet

Encoder WDGA 58V SSI

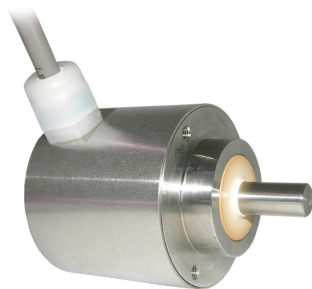
www.wachendorff-automation.com/wdga58vssi

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 WDGA 58V absolute SSI magnetic, with EnDra®-Technology



EnDra®
Technologie

SSI
Synchronous Serial Interface

- Resistance to salt mist acc. to (IEC 60068-2-11)
- Acid- and alkaline resistance
- High protection rating IP67 all around and IP69K (high pressure / steam cleaning)
- EnDra® multiturn technology: maintenance-free and environmentally friendly
- SSI, gray or binary
- Single-turn/Multi-turn (16 bit/43 bit)
- Forward-looking technology with 32 bit processor

www.wachendorff-automation.com/wdga58vssi

Especially for food and beverage industry
Acid- and alkaline resistance

| Mechanical Data | |
|-----------------|----------------------|
| Housing | |
| Flange | clamping flange |
| Flange material | stainless steel, V4A |
| Housing cap | stainless steel, V4A |
| Housing | Ø 58 mm |

| Shaft(s) | |
|-----------------|--------------------------------------|
| Shaft material | stainless steel, V4A |
| Starting torque | approx. 1 Ncm at ambient temperature |

| | |
|---------------------------------------|----------|
| Shaft | Ø 10 mm |
| Shaft length | L: 18 mm |
| Max. Permissible shaft loading radial | 100 N |
| Max. Permissible shaft loading axial | 100 N |

| Bearings | |
|----------------------|---|
| Bearings type | 2 precision ball bearings |
| Nominal service life | 1 x 10 ⁹ revs. at 100 % rated shaft load 1 x 10 ¹⁰ revs. at 40 % rated shaft load 1 x 10 ¹¹ revs. at 20 % rated shaft load |
| Max. operating speed | 3600 rpm |

| Machinery Directive: basic data safety integrity level | |
|--|--|
| MTTF _d | 1000 a |
| Mission time (TM) | 20 a |
| Nominal service life (L10h) | 1 x 10 ¹¹ revs. at 20 % rated shaft load and 3600 rpm |
| Diagnostic coverage (DC) | 0 % |

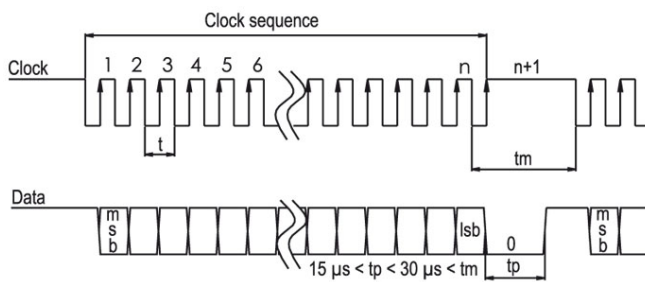
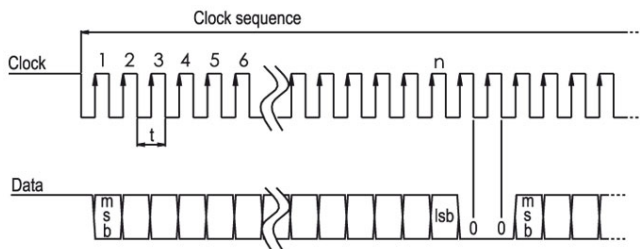
| Electrical Data | |
|----------------------------------|------------------------------------|
| Power supply/Current consumption | 4,75 VDC up to 32 VDC: typ. 50 mA |
| Power consumption | max. 0.5 W |
| Power supply/Current consumption | 4,75 VDC up to 5,5 VDC: typ. 80 mA |
| Power consumption | max. 0.44 W |

| Sensor data | |
|------------------------|-----------------------------------|
| Single-turn technology | innovative hall sensor technology |
| Single-turn resolution | up to 65,536 steps/360° (16 bit) |

| | |
|-----------------------------|---|
| Single-turn accuracy | ± 0.0878° (12 bit) |
| Single-turn repeat accuracy | ± 0.0878° (12 bit) |
| Internal cycle time | 600 µs |
| Multi-turn technology | patented EnDra® technology no battery, no gear. |
| Multi-turn resolution | up to 43 bit. |

