

Draw-wire system SZG65 - WDGA CANopen



- Exceptionally rugged length sensor
- Measuring range: 0 - 1250 mm
- Interface: CANopen CiA 406
- free configurable
- IP65 absolute encoder WDGA CANopen ready-mounted

www.wachendorff-automation.com/szgwgdacan

The draw-wire encoder SZG65 WDGA CANopen was developed for use in harsh environments. The various methods of installation mean high flexibility. It can be used even where space is tight, thanks to its compact dimensions. The SZG65 WDGA CANopen can be mounted quickly and with its highly precise mechanics provides reliable accurate length measurement, with all advantages, which result from an absolute length measurement. e. g. The position-value is saved, if supply breaks down and is available immediately if supply gets recovered. Doing a reference run isn't necessary. The intelligent spring-suspension and the nylon-coated stainless-steel wire cable guarantee long-service life, even in difficult operating conditions. The encoder is already installed.

Typical areas of application include:

lift/elevators, lifting platforms, theatre stages, fork lifts and cranes.

Measurement ranges: 0 mm up to 1.250 mm,

Resolution measurement ranges:

Position per mm	Bit per revolution
2.5	8
5.1	9
10.2	10
20.4	11
40.9	12

Interface: CANopen CiA 406

Deviation: Less than 0.02 % of the final value.

Measuring wire: 0.48 mm of thick nylon coated high-grade steel wire. (incl. coating) eye, see drawing

Wire connection: eye, see drawing

max. wire speed: 7.5 m/sec.

Pull out strength: approx. 0.14 kg

System-unit housing: anodised aluminium/ steel case chrome-plated

Weight: SZG incl. encoder max. 1 kg

Life expectancy: at least 10 million cycles

Operating temperature: -40 °C up to +80 °C

Storage temperature: -40 °C up to +80 °C

Interface

Protocol:

CAN

CANopen

- Communication profil CiA 301
- Device Profile for encoder CiA 406 V3.2 class C2

Node number: 0 up to 127 (default 127)

Baud rate: 10 kBaud up to 1 MBaud with automatic bit rate detection

The standard settings as well as any customization in the software can be changed via LSS (CiA 305) and the SDO protocol, e. g. PDOs, Scaling, Heartbeat, Node-ID, Baud rate, etc.

Programmable CAN transmission modes

- **Synchronous mode:** when a synchronisation telegram (SYNC) is received from another bus node, PDOs are transmitted independently.
- **Asynchronous mode:** a PDO message is triggered by an internal event. (e.g. change of measured valued, internal timer, etc.)

Electrical Data:

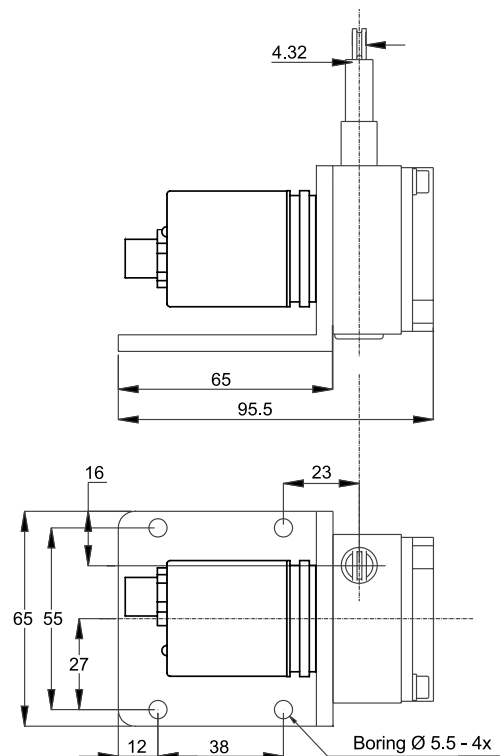
Supply voltage: 10 VDC up to 30 VDC

max. 50 mA

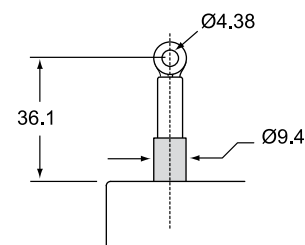
Power consumption: max. 0.5 W

Connection configuration for encoder WDGA CANopen:

Definition	connector pin (connector-encoder)	Sensor connector pin assignment 5-pin
U_B	2	
Ground (GND)	3	
CAN _{High}	4	
CAN _{Low}	5	
CAN _{GND} / shield	1	



All details in mm and dependent on the encoder configuration



Order No.:

