BLUE RIDGE TECHNOLOGIES™
UNIFIED LIGHTING CONTROL

Retrofit Kit 1

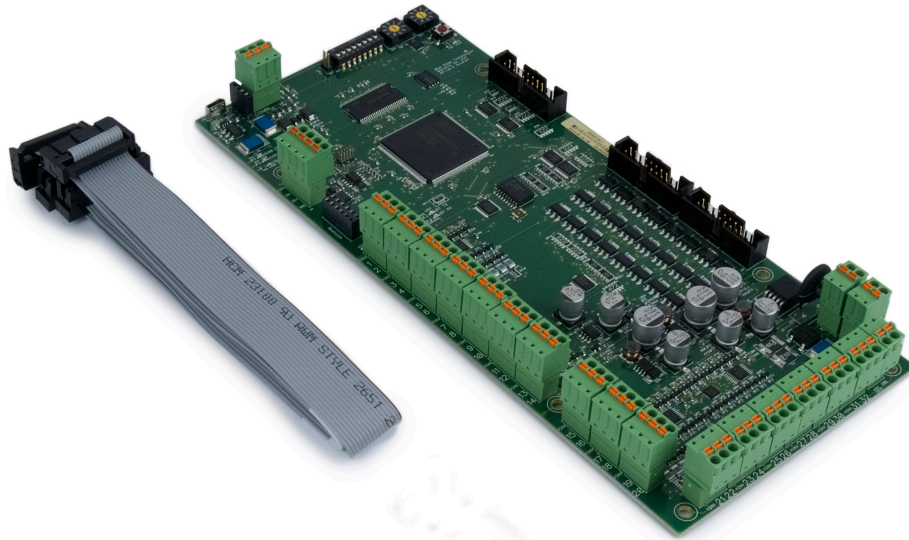| Project	Part Number	Ref.

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 1 (RK1) is a direct replacement for LMB, Lx5, and Lx6 Legacy Controllers in relay panels which utilize LTR style relays. The kit includes a Controller Board, two 16-20pin ribbon cables.

Features

Compatible with :
• Automated Logic LC Line Panels (LTR)
• Blue Ridge Technologies Panels (LTR)
• Kele AutoPhos Panels (LTR)
• Lumisys Panels (LTR)
• Triatek Panels (LTR)
Retains relays, line voltage wire, conduit, and enclosure
Control up to 64 relays
BACnet MS/TP communication to BAS network
CANbus network for Satellite and Capacitive Touch Stations (CTS)
Install in less than 4 hours

General Specifications

Dimensions:
  Controller Board: 9.70"(246mm)H x 4.25"(108mm)W x 1.13"(29mm)D
  Threaded Stand-offs: 5/16"(8mm) to provide clearance for Controller Board
  16-20pin Ribbon Cable: 12"(304mm)L
Weight: 10oz(283g)
Mounting: Mounts in position of original controller
Operating Environment: 32-125°F (0-50°C), 20-95%RH, non-condensing

Certifications

Maintains Panel UL Listing

Warranty

Five (5) 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)