| Environmental data | |
|----------------------------------|--|
| 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 DIN EN 61000-6-3 DIN EN 61326-1 |
| Vibration: (DIN EN 60068-2-6) | 300 m/s ² (10 Hz up to 2000 Hz) |
| Shock: (DIN EN 60068-2-27) | 5000 m/s ² (6 ms) |
| Design: | according DIN VDE 0160 |
| Turn on time: | <1,5 s |

| Interface | |
|--|---|
| Interface: | SSI |
| Clock input: | via opto-coupler |
| Clock frequency: | 100 kHz up to 500 kHz, up to 2 MHz on request |
| Data output: | RS485/RS422 compatible |
| Output code: | gray or binary |
| SSI output: | Angular-/position value |
| Parity bit: | optional (even/odd) |
| Error bit: | optional |
| Turn on time: | <1,5 s |
| Configuration inputs | DIR = GND -> cw DIR = +UB -> ccw |
| Positive direction of counting: (View on shaft) | |
| Set to zero: | Set: Preset = +UB for 2 s Deactivate: Preset = GND |

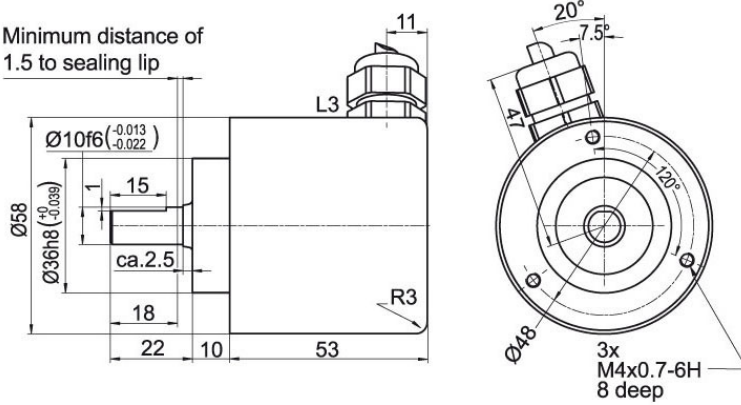
Transmission protocol SSI Single transmission:

Transmission protocol SSI Multipath transmission:

General Data

| | |
|------------------------------|---------------------------|
| Weight | approx. 600 g |
| Connections | cable outlet (TPE) |
| Protection rating (EN 60529) | IP67 all around and IP69K |
| Operating temperature | -20 °C up to +80 °C |
| Storage temperature | -20 °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, L3 with 2 m cabel

 Minimum distance of
 1.5 to sealing lip

Description
L3 radial, shield connected to encoder housing

| Assignments | |
|------------------|---------|
| GND | OG |
| (+) Vcc | BN |
| SSI CLK+ | GN |
| SSI CLK- | YE |
| SSI DATA+ | GY |
| SSI DATA- | PK |
| PRESET | BU |
| DIR | RD |
| Shield | housing |

| Example Order No. | Type | Your encoder |
|-------------------|--|------------------|
| WDGA 58V | WDGA 58V | WDGA 58V |
| | Shaft | Order key |
| 10 | Ø 10 mm | 10 |
| | Single-turn Resolution | Order key |
| 12 | Single-turn resolution 1 bit up to 16 bit: (e. G. 12 bit) | 12 |
| | Multi-turn Resolution | Order key |
| 12 | Multi-turn up to 43 bit (e. G. 12 bit) No Multi-turn = 00 | 12 |
| | Data protocol | Order key |
| SI | SSI | SI |
| | Software | Order key |
| A | up to date release | A |
| | Code | Order key |
| B | binary | B |
| | gray | G |
| | Power supply | Order key |
| 0 | 4.75 V up to 32 V (standard) | 0 |
| | 4.75 V up to 5.5 V | 1 |
| | Galvanic isolation | Order key |
| 1 | yes | 1 |
| | Electrical connections | Order key |
| L3 | Cable: | |
| | radial, shield connected to encoder housing | L3 |

| | | | | | | | | | | |
|--------------------------|----------|----|----|----|----|---|---|---|---|----|
| Example Order No. | WDGA 58V | 10 | 12 | 12 | SI | A | B | 0 | 1 | L3 |
|--------------------------|----------|----|----|----|----|---|---|---|---|----|

| | | | | | | | | | | | |
|----------|--|--|--|--|--|--|--|--|--|--|--------------------------|
| WDGA 58V | | | | | | | | | | | Example Order No. |
|----------|--|--|--|--|--|--|--|--|--|--|--------------------------|



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



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