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D3D3Y

3 Phase Digital Multi Meter



Product Name:
D3D3Y

Product Type :
3 Phase Digital Multi Meter

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Product Specification

Product Size

Height x Width x Depth : 96 x 96 x 78 mm

Mounting

- a. Size : 91 x 91 mm
- b. Mode : Flush Mounted

Display

- a. Type : Backlit LED
- b. Resolution : 3 Lines

Type of Measure : Voltage Primary & Secondary CT
Current Primary & Secondary PT
Frequency
Run Hour
RPM

Rated Input Voltage : 600 VAC
11 - 300 VAC (L-N)
19 - 519 VAC (L-L)

Rated Input Current : 5 A (Standard)
Min. 50 mA, Max. 6A

Frequency Range : 50 / 60 Hz

Primary CT : 5A - 1000A
(programmable to any value)

Secondary CT : 5A (fixed)



Primary PT : 100V - 500kV (programmable to any value)

Secondary PT : 100VAC - 500VAC (programmable to any value)

Measure Accuracy: 0.5% Voltage
1.0% Current
1.0% Frequency
1.0% Run Hour

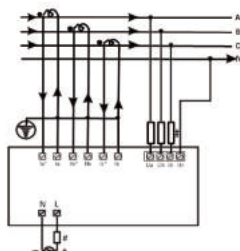
Product Environment

- Operating environment
 - For indoor use
 - Maximum 200m
 - Pollution grade II
- Temperature:
 - Working: -10°C -55°C
 - Storage: -20°C -75°C
- Humidity: up to 85% non - condensing
- Safety class: II

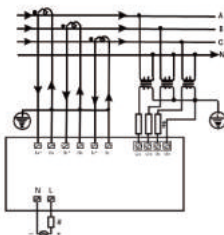
Product Installation

Standard wiring diagram

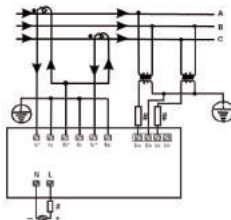
- (1) Three-phase four-line
 3 Φ -4-line,
 3 CTs (current transformer)
 Network selection: 3P4W



- (2) Three-phase four-line
 3 Φ -4-line,
 3 CTs (current transformer) and
 3 PTs (potential transformer)
 Network selection: 3P4W



- (3) Three-phase three-line
 3 Φ -3-line,
 2 CTs (current transformer) and
 2 PTs (potential transformer)
 Network selection: 3P3W



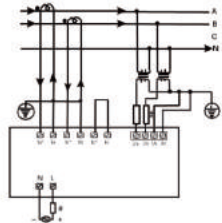
(4) Three-phase three-line

3 Φ -3-line,

2 CTs (current transformer) and

2 PTs (potential transformer)

Network selection: 3P3W

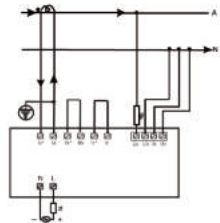


(5) Two-phase three-line

1 Φ -2-line,

1 CT (current transformer)

Network selection: 3P4W



Wiring guidelines:

1. To prevent electric shock, the power must be off when wiring is to be carried out.
2. Wiring shall be arranged directly according to ports.
Please confirm whether all connections are correct.
3. Use drag steering.
4. To reduce electromagnetic interference to electrical wires, equipment and wires shall be connected in suitable range with same size for shortest connection.

5. Wiring layout shall be away from any internal electromagnetic interference source.
6. The cross section of wires connecting power must be 0.5mm²-2.5mm² (20-14AWG; 75°C (min)).
And the current load of the wires shall be 6A.
7. Copper wire (standard or single core cable) can be used.
8. Before testing the equipment, please test the voltage and confirm whether it is proper.

