

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



5 Channel Isolation Amplifier Type M9644



Technical description

This interface utilize an isolating amplifier channel to galvanically isolate DC current signals without a power supply.

The M9644 can be delivered up to five self contained isolating amplifier channels.

The input current signal can be in the range of 0...27mA.

The DC signal is converted to an AC signal by a chopper, transformed 1:1

to the secondary of a transformer, rectified and ripple rejected by a filter, thus restoring the original DC current signal.

The output may be on a common mode voltage or on different grounds and feeds remote displays, recorders, PLC's analog input, computers etc.

Applications:

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

Technical Data

Input

Input current (I_E): 0...5mA, 0...20mA, 4...20mA, max. 27mA
 Max. Input current: 50mA (= thermal limitation)
 Max. Input voltage (U_E): +20V
 Max. voltage drop: $\cong 3,7V$

Output

No. of outputs: 2...5 pieces, galvanically isolate, non-interacting
 Current transfer ratio ($I_E: I_A$): 1,0 : 1,0
 Load: $\leq 500\Omega$
 Transfer gain error: Typ. $\pm 0,1\%$
 Output ripple: 0,9% ($R_L=300\Omega, I_A=20mA, f=1,8kHz$)
 Rise time: Typ. 75ms
 Working temperature range: -10 to +60°C (max. $\pm 0,1\%/20mA$)

Coupling

Internal oscillator: Typ. 1,8kHz with MosFet-switches
 Max. common mode voltage (U_{cmv}): 230Veff, V_{TEST} 2500Veff/1minute.
 Operation principle: The input current is chopped with 1.8kHz, transformed from the primary to the secondary by a transformer, rectified and filtered, see block diagram

Power supply: 24VDC, -10...20%
 Power supply load: < 5 Watt
 CE conformity: fulfilled

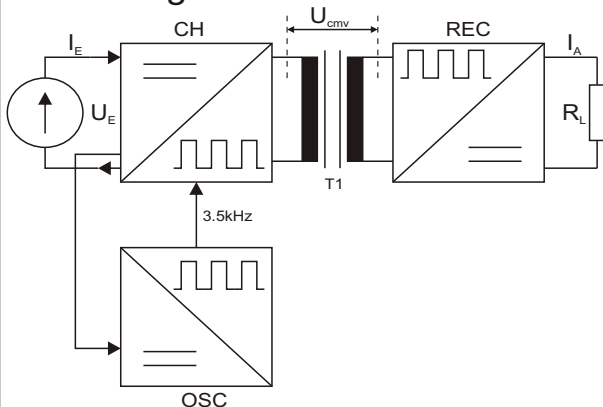
Mechanical Data

Terminals: Terminal 32pole; DIN41612, A+C used

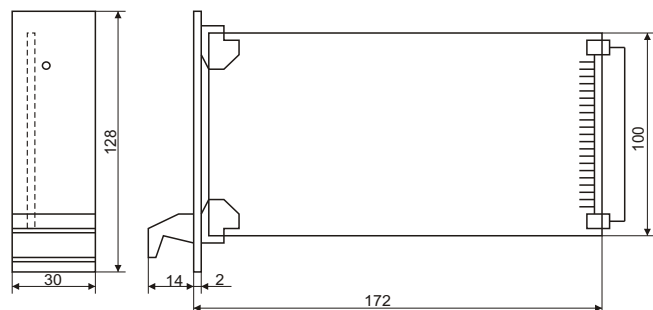
Terminal description:	2ac channel 1 +	4ac channel 1 -
	6ac channel 2 +	8ac channel 2 -
	10ac channel 3 +	12ac channel 3 -
	14ac channel 4 +	16ac channel 4 -
	18ac channel 5 +	20ac channel 5 -
	24ac option 2-wire transmitter (+24VDC)	
	26ac power supply +	28ac power supply -
	30ac signal input+	32ac signal input -

Dimensions: W x H x D = 30 x 128 x 172 mm, 6 TE, 3 HE, system "Schroff"
 Weight: 300 g
 Warranty: 2 years

Block diagram:



Dimensions in mm:



MOSTEC

Mess- und Regeltechnik
 Lausenerstrasse 13a
 CH-4410 Liestal
 Switzerland
 Tel. +41 61 921 40 90
 Fax +41 61 921 40 83