The dual channel MS31-LiU analogue data repeater isolates, converts and repeats standard analogue signals, and passes the converted signals to a user defined output.

The input circuit accepts a standard current input (0/4...20 mA), a standard voltage input (0/2...10 V) or a variable voltage input (0...1 - 10 V).

The transfer characteristic of the analogue data repeater is programmed with bridge connectors (refer to drawing on next page). By this method, dead-zero signals are converted to live-zero signals (or vice-versa). In addition, current signals can be converted to voltage signals and voltage signals to current signals.

The analogue output signal can be passed to both outputs which may be used simultaneously.

The power supply is isolated from the input circuit, output circuit and supply voltage. A green LED indicates that power is supplied to the device.

Special version: MS31-LiU.../M12: signal inverter for inversions from 0...20 mA/20...0 mA.
S
E
S
E
S
E
S
E

0...20 mA
and
0...10 V

4...20 mA
or
2...10 V

4...20 mA
or
2...10 V

50 mm wide, Polycarbonate/ABS
panel mounting or snap-on clamps
for top-hat rail (DIN 50022)

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2 x 8 self-lifting pressure plates
≤ 2 x 2.5 or 2 x 1.5 mm² with wire sleeves

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-25...+60 °C
-25...+60 °C

LED Indication
- Power "ON"
green
green

Housing
50 mm wide, Polycarbonate/ABS
panel mounting or snap-on clamps
for top-hat rail (DIN 50022)

Connection profile
2 x 2.5 or 2 x 1.5 mm² with wire sleeves

Degree of protection (IEC 60529/EN 60529)
IP 20

Operating temperature
-25...+60 °C

Programming
Selection of transfer functions
- 1:1 transfer
- Dead-zero conversion
- Live-zero conversion
- Current/voltage conversion
- Voltage/current conversion

Type
MS31-LiU/230VAC
05 310

Supply Voltage $U_B$
184...264 VAC

Line frequency/ripple $W_{PP}$
48...62 Hz

Power/current consumption
≤ 5 VA

Galvanic isolation
between input circuit, output circuit and supply voltage for 250 V$_{rms}$, test voltage 2.5 kV$_{rms}$

Input Circuits
Voltage input
- Input resistance
50 kΩ

- Operating characteristics
0/2...10 V

Current input
- Input resistance
50 Ω

- Operating characteristics
0/4...20 mA

Variable voltage input
- Input resistance
5 kΩ/V

- Operating characteristics
0...1-10 V

Output Circuits
Voltage output
0/2...10 V

- Load resistance
≥ 1 kΩ

Current output
0/4...20 mA

- Load impedance
≤ 500 Ω

Transfer Characteristics
Linearity tolerance
≤ 0.1 % of final value

Load impedance
≤ 0.01 % of final value

Effect of load impedance
≤ 0.01 % of final value

Conversion error ($U_{\rightarrow U}$; $I_{\rightarrow U}$)
≤ 0.1 % of final value

Ambient temperature sensitivity
≤ 0.005 %/K of final value

Pulse rise time (10 %...90 %)
< 50 ms

Release time (90 %...10 %)
< 50 ms

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- Power "ON"
green
green

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≤ 2 x 2.5 or 2 x 1.5 mm² with wire sleeves

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Analogue Data Transmitters

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