Device may be connected to or disconnected from a live conductor.

Flexible sensors can be connected to or disconnected from live conductors when using appropriate protective insulation. Other sensors can only be connected to or disconnected from insulated conductors suited to the voltage of the conductor under measurement.

Measurement categories

This instrument’s current measurement part conforms to the safety requirements for CAT III 600 V, and the voltage measurement part conforms to the safety requirements for CAT II 600 V, CAT III 300 V measuring instruments.

**WARNING**

- Do not use the instrument if the LCD display indicates 
  - OFF
  - OF
  - -OF
- Using the instrument in a way not described in this manual may negate the provided safety features. Before using the instrument, be certain to carefully read the following safety notes.

In this document, the risk seriousness and the hazard levels are classified as follows.

**DANGER**

- Immediate risk of operator death or serious injury
- Potential risk of operator death or serious injury
- Potential risk of minor operator injury or device damage or malfunction
- Prohibited actions
- Actions that must be performed

**WARNING**

- Risk of electric shock
- Exposed to high humidity or condensation
- Exposed to high temperature
- Exposed to corrosive or combustible gases
- Exposed to high voltage
- Exposed to high pressure
- Exposed to high humidity or condensation
- Exposed to high quantities of dust particles

**CAUTION**

- Risk of electric shock
- Prohibited actions
- Actions that must be performed

Symbols affixed to the device

- Precaution or hazard (See corresponding topic.)
- Risk of electric shock
- Protected throughout by double insulation or reinforced insulation

- Prohibited actions
- Actions that must be performed

**DANGER**

Measuring a location with a higher category number than the measurement category indicated on this device may result in a serious accident such as electric shock.

To avoid electric shock, do not touch the portion beyond the protective barrier during use.

Never apply voltage to the test leads when the resistance and continuity functions are selected.

Doing so may damage the instrument and result in bodily injury. To avoid electrical accidents, remove power from the circuit before measuring.

**WARNING**

- To avoid electric shock, short circuits and damage to the instrument, disconnect the test leads from the measurement object before switching the rotary switch.
- To prevent electric shock, when measuring the voltage of a power line use a test lead that satisfies the following criteria:
  - Conforms to safety standards IEC61010 or EN61010
  - Of measurement category III or IV
  - Its rated voltage is higher than the voltage to be measured
- The optional test leads for this instrument conform to the safety standard EN61010. Use a test lead in accordance with its defined measurement category and rated voltage.

- Installing the instrument in inappropriate locations may cause a malfunction of instrument or may give rise to an accident. Avoid the following locations:
  - Exposed to direct sunlight or high temperature
  - Exposed to corrosive or combustible gases
  - Exposed to a strong electromagnetic field or electrostatic charge
  - Near induction heating systems (such as high-frequency induction heating systems and IH cooking equipment)
  - Susceptible to vibration
  - Exposed to water, oil, chemicals, or solvents
  - Exposed to high moisture or condensation
  - Exposed to high quantities of dust particles

**CAUTION**

- Since there is a risk of electric shock, check that the insulation on the test lead and flexible sensor (optional) are neither ripped nor torn, and no metal conductor inside the wire are exposed before using the instrument.
- If damaged, replace them with those specified by our company.
- To prevent a short circuit accident, be sure to use the test leads with the switches attached when performing measurements in the CAT III measurement category.
- If the sleeves are inadvertently removed during measurement, stop the measurement.
- With regard to the electricity supply, there are risks of electric shock, heat generation, fire, and arc flash due to short circuits. If persons unfamiliar with electricity measuring instrument are to use the instrument, another person familiar with such instruments must supervise operation.
- This instrument is measured on a live line. To prevent electric shock, use appropriate protective insulation and adhere to applicable laws and regulations.
- Handle and dispose of batteries in accordance with local regulations.

**CAUTION**

- Do not place foreign objects between the jaw tips (or flexible loop coupling) so keep the surfaces clean by gently wiping with a soft dry cloth.
- Display will automatically turn off if the instrument is not used for 30 min. (Auto power-saving function)
- The indicator lights up when the remaining battery capacity is low. In this case, the instrument’s reliability is not guaranteed. Replace the battery immediately.
- To avoid battery depletion, turn the rotary switch OFF after use (the auto power save feature consumes a small amount of current).

- **DANGER**

- Risk of electric shock
- Prohibited actions
- Actions that must be performed

**WARNING**

- Since there is a risk of electric shock, check that the insulation on the test lead and flexible sensor (optional) are neither ripped nor torn, and no metal conductor inside the wire are exposed before using the instrument.
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- **DANGER**

- Risk of electric shock
- Prohibited actions
- Actions that must be performed

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- To avoid battery depletion, turn the rotary switch OFF after use (the auto power save feature consumes a small amount of current).
**Resistance Measurement (Ω)**

**Specifications**

**Accuracy**

We define measurement tolerances in terms of rdg. (reading) and dgt. (digit) values, with the following meanings:

- **rdg.** (reading or displayed value)
  - The value currently being measured and indicated on the measuring instrument.

- **dgt.** (resolution)
  - The smallest displayable unit on a digital measuring instrument, i.e., the input value that causes the digital display to show a 1-digit as the least-significant digit.

**Basic Specifications**

- **Maximum input current**
  - 2200 A AC continuous (45 Hz to 66 Hz)
  - Flexible loop (3280-10F) +CT6280 or 3280-20F +CT6280

- **Maximum input voltage**
  - 600 V AC/DC and 3 x 10^6 Hz or less (ACV/DCV)

- **Overload protection**
  - 600 V AC/DC (ACV/DCV/Continuity)

- **Maximum rated voltage to earth**
  - 600 V AC (Measurement category III)
  - 300 V AC (Measurement category IV)
  - Anticipated transient overvoltage: 6000 V

- **AC measurement method**
  - 3280-10F: Average value measurement RMS method
  - 3280-20F: True RMS measurement method

- **Display update rate**
  - 400 ms/5s

- **Noise rejection characteristics**
  - NMRR: DCC ~ 40 dB or more (50 Hz/60 Hz)
  - CMRR: DCC ~ 100 dB or more (~50 Hz/60 Hz, 1 kHz unbalance)
  - ACV: ~ 60 dB or more (50 Hz/60 Hz, 1 kHz unbalance)
  - Alternating current (50 Hz/60 Hz, 1 kHz unbalance)
  - But, ~45 dB or more for 600 V range.

- **Crest factor**
  - For 2500 counts or less, 2.5
  - Zero-diplay range
  - 5 counts (AC Current, Jaw - flexible loop)

- **Effects of conductor position**
  - 3280-10F, 3280-20F: ±5.0%
  - CT6280: ±5.0%

- **Maximum measurable conductor diameter**
  - 3280-10F, 3280-20F: ≤ 0.63 mm or less
  - CT6280: ≤ 0.10 mm or less

**CALIFORNIA, USA ONLY**

This product contains a CR Coin Lithium Battery which contains Perchlorate Material - special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate/