Square and Rectangular panel meters are direct indication of measuring input. Suitable to use on the distribution panel, control panel, switchboard panel, power plant, mimic board, machines and others. Designed for industrial applications which required precise, reliable and robust instruments for the display range and indicating.

Each measuring instrument is suited for one of the following measuring tasks:

- **DC voltage meter**
  - Direct connection 0-150V, 0-300V or request.
  - Direct connection 1, 3, 5, 10, 20, 30A.
  - Direct connection 1mA, 5mA, 10mA, 20mA, 30mA, 40mA, 50mA, 75mA, 100mA, 150mA, 200mA.
  - Shunt resistor 60mV, 75mV, 150mV, 300mV.

- **AC voltage meter**
  - Direct connection 0-150V, 0-300V, 0-500V, 0-600V.
  - PT connection 100, 110, 115, 120V ac.

- **DC current meter**
  - Direct connection 1, 3, 5, 10, 20, 30, 40, 50, 60A.
  - Direct connection 1mA, 5mA, 10mA, 20mA, 30mA, 40mA, 50mA, 75mA, 100mA, 150mA, 4...20mA.
  - Shunt resistor 60mV, 75mV, 150mV, 300mV.

- **AC current meter**
  - Direct connection 1, 3, 5, 10, 20, 30, 40, 50, 60A.
  - Direct connection 1mA, 5mA, 10mA, 20mA, 30mA, 40mA, 50mA, 75mA, 100mA, 150mA, 4...20mA.
  - Shunt resistor 60mV, 75mV, 150mV, 300mV.

- **Frequency meter**
  - Input voltage 50V, 100V, 220V, 380V, 440V or request.

- **Power Factor meter** 1Ph2W, 3Ph3W
  - Input voltage 50V, 100V, 220V, 380V, 440V or request.
  - Input current CT / 1A or CT / 5A.

- **Watt or Var meter** 1Ph2W, 3Ph3W, 3Ph4W
  - Input voltage 50V, 100V, 220V, 380V, 440V or request.
  - Input voltage PT connection 100, 110, 115, 120V ac.
  - Input current CT / 1A or CT / 5A.

- **Others** by request or more detail see ordering information.

### Display

- **Scale Graduation**: Coarse-fine
- **Pointer**: Beam pointer with slim knife.

### Mechanical Design

- **Housing Material**: Polycarbonate, self-extinguishing and drip-proof per UL94V-0
- **Mounting Fasteners**: Standard type screw clamp
- **Scale**: Interchangeable scales
  - Scales may only be replaced under voltage-free conditions!
- **Replaceable**: Bezels and glass face plates, May only be replaced under voltage-free conditions!
- **Terminals**: M4 screw terminals with self-lifting terminal clips.

### Contact Protection

- **Accuracy**: 1.5, 1.0 or request.

### Consumption

- **Ammeter**: 0.7 Ω for 4...20 mA.
- **Ammeter**: 8 mA for shunt operated.
- **Ammeter**: 60mV for direct connection.
- **Volt meter**: 1000 Ω / V.

### Ambient Conditions

- **Operating Temperature**: - 20 ... + 55 °C
- **Storage Temperature**: - 40 ... + 70 °C
- **Relative Humidity**: max. 95%

### Compliance with Regulations

- **Protection**:
  - IP 52, front panel, Terminal IP20
  - Class 1

<table>
<thead>
<tr>
<th>Size (Square)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>RC50</td>
<td>50</td>
<td>50</td>
<td>61</td>
<td>43</td>
</tr>
<tr>
<td>RC60</td>
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</tr>
<tr>
<td>RC80</td>
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<td>61</td>
<td>46.5</td>
</tr>
<tr>
<td>Y560</td>
<td>58</td>
<td>47.5</td>
<td>61</td>
<td>43</td>
</tr>
<tr>
<td>Y670</td>
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<td>46.5</td>
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<tr>
<td>Y780</td>
<td>80</td>
<td>68</td>
<td>61</td>
<td>46.5</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Size (Rectangular)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC50</td>
<td>58x47.5</td>
<td>70x60</td>
<td>80x68</td>
<td></td>
</tr>
<tr>
<td>RC60</td>
<td>RC60</td>
<td>RC60</td>
<td>RC60</td>
<td></td>
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<tr>
<td>RC80</td>
<td>Y560</td>
<td>Y670</td>
<td>Y780</td>
<td></td>
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<tr>
<td>Y560</td>
<td>35mm</td>
<td>42mm</td>
<td>70mm</td>
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<tr>
<td>Y670</td>
<td>38mm</td>
<td>45mm</td>
<td>50mm</td>
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<tr>
<td>Y780</td>
<td>Max Voltage: 300 V</td>
<td>300 V</td>
<td>600 V</td>
<td></td>
</tr>
<tr>
<td>Test Voltage</td>
<td>2.2 Kv</td>
<td>2.2 Kv</td>
<td>2.2 Kv</td>
<td></td>
</tr>
</tbody>
</table>
Ordering Information.

**MODEL**
- RC50 for 50x50 mm.
- RC60 for 60x60 mm.
- RC80 for 80x80 mm.
- Y560 for 58x47.5 mm.
- Y670 for 70x60 mm.
- Y780 for 80x68 mm.

**TYPE**
- DA: DC Ammeter
- DV: DC Voltmeter
- AA: AC Ammeter
- AV: AC Voltmeter
- F: Frequency meter
- PF: Power Factor meter
- W: Watt meter
- Q: Var meter

**SYSTEM**
- *E11…Single phase two wire
- *E31…Three phase three wire bal. load
- *E32…Three phase three wire unbal. load
- *E33…Three phase four wire unbal. load

**INPUT**
- A for A, V, F only
- B for W, Q, PF
- C for W, Q, PF CT, PT rated

Example:
1) DC Amp Meter RC50-DA Input 100A/60mV, Range 0-100A
2) DC Volt Meter RC 60-DV Input 150V, Range 0-150V
3) AC Amp Meter RC 80-AA Input CT100/5A, Range 0-100A
4) AC Volt Meter Y560-AV Input PT115kV/115V, Range 0-130kV
5) F110 Frequency Y670-F Input 220V, Range 45-55Hz
6) AC PF Meter Y780-PF-E31 Input 115V, CT 5A, Range 0.5-1-0.5
7) AC Watt Meter RC80-W-E33 Input PT115kV/115V, CT 200/5A, Range 0-40MW
8) AC Var Meter RC60-Q-E32 Input PT115kV/115V, CT 200/5A, Range 0-40MVar

E factory standard range or specify when ordering or consult.
Pointer type Meter
ANSI Panel, Analog meter

Wiring Diagram.

AC, DC Volt Meter.

Direct Connection

PT Connection

AC, DC Current Meter.

Direct Connection

CT Connection

Frequency Meter.

Direct Connection

PT Connection

PF Power Factor Meter.

Direct Connection

PT Connection

W, Q Watt – Var Meter.

1Ph 2W

3Ph 3W

3Ph 4W