

Programmable Isolation Amplifier Type M2842

16 preprogrammed ranges

Programmable

17.5mm case

Plug-in terminals



Technical description

The M2842 series "snap-on" isolation amplifier and line conditioner can be used to provide a low cost analogue input to standard PLS resp. SPC's without the use of an expensive analogue input card. Use an inexpensive digital I/O pin of your SPC to read the output frequency of the M2842. The M2842 can accept current / voltage and temperature signals which are converted to an output frequency proportional to the input signal.

Additionally, the M2842 provides a 2.5kV galvanic separation between input, output and supply. The output section provides NPN, PNP or an active high/low signal. All within a voltage range between 5 and 24Vpp signal level.

As a typical application the M2842 can be used to capture and galvanically isolate a temperature of a PT-100 probe. If your SPC has no more analogue inputs left, the output frequency of the M2842 is captured with a simple digital input pin. Doing so, the relatively expensive and not galvanically isolated input card of your SPC can be avoided.

Since the M2842 is also an isolation amplifier, parasite ground loops or interferences can be avoided. Another typical application can be the control of a stepper motor control unit with pulses or frequencies if the set point signal is analogue.

The instrument is equipped with 16 pre-programmed ranges which can be selected with program switches on one edge of the instrument. With the "Mpro" software which is free of charge, any range within the measuring range of the instrument is programmable. If you wish, Mostec can program any non standard measuring range.

Adjustable standard ranges:

Input signals: 0...1V, 0...10V, 0...20mA, 4...20mA, -50...300°C, -30...+170°C, 0...100°C
Output signals: 0...1kHz and 0...2kHz, higher frequencies on request.

Supply: Wide range power supply from 20VAC/DC to 253VAC/DC, galvanic 3-way-isolation.

Technical Data:

Input:	Voltage DC: 0...1V, 0...10V, Current DC: 0...20mA, 4...20mA, Temperature sensor Pt-100: -50...300°C, -30...+170°C, 0...100°C, programmable with the software "Mpro"
Output:	0...1kHz and 0...2kHz, others on request, programmable with the software "Mpro"
Input impedance:	Current input: 22 Ω (= input load) Voltage input: 1M
Max. output current limit:	Max. 25mA, short circuit proof
Special signal range:	Voltage input: ±100mV to ±10VDC, others on request Current input: ±2mA to ±20mADC, others on request Frequency output: 0...2kHz, others on request
Temperature sensor:	Platinum-100 (DIN 43760) in 2- or 3-wire circuit, others on request
Max. length of sensor cable:	3-wire shielded, up to 20 m cable resistor, symmetrically (300m) 2-wire shielded, error depends on cable resistance
Input, 2-wire transmitter:	20VDC, max. 25mA
Test Isolation Voltage:	2500VAC 1 minute, input output power supply 4000VAC on request
Reproducibility:	0.1%
Accuracy:	0.1% at 23°C ambient
Long-term stability:	0.1% after 3 months
Temperature coefficient:	Zero drift typ. 20ppM/°C, gain drift typ. 15ppM/°C
Working temperature range:	-5 to +55°C
Max. humidity:	95%, non-condensing
Power supply:	Wide range power supply: 20 to 253VAC or DC
Power supply load:	2.0W
CE-conformity:	fulfilled
Case:	17.5mm wide case
Mounting:	35mm mounting rail, EN50022-35
Weight:	130g
Terminals:	Plug-in screw terminals
Terminal description:	1 = Power supply: AC~/DC(+) 2 = Power supply: AC~/DC(-) 3 = Protective earth (PE) 4 = Signal output PNP (E) 5 = Signal output PNP (K) 6 = Signal output NPN (K) 7 = Signal output NPN (E) 8 = Signal input U(+) 9 = Signal input I(+) 10 = Signal input U/I (-) 11 = +20V (2-wire) 12 = Temperature sensor (-) sense 13 = Temperature sensor (-) 14 = Temperature sensor (+)
U = voltage I = current K = collector E = emitter	
Warranty:	2 years
Options:	- "Low-cost" versions with reduced functions - USB programming unit for MOSTEC devices with cable and software - Customer modifications, special ranges

Programming by Laptop:



Note:
- Connect to the USB interface by a Mostec programming unit
- Download free programming software: www.mostec.ch

MOSTEC

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Dimensions (mm), Wiring:

