**ProLoop Lite**

Loop detector for industrial doors and gates and car parks

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**Translation of the original instruction**

**General**

1. **Safety instructions**

   - These devices and their accessories may only be operated in accordance with the operating instructions (intended use).
   - These devices and their accessories may only be placed in operation by trained and qualified personnel.
   - These devices may only be operated with the operating voltages and parameters intended for them.
   - If malfunctions occur that cannot be eliminated, place the device out of operation and send it in for repair.
   - These devices may only be repaired by the manufacturer. Tampering and alterations are not permitted. This will invalidate all guarantee and warranty claims.

2. **Mechanical mounting in the switch cabinet**

   The ProLoop Lite is mounted in the switch cabinet on a 35 mm H-rail in accordance with EN 50022. The terminals can be plugged in and coded.

3. **Connect electrical equipment**

   The loop connection wiring to a loop detector must be twisted at least 20 times per meter.

   Please wire the device according to the wiring diagram.

   Ensure correct assignment of the terminals and that the power supply is right in accordance with the type plate on the device.

   **3.1 Terminal connection diagram**

<table>
<thead>
<tr>
<th>Power supply</th>
<th>Loop connection 1-channel device</th>
<th>Loop connection 2-channel device</th>
<th>Output 1</th>
<th>Output 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Power supply diagram]</td>
<td>![Loop connection 1-channel device diagram]</td>
<td>![Loop connection 2-channel device diagram]</td>
<td>![Output 1 diagram]</td>
<td>![Output 2 diagram]</td>
</tr>
</tbody>
</table>

4. **Value and parameter setting options**

   **General**

   The settings of the ProLoop Lite devices in this chapter are depicted and explained using the 1-loop device.

   The settings for loop 2 of a 2-loop device should be made using the corresponding method.
### 4.1 Value and parameter setting options

<table>
<thead>
<tr>
<th>Standard display 1-loop device</th>
<th>Standard display 2-loop device</th>
</tr>
</thead>
</table>

### 4.2 Basic functions of output relay status

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Loop unactivated</th>
<th>Loop activated</th>
<th>Fault</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Door and gate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Barrier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Quiescent current</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4.3 Time functions $t_1$, $t_2$ and time factor $t_3$ (settings, see table 4.8)

- **Activation** of the loop pulls the relay on; the relay drops off when the loop is exited.
  - $t = \text{typically ms or s}$

- **Activation pulse**: When the loop is activated, the relay is pulled on and drops back off after time $t$.
  - $t = \text{typically ms or s}$

- **Switch-on delay**: When the loop is activated, the relay is pulled on after the time $t$ and drops off when the loop is exited.
  - $t = \text{typically ms or s}$

- **Switch-off delay**: When the loop is activated, the relay is pulled on drops off after time $t$ after the loop is exited.
  - $t = \text{typically ms or s}$

- **Exit pulse**: When the loop is exited, the relay is pulled on and drops back off after time $t$.
  - $t = \text{typically ms or s}$

- **Maximum presence**: When the loop is activated, the relay is pulled on and drops back off when exited, but not later than after time $t$.
  - $t = \text{typically ms or s}$

### 4.4 Sensitivity $S$ (setting, see table 4.8)

The sensitivity $S$ of the loop detector can be adjusted in 9 steps:

- $S_1$ = lowest sensitivity
  - (much metal, low recognition distance)
- $S_9$ = highest sensitivity
  - (little metal, large recognition distance)
- $S_4$ = factory setting

### 4.5 Automatic sensitivity boost ASB $S$ (setting, see table 4.8)

**ASB** (= Automatic Sensitivity Boost).

ASB is required in order to be able to detect trailer drawbars after activation.

### 4.6 Frequency $F$ (setting, see table 4.8)

Four different frequencies $F_1$, $F_2$, $F_3$ and $F_4$ can be set. This helps to prevent crosstalk with adjacent loops. Factory setting: $F_4$.

### 4.7 Switching from operating to configuration mode

#### 1-loop device

Display after start-up: [Diagram of 1-loop device]

Touch the «Mode» button once to change to configuration mode

#### 2-loop device

Display after start-up: [Diagram of 2-loop device]

Touch the «Mode» button once to change to configuration mode

Example: Time function set

Example: Parameter “h” set

(Back to automatic mode: Press and hold Mode button > 1 second)
### 4.8 Configuration mode

Note on 2-loop device: For each function after Loop 1 is set, the parameters of Loop 2 are set (perform settings similarly).

#### Table Settings

<table>
<thead>
<tr>
<th>Function</th>
<th>LCD Display</th>
<th>Button operation parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Operating mode</td>
<td></td>
<td>Operating mode</td>
</tr>
<tr>
<td>B Basic function</td>
<td></td>
<td>Door and gate*</td>
</tr>
<tr>
<td>C Time function</td>
<td></td>
<td>Switch-on delay</td>
</tr>
<tr>
<td>D Time unit</td>
<td>With time function (∞), this display does not appear</td>
<td>Switch-off delay</td>
</tr>
<tr>
<td>E Time factor</td>
<td>With time function (∞), this display does not appear</td>
<td>Loop activation pulse</td>
</tr>
<tr>
<td>F Sensitivity</td>
<td></td>
<td>Loop exit pulse</td>
</tr>
<tr>
<td>G Automatic sensitivity boost ASB</td>
<td>ASB = Automatic Sensitivity Boost</td>
<td>Maximum presence</td>
</tr>
<tr>
<td>H Frequency</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- Time unit multiplied by time factor gives the set time.
- *Factory setting
5 Error display

When an error occurs, the operating mode “A” and the error display “E” are shown alternatingly. The LED changes to flashing red.

6 Reset

- **Error display**
  - The LED changes to flashing red.

- **Reset**
  - 2 seconds
  - **Reset 1 (recalibration)**
  - The loop(s) is/are recalibrated.

7 Technical data

<table>
<thead>
<tr>
<th>Power supply voltage/ power consumption</th>
<th>Dimensions</th>
<th>22.5 x 92 x 85 mm (W x H x D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 VDC</td>
<td>Housing mounting</td>
<td>Direct DIN rail mounting</td>
</tr>
<tr>
<td>24 VDC -10% to +20%, max. 1.5 W</td>
<td>Connection type</td>
<td>Screw-in terminals</td>
</tr>
<tr>
<td>230 VAC 230 VAC ± 10%, 50 Hz, max. 2.9 VA</td>
<td>Protection class</td>
<td>IP 20</td>
</tr>
<tr>
<td>Loop inductiveness Max. 20 to 1000 µH</td>
<td>Operating temperature</td>
<td>-20°C to +60°C</td>
</tr>
<tr>
<td>Ideally 80 to 300 µH</td>
<td>Storage temperature</td>
<td>-40°C to +70°C</td>
</tr>
<tr>
<td>Loop power line For 20-40 µH: max. 100 m with 1.5 mm²</td>
<td>Air humidity</td>
<td>&lt; 95% non-condensing</td>
</tr>
<tr>
<td>For &gt;40 µH max. 200 m with 1.5 mm²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min. twisting 20 times per metre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loop resistance &lt; 8 ohms with connection wire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output relay (loop) Max. 240 VAC; 2 A / 30 VDC; 1 A; AC-1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8 EU Declaration of Conformity

See attachment

9 WEEE

Devices with this symbol must be treated separately during disposal. This must be done in accordance with the laws of the respective countries for environmentally sound disposal, processing and recycling of electrical and electronic equipment.

10 Contact

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