



## Technical data

### ESW<sup>®</sup>- HOL6550/Ex Mini-C-014

old designation (ESW<sup>®</sup>-Mini/Ex-C-014)

|                            |                                                                                                                                                                                             |               |                 |                |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|----------------|
| operation voltage          | 24V DC ±10%                                                                                                                                                                                 |               |                 |                |
| current input              | max. 45mA                                                                                                                                                                                   |               |                 |                |
| temperature range          | -20°C to 65°C                                                                                                                                                                               |               |                 |                |
| type of protection         | IP 68                                                                                                                                                                                       |               |                 |                |
| case                       | high grade steel V4A                                                                                                                                                                        |               |                 |                |
| case dimensions            | 101 x77 (h x Ø ), Fixing hole M10x1.5 ; see manual                                                                                                                                          |               |                 |                |
| torque                     | max. 30Nm, power transmission only at hexagonal bolt                                                                                                                                        |               |                 |                |
| weight                     | approx. 1,9kg (without cable), approx. 2,1kg (with cable)                                                                                                                                   |               |                 |                |
| connecting cable           | 3m, data line, 10 x 0,34mm²/ <b>SD200 C 12x0,34mm²</b> , firmly fixed<br>cover material: PUR/ <b>PUR</b> , temperature range: -40°C to 90°C<br>min. bending radius: 70,00mm/ <b>50,25mm</b> |               |                 |                |
| screw-type conduit fitting | ADE 1F,M20,Di5 Brass CuZn39Pb3, nickel-plated<br>Sealing ring: Neoprene/Silicone                                                                                                            |               |                 |                |
| sensor                     | integrated acceleration sensor                                                                                                                                                              |               |                 |                |
| measuring value            | vibration velocity in mm/s                                                                                                                                                                  |               |                 |                |
| measuring range            | 0 to 15mm/s, 0 to 30mm/s, 0 to 45mm/s<br>inside the case by DIP-switches adjustable                                                                                                         |               |                 |                |
| signal assessment          | arithm. average, aligned to RMS                                                                                                                                                             |               |                 |                |
| frequency range            | 10Hz to 1kHz (-3dB)                                                                                                                                                                         |               |                 |                |
| filter                     | Butterworth, 40dB/dec resp. 12dB/oct                                                                                                                                                        |               |                 |                |
| analogue output            | 4 to 20mA, current source,<br>proportional to measurement range                                                                                                                             |               |                 |                |
| load                       | max. 500 Ohm                                                                                                                                                                                |               |                 |                |
| switching output           | potential free relay contact (30V, 1A)                                                                                                                                                      |               |                 |                |
| switching threshold        | 10% to 100% of measuring range,<br>adjustable in 10% steps by step switch inside the case<br><br>switching threshold prefixed by factory                                                    |               |                 |                |
| switching delay            | rise time delay 5s fixed by factory<br>fall time delay 0,5s fixed by factory                                                                                                                |               |                 |                |
| gas registration           | II 2G Ex d IIC T6 Gb                                                                                                                                                                        |               |                 |                |
| dust registration          | II 2D Ex tb IIIC T80°C Db                                                                                                                                                                   |               |                 |                |
| cable connection           | pink                                                                                                                                                                                        | +Ub           | blue            | Ub GND         |
|                            | grey                                                                                                                                                                                        | analog output | red             | external Test  |
|                            | white                                                                                                                                                                                       | analog GND    | brown           | opener         |
|                            | yellow                                                                                                                                                                                      | closer        | green           | middle contact |
|                            | black                                                                                                                                                                                       | nc            | purple          | nc             |
|                            | <b>gey-pink</b>                                                                                                                                                                             | <b>nc</b>     | <b>red-blue</b> | <b>nc</b>      |
|                            | For delivery the shield is connected with case, not with ground                                                                                                                             |               |                 |                |
| Optional                   | threaded pin M10x25mm, V4A                                                                                                                                                                  |               |                 |                |

Technical data under reservation!

A self-test can be externally activated by applying +24V for min. 200ms via a button to the external test line (red line)

**monitoring function :**

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| electric cable monitoring | during operation the relay is energized, the closer contact is interconnected with middle contact.<br>Once an error occurs, e.g. voltage drop, or cable break, relay will be de-energized and contacts disconnected.                                                                                                                                                                                                                                  |
| permanent self check      | check of voltage values, transducer, and controller functions                                                                                                                                                                                                                                                                                                                                                                                         |
| self check                | At a test after power on, activating by internal dip-switch as well as a test activation by external control line, the ok relay will be switched for one time and the alarm-relay will be switched for twice times. While the automatic tests´ the relays will not be energized.<br><br>If the self-test or the permanent test will detect a defect, the alarm relay will be de energized- the contacts open and the analog output will provide 22mA. |
| self check starts         | <ul style="list-style-type: none"><li>- after switching on the power, duration 12s</li><li>- automatically app. all 24h, for duration of approx. 5-6 seconds</li><li>- by external activation, applying a potential to the red cable line of +24V (min. duration requirement is 200 ms), duration app. 2-3s</li><li>- internal, by switching DIP-switch, duration approx. 2-3s</li></ul>                                                              |

Inside the unit the alarm- and ok-relay are serial interconnected. In case of an alarm, internal error or voltage drop down both relays will be de-energized (fall down) in their rest position, the closer contacts are disconnected.

For checking the complete function it is necessary to perform the self-check in periodic intervals – including the test of the alarm-relay and ok relay regarding switching-ability. The frequency of this verification is determined by the operator.

**The technical construction complies:**

Performance-Level PL - c (in accordance with EN13849)  
Category Cat.-2  
Diagnostic-Coverage DC = low  
Mean time to failure MTTFd = high

**Control range:**

|                     |             |                        |
|---------------------|-------------|------------------------|
| 45mm/s eff at 1kHz  | corresponds | 28,8g eff = 40,8g peak |
| 45mm/s eff at 444Hz | corresponds | 12,8g eff = 18g peak   |
| 20mm/s eff at 1kHz  | corresponds | 12,8g eff = 18g peak   |

Technical data under reservation!