



- Combined Frequency (Hz), Active Power (Watt) or Reactive Power (VAR) Transducer for balanced or unbalanced load
- Precision true RMS class 0,5 (Hz & Watt) and class 1 (VAR) measurement, not affected by any waveform distortion
- For use with 1A or 5A current transformers
- Up to two individual very fast analogue output signals (<50mS), (optional)
- DIN96 Slave Indicators with full scale (optional)

Specifications

| | |
|---|---|
| Monitored Voltage: | 100-120V, 200-240V, 380-415V, 440-460V, 480VAC 40-70Hz (Fuse 0,5A) |
| Optional Separate Auxiliary Voltage AC: | 100-120V, 200-240V, 380-415V, 440-460V, 480VAC 40-70Hz (Fuse 0,5A) |
| Optional Separate Auxiliary Voltage DC: | 24-60VDC (Fuse 0,5A) 110-220VDC (Fuse 1A) |
| Supply tolerance: | +10%, -20% |
| Power rating: | 5VA |
| Current Input: | 1A CT or 5A CT, <0,1VA |
| Frequency range: (Other range on request) | 45-55Hz 55-65Hz 45-65Hz 30-70Hz |
| Analogue output 1: (Any % of the Hz range) (see page 3 for available outputs) | mA: Up to 20mA, max 500R V: Up to 10V, min 100kohm (other on request) |
| Analogue output 2: (Watt or VAR range) (see page 3 for available outputs) | mA: Up to 20mA, max 500R V: Up to 10V, min 500ohm (other on request) |
| Accuracy: | Class 0,5 (Watt) Class 1 (VAR) |
| Temperature: | -20 to +70°C |
| Humidity, relative: | 0-95% |
| Weight: | 0.6kgs |
| Front protection: | IP21 |
| Flammability: | UL94-V0 |

The unit meets EN 60255-27 Cat. III, Pollution degree 2 and the relevant environmental and EMC tests specified in EN 60255-26 to comply with the requirements of the major Classification Societies.

Description

The digitally controlled MT-FW/R is a precision transducer for frequency (Hz) and balanced or unbalanced load system active (Watt) or reactive (VAR).

To be used in applications that require a very fast response, precision monitoring of frequency, active or reactive power. Ideal for systems for regulation and control of the load on generators, motors and inverters.

The unit measures the voltage and current true r.m.s. value, and accuracy is independent of any waveform distortion. A green LED (ON) indicates the auxiliary supply presence.



Two individual very fast analogue output signals proportional to Frequency (Hz), the measured Active Power (Watt) or Reactive Power (VAR) level. (See page 3 for an overview of models).

If an output is used for remote meter reading, we recommend 0-1mA for the slave indicator.

It also includes an additional RJ12 output for a DIN96 Slave Indicator (optional).

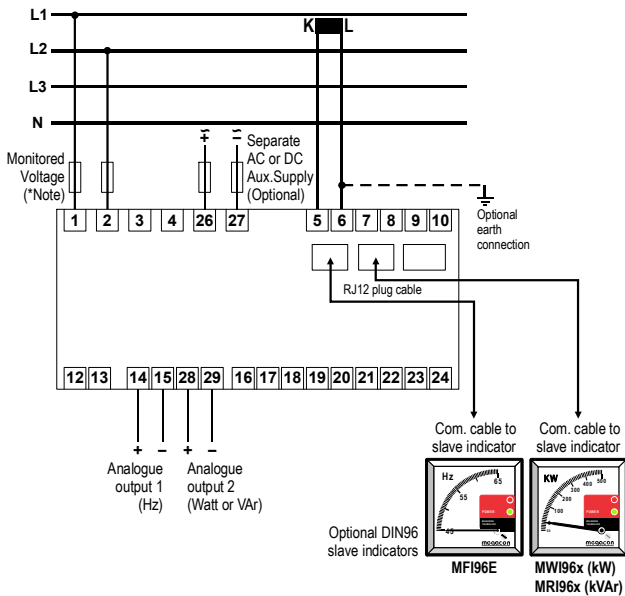
The noise-immune mA output is isolated from both the C.T. and voltage inputs and auxiliary power.

The standard models takes the auxiliary supply voltage from the monitored voltage (terminal 1 & 2).

It can also be delivered with optional separate AC or DC auxiliary voltage (terminal 26 & 27), but that must be specified when ordering (see page 3 for ordering code for separate Aux. Supply).

