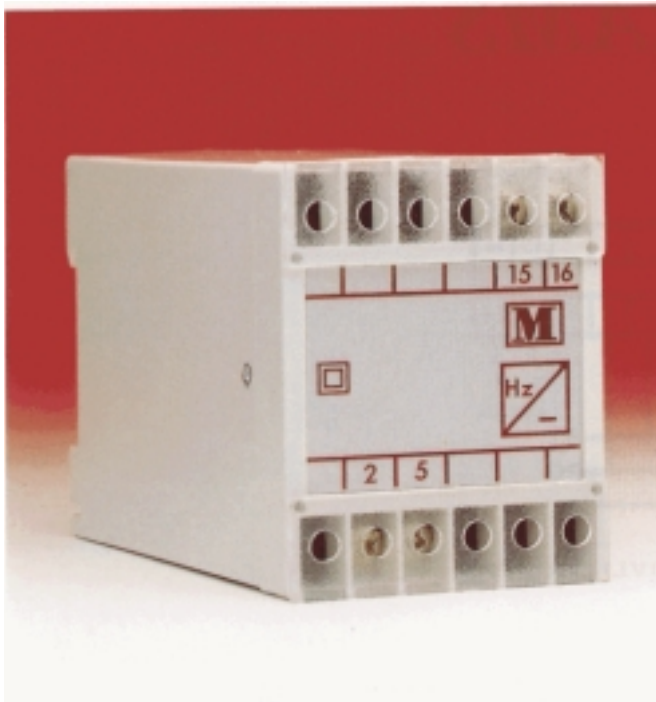


FREQUENCY



TECHNICAL SPECIFICATION

INPUT

Rated value U_n	57.8 < 600V
Power consumption	<1.5 VA (FA1) <1 VA (FL1 FX1)
Working range	75-125% U_n (FA1) 15-125% U_n (FL1 FX1)
Measuring range	45-55 / 45-65 / 55-65 / 360-440Hz
Overload continuous	1.5 x U_n
Overload for 1 sec.	2 x U_n

OUTPUT

Rated value mA	0-1 / 5 / 10 / 20mA (FA1 FX1)
Rated value mA	4-20mA (FL1)
Rated value volts	0-5 / 10 V (FA1 FX1)
Rated value volts	1-5 V (FL1)

ADJUSTMENT

Zero	No adjustment
Span	No adjustment

AUXILIARY

A.C. Voltage	115 / 230 / 400 V (± 25% / 45-65 Hz / < 2 VA)
D.C. Voltage	24 / 48 / 110 V (±20% / galvanically isolated / <3W) Note M100-FA1 is self powered

WEIGHT & CASE SIZE Approx. 0.4kg, 55mm case

SELECTION GUIDE

M100-FA1	Self powered true zero outputs
M100-FL1	Auxiliary powered live zero outputs
M100-FX1	Auxiliary powered true zero outputs

TYPICAL APPLICATIONS

The M100 series of frequency transducers are designed to measure frequency in single and 3 phase systems. The A.C. Input is converted to a D.C. Output, that is directly proportional to the change in input frequency within a specified span.

The M100-FA1 is self powered. (No auxiliary required)

The working voltage range is 75-125% of the nominal voltage.

The M100-FL1 is auxiliary powered. The outputs are live zero either 4mA or 1 volt. The auxiliary enables the working voltage range to be 15-125%.

The M100-FX1 is essentially the same as the FA1 but an auxiliary is provided to enable the unit to have a working voltage range of 15-125%.

All types of the above frequency transducers are typically used to monitor and control frequency in such applications as 3 phase mains supplies, A.C. Generating sets and process control etc.

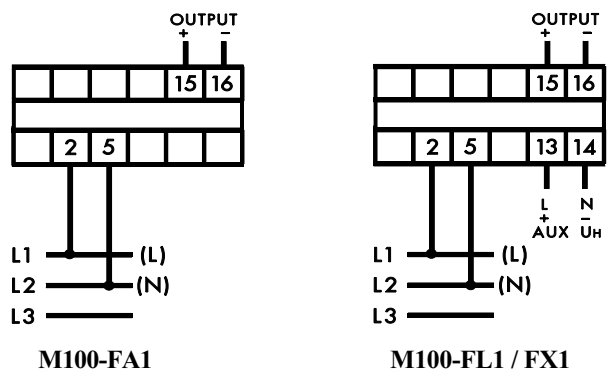
ORDERING INFORMATION

Product code	Input Hz	Output	Aux	Freq.	Options
M100-FL1	45-55Hz	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 temperature other than 23°C

CONNECTION DIAGRAMS



**Power Measurement
Specialists
800-523-9194**

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 (Unless otherwise stated)	1mA	<15 kOhm
	5mA	<3 kOhm
	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

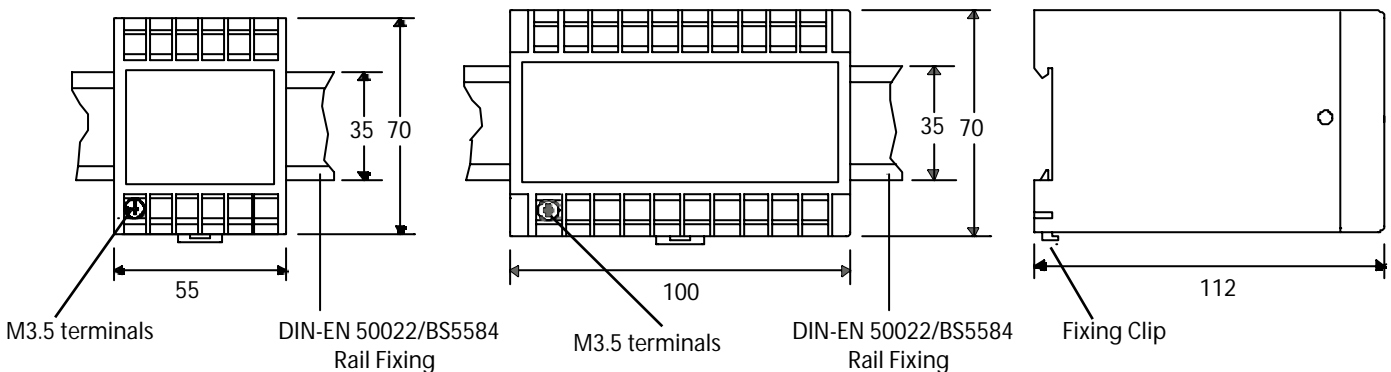
Fixing	Snap on to DIN rail 35 x 7.5 mm complies with DIN-EN 50022 BS 5584
Mounting	Any position
Enclosure Code	Case IP 50 / terminals IP 30 Complies with IEC 529 BS 5490 DIN 40050

APPROVALS

cU.L. Approval	File No E157034
----------------	-----------------

CASE DIMENSIONS

All Dimensions in mm



Panel Components & Systems

