



# Online Data Sheet

## Encoder WDG 58M BiSS

[www.wachendorff-automation.com/wdggf58mbiss](http://www.wachendorff-automation.com/wdggf58mbiss)

### 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 WDG 58M Motorfeedback BiSS-C



- Highest precision in highly dynamic movement
- Interface: BiSS-C
- Singleturn max. 19 Bit and 1 Vss 2048 sin/cos (optional 512, 1024)
- Electronic ID label
- 2-colour-LED as indicator for operating condition and error message
- Specific spring lever available

[www.wachendorff-automation.com/wdg58mbiss](http://www.wachendorff-automation.com/wdg58mbiss)

## Mechanical Data

Housing	
Flange	Motorfeedback flange
Flange material	aluminum
Housing cap	aluminum
Housing	Ø 58 mm

Shaft(s)	
Starting torque	approx. 1 Ncm at ambient temperature

Shaft	Ø Conus 1/10; 9.25 mm
Shaft length	L: 16.5 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	60 N

Bearings	
Bearings type	2 precision ball bearings
Nominale service life	1 x 10 <sup>9</sup> revs. at 100 % rated shaft load 1 x 10 <sup>10</sup> revs. at 40 % rated shaft load 1 x 10 <sup>11</sup> revs. at 20 % rated shaft load
Max. operating speed	12000 rpm

Electrical Data	
Power supply/Current consumption	3.5 VDC up to 30 VDC: typ. 160 mA
Power consumption	max. 0.6 W
Power supply/Current consumption	4,75 VDC up to 5,5 VDC: typ. 80 mA
Power consumption	max. 0.6 W
Output circuit	1 Vpp sin/cos
Pulse frequency	1 Vpp sin/cos: max. 400 kHz (-3 dB)
Channels	AB

Sensor data	
Single-turn technology	optical
Single-turn resolution	max. 524,288 steps/360° (19 bit)
1 Vpp resolution	2048 sin/cos (512, 1024 optional)
Channels output	AB
Limit frequency (-3dB)	400 kHz

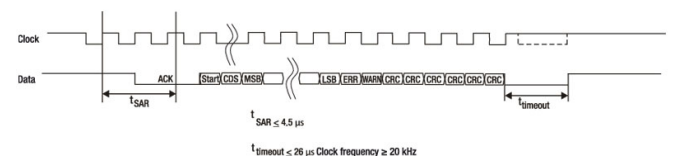
Environmental data	
Environmental data:	

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 <sup>2</sup> (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	1000 m/s <sup>2</sup> (6 ms)
Design:	according DIN VDE 0160

## Interface

<b>Interface:</b>	<b>BiSS-C (<a href="http://www.biss-interface.com">www.biss-interface.com</a>)</b>
Clk (Clock input):	via opto-coupler
Clk-/Clock frequency:	20 kHz up to 10 MHz
Data output:	RS485
Output code:	gray or binary
BiSS-C protocol:	position + Error-/Warnbit + CRC 6 Bit
CRC-Polynomial:	x <sup>6</sup> + x <sup>1</sup> +1 (0x43)
Positive direction of counting (View on shaft):	cw
Set to zero:	configurable via BiSS-C

## Transmission Protocol BiSS-C



## General Data

Weight	approx. 279 g
Connections	cable output, 2 m, tangential
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +115 °C
Storage temperature	-40 °C up to +115 °C

## More Information

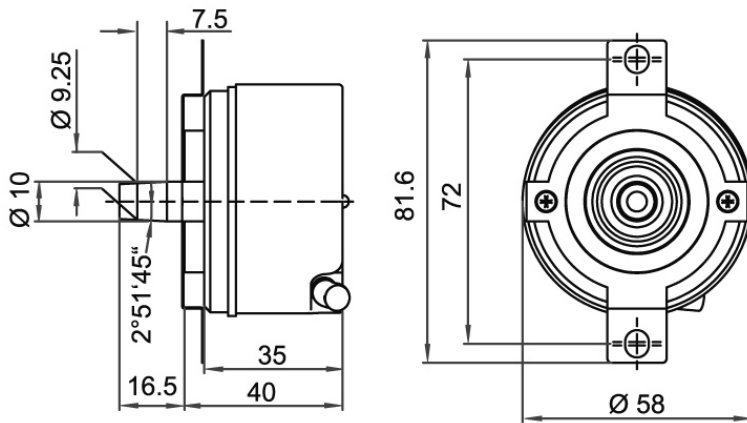
General technical data and safety instructions  
<http://www.wachendorff-automation.com/gtd>

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Options

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

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**Cable outlet tangential, 2 m, T3**

**Description**

T3 tangential, flex

Assignments	
	<b>T3</b>
<b>A+</b>	GYPK
<b>A-</b>	RDBU
<b>B+</b>	BK
<b>B-</b>	VT
<b>Data+</b>	GY
<b>Data-</b>	PK
<b>CLK+</b>	GN
<b>CLK-</b>	YE
<b>(+) Vcc</b>	BN
<b>GND</b>	WH
<b>Shield</b>	flex
<b>SET</b>	BU
<b>DIR</b>	RD

## Options

### Cable length

The encoder WDF 58M BiSS can be supplied with more than 2 m cable.  
Please extend the standard order code with a three figure number, specifying the cable length in decimetres.  
5 m cable = 050  
10 m cable = 100

### Order key

**XXX = Decimeter**

Example Order No.	Type	Your encoder
WDGF 58M	WDGF 58M	WDGF 58M
	<b>Shaft</b>	<b>Order key</b>
10	Ø Conus 1/10; 9.25 mm	10
	<b>Single-turn Resolution</b>	<b>Order key</b>
13	9 bit up to 19 bit (EG: 13 Bit = 13)	13
	<b>Multi-turn Resolution</b>	<b>Order key</b>
00	No Multi-turn = 00	00
	<b>Sinus per revolution 1Vpp</b>	<b>Order key</b>
11	2048	11
	512 (optional)	9
	1024 (optional)	10
	<b>Data protocol</b>	<b>Order key</b>
BI	BiSS	BI
	<b>Software</b>	<b>Order key</b>
A	up to date release	A
	<b>Code</b>	<b>Order key</b>
B	binary	B
	gray	G
	<b>Power supply</b>	<b>Order key</b>
2	3,5 V up to 30 V (standard)	2
	4.75 V up to 5.5 V	1
	<b>Galvanic isolation</b>	<b>Order key</b>
1	yes	1
	no	0
	<b>Electrical connections</b>	<b>Order key</b>
T3	<b>Cable:</b>	
	tangential, flex, with 2 m cable, IP67	T3
	<b>Options</b>	<b>Order key</b>
	Without option	Empty
	Cable length	XXX = Decimeter

<b>Example Order No.</b>	WDGF 58M	10	13	00	11	BI	A	B	2	1	T3	
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WDGF 58M												<b>Example Order No.</b>
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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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