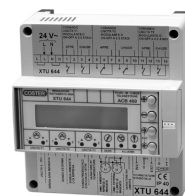


# TEMPERATURE & HUMIDITY CONTROLLER FOR 2-BATTERY AIR-HANDLING UNITS

## OPTIONAL TELEMAGEMENT

### XTU 644



**TELEMAGEMENT C-Bus: Enabled with ACB 460 accessory**

#### APPLICATION

For control of temperature and humidity of room and/or discharge air in air-handling units comprising:

- 1 or 2 batteries for heating and/or cooling.
- 1 modulating or On-Off humidification battery.
- 1 air mixing unit or 1 heat regenerator.

**Essential sensors: 1 room or air duct temperature sensor.**

**Optional sensors: 1 flow temperature sensor, 1 pre-heating temperature sensor, 1 outside temperature sensor, 1 room or air duct humidity sensor, 1 outside humidity sensor, 1 window dew-point sensor, 1 temperature set-point adjuster, 1 humidity set-point adjuster.**

#### Features

- Power supply: 24V~; Consumption: 5VA; DIN 105 x 115 modular enclosure; Protection: IP 40.
- Digital programming by means of 4 keys and alphanumeric display.
- Three outputs: 3-wire modulating or On-Off in two stages (2 equal loads) or in three stages (2 unequal loads) configurable for:
  - control of room temperature in relation to heating and cooling values requested with, if required, summer outside compensation, minimum and maximum limits of flow in order to avoid cold air currents, stratification of warm air and condensing in the air ducts.
  - control of flow temperature in relation to heating and cooling values requested with, if required, winter and summer compensation.
  - control of pre-heating temperature at a value variable in relation to room temperature and humidity.
  - control of room relative humidity in relation to humidification & dehumidification values requested.
- One progressive 0...10V DC output configurable for:
  - control of air mixture in relation to room-outside temperature (free cooling) or an enthalpic comparison.
  - control of outside air for controlling room dehumidification with compensation for window dew point.
  - control of heat regenerator in relation comparison room – outside temperatures.
- Manual or automatic season switching of the controller functions and of the three-wire On-Off season control.
- Variation of temperature & humidity set points by means of remote control.
- Alarms for plant faults and for open or short sensor circuit.

| Code    | Description   | Data Sheet |
|---------|---|------------|
| XTU 644 | Temperature & humidity controller for 2-battery air-handling units optional telemanagement. | E 135      |

#### SENSORS AND ACCESSORIES

| Code    | Description   | Application range         | Sensing element or signal | Data Sheet |
|---------|---|---------------------------|---------------------------|------------|
| ACB 460 | Plug-in for C-Bus communication                             | –                         | –                         | T 433      |
| STA 010 | Air duct temperature sensor (extract, discharge, dew point) | 0 ... 60 °C               | NTC 10 kΩ                 | N 150      |
| SAB 010 | Room temperature sensor                                     | 0 ... 40 °C               | NTC 10 kΩ                 | N 111      |
| STA 001 | Air duct temperature sensor (external)                      | –40 ... 40 °C             | NTC 1 kΩ                  | N 150      |
| SAE 001 | Outside temperature sensor                                  | –40 ... 40 °C             | NTC 1 kΩ                  | N 120      |
| STV 010 | Window glass dew point sensor.                              | 0 ... 40 °C               | NTC 10 kΩ                 | N 160      |
| SUR 704 | Relative humidity and temperature sensor                    | 10 ... 90 %               | 0 ... 10 V–               | N 221      |
| SUT 714 | Relative humidity and temperature sensor                    | 10 ... 90 %               | 0 ... 10 V–               | N 222      |
| SAU 914 | Relative humidity & temperature sensor                      | 10 ... 90%<br>0 ... 40 °C | 0 ... 10 V–<br>NTC 10 kΩ  | N 227      |
| CDB 100 | Set point adjuster with incorporated sensor                 | –5 ... +5 °C              | NTC 10 kΩ                 | N 710      |
| CDB 200 | Humidity setpoint adjuster                                  | –10 ... +10 %             | –                         | N 710      |