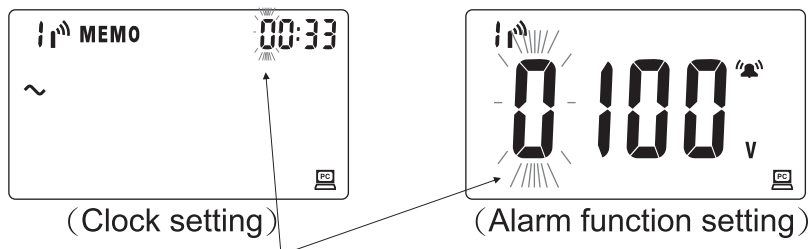




Subsidiary function (►), to move the position of blinking digit while setting the clock and alarm function.



When the digit is blinking, press this key to move to next digit.

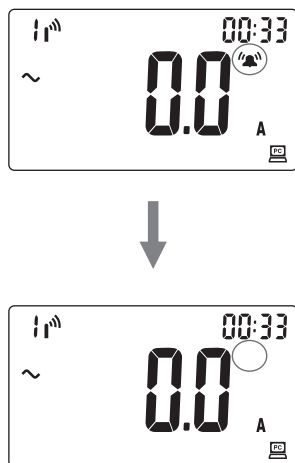
※ For operation in alarm setting function, please refer to page 22 ~ 24.

※ For operation in clock setting function, please refer to page 25.



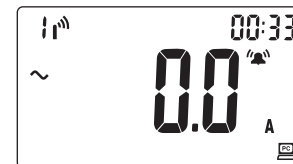
ALARM key operation instruction

- Activate Alarm function ※ For alarm value setting, please refer to page 23 ~ 24.



- Press ALARM to enter alarm function mode. When alarm symbol appears, alarm function is activated
 1. When measuring data of transmitter reaches the setting value, buzzer will beep for 2 min each time.
 2. To stop buzzer by pressing SEARCH key. It will keep beeping when measuring data reaches the setting value if not cancel the alarm function.
- Press ALARM key, the alarm symbol disappears and alarm function is cancelled.

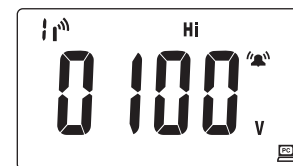
- Alarm function setting



Press ALARM key to enter alarm function mode.



Press SEARCH key

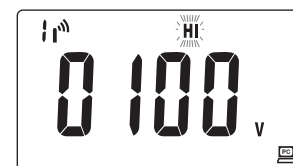


Enter to value setting mode It will return to measuring mode without pressing ►, ▲ the alarm symbol disappears.

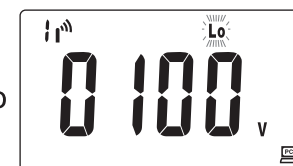


Press ► key

- ① Choose Hi or Lo

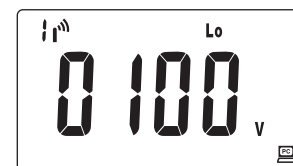


Press ▲ key to choose Hi or Lo

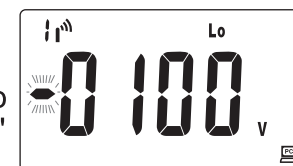


Press ► key

- ② Choose "+" "-" Symbol



Press ▲ key to choose "+" "-" symbol

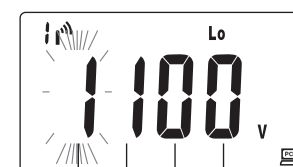


Press ► key

- ③ Alarm Value Setting



Press ▲ key and operate with ► to set the value

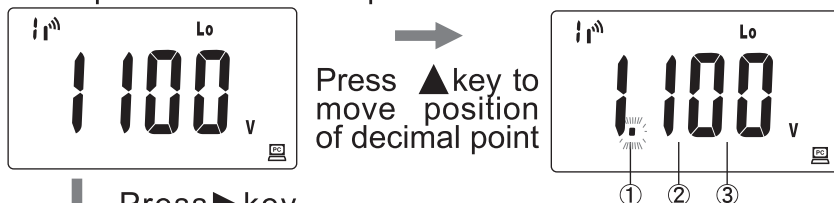


Following procedures, see next page.

Procedures continuing from the previous page

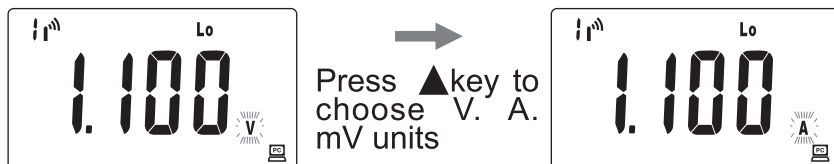
↓ Press ► key

④ Move position of decimal point



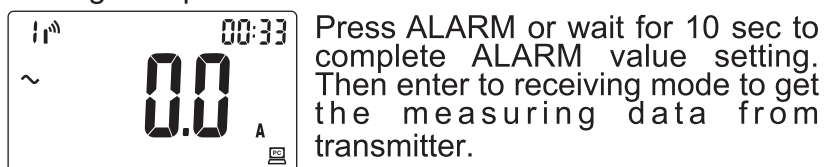
↓ Press ► key

⑤ Choose V. A. mV units

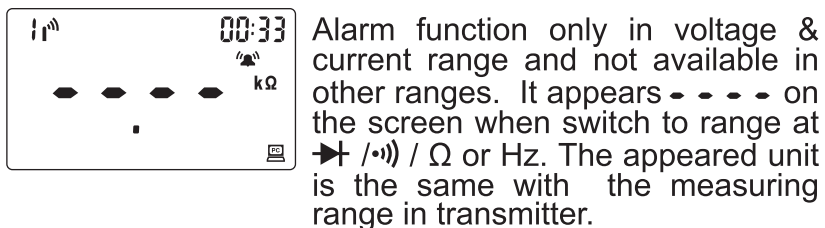


↓ Press ALARM key or wait for 10 sec.

