



Online Data Sheet

Encoder WDGA 58V SSI

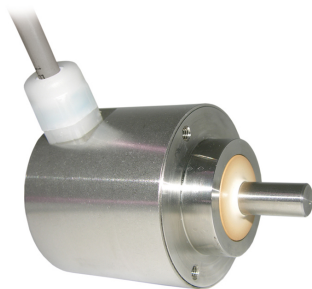
www.wachendorff-automation.com/wdga58vssi

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 58V absolute SSI magnetic, with EnDra®-Technology



EnDra®
Technologie

SSI
Synchronous Serial Interface

- Resistance to salt mist acc. to (IEC 60068-2-11)
- Acid- and alkaline resistance
- High protection rating IP67 all around and IP69K (high pressure / steam cleaning)
- EnDra® multiturn technology: maintenance-free and environmentally friendly
- SSI, gray or binary
- 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	
Housing	
Flange	clamping flange
Flange material	stainless steel, V4A
Housing cap	stainless steel, V4A
Housing	Ø 58 mm

Shaft(s)	
Shaft material	stainless steel, V4A
Starting torque	approx. 1 Ncm at ambient temperature

Shaft	Ø 10 mm
Shaft length	L: 18 mm
Max. Permissible shaft loading radial	100 N
Max. Permissible shaft loading axial	100 N

Bearings	
Bearings type	2 precision ball bearings
Nominal 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
Nominal 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	10 VDC up to 32 VDC: typ. 50 mA
Power consumption	max. 0.5 W
Power supply/Current consumption	4,75 VDC up to 5,5 VDC: typ. 80 mA
Power consumption	max. 0.44 W

Sensor data	
Single-turn technology	innovative hall sensor technology
Single-turn resolution	up to 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 43 bit.

Environmental data	
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)	50 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

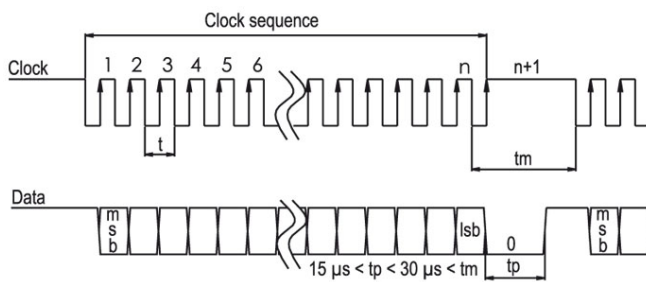
Interface	
Interface:	SSI
Clock input:	via opto-coupler
Clock frequency:	100 kHz up to 500 kHz, up to 2 MHz on request
Data output:	RS485/RS422 compatible
Output code:	gray or binary
SSI output:	Angular-/position value
Parity bit:	optional (even/odd)
Error bit:	optional
Turn on time:	<1,5 s

Configuration inputs	DIR = GND -> cw DIR = +UB -> ccw
Positive direction of counting: (View on shaft)	
Set to zero:	Set: Preset = +UB for 2 s Deactivate: Preset = GND

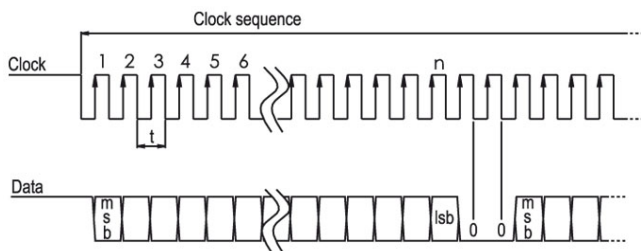
LED-behaviour:	
At Start / while booting:	- red gleam (< 2.3 s)
Malfunction:	- constant red gleam (> 2.3 s)
Normal function:	- constant green gleam

No supply: - no gleam

Transmission protocol SSI Single transmission:



Transmission protocol SSI Multipath transmission:



General Data

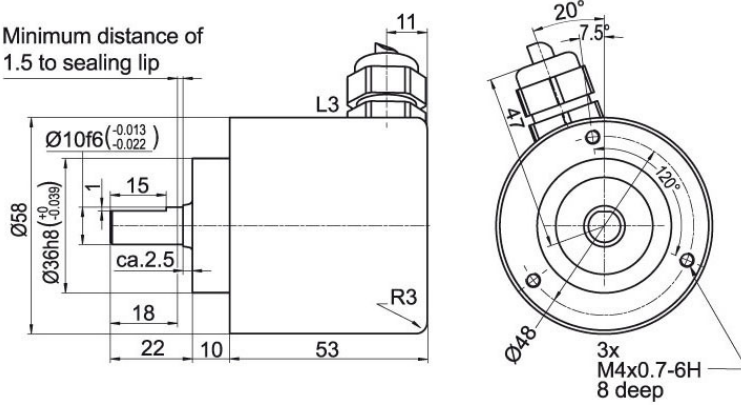
Weight	approx. 600 g
Connections	cable outlet (TPE)
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65; cable outlet K1: IP40, K6: IP20
Operating temperature	-20 °C up to +80 °C
Storage temperature	-20 °C up to +80 °C

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 cabel

 Minimum distance of
 1.5 to sealing lip

Description
L3 radial, shield connected to encoder housing

Assignments	
GND	OG
(+) Vcc	BN
SSI CLK+	GN
SSI CLK-	YE
SSI DATA+	GY
SSI DATA-	PK
PRESET	BU
DIR	RD
Shield	housing

Example Order No.	Type	Your encoder	
WDGA 58V	WDGA 58V	WDGA 58V	
Shaft		Order key	
10	Ø 10 mm	10	
Single-turn Resolution		Order key	
12	Single-turn resolution 1 bit up to 16 bit: (e. G. 12 bit)	12	
Multi-turn Resolution		Order key	
12	Multi-turn up to 43 bit (e. G. 12 bit) No Multi-turn = 00	12	
Data protocol		Order key	
SI	SSI	SI	
Software		Order key	
A	up to date release	A	
Code		Order key	
B	binary	B	
	gray	G	
Power supply		Order key	
0	10 V up to 32 V (standard)	0	
	4.75 V up to 5.5 V	1	
Galvanic isolation		Order key	
1	yes	1	
Electrical connections		Order key	
L3	Cable:		
	radial, shield connected to encoder housing	L3	

Example Order No.	WDGA 58V	10	12	12	SI	A	B	0	1	L3
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WDGA 58V											Example Order No.
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For further information please contact our local distributor.
Here you find a list of our distributors worldwide.
<https://www.wachendorff-automation.com/>



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