

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.
- The 5531B1 Ex display includes the 8501 enclosure and can be mounted in Ex Zone 2 or 22 (gas or dust).
- The 5531B2 includes the 8501 enclosure and can be mounted in Ex Zone 1, 2, 21 or 22 (gas or dust).

Technical characteristics

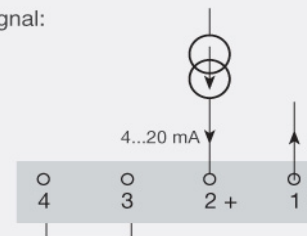
- With a full measurement range of 3.6 to 23 mA, the 5531 is NAMUR NE43 compliant.
- The display can be push-button scaled to any range between -9999 to 9999, and reverse display action is possible.
- The LCD backlight can be set to half or full intensity for easy viewing in low light conditions.
- The 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.

Connections

Input signal:



Order:

Type	Input signal area classification	Field enclosure
5531B1	4...20 mA from safe, zone 2 and 22	Yes
5531B	4...20 mA from zone 0	No
5531B2	4...20 mA from zone 0 and 20	Yes

Environmental Conditions

Specifications range.....	-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
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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 full backlight.....	< 10.5 V @ 20 mA

Output specifications**Display:**

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

Approvals

EMC.....	2004/108/EC
ATEX 94/9/EC.....	KEMA 05ATEX1044 X (5531A/B1)
ATEX 94/9/EC.....	KEMA 05ATEX1105 X (5531B/B2)
EAC.....	TR-CU 020/2011
EAC Ex TR-CU 012/2011.....	RU C-DK.GB08.V.00410