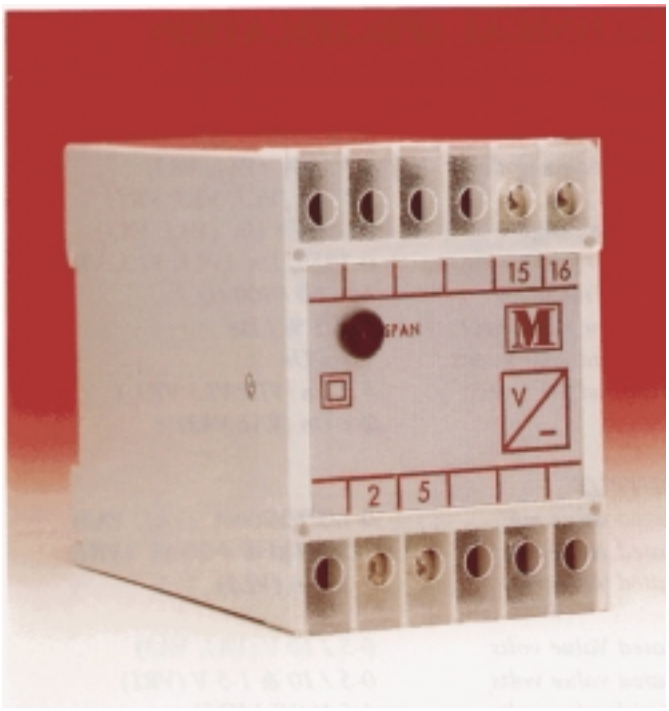
SPECIAL AC VOLTAGE



SELECTION GUIDE

M100-VS1	*Suppressed zero voltage auxiliary powered*
M100-VX1	*1 ph. aux. powered ave. sensing RMS calibrated*
M100-VX3	*3 ph. aux. powered ave. sensing RMS calibrated*

TYPICAL APPLICATIONS

The M100-VS1 is a self powered voltage transducer. The suppression allows the transducer to accurately measure a voltage system over a narrow band either side of a nominal voltage. The range can be between ± 10% to ± 30% which can be specified when ordering. Typical application is to display the voltage on an analogue meter with an expanded scale. This allows the user to read small changes in the voltage in a single or 3 phase system. The output could also be fed to a computer that could then control the voltage of the system, to ensure that it stays within the narrow band.
The M100-VX1 and VX3 are essentially the same as the M100-VA1 and VA3, but they have auxiliaries which allow the working range to be 0-125% rather than 10-125%. Used where the average sensing of voltage is required from 0 to 125% of the nominal voltage.

TECHNICAL SPECIFICATION

INPUT	
Rated value Un	*57.8 <100 / 110 <600 V*
Power consumption	*< 1 VA (VX1, VX3)*
	<1.5 VA (VS1)
Working range	*0-125% Un (VX1, VX3)*
	10-30% Un (VS1)
Rated Frequency	*50 / 60 / 400 Hz*
Frequency influence	*0.005 % / Hz*
Overload continuous	*1.5 x Un*
Overload for 1 sec.	*2 x Un*
OUTPUT	
Rated value mA	*0-1 / 5 / 10 / 20mA (VX1, VX3)*
Rated value mA	*1/5/10/20 & 4-20mA (VS1)*
Rated value volts	*0-5 / 10 V (VX1, VX3)*
Rated value volts	*0-5 / 10 V & 1-5 V (VS1)*
ADJUSTMENT	
Zero	*No adjustment (VX1, VX3)*
Zero	*± 2% (VS1)*
Span	*± 10% (VX1, VX3, VS1)*
AUXILIARY	
A.C. Voltage	*115 / 230 / 400 V*
	(± 25% / 45-65Hz / <2 VA)
D.C. Voltage	*24 / 48 / 110 V (± 20%*
	galvanically isolated / < 3 W)
	Note M100-VS1 is self powered
WEIGHT & CASE SIZE	
M100-VS1,VX1	*Approx. 0.4 kg. 55mm case*
M100-VX3	*Approx. 0.7 kg. 100mm case*

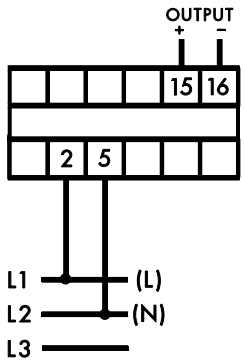
ORDERING INFORMATION

Product Code	*Input Un*	*Output*	*Aux*	*Freq. Option*
M100-VS1	*110V ± 15%*	*20mA*	*-*	*50Hz*

