

## Draw-wire system SZG93 WDG incremental



- Exceptionally rugged length sensor
- Measuring range: 0 - 2.500 mm
- Output: incremental signals
- IP65 encoder ready-mounted

[www.wachendorff-automation.com/szg93wdginc](http://www.wachendorff-automation.com/szg93wdginc)

The draw-wire encoder SZG93 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 SZG93 can be mounted quickly and with its highly precise mechanics provides reliable accurate length measurement. 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 2.500 mm

### Resolution Measurement ranges:

Various, depending on encoder up to 50 pulses/mm  
at 4 x edge evaluation

WDG 40Z with 200 PPR = Resolution: 1 pulses/mm

WDG 40Z with 1000 PPR = Resolution: 5 pulses/mm

WDG 40Z with 2000 PPR = Resolution: 10 pulses/mm

WDG 40Z with 2500 PPR = Resolution: 12,5 pulses/mm

### Electrical Output:

2 channels (A follows B) are shifted by 90°.

H24 = 10 VDC up to 30 VDC, pushpull, 40 mA per channel

H05 = 4,75 VDC up to 5,5 VDC, pushpull, 40 mA per channel

**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. 0,4 kg

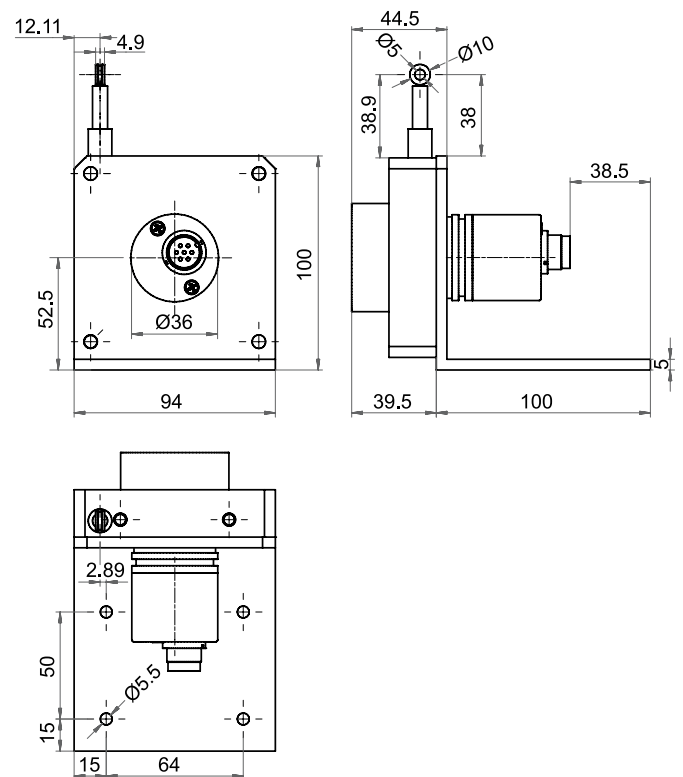
**System-unit housing:** anodised aluminium

**Weight:** SZG incl. encoder 0,817 kg

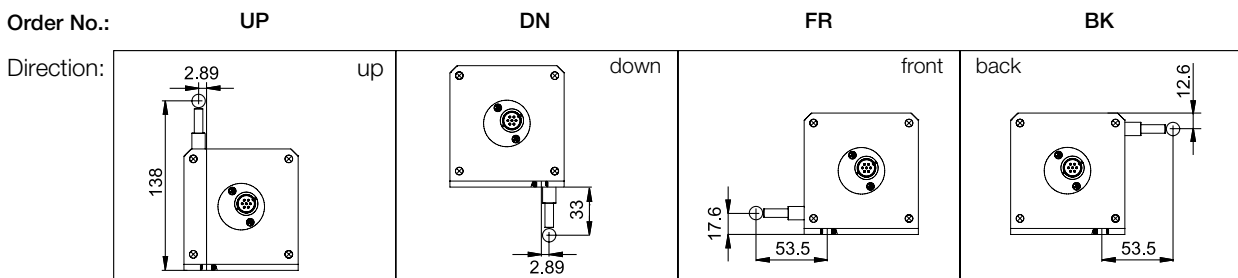
**Life expectancy:** at least 10 million cycles

Operating temperature: -20 °C up to +70 °C

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



All details in mm and dependent on the encoder configuration.



**Example of the order of a Draw-wire system:**

SZG93 - 2.500 - N - UP - H24 - 05

- 2500: Draw wire system 2.500 mm measurement range;
- N: nylon coated high-grade steel wire
- UP: wire exit up
- H24: incl. incremental encoder 40Z with channels:  
A follows B, signal output: H24 = 10 VDC up to 30 VDC, HTL
- Connections: connector 7-pin, axial
- 05: Resolution 5 pulses/mm

**Order number: SZG93 - 2.500 - N - UP - H24 - 05**

**Position: 1 2 3 xx yy zz**

Short description	Position	Part of order number	Description
Type	1	SZG93	Draw wire system, housing 94 mm
Measurement range (MB)	2	2.500	measurement range 2.500 mm
Measurement wire	3	N	0.48 mm of thick nylon coated high-grade steel wire
Mounting direction	xx	UP DN FR BK	Wire exit up Wire exit down Wire exit back Wire exit back
Output	yyy	H24 = 10 VDC - 30 VDC, HTL H05 = 4,75 VDC - 5,5 VDC, TTL	Channels: A follows B, signal output
Solution *1	zz	01 05 10 12 zz*	1 pulses per mm 5 pulses per mm 10 pulses per mm 12,5 pulses per mm You specify another encoder, please, use the order number of the WDG 40Z type. This encoder is assembled by us.

\*1 if you enter here 01, 05, 10 or 12 you will get a ready-mounted encoder;

Order number: WDG 40Z-ZZZZ-ABN-H24-S2 (pulses/mm):

For resolution 1 pulses/mm = 200, 5 pulses/mm = 1000, 10 pulses/mm = 2000 and 12,5 pulses/mm = 2500 with the following qualities:

Channels: A follows B: 2 channels shifted by 90° plus inverted signals

Output: H24: 10 Volt up to 30 Volt, 40 mA push-pull, H05 = 4.75 Volt up to 5.5 Volt, 40 mA push-pull

Connection: connector 7-pin, axial (PIN-arrangement: B=4, A=3, GND=1, +UB=2, Error=6)

If you like to specify your individual encoder, please enter at the order number xx

and define from the data sheet WDG 40A your special encoder or call our technical support.

**Ordering information:**

