The Temperature limiter TB 40 has been given Safety Approval according to DIN 3440. This enables it to be used as a safety cut-out in heating plants. If the pre-set limit value is exceeded, output relay 1 is de-energized and remains locked in this state, even if the process value falls back below the limit.

Functional description

The limit value (GW) is adjusted by means of the front-panel keys, and is only possible if an internal switch is closed and a code number has been entered. With process value X higher than limit value GW, relay 1 is de-energized and remains locked. When X falls below GW, the relay can be reset by means of front panel keys or via an external contact.

Switching difference of the contacts: 1 digit
Action of input circuit monitor: same as X > GW

Further technical data: see KS 40
### Parameter adjustment ranges

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Adjustment range</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-alarm</td>
<td>LCL(^1)</td>
<td>rel. 1...9999</td>
<td></td>
</tr>
<tr>
<td>Reset</td>
<td>Loc(^2)</td>
<td>0...3</td>
<td></td>
</tr>
<tr>
<td>Lower set-point limit</td>
<td>SPL</td>
<td>x₀...x₁₀₀</td>
<td>Adjustment range corresponds to input span (see configuration)</td>
</tr>
<tr>
<td>Upper set-point limit</td>
<td>SPH</td>
<td>x₀...x₁₀₀</td>
<td></td>
</tr>
<tr>
<td>Decimal point</td>
<td>dP(^3)</td>
<td>0 or 1</td>
<td>0 = no decimal point</td>
</tr>
<tr>
<td>Lower input limit</td>
<td>InL(^3)</td>
<td>–999...9999</td>
<td>x₀ Span start</td>
</tr>
<tr>
<td>Upper input limit</td>
<td>InH(^3)</td>
<td>–999...9999</td>
<td>x₁₀₀ End of span</td>
</tr>
</tbody>
</table>

1) Setting of pre-alarm is relative to the limit value GW. If LCL is adjusted to a value less than 1, the display shows “----”, and the pre-alarm is switched off.

2) Loc = 0: Resetting only via front keys.
   Loc = 1: Resetting only via external contact.
   Loc = 2: As Loc 0, but process value X is only displayed on alarm.
   Loc = 3: As Loc 1, but process value X is only displayed on alarm.

3) Only with inputs 0/4...20 mA and 0...10 V (see configuration)

### Configuration

```
C0 00
```

Input:
- Type L 0...900 °C 0
- Type J 0...900 °C 1
- Type K 0...1350 °C 2
- Type N 0...1300 °C 3
- Type S 0...1760 °C 4
- Type R 0...1760 °C 5
- Pt 100 DIN/IEC – 99...500 °C 6
- 0...20 mA, linear 7
- 4...20 mA, linear 8
- 0...10 V, linear 9

Factory setting: C0000

### Connections

**Mains supply**
- 230 V 26
- 115 V 25

**Pre-alarm 3**
- 24

**Outputs**
- 21

**Relay 1**
- 20

**Logic**
- 18

**Measurement input**
- 0...10 V + 16
- 0/4...20 mA + 15

**Inputs**
- 14

### ORDERING DATA

<table>
<thead>
<tr>
<th>Temperature limiter TB 40</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9404 407 46021</td>
</tr>
</tbody>
</table>