

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 $\leq 0.02\%/K$ of final value**

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

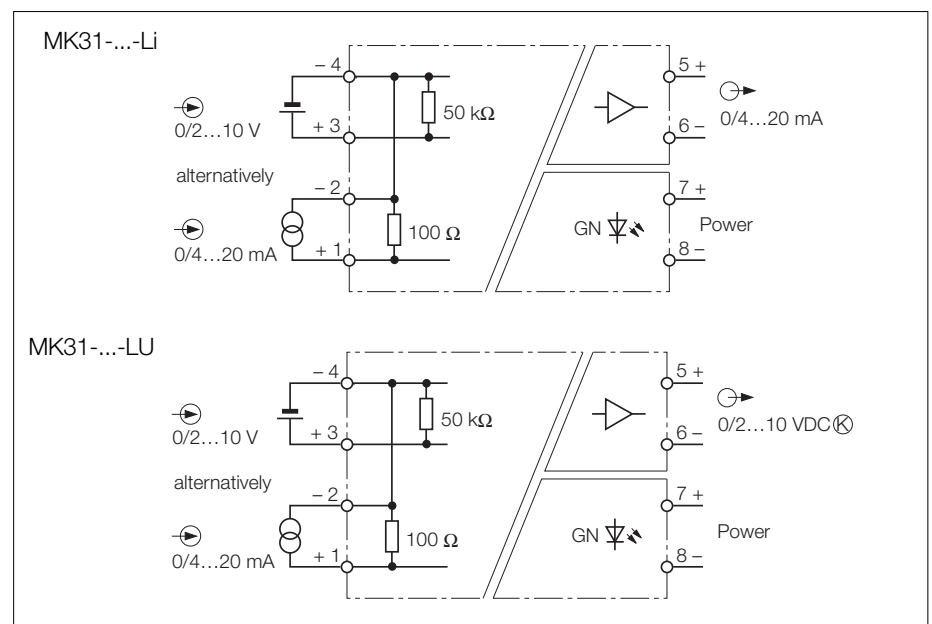
The devices provide a current and a voltage input which may be used alternatively. Depending on the type of device, the output is either a current or a voltage output. The function truth table lists the available

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.

$\begin{matrix} \text{O} \\ \text{I} \end{matrix}$	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	MK31-...LU
Ident-no.	see table page 3 – 33	see table page 3 – 33
Supply voltage U_B	19...29 VDC	19...29 VDC
Ripple W_{PP}	$\leq 10\%$	$\leq 10\%$
Current consumption	approx. 50 mA	approx. 50 mA
Galvanic isolation	between input circuit, output circuit and supply voltage for 250 V_{rms} , test voltage 2.5 kV_{rms}	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 $k\Omega$	50 $k\Omega$
– 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		
Load impedance	current output $\leq 500\ \Omega$	voltage output, short-circuit protected
Output current	0/4...20 mA	
Load resistance		$\geq 500\ \Omega$
Output voltage		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	$\leq 0.2\%$	$\leq 0.2\%$
Ambient temperature sensitivity	$\leq 0.02\%$ /K of final value	$\leq 0.02\%$ /K of final value
Pulse rise time	$\leq 300\ ms$	$\leq 300\ ms$
Release time	$\leq 300\ ms$	$\leq 300\ ms$
LED indications		
– Power	green	green
Housing		
Mounting	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	
Connection	via flat terminals with self-lifting pressure plates	
Connection profile	$\leq 2 \times 2.5\ mm^2$ or $2 \times 1.5\ mm^2$ with wire sleeves	
Degree of protection (IEC 60529/EN 60529)	IP20	
Operating temperature	-25...+60 °C	