⑥ Setting Completed

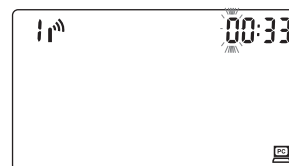


● Other ranges has no ALARM function

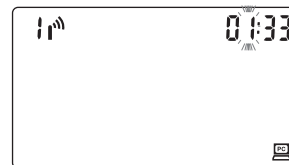


Press this key to enter clock setting mode. After entering this mode, the display only lasts for 2 sec then exit. It needs to set the time by pressing ▲ or ► right away.

CLOCK SET key operation instruction



Press this key then press ▲ or ► right away then the left digit starts to blink



Operate with ▲ or ► to set the clock



Press CLOCK SET key or wait for 10 sec to complete the clock setting then exit the setting mode.



When disconnects, press this key to activate the search function.



BEEP CANCEL

Subsidiary function BEEP CANCEL, to stop beeping manually.

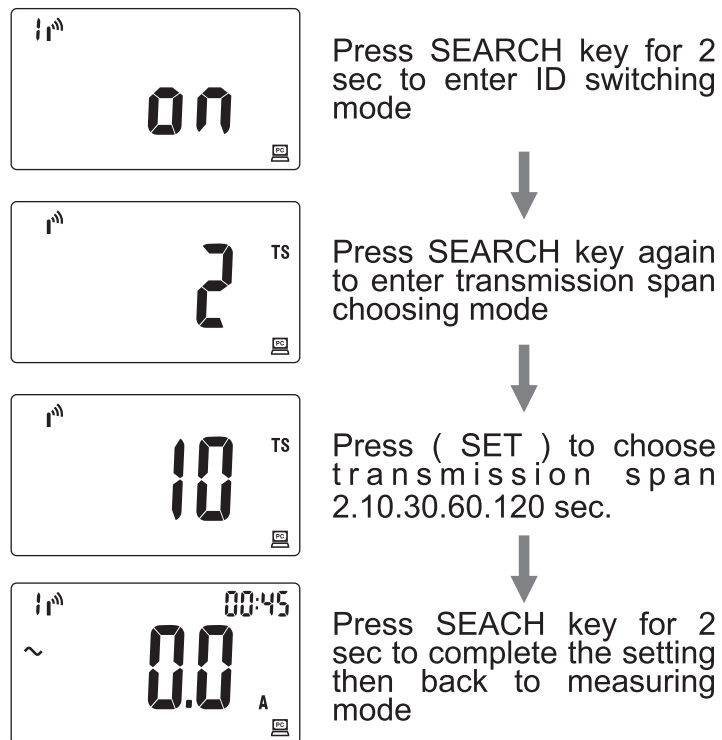
※ When stop buzzer with manual, it keeps beeping when reach the setting value if not disable the alarm function



Subsidiary function (FUNCTION), to operate with (SET) to set the transmission span and with CHANNEL key to switch ID code to have transmission on or off.

