PERFORMANCE MADE SMARTER

Loop-powered LCD indicator

5531B



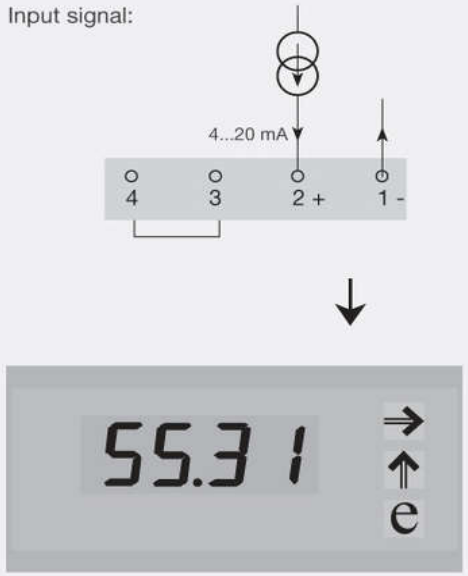
– 4 digit 1/8 DIN (48 x 96 mm) loop-powered LCD display
– Easy push-button configuration
– Backlit LCD display is readable in low light conditions
– Display can be mounted in the safe area or in I.S. / Ex zone

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



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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

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