



Online Data Sheet

엠플루트 CAN SAE J1939 통신 마그네틱 로터리 엔코더 WDGA 36E 시리즈 - 8, 10, 12, 14, 15 mm

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 36E absolute CAN SAE J1939 magnetic, with EnDra® Technologie



EnDra®
Technologie

SAE J1939

- CAN SAE J1939 프로토콜 절대형 로터리 엔코더 - 중공축 타입**
 - 프로토콜 : ISO11898(High Speed CAN)
 - 중장비 어플리케이션 전용 통신 프로토콜
- EnDra® 기술을 활용한 멀티턴 분해능**
 - 최대 32bit 대응
 - 위치 기억을 위한 배터리, 기어 불필요
- 위치, 속도, 가속도 정밀 측정**
- .IP67의 보호 기능 - 방수/방진 로터리 엔코더**
 - Shaft sealing - IP65 **IP67선택 가능

Mechanical Data

Housing

Flange	hollow shaft (blind-bored)
Flange material	aluminum
Housing cap	steel case chrome-plated, magnetic shielding
Housing	Ø 36 mm

Shaft(s)

Starting torque	approx. 1.6 Ncm at ambient temperature
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Shaft	Ø 8 mm
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Insertion depth min.	10 mm
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Insertion depth max.	14.5 mm
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Max. Permissible shaft loading radial	80 N
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Max. Permissible shaft loading axial	50 N
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Shaft	Ø 10 mm
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Insertion depth min.	10 mm
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Insertion depth max.	14.5 mm
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Max. Permissible shaft loading radial	80 N
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Max. Permissible shaft loading axial	50 N
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Shaft	Ø 12 mm
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Insertion depth min.	10 mm
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Insertion depth max.	14.5 mm
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Max. Permissible shaft loading radial	80 N
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Max. Permissible shaft loading axial	50 N
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Shaft	Ø 14 mm
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Insertion depth min.	10 mm
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Insertion depth max.	14.5 mm
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Max. Permissible shaft loading radial	80 N
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Max. Permissible shaft loading axial	50 N
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Shaft	Ø 15 mm
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Insertion depth min.	10 mm
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Insertion depth max.	14.5 mm
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Max. Permissible shaft loading radial	80 N
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Max. Permissible shaft loading axial	50 N
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Bearings

Bearings type	2 precision ball bearings
Nominale 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	6000 rpm

Machinery Directive: basic data safety integrity level

MTTF _d	1000 a
Mission time (TM)	20 a
Nominale service life (L10h)	1 x 10 ¹¹ revs. at 20 % rated shaft load and 6000 rpm
Diagnostic coverage (DC)	0 %

Electrical Data

Power supply/Current consumption	10 VDC up to 32 VDC: typ. 50 mA
Power consumption	max. 0.5 W

Sensor data

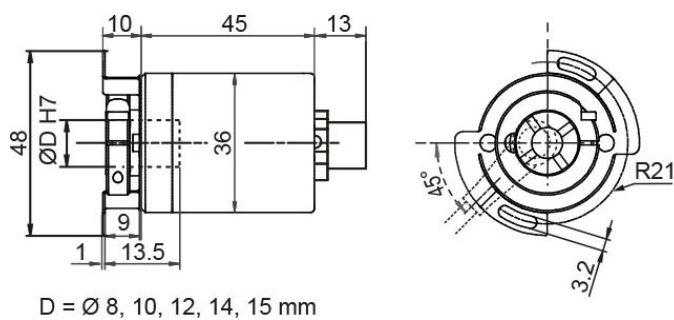
Single-turn technology	innovative hall sensor technology
Single-turn resolution	65.536 steps/360° (16 bit)
Single-turn accuracy	< ±0.35°
Single-turn repeat accuracy	< ±0.20°
Internal cycle time	≤ 600 µs
Multi-turn technology	patented EnDra® technology no battery, no gear.
Multi-turn resolution	up to 32 bit

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
Vibration: (DIN EN 60068-2-6)	300 m/s ² (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	1000 m/s ² (6 ms)
Design:	according DIN VDE 0160
Turn on time:	<1,5 s

Interface	
Interface:	CAN
CAN physical layer:	ISO 11898 (High Speed CAN)
Protocol:	ISO 11898 (High Speed CAN)
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:	0x18FF000A
PGN:	0xFF00
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
General Data	
Weight	approx. 110 g
Connections	connector outlet
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +85 °C
Storage temperature	-40 °C up to +100 °C
More Information	
General technical data and safety instructions http://www.wachendorff-automation.com/gtd	
Options http://www.wachendorff-automation.com/acc	

Connector, M12x1, axial, CB5, 5-pin



Description

CB5 axial, 5-pin, shield connected to encoder housing

Assignments	
	CB5
(+) Vcc	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1

Example Order No.	Type	Your encoder	
WDGA 36E	WDGA 36E	WDGA 36E	
	Shaft	Order key	
08	Ø 8 mm	08	
	Ø 10 mm	10	
	Ø 12 mm	12	
	Ø 14 mm	14	
	Ø 15 mm	15	
	Single-turn Resolution	Order key	
14	Single-turn resolution 1 bit up to 16 bit: (e. G. 14 bit)	14	
	Multi-turn Resolution	Order key	
18	Multi-turn up to 32 bit (e. G. 18 bit) (Single-turn + Multi-turn max. 32 bit) No Multi-turn: 00	18	
	Data protocol	Order key	
CJ	CAN SAE J1939	CJ	
	Software	Order key	
A	up to date release	A	
	Code	Order key	
B	binary	B	
	Power supply	Order key	
0	10 V up to 32 V (standard)	0	
	Galvanic isolation	Order key	
0	no	0	
	Electrical connections	Order key	
CB5	Connector:		
	sensor-connector, M12x1, 5-pin, axial, IP67, shield connected to encoder housing	CB5	

Example Order No.	WDGA 36E	08	14	18	CJ	A	B	0	0	CB5
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WDGA 36E										Example Order No.
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For further information please contact our local distributor.
Here you find a list of our distributors worldwide.
http://www.wachendorff-automation.com/distributors_worldwide.html



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