

# Digital Multimeter

# DM-50



## features



### technical data

#### Network Type

3P4W, 3P3W & 1P2W

#### Display Type

4-digits 7 Segment Display

#### LEDs Indication

A, V, Hz, PF, Cos $\phi$ , kW, kVA, kVA

#### Aux Power Supply

AC range : 65 ~ 275 Vac (45 ~ 65 Hz)  
 DC range : 90 ~ 300 Vdc  
 Consumption : < 3VA

#### Current Measurement

AC Input Range : 0.025 ~ 10.0 A  
 Accuracy :  $\pm 1.0\%$   
 CT Range : 5 ~ 10,000 / 5A  
 Burden : < 0.1 VA at 5A

#### Voltage Measurement

AC Input Range : 0~300 VLN, 0~500 VLL  
 Accuracy :  $\pm 1.0\%$

#### Power Measurement

Accuracy (W, VAR, VA, PF, Cos $\phi$ ) :  $\pm 2.0\%$

#### Frequency Measurement

Range : 45 ~ 65 Hz  
 Accuracy :  $\pm 0.5\%$

#### Mechanical

Operating Temp. : -5°C ~ +55°C  
 IP Rating : IP54 (front panel)  
 Installation : Panel flush mount  
 Dimension (mm) : 99.2 (h) x 99.2 (w) x 45 (d)  
 Weight : approx. 265 gram

True RMS Measurement

4-digits Segment Display

Real Time Display (for each phase) :-

- Current (I)
- Voltage (V)
- Frequency (Hz)
- True Power Factor (PF)
- Displacement Power Factor (Cos $\phi$ )
- Active Power (P)
- Reactive Power (Q)
- Apparent Power (S)

Default View Mode Selection

Auto / Manual Scroll for L1, L2 & L3

Alarm LED Indication :- (Activated by A-02s)

- Adjustable Over / Under Current Setting
- Adjustable Over / Under Voltage Setting
- Adjustable Over / Under Frequency Setting
- Adjustable Low PF / Cos $\phi$  Setting
- Adjustable Start / Reset Time Delay

Complies with: IEC 61326-1

External Plug-in Module for :-

- A-01s / A-01sp (RS-485 Modbus RTU) *isolated type*
- A-02s (RS-485 Modbus RTU + Alarm Output) *isolated type*

### measured parameters

**Voltage** : V1, V2, V3, V12, V23, V31

**Current** : I1, I2, I3, In

**Active Power** : P1, P2, P3,  $\Sigma P$

**Reactive Power** : Q1, Q2, Q3,  $\Sigma Q$

**Apparent Power** : S1, S2, S3,  $\Sigma S$

**Frequency** : Hz

**True Power Factor** : PF1, PF2, PF3, PFavg

**Displacement Power Factor**:  
 Cos $\phi$  1, Cos $\phi$  2, Cos $\phi$  3, Cos $\phi$  avg

**Alarm** : Off / Under / Over Current  
 Off / Under / Over Voltage  
 Off / Under / Over Frequency  
 Off / Low PF / Low Cos $\phi$   
 Start / Reset Time Delay

