Wachendorff Automation GmbH & Co. KG
Industriestraße 7 • D-65366 Geisenheim
Tel.: +49 (0) 67 22 / 99 65 - 25 • Fax: +49 (0) 67 22 / 99 65 - 70
E-Mail: wdg@wachendorff.de • www.wachendorff.de

Draw-wire system SZG65 - WDGA SSI

- Exceptionally rugged length sensor
- Measuring range: 0 - 1250 mm
- Interface: SSI
- IP65 absolute encoder WDGA SSI ready-mounted

www.wachendorff-automation.com/szgwdgassi

The draw-wire encoder SZG65 WDGA SSI 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 SSI can be mounted quickly and with its highly precise mechanics provides reliable accurate length measurement, with all advantages, which result from an absolute lenght 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: SSI

Deviation: Less than 0.02 % of the final value.

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

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

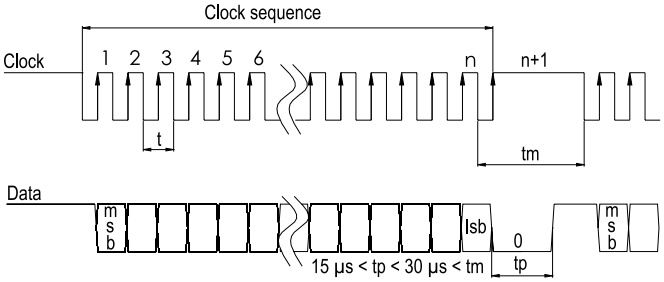
Operating temperature: -40 °C up to +80 °C
Storage temperature: -40 °C up to +80 °C

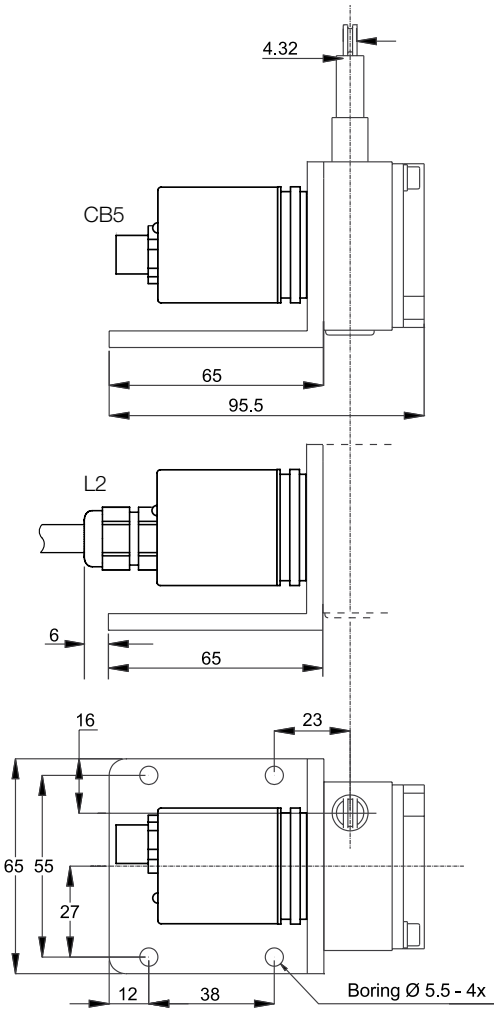
Interface	**SSI**
Clock input:	via opto-coupler
Clock frequency:	100 kHz up to 500 kHz up to 2 MHz on request
Data output:	RS485/RS422 compatible
Output code:	gray or binary
SSI output:	Angular-/position value
Parity bit:	optional (even/odd)
Error bit:	optional
Turn on time:	<1.5 s
Positive direction of counting: (View on shaft)	DIR = GND cw DIR = +Ub ⇨ccw
Set to zero:	Preset = apply +Ub for 2 s

Electrical Data:

Supply voltage:	10 VDC up to 30 VDC; 4.75 VDC up to 5.5 VDC
	max. 80 mA
Power consumption:	max. 0.8 W

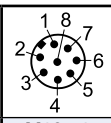
Protocol SSI:

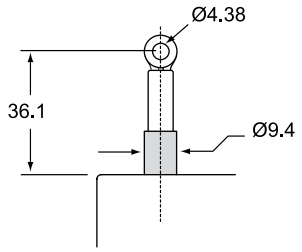




All details in mm and dependent on the encoder configuration.