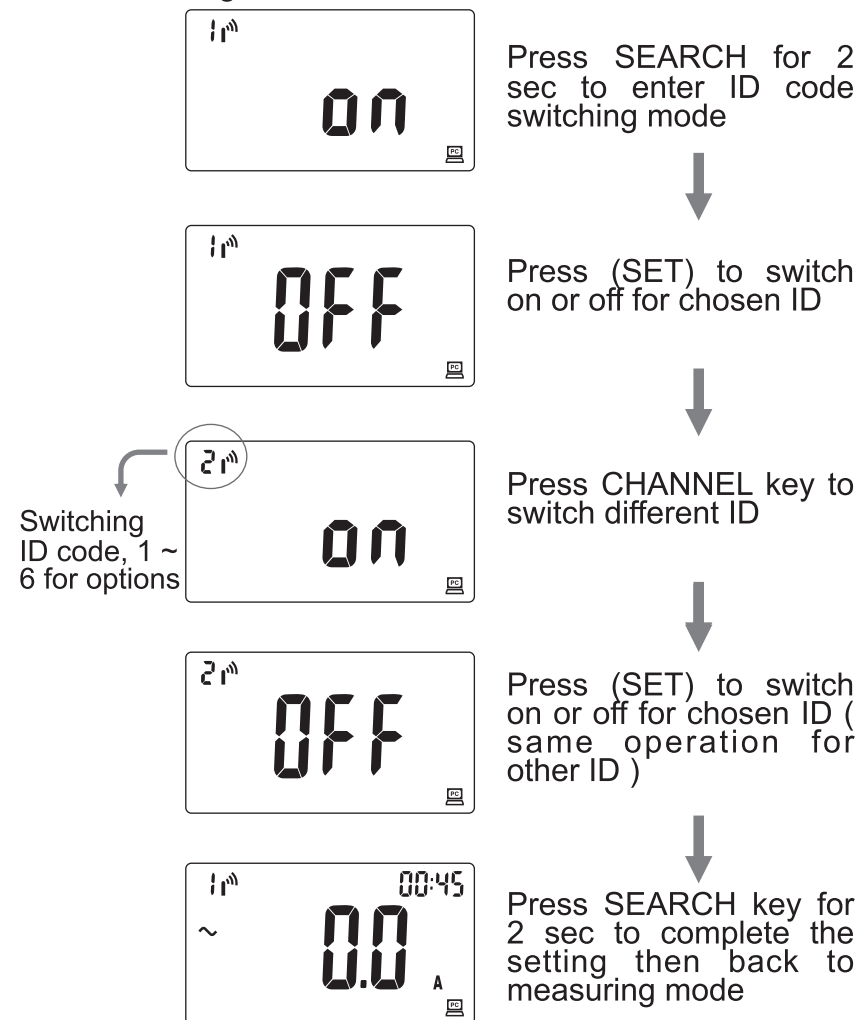
FUNCTION operation instruction

• Transmission span setting



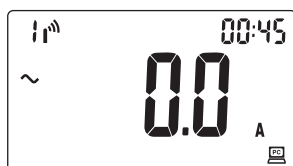
Attention : When using one transmitter and one receiver, when transmission span must be consistent in both units so that the measuring data just can be transferred correctly.

• ID code setting





- When using multi transmitters to one receiver, the chosen ID of receiver which in “on” status can be switched by pressing CHANNEL key after ID code setting is completed and return to measuring mode.
- When using one transmitter to one receiver, the chosen channel must be consistent in both units so that the measuring data just can be transferred correctly.



Press CHANNEL key to switch the ID code which is in “on” status.

Multi transmitter to one receiver operation instruction

1. When using multi transmitters to one receiver, the power consumption is bigger due to transmission in the process all the time. If using one transmitter to one receiver, do not switch to the mode of multi transmitters to one receiver and set other 5 ID codes at “off “ status to lower the power consumption.
2. When using Multi transmitter to one receiver, user can choose and set the transmission time for each channel. But if using one transmitter and one receiver, the channel and transmission span need to be consistent for transmitter and receiver.

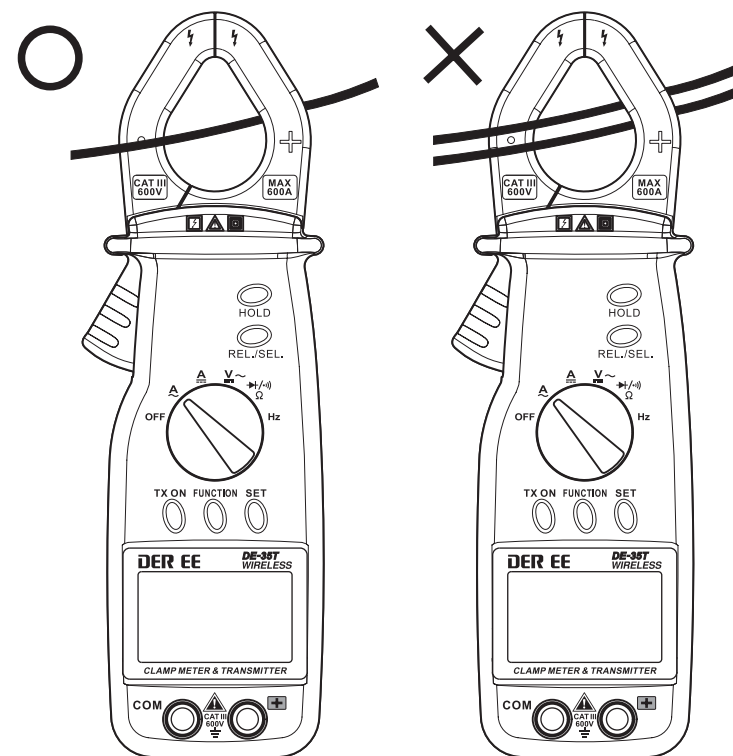
(6) DE-35T (Transmitter) MEASURING INSTRUCTION

•AC Current Measurement (\sim)

Measuring range: 400.0A ~ 600A (2 ranges, will change automatically)

1. Set the function switch knob to \sim .
2. Pull the clamp trigger to open the clamp. Place one conductor only in the center of the clamp (as figure below). Read the value until the reading becomes stable.
3. In AUTO RANGE mode, it will choose the proper range for measurement automatically.
4. When finished, set the function switch knob to OFF position and turn off the meter.

Note: When taking measurement in place where indicated values are hard to read, press HOLD key to lock the value and then read it in other proper place.

