

Loop-powered LCD indicator

5531B



- 4 digit 1/8 DIN (48 x 96 mm) loop-powered LCD display
- Easy push-button configuration
- Backlit LCD display is readable in low light conditions
- Display can be mounted in the safe area or in I.S. / Ex zone



Application

- The 5531 indicator is powered by the 4 to 20 mA current loop and is easily scaled to display the correct process value.
- Because it does not require separate power wiring, the 5531 is perfect for remote display of process loops.
- The 5531B can be mounted in Ex Zone 1.

Technical characteristics

- With a full measurement range of 3.6 to 23 mA, the 5531 is NAMUR NE43 compliant.
- The display can be push-button scaled to any range between -9999 to 9999, and reverse display action is possible.
- The LCD backlight can be set to half or full intensity for easy viewing in low light conditions.
- The display only requires 1.5 VDC, (75 Ω loop load), with the backlight turned off.
- The input is HART transparent.
- The front push-buttons can be disabled to prevent unauthorized adjustment.

Mounting / installation

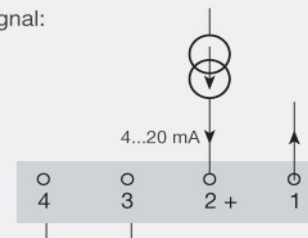
- Once panel mounted with the included gasket, the 5531 provides IP65 ingress protection.

Note

- Not suitable for new installations requiring certification to the latest ATEX standards - see ATEX certificate KEMA 05ATEX1105X and Declaration of conformity for details.

Applications

Input signal:



Order

| Type | Version |
|-------|-----------|
| 5531B | Zone 1, 2 |

Environmental Conditions

| | |
|------------------------------|----------------------|
| Operating temperature..... | -20°C to +60°C |
| Storage temperature..... | -20°C to +60°C |
| Calibration temperature..... | 20...28°C |
| Relative humidity..... | < 95% RH (non-cond.) |
| Protection degree..... | IP65, from front |

Mechanical specifications

| | |
|---|--|
| Dimensions (HxWxD)..... | 48 x 96 x 120 mm |
| Cut out dimensions..... | 44.5 x 91.5 mm |
| Weight approx..... | 200 g |
| Cable glands and cable diameter..... | M16 x 1.5 / Ø 5...8 mm |
| Wire size, connector terminal 1 - 4..... | 0.13...2.08 mm ² / AWG 26...14 stranded wire |

Common specifications

Supply

| | |
|---------------------|--------------------|
| Supply voltage..... | Input loop-powered |
|---------------------|--------------------|

Response time

| | |
|---|-----------------|
| Response time (0...90%, 100...10%)..... | < 1 s |
| EMC immunity influence..... | < ±0.5% of span |
| Signal / noise ratio..... | > 60 dB |
| Updating time..... | 500 ms |

Input specifications

Current input

| | |
|---|------------------|
| Measurement range..... | 3.6...23 mA |
| Loop error detection, 4...20 mA: Low..... | ~ < 3 mA |
| Loop error detection, 4...20 mA: High..... | ~ > 24 mA |
| Input voltage drop, without backlight..... | < 1.5 V @ 20 mA |
| Input voltage drop, with half backlight..... | < 6.5 V @ 20 mA |
| Input voltage drop, with full backlight..... | < 10.5 V @ 20 mA |

Output specifications

Display

| | |
|----------------------|-------------------|
| Display readout..... | ± 9999 (4 digits) |
| Digit height..... | 16 mm |

Observed authority requirements

| | |
|-----------|----------------|
| EMC..... | 2014/30/EU |
| RoHS..... | 2011/65/EU |
| EAC..... | TR-CU 020/2011 |

Approvals

| | |
|-------------|---------------------------------|
| ATEX..... | KEMA 05ATEX1044 X (5531A/B1) |
| ATEX..... | KEMA 05ATEX1105 X (5531B/B2) |
| EAC Ex..... | EAEU KZ 7500361.01.01.08756 |