

Isolated Frequency to Current/Voltage Converter BM200

Issue 4.0

Jul '08

IEC61508: Typically, SIL2. (Please contact Sales Office for details).

Function: Conversion of an input frequency to a linearly proportional, isolated output current or voltage. The BM200 can be used to monitor the speed of rotating machinery and can be followed by a BM100/BM120 trip amplifier to give alarm, control or shutdown facilities at preset levels of speed. It is ideally suited for use with turbine flow meters to give an analogue measurement of flow rate, and with proximity detectors for non-contact speed measurement. The BM200 incorporates both a sensitivity adjustment and a reference voltage to allow a variety of sensor types to be used.



SPECIFICATIONS

Please note that the following are typical standard ranges. We will manufacture instruments to cater for other ranges too, within certain limitations. Please contact our internal sales department for further clarification.

INPUTS:

Frequency Range

Minimum 0 to 5 Hz
Maximum 0 to 20 KHz

Voltage

Min 15 mV RMS up to 10KHz
Min 25 mV RMS up to 20KHz
Maximum 50 Volts RMS

Sensitivity

For minimum sensitivity wind sensitivity potentiometer fully anti-clockwise

OUTPUTS:

DC Current

0 to 10mA into 10 to 2000 ohms
4 to 20mA into 10 to 1000 ohms
Other ranges as required
Minimum span 1mA
Maximum span 20mA

DC Voltage

The voltage output is derived from passing a mA signal through an internal resistor

0 to 1 Volt DC thru 51 ohms
0 to 10 Volt DC thru 510 ohms
1 to 5 Volt DC thru 240 ohms
Other ranges as required
Minimum span 1 Volt DC
Maximum span 10 Volt DC

Input/Output/Supply Isolation

3 Port Isolation
600V > 20M ohms

SUPPLY:

Power Supplies

8 to 30 Volt DC
with converter to maintain signal to power supply isolation

Power Required

2.0 Watts Maximum

Pilot Light

Red LED indicates Power ON

Transducer Power Supply

8 Volt DC @ 3mA suitable for use with Namur proximity sensors and various other transducers

GENERAL:

Temperature Coefficient

±0.1% of span / Δ 10°C

Linearity Error

Better than 0.1% between 5 and 100% of span

Operating Temperature Range

0 to +45°C

Storage Temperature Range

-20 to +60°C

Operating Humidity Range

0 to 95% RH non-condensing

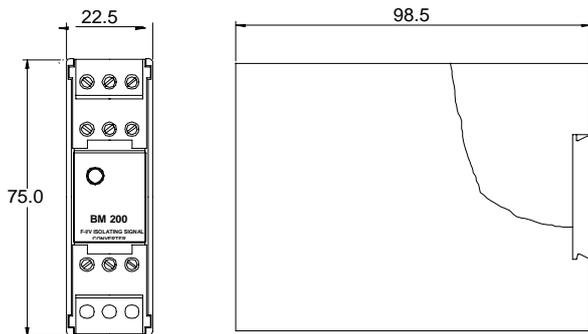
Storage Humidity Range

0 to 95% RH non-condensing

Weight

100 gms

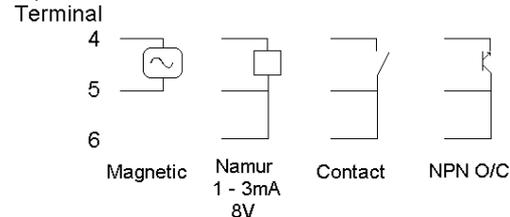
MECHANICAL DETAILS



TERMINATION DETAILS

Terminal	Terminal
1 Power Supply -ve	7 Active o/p -ve / Passive +ve
2 Power Supply +ve	8 Active o/p +ve
3 Power Supply Screen	9 Passive o/p -ve
4 0 Volt reference	10 Unused
5 ~ AC input signal	11 Unused
6 1K ohm internal resistor from 8V reference	12 Unused

Input Variations



ORDERING DETAILS

- a) Give identification code, i.e. BM200
- b) Give all details of input signal, i.e. input type (as listed above) and frequency range
- c) Give details of output required, both type and range, i.e. 4 to 20mA