**Operated Hours**

Hour Run

### communication

**A-01s / A-01sp & A-02s** Plug in module  
*(sold separately)*

Modbus RTU RS-485 (isolated type) with :-

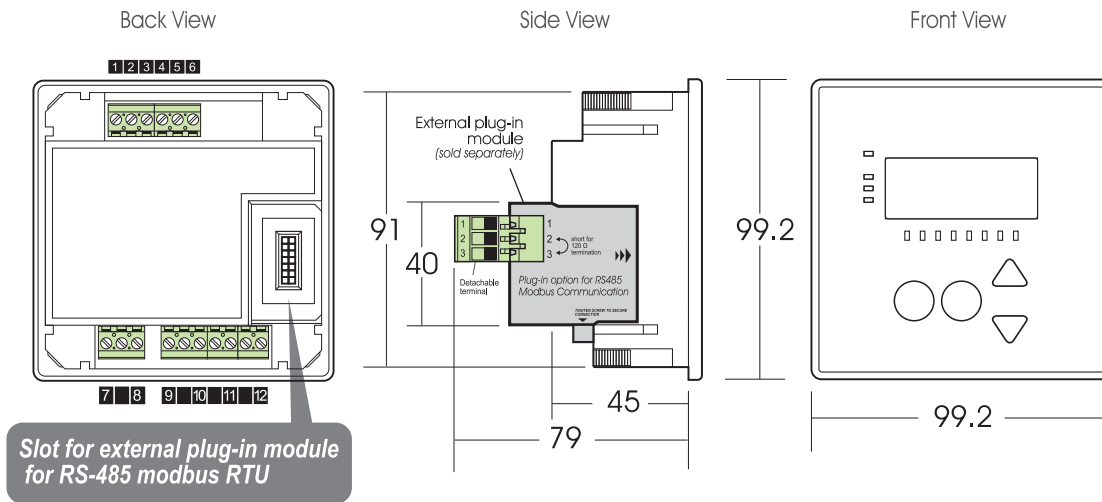
- i) Modbus Address : 1 ~ 247
- ii) Baud rate (kbps) : 0.3, 0.6, 1.2, 2.4, 4.8, 9.6, 19.2, 28.8
- iii) Parity : none, odd, even

### *(programmable alarm)* external output

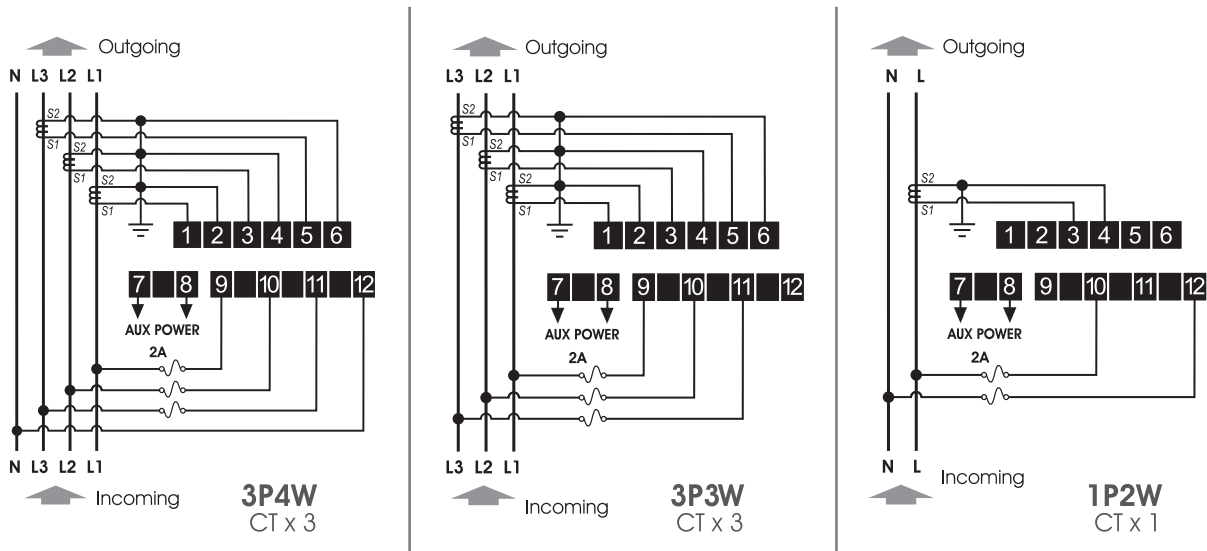
**A-02s** Plug in module *(sold separately)*

Modbus RTU RS-485 *(isolated type)* with external alarm output only

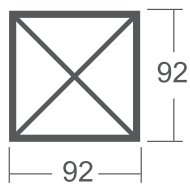
## casing dimension



## wiring diagram



## panel cut-out



Panel Cut-out : 92 x 92

## ordering information

Model	Description
DM-50	65 ~ 275 Vac (45~65 Hz) 90~300 Vdc

Note: All measurement in mm.