Mounting guidelines:

1. The equipment shall be embedded type and shall be a part of the control panel under normal circumstances.
In this case, the port shall not be entered into terminal client after installation/internal wiring is completed.
2. Conductor shall not contact internal circuit of the equipment or other equipment which may tend to cause safety problems or operator injury.
3. Breaker or main switch must be installed between power wire section inside power box which is convenient for on and off controlling function.
4. Before disconnecting external secondary current transformer on the equipment, please confirm that the current transformer is short-circuited so as to prevent electric shock hazard and injury.
5. The equipment shall not be installed in environments which are forbidden in the specification.



6. The equipment doesn't contain fuse. External fuse can be installed.
It is recommended to use the one with
parameter of 275V AC/0.5 Amp in electric circuit/battery.

Mechanical installation:

For installing the meter:

1. Suitable hole size, as shown below.
2. Push the meter into the hole, install the clamp at the back side and fix it properly. Clamp two sides of the opposite angle to achieve optimum location.

Maintenance:

1. The equipment shall be cleaned regularly to avoid blocking of ventilation opening.
2. Dry or wet cloth can be used for cleaning.
No other cleansers shall be used except water.

Product Operation

Online details

There are four dedicated key symbols, which are “”, “”, “”
“SET” for reading parameters on digit display meter. It is very easy to read parameters by pressing the keys.

Key	Details of online operation
Press “  ”	For 3Φ-4-line system: The first display screen: display neutral voltage, current, frequency of the first phase The second display screen: display neutral voltage, current, frequency of the second phase The third display screen: display neutral voltage, current, frequency of the third phase The fourth display screen: average display neutral voltage, average current, frequency of three phases The fifth display screen: average display line voltage, average current, frequency of three phases
	For 3Φ-3-line system: The first display screen: display line voltage, current, frequency of the first phase The second display screen: display line voltage, current, frequency of the second phase The third display screen: display line voltage, current, frequency of the first phase The fourth display screen: average display line voltage, average current, frequency of three phases
Press “  ”	The first display screen: display each current of three phases

Press “←”	Display operation hours (for nonzero pole)	
Press “→”	The first display screen: display neutral voltage of three phases The second display screen: display line voltage of three phases Note: for 3Φ-3-line system, only two screens will be displayed.	

Structure:

Enter into configuration menu to modify parameters by using the three keys.

Note: please operate after reading the specification carefully.

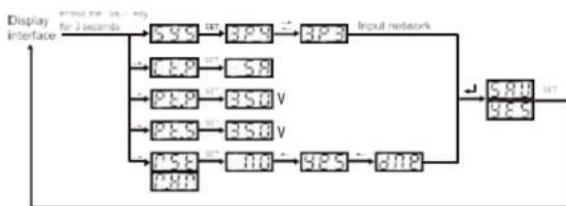
For configuring setting mode:

- Press the “SET” key for 3 seconds to enter into or exit the configuration menu.
- Press the left key “←”, or the right key “→” to scroll, view, and set pages.
- Press the left key “←”, or the right key “→” to add or decrease (change) parameter setting.

Setup page	Function	Scope or selection	Factory setting
1	Network selection	3P3W and 3P4W	3P4W
2	(Current transformer) CT primary	5A or 10.0KA	5
3	(Potential transformer) PT primary	100V-500KV	350
4	(Potential transformer) PT secondary selection	100V-500V	350
5	Operation time resetting ☐ Y ☐ N	yes/no	no

Note: It starts to time when the current is $>50\text{mA}$ and the voltage is $>0\text{V}$.

Structure chart of programming menu



Terminal specification

4	5	6	7	8	9
Ia	Ia*	Ib	Ib*	Ic	Ic*

Current Signal

11	12	13	14
Ua	Ub	Uc	Un

Voltage

Note: Current with "*" symbol is input end.

Quantity of input, Please don't forget to check the quantity of input.

Power		Analog Output				RS485	
N	L	COM	BS1	BS2	BS3	IN1	IN2
1	2	30	31	32	33	35	36

Note: if there are any conflicts between the terminal diagram and the actual terminal diagram on the back of the product, the one on the back shall prevail.

