

# HOW TO REPLACE AN NVENT RAYCHEM RAYSTAT-EX-03 WITH AN NVENT RAYCHEM ETS-05 THERMOSTAT

Four years ago, the nVent RAYCHEM RAYSTAT-EX-03 thermostat was replaced by the nVent RAYCHEM ETS-05-L2-E and ETS-05-H2-E thermostats. The ETS-05 surface sensing thermostats outperforms the Raystat-EX-03 on many levels:

- Higher current rating (32 Amps)
- Better accuracy
- Larger terminals, and with cage clamps
- Sensor fail safe configuration capability
- Alarm light indication
- Better price & lower installation cost



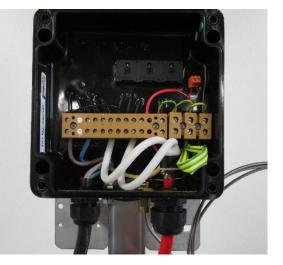
Now the RAYSTAT-EX-03 has become an obsolete product. Any field replacements can be done easily as described in this procedure.

## **REPLACEMENT PROCEDURE**

1/ De-energize the RAYSTAT-EX-03 thermostat.

2/ Remove the front lid.

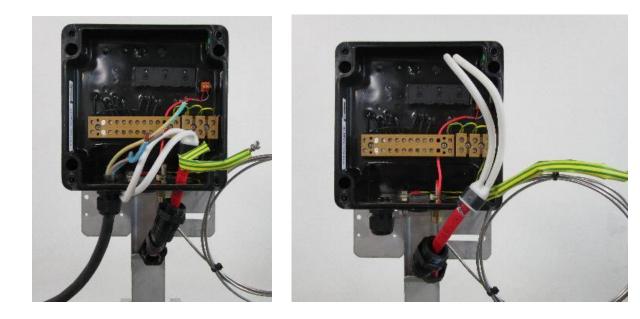




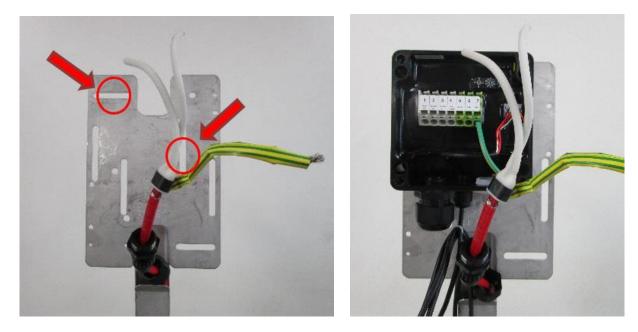
3/ Remove the pipe insulation locally. Loosen the temperature sensor from the pipe.



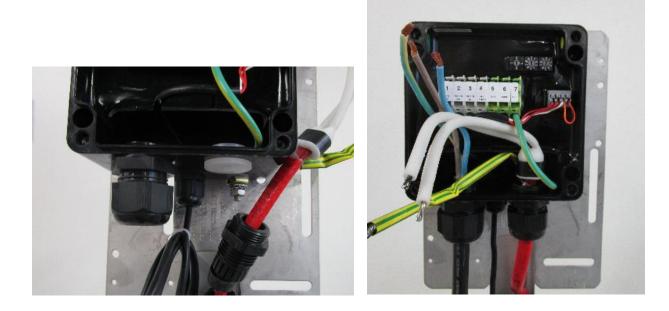
- 4/ Disconnect the power supply and the heating cable from the enclosure terminals.
- 5/ Loosen the power cable gland and heating cable gland. To uninstall the heating cable gland first loosen the cap, take out the grommet and unscrew the gland body from the enclosure.
- 6/ Remove all cables from the enclosure.
- 7/ Unscrew the enclosure from the support bracket. Keep the screws and bolts.



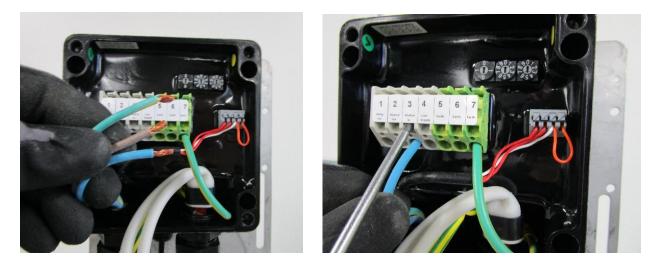
8/ Mount the ETS-05 thermostat on the same support bracket, after removing the front lid. The preferred mounting position is indicated on the picture below.



- 9/ Remove the temporary rain plug (white color) on bottom side of the enclosure.
- 10/ Pass the heating cable through the entry and install the gland body.
- 11/ Pass the power cable through the gland on the left side.



12/ Connect the power cable to the cage clamp terminals. When needed remove the insulation of the power cable conductors a bit further to ensure good electrical contact with the cage clamp terminals.



13/ Connect the heating cable to the terminals. To make sure the heating cable conductor is installed correctly in the cage clamp terminals slide the white insulation (= nVent RAYCHEM core sealer) back during the installation.

14/ When all cables are connected, re-install all grommets and glands again.



15/ Install the new sensor (delivered with ETS-05) on the pipe. When needed, shorten the sensor wires. Fix the sensor tip to the pipe with nVent RAYCHEM glass tape. Set the correct temperature on the 3 adjustable turning wheels.

- 16/ Close thermostat by mounting the front lid again.
- 17/ Energize system to test the functionality.



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