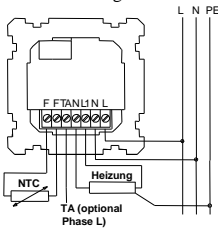
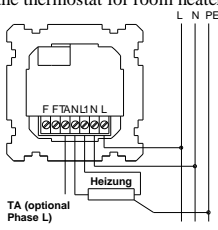
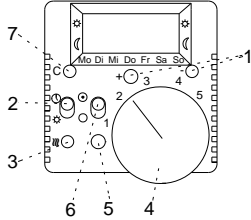


<p><b>Instruction for installation and use</b></p> <p>Electronic Thermostat with timer for individual rooms</p> <p><b>Concealed installation</b>  HRT-6020-50  - with inner sensor for room heating from 5° to 30° C</p> <p>HRT-6028-50  - with outer sensor for tiled stove heating 10° to 80° C</p>	<p><b>Safety Advice</b></p> <p>Only an authorised electrician should install the thermostat. All safety regulations must be followed.</p> <p>Before installation turn off main power source.</p> <p><b>Attention</b></p> <p>In case of system failure mains voltage may be connected to sensor cable.</p>	<p><b>Diagram 1A</b></p> <p>Connecting the tiled stove heating thermostat</p>  <p>. Alternatively a thermal actuator, or electrical heater fan</p>	<p><b>Diagram 1B</b></p> <p>Connecting the thermostat for room heater</p>  <p>. Alternatively a thermal actuator, or electrical heater fan</p>
<p><b>Installation</b></p> <p>The thermostats are built in standard flush-type mounting boxes of 55-mm diameter with a retaining ring for use <i>over</i> wall covering. If the box is needed for any other wiring, a deep box is recommended.</p> <p>Attach the wires with clamp-like terminal: no screws are necessary. The conductor ends must be <i>even</i> and <i>stripped</i> approximately <i>12 mm</i>.</p> <p>There are two plug possibilities for each connecting point. If wires have been incorrectly attached they can be detached by gently pulling them back and forth with a pliers. A few connection clamps will remain on some types of devices.</p> <p>The protective contact need not be attached. The respective terminal can be used for loop-through purposes.</p>	<p><b>Assembly</b></p> <ul style="list-style-type: none"> <li>. After bolting the device to the box, put the caps on both slide switches.</li> <li>. Carefully slide the lid on until it clicks into place. Screw it shut.</li> <li>. Place the grooved dial onto its axle.</li> </ul> <p><b>Tiled Stove Heating Thermostat</b></p> <ul style="list-style-type: none"> <li>. The sensor must be placed separately in a protective tube at heating mat level between heating conductors.</li> </ul> <p><b>Room Thermostats</b></p> <ul style="list-style-type: none"> <li>. Install circa 1.5 m above the floor.</li> <li>. Avoid draughts from windows and doors.</li> <li>. Make sure the thermostat is not positioned under curtains or between shelves or other objects that block normal room circulation.</li> <li>. Heat from sources other than the heater can adversely affect the thermostat's precision.</li> </ul>	<p><b>Use</b></p> <ul style="list-style-type: none"> <li>. The electronic thermostats with inner sensors are used to regulate room heaters.</li> <li>. The electronic thermostats with outer sensors are used to regulate floor heating systems.</li> <li>. Electric heaters and warm water heaters (with thermal actuators normally closed) can be used.</li> </ul> <p>With the thermostat's timer the temperature can be adjusted down once or twice each day with different time periods for work days and rest days. The low temperature is programmed while the high (or warm) temperature can be adjusted at any time by burning the dial.</p> <p>The thermostats are pre-programmed with Monday through Friday designated as work days and Saturday and Sunday as rest days. The low temperature is pre-programmed at 15°C. The warm temperature is pre-programmed to run from 0600 h to 2200 h.</p>	<p><b>Figure 2</b></p> <p>View of Device</p> 
<p><b>Guide to Figure 2</b></p> <ol style="list-style-type: none"> <li>+ and – keys Set variables</li> <li>Slide Switch Change from time program to constant temperature</li> <li>LED Indicator If lit, heater is on</li> <li>Dial Set warm temperature</li> <li>Reset key Deletes time and day, restarts microcontroller heating times remain unchanged</li> <li>Slide Switch Switch heater on and off</li> <li>Control key c Starting programming, select variables</li> </ol>	<p><b>Getting started</b></p> <p>The thermostats are pre-programmed with a single low temperature period per day. Pre-programmed setting are follows:  <b>Work Days</b> are Monday through Friday. <b>Rest Days</b> are Saturday and Sunday.</p> <p>The thermostat is pre-programmed to monitor the temperature on both work and rest days at the following times:  . from 0600 h to 2200 h: <u>Warm-temperature period</u>.  (Set the desired temperature any time with the dial.)  . from 2200 h to 0600 h: <u>Low temperature period</u>  . Low temperature 15 °C</p> <p>If you want to use these pre-programmed settings you only need to set the correct <u>time</u> and <u>day of the week</u> (next page) and the thermostat is ready.</p>	<p><b>Getting Started</b></p> <p><b>Setting the time and day of the week</b></p> <ul style="list-style-type: none"> <li>. Press the Control key c. (The display will flash).