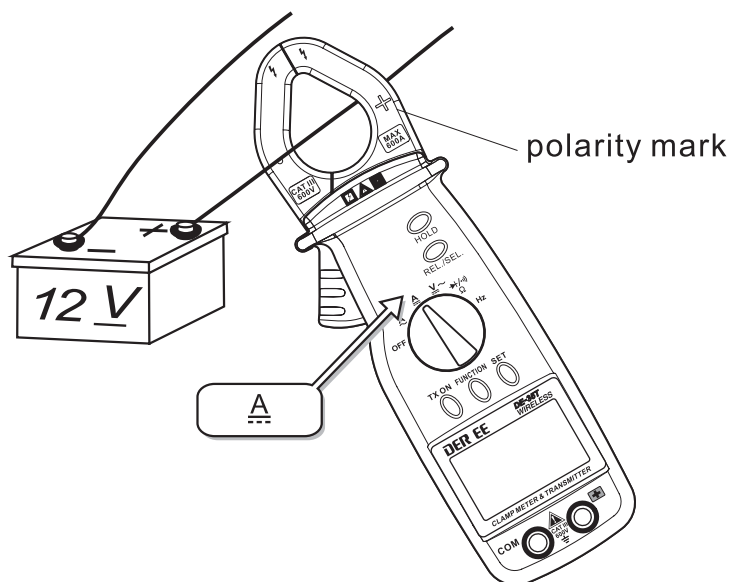


•DC Current Measurement ($\underline{\underline{A}}$)

Measuring range: 400.0A ~ 600A (2 ranges, will change automatically)

1. Set the function switch knob to $\underline{\underline{A}}$.
2. Press REL. key for zero set (auto range is cancelled and range is fixed after press REL. key).
3. Pull the clamp trigger to open the clamp. Place one conductor only in the center of the clamp (as figure below). Read the value until the reading becomes stable.
4. If minor reading before measurement is not concerned, may not press REL. key for zero set and the measurement will carry out in auto range mode.
5. When finished, set the function switch knob to OFF position and turn off the meter.

Note: If “ \ominus ” symbol appears, it means the direction of the measured conductor is opposite to the polarity mark on the clamp.

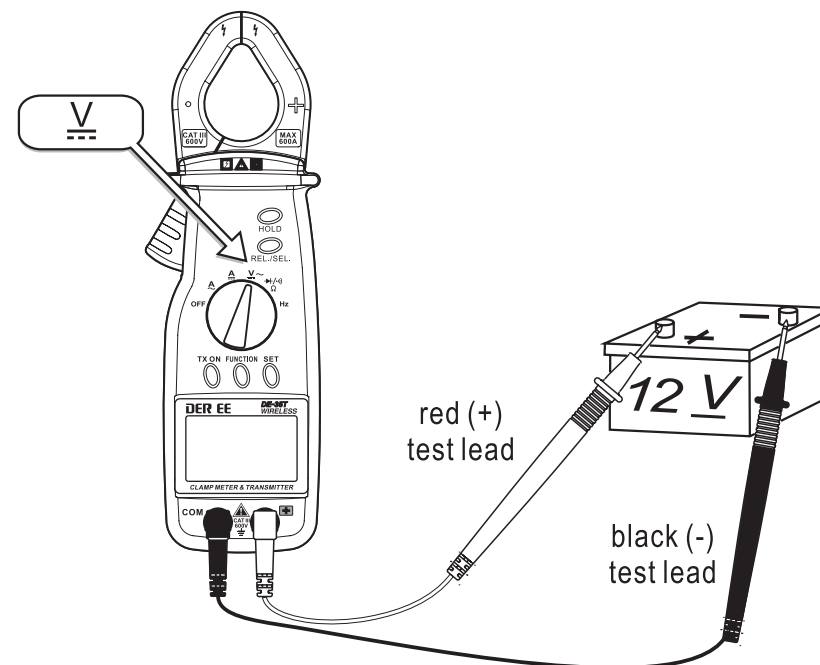


•DC Voltage Measurement ($\underline{\underline{V}}$)

Measuring range: 400.0mV ~ 600V (5 ranges, will change automatically)

1. Set the function switch knob to $\underline{\underline{V}}$. display on LCD.
2. Plug black test lead into COM terminal and red test lead into \oplus terminal.
3. Connect test leads to the object under test and then read the value when it stabilizes.
4. If “ \ominus ” symbol appears, it means the polarity of the object is opposite to the meter.
5. The meter will choose the appropriate range for measuring automatically.
6. When finished, set the function switch knob to OFF position and turn off the meter.

Attention: 1. Make sure the polarity is correct before measurement.
2. Make sure the object under test does not exceed the maximum range of 600V to avoid the possible injury of human body or damage the meter.

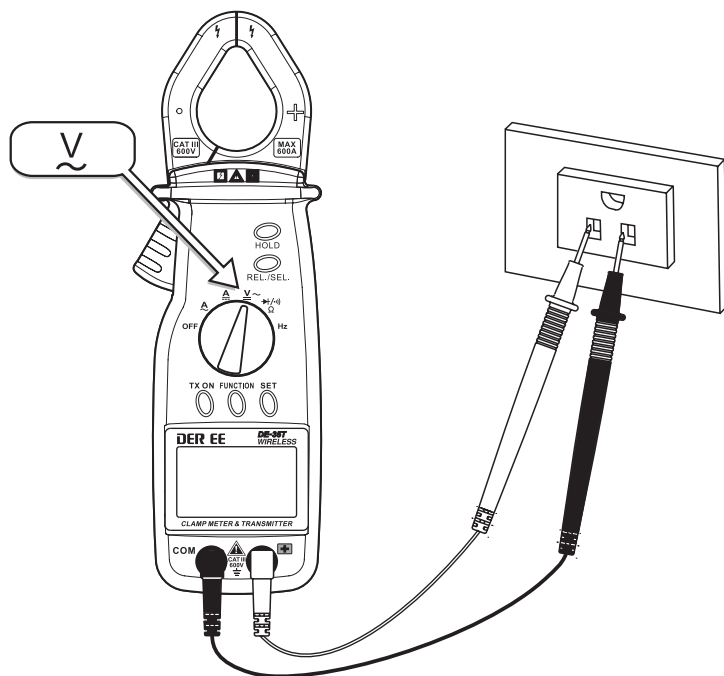


• AC Voltage Measurement (\tilde{V})

Measuring range: 4.000V ~ 600V (4 ranges, will change automatically)

1. Set the function switch knob to \tilde{V} . Press REL./SEL. key until \sim display on LCD.
2. Plug black test lead into COM terminal and red test lead into \oplus terminal.
3. Connect test leads to the object under test and then read the value when it stabilizes.
4. The meter will choose the appropriate range for measuring automatically.
5. When finished, set the function switch knob to OFF position and turn off the meter.