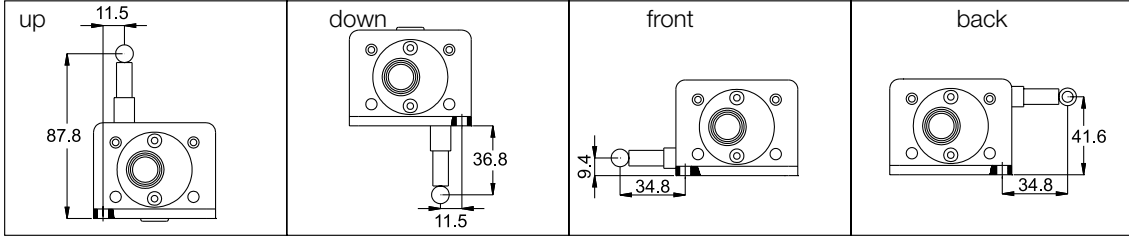
UP

DN

FR

BK

Direction:



Ordering information:

Measurement range:

1250 = 1.250 mm

Measurement wire:

N = 0.48 mm of thick nylon coated high-grade steel wire

Mounting direction:

UP = Wire exit up

DN = Wire exit down

FR = Wire exit front

BK = Wire exit back

Singleturn resolution in bit per revolution

(1250 mm measurement ranges)

8 => 8 bit (= approx. 2.5 position/mm)

9 => 9 bit (= approx. 5.1 position/mm)

10 => 10 bit (= approx. 10.2 position/mm)

11 => 11 bit (= approx. 20.4 position/mm)

12 => 12 bit (= approx. 40.9 position/mm)

Multiturn resolution

18 = 18 bit

Interface

CO = CANopen

Software:

A = up to date release

Code

B = binary

Power supply

0 = 10 V up to 30 V

Galvanic isolation

0 = no

Connection

CB5 = connector, 5-pin, axial

Your system

SZG65

N

18

CO

A

B

0

0

CB5

Montageanleitung absolute Drehgeber WDGA EnDra®, CANopen,

Assembly instructions for WDGA EnDra®, CANopen absolute encoder, Instructions de montage, capteur angulaire WDGA EnDra®, CANopen, Istruzioni per l'uso trasduttore assoluto WDGA EnDra®, CANopen, Instrucciones de montaje codificador absoluto WDGA EnDra®, CANopen.

Wachendorff Automation GmbH & Co. KG

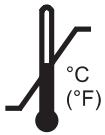
Industriestraße 7 • D-65366 Geisenheim

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Fax: +49(0)67 22/99 65-70

E-Mail: wdg@wachendorff.de

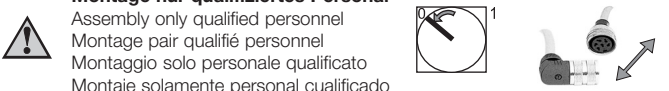
www.wachendorff-automation.de



-40 °C ... +80 °C
(-40 °F ... +176 °F)

-40 °C ... +100 °C
(-40 °F ... +212 °F)

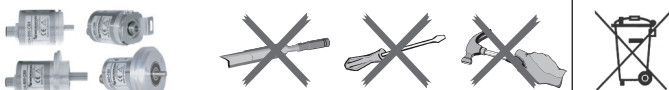
Montage nur qualifiziertes Personal
 Assembly only qualified personnel
 Montage par qualifié personnel
 Montaggio solo personale qualificato
 Montaje solamente personal cualificado



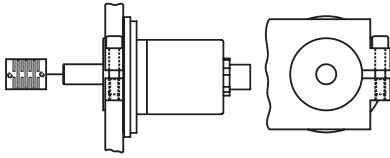
DIN EN 100015-1



Nur für industriellen Einsatz!
 Only for industrial application!
 Uniquement réservé à l'emploi industriel !
 Solo per l'uso industriale !
 ¡Solamente para uso industrial!



