

Encoder WDGA 36E absolute CANopen magnetic, with EnDra® - Technology



EnDra®
Technology

CANopen®

- EnDra®: maintenance-free and environmentally friendly
- CANopen, Single- and Multiturn
- Communication Profile according to CiA 301
- Device Profile for encoder CiA 406 V3.2 class C2
- Single-/Multiturn (14 bit/40 bit)
- Forward-looking technology with 32 Bit processor
- 2-colour-LED as indicator for operating condition and error message appropriate CiA 303-3

www.wachendorff-automation.com/wdga36ecan

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 or cable

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) with high precision value up to 40 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 cable outlet K6: IP20

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

Interface

Protocol:	CAN CANopen
	- Communication profil CiA 301 - Device Profile for encoder CiA 406 V3.2 class C2
Node number:	0 up to 127 (default 127)
Baud rate:	10 kBaud up to 1 MBaud with automatic bit rate detection

The standard settings as well as any customization in the software can be changed via LSS (CiA 305) and the SDO protocol, e. g. PDOs, Scaling, Heartbeat, Node-ID, Baud rate, etc.

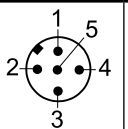
Programmable CAN transmission modes

- **Synchronous mode:** when a synchronisation telegram (SYNC) is received from another bus node, PDOs are transmitted independently.
- **Asynchronous mode:** a PDO message is triggered by an internal event. (e.g. change of measured valued, internal timer, etc.)

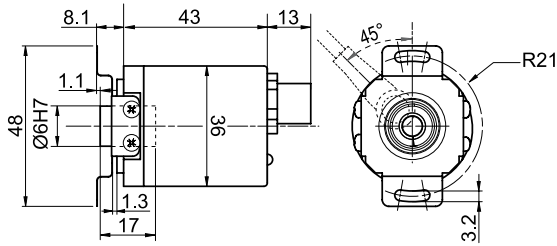
Electrical Data:

Supply voltage:	10 VDC up to 30 VDC max. 50 mA
Power consumption:	max. 0.5 W

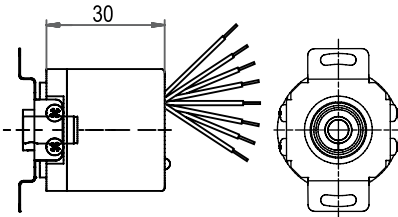
Electrical connections

		
Connector/ cable	M12 x1	cable
Definition	CB5 axial, 5-pin	K6, axial
U _B	2	bn
Ground (GND)	3	wh
CAN _{High}	4	gn
CAN _{Low}	5	ye
CAN _{GND} /Schirm	1	gy

Connector, M12 x 1, 5-pol. CB5

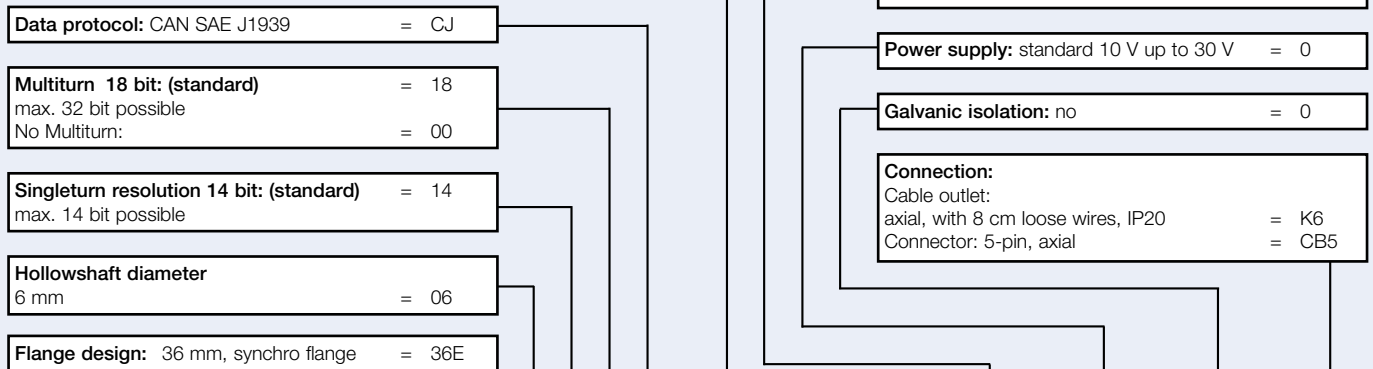


Cable outlet K6:



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	