</li> <li>. Set the actual time by pressing the + and – keys</li> <li>. Press c again (A day will flash)</li> <li>. Set the day of the week by pressing the + and – keys. The day will stop flashing after 3 minutes.</li> </ul> <p><u>That's it. The device is now running.</u></p> <p>Note:  To programme the timer to your individual needs, follow the instructions in the section "Programming" The principle is easy. Each time you press the control key c one variable flashes after another and can be changed with the + and – key.</p>	<p><b>Operation</b></p> <p><b>Constant warm temperature option</b></p> <p>If you want to run the heater without the time schedule, disengage the timer by flipping down the right slide switch (figure 2) to constant temperature (the sun icon). Choose the desired temperature with the dial.</p> <p>To reinstate the timer, simply flip the slide switch back up. The thermostat is now operating in the defined time programme.</p> <p><b>Turning off the heater</b></p> <p>To turn the heater off, flip the left slide switch down. The clock will continue to function. To turn the heater back on, simply flip the slide switch back up.</p> <p><b>Note:</b>  The LED is lit only when the thermostat requires heat.</p>

<p><b>Programming</b> <span style="float: right;">(GB)</span></p> <p>The time periods and low temperature level can be altered to your individual needs. For example: To change the pre-programmed settings (as shown in the top diagram) to the plans shown in the bottom two diagrams, take the following steps (both slide switches must be flipped up):</p> <p><b>Fig. 3 Pre-programmed settings</b></p>	<p><b>Programming</b> <span style="float: right;">(GB)</span></p> <p>Begin by setting the time and day of the week as shown in the section <u>Getting Started</u>. Immediately after setting the time and day of the week, proceed as follows.</p> <ul style="list-style-type: none"> <li>Press the control key c (the pre-programmed 15°C low temperature will flash on the display )</li> <li>Set the desired temperature by pressing the + and –keys. For example, to set the temperature to 17°C, press the + key until 17°C, press the + key until 17°C flashes.</li> <li>Press c again. Set the desired starting time for the first warm period for work days. For example, to change the pre-programmed 0600 h to the desired 0800 h, press the + key until 0800 h flashes.</li> <li>Press c again. Set the desired starting time for the first low temperature period by pressing the + and – keys. For example, to change the pre-programmed 2200 h to 1200 h, keep pressing the – key until 1200 h flashes.</li> <li>Press c again. Set the starting time for the second warm period. For example, to change the pre-programmed 0000 h to 1400 h, keep pressing the + or – key until 1400 flashes.</li> </ul>	<p><b>Programming</b> <span style="float: right;">(GB)</span></p> <p>Press c again. Set the starting time for the second low temperature period as before with the + and - keys. <u>The thermostat is now programmed for work days</u>. Proceed to change the <b>settings for rest days</b>.</p> <p><b>Press the control key c again</b>. Set the starting time for the first warm temperature period with the + and – keys. For example, to change from the pre-programmed 0600 h to 0900 h, keep pressing the + key until 0900 flashes.</p> <p><b>Press c again</b>. Set the starting time for the first low temperature period with the + and – keys. For example to change from the pre-programmed 2200 h to 2300 h press the + key until 2300 h flashes.</p> <p><b>Press c again</b>. Set the starting time for the second warm-temperature time with the + and – keys. The thermostat is pre-programmed at 0000 h. For example, keep 0000 h and do not press + or -.</p> <p><b>Press c again</b>. Set the starting time for the second low-temperature time with the + and – keys. The thermostat is pre-programmed at 0000 h. For example, keep 0000 h and do not press + or -. By setting 0000 h a second time you have programmed the thermostat to warm temperatures from 0900 h to 2300 h on rest days without a second low-temperature period.</p>	<p><b>Programming</b> <span style="float: right;">(GB)</span></p> <p>The programming for rest days is now complete. Press c a last time. The current time and day of the week are shown and the thermostat is running.</p> <p><b>Note:</b> You can stop the programming procedure at any time. The changes you made to the settings will be assumed and any unchanged settings will remain intact. For example, if you want to change only the low-temperature level, simply stop programming after completing that step. The display will stop flashing after about 3 minutes and the new low-temperature setting is valid while the other settings remain unchanged. The current time and day of the week are indicated.</p> <p><b>Note</b> You can quickly reinstate the pre-programmed settings by simultaneously pressing the c, + and – key. After this you need only reset the correct time and day of the week as shown in section <b>Getting Started</b>.</p>																										
