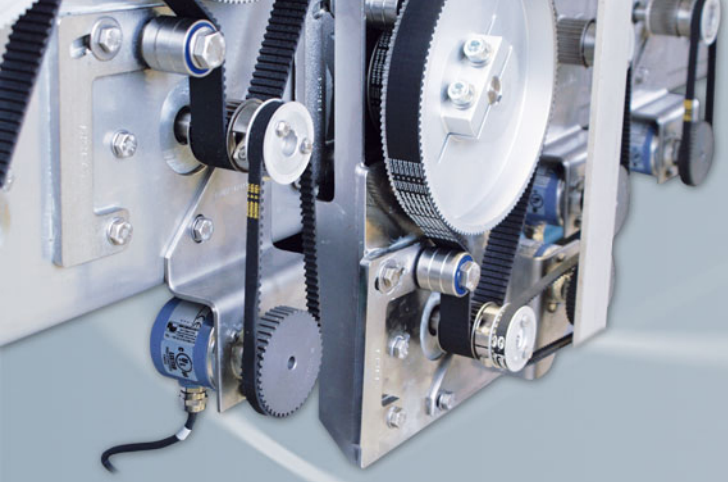


WACHENDORFF
Automation GmbH & Co. KG

Online Data Sheet

Encoder WDGA 58A SAEJ1939 galv. isolation

www.wachendorff-automation.com/wdga58asaej1939galv

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 58A absolute CAN SAE J1939 galv. isolation, magnetic, with EnDra®- Technology

EnDra® Technologie

SAE J1939

- EnDra® Technology:
- CAN SAE J1939 protocol
- Galvanic isolaltion
- Single-/Multiturn (14 bit / 18 bit))
- Forward-looking technology with 32 Bit processor
- 2-colour-LED as indicator for operating condition
- High shaft load up to 220 N radial, 120 N axial

www.wachendorff-automation.com/wdga58asaej1939galv

Mechanical Data	
Housing	
Flange	synchro flange
Flange material	aluminium
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, approx. 1.416 in-ozf at ambient temperature
Shaft	Ø 6 mm
Shaft length	L: 12 mm
Max. Permissible shaft loading radial	125 N
Max. Permissible shaft loading axial	120 N
Shaft	Ø 8 mm
Shaft length	L: 20 mm
Max. Permissible shaft loading radial	125 N
Max. Permissible shaft loading axial	120 N
Shaft	Ø 10 mm
Shaft length	L: 20 mm
Max. Permissible shaft loading radial	220 N
Max. Permissible shaft loading axial	120 N
Shaft	Ø 3/8", 9.525 mm, Ø 3/8"
Shaft length	L: 20 mm, L: 0.787 in
Max. Permissible shaft loading radial	220 N, 22.434 kp
Max. Permissible shaft loading axial	120 N, 12.237 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	8000 rpm

Electrical Data	
Power supply/Current consumption	10 VDC up to 32 VDC: max. 100 mA
Power consumption	max. 1 W

Sensor data	
Singleturn technology	innovative hall sensor technology
Singleturn resolution	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 262,144 revolutions (18 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/s² (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	1000 m/s² (6 ms)
Design:	according DIN VDE 0160
Turn on time:	<1,5 s

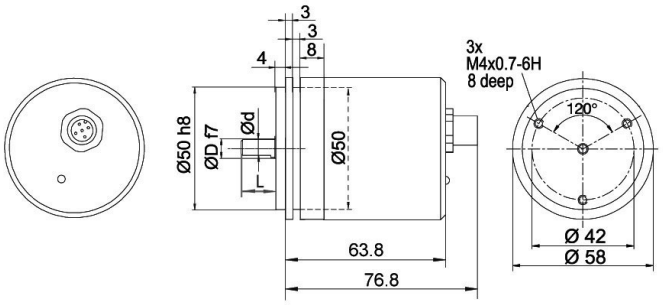
Interface	
Interface:	**CAN**
CAN physical layer:	ISO 11898 (High Speed CAN)
Protocol:	ISO 11898 (High Speed CAN)
Baud rate:	Auto-Baud-Detection
Standard Preset configuration:	(other configurations on request)
Direction of counting:	(View from shaft end) ccw
ECU-adress:	0x 0A
Process data Identifier:	0x18FF000A
PGN:	0xFF00
Process data mapping:	Byte 0-3 32 Bit Position Value Byte 4 8 Bit Error Register PDU timer and Position Preset can be adjusted by PGN configration 0xEF00 (Prop. A)
PDU - Time:	50 ms (default)

Configuration - PGN:	0x EF 00 (Prop.A)
Byte 0:	0x 01
Byte 1:	0x FF
Byte 2:	PDU time LSB
Byte 3:	PDU time MSB
Byte 4:	Preset LSB
Byte 5, 6:	Preset
Byte 7:	Preset MSB

General Data	
Connections	connector outlet
Protection rating (EN 60529)	IP67, shaft sealed to IP65
Operating temperature	-40 °C up to +85 °C, -40 °F up to +176 °F
Storage temperature	-40 °C up to +100 °C, -40 °F up to +212 °F

More Information
General technical data **http://www.wachendorff-automation.com/gtd**
Options **http://www.wachendorff-automation.com/acc**

WDGA 58A CAN SAE J1939, galv. isolation, with M12x1, axial CB5, 5-pin

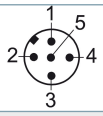


D = 6, L = 12, d = 5.3 shaft with flat
D = 8, L = 20, d = 7.5 shaft with flat
D = 10, L = 20, d = 10 shaft with out flat*
D = 3/8", L = 20, d = 8.3 shaft with flat

