Programmable Unitary Controller

PUC Series

Product Data

Overview

Honeywell PUC Series PUC8445 programmable unitary controller supports Ethernet BACNet IP communication which offers fast response in data downloading and updating. The controller supports numerous network topologies allowing flexible networking and wiring. The controller is programmable and can be widely used to control different building equipment.

Features

- Support Ethernet BACNet IP communication
- Fully programmable to meet different HVAC applications
- Fast response in downloading and updating data
- Dual-Ethernet port allows it to support both star and daisy chain connection, as well as ring connection (optional RSTP switch required)
- Elegant design, light weight and easy to operate
- Color-coded removable terminal blocks enable convenient and fault free termination
- Built-in input/output ports allowing expansion module through RS-485 port
- Additional network security with advanced security encryption standard
- Embedded programmable tool under Niagara platform with user friendly interface
- CE, BTL, UL and RoHS certification

Technical Specification

Description

Table 1 Ordering Part Number

Part Number	UI	DI	AO	DO
PUC8445-PB1	8	4	4	5

Electrical

Nominal voltage: 24VAC; 50/60Hz

Power consumption: 5VA max. (controller only)

15VA max. (including controller and all input, output and communication channels)

Operating Environment

- **Operating temperature**
  0 ℃ - +50 ℃
- **Relative humidity:** 5%~95% Non-condensating
- **Protection rating:** IP20

LED Display

Controller's status can be displayed via LED

Table 3 STA LED status description

STA LED Stats	Controller Status
Off	No power; damaged LED; insufficient power supply; initial power-on; or boot loader damaged
Solid on	Start up power insufficient. Check power supply – this requires about 3.5 sec – occurs on power up, reset and refresh
Blinking mode 1 – continuously blinks on for 1 sec and off for 1 sec	Operating normally
Blinking mode 2 – continuously blinks on for 0.5 sec and off for 0.5 sec	Equipment alarm active; downloading configuration; loss of configuration
Blinking mode 3 – continuously blinks on for 0.25 sec and off for 0.25 sec	Equipment in firmware upgrading mode.

Table 4 485 LED status instructions

RS485 Communication status

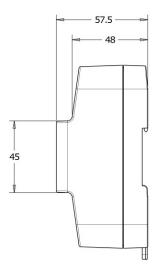| 485 LED Status	Communication Status
Solid off	Modbus equipment not installed or configuration document corrupted
Solid off, blink once every 2.5 seconds	Controller is operating normally with no Modbus communication.
Solid off, blink twice every 2.5 seconds	Controller is operating normally with Modbus communication.
Solid off, blink 3 times every 2.5 seconds	Controller is operating normally with transmission of document in progress.

Table 5 ETH LED status description

BACnet IP communication status. After the controller is powered on, LED will display one of the following status as described in Table 5.

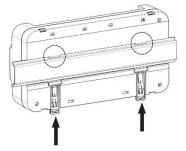| ETH LED Status	Communication Status
Solid ON	Equipment fault or system crushed
Solid on, blink once every 2.5 seconds	Bootloader running with no IP link
Solid on, blink twice every 2.5 seconds	Bootloader running with BACNet communication
Solid on, blink 3 times every 2.5 seconds	Bootloader running with BACNet communication and data tranmission
Solid Off	No power supply, equipment malfunction or system crushed
Solid off, blink once every 2.5 seconds	Controller is operating normally, without IP link
Solid off, blink twice every 2.5 seconds	Controller is operating normally with BACnet communication.
Solid off, blink 3 times every 2.5 seconds	Controller is operating normally with communication and data transmission.
Rapid blinking	Equipment fault or system crashed

Product Dimensions (unit: mm)
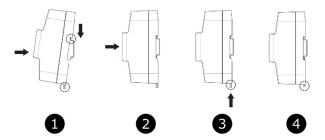

Product Installation

Installation notes

- Removable terminals make it easier for installation and maintenance;
- Controller must be installed in adequate space for wiring, maintenance and removal;
- Product supports DIN rail. DIN rail specification: EN50022 7.5 mm x 35 mm.

Instructions:

1. Pull both hooks at the base of the controller. Tilt the controller and fix the hooks on the top of the controller onto the guide rails;
2. Press the controller for it to fit the guide rail;
3. Push in both hooks at the base to fasten the controller;
4. The controller after the hooks are pushed in is as shown in Figure 4.

Honeywell Environmental and Combustion

Controls (Tianjin) Co., Ltd.

No. 158, Nanhai Road, Tianjin

Economic-Technological Development Area

Postal Code: 300457

Tel: +86-22-66287000

Fax: +86-22-25325214

HBT-Building-BCS-WEBs-Apr.2019 –EN01

Honeywell