Attention: 1. Polarity is unrelated to AC voltage measurement.
2. Make sure the object under test does not exceed the maximum range of 600V to avoid the possible injury of human body or damage the meter.

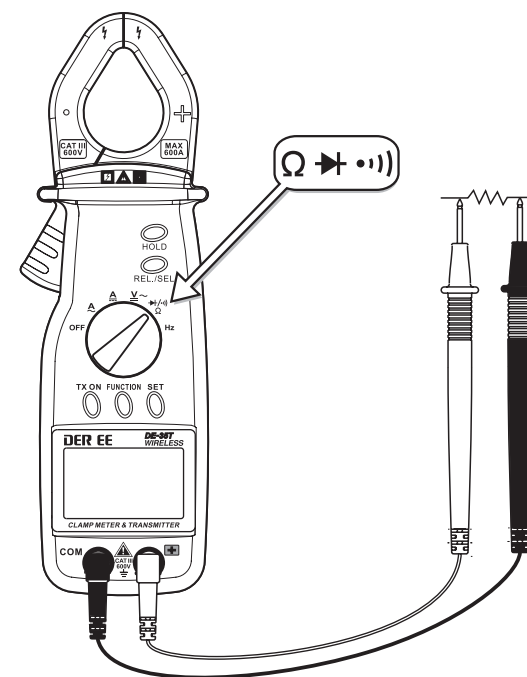


• Resistance Measurement (Ω)

Measuring range: 400 Ω ~ 40M Ω (6 ranges, will change automatically)

1. Set the function switch knob to Ω / \rightarrow / \bullet / \parallel . "OL" displays and **M Ω** symbol appears on the right upper of LCD display.
2. Plug black test lead into COM terminal and red test lead into \oplus terminal.
3. Connect test leads to the object under test and then read the value when it stabilizes.
4. When finished, set the function switch knob to OFF position and turn off the meter.

Attention: 1. Polarity is unrelated to resistance measurement.
2. Do not touch the metal probe of test leads with hands to avoid the error reading of measurement result.



• Diode Test (→|)

1. Set the function switch knob to Ω / →| / (·|) . Press REL./SEL. key until →| symbol and V unit display.
2. Plug black test lead into COM terminal and red test lead into \oplus terminal.
3. Apply test leads to the diode and then read the value when it stabilizes

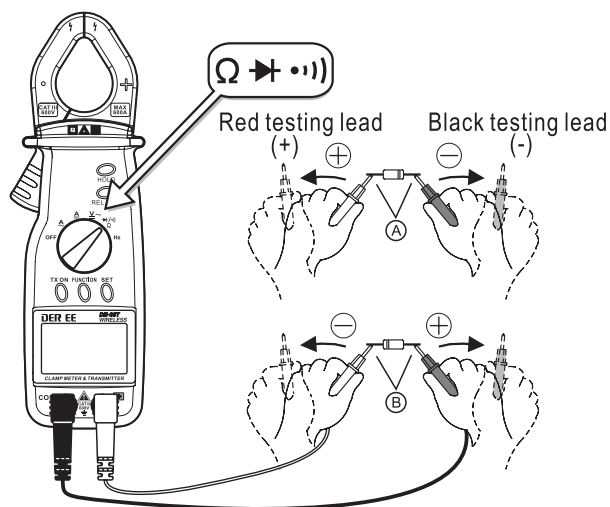
(A) Forward-bias Diode Test

Connect black test lead to the cathode and red test lead to the anode as shown Fig. (A). Silicon diodes should give a reading approximately 0.5~0.7V and GE diodes give 0.2~0.3V. In case the reading value is near to "0", it means short circuit. If LCD displays "OL" means open circuit.

(B) Reverse-bias Diode Test

Connect black test lead to the anode and the red test lead to the cathode as shown Fig. (B). Normally the LCD display "OL" indicating that the diode is good. The diode is defective if the display gives a certain voltage level.