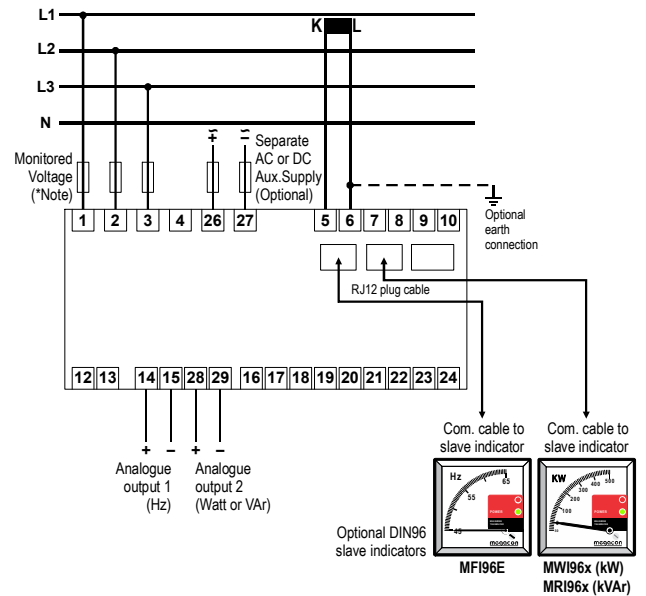
Connection Diagram

MT-F1W2
MT-F1R2



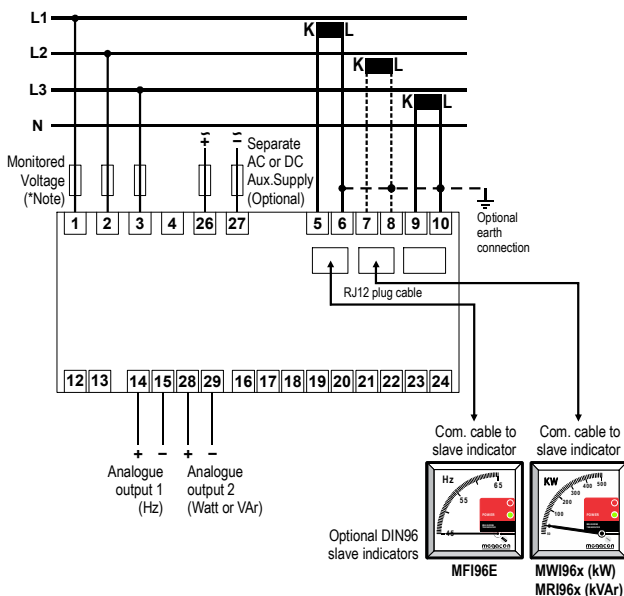
Connection Diagram

MT-F1W3
MT-F1R3



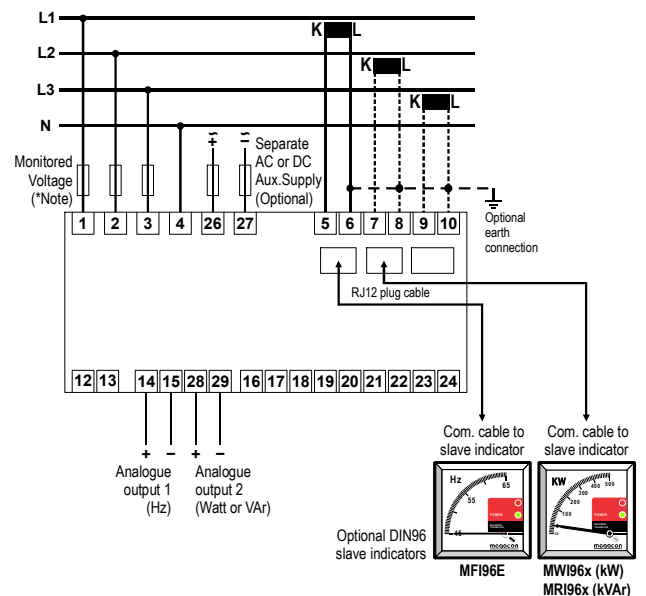
Connection Diagram

MT-F2W3
MT-F2R3
MT-F3W3
MT-F3R3
Dotted wire is for
MT-F3W3 & MT-F3R3



Connection Diagram

MT-F1W4
MT-F1R4
MT-F3W4
MT-F3R4
Dotted wire is for
MT-F3W4 & MT-F3R4



The MEGAcon policy is one of continuous improvement, consequently equipment supplied may vary in detail from this publication.

***Note:** The standard models takes the auxiliary supply voltage from the monitored voltage (terminal 1 & 2).

Info: To ensure correct kW or kVAR measurement, the voltage phase sequence and CT connections must be as shown on connection diagrams. (See page 3 for an overview of models)