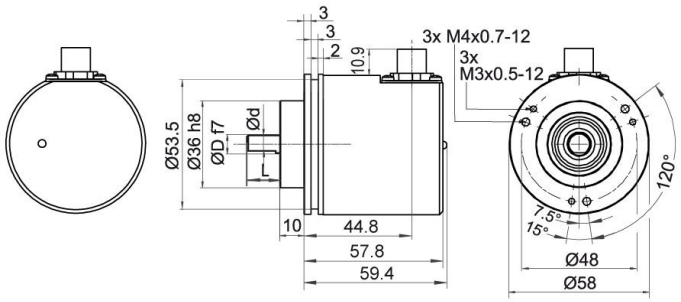
*option full IP67 version: D=Ø 10 mm)
D = 10, L = 20, d = 9 shaft with flat

Description

CB5 axial, 5-pin, shield connected to encoder housing

Assignments	
	CB5
	
(+) Vcc	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1

WDGA 58A CAN SAE J1939, galv. isolation, with M12x1, CC5, radial, 5-pin

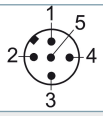


D = 6, L = 12, d = 5.3 shaft with flat
D = 8, L = 20, d = 7.5 shaft with flat
D = 10, L = 20, d = 10 shaft with out flat*
D = 3/8", L = 20, d = 8.3 shaft with flat

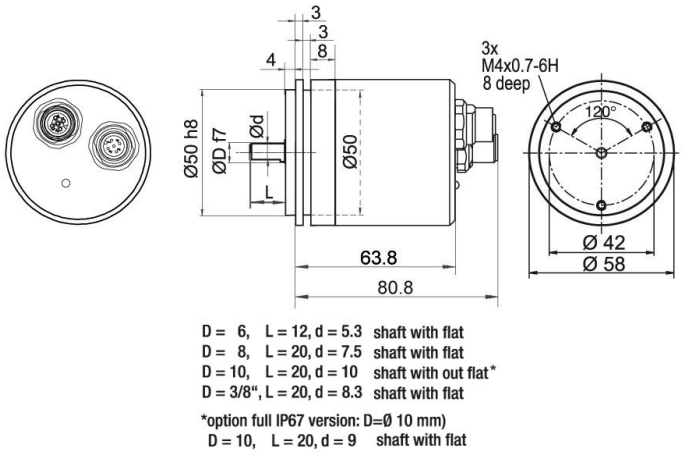
*option full IP67 version: D=Ø 10 mm)
D = 10, L = 20, d = 9 shaft with flat

Description

CC5 radial, 5-pin, shield connected to encoder housing

Assignments	
	CC5
	
(+) Vcc	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1

WDGA 58A CAN SAE J1939, galv. isolation, with 2x M12x1, axial DB5

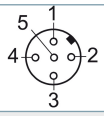


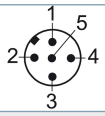
D = 6, L = 12, d = 5.3 shaft with flat
D = 8, L = 20, d = 7.5 shaft with flat
D = 10, L = 20, d = 10 shaft with out flat*
D = 3/8", L = 20, d = 8.3 shaft with flat

*option full IP67 version: D=Ø 10 mm)
D = 10, L = 20, d = 9 shaft with flat

Description

DB5 axial, 5-pin, shield connected to encoder housing

Assignments	
	DB5
	
Female connector	M12x1, 5-pin
(+) Vcc	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1

Assignments	
	DB5
	
Connector	M12x1, 5-pin
(+) Vcc	2
GND	3
CANHigh	4
CANLow	5
CANGND shield	1

Options

120 Ohm terminating resistor	Order key
The encoder WDGA 58A CAN SAE J1939 galv. is also available with fixed 120 Ohm terminating resistor.	**AEO**

Shafts sealed to IP67 (shaft with flat: Ø 10 mm only)	Order key
The encoder WDG 58A CAN SAE J1939 galv. isolation can be supplied in a full IP67 version. Max. RPM: 3500 min'-1 Permitted Shaft-Loading: axial 100 N; radial 110 N Starting-torque: approx. 4 Ncm at ambient temperature	**AAS**

Example Order No.	Type		Your encoder
WDGA 58A	WDGA 58A		WDGA 58A
	Shaft	**Order key**	
06	Ø 6 mm	06	
	Ø 8 mm	08	
	Ø 10 mm	10	
	Ø 3/8", 9.525 mm Ø 3/8"	4Z	
	Singleturn Resolution	**Order key**	
12	Singleturn resolution 14 Bit: (standard) max. 14 Bit possible	14	
	Multiturn Resolution	**Order key**	
18	Multiturn 18 Bit (standard) max. 32 Bit possible No Multiturn = 00	18	
	Data protocol	**Order key**	
CJ	CAN SAE J1939 (galv. isolation)	CJ	
	Software	**Order key**	
A	up to date release	A	
	Code	**Order key**	
B	binary	B	
	Power supply	**Order key**	
0	10 V up to 32 V (standard)	0	
	Galvanic isolation	**Order key**	
1	yes	1	
	Electrical connections	**Order key**	
CB5	**Connector:**		
	sensor-connector, M12x1, 5-pin, axial, IP67, shield connected to encoder housing	CB5	
	sensor-connector, M12x1, 5-pin, radial, IP67, shield connected to encoder housing	CC5	
	sensor-connector/female connector, 2x M12x1, 5-pin, axial, IP67, shield connected to encoder housing	DB5	
	Options	**Order key**	
	Without option	Empty	
	120 Ohm terminating resistor	AEO	
	Shafts sealed to IP67 (shaft with flat: Ø 10 mm only)	AAS	

Example Order No.	WDGA 58A	06	12	18	CJ	A	B	0	1	CB5	
	WDGA 58A											Example Order No.

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

WACHENDORFF

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