4. When finished, set the function switch knob to OFF position and turn off the meter.



• Continuity Check (·|))

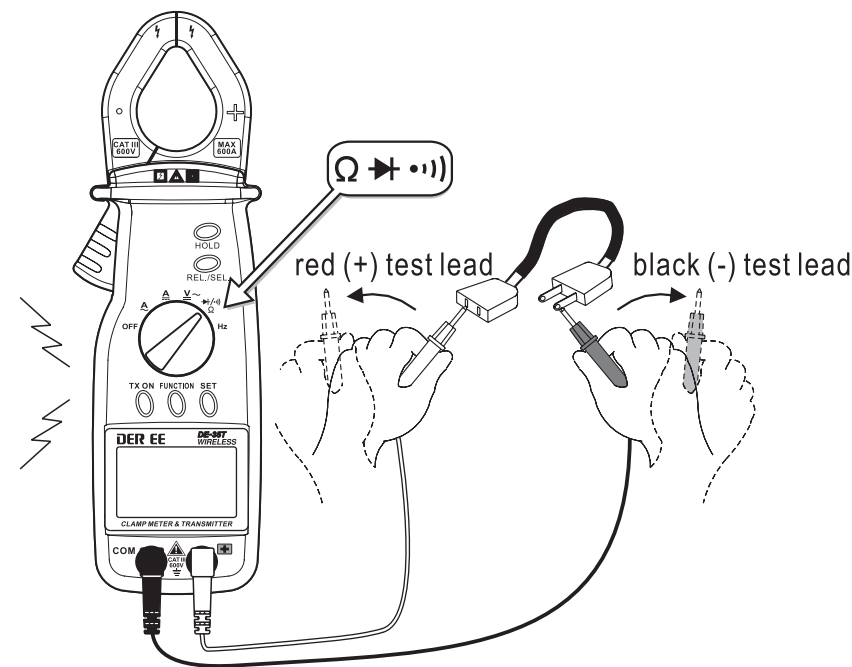


Attention

To avoid damaging the multimeter

- Please shut down the power source applying to the circuit under test before forwarding measurement. Otherwise, the high voltage or big current may damage the multimeter.

1. Set the function switch knob to Ω / →| / (·|) .
2. Plug black test lead into COM terminal and red test lead into \oplus terminal.
3. Press REL./SEL. key until (·|) symbol & Ω unit display.
4. Apply test leads to the circuit under test and the beeper will sound while the circuit is continuous and approximately below 100 Ω .
5. When finished, set the function switch knob to OFF position and turn off the meter.

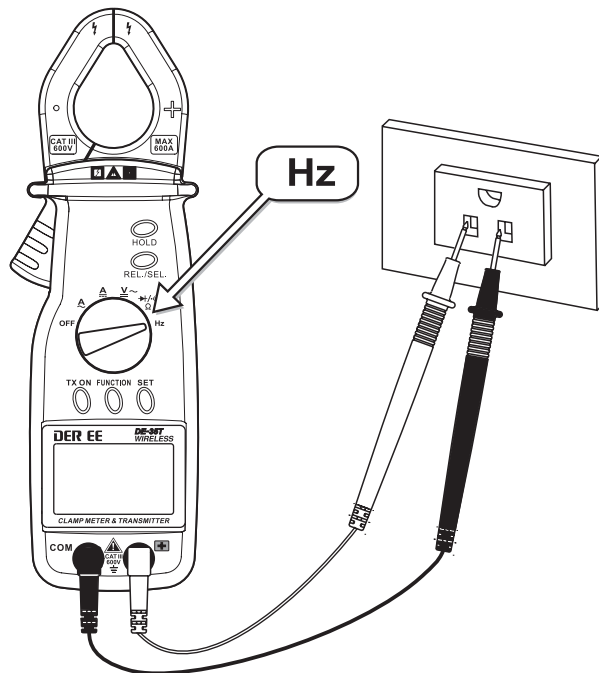


● Frequency Measurement (Hz)

Measuring range: 5.000Hz ~ 100kHz (6 ranges, will change automatically)

1. Set the function switch knob to Hz. Hz unit display.
2. Connect test leads to the object under test and then read the value when it stabilizes.
3. When finished, set the function switch knob to OFF position and turn off the meter.

Attention: 1. Polarity is unrelated to frequency measurement.
2. Make sure the object under test does not exceed 600V to avoid the possible injury of human body or damage the meter.



(7) REPLACING BATTERIES

● DE-35R (Receiver)

When battery power is low for normal operation, symbol displays.

When or symbol display, please replace both two new batteries for DE-35R receiver.

When symbol display, please replace both two new batteries for DE-35T transmitter.

● DE-35T (Transmitter)

When battery power is low for normal operation, symbol displays. Please replace both two new batteries.(Please use standard alkaline LR6 or AA battery. Apply non-alkaline batteries are also acceptable but life time will be shorter.

Attention

- Before replacing batteries, make sure to disconnect the clamp meter from the circuit under test.
- Replace two new batteries at the same time and make sure the batteries are installed at correct polarities.

(8) SPECIFICATION

① General Specification:

| Function | Transmitter | Receiver |
|---------------------------------------|---|---|
| Measurement Functions | DCA, ACA, DCV, ACV, Resistance, Diode, Continuity and Frequency | — |
| Additional Functions | Data hold, Function selection, Relative measurement | Data hold, Alarm function, Clock, MAX/MIN memory |
| LCD Display | Unit & function indication, Measuring value display, Negative polarity indication, Low battery indication | Unit & function indication, Measuring value display, Negative polarity indication, Low battery indication, Clock indication |
| Range | Auto Range | — |
| Sampling Rate | No transmission : 3 times per second Transmission : 1 time per second | — |
| Operation Temperature / Humidity | -10°C~50°C (14°F~122°F) below 80% R.H. (no condensation) | |
| Storage Temperature / Humidity | -20°C~60°C (-4°F~140°F) below 70% R.H. (no condensation) | |
| Power Supply | standard alkaline LR6 or AA battery (2 batteries each for transmitter and receiver) | |
| Battery Life Time (standard alkaline) | Without transmission at ACV, approx. 300 hours | With transmission span 2 sec, approx. 100 hours |
| | With transmission span 2 sec, approx. 100 hours | ※ Battery life time depends on battery capacity |
| Dimension | 220(L)x64(W)x35(H)mm | 179(L)x72(W)x32(H)mm |
| Max. Clamp Size | Φ30mm or 10x35mm | — |
| Weight | 251g approx.(exclude batteries) | 177g approx.(exclude batteries) |

