



Online Data Sheet

Encoder WDG 58M BiSS

www.wachendorff-automation.com/wdgm58mbiss

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

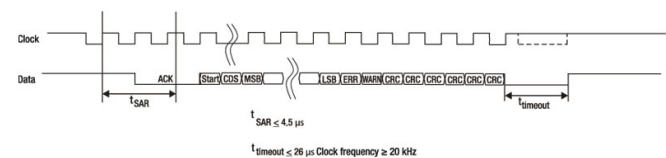
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Mechanical Data	
Housing	
Flange	Motorfeedback flange
Flange material	aluminum
Housing cap	aluminum
Housing	Ø 58 mm
Shaft(s)	
Starting torque	approx. 1 Ncm at ambient temperature
Shaft	Ø Conus 1/10; 9.25 mm
Shaft length	L: 16.5 mm
Max. Permissible shaft loading radial	80 N
Max. Permissible shaft loading axial	60 N
Bearings	
Bearings type	2 precision ball bearings
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	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 ² (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	1000 m/s ² (6 ms)
Design:	according DIN VDE 0160

Interface	
Interface:	BiSS-C (www.biss-interface.com)
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 ⁶ + x ¹ +1 (0x43)
Positive direction of counting (View on shaft):	cw
Set to zero:	configurable via BiSS-C

Transmission Protocol BiSS-C

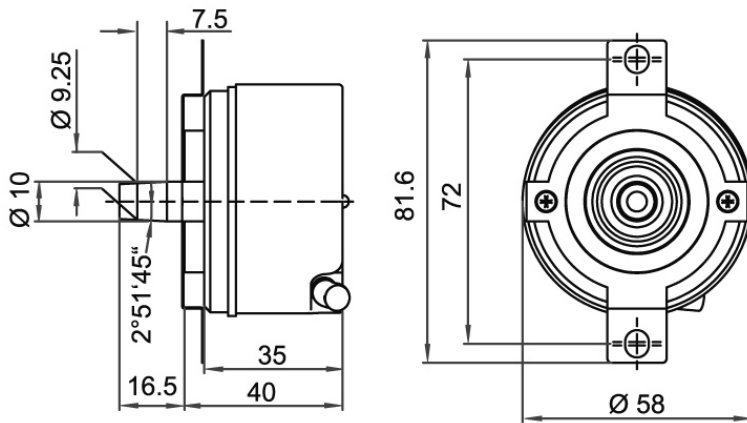


General Data	
Weight	approx. 279 g
Connections	cable output, 2 m, tangential
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +115 °C
Storage temperature	-40 °C up to +115 °C

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

Options

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

Cable outlet tangential, 2 m, T3

Description

T3 tangential, flex

Assignments	
	T3
A+	GYPK
A-	RDBU
B+	BK
B-	VT
Data+	GY
Data-	PK
CLK+	GN
CLK-	YE
(+) Vcc	BN
GND	WH
Shield	flex
SET	BU
DIR	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	
	Shaft	Order key	
10	Ø Conus 1/10; 9.25 mm	10	
	Single-turn Resolution	Order key	
13	9 bit up to 19 bit (EG: 13 Bit = 13)	13	
	Multi-turn Resolution	Order key	
00	No Multi-turn = 00	00	
	Sinus per revolution 1Vpp	Order key	
11	2048	11	
	512 (optional)	9	
	1024 (optional)	10	
	Data protocol	Order key	
BI	BiSS	BI	BI
	Software	Order key	
A	up to date release	A	A
	Code	Order key	
B	binary	B	
	gray	G	
	Power supply	Order key	
2	3,5 V up to 30 V (standard)	2	
	4.75 V up to 5.5 V	1	
	Galvanic isolation	Order key	
1	yes	1	
	no	0	
	Electrical connections	Order key	
T3	Cable:		T3
	tangential, flex, with 2 m cable, IP67	T3	
	Options	Order key	
	Without option	Empty	
	Cable length	XXX = Decimeter	

Example Order No.	WDGF 58M	10	13	00	11	BI	A	B	2	1	T3	
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WDGF 58M					BI	A					T3	Your encoder
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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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