Panel instruments

Schneider Electric panel instruments reliably comply with the most stringent standards, including IEC, MID, UL, etc., and we thoroughly test all products with recognized, third-party laboratories.

Our products are simple to install, configure, and use. This saves our partners time and money and lets them deliver the best solutions in a timely and cost-effective manner. Whatever the size or type of application, the PowerLogic™ product line is an integral part of smart panels.
Function

**iAMP**
Ammeters measure the current flowing through an electric circuit in amps.

**iVLT**
Voltmeters measure the potential (voltage) difference of an electric circuit in volts.

Common technical data

- **Accuracy:** Class 1.5.
- **Complies with standards IEC 60051-1, IEC 61010-1 and IEC 61000-4.**
- **Ferromagnetic device.**
- **Pseudo-linear scale over 90°.**
- **Ammeters (except catalog number 16029):**
  - connection on CT, ratio In/5, to be ordered separately
  - interchangeable dials.
- **Temperature:**
  - operating temperature: -25 °C to 55 °C
  - reference temperature: 23 °C
- **Influence of temperature on accuracy:** ±0.03 %/°C.
- **Utilisation frequency:** 50 Hz to 60 Hz.
- **Consumption:**
  - AMP: 1.1 VA
  - VLT catalog number 15060: 2.5 VA
  - VLT catalog number 16061: 3.5 VA.
- **Permanent overload:**
  - AMP: 1.2 In
  - VLT: 1.2 Un.
- **Maximum overload for 5 s:**
  - AMP: 10 In
  - VLT: 2 Un.
- **Connection:** tunnel terminals for 1.5 to 6 mm² rigid cables.

Commercial reference numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Scale</th>
<th>Connection with CT</th>
<th>Width in mod. of 9 mm</th>
<th>Comm. ref. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>iAMP with direct connection</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>0-30 A</td>
<td>no</td>
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<td><strong>iAMP with connection on CT</strong></td>
<td></td>
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<tr>
<td>Basic device (delivered without dial)</td>
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<td>8</td>
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<td>Dial</td>
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<tr>
<td>0-5 A</td>
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<td>16032</td>
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<td>0-50 A</td>
<td>50/5</td>
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<td>16033</td>
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<td>0-75 A</td>
<td>75/5</td>
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<td>16034</td>
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<td>0-100 A</td>
<td>100/5</td>
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<td>16035</td>
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<td>0-150 A</td>
<td>150/5</td>
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<td>16036</td>
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<td>0-200 A</td>
<td>200/5</td>
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<td>16037</td>
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<td>0-250 A</td>
<td>250/5</td>
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<td>16038</td>
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<td>0-400 A</td>
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<td>0-500 A</td>
<td>500/5</td>
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<td>0-600 A</td>
<td>600/5</td>
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<td>16042</td>
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<td>0-800 A</td>
<td>800/5</td>
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<td>1500/5</td>
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<td>16045</td>
</tr>
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<td>0-2000 A</td>
<td>2000/5</td>
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<td></td>
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</tr>
<tr>
<td><strong>iVLT</strong></td>
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<td></td>
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<tr>
<td>0-300 V</td>
<td></td>
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<td>16060</td>
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<tr>
<td>0-500 V</td>
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<td>8</td>
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<td>16061</td>
</tr>
</tbody>
</table>

See your Schneider Electric representative for complete ordering information.
Function

**iAMP**
Ammeters measure in amps the current flowing through an electric circuit.

**iVL T**
Voltmeters measure in volts the potential (voltage) difference of an electric circuit.

**iFRE**
Frequency meters measure in hertz the frequency of an electric circuit from 20 to 600 V AC.

Common technical data
- Supply voltage: 230 V AC
- Operating frequency: 50 Hz to 60 Hz.
- Display by red LED: 3 digits, h = 8 mm (0.31 in).
- Accuracy at full-scale: 0.5 % ±1 digit.
- Consumption: max. 5 VA or rated 2.5 VA.
- Degree of protection:
  - IP40 on front face.
  - IP20 at terminal level.
- Connection: tunnel terminals for 2.5 mm² cables.

Specific data

**10 A direct reading ammeter**
- Minimum value measured: 4 % of rating.
- Measurement input consumption: 1 VA.

**Multi-rating ammeter**
- Ratings:
  - in direct reading: 5 A.
  - by CT (not supplied) configurable on the front face of the ammeter: 10, 15, 20, 25, 40, 50, 60, 100, 150, 200, 250, 400, 500, 600, 800, 1000, 1500, 2000, 2500, 4000, 5000 A.
- Minimum value measured: 4 % of rating.
- Measurement input consumption: 0.55 VA.

**Voltmeter**
- Direct measurement: 0...600 V AC
- Input impedance: 2 MW.
- Minimum value measured: 4 % of rating.

**Frequency meter**
- Minimum value measured: 20 Hz.
- Maximum value measured: 100 Hz.
- Full-scale display: 99.9 Hz.

Compliance with standards
- Safety: IEC/EN 61010-1.

Commercial reference numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Scale</th>
<th>Connection with CT</th>
<th>Width in mod. of 9 mm</th>
<th>Comm. ref. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct reading iAMP</td>
<td>0-10 A</td>
<td>No</td>
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<td>15202</td>
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<tr>
<td>Multi-rating iAMP</td>
<td>0-5000 A</td>
<td>As per rating</td>
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<td>15209</td>
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<tr>
<td>iVL T</td>
<td>0-600 V</td>
<td></td>
<td>4</td>
<td>15201</td>
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<td>iFRE</td>
<td>20-100 Hz</td>
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<td>4</td>
<td>15208</td>
</tr>
</tbody>
</table>

See your Schneider Electric representative for complete ordering information.
Function

The 72 x 72 measurement devices are designed for flush-mounted installation on doors, wicket doors and front plates of enclosures and cubicles.

AMP
The ammeters measure in amps the current flowing through an electrical circuit.

VLT
The voltmeter measure in volts the potential difference (voltage) of an electrical circuit.

Common technical data
- Accuracy: Class 1.5.
- Compliance with standard IEC 60051-1, IEC 61010-1 and IEC 61000-4.
- Ferromagnetic device.
- Scale length: 62 mm over 90°.
- Mounting in enclosure or in cubicle.
- Degree of protection: IP52.
- Maximum operating position: 30° / vertical.
- Temperature:
  - operation: -25 °C to 50 °C.
  - reference: 23 °C.
- Influence of temperature on accuracy: ±0.003 %/ °C.
- Utilisation frequency: 50 Hz to 60 Hz.

AMP specific technical data
- Needs a In/5 CT to be ordered separately.
- Interchangeable dials to be ordered separately.
- Consumption: 1.1 VA.
- Permanent overload: 1.2 In.
- Maximum overload for 5 s: 10 In.

VLT specific technical data
- Consumption: 3 VA.
- Permanent overload: 1.2 Un.
- Maximum overload for 5 s: 2 Un.

Commercial reference numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Scale</th>
<th>Connection on CT</th>
<th>Comm. ref. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMP for standard feeder</td>
<td>X/5</td>
<td>16009</td>
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</tr>
<tr>
<td>Basic device (delivered without dial)</td>
<td>0-50 A</td>
<td>50/5</td>
<td>16004</td>
</tr>
<tr>
<td>1.3 In dial</td>
<td>0-100 A</td>
<td>100/5</td>
<td>16010</td>
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<td></td>
<td>0-200 A</td>
<td>200/5</td>
<td>16011</td>
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<td>0-400 A</td>
<td>400/5</td>
<td>16012</td>
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<td>0-600 A</td>
<td>600/5</td>
<td>16013</td>
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<td>0-1000 A</td>
<td>1000/5</td>
<td>16014</td>
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<td></td>
<td>0-1250 A</td>
<td>1250/5</td>
<td>16015</td>
</tr>
<tr>
<td></td>
<td>0-1500 A</td>
<td>1500/5</td>
<td>16016</td>
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<tr>
<td></td>
<td>0-2000 A</td>
<td>2000/5</td>
<td>16019</td>
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<tr>
<td>AMP for motor feeder</td>
<td>X/5</td>
<td>16003</td>
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</tr>
<tr>
<td>Basic device (delivered without dial)</td>
<td>0-30-90 A</td>
<td>30/5</td>
<td>16006</td>
</tr>
<tr>
<td>3 In dial</td>
<td>0-75-225 A</td>
<td>75/5</td>
<td>16007</td>
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<tr>
<td></td>
<td>0-200-600 A</td>
<td>200/5</td>
<td>16008</td>
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<tr>
<td>VLT</td>
<td>0-500 V</td>
<td>16005</td>
<td></td>
</tr>
</tbody>
</table>

See your Schneider Electric representative for complete ordering information.
Function
The 96 x 96 measurement devices are designed for flush-mounted installation on doors, wicket doors and front plates of enclosures and cubicles.

AMP
The ammeters measure in amps the current flowing through an electrical circuit.

VLT
The voltmeter measure in volts the potential difference (voltage) of an electrical circuit.

