



Online Data sheet

HM 2602

Encoder WDGA 58V CANopen

www.wachendorff-automation.com/wdga58vcan

Wachendorff Automation

... systems and encoders

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Nyckelvägen 7
142 50 SKOGÅS, Sweden

Tel: +46 (0)8 771 02 20
info@hemomatik.se

www.hemomatik.se

IndustrieROBUST

Encoder WDGA 58V absolute CANopen, with EnDra®-Technology



Illustration similar

EnDra®
Technologie

CANopen®

- Resistance to salt mist acc. to (IEC 60068-2-11)
- EnDra®: maintenance-free and environmentally friendly
- Acid- and alkaline resistance
- CANopen, Single-turn/Multi-turn
- Communication Profile according to CiA 301
- Device Profile for encoder CiA 406 V3.2 class C2
- Single-turn/Multi-turn (16 bit / 43 bit)
- Forward-looking technology with 32 Bit processor

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Especially for food and beverage industry
Acid- and alkaline resistance

Mechanical Data	
Flange	clamping flange
Flange material	stainless steel, V4A
Housing material	stainless steel, V4A
Flange diameter	Ø 58 mm [Ø 2.283"]

Shaft(s)	
Shaft material	stainless steel, V4A
Starting torque	approx. 1 Ncm [1.416 in-ozf] at ambient temperature
Shaft	Ø 10 mm [Ø 0.394"]
Shaft length	L: 18 mm [0.709"]
Max. Permissible shaft loading radial	100 N [10.197 kp]
Max. Permissible shaft loading axial	100 N [10.197 kp]

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	3600 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 3600 rpm
Diagnostic coverage (DC)	0 %

Electrical Data	
Power supply/Current consumption	4,75 VDC up to 32 VDC: typ. 50 mA
Power consumption	max. 0.5 W
Operating principle	magnetic

Sensor data	
Single-turn technology	innovative hall sensor technology
Single-turn resolution	65,536 steps/360° (16 bit)
Single-turn accuracy	± 0.0878° (12 bit)

Single-turn repeat accuracy	± 0.0878° (12 bit)
Internal cycle time	600 µs
Multi-turn technology	patented EnDra® technology no battery and no gear.
Multi-turn resolution	up to 32 bit with high precision value up to 43 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 DIN EN 61326-1
Vibration: (DIN EN 60068-2-6)	300 m/s ² (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	5000 m/s ² (6 ms)
Electrical Safety:	According DIN VDE 0160
Turn on time:	<1,5 s

Duty information	
Customs tariff number:	90318020
Country of origin:	Germany

Interface	
Interface:	CAN
Protocol:	CANopen <ul style="list-style-type: none"> • Communication profil CiA 301 • Device Profile for encoder CiA 406 V3.2 class C2
Node number:	1 up to 127 (default 127)
Baud rate:	10 kBaud up to 1 MBaud with automatic bit rate detection.
Advice:	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.)

General Data

Weight	approx. 600 g [21.164 oz]
Connections	cable outlet (TPE)
Protection rating (EN 60529)	IP67+IP69K all around
Operating temperature	-20 °C up to +80 °C [-4 °F up to +176 °F]
Storage temperature	-20 °C up to +80 °C [-4 °F up to +176 °F]

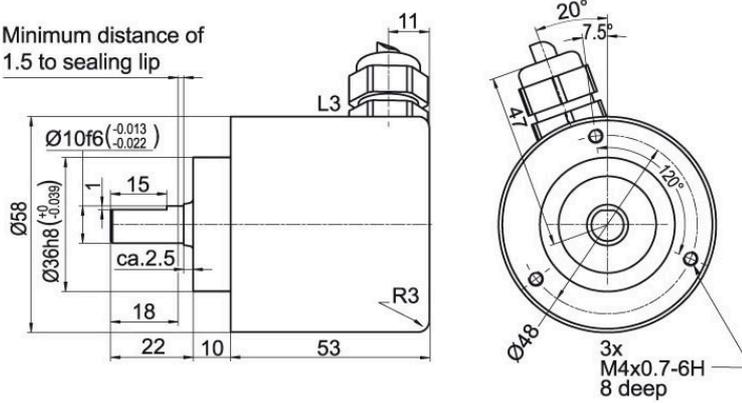
More Information

General technical data and safety instructions
<http://www.wachendorff-automation.com/gtd>

Options
<http://www.wachendorff-automation.com/acc>

Cable connection L3 with 2 m cable

Minimum distance of 1.5 to sealing lip



Description

L3 radial, shield connected to encoder housing

Assignments	
(+) Vcc	BN
GND	OG
CANHigh	GN
CANLow	YE
CANGND shield	shield

Options

120 Ohm terminating resistor

Order key

The encoder WDGA 58V CANopen is also available with fixed 120 Ohm terminating resistor.

AEO

Example Order No.	Type	Your encoder
WDGA 58V	WDGA 58V	WDGA 58V
	Shaft	Order key
10	Ø 10 mm [Ø 0.394"]	10
	Single-turn Resolution	Order key
12	Single-turn resolution 1 bit up to 16 bit, recommended min. 6 bit (e. G. 12 bit)	12
	Multi-turn Resolution	Order key
18	Multi-turn resolution: (examples) 18 bit = 18 43 bit = 43 no Multiturn = 00	18
	Data protocol	Order key
CO	CANopen	CO
	Software	Order key
A	up to date release	A
	Code	Order key
B	binary	B
	Power supply	Order key
0	4.75 V up to 32 V (standard)	0
	Galvanic isolation	Order key
0	no	0
	Electrical connections	Order key
L3	Cable:	L3
	radial, shield connected to encoder housing	
	Options	Order key
	Without option	Empty
	120 Ohm terminating resistor	AEO

Example Order No.	WDGA 58V	10	12	18	CO	A	B	0	0	L3	
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WDGA 58V											Example Order No.
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