

Online Data Sheet

Encoder WDGA 58S SSI

www.wachendorff-automation.com/wdga58sssi

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

IndustrieROBUST

Encoder WDGA 58S absolute SSI magnetic, with EnDra®-Technology


EnDra®
Technologie

SSI
Synchronous Serial Interface

- Resistance to salt mist (IEC 60068-2-11) succeeded
- Protection: IP67 + IP69k (high pressure / steam cleaning)
- EnDra®: maintenance-free and environmentally friendly
- SSI, Gray or binary
- Single-/Multiturn (max. 14 bit/39 bit)
- Forward-looking technology with 32 Bit processor
- 2-colour-LED as indicator for operating condition

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Salt mist IEC 60068-2-11
High pressure / steam cleaning

Mechanical Data	
Housing	
Flange	clamping flange
Flange material	Aluminium, anodized natur
Housing cap	steel case chrome-plated, magnetic shielding
Housing	Ø 58 mm

Shaft(s)	
Shaft material	stainless steel
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
Nomiale 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
Nomiale 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: max. 80 mA
Power consumption	max. 0.8 W
Power supply/Current consumption	4,75 VDC up to 5,5 VDC: max. 80 mA
Power consumption	max. 0.4 W

Sensor data	
Singleturn technology	innovative hall sensor technology
Singleturn resolution	up to 16,384 steps/360° (14 bit)

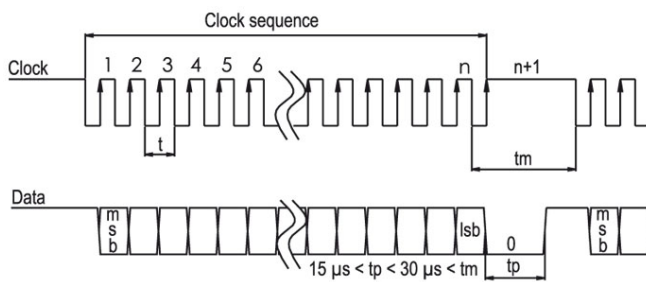
Singleturn accuracy	< ±0.35°
Singleturn repeat accuracy	< ±0.20°
Intern cycle time	≤ 600 µs
Multiturn technology	patented EnDra® technology no battery, no gear.
Multiturn resolution	up to 39 bit.

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)	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

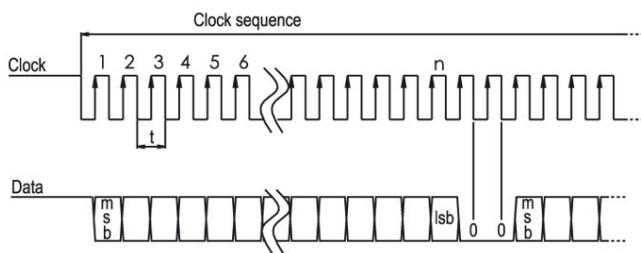
Interface	
Interface:	SSI
Clock input:	via opto-coupler
Clock frequency:	100 kHz up to 500 kHz, up to 2 MHz on request
Data output:	RS485/RS422 compatible
Output code:	gray or binary
SSI output:	Angular-/position value
Parity bit:	optional (even/odd)
Error bit:	optional
Turn on time:	<1,5 s

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

Transmission protocol SSI Single transmission:



Transmission protocol SSI Multipath transmission:



General Data

Weight	approx. 200 g
Connections	connector outlet
Protection rating (EN 60529)	IP67 all around and IP69K. Resistance to salt mist (IEC 60068-2-11) after 672 hours.
Operating temperature	-40 °C up to +80 °C
Storage temperature	-40 °C up to +100 °C

More Information

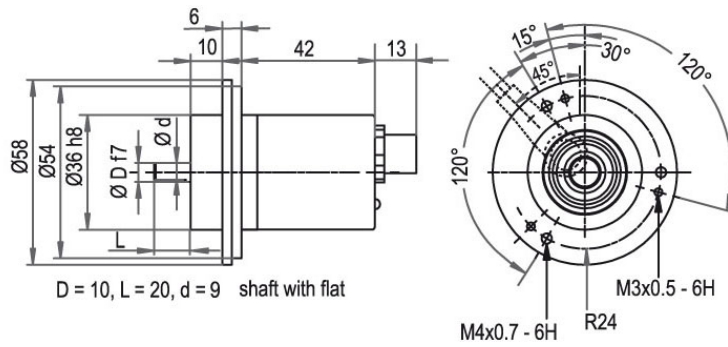
General technical data

<http://www.wachendorff-automation.com/gtd>

Options

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

Connector, M12x1 CB8, axial, 8-pin



Description

CB8 axial, 8-pin, shield connected to encoder housing

Assignments	
	CB8
GND	1
(+) Vcc	2
SSI CLK+	3
SSI CLK-	4
SSI DATA+	5
SSI DATA-	6
PRESET	7
DIR	8
Shield	housing

Example Order No.	Type	Your encoder	
WDGA 58S	WDGA 58S	WDGA 58S	
	Shaft	Order key	
10	Ø 10 mm	10	
	Singleturn Resolution	Order key	
12	Singleturn resolution 8 Bit up to 14 Bit: (e. G. 12 Bit)	12	
	Multiturn Resolution	Order key	
12	Multiturn 1 bit up to 39 bit (e. G. 12 bit) No Multiturn = 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	
CB8	Connector:		
	sensor-connector, M12x1, 8-pin, axial, IP67, shield connected to encoder housing	CB8	

Example Order No.	WDGA 58S	10	12	12	SI	A	B	0	1	CB8
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WDGA 58S										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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