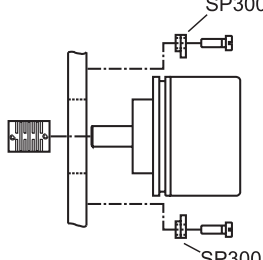
WDGA58B
WDGA58S
WDGA58V



M3 (8.8)
Ma = 1 Nm

M4 (8.8)
Ma = 2 Nm

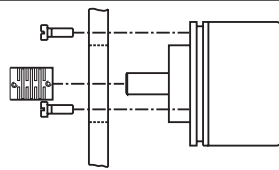
WDGA58A
WDGA58B
WDGA58S
WDGA36Z



M3 (8.8)
Ma = 1 Nm

M4 (8.8)
Ma = 2 Nm

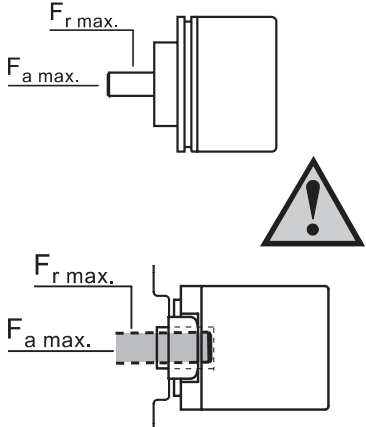
WDGA58A
WDGA58B
WDGA58S
WDGA58V
WDGA36Z



M3 (8.8)
Ma = 1 Nm

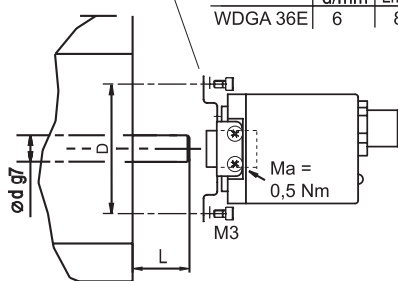
M4 (8.8)
Ma = 2 Nm

Standard	F _r max.	F _a max.
WDGA58A WDGA58B Ø 6 mm Ø 10 mm	125 N 220 N	120 N 120 N
WDGA58S WDGA58V Ø 10 mm	100 N	100 N
WDGA36Z	80 N	50 N
WDGA36E WDGA58E	80 N 80 N	50 N 50 N



WDGA36E **Artikelnr.,** Item number, Numéro d'article, Número de artículo : WDGDS10016

d/mm	Lmin	Lmax	D
WDGA 36E 6	8	17	42

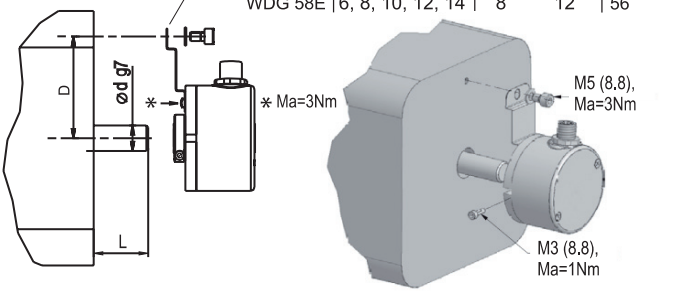


M3 (8.8)
Ma = 1 Nm

Ma = 0,5 Nm

WDGA58E **Artikelnr.,** Item number, Numéro d'article, Número de artículo : WDGDS10001

d/mm	Lmin	Lmax	D
WDG 58E 6, 8, 10, 12, 14	8	12	56



* Ma=3Nm

M5 (8.8), Ma=3Nm

M3 (8.8), Ma=1Nm

Übertragungsrate Transmission rate Taux de transfert Velocità di trasferimento Velocidad de transmisión	max. Buslänge Max. bus length Longueur max du port Lunghezza massima linea derivata Longitud máx. de bus	max. Stichleitungslänge Max. stub line length Longueur max de la ligne d'accord Lunghezza massima linea derivata Longitud máx. línea de empalme
20 kBit/s	1000 m	7,5 m
100 kBit/s	500 m	3,75 m
250 kBit/s	270 m	1,5 m
500 kBit/s	100 m	0,75 m
1000 kBit/s	40 m	0,3 m

Definition, Definition, Définition Definizione, Definición	Steckerpin, Plug pin, Connecteur points, Spinotto, Pin conector	Kabel, cable, câble, Cable, cavo
U _B (10 VDC - 30 VDC)	2	br
Ground (GND)	3	wh
CAN High	4	gn
CAN Low	5	ye
CAN GND/Schirm, Shield, Ecran, Pantalla, Schermo	1	gy

Bitte beachten Sie das Handbuch zum WDGA CANopen unter www.wachendorff-automation.de/handbuchwdga
 Please observe the handbook for WDGA CANopen under
 Veuillez consulter le manuel WDGA de CANopen sur
 Osservare il manuale del WDGA CANopen sotto
 Por favor, tengan en cuenta el manual WDGA CANopen en
www.wachendorff-automation.com/manualwdga

Die EDS-Datei finden Sie unter www.wachendorff-automation.de/eds
 You will find the EDS file under
 Vous trouverez le fichier EDS sur
 Il file EDS può essere trovato sotto
 Encontrará el archivo EDS en
www.wachendorff-automation.com/eds