

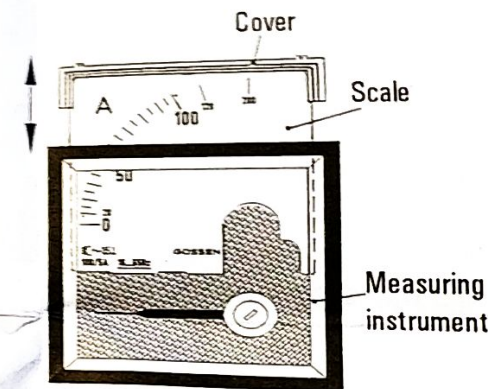
Operating instructions for square & rectangular analogue panel meters

General: As analogue panel meters are manufactured and supplied according to customer specified requirements, it is important to consult the product catalogue as well as these operating instructions. Latest data sheets can also be found on our website.

1. **Intended use:** Installation in panels, large machines and fixed installations.
 2. **Technical data:** Refer to the product label and catalogue for details of the product variations.
 3. **Making connections:** Analogue panel meters must be connected in specific ways, depending on the function and measuring range shown on the meter.
 4. **Manufacturer:** See the company data above or, if not available, the labelling on the product.
 5. **The meter must be used in accordance with the stated operating voltage and over voltage category (marked as CAT).**
 6. **Technical specifications:** Panel meters do not require an auxiliary voltage, except for indicator/controller versions. The operating voltage and polarity is specified next to the meter's terminals. With more than one measuring range, additional marked terminals are fitted. The indicated polarity must be observed for D.C. voltage or current measurements. The connections are made by means of screw terminals or plug-in connections of various sizes. For illuminated meters, additional plug-in connections are provided on the lamp socket (the lamp voltage is specified next to its connections). Termination bushes should be used for stranded conductors. Cable lugs suitable for the terminal connection bolts must be used for current values ≥ 15 A.
 7. **Service conditions:** Analogue panel meters are intended for use in normal environmental conditions, namely:
 - Indoor installation, up to 2,000 m elevation above sea level, temperature range, relative humidity and condensation - see the catalogue data, transient voltages (withstand surge voltages are permissible as per category II of IEC 60364-4-443)
 8. **Cleaning:** Wipe with a dry cloth only.
 9. **Safety instructions:**
 - The instrument may be connected without additional protection against hazardous voltage shock to voltages above earth within the specified operating voltage and over voltage category (CAT) ranges.
 - The protective terminals must be professionally connected to the protective conductor.
- IF the instrument is not use like this instruction manual, it is possible the included safety functions are not effective.

Information for replacement scale
(only instruments with a replaceable scale)

1. Remove the cover
2. Replace the scale
3. Refit the cover



Sliding latch fixing – technique (Series B)



1. Remove the contact protection
2. Insert the meter into the panel cut-out
3. Press the sliding latch towards the panel from the rear of the meter