

# Digital Multimeter

# DM-50

## features



- 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 PF / Cos  $\Phi$  Setting
  - Adjustable Start / Reset Time Delay
- External Plug-in Module for :-
  - A-01s (RS-485 Modbus RTU) isolated type
  - A-02s (RS-485 Modbus RTU + Alarm Output) isolated type

## 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  $\Phi$ ) :  $\pm 1,0\%$

**Frequency Measurement**  
Range : 45 ~ 65 Hz  
Accuracy :  $\pm 0,1\%$

**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

## 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

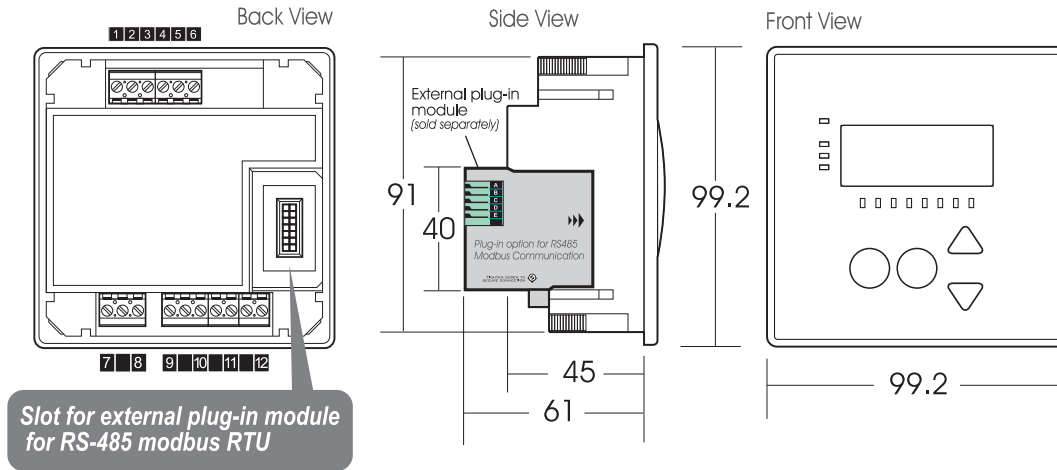
## communication

- A-01s & A-02s** Plug in module (sold separately)  
Modbus RTU RS-485 (isolated type) with :-
- i) Modbus Address : 1 ~ 247
  - ii) Baud rate (kbps) : 3, 6, 12, 24, 48, 96, 192, 288
  - iii) Parity : none, odd, even

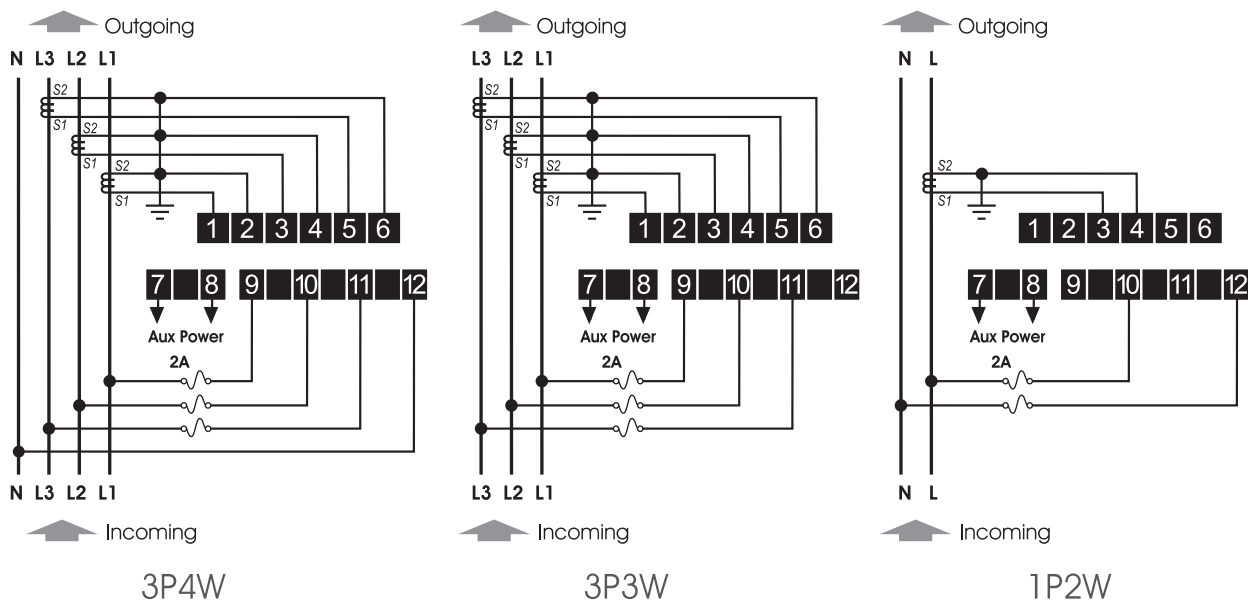
## (programmable alarm) external output

- A-02s** Plug in module (sold separately)  
Modbus RTU RS-485 (isolated type) with external alarm output only

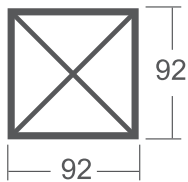
## casing dimension



## 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.