

# Terminal Room and Zone Controllers

TRCs and TZCs are a family of wall-mounted controllers designed to provide cost effective control of terminal and unitary HVAC equipment. The TRC/TZC product line includes devices tailored specifically for control of a broad set of equipment such as fan coil units, heat pumps, variable air volume (VAV) terminal units, and packaged HVAC and AHU units.



- Precise stand-alone control for HVAC unit and other unitary control equipment applications
- A wide variety of models with pre-programmed sequences and options to fit most any unitary application
- Fully integrated with Philips Teletrol's eBuilding system
- Incorporates integrated flash memory technology to maintain information in the event of power loss
- Large, backlit display for local information and configuration
- Attractive design fits well in any environment

## A Complete Stand-Alone Controller

Each TRC/TZC is a complete stand-alone controller with its own microprocessor and non-volatile memory. This allows it to execute independent local control of equipment even when connection to a high-level controller is not available. A BACnet MS/TP RS-485 communications network allows TRC/TZCs to be networked together and connected to the Philips Teletrol eBuilding™ system controller. This networking capability allows the TRC/TZC to be a fully integrated part of a comprehensive energy management and building automation system.

TRC/TZCs are designed for ease of installation, wiring and service. They incorporate removable terminal blocks and explicit terminal identification. They also incorporate automatic baud rate detection and status LED's for the BACnet MS/TP network to ease the installation process.

TRC/TZCs use the latest microcontroller technology and surface mount electronic devices to achieve powerful functionality in a small, attractive package.

## Integration with Philips Teletrol's eBuilding System

TRC/TZCs have been designed to fully integrate into Philips Teletrol's eBuilding facility automation system – a system that is:

- IT-friendly
- BACnet compatible
- Internet-powered

TRCs and TZCs can be connected to an eBuilding controller over BACnet MS/TP and the Terminal Room/Zone Controllers data is transparently integrated with all other system data. Integration allows eBuilding controllers to monitor, interrogate and coordinate multiple TRC/TZCs to implement a wide range of system optimization strategies. TRC/TZC data can be accessed in the eBuilding controller in the same way as local point data. This means that TRC/TZC data can be easily referenced in control programs, displayed on operator screens, stored in history logs and used in trends and alarms.



## Product Models

The TRC/TZC product line includes multiple models built on a common hardware platform. Each model is tailored to a specific application and designed to effectively control its associated HVAC equipment.

- Model 76XX – The TRC 76XX series is specifically designed to control packaged and split staged heating/cooling equipment and heat pumps. Additionally, the TRC 76XX series is pre-programmed to suit the most used applications, and contains all required I/O hardware for the target applications. Single stage, 2 stage and heat pump versions are available for a wide range of applications.
- Model 73XX – The TRC 73XX series is specifically designed to control multi-speed fan coil units with 2 position, analog or floating temperature control valves. This model also incorporates a selection of pre-programmed sequences that accommodate most applications directly. Avoidable sequence options and on-board inputs and outputs eliminate the need for auxiliary relays and peripheral devices in most applications. Versions with integrated relative humidity sensors are also available.
- Model 72XX – The TRC 72XX series is specifically designed to control 0-10VDC, staged and floating point heating and cooling terminal systems. The TRC 72XX series is pre-programmed to suit the most used applications and requires little configuration to accomplish remarkable temperature control regardless of the application. Common applications include cooling only VVT zone with re-heat, fin-tube radiators, cabinet heaters, radiant panel heaters and electric re-heat zones. Optional changeover sensing eliminates multi-vendor peripheral sourcing and further simplifies installation.

## Communications

Terminal Room/Zone Controllers provide an RS-485 communication bus connection which allows multiple Terminal Room/Zone Controllers to be networked together and connected to Philips Teletrol eBuilding controllers. The network uses BACnet protocol and operates at 9.6k, 19.2k or 38.4k baud. Autobaud detection is used by the TRC/TZC to ease system configuration. The network address of each device is configured through a local password protected intuitive user interface.

### Specifications:

#### POWER

24 Vac, +/-20%, 50/60 Hz

#### POWER CONSUMPTION

2 VA

#### OPERATING ENVIRONMENT

32 to 122°F (0 to 50°C), 10-95% RH non-condensing

#### STORAGE CONDITIONS

-22 to 122°F (-30 to 50°C), 10-95% RH non-condensing

#### CONTROL ACCURACY

+/-0.9°F (+/- 0.5°C) at 70°F (21°C) typical calibrated

#### COMMUNICATIONS

BACnet MS/TP – RS45 with autobaud rates of 9.6K, 19.2K and 38.4k

#### WIRE TERMINATIONS

Removable screw terminals-18 gauge maximum, 22 gauge recommended

#### DIMENSIONS/WEIGHT

4.94" x 3.38" x 1.13"/.75 lbs

(125mm 86mm x 29mm)/.34 kg

#### AGENCY COMPLIANCE

24 Vac, +/-20%, 50/60 H FCC: Class A computing device, Subpart J of Part 15 UL: UL873 z

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