

# LOOP-POWERED LCD INDICATOR

ATEX  

- 4-digit LCD display 48 x 96 mm
- Loop-powered
- Easy scalable from front keys
- Backlight
- Standard and ATEX Ex version
- IP65 enclosure from front



## Application:

The PReview 5531 indicator is ideal for local readout of 4...20 mA current signals scaled directly in process units.

PReview does not need any external power supply since the indicator is powered by the 4...20 mA loop signal. The Ex version can be used for local readout in hazardous areas classified as zone 0, 1, or 2.

## Technical characteristics:

**Input:** 4...20 mA standard signal.

An adhesive label with process units may be attached to the front below the digits.

Input voltage drop is  $\leq 1.5$  VDC, corresponding to a feed-through resistance of  $75 \Omega$  (when backlight is switched off). Reversed display readout is possible, see routing diagram on the reverse.

## Programming / scaling:

Dipswitch 1, switch 1 on the rear panel is used to enable / disable the front keys thus facilitating scaling.

**Scale mode:** In scale mode the indicator may be scaled, see routing diagram on the reverse of this data sheet.

**Run mode:** In run mode the indicator will display the actual current according to the scaling.

**Backlight:** Dipswitch 1, switch 2 and 3 on the rear panel is used to select backlight intensity, see programming on the reverse of this data sheet. Please note that the input voltage drop is dependent on backlight intensity.

## Electrical specifications:

### Specifications range:

(@:  $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ )

### Common specifications:

|                                |                             |
|--------------------------------|-----------------------------|
| Max. voltage drop at 20 mA:    |                             |
| Without backlight .....        | < 1.5 VDC                   |
| Half backlight .....           | < 6.5 VDC                   |
| Full backlight .....           | < 10.5 VDC                  |
| Response time (0...90%) .....  | < 1 s                       |
| Calibration temperature .....  | 20...28°C                   |
| Signal dynamics, input .....   | 15 bit                      |
| Temperature coefficient .....  | < $\pm 0.01\%$ of span / °C |
| Linearity error .....          | < $\pm 0.1\%$ of span       |
| EMC immunity influence .....   | < $\pm 0.5\%$               |
| Screw terminal torsion.....    | 0.5 Nm                      |
| Humidity .....                 | < 95% (non-cond.)           |
| Dimensions (HxWxD).....        | 48 x 96 x 120 mm            |
| Cut-out dimensions (HxW) ..... | 44.5 x 91.5 mm              |
| Tightness (from front) .....   | IP65                        |
| Weight .....                   | 150 g                       |

### Input:

|                         |             |
|-------------------------|-------------|
| Measurement range ..... | 3.6...23 mA |
|-------------------------|-------------|

### Display:

|                                   |                       |
|-----------------------------------|-----------------------|
| Display readout .....             | $\pm 9999$ (4 digits) |
| Min. display readout (span) ..... | 0 counts              |
| Decimal point .....               | Programmable          |
| Digit height .....                | 16 mm                 |
| Updating speed .....              | 500 ms                |

### Ex data:

|                      |                   |
|----------------------|-------------------|
| U <sub>i</sub> ..... | : 45 VDC          |
| I <sub>i</sub> ..... | : 500 mA          |
| P <sub>i</sub> ..... | : 0.9 W           |
| C <sub>i</sub> ..... | : 0 $\mu\text{F}$ |
| L <sub>i</sub> ..... | : 0 mH            |

### EEx approval CENELEC

|                          |   |
|--------------------------|---|
| DEMKO 02.....            | ATEX 132122   |
| ATEX .....               | 0539  II 1 G |
|                          | EEx ia IIC T6   |
| Applicable in zone ..... | Zone 0, 1 or 2  |

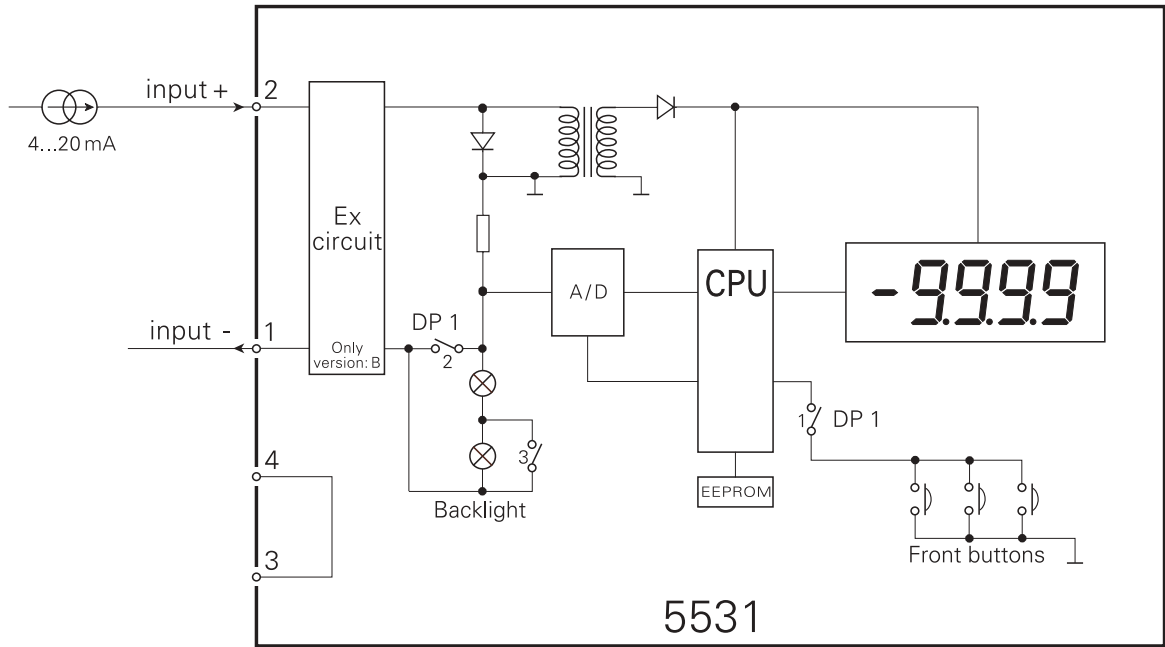
### Observed authority requirements: Standard:

|                              |                          |
|------------------------------|--------------------------|
| EMC 89/336/EEC Emission..... | EN 50 081-1, EN 50 081-2 |
| Immunity.....                | EN 50 082-2, EN 50 082-1 |
| Emission and immunity.....   | EN 61 326                |
| ATEX 94/9/EEC.....           | EN 50 014 and EN 50 020  |

Of span = Of the presently selected range

| Type | Version  |     |
|------|----------|-----|
| 5531 | Standard | : A |
|      | ATEX Ex  | : B |

Block diagram:



Programming:

| DP 1            | Front keyboard | SW ON | SW OFF |
|-----------------|----------------|-------|--------|
| Keys locked     | -              | 1     | -      |
| Keys NOT locked | 1              | -     | -      |

| DP 1           | Backlight | SW ON | SW OFF |
|----------------|-----------|-------|--------|
| Off            | -         | 2     | -      |
| Half intensity | 3         | 2     | -      |
| Full intensity | -         | 2, 3  | -      |

Routing diagram:

