

Project

Part Number

Ref.

Data Sheet : Catalog Page 50



Overview

Retrofit Kit (RK) replaces existing relay panel electronics. RK installation retains the original relays, line voltage wire, conduit, and enclosure reducing labor as well as material cost. Retrofit Kit 3 (RK3) is designed to convert existing relay panels which utilize 3-Wire relays. The kit includes a Controller Board, up to four 16-Relay Interface Boards (RIB), and ribbon cables. Each board is mounted on a single aluminum plate for installation.

Features

Compatible with :

- General Electric Panels (RR7)
- Horton Controls Panels (RR7)
- WattStopper Panels (RR7)
- Lithonia Lighting Panels (RR7)
- Triatek L2500 Panels (RR7)
- ILC Panels (2R7)

Available in 16, 32, 48, and 64 relay capacities

Retains relays, line voltage wire, conduit, and enclosure

BACnet MS/TP communication to BAS network

Sub network for Satellite and Capacitive Touch Stations (CTS)

Install in less than 4 hours

Available PT3 3-Wire Relay Interface Pigtail

General Specifications

Construction: PCB's mounted to 14ga aluminum plates

Dimensions:

Controller Board: 11.00"(279mm)H x 4.50"(113mm)W x 1.50"(38mm)D

RIB: 9.88"(251mm)H x 2.13"(113mm)W x 1.13"(29mm)D

20pin Ribbon Cable: 48"(1219mm)L

Weight: 2lbs(1kg)

Mounting: Panel back plate with self-tapping screws (not included)

Operating Environment: 32-125°F (0-50°C), 20-95%RH, non-condensing

Certifications

Electronics meet or exceed IEC Level 3

CEC Title 24

Warranty

Two (2) year limited manufacturer warranty from date of shipment (extended warranty optional).

Firmware Specifications (Controller Board)

Platform: Aperio Open Control Platform

Time Clock: Real-time clock with BACnet time sync

Schedule: BACnet Schedule, Monday – Sunday, Holidays, and Exceptions

Non-Volatile Memory: 16MB total, 2MB for trend data (15min trend requires 2K per day)

RAM: 2MB total, data stored in non-volatile memory upon power loss

Configuration: Tech Kit 2.0 (see data sheet for details)

Configuration Connection: Micro-B USB or Bluetooth Wireless

Low Voltage Specifications (Controller Board)

Power In: 24VAC +/-10%, 30VA, 50-60 Hz

Auxiliary Out: 24VAC, 800mA (devices with full wave rectified power supply only)

Universal Input (UI) and Satellite / Station Network Power Out: 24VDC, 200mA total

Universal Input: 24 two-wire inputs

Universal Input Software Configuration:

Digital Input (DI)

Analog Input (AI): 0-5VDC, 0-10VDC, or 4-20mA

Universal Input Wire Requirement / Maximum Length: 18AWG (Solid or Stranded) / 500'(152m)

BAS Network Specifications

Protocol: BACnet MS/TP

Baud Rate: DIP switch selectable 9.6K, 19.2K, 38.4K, 76.8K, or 115.2K

Device Profile: BACnet Advance Application Controller (AAC)

Address Range: 1 – 99 selectable with rotary dials

Unit Load: 1/8 unit load

Topology: RS-485, half duplex, daisy chain wiring

Wire Requirement / Maximum Length: CL3P, 22AWG, 2 conductor, shielded, low cap / 4000'(1216m)

Points: See *PIC Statement*

Satellite / Station Network Specifications

Compatible with CTS and Satellite devices. See data sheet for details.

RIB Specifications

RIB-A: 16 relay outputs each, drives relays 1-16 and 33-48

RIB-B: 16 relay outputs each, drives relays 17-32 and 49-64

Relay Output Rating: 24VDC ON pulse (Red), OFF pulse (Black)

Relay Output Compatibility: 1 RR7 or equal per, no external power / switches

Relay Output Connection: 5 pin header, keyed for PT3 3-Wire Relay Interface Pigtail connection

Wire Requirement / Maximum Length: 18AWG / 50'(15m)

Optional Equipment Specifications

PT3 3-Wire Relay Interface Pigtail:

Description: 18"(457mm)L, 18AWG, 3-wire

Pin/Color Code: 1/Unused, 2/Unused, 3/Black, 4/Red, 5/Blue

RIB Connection: Keyed 5pin plug-on connector

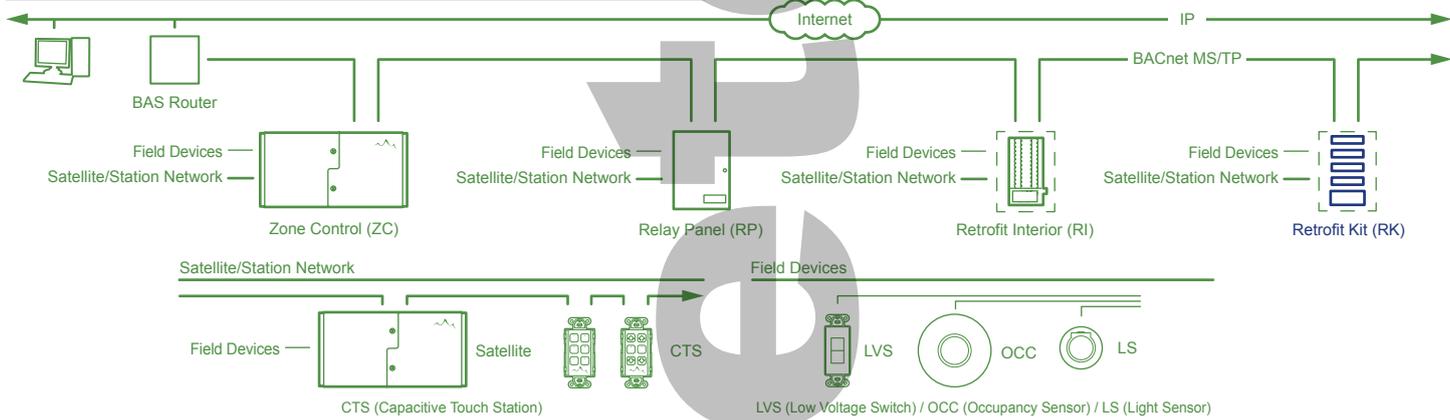
Relay Connection: 3 Insulation Displacement Connectors (IDC), 22-16AWG, UL Listed

Retrofit Kit 3

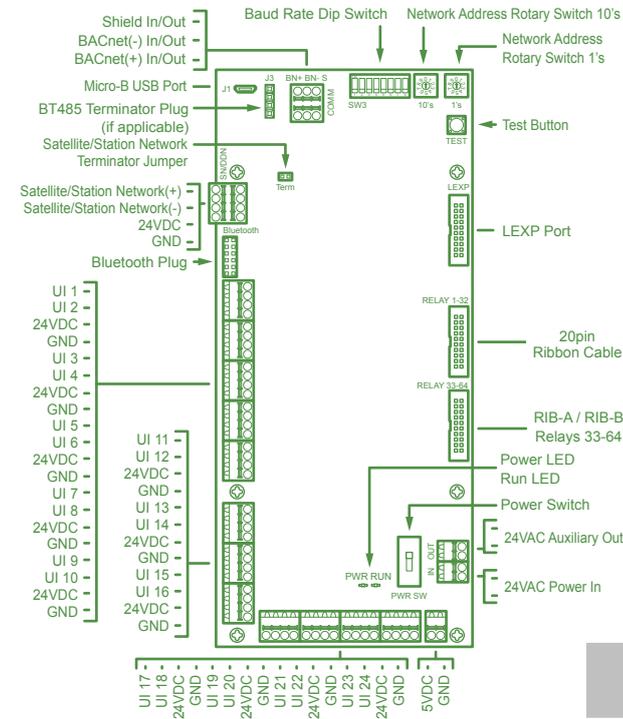
www.BRTint.com : 800-241-9173 Blue Ridge Technologies® © 2014 Blue Ridge Technologies International, LLC All Rights Reserved. RK3-DS-V14.05

Data Sheet : Catalog Page 51

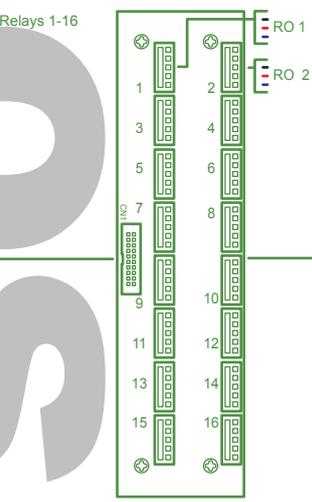
General Architecture



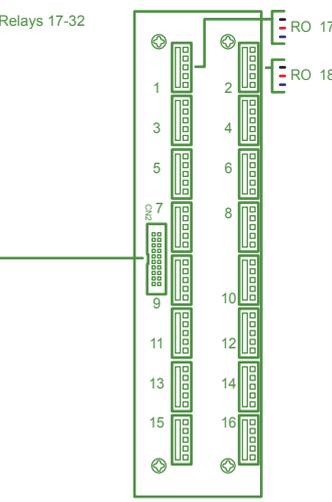
Controller Board Terminations



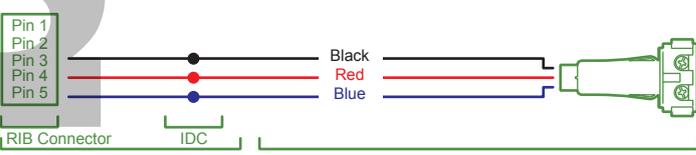
RIB-A Terminations



RIB-B Terminations



PT3 Terminations



UI (Universal Input) / GND (Ground) / RO (Relay Output) / IDC (Insulation Displacement Connector)

PT3

Original RR7 or 2R7 Relay / Wiring

Ordering Information

Part Number	Description
RK3SS16	Kit for 3-wire relays, RR7 or equal, 16 RO, 24 UI
RK3SS32	Kit for 3-wire relays, RR7 or equal, 32 RO, 24 UI
RK3SS48	Kit for 3-wire relays, RR7 or equal, 48 RO, 24 UI
RK3SS64	Kit for 3-wire relays, RR7 or equal, 64 RO, 24 UI
RKPT3	Pigtail for 3-Wire Relays, 18 Inches, Includes Insulation Displacement Connectors

RO (Relay Output) / UI (Universal Input)