Accessories :

- Instruction Manual 1
- Test Leads (black + red) 1
- Batteries AA 1.5V 4

Accessories for USB interface

- USB software
- USB cable

② Transmitter Specification

■ Testing Environment : 23 ±5°C ,80% R.H. MAX

■ Accuracy : ± (% rdg+dgt)

● AC Current Measurement(\tilde{A})

*50~500Hz

| Range | Resolution | Accuracy | Maximum Input Current |
|-------|------------|---------------------|-----------------------|
| 400A | 0.1A | ± (1.8%rdg + 10dgt) | 600A |
| 600A | 1A | ± (1 %rdg + 5dgt) | |

● DC Current Measurement(\underline{A})

| Range | Resolution | Accuracy | Maximum Input Current |
|-------|------------|---------------------|-----------------------|
| 400A | 0.1A | ± (1.8%rdg + 10dgt) | 600A |
| 600A | 1A | ± (1 %rdg + 5dgt) | |

● DC Voltage Measurement(\underline{V})

| Range | Resolution | Accuracy | Input Impedance | Maximum Input Voltage |
|-------|------------|---------------------|-----------------|-----------------------|
| 400mV | 0.1mV | + (0.75%rdg + 3dgt) | approx. ≥100MΩ | 600V |
| 4V | 0.001V | ± (1%rdg + 3dgt) | approx. 11Ω | |
| 40V | 0.01V | | approx. 10Ω | |
| 400V | 0.1V | | | |
| 600V | 1V | | | |

● AC Voltage Measurement(\tilde{V})

*50~500Hz

| Range | Resolution | Accuracy | Input Impedance | Maximum Input Voltage |
|-------|------------|---------------------|-----------------|-----------------------|
| 4V | 0.001V | ± (1.5%rdg + 10dgt) | approx.11Ω | 600V rms |
| 40V | 0.01V | | approx.10Ω | |
| 400V | 0.1V | | | |
| 600V | 1V | ± (1.5%rdg + 5dgt) | | |

● Resistance Measurement (Ω)

| Range | Resolution | Accuracy | Remarks | Maximum Input Voltage |
|-------|------------|------------------|---|-----------------------|
| 400Ω | 0.1Ω | ± (1%rdg + 5dgt) | <ul style="list-style-type: none"> ● Open voltage: approx. 0.4V ● The measuring current changes in accordance with the resistance measured. | 600V |
| 4kΩ | 0.001kΩ | | | |
| 40kΩ | 0.01kΩ | | | |
| 400kΩ | 0.1kΩ | | | |
| 4MΩ | 0.001MΩ | ± (3%rdg + 5dgt) | | |
| 40MΩ | 0.01MΩ | ± (5%rdg + 5dgt) | | |

● Continuity Check (••))

| Range | Resolution | Accuracy | Maximum Input Voltage |
|-------|------------|---|-----------------------|
| 400Ω | 0.1Ω | The buzzer turns on for resistances below approx.100Ω | 600V |

● Diode Test(→|)

| Range | Resolution | Accuracy | Remarks | Maximum Input Voltage |
|--------|------------|----------------|-------------------------------------|-----------------------|
| 1.000V | 0.001V | ±(10%rdg+5dgt) | ●Open Circuit voltage: approx. 1.5V | 600V |

● Frequency Measurement (Hz)

| Range | Resolution | Accuracy | Remarks | Maximum Input Voltage |
|----------|------------|-----------------|---|-----------------------|
| 5.000Hz | 0.001Hz | ±(0.7%rdg+5dgt) | ●Accuracy in the case of sine wave. ●5.000Hz~100kHz : typical above 5V rms | 600V |
| 50.00Hz | 0.01Hz | | | |
| 500.0Hz | 0.1Hz | | | |
| 5.000kHz | 0.001kHz | | | |
| 50.00kHz | 0.01kHz | | | |
| 100.0kHz | 0.1kHz | | | |

★ The listed accuracy is changed with additional 0.1 x specified accuracy per 1°C change when the environmental temperature is < 18°C or > 28°C

(9) External Power Supply & USB Socket

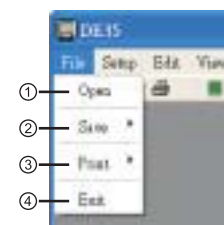
① Socket for signal output



- External Power supply :
AC converter → over 3VDC / 10mA .
3.5Φ x 1.35 mm plug ⊕ ⊖

② USB operation instruction

■ File



- ① Open file : *.xls.
- ② Save file: *.xls / *.bmp / *.jpg.
- ③ Print : Graph / record.
- ④ Exit : End program.

※ Recorded measuring data and graph on the main display can be saved at the same time in one excel file.
Since the main display only shows one graph for one channel, if you want to save the graph of other channels, you have to switch to the desired channel then save the graph you want.

■ Setup

Com port :
Select auto scan com port or appointed com port.

