

AC VOLTAGE



TECHNICAL SPECIFICATION

INPUT

Rated value U_n	57.8 < 100 / 110 < 600 V
Power consumption	< 1.5 VA (VA1, VA3) < 1 VA (VL1, VL3, VR1)
Working range	15-125% U_n (VA1, VA3) 0-125% U_n (VL1, VL3, VR1)
Rated Frequency	50 / 60 / 400 Hz
Frequency influence	0.005 % / Hz
Overload continuous	1.5 x U_n
Overload for 1 sec.	4 x U_n (VL1 VL3 VR1) 2 x U_n (VA1 VA3)

OUTPUT

Rated value mA	0-1/5/10/20mA (VA1, VA3)
Rated value mA	1/5/10/20 & 4-20mA (VR1)
Rated value mA	4-20mA (VL1)

Rated Value volts	0-5 / 10 V (VA1, VA3)
Rated value volts	0-5 / 10 & 1-5 V (VR1)
Rated value volts	1-5 V (VL1 VL3)

ADJUSTMENT

Zero	No adjustment (VA1, VA3)
Zero	$\pm 2\%$ (VR1, VL1)
Span	$\pm 10\%$ (VA1, VA3, VR1, VL1, VL3)

AUXILIARY

A.C. Voltage	115 / 230 / 400 V ($\pm 25\%$ / 45-65Hz / < 2 VA)
D.C. Voltage	24 / 48 / 110 V ($\pm 20\%$ / galvanically isolated / < 3 W) Note M100-VA1 & VA3 are self powered.

WEIGHT & CASE SIZE

M100-VA1	Approx. 0.3 kg. 55mm case
M100-VL1, VR1	Approx. 0.4 kg. 55mm case
M100-VA3	Approx. 0.6 kg. 100mm case
M100-VL3	Approx. 0.7 kg. 100mm case

ORDERING INFORMATION

Product Code	Input	In	Output	Aux	Freq.	Options
M100-AL1	5A		4-20mA	230V	50Hz	

OPTIONS

1. Non standard inputs / outputs only as far as technically acceptable.
2. A.C. Auxiliary in range 57.7 to 450 volts
3. Calibration at nominal Hz 35.....450Hz
4. Calibration at temperature other than 23°C

SELECTION GUIDE

M100-VA1	1 ph. self powered ave. sensing RMS calibrated
M100-VL1	1 ph. aux powered ave. sensing RMS calibrated
M100-VR1	1 ph. aux powered true RMS sensing RMS cal.
M100-VA3	3 ph. self powered ave. sensing RMS calibrated
M100-VL3	3 ph. aux powered ave. sensing RMS calibrated

TYPICAL APPLICATIONS

The M100 series voltage transducers are designed to measure A.C. Voltage in single and 3 phase system. They convert the A.C. Signal to a D.C. Output that is directly proportional to the input signal.

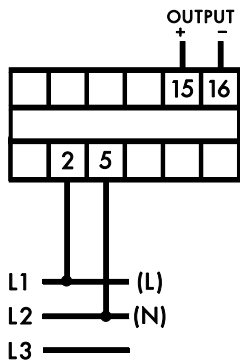
The M100-VA1 VA3 are self powered (i.e. no auxiliary required) average sensing RMS calibrated voltage transducers, mA and voltage outputs are available.

The M100-VL1 VL3 are average sensing RMS calibrated, live zero voltage transducers. Auxiliary is required to provide power so that 4mA output signal is present when the input is zero.

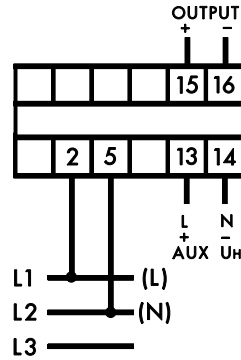
The M100-VR1 is true RMS sensing RMS calibrated allowing measurement of distorted waveforms of up to 9th harmonic with a crest factor of 5. The VR1 is typically used in voltage measurement where distorted waveform is common such as thyristor drives.

The above units are used to measure voltage in energy management systems, switchboards, generator and telemetry controls. Isolation of 4kV is provided between the input and output signal, allowing the output to be fed to conventional analogue meters, digital meters, PLC, and computer systems.

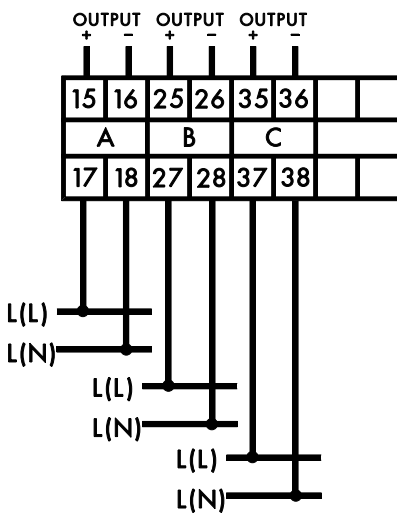
AC VOLTAGE CONNECTION DIAGRAMS



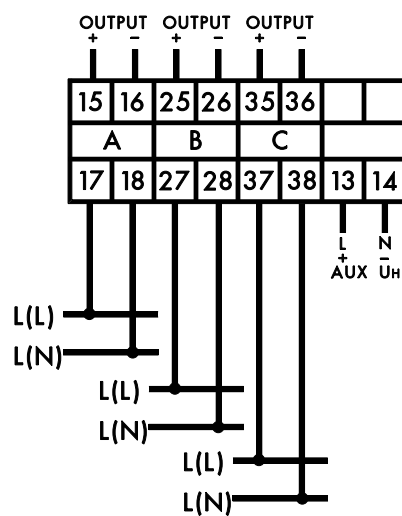
M100-VA1 / VS1



M100-VL1 / VR1 / VX1



M100-VA3



M100-VL3 / VX3