

Draw-wire system SZG122 WDGA CANopen



Typical areas of application include:

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

Measurement ranges:

0 cm up to 1000 cm, 0 cm up to 1500 cm, 0 cm up to 2000 cm,
 0 cm up to 2500 cm, 0 cm up to 3000 cm, 0 cm up to 3800 cm
 and 0 cm up to 4300 cm

Resolution measurement ranges:

Position per mm	Bit per revolution
0,83	8
1,65	9
3,31	10
6,62	11
13,23	12
26,47	13

Deviation: Less than 0.02 % of the final value.

Measuring wire:

Wire connection: eye
 max. wire speed: 1.5 m/sec.

Ø	Material	Measurement range
0.86 mm	thick nylon coated high-grade stainless steel wire	0 cm up to 1.000 cm, 0 cm up to 1.500 cm
0.48 mm	thick nylon coated high-grade stainless steel wire	0 cm up to 2.000 cm, 0 cm up to 2.500 cm, 0 cm bis 3.000 cm
0.38 mm	steel wire	0 cm up to 3.800 cm 0 cm up to 4.300 cm

System-unit housing: anodised aluminium

Weight: SZG incl. encoder max. 6.5 kg.

Life expectancy: At least 10 million cycles.

Operating temperature: -20 °C up to +80 °C.

Storage temperature: -30 °C up to +80 °C.

Interface

CAN
 Protocol: 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.

It is recommend to configure object 6000 h resolution and direction to ccw.

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.)

- Exceptionally rugged length sensor
- Measuring range 0 cm up to 1000 cm to 0 cm up to 4300 cm
- Interface: CANopen CiA 406
- IP65 absolute encoder WDGA CANopen ready-mounted

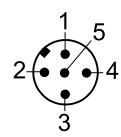
www.wachendorff-automation.com/szg122wdgacan

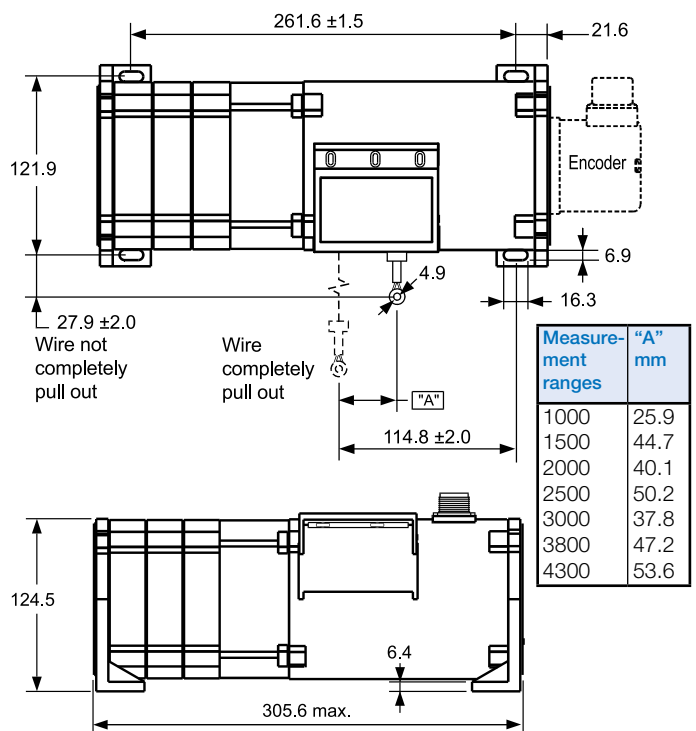
The draw-wire encoder SZG122 WDGA CANopen was developed for use in harsh environments. The various methods of installation mean high flexibility. It can be used even where space is tight, thanks to its compact dimensions. The SZG122 WDGA CANopen can be mounted quickly and with its highly precise mechanics 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.

