

Current Repeater/ Voltage Repeater MK31-...-Li/24VDC MK31-...-LU/24VDC 1-channel

3

- 1-channel current repeater/voltage repeater**
- Galvanic isolation of standard analogue signals**
- Input circuits 0/2...10 V or 0/4...20 mA (selectable)**
- Output circuits 0/4...20 mA or 0/2...10 V**
- Linearity $\leq 0.1\%$**
- Temperature drift $\leq 0.02\%/\text{K}$ of final value**

The MK31-...-Li and MK31-...-LU are current/voltage repeaters designed to isolate standard analogue signals.

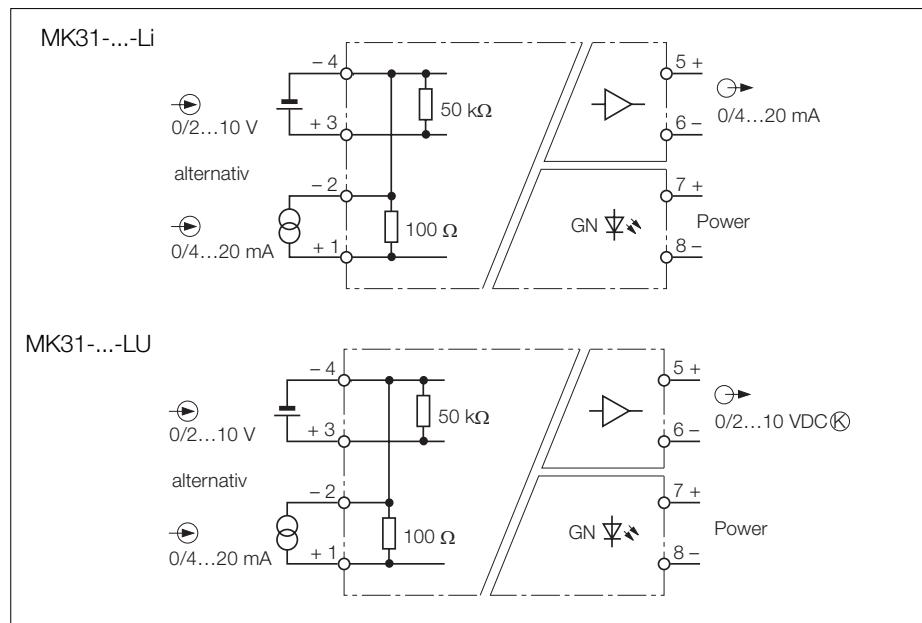
The devices provide a current and a voltage input which may be used alternatively. Depending on the type of device, the output is either a current or a voltage output. The function truth table lists the available

versions with the respective ident-numbers and the transmission modes.

The devices feature galvanic isolation between the input circuits, output circuits and power supply.

Further devices with modified transfer characteristics on request. A green LED indicates that the device is powered.

	0...20 mA	4...20 mA	0...10 V	2...10 V
0...20 mA 0...10 V	MK31-11-Li 7506102	MK31-111-Li 7506103	MK31-11-LU 7506202	MK31-111-LU 7506203
4...20 mA 2...10 V	MK31-112-Li 7506104	MK31-11-Li 7506102	MK31-112-LU 7506204	MK31-11-LU 7506202



Current Repeater/Voltage Repeater MK31-...-Li/MK31-...-LU

Type	MK31-...-Li see table page 3 – 15	MK31-...-LU see table page 3 – 15
Supply voltage U_B	19...29 VDC $\leq 10\%$ approx. 50 mA between input circuit, output circuit and supply voltage for 250 V _{rms} , test voltage 2.5 kV _{rms}	19...29 VDC $\leq 10\%$ approx. 50 mA between input circuit, output circuit and supply voltage for 250 V _{rms} , test voltage 2.5 kV _{rms}
Input circuits		
Voltage input (3 and 4)		
– Input resistance	50 k Ω	50 k Ω
– Operating characteristics	0/2...10 V (< 20 V)	0/2...10 V (< 20 V)
Current input (1 and 2)		
– Input resistance	100 Ω	100 Ω
– Operating characteristics	0/4...20 mA (< 40 mA)	0/4...20 mA (< 40 mA)
Output circuits	current output $\leq 500 \Omega$ 0/4...20 mA	voltage output, short-circuit protected $\geq 500 \Omega$ 0/2...10 V
Transfer characteristics		
Linearity tolerance of setpoint adjustment	$\leq 0.1\%$ of final value	$\leq 0.1\%$ of final value
Measuring tolerance	$\leq 0.2\%$	$\leq 0.2\%$
Long term error	0.1 %/year	0.1 %/year
Ambient temperature sensitivity	$\leq 0.02\%/\text{K}$ of final value	$\leq 0.02\%/\text{K}$ of final value
Pulse rise time	$\leq 300\text{ ms}$	$\leq 300\text{ ms}$
Release time	$\leq 300\text{ ms}$	$\leq 300\text{ ms}$
LED indications		
– Power	green	green
Housing	8-pole, 18 mm wide, Polycarbonate/ABS flammability class V-0 per UL 94 snap-on clamps for top-hat rail (DIN 50022) or screw terminals for panel mounting via flat terminals with self-lifting pressure plates $\leq 2 \times 2.5\text{ mm}^2$ or $2 \times 1.5\text{ mm}^2$ with wire sleeves	
Mounting		
Connection		
Connection profile		
Degree of protection (IEC 60529/EN 60529)	IP20	
Operating temperature	-25...+60 °C	