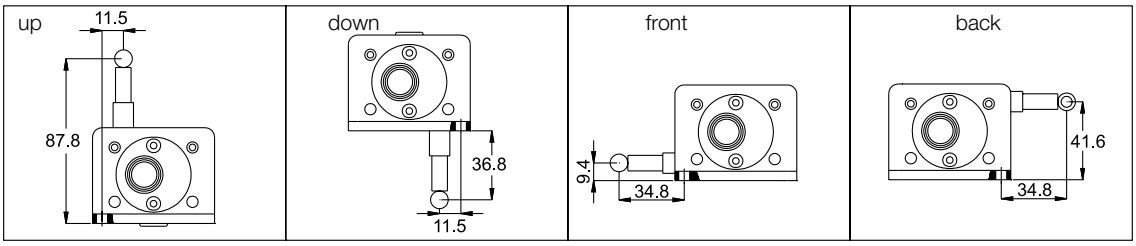
Connection configuration for encoder WDGA SSI:

		
Connection / cable	M12 x1	cable outlet
Description	CB8 axial, 8-pin	L2, axial
GND	1	wh
Plus U+	2	bn
SSI CLK+	3	gn
SSI CLK-	4	ye
SSI DATA+	5	gy
SSI DATA-	6	pk
PRESET	7	bu
DIR	8	rd
Shield	housing	housing K1 n. c.



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 (example) = 6 bit up to 24 bit

Interface
SI = SSI

Software:
A = up to date release

Code
B = binary
G = gray

Power supply
0 = 10 V up to 30 V
1 = 4,75 V up to 5,5 V

Galvanic isolation
1 = yes

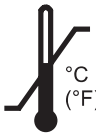
Connection
CB8 = connector, axial, 8-pin
L2 = cable, IP65, 2 m, shield connected to encoder housing

Your system	SZG65		N			18	SI	A			1	

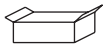
Wachendorff Automation GmbH & Co. KG
Industriestraße 7 • D-65366 Geisenheim
Tel.: +49 (0) 67 22 / 99 65 -523
Fax: +49 (0) 67 22 / 99 65 -70
E-Mail: wdg@wachendorff.de
www.wachendorff-automation.de

Montageanleitung Absolutgeber WDGA EnDra® SSI,

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



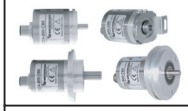
-40 °C ... +80 °C
(-40 °F ... +176 °F)

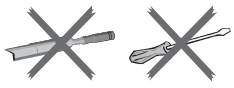


-40 °C ... +100 °C
(-40 °F ... +212 °F)

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

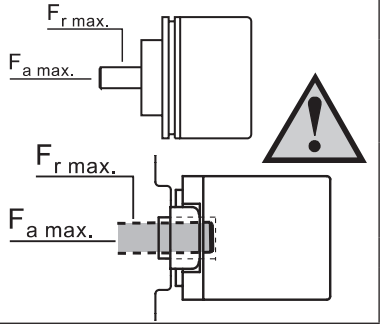
DIN EN 100015-1



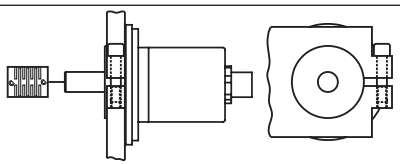


Nur für industriellen Einsatz! Only for industrial application! Uniquement réservé à l'emploi industriel ! Solo per l'uso industriale ! ¡Solamente para uso industrial!