Electrical Data:

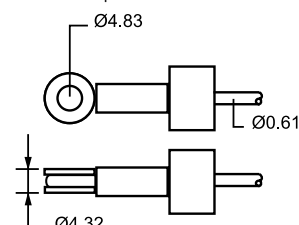
Supply voltage: 10 VDC up to 30 VDC
 max. 50 mA
 Power consumption: max. 0.5 W

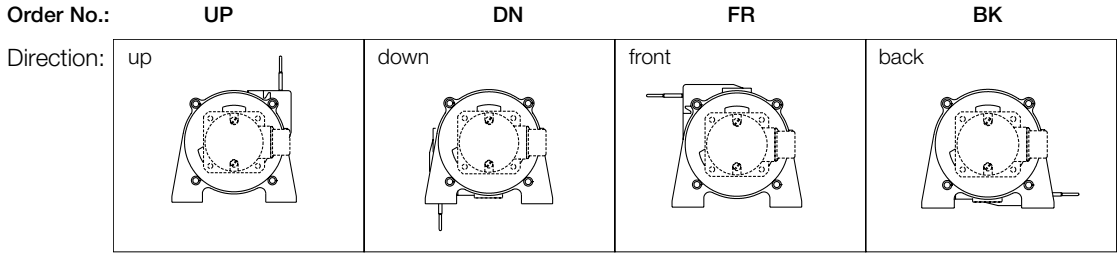
Connection configuration for encoder WDGA CANopen:

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.





Ordering information:

Measurement range:
1000 = 1.000 cm, 1500 = 1.500 cm, 2000 = 2.000 cm, 2500 = 2.500 cm,
3000 = 3.000 cm, 3800 = 3.800 cm, 4300 = 4.300 cm

Messeil:
N = Thick nylon coated high-grade stainless steel wire or stainless 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:
(measurement ranges page 1)
08 => 8 bit (= approx. 0,83 Position/mm)
09 => 9 bit (= approx. 1,65 Position/mm)
10 => 10 bit (= approx. 3,31 Position/mm)
11 => 11 bit (= approx. 6,62 Position/mm)
12 => 12 bit (= approx. 13,23 Position/mm)
13 => 13 bit (= approx. 26,47 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 32 V

Galvanic isolation
0 = no

Connection, axial
CB5 = connector, axial, 5-pin

Example of
your system

SZG122 2500 N UP 10 18 CO A B 0 5 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.

	-40 °C ... +80 °C (-40 °F ... +176 °F)	WDGA58V: -20 °C ... +80 °C (-4 °F ... 176 °F)
	-40 °C ... +100 °C (-40 °F ... +212 °F)	-20 °C ... +80 °C (-4 °F ... 176 °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

Sicherheitsmassnahmen/safety instructions:
 Die Produkte dürfen nur in industrieller Umgebung und im NICHT sicherheitsrelevanten Bereich eingesetzt werden. The products are only designed and produced for use in industrial environments and NOT for use in safety related applications.

WDGA58B WDGA58S WDGA58V		M3 (8.8) Ma = 1 Nm M4 (8.8) Ma = 2 Nm
-------------------------------	--	--

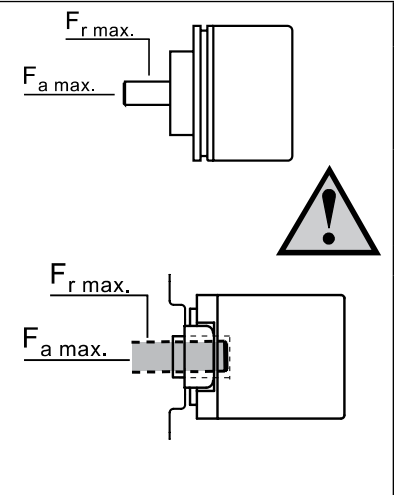
WDGA58A WDGA58B WDGA58S WDGA36A		M3 (8.8) Ma = 1 Nm M4 (8.8) Ma = 2 Nm
--	--	--

WDGA58A WDGA58B WDGA58S WDGA58V WDGA36A		M3 (8.8) Ma = 1 Nm M4 (8.8) Ma = 2 Nm
---	--	--

Übertragungsrage	max. Buslänge	max. Stichleitungslänge
Transmission rate	Max. bus length	Max. stub line length
Taux de transfert	Longueur max du port	Longueur max de la ligne d'accord
Velocità di trasferimento	Lunghezza massima bus	Lunghezza massima linea derivata
Velocidad de transmisión	Longitud máx. de bus	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

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

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
WDGA36A	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

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

d/mm	Lmin	Lmax	D
6, 6.35 (1/4"), 7, 8, 9.525 (3/8"), 10, 12, 14	11	15	56

M5 (8.8), Ma=3Nm
M3 (8.8), Ma=1Nm

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

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