

# Encoder WDGA 58V absolute CAN SAE J1939 magnetic, with EnDra® - Technology

**Especially for food and beverage industry**  
**Acid- and alkaline resistance**



**EnDra**  
Technology

**SAE J1939**

- Resistance to salt mist acc. to (IEC 60068-2-11)
- Protection IP67 all around and IP69k (High pressure / steam cleaning)
- EnDra®: maintenance-free and environmentally friendly
- Acid- and alkaline resistance
- CAN SAE J1939 protocol
- Single-/Multiturn (14 bit/18 bit)
- Forward-looking technology with 32 Bit processor

[www.wachendorff-automation.com/wdga58vsaej1939](http://www.wachendorff-automation.com/wdga58vsaej1939)

## Specifications:

### Mechanical Data

Housing	
- Clamping flange:	stainless steel, V4A
- Cap:	stainless steel, V4A
Shaft	Ø 10 mm
- Material:	stainless steel, V4A
- Permitted load on shaft end:	max. 100 N radial max. 100 N axial
- Starting torque:	approx. 1 Ncm at ambient temperature

### Bearings

- Type:	2 precision ball bearings
- Service life:	1 x 10 <sup>9</sup> revs. at 100 % rated shaft load 1 x 10 <sup>10</sup> revs. at 40 % rated shaft load 1 x 10 <sup>11</sup> revs. at 20 % rated shaft load

Max. operating speed:

3600 rpm

Weight:

approx. 600 g

Connections:

cable outlet (TPE)

### Machinery Directive:

#### basic data safety integrity level

MTTF <sub>d</sub> :	1000 a
Mission time (T <sub>M</sub> ):	20 a
Normal service life (L <sub>10h</sub> ):	1 x 10 <sup>11</sup> revs. at 3,600 min <sup>-1</sup> and 20 % rated shaft load
Diagnostic coverage (DC):	0 %

### Sensor data

Singleturn technology:	innovative hall sensor technology
Singleturn resolution:	16,384 steps/360° (14 bit)
Singleturn accuracy:	< ± 0.35°
Singleturn-repeat accuracy:	< ± 0.20°
intern cycle time:	≤ 600 µs
Multiturn Technology:	patented EnDra® technology no battery and no gear
Multiturn resolution:	up to 262,144 revolutions (18 bit)

### Environmental data

Operating temperature:	- 20 °C up to + 80 °C
Storage temperature:	- 20 °C up to + 80 °C
Protection rating:	IP67 all around and IP69K
(EN 60529)	Resistance to salt mist (IEC 60068-2-11) after 672 hours

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

Vibration:	50 m/s <sup>2</sup> (10-2000 Hz)
(DIN EN 60068-2-6)	
Shock:	1000 m/s <sup>2</sup> (6 ms)
(DIN EN 60068-2-27)	
Design:	appropriate DIN VDE 0160

### Interface

CAN physical layer:	ISO 11898 (High Speed CAN)
Protocol:	CAN SAE J1939
Baud rate:	Auto-Baud-Detection

### Standard

<b>Preset configuration:</b>	(other configurations on request)	
Direction of counting:	(View from shaft end) ccw	
ECU-address:	0x 0A	
Process data Identifier:	0x 18 FF 00 0A	
PGN:	0x FF 00	
Process data mapping:	Byte 0-3	32 Bit Position Value
	Byte 4	8 Bit Error Register

PDU timer and Position Preset can be adjusted by PGN configuration 0xEF00 (Prop. A).

PDU - Time:	50 ms (default)
Configuration - PGN:	0x EF 00 (Prop.A)
Byte 0:	0x 01
Byte 1:	0x FF
Byte 2:	PDU time LSB
Byte 3:	PDU time MSB
Byte 4:	Preset LSB
Byte 5, 6 :	Preset
Byte 7:	Preset MSB

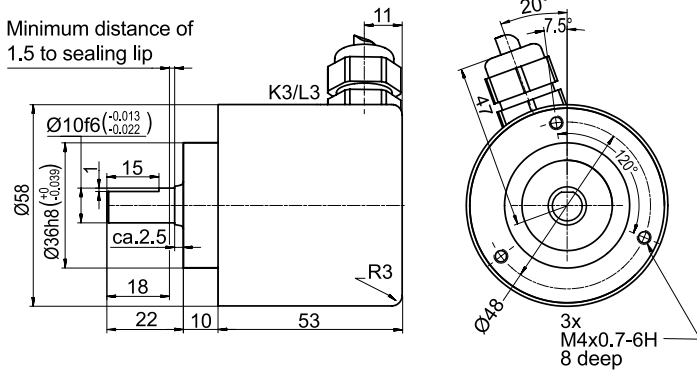
### Electrical Data:

Supply voltage:	10 VDC up to 32 VDC max. 50 mA
Power consumption:	max. 0.5 W

### Connection configuration radial

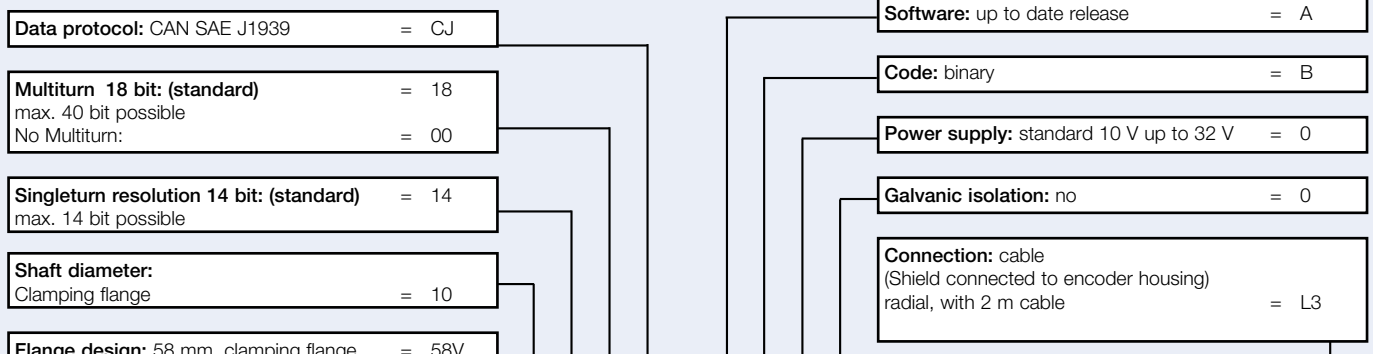
Definition	Cable K3, radial
U <sub>B</sub>	brown
Ground (GND)	orange
CAN <sub>High</sub>	green
CAN <sub>Low</sub>	yellow
CAN <sub>GND</sub> / shield	shield

**Cable connection L3 with 2 m cable**



All dimensional specifications in mm.

**Ordering information:**



**Order-No.:**

Example	WDGA	58V	10	14	18	CJ	A	B	0	0	L3
Your encoder	WDGA	58V	10			CJ	A	B	0	0	L3