Anti-Condensation Solutions

SCR & PR Series
SCR 1 | PR 50 ... PR 300
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Smart Condensation Relay
The SCR 1 is an intelligent condensation relay designed to regulate heaters using its advanced predictive algorithm. It actively monitors both temperature and humidity to optimize energy consumption by preventing the heater from remaining on unnecessarily. Additionally, the optional Modbus RTU communication enables remote control of the heaters and real-time monitoring of critical parameters such as temperature, relative humidity, and heater operation status.

Technical Specifications
- Supply Voltage: 24 Vdc / 110 Vdc
  110 Vac / 220 Vac
  (Specified in the Order)
- Switching Power: Up to 1,2 kW
- Communications: Modbus RTU (Optional)
- Device Modes: Normal (Without Modbus RTU)
  Slow / Normal / Fast (Modbus RTU)
- Measuring Range: -40 °C / + 125 °C
  (Accuracy ±0.2°C (Temperature) (Typical)
- Measuring Range: 0 - 100 %RH
  (Accuracy ±2% (Humidity) (Typical)
- Dimensions for Main Unit: 114,4 x 107,3 x 35,3 mm
- Dimensions for Sensor Unit: 61 x 86 x 32 mm

Advantages
- Smart predictive control principle
- Relative humidity & temperature measurement
- No settings required
- Prevents personnel mistakes
- Efficient thanks to predictive variable time working and duty cycle
- Remote monitoring and control via Modbus RTU (optional)
- Several modes for different climates

Anti-Condensation Heaters
Anti-Condensation Heaters are required to prevent failures or corrosion caused by low temperatures or high humidity inside the enclosure. This occurs when ambient temperature is low and the equipment does not generate enough heat to maintain the minimum internal temperature.

Additional Informations
- Climatic properties such as the air temperature and humidity in the environment where the electrical cubicles are installed are very important for the continuity of the system and the safety of the personnel.
- The amount of water in the air is called moisture. As the temperature increases, the amount of water in the unit air increases.

Applications Areas
- LV and HV Electrical Panels

Standards
- IEC 60664-1
- IEC 60529
Technical Specifications

- Resistance Element: Stainless steel wire wound
- Frame Profile: High cooling surface aluminium
- Insulation: 2 kV 50 / 60 Hz 1 min.
- Protection Degree: IP 5X
- Installation: Screw mounting
- Dimensions (mm): DIN 35 rail mounting
- Touch-Safe Cover: Optional

One or more Anti-Condensation Heaters and a separate thermostat (if used) shall be used for each HV cubicle.

Advantages

- The most efficient body surface area that can be used in the environment heating are increased extrusion and anodized.
- Aktif heaters’ frames have 120% more surface efficiency than stainless tube heaters.
- MGO powder is used for insulation material.
- MGO powder increases the mechanical strength and vibration resistance of the heater.
- As the resistance element is stainless and has very low temperature coefficient been used, the power of the heater does not reduce during operation.
- PTC heaters cannot prevent condensation as their power significantly reduce while operating.
- Aktif heaters offer the best solution as moisture reduction performance. It is 60% more efficient than tube heaters and 670% more than PTC heaters.
- The dissipation of heat inside the cubicle is important for the Anti-Condensation Heaters in order to perform its task homogeneously. Temperature difference at different points of the cubicle is maximum 20 ºC for heaters.

<table>
<thead>
<tr>
<th>Type</th>
<th>Power Value</th>
<th>Dimensions (mm)</th>
<th>Cover Option</th>
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<td>50 315 - 60</td>
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</table>

* Standard voltage is 230 Vac. 24 /48/110 Vac / dc are optional.
Owing to periodical improvements of our products the supplied products may differ in some details from the data stated in the prospectus material. Published by Aktif subject to alteration without notice.

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