<p><b>Programming</b></p> <p><b>Changing the work and rest day settings</b></p> <p>Work days have been pre-programmed as <b>Monday through Friday</b> and rest days as Saturday and Sunday.</p> <p>To change this:</p> <ul style="list-style-type: none"> <li>Simultaneously press the + and – keys.</li> <li>Then press the control key c. All the days of the week are now on the display. “Mo” for Monday is flashing, and “A” for work day is lit up.</li> <li>Press either the + or – key to change Monday from a work day, “A” to a rest day, “R”.</li> <li>Press the c key again to go down the list of days. When the day is flashing, it can be changed from A to R or vice versa with the + or – keys.</li> <li>When finished , again press the + and – keys simultaneously; the thermostat is now set to your wishes . If you don’t press the keys again, the changes will automatically be assumed after 3 minutes.</li> </ul>	<p><b>Technical Data</b></p> <table border="0"> <tr> <td>Mains voltage</td> <td>230 V ~ +/- 10%, 50 Hz</td> </tr> <tr> <td>Breaking current 6028</td> <td>12 (4) A</td> </tr> <tr> <td>Breaking current 6020</td> <td>12 (4) A</td> </tr> <tr> <td>Differential gap</td> <td>0,7 K</td> </tr> <tr> <td>Temperature Sensor</td> <td>NTC, 2kΩ 25°C</td> </tr> <tr> <td>Sensor cable length</td> <td>4 m</td> </tr> <tr> <td>Setting range</td> <td>Position 1...6</td> </tr> <tr> <td>- room heating</td> <td>5...30°C</td> </tr> <tr> <td>- tiled stove heating</td> <td>10...80° C</td> </tr> <tr> <td>Ambient temperature rating</td> <td>- 10 .to +40° C</td> </tr> <tr> <td>Connection cable</td> <td>1,5 mm<sup>2</sup>, max.</td> </tr> <tr> <td>Actuators for warm water heaters</td> <td>normally closed</td> </tr> <tr> <td>Energy class</td> <td>IV = 2.0%</td> </tr> </table>	Mains voltage	230 V ~ +/- 10%, 50 Hz	Breaking current 6028	12 (4) A	Breaking current 6020	12 (4) A	Differential gap	0,7 K	Temperature Sensor	NTC, 2kΩ 25°C	Sensor cable length	4 m	Setting range	Position 1...6	- room heating	5...30°C	- tiled stove heating	10...80° C	Ambient temperature rating	- 10 .to +40° C	Connection cable	1,5 mm <sup>2</sup> , max.	Actuators for warm water heaters	normally closed	Energy class	IV = 2.0%	<p><b>Figures 4</b></p> <p>Display indicators</p> <p>a: Type of day. <b>A</b> = work day and <b>R</b> = rest day  b: First warm-temperature period  c: First low-temperature period  d: Second warm-temperature period  e: Second low-temperature period  f: Days of the week.</p>	<p><b>Display Indicators</b></p> <p>The current functioning condition of the thermostat can always be clearly seen on the display.</p> <p>On <b>work days</b> A is lit up.  On <b>rest days</b> R is lit up.</p> <ul style="list-style-type: none"> <li>During the first warm-temperature period the sun icon is lit on the left side of the display (b in figure 4)</li> <li>During the first low-temperature period the moon icon is lit on the left side of the display (c in figure 4)</li> <li>During the second warm-temperature period the sun icon is lit on the right side of the display (d in figure 4).</li> <li>During the second low-temperature period the moon icon is lit on the right side of the display (e in figure 4).</li> </ul> <p>The current <b>time</b> and <b>day of the week</b> is indicated.</p>
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<p><b>Restricting the Temperature Range</b></p> <p>You can mechanically restrict the range of temperatures by limiting the dial movement.</p> <p>To do this:</p> <ul style="list-style-type: none"> <li>Carefully unscrew the dial with a screwdriver. (3 in figure 2)</li> <li>With a small pliers, pull out the arresting pin on the device lid.</li> <li>Turn the small cog wheel to the desired restriction.</li> <li>Reverse your steps to refasten the dial.</li> </ul> <p><b>Note</b> To restrict the temperature range the power source does not need to be turned off.</p>	<p><b>Power Failure</b></p> <p>After a power failure, power interruption or sensor short circuit the heater will turn off.</p> <p>The display will flash. The time will still be indicated for about 2 days. After the disruption, check the time and reset if necessary as shown in section <u>Getting Started</u>.</p> <p>The programmed settings will remain intact.</p> <p><b>Attention</b> In case of malfunction mains voltage may be in contact with sensor cable.</p>	<p><b>Troubleshooting</b></p> <p>Problem/Solution  <u>Heater isn't working</u>  Check power supply  Check heater  Check sensors  Check and , if necessary, reset temperature settings</p> <p><u>No indicators on Display</u>  Check power supply</p> <p><u>Thermostat switches too soon/too late</u>  Check and, if necessary, reset Work and Rest day settings press RESET key and re-programme the device.</p>	<p><b>Warranty</b></p>																										