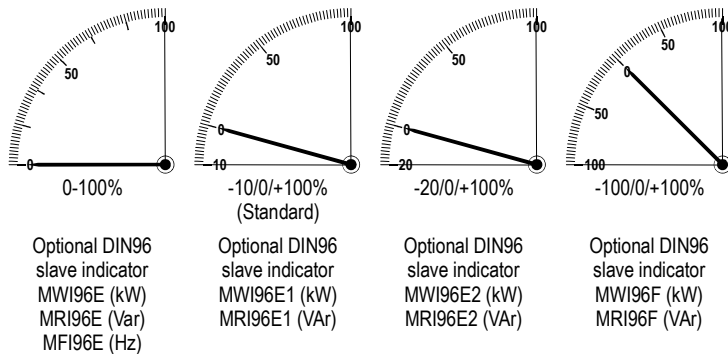
Model Overview

| Models | Frequency (Hz) and Active Power (W) | O/P 1 | O/P 2 |
|---------|---|-------|-------|
| MT-F1W2 | 1 element, single phase | X | X |
| MT-F1W3 | 1 element, 3 phase, 3 wire, balanced load | X | X |
| MT-F1W4 | 1 element, 3 phase, 4 wire, balanced load | X | X |
| MT-F2W3 | 2 element, 3 phase, 3 wire, unbalanced load | X | X |
| MT-F3W3 | 3 element, 3 phase, 3 wire, unbalanced load | X | X |
| MT-F3W4 | 3 element, 3 phase, 4 wire, unbalanced load | X | X |

| Models | Frequency (Hz) and Reactive Power (R) | O/P 1 | O/P 2 |
|---------|---|-------|-------|
| MT-F1R2 | 1 element, single phase | X | X |
| MT-F1R3 | 1 element, 3 phase, 3 wire, balanced load | X | X |
| MT-F1R4 | 1 element, 3 phase, 4 wire, balanced load | X | X |
| MT-F2R3 | 2 element, 3 phase, 3 wire, unbalanced load | X | X |
| MT-F3R3 | 3 element, 3 phase, 3 wire, unbalanced load | X | X |
| MT-F3R4 | 3 element, 3 phase, 4 wire, unbalanced load | X | X |

Scaling for optional DIN96 slave indicator

Shown below are designations for the available circuit configurations:



Analogue Output

The output signals are proportional to the meter reading.

The signal is specifically intended as an input to a control system for monitoring or control.

Add suffix from table below to type designation to specify output required:

| Outputs 1 (Hz) | Outputs 2 (Watt or VAR) |
|----------------------|-------------------------|
| O/P1 0 - 10mA | O/P11 0 - 10mA |
| O/P2 0 - 20mA | O/P12 0 - 20mA |
| O/P3 4 - 20mA | O/P13 4 - 20mA |
| O/P4 4 - 12 - 20mA | O/P14 4 - 12 - 20mA |
| O/P5 N/A | O/P15 4 - 5,45 - 20mA |
| O/P6 -10 - 0 - +10mA | O/P16 -10 - 0 - +10mA |
| O/P7 -20 - 0 - +20mA | O/P17 -20 - 0 - +20mA |
| O/P8 0 - 10V | O/P18 0 - 10V |
| O/P9 0,2 - 10V | O/P19 0,2 - 10V |
| O/P10 4,3 - 20mA | O/P20 4,3 - 20mA |

Connection

Terminal type : Terminal Clamp and Screw
Wire max. : T1-T4,
T26-T27: AWG 24-14,
T5-T10: AWG 12,
other terminals: AWG 24-12

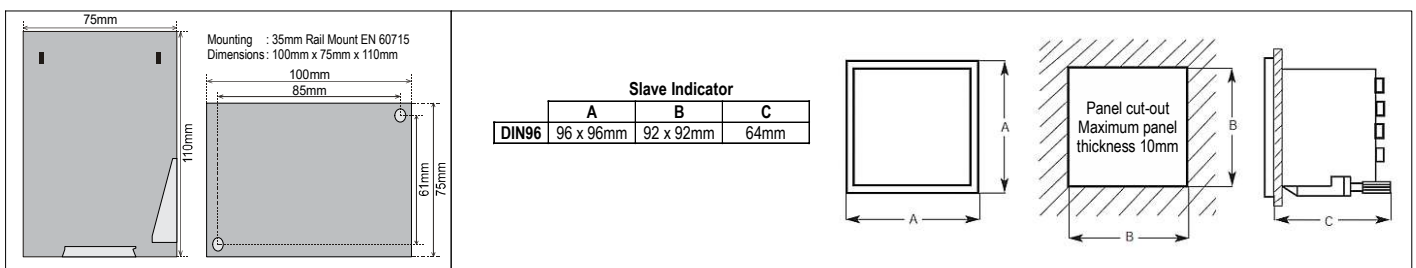
Screw Torque : 0.5Nm

Overload

Voltage : 1.2 x Un continuous
2 x Un for 10secs

Current : 2.5 x In continuous
5 x In for 1secs (max 25A)

Dimensions



The MEGAcon policy is one of continuous improvement, consequently equipment supplied may vary in detail from this publication.

ORDERING INFORMATION (Example)

Type : MT-F2W3
Aux. Supply : 200-240VAC
Input Voltage : 230V
Input Current C.T. : 1500/5A
Hz range : 30-70Hz
kW range : -60/0/+600kW
Analogue output 1 : O/P3: 4-20mA
Analogue output 2 : O/P18: 0-10VDC

Optional Separate Aux. Supply:
Add -SA for models with Separate AC Aux. Supply.
(Example: MT-F2W3-SA)
Add -SD for models with Separate DC Aux. Supply.
(Example: MT-F2W3-SD)

