Process Signal Integrator MIN400

Function: Precision electronic instrument for the integration of electrical quantities against time giving a 24 Volt DC pulse and an open collector output suitable for operation of an electro-mechanical impulse counter, etc. The MIN400 can be used for any application where time-varying signals require integrating. For instance:– Flow, Mass Flow (Liquids, Solids or Gases), Electric Charge, etc.

Application Notes: If the MIN400 is required to work from low level signals then it can be preceded by a BM303 signal amplifier. Similarly the MIN400 can accept square law signals from differential pressure/flow transmitters if preceded by a MIN500 Square Root Extractor.

SPECIFICATIONS

Please note that the following are typical ranges. We also manufacture instruments to cater for other ranges, within limitations detailed below. All instruments come with span and zero potentiometers for fine tuning on site.

INPUTS:

DC Current
0 to 1mA into 100 ohms
0 to 10mA into 10 ohms
4 to 20mA into 10 ohms
10 to 50mA into 10 ohms
Other ranges as required

DC Voltage
Between 0 and 250 Volts DC
Minimum voltage span 100 mVolts
Maximum voltage span 250 Volts

Input Impedance
1M ohm or greater for inputs of greater than 1 Volt DC

OUTPUTS:

Output Pulse
1) 24 Volt DC 40mS wide, derived from an Open Collector and internal supply, and
2) Opto Coupler, 40mS wide
Maximum sink current 5mA
Maximum voltage 30 Volts
Isolated from input and supply

Output Count Rate
Minimum 120 counts per hour
2 counts per minute
Maximum 12,000 counts per hour
200 counts per minute
– internally switch selectable

Loading
150 ohms minimum DC resistance
160mA maximum suitable for one electro-mechanical counter

SUPPLY:

Power Supply Voltage
18 to 30 Volt AC or DC, or
10 to 15 Volt AC or DC
with converter to maintain signal to power supply isolation

Power Required
1.5 Watts Maximum

Pilot Light
Red LED shows Power ON

GENERAL:

Linearity Error
Pulse rate proportional to input
±0.1% of span

Temperature Coefficient
±0.1% of span /△10ºC

Operating Temperature Range
0 to +50ºC

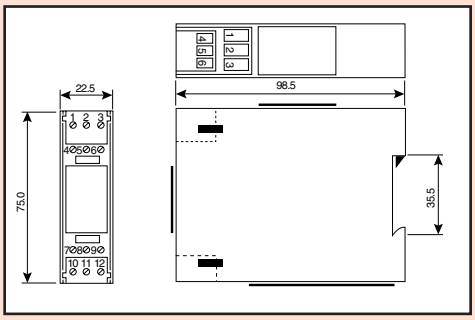
Storage Temperature Range
–20 to +60ºC

Operating Humidity Range
0 to 95% RH non-condensing

Storage Humidity Range
0 to 95% RH non-condensing

Weight
113 gms

MECHANICAL DETAILS



TERMINATION DETAILS

Terminal		Terminal	
1	Power Supply –ve	7	Counter output –ve
2	Power Supply +ve	8	Counter output +ve
3	Power Supply Screen	9	Unused
4	Input –ve	10	Opto Coupler
5	Input +ve	11	output
6	Unused	12	Unused

ORDERING DETAILS

a) Give identification code, i.e. MIN400
b) Give power supply voltage, 12 or 24 Volt AC or DC
c) Give details of input signal, both type and range, i.e. 4 to 20mA
d) Give details of output count rate required, i.e. 0 to 250 counts per hour

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