

Encoder WDGA 36E absolute CAN SAE J1939 magnetic, with 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
- 2-colour-LED as indicator for operating condition

www.wachendorff-automation.com/wdga36esaej1939

Specifications:

Mechanical Data

Housing:	steel case chrome-plated, magnetic shielding
Flange type:	hollow bore (blind)
Flange material:	Aluminium
Shaft material:	stainless steel
Shaft Ø:	6 mm
Insertion depth min./max.:	8 mm/17 mm
Permissible shaft loading:	80 N radial 50 N axial
Starting torque: (at ambient temperature)	< 0.3 Ncm
Bearings type:	2 precision ball bearings
Service life:	1.4 x 10 ⁸ revs. at 100 % rated shaft load 2.0 x 10 ⁹ revs. at 40 % rated shaft load 1.7 x 10 ¹⁰ revs. at 20 % rated shaft load
Operating speed max.:	12,000 min ⁻¹
Weight:	110 g
Connection:	connector

Machinery Directive:

basic data safety integrity level

MTTF _d :	1000 a
Mission time (T _M):	20 a
Normal service life (L _{10h}):	1.7 x 10 ¹⁰ revs. at 12,000 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
Protection class (EN 60529):	IP67, shaft sealed to IP65

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

Interface

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-adress:	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

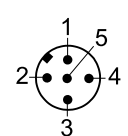
PDU timer and Position Preset can be adjusted by PGN configuration 0xEF00 (Prop. A).

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

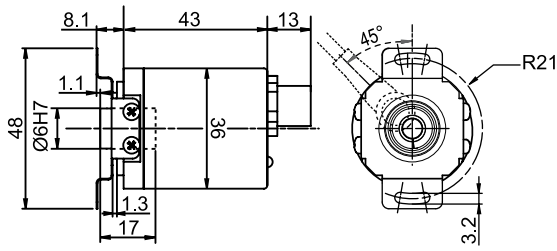
Electrical Data:

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

Electrical connections, axial, M12x1

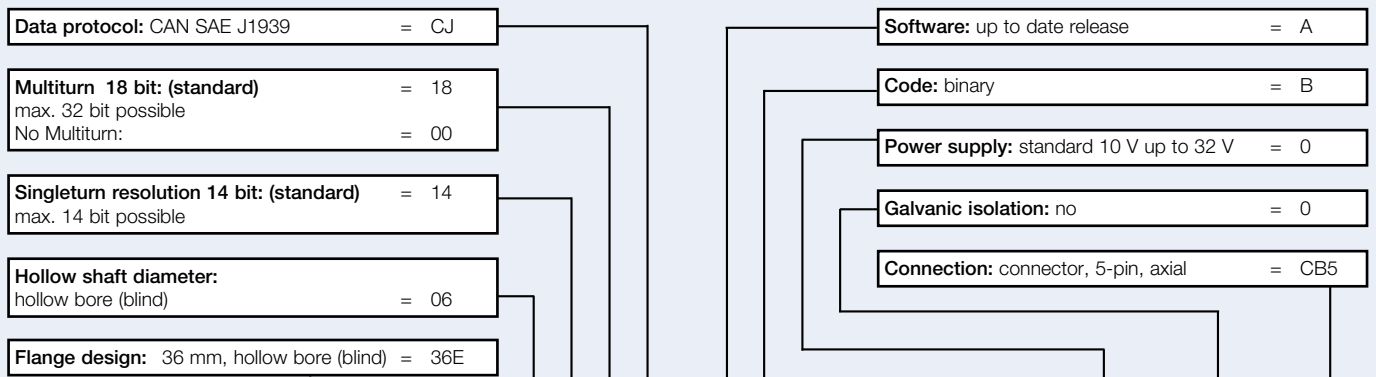
Definition	connector pin (connector- encoder)	Sensor connector pin assignment 5-pin
U _B	2	
Ground (GND)	3	
CAN _{High}	4	
CAN _{Low}	5	
CAN _{GND} / shield	1	

Connector, M12 x 1, 5-pol. CB5



All dimensional specifications in mm.

Ordering information:



Order-No.:

Example	WDGA	36E	06	14	18	CJ	A	B	0	0	CB5
Your encoder	WDGA	36E	06			CJ	A	B	0	0	CB5