

## Set - Guided belt measuring unit Silent Move Compact WDGMSMZK For heights up to 120 metres (393.70 ft)



- Quiet and non-slip digital shaft copying for universal mounting on a lift cabin
- Use up to speeds of 4 m/s (800 ft/min).
- Particularly quiet and smooth-running, thanks to special belts and low-noise suspension.
- User-friendly, reliable alternative to switches and sensors.
- Accuracy in the shaft:
  - Incremental encoder WDG158B  
< 0.03 mm/pulse (0.00133 inch/pulse) 5,000 pulses
  - Absolute encoder WDGA58B multiturm, with CANopen interface: 4,096 steps/turn and 262,144 (18 bit multiturm) turns, CANopen LIFT interface: 4,096 steps/turn and 262,144 (18 bit multiturm) turns or SSI interface: 4,096 (12 bit) steps/turn and 8,192 (13 bit multiturm) turns
  - 16 Bit < 0.003 mm (0.000102 inch)
  - 13 Bit < 0.02 mm (0.000813 inch)
  - 12 Bit < 0.04 mm (0.001627 inch)
- Fast and flexible installation with complete set of mechanical parts.

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

Put together your own measuring unit for shaft copying, by selecting an encoder and specifying the length of the special belt.



Incremental encoder  
WDG158B



Absolute encoder  
WDGA58B

### Incremental encoders WDG1:

#### Calculation of resolution in the shaft:

Effective circumference of pulley: 169.24 mm (6.6629 inch)

$$\text{Res. in mm (inch)} = \frac{169.24 \text{ mm (6.6629 inch)}}{\text{Pulse number of encoder (PPR)}}$$

$$\text{Res. in pulses/mm (inch)} = \frac{\text{Pulse number of encoder (PPR)}}{169.24 \text{ mm (6.6629 inch)}}$$

#### Calculation of the limit frequency:

$$f_g \text{ (Hz)} = \frac{\text{Pulse number of encoder (PPR)} \times \text{max. speed (m/sec) (ft/sec)}}{0.16924 \text{ m (0.5552493 ft)}}$$

#### Calculation of the traverse path:

$$s \text{ (m) (ft)} = \frac{\text{Pulses (l)}}{\text{Pulse number of encoder (PPR)}} \times 0.16924 \text{ m (0.5552493 ft)}$$



Special belt for exceptionally quiet, non-slip measuring.

**Ordering information - Guided belt landing system WDGMSMZK:**

Description:	Order No.:
<p><b>Unit (without encoder):</b> Belt pulley, 2 tensioning rollers, encoder attachment, attachment of the belt in the shaft, tensioning device and fixing for the belt. Please order the special belt separately. (see below: Silent Move special belt, calculation of length)</p>	WDGMSMZK
<p><b>Incremental variants</b> <b>Unit with incremental encoder 58B10600ABNH24K3:</b> For an accuracy of measurement of 0.28 mm (0.011105 inch) or 3.5 pulses/mm (90.1 pulses/inch) with a limit frequency of 14.1 kHz and a cab speed of 4 m/s (787.4 ft/min). Encoder type 58B10600ABNG24K3: Shaft: Ø 10 mm, pulse number: 600 PPR, channels: AB and zero pulse, G24: 10 up to 30 VDC, channels push-pull, K3: lead outlet 2 m cable, radial</p>	WDGMSMZK600ABNH24K3
<p><b>Unit with incremental encoder 58B101000ABNH24K3:</b> For an accuracy of measurement of 0.17 mm (0.006663 inch) or 5.8 pulses per mm (150.1 pulses per inch) with a limit frequency of 23.5 kHz and a cab speed of 4 m/s (787.4 ft/min). Encoder type 58B101000ABNG24K3: Shaft: Ø 10 mm, pulse number: 1,000 PPR, channels: AB and zero pulse, G24: 10 VDC up to 30 VDC, channels push-pull, K3: lead outlet 2 m cable, radial</p>	WDGMSMZK1000ABNH24K3
<p><b>Unit with inkremental encoder 58B102500ABNH24K3:</b> For an accuracy of measurement of 0.07 mm (0.002665 inch) or 4.7 pulses per mm (375.2 pulses/inch) with a limit frequency of 58.8 kHz and a cab speed of 4 m/s (787.4 ft/min). Encoder type 58B102500ABNH24K3: Shaft: Ø 10 mm, pulse number: 2,500 PPR, channels: AB and zero pulse, H24: 10 VDC up to 30 VDC, channels push-pull, K3: lead outlet 2 m cable, radial</p>	WDGMSMZK2500ABNH24K3
<p><b>Find your incremental encoder:</b> With the aid of the calculation forms for limit frequency and resolution in the shaft and the data sheet WDG158B. All variants defined except optional shaft sealed to IP67.</p>	WDGMSMZKXXXXYYZZSC8
<p><b>Absolute variants WDGA58B CANopen. CANopen LIFT or WDGA58B SSI</b> <b>Unit with absolute multiturn encoder with CANopen CiA 406 interface:</b> For an accuracy of measurement of 0.042 mm (0.001627 inch) or 24.1 steps/mm (614.7 steps/inch). Binary code: 4,096 (12 bit) steps/revolution and max. 262,144 (18 bit) revolutions. 10 VDC up to 30 VDC, clamping flange, 5 pin. connector, radial, 10 m bus line with connector and female connector, T-junction, termination resistor.</p>	WDGMSMZK1218COAB00CC5
<p><b>Unit with absolute multiturn encoder with CANopen LIFT CiA 417 interface:</b> For an accuracy of measurement of 0.042 mm (0.001627 inch) or 24.1 steps/mm (614.7 steps/inch) configurable. Binary Code: 4,096 (12 bit) steps/revolution and max. 262,144 (18 bit) revolutions configurable. Power supply 10 VDC up to 30 VDC, 5 pin. connector, radial, 10 m bus line with connector and female connector, T-junction, termination resistor.</p>	WDGMSMZK1218CLAB00CC5
<p><b>Unit with absolute multiturn encoder with SSI interface*:</b> For an accuracy of measurement of 0.042 mm (0.001627 inch) or 24.1 steps/mm (614.7 steps/inch). * Gray Code (G)/Binary Code (B): 4,096 (12 bit) steps/revolution and 8,192 (13 bit) revolutions. 10 VDC up to 30 VDC, clamping flange, lead outlet 2 m cable, radial</p> <p>Comprehensive technical information on WDGA 58B CANopen / WDGA 58B CANopen LIFT / WDGA 58B SSI - <a href="http://www.wachendorff-automation.com/wdga58bcan">www.wachendorff-automation.com/wdga58bcan</a> /<a href="http://www.wachendorff-automation.com/wdga58bcanlift">wdga58bcanlift</a> /<a href="http://www.wachendorff-automation.com/wdga58bssi">wdga58bssi</a></p>	WDGMSMZK1218SIAX01L3 X = G or B
<p><b>Silent Move Compact special tooth belt:</b> Calculation of the length: Transport height + 5 m (extend accordingly for transition points)</p> <ul style="list-style-type: none"> <li>20 m</li> <li>35 m</li> <li>50 m</li> <li>60 m</li> <li>80 m</li> <li>430 m-drum</li> </ul> <p>Special tooth belt (XXX = figures in metres)</p>	WDGZR020 WDGZR035 WDGZR050 WDGZR060 WDGZR080 WDGZR430 WDGZRXXX