Common technical data
- Accuracy: class 1.5.
- Compliance with standard IEC 60051-1, IEC 61010-1 and IEC 61000-4.
- Ferromagnetic device.
- Scale length: 80 mm over 90°.
- Mounting in enclosure or in cubicle.
- Degree of protection: IP52.
- Maximum operating position: 30° / vertical.
- Temperature:
  - operation: -25 °C to 50 °C.
  - reference: 23 °C.
- Influence of temperature on accuracy: ±0.003 % / °C.
- Utilisation frequency: 50 Hz to 60 Hz.

AMP specific technical data
- Needs a In/5 CT to be ordered separately.
- Interchangeable dials to be ordered separately.
- Consumption: 1.1 VA.
- Permanent overload: 1.2 In.
- Maximum overload for 5S: 10 In.

VLT specific technical data
- Consumption: 3 VA.
- Permanent overload: 1.2 Un.
- Maximum overload for 5S: 2 Un.

Commercial reference numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Scale</th>
<th>Connection on CT</th>
<th>Comm. ref. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMP for standard feeder</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Basic device (delivered without dial)</td>
<td>X/5</td>
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<tr>
<td>1.3 In dial</td>
<td>0-50 A</td>
<td>50/5</td>
<td>16079</td>
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<td>0-100 A</td>
<td>100/5</td>
<td>16080</td>
</tr>
<tr>
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<td>0-200 A</td>
<td>200/5</td>
<td>16081</td>
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<td>0-400 A</td>
<td>400/5</td>
<td>16082</td>
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<td>0-600 A</td>
<td>600/5</td>
<td>16083</td>
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<td>0-1000 A</td>
<td>1000/5</td>
<td>16084</td>
</tr>
<tr>
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<td>0-1250 A</td>
<td>1250/5</td>
<td>16085</td>
</tr>
<tr>
<td></td>
<td>0-1500 A</td>
<td>1500/5</td>
<td>16086</td>
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<tr>
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<td>0-2000 A</td>
<td>2000/5</td>
<td>16087</td>
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<tr>
<td></td>
<td>0-2500 A</td>
<td>2500/5</td>
<td>16088</td>
</tr>
<tr>
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<td>0-3000 A</td>
<td>3000/5</td>
<td>16089</td>
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<tr>
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<td>0-4000 A</td>
<td>4000/5</td>
<td>16090</td>
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<td>5000/5</td>
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<tr>
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<td>0-6000 A</td>
<td>6000/5</td>
<td>16092</td>
</tr>
<tr>
<td>AMP for motor feeder</td>
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<td></td>
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<tr>
<td>Basic device (delivered without dial)</td>
<td>X/5</td>
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<td>16073</td>
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<td>3 In dial</td>
<td>0-30-90 A</td>
<td>30/5</td>
<td>16076</td>
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<td>0-75-225 A</td>
<td>75/5</td>
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<td>0-200-600 A</td>
<td>200/5</td>
<td>16078</td>
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<td>VLT</td>
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<td>16075</td>
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<tr>
<td></td>
<td>0-500 V</td>
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<td></td>
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</tbody>
</table>

See your Schneider Electric representative for complete ordering information.
Function
The 48 x 48 selector switches are designed for flush-mounted installation on doors, wicket doors and front plates of enclosures and cubicles.

CMA
The ammeter selector switch uses a single ammeter (by means of current transformers) for successive measurement of the currents of a three-phase circuit.

CMV
The voltmeter selector switch uses a single voltmeter for successive measurement of the voltages (phase-to-phase and phase-to-neutral) of a three-phase circuit.

Common technical data
- Durability:
  - electrical: 100,000 operations.
  - mechanical: 2,000,000 operations.
- AgNi contact.
- Operating temperature: -25 °C to 50 °C.
- Compliance with standards IEC/EN 60947-3.
- Degree of protection:
  - IP65 on front face.
  - IP20 at terminal level.

Commercial reference numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Rating (A)</th>
<th>Voltage (V)</th>
<th>Number of positions</th>
<th>Comm. ref. no.</th>
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</thead>
<tbody>
<tr>
<td>CMA</td>
<td>20</td>
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<td>16017</td>
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</tr>
<tr>
<td>CMV</td>
<td>500</td>
<td>17</td>
<td>16018</td>
<td></td>
</tr>
</tbody>
</table>

See your Schneider Electric representative for complete ordering information.

Connection

CMA.

CMV.

Reading 3 phase-to-earth voltages + 3 phase-to-phase voltages.

Note: When connecting do not remove the pre-cabling.

