

# LOOP-POWERED LCD INDICATOR



- 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 as the indicator is powered by the 4...20 mA loop signal.
- The Ex version 5531B can be used in hazardous areas classified as zone 1 or 2.
- 5531B1 includes an Ex field enclosure suitable for use in zones 2 and 22 without the need for a barrier.
- 5531B2 includes an Ex field enclosure for use in zones 1, 2, 21, or 22.

## 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:

DIP switch 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:** DIP switch 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.

## Field enclosure type 8501:

The field enclosure type 8501 complies with industrial standards for efficient protection of process equipment in wet areas up to IP65. When 8501 is delivered with a built-in PReview 5531, the assembled unit is approved for installation in explosive gas atmospheres as well as in explosive dust environments. The technical specifications of the field enclosure can be found in the 8501 data sheet.

## Electrical specifications:

Specifications range..... -20°C to +60°C

## Common specifications:

Max. voltage drop at 20 mA:  
 Without backlight / full backlight..... < 1.5 VDC / < 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  
 Protection degree (from front) ..... IP65  
 Weight ..... 150 g

## Input:

Measurement range ..... 3.6...23 mA

## Display:

Display readout .....  $\pm 9999$  (4 digits)  
 Digit height ..... 16 mm  
 Updating speed ..... 500 ms

## EEx / I.S. approval:

### 5531B:

DEMKO 02ATEX132122 ..... II 1 G  
 EEx ib IIC T6  
 Applicable in zone ..... 1 or 2

### 5531B1:

KEMA 05ATEX1044 X..... -5°C  $\leq T_a \leq$  +60°C II 3 GD T85°C  
 -20°C  $\leq T_a \leq$  +60°C II 3 G  
 EEx nL IIC T6  
 Applicable in zone ..... 2 or 22

### 5531B2:

KEMA 05ATEX1105 X..... -5°C  $\leq T_a \leq$  +60°C II 2 GD T85°C  
 -20°C  $\leq T_a \leq$  +60°C II 2 G  
 EEx ib IIC T6  
 Applicable in zone ..... 1, 2, 21 or 22

## Ex / I.S. 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  $\mu$ F  
 L<sub>i</sub> ..... : 0 mH

## GOST R approval:

VNIIM & VNIIFTRI, Cert. no. ....

## Observed authority requirements:

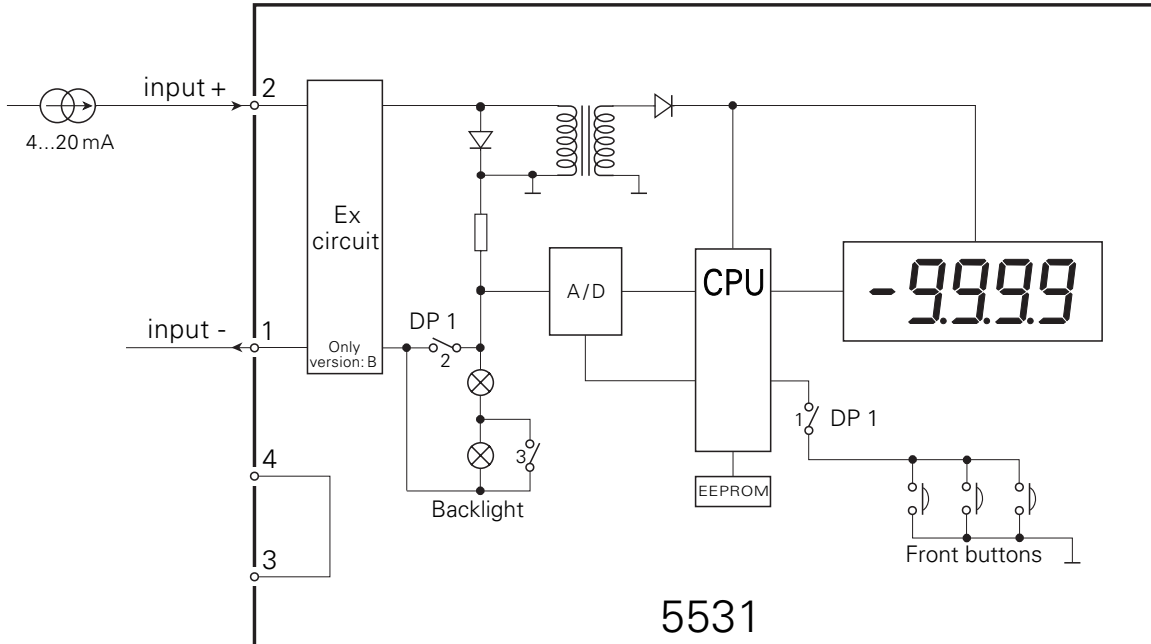
EMC 2004/108/EC ..... EN 61326-1  
 ATEX 94/9/EF ..... EN 50014, EN 50020,  
 EN 60079-15, EN 61241-0 and  
 draft IEC 61241-111

Of span = Of the presently selected range

Order: 5531

Type	Version	Field enclosure
5531	Standard : A	Type 8501
	ATEX Ex : B	None :
		8501 / EEx nL IIC : 1
		8501 / EEx ib IIC : 2

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:

