

## MULTI POWER METER

Case : 110x110mm



**DE-500PM** Multi-Power Meter  
**DE-510PM** Multi-Power Meter(Demand)

Case : 144x144mm



**DE-900PM** Multi-Power Meter  
**DE-910PM** Multi-Power Meter(Demand)

### ■ Features

- Display of all the electric parameters V, A, W, Var, VA, PF, Hz, WH, VarH ect.
- True RMS conversion.
- Maximum function.
- Field programmable PT and CT ratio.
- Memory for all setup and energy data.
- Option :
  - 2 channels digital input
  - 2 channels D/O output.

### ■ Specifications

Display :	Red LED 0.4" high --- DE-500PM Red LED 0.56" high --- DE-900PM
Over range Indication :	" O.L "
Conversion Rate :	1/sec.
Isolation :	Input/Output/Power/Case
Operating Temp. :	0~60°C / Below 90%R.H.
Storage Temp. :	-10~70°C / Below 80% R.H.
Temp. Coefficient :	±0.1% F.S/°C
CT, PT ratio :	1~9999
Interface :	RS-485(Standard), or RS-232
Power Supply :	AC 90~260V, 50/60Hz
Option :	DC 24, 120V ±20%
Power Consumption :	Approx. 7VA
Dielectric Strength :	DIN-IEC688, AC 2.3KV/1min, between terminal. AC 2.8KV/1min, between terminal and case
Isolation Resistance :	DC 500V, 100MΩ at above terminals
Dimensions :	110(W) ×110(H) ×140(D)mm --- DE-500PM 144(W) ×144(H) ×100(D)mm --- DE-900PM

### ■ Input

Voltage :	V1, V2, V3, Neutral (These are the 3phase Voltage and neutral)
Range :	600V <sub>L-L</sub> / 347V <sub>L-N</sub>
Current :	1S, 1L, 2S, 2L, 3S, 3L (These are the 3phase currents )
Range :	0~1A, 0~5A
Over load :	Voltage.....750V continuous 1.25 x rated continuous Current.....3 x rated continuous 10 x rated for 10sec.
Burden :	≤ 0.2VA per Voltage circuit ≤ 0.2VA per Current circuit
Frequency :	45~65Hz

### ■ RS-485 Interface

Address :	1 ~ 255
Baudrate :	19200,9600,4800,2400,1200
Protocol :	Modbus RTU Mode

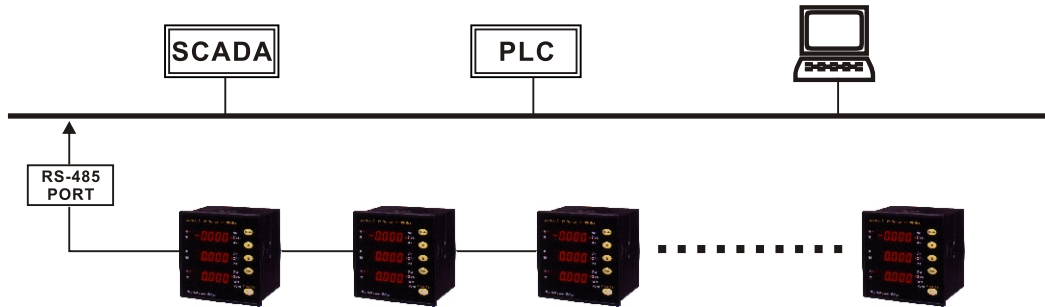
### ■ DO output

2 channel Relay output
Contact Capacity :
AC 250V, 1A resistive load
DC 30V, 2A resistive load

## RS-485 Connection

We use the most convenient and the easiest RS-485 as our standard output port, besides, we adopt Modbus RTU mode, one of the most popular protocol in the world, as our standard protocol.

RS-485 communications allows multiple devices to be connected on the same bus. Up to 30 devices can be connected on a single RS-485 bus, which consists of a shield twisted pair cable. The overall length of the RS-485 cable connecting all devices cannot exceed 4000ft (1219m).



## Power Meter

Measurement	Items	DE-900PM/DE-500PM	DE-910PM/DE-510PM
$V_{L-N}$	V1, V2, V3, $V_E$	●	●
$V_{L-L}$	V12, V23, V13, $V_E$	●	●
A	A1, A2, A3, $A_E$	●	●
W	W1, W2, W3, $\Sigma W$	●	●
Var	Var1, Var2, Var3, $\Sigma Var$	●	●
VA	VA1, VA2, VA3, $\Sigma VA$	●	●
PF	PF1, PF2, PF3, $\Sigma PF$	●	●
Hz		●	●
WH	$\Sigma WH$	●	●
VarH	$\Sigma VarH$	●	●
Demand W	DW, Max.DW(1~60min free setting)		●
RS-485		●	●

## Programmable Measurement & Indicating

Items	L1	L2	L3	Total	Average	Accuracy(F.S)	Display (Max.)
$V_{L-N}$	V1	V2	V3		$V_E$	$\pm 0.25\%$	9999V/KV
$V_{L-L}$	V12	V23	V13				
A	A1	A2	A3	$\Sigma W$	$A_E$	$\pm 0.25\%$	9999A/KA
W	W1	W2	W3				$\pm 0.5\%$
Var	Var1	Var2	Var3	$\Sigma Var$		$\pm 0.5\%$	$\pm 9999Var/KVar/MVar$
VA	VA1	VA2	VA3	$\Sigma VA$		$\pm 0.5\%$	9999VA/KVA/MVA
PF	PF1	PF2	PF3	$\Sigma PF$		$\pm 0.5\%$	$\pm 0.999$
WH				WH		$\pm 0.5\%$	9999999999WH/KWH/MWH
VarH				VarH		$\pm 0.5\%$	9999999999VarH/KVarH/MVarH
Hz						$\pm 0.1\%$	45.0~65.0Hz
<b>Accuracy performance range</b>				<b>Measurement range</b>			
V : 10~100%		PF : 0.5~ $\pm 1.0$		V : 0~120%		A : 0~120%	
A : 5~100%		Hz : 45~65Hz					

$$V_E = (V_{12} + V_{23} + V_{13}) / 3$$

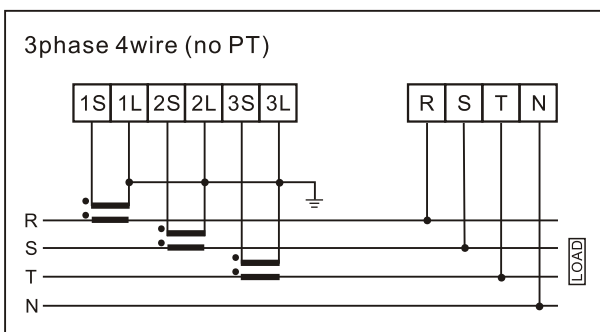
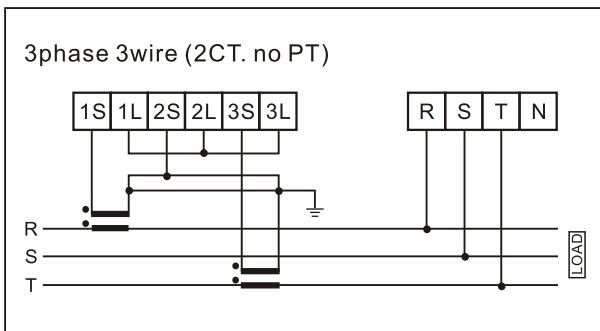
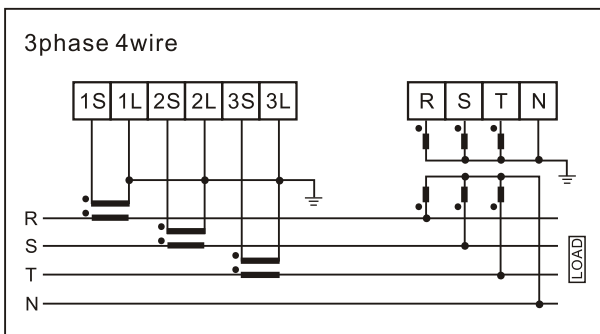
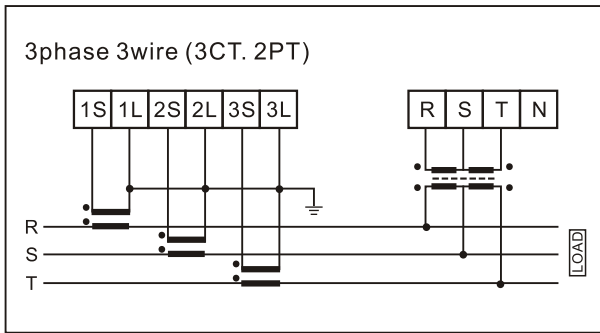
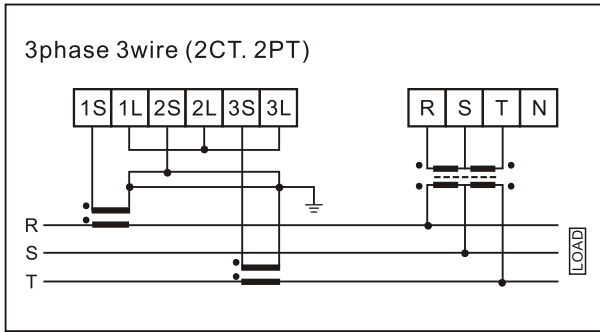
$$A_E = (A_1 + A_2 + A_3) / 3$$

$$\Sigma W = W_1 + W_2 + W_3$$

$$\Sigma PF = \Sigma W / [V_1 A_1 + V_2 A_2 + V_3 A_3]$$

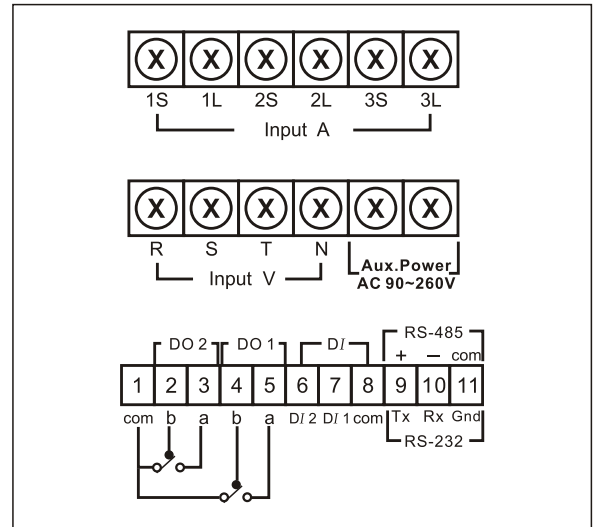
$$\Sigma VAR = \sqrt{VA_1^2 - W_1^2} + \sqrt{VA_2^2 - W_2^2} + \sqrt{VA_3^2 - W_3^2}$$

## ■ Writing diagrams of input

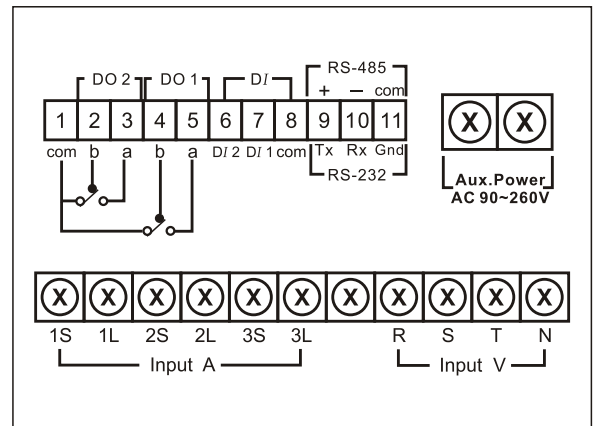


## ■ Connection Diagram

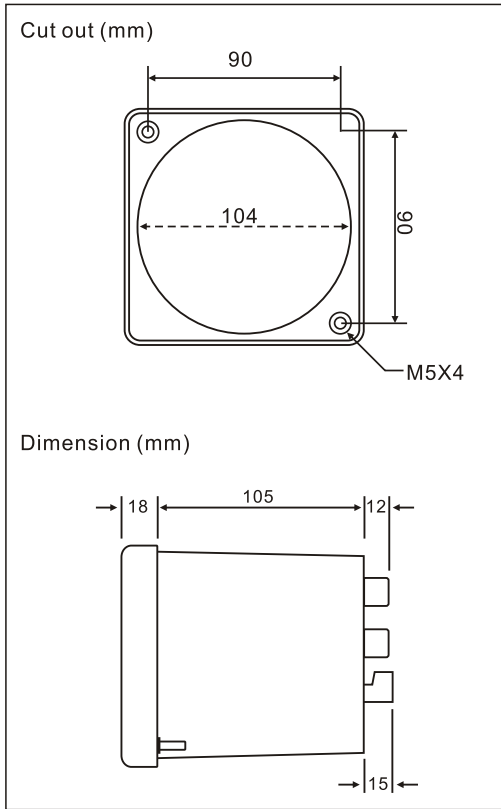
Model : DE-500PM



Model : DE-900PM



**Model : DE-500PM**

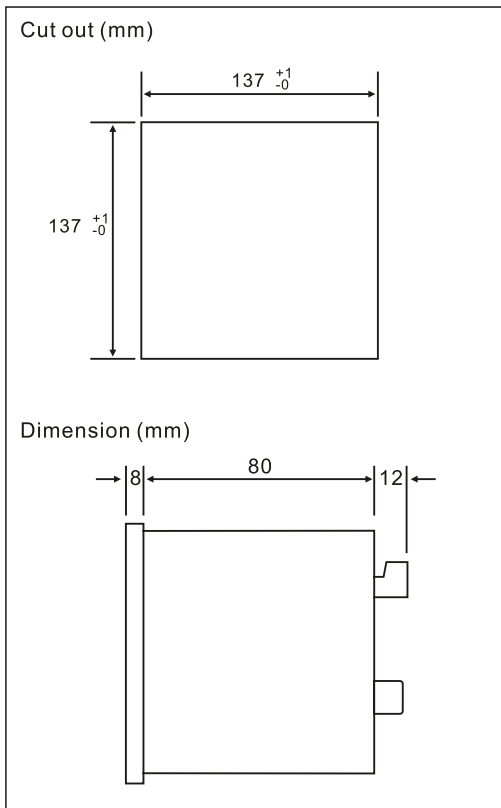


■ Order Code

**Model** -     -

- Input ACV \_\_\_\_\_
- 1 : 600VL-L / 347VL-N
- Input ACA \_\_\_\_\_
- 1 : AC 5A
- 2 : AC 1A
- Y : Option
- Interface \_\_\_\_\_
- 1 : RS-485(standard)
- 2 : RS-232
- Power Supply \_\_\_\_\_
- 1 : AC 90~260V, 50/60Hz
- 2 : DC 24V
- 3 : DC 120V
- Option \_\_\_\_\_
- 1 : 2 digital input ( DI ) + 2 Relay output ( DO )
- N : None

**Model : DE-900PM**



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Appearance and specification may be revised if needed without notice in prior.