

Function: Precision electronic DC powered instrument for the integration of electrical quantities against time. The integrated quantity is output in the form of a DC pulse and an isolated open collector signal suitable for operation of an electro-mechanical counter, etc. The BM400 can be used for many applications where time-varying signals require integrating. For instance: Flow, Mass Flow (Liquids, Solids or Gases), Electric Charge, etc.

Application notes: If the BM400 is required to work from a low level signal then it can be preceded by a BM303 signal amplifier. Similarly the BM400 can accept a square law signal from a differential pressure/flow transmitter if preceded by a MIN500 Square Root Extractor.



SPECIFICATIONS

Please note that the following are typical ranges. Other ranges available, please contact sales office.

INPUTS:

D C 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 current inputs as required
Minimum current 1mA
Maximum current 100mA

D C Voltage

Between 0 and 250 Volts DC
Minimum voltage span 100mV
Maximum voltage span 250V
Input Impedance:
1M ohm or greater for inputs of greater than 1 Volt DC

OUTPUTS:

Output Pulse

1) 24V DC 40mS wide, derived from an Open Collector and internal supply, and
2) Open Collector, 40mS wide
Isolated from input and supply by an opto-coupler – requires external power
Maximum sink current 5mA
Maximum voltage 30 Volts DC

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

8 to 30 Volt 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/ Δ 10°C

Operating / Storage Temperature Range

0 to +45°C / -20 to +60°C

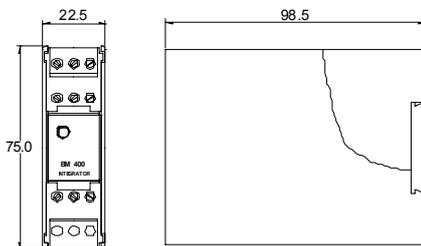
Operating / Storage Humidity Range

0 to 95% RH non-condensing

Weight

113 gms

MECHANICAL DETAILS



TERMINATION DETAILS

Terminal

- 1 Power Supply -ve
- 2 Power Supply +ve
- 3 Power Supply Screen
- 4 Input -ve
- 5 Input +ve
- 6 Unused

Terminal

- 7 Powered Counter Output -ve
- 8 Powered Counter Output +ve
- 9 Unused
- 10 } Isolated Open Collector
- 11 } Output
- 12 Unused

ORDERING DETAILS

- a) Give identification code, i.e. BM400
- b) Give power supply voltage, i.e. 24 Volt DC
- c) Give details of input signal, i.e. input type (as listed above) and range.
- d) Give details of output count rate required, i.e. 0 to 1200 counts per hour