See appropriate Installation Guide for this product.
Function

iCMA
This 4-position ammeter selector switch uses a single ammeter (using current transformers) for successive measurement of the currents of a three-phase circuit.

iCMV
This 7-position voltmeter selector switch uses a single voltmeter for successive measurement of voltages (phase-to-phase and phase-to-neutral) of a three-phase circuit.

Common technical data

- Rotary handle.
- Maximum operating voltage: 440 V, 50/60 Hz.
- Nominal thermal current: 10 A.
- Operating temperature: -20 °C to 55 °C.
- Storage temperature: -25°C to 80°C.
- Mechanical durability (AC21A-3 x 440 V): 2,000,000 operations.
- Degree of protection:
  - IP66 on front face.
  - IP20 at terminal level.
- Electrical durability: 1,000,000 operations.
- Connection: jumper terminals with captive screws, for cables up to 1.5 mm².

Commercial reference numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Rating (A)</th>
<th>Voltage (V AC)</th>
<th>Width in mod. of 9 mm</th>
<th>Comm. ref. no.</th>
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</thead>
<tbody>
<tr>
<td>iCMA</td>
<td>10</td>
<td>415</td>
<td>4</td>
<td>15126</td>
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<tr>
<td>iCMV</td>
<td>10</td>
<td>415</td>
<td>4</td>
<td>15125</td>
</tr>
</tbody>
</table>

See your Schneider Electric representative for complete ordering information.

Connection

See appropriate Installation Guide for this
Function
Electromechanical counter that counts the operating hours of a machine or piece of electrical equipment. Giving a precise indication of operating time, the counter is used to decide when to carry out preventive maintenance.

Common technical data
- Electromechanical display.
- Maximum display: 99999.99 hours.
- Display accuracy: 0.01 %.
- Without reset.
- Storage temperature: -25 °C to 85 °C.
- Connection: tunnel terminals for 2.5 mm² cable.

Specific technical data
**iCH "DIN"**
- Consumption: 0.15 VA.
- Operating temperature: -10 °C to 70 °C.
- Mounting on DIN rail.

**CH "48 x 48"**
- Consumption:
  - 15607: 0.25 VA
  - 15608: 0.15 VA
  - 15609: 0.02 VA to 12 V and 0.3 VA to 36 V.
- Operating temperature: -20 °C to 70 °C.
- Degree of protection: IP65 on front face.
- Mounting on front face of monitoring switchboards.

Commercial reference numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Voltage (V)</th>
<th>Width in mod. of 9 mm</th>
<th>Comm. ref. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>iCH &quot;DIN&quot;</strong></td>
<td>230 V AC ± 10% / 50 Hz</td>
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<td>15440</td>
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<tr>
<td><strong>CH &quot;48 x 48&quot;</strong></td>
<td>24 V AC ± 10% / 50 Hz</td>
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<td>15607</td>
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<tr>
<td></td>
<td>230 V AC ± 10% / 50 Hz</td>
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<td>15608</td>
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<tr>
<td></td>
<td>12 to 36 V DC</td>
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<td>15609</td>
</tr>
</tbody>
</table>

See your Schneider Electric representative for complete ordering information.

Connection

See appropriate Installation Guide for this
Function
Electromechanical counter designed to count impulses emitted by: kilowatt-hour meters, temperature overrun detectors, people meters, speed meters, etc.

Common technical data
- Supply and metering voltage: 230 V AC ± 10 %, 50/60 Hz.
- Consumption: 0.15 VA.
- Maximum display: 9 999 999 impulses.
- Without reset.
- Metering data:
  - Minimum impulse time: 50 ms
  - Minimum time between 2 impulses: 50 ms.
- Storage temperature: -25 °C to 85 °C.
- Operating temperature: -10 °C to 70 °C.
- Connection: tunnel terminals for 2.5 mm² cable.

Commercial reference numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Width in mod. of 9 mm</th>
<th>Comm. ref. no.</th>
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</thead>
<tbody>
<tr>
<td>iCI</td>
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</tbody>
</table>

Connection

See appropriate Installation Guide for this
Analog ammeters and voltmeters iAMP, iVLT

Digital ammeters, voltmeter and frequency meter iAMP, iVLT

iCMA and iCMV selector switches

72 x 72 analog ammeters and voltmeter

96 x 96 analog ammeters and voltmeter

See the appropriate Installation Guide for this product.
48 x 48 CMA and CMV selector switches

iCi impulse counter and iCH hour counter

48 x 48 CH hour counters

See the appropriate Installation Guide for this product.