Alarm setting :
On DCV, ACV, DCA, ACA type. If recording value larger than hi value or smaller than low value then alarm beep.

Channel :
User can change name to channel 1~6 and description.

Graph scales :
Select one page graph can draw time axial scales(25~200).

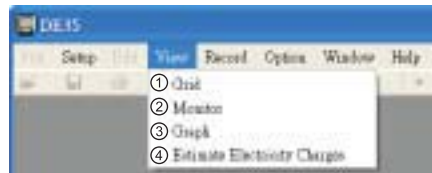
Power rate :
Setting parameter for compute electricity charges.

■ Edit



Clear current record data and graph.

■ View



- ① Grid(Record) : Select Tabular enable. Record data list processing.
- ② Monitor : Select display instantaneous data.
- ③ Graph : Select graph enable.
- ④ Can be estimate electricity charges on DCA or ACA type.(Setting parameter on setup form.)



② ① ③ ④

- ① Grid(Record) : Record data list processing.

| Index | Time | Ch1 | Unit | Time | Ch2 | Unit | Time | Ch3 | Unit |
|-------|----------|------|------|------|-----|------|------|-----|------|
| 3032 | 13:26:45 | 13.1 | A | | | | | | |
| 3034 | 13:26:57 | 13.6 | A | | | | | | |
| 3036 | 13:26:59 | 13.0 | A | | | | | | |
| 3038 | 13:27:00 | 13.6 | A | | | | | | |
| 3037 | 13:27:02 | 13.0 | A | | | | | | |
| 3036 | 13:27:03 | 13.5 | A | | | | | | |
| 3036 | 13:27:05 | 13.2 | A | | | | | | |
| 3040 | 13:27:07 | 13.2 | A | | | | | | |
| 3041 | 13:27:08 | 13.6 | A | | | | | | |
| 3042 | 13:27:10 | 13.0 | A | | | | | | |
| 3043 | 13:27:12 | 13.6 | A | | | | | | |
| 3044 | 13:27:13 | 12.9 | A | | | | | | |

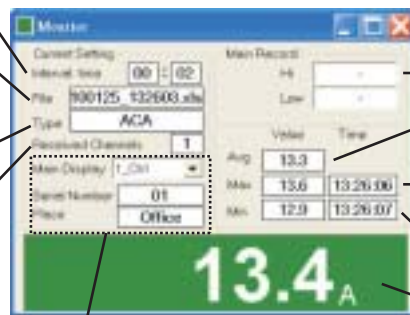
- ② Monitor :

Transmission interval time.

Prospective saved file name.

Measuring range of transmitter

The number of channels that receiver receives



Alarm and setting.

Avg : Average value up to present.

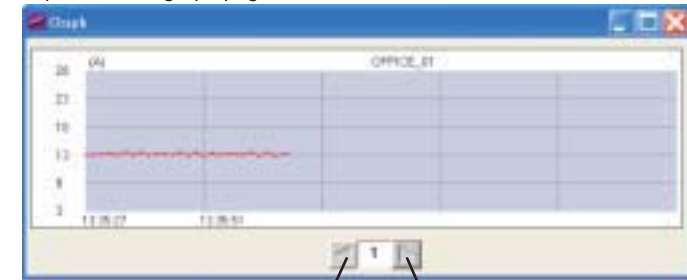
Max : Maximum value up to present.

Min : Minimum value up to present.

Display measuring data simultaneously from transmitter

You can change the description you want for Channel, Serial number and place in "setup" function.

- ③ Graph : Current graph page.



return to home page.

To next page.

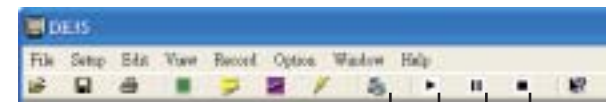
- ④ Estimate Electricity Charges

1. The estimate electricity charges form is displayed. Counting electricity charges on DCA or ACA type.(Setting parameter on setup form.)
2. This screen will not display while transmission starting. You have to set up V,COS and unit price per cost of electricity in the Setup function and select Estimate Electricity Charges in the View function to start calculate the electricity charges.
3. After that, the Estimate Electricity Charges screen will be showed and updated on the main display simultaneously.

■ Record



① ② ③ ④



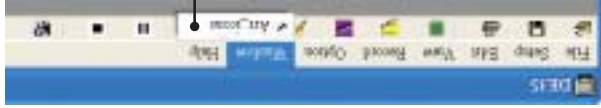
① ② ③ ④

- ① Connect : Link DE35 meter.
- ② Start : Start to receive data.(Include auto to link DE35 meter)
- ③ Pause : Pause receive data. When it pauses, only can stop receiving the data but can't save the file.
- ④ Stop : Stop receiving data.

- 1. Open DE35 Meter user's guide.
- 2. Open DE35 PC operation note.



■ Help



■ Window

- Grid Record
 - 1. Grid record background color.
 - 2. Tabular grid lines select.



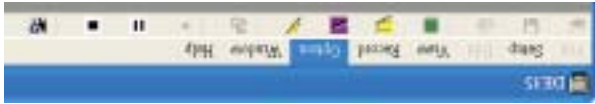
- Monitor
 - 1. Main display receiving data value & unit font color.
 - 2. Main display receiving data value & unit background color.



- Graph
 - 1. Graph background color.
 - 2. Main display channel tick scale color.
 - 3. Graph title text.



■ Option



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice : The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.