

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



EnDra®
 Technology

SAE J1939

- EnDra®: maintenance-free and environmentally friendly
- CAN SAE J1939 protocol
- Single-/Multiturn (14 bit / 18 bit)
- Forward-looking technology with 32 Bit processor

www.wachendorff-automation.de/wdga58esaej1939

Mechanical Data

Housing
 - Flange: Aluminium
 - Cap: Aluminium, powder coated
 - Torque Support:
 1. Spring plate Incl. 1 spring plate WDGDS10001
 Compensation: axial: max. 1.5 mm, radial: max. 0.1 mm
 Max. operating speed: 6000 min⁻¹
 up to max. protection rating +60 °C
 2. Cylinder pin 4 mm Accessories WDGDS10005
 Compensation: axial: max. 1 mm, radial: max. 0.3 mm
 Max. operating speed: 3000 min⁻¹

Hollow bore (blind)

- Material: stainless steel
 - Diameter: 6, 12 or 14 mm
 8, 10 mm with adapter sleeve
 - Permitted load on shaft end: max. 80 N radial
 max. 50 N axial
 - Starting torque: approx. 1.6 Ncm at ambient temperature
 Attachment: permanently attached clamping ring

Bearings

- Type: 2 precision ball bearings
 - Service life: 1 x 10⁹ revs. at 100 % rated shaft load
 1 x 10¹⁰ revs. at 40 % rated shaft load
 1 x 10¹¹ revs. at 20 % rated shaft load

Weight:

approx. 220 g
 Connections: cable or connector, radial

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

Machinery Directive: basic data safety integrity level

MTTF_d: 1000 a
 Mission time (T_M): 20 a
 Normal service life (L_{10h}): 1 x 10¹¹ revs. at 6,000 min⁻¹
 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: -40 °C up to +80 °C
 Storage temperature: -40 °C up to +100 °C

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/s² (10-2000 Hz)
 (DIN EN 60068-2-6)
 Shock: 1000 m/s² (6 ms)
 (DIN EN 60068-2-27)
 Design: appropriate DIN VDE 0160

Interface

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

Standard

Preset configuration: (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

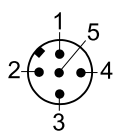
PDU timer and Position Preset can be adjusted by
 PGN configuration 0xEF00 (Prop. A).

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

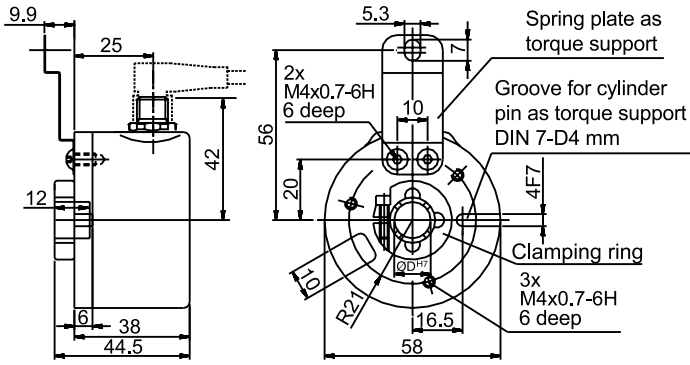
Electrical Data:

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

Electrical connections, radial, M12x1

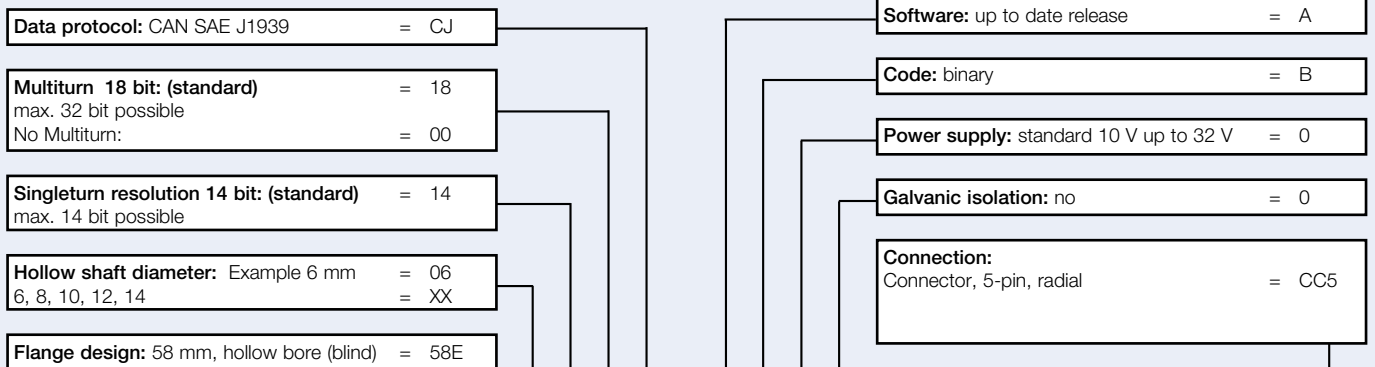
Definition	connector pin (connector-encoder)	Sensor connector pin assignment 5-pin
U _B	2	
Ground (GND)	3	
CAN _{High}	4	
CAN _{Low}	5	
CAN _{GND} / shield	1	

Connector, M12 x 1, 5-pin. CC5



All dimensional specifications in mm.

Ordering information:



Order-No.:

Example	WDGA	58E	06	14	18	CJ	A	B	0	0	CC5
Your encoder	WDGA	58E				CJ	A	B	0	0	CC5