

## System - Circumferential belt measuring system Silent Move light WDGMSUZ For heights up to 70 metres (230 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  
0.072 mm/pulse (0.002834 inch/pulse) 5,000 pulses
  - Absolute encoder WDGA58B multiturn, with CANopen interface: 4,096 steps/turn and 262,144 (18 bit multiturn) turns, CANopen LIFT interface: 4,096 steps/turn and 262,144 (18 bit multiturn) turns or SSI interface: 4,096 (12 bit) steps/turn and 8,192 (13 bit multiturn) turns
- Fast and flexible installation with complete set of mechanical parts.

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

The quiet **Silent Move** belt shaft copying devices are systems which are installed quickly and easily in the shaft.  
 All installation components required for standard installation to the lift cab rail or on the wall are supplied.

Put together your own system 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: 360 mm (14.1732283465 inch)

$$\text{Res. in mm (inch)} = \frac{360 \text{ mm (14.1732283465 inch)}}{\text{Pulse number of encoder (PPR)}}$$

$$\text{Res. in pulses/mm (inch)} = \frac{\text{Pulse number of encoder (PPR)}}{360 \text{ mm (14.1732283465 inch)}}$$

#### Calculation of the limit frequency:

$$f_g \text{ (Hz)} = \frac{\text{Pulse number of encoder (PPR)} \times \text{max. speed (m/sec) (ft/sec)}}{0.36 \text{ m (1.1811 ft)}}$$

#### Calculation of the traverse path:

$$s \text{ (m) (ft)} = \frac{\text{Pulses (l)}}{\text{Pulse number of encoder (PPR)}} \times 0.36 \text{ m (1.1811 ft)}$$

### Absolute encoders WDGA:

Repeat precision with WDGA: +/- 0.2 mm (0.007874 inch)



Special belt for exceptionally quiet, non-slip measuring.

## Ordering information - Circumferential belt measuring system WDGMSUZ:

Description:	Order No.:
<p><b>System (without encoder):</b> 2 guide pulleys, encoder attachment, tensioning device for the belt and corresponding assembly components. Please order the special belt separately. (see below: Silent Move special belt, calculation of length)</p>	WDGMSUZ
<p><b>Incremental variants</b> <b>System with incremental encoder WDGI 58B10600ABNH24SC8 and 15 m cable (KI 8-67-15S):</b> For an accuracy of measurement of 0.6 mm (0.02362 inch) or 1.6 pulses/mm (42.3 pulses/inch) with a limit frequency of 6.6 kHz and a cab speed of 4 m/s (787.4 ft/min). Encoder type 58B10600ABNH24SC8: Shaft: Ø 10 mm, pulse number: 600 PPR, channels AB and zero pulse, power supply 10 VDC up to 30 VDC, channels push-pull, sensor connector 8-pol. radial, 15 m cable (KI 8-67-15 S)</p>	WDGMSUZ58B10600ABNH24SC8
<p><b>System with incremental encoder 58B101000ABNH24SC8 and 15 m cable (KI 8-67-15 S):</b> For an accuracy of measurement of 0.36 mm (0.01417 inch) or 2.7 pulses per mm (70.5 pulses per inch) with a limit frequency of 11.1 kHz and a cab speed of 4 m/s (787.4 ft/min). Encoder type 58B101000ABNH24SC8: Shaft: Ø 10 mm, pulse number: 1,000 PPR, channels AB and zero pulse, power supply 10 VDC up to 30 VDC, channels push-pull, sensor connector 8-pol. radial, 15 m cable (KI 8-67-15 S)</p>	WDGMSUZ58B101000ABNH24SC8
<p><b>System with incremental encoder 58B102500ABNH24SC8 and 15 m cable (KI 8-67-15 S):</b> For an accuracy of measurement of 0.144 mm (0.005669 inch) or 6.94 pulses/mm (176.38 pulses/inch) with a limit frequency of 27.7 kHz and a cab speed of 4 m/s (787.4 ft/min). Encoder type 58B102500ABNH24SC8: Shaft: Ø 10 mm, pulse number: 2,500 PPR channels AB and zero pulse, power supply 10 VDC up to 30 VDC, channels push-pull, sensor connector 8-pol. radial, 15 m cable (KI 8-67-15 S)</p>	WDGMSUZ58B102500ABNH24SC8
<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>	WDGMSUZ58B10XXXXYYZZSC8
<p><b>Absolute variants WDGA58B CANopen, CANopen LIFT or SSI</b> <b>System with absolute multiturn encoder with CANopen CiA 406 interface:</b> For an accuracy of measurement of 0.088 mm (0.0035 inch) or 11.38 steps/mm (289 steps/inch). Binary Code: 4,096 (12 bit) Steps/revolution and max. 262,144 (18 bit) revolutions. 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>	WDGMSUZ58B101218COAB00CC5
<p><b>System with absolute multiturn encoder with CANopen LIFT CiA 417 interface:</b> For an accuracy of measurement of 0.088 mm (0.0035 inch) or 11.38 steps/mm (289 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>	WDGMSUZ58B101218CLAB00CC5
<p><b>System with absolute multiturn encoder with synchronous serial interface SSI*:</b> For an accuracy of measurement of 0.088 mm (0.0035 inch) or 11.38 steps/mm (289 steps/inch). * Gray Code (G)/Binary Code (B): 4,096 (12 bit) steps/revolution and 8,192 (13 bit) revolutions. power supply 10 VDC up to 30 VDC, 8 pin. connector, radial, 10 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>	WDGMSUZ58B101218SIAX01CC8  X = G or B
<p><b>Silent Move light special tooth belt:</b> Calculation of the length: Transport height x 2 + 10 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> <li>Special tooth belt (XXX = figures in metres)</li> </ul>	WDGZR020 WDGZR035 WDGZR050 WDGZR060 WDGZR080 WDGZR430 WDGZRXXX

Customs tariff number: 90318020  
Country of origin: Germany