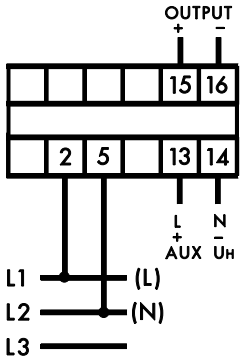
OPTIONS

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*

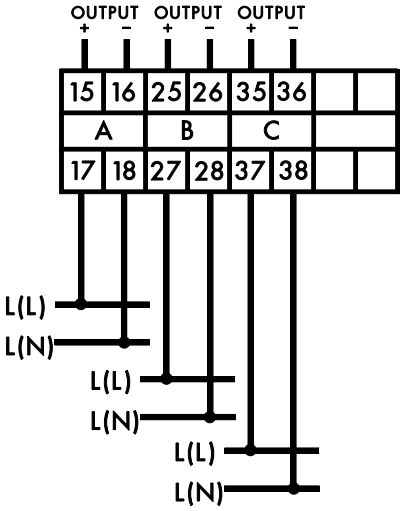
AC VOLTAGE CONNECTION DIAGRAMS



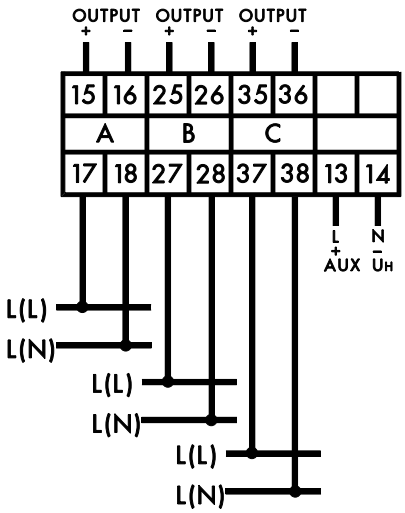
M100-VA1 / VS1



M100-VL1 / VR1 / VX1



M100-VA3



M100-VL3 / VX3

GENERAL SPECIFICATIONS

ENVIRONMENTAL

Working temperature	*0 to +60 deg C*
Functional temperature	*-25 to +70 deg C*
Storage temperature	*-55 to +85 deg C*
Temperature coefficient	*0.02% per deg C (100 ppm / °C)*
Relative humidity	*95% non condensing*
Class of climate	*HSE complying with DIN 40040 -3 complying with VDE/VDI 3540*

INSULATION

Test voltage	*4kV RMS 50Hz 1min. between Input / Case / Auxiliary / Output*
Impulse test	*EMC 5kV transient complying with IEC 801 / EN55020*
HF interference test	*EHF 2.5kV 1MHz complying with IEC 255-4*
Protection class	*II complying with IEC 348 BS 4753 / DIN 57411 / VDE 0411*

APPLIED STANDARDS

General	*IEC 688 / BS 6253 / VDE/ VDI 2192*
Safety	*BS EN61010 DIN 57411 / VDE 0411 ANSI C37*
Surge withstand	*IEC 801 / EN 55020 ANSI C37-90a*
Radio screening	*RFI degree N complies with VDE 0875*
EMC	*Emissions EN50081-2 Immunity EN50082-1*

ACCURACY

Class	*±0.2 % complying with IEC 688*
Calibration temperature	*23°C*
Temperature coefficient	*0.01% / °C (100 ppm / °C)*
Stability	*0.05 % per annum non cumulative*
Warm up time	*<15 min*

OUTPUT

Rated value	*See individual product pages*	
Load resistance mA	*1mA*	*<15 kOhm*
(Unless otherwise	*5mA*	*<3 kOhm*
stated)	*10mA*	*<1.5 kOhm*
	20mA	*< 0.75kOhm*
	4-20mA	*< 0.75kOhm*
Load resistance volts	*1, 5 & 10 volts >1 kOhm*	
(M100-VA1,VA3 only)	*1, 5 & 10 volts > 50kOhm*	
Load influence	*<0.1 %*	
Ripple	*<0.5% peak-peak at full load*	
Response time	*<200 msec for 0-99 % at full load*	
Overload	*<2 x rated value at full load*	
No load voltage	*<27 V*	

ENCLOSURE

Fixing	*Snap on to DIN rail 35 x 7.5 mm complies with DIN-EN 50022 BS 5584*
Mounting	*Any position*
Enclosure Code	*Case IP 50 / terminals IP 30 Complies with IEC 529 BS 5490 DIN 40050*

APPROVALS

cU.L. Approval	*File No E157034*

CASE DIMENSIONS

All Dimensions in mm