



# PT-181 DDC Portable Training Unit

Building Automation HVAC Controls Energy Management DDC Programming

## Overview

The PT-181 is a portable training unit specifically designed for the DDC (Direct Digital Controls) industry. It is packaged with curriculum that is both embedded in the Trainer and contained in a written workbook resulting in a highly interactive student – trainer experience. The PT-181 incorporates some of the most popular DDC devices currently in use. The web-enabled DDC controller allows the student to access the Trainer using a standard web browser and HTML5 or JAVA WebStart®. All of the DDC devices are interfaced with the main controller via hardwired or network connections. BACnet IP (Ethernet) and MS/TP (RS485 serial) networks are utilized allowing the student to gain exposure to the most popular BAS networks in use. The PT-181s can be operated stand alone or easily networked together for use in a learning center



environment. Onboard temperature, CO<sub>2</sub>, humidity, and motion sensors are included. Graphical object oriented programming is presented using the Niagara N4 Framework®. The rugged, weatherproof case has built-in rollers and a retractable handle. The case can be permanently mounted to a tabletop using the integral mounting slots.

## Components

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DDC Controller, Web enabled, JACE 8000 series, with permanent BACnet, LON, Modbus licenses

34 point Remote Input/Output module with integral power supply

Programmable RTU thermostat with color touchscreen, BACnet MSTP, and web interface

Communicating FCU thermostat with analog output and BACnet MSTP interface

CO<sub>2</sub> / temperature room sensor with setpoint slider

Micro VFD with Modbus interface and 3 phase visual output indicators

90 degree stroke Actuator with 2-10 vdc position feedback

Status CT, Pilot relay with Auto/On override, Thermistor temp probe

Instrument panel with Input/Output devices and 24vac posts

0 to 20vdc Digital meter

5 port Ethernet switch 10/100mpbs

## Specifications

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Power Requirements	100w 120vac 60hz
Operating Temperature	55°F to 85°F
Storage Temperature	10°F to 110°F
Relative Humidity	10 to 95% RH non-condensing
Mounting	3/8" carriage bolts (2) optional
Shipping Weight	44 lbs (not including workbooks)
Dimensions	24"W x 21"H x 10"D (w/cover)



## Curriculum

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DDC/HVAC-101 Introduction to Direct Digital Controls – HVAC Focus (DDC Level 1)

Rev. 0119 Subject to change

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