

Mostec AG
 Mess- und Regeltechnik
 Lausenerstrasse 13a
 CH-4410 Liestal
 Switzerland
 Tel. +41 61 921 40 90
 Fax +41 61 921 40 83
 Internet www.mostec.ch
 E-Mail info@mostec.ch



Isolation amplifier 1:1 without supply - 1, 2 and 3 channel Type M8731/22



Technical description

This "snap-on" interface module consists of 1-3 isolating amplifier channels to galvanically isolate DC current signals without a power supply.

The input current signal can be in the range of 0...27mA. This DC signal is converted to an AC signal, transformed 1:1 to the secondary, rectified and ripple rejected by a filter, thus restoring the original DC current signal.

The small 22mm case contains 1, 2 or 3 separate isolating amplifiers.

The output can be on a common mode voltage or on different ground and may feed remote displays, recorders, PLC's analog input, computers and data loggers.

Applications:

Heating, air conditioning, signal isolation, data logging applications etc.

Technical Data:

Input

Input current (I_E): 0...5mA, 0...20mA, 4...20mA, max. 27mA
 Max. input current: 50mA with open output
 Max. input voltage (U_E): +20V
 Max. voltage drop: $\approx 3,7V$

Output

Current transfer ratio ($I_E: I_A$): 1,0 : 1,0
 Max. load: $\leq 500\Omega$
 Load error: Typ. $\pm 0,1\%$
 Output ripple: 0,9% ($R_L=280\Omega$, $I_A=20mA$, $f=3,5kHz$)
 Rise time: Typ. 75ms
 Working temperature range: -10...+60°C (max. $\pm 0,1\%/20mA$)

Coupling

Internal oscillator: Typ. 3,5 kHz
 Max. common mode voltage (U_{cmv}): 230VAC RMS, Testvoltage: 2500Veff /1'.
 Operating Principle: The input signal is chopped with 3.5kHz, transformed from the primary to the secondary by a transformer, rectified and filtered. (see block diagram)
 Supply current: None, will be drawn out of the primary signal
 CE-Conformity: fulfilled

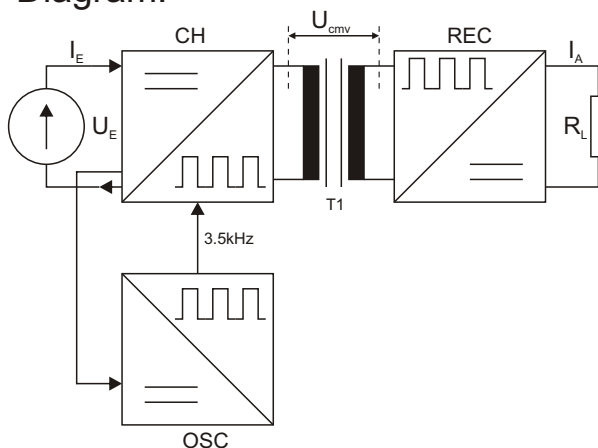
Mechanical specifications

Terminals: 12 screw terminals
 Terminal description:

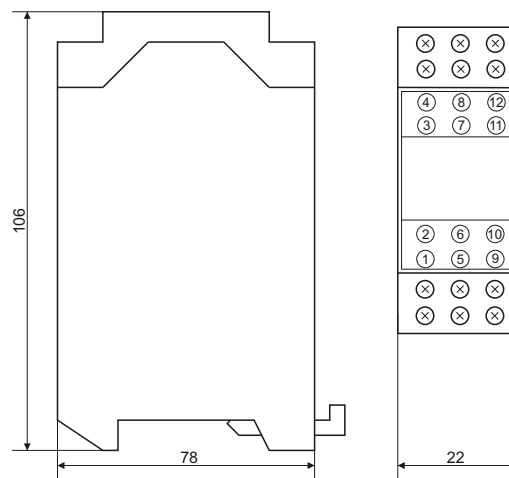
Channel 1:	Input (+) = 1	Input (-) = 2
	Output (+) = 3	Output (-) = 4
Channel 2:	Input (+) = 5	Input (-) = 6
	Output (+) = 7	Output (-) = 8
Channel 3:	Input (+) = 9	Input (-) = 10
	Output (+) = 11	Output (-) = 12

Dimensions: W x H x D = 22 x 106 x 78mm
 Mounting: 35mm mounting rail, EN50022-35
 Weight: 130 g
 Warranty: 2 years

Diagram:



Dimensions:



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