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



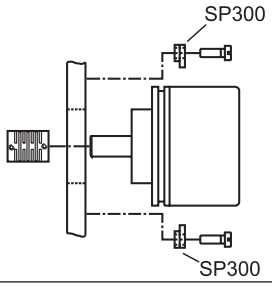
WDGA58B
WDGA58S
WDGA58V



M3 (8.8)
Ma = 1 Nm

M4 (8.8)
Ma = 2 Nm

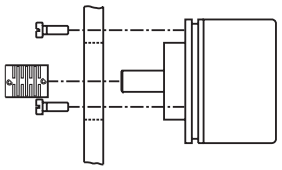
WDGA58A
WDGA58B
WDGA58S
WDGA36Z



M3 (8.8)
Ma = 1 Nm

M4 (8.8)
Ma = 2 Nm

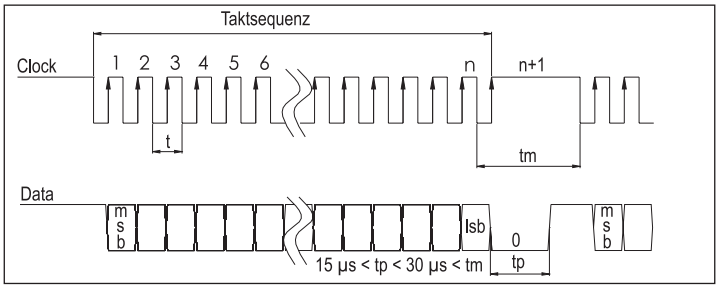
WDGA58A
WDGA58B
WDGA58S
WDGA58V
WDGA36Z



M3 (8.8)
Ma = 1 Nm

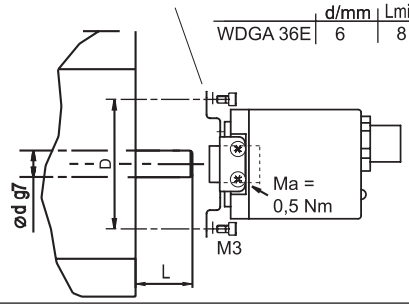
M4 (8.8)
Ma = 2 Nm

max. Kabellänge max. cable length Longueur max du Câble Lunghezza massima Cable Longitud máx. de cable	Übertragungsrate Transmission rate Taux de transfert Velocità di trasferimento Velocidad de transmisión
3 m	< 1000 Khz
6 m	< 800 Khz
12 m	< 700 Khz
25 m	< 600 Khz
50 m	< 500 Khz
100 m	< 400 Khz
200 m	< 300 Khz
500 m	= 100 Khz



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

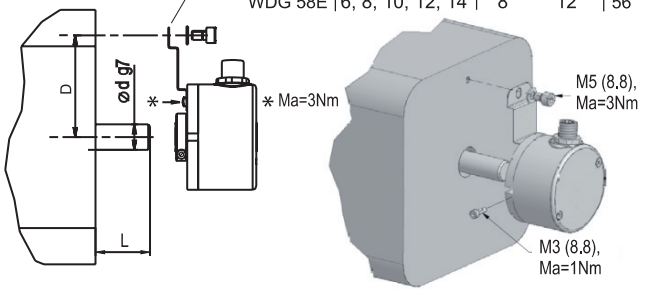
	d/mm	Lmin.	Lmax.	D
WDGA 36E	6	8	17	42



M3 (8.8)
Ma = 1 Nm

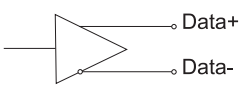
WDGA58E **Artikelnr.,** Item number, Numéro d'article, Número de artículo :
WDGDS10001

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



	Stecker, connector, Fiche, Conector, spina			Kabel, cable, Câble,Cable, cavo
	CB8/CC8 (M12, 8-pin)	C5 (M23 12-pin)	CH8 (M16 8-pin)	K1/ L2/ L3
GND	1	12	2	wh
Plus U+	2	11	1	bn
SSI CLK+	3	2	6	gn
SSI CLK-	4	1	5	ye
SSI DATA+	5	3	4	gy
SSI DATA-	6	4	3	pk
PRESET	7	9	8	bu
DIR	8	8	7	rd
Schirm Shield Ecran Pantalla Schermo	Gehäuse housing boîte carcasa casa	Gehäuse housing boîte carcasa casa	Gehäuse housing boîte carcasa casa	K1: offen, open, ouvert,aperto, abierto L2/L3: Gehäuse, housing, boîte, carcasa, casa

Ausgangsschaltung
Output Circuit,
Couplage de sortie,
Circuito d'uscita
Circuito de salida
RS485



Eingangsschaltung, Input Circuit,
Couplage d'entrée, circuito d'ingresso,
Circuito de entrada

Einschaltzeit, System start-up Time,
Temps de commutation, Tempo di commutazione, tiempo de conmutación: <1,5 s

Positive Zählrichtung: (Blick auf Welle)
Complement = nc ⇨ cw
Complement = +Ub ⇨ ccw
Preset = +Ub für 2 s

19.11.2010 Angaben ohne Gewähr, Irrtümer und Änderungen vorbehalten. Information not warranted. Errors and modifications excepted. Spécifications sous réserve d'erreur. Sauf erreur ou omission. Indicaciones sin garantía. Se reserva el derecho de error y modificación. Indicazioni senza garanzia. Salvo errori e modifiche. Artikelnummer, Item number, Numéro d'article, Número de artículo : **BAWDGAMA01_02**