

## Panel Power Meter

Certificates 



### Model No.

**KDY - A**

① ② ③ ④

① Digital Meter

② Panel meter

③ Measurement

④ Communication

How to order  
KDY-AC (With communication),  
KDY-A (Without communication)

A 3PV, 3PA, W, PF, var, Hz, Wh, varh

C RS-485 N/A None

Customized product can be produced by order.

### Overview

Instrument which can display the power distribution boards 3 Ø A, 3 Ø V, W, PF, var, Hz, Wh, varh and remote power monitoring by RS-485 communication.

### Specification

|                       |                                                |
|-----------------------|------------------------------------------------|
| Aux. power            | AC 110/220V±10%(50/60Hz),<br>DC 110V           |
| Operating temperature | -10~50°C                                       |
| Operating humidity    | 20~85%                                         |
| Insulation resistance | More than 10MΩ                                 |
| Surge impulse         | Voltage(1.2μs/ 50μs,5kV)<br>Current(8μs/ 20μs) |
| Burst                 | Level 4(IEC 61000-4-4)                         |
| Withstand voltage     | AC 2kV/1 minute                                |
| Maximum input         | Less than A-0.2VA,<br>Less than V-0.1VA        |
| Weight                | 800g                                           |

### Function

- 3-phase voltage, 3 phase current, W, PF, var, Hz, Wh, etc. and others are displayed with three windows.
- CT, PT, and primary value can be set.
- RS-485 Serial Communication.

### Input

|          |                    |                                   |
|----------|--------------------|-----------------------------------|
| Range    | Line voltage       | 40~500V                           |
|          | Current input      | 0.1~6A                            |
|          | Frequency          | 45~65Hz<br>1P2W, 1P3W, 3P3W, 3P4W |
| Accuracy | Refer to page 111p |                                   |

### Display

|                      |                   |
|----------------------|-------------------|
| LED                  | 14.2(0.56")mm Red |
| Display update speed | 1000ms            |

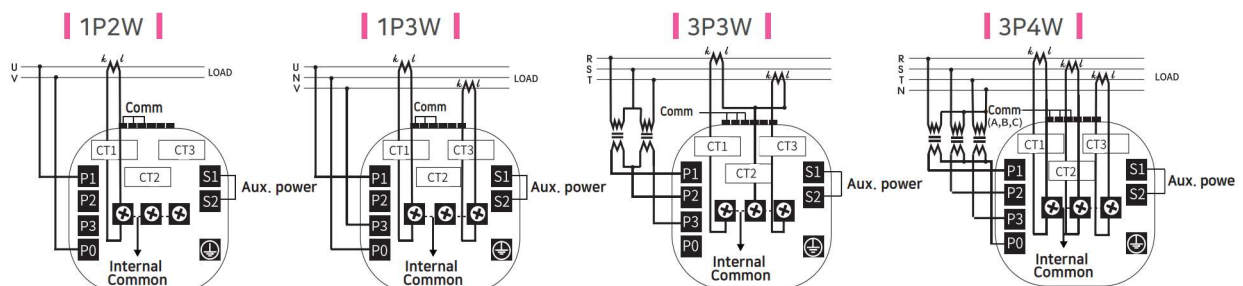
### Communication specification

|                       |                                       |
|-----------------------|---------------------------------------|
| Interface             | RS-485, Multi-drop 2Wire              |
| Protocol              | Modbus RTU(Basic)<br>Melsec(Optional) |
| Address setting       | 0~255                                 |
| Transmission distance | maximum 1.2km within                  |
| Transmission rate     | 9600bps                               |

### Setting order and method

- Connection method setting (▲, ▼ KEY) & save(SET KEY)
- P. T Primary voltage selection(▲, ▼ KEY) & Save(SET KEY)
- C. T 1st current selection (▲, ▼ KEY) & save(SET KEY)
- Communication address setting
  - ones digit setting (▲, ▼ KEY) & Save(SET KEY)
  - Tens digit setting (▲, ▼ KEY) & Save(SET KEY)
  - Hundreds digit setting (▲, ▼ KEY) & Save(SET KEY)
- PT/CT ratio need to be checked on installation.

### Connection diagram



## Detailed Function

### Indicate LED

Indicate the data shown in displays.

### Select button

Circuit, current, voltage, communication  
Energy reset,  
Select indication value



### Display window

4 Digit Display item can be varied  
by select button window  
Using UP / DOWN KEY

Measurement values can be selectively viewed

### Communication LED

#### A1, A2, A3 C . T Primary current selection

##### C.T Primary current value selection.

5→10→15→20→25→30→40→50→60→70→75→  
80→90→100→120→125→130→140→150→160→  
170→175→180→200→225→240→250→300→4  
00→450→500→600→700→750→800→900→  
1000→1200→1250→1300→1400→1500→1600→  
1700→1750→1800→2000→2500→3000→3200→3  
500→3600→4000→5000→6000

#### V1, V2, V3, P . T Primary voltage selection

##### Primary voltage value selection range (Select 500 for direct connection)

3P3W : 500→220→380→440→3.30→6.60→7.20→  
11.0→11.4→22.0→22.9→66.0→154  
3P4W : 500→380→11.4→22.9

##### ▲ Note

If the power is off, the accumulated value  
for 30 minutes can be deleted.

| Display sequence | 1   | 2         | 3    | 4  | 5   | 6  | 7    |
|------------------|-----|-----------|------|----|-----|----|------|
| Display A        | Σ V | R phase V | RS V | A1 | PF  | Hz | A0   |
| Display B        | Σ A | S Phase V | ST V | A2 | var | Wh | Varh |
| Display C        | W   | T Phase V | TR V | A3 | W   | Wh | Varh |

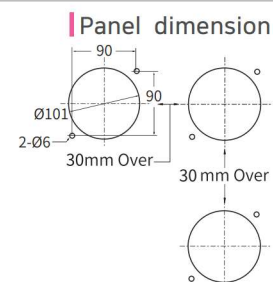
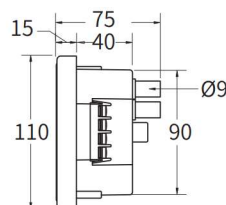
## Accuracy

| V, A                          |         | W, var                        |  |
|-------------------------------|---------|-------------------------------|--|
| ± (0.3% of rdg + 0.2% of F.S) |         | ± (1.0% of rdg + 0.2% of F.S) |  |
| PF                            | Hz      | Wh, varh                      |  |
| ± (1.0% of rdg + 0.1°)        | ± 0.1Hz | ± (W Accuracy + 1 count/h)    |  |

at 45~65Hz, at COS Ø ± 0.8~1.0, 23°C

## Drawing

Unit : mm



The inner diameter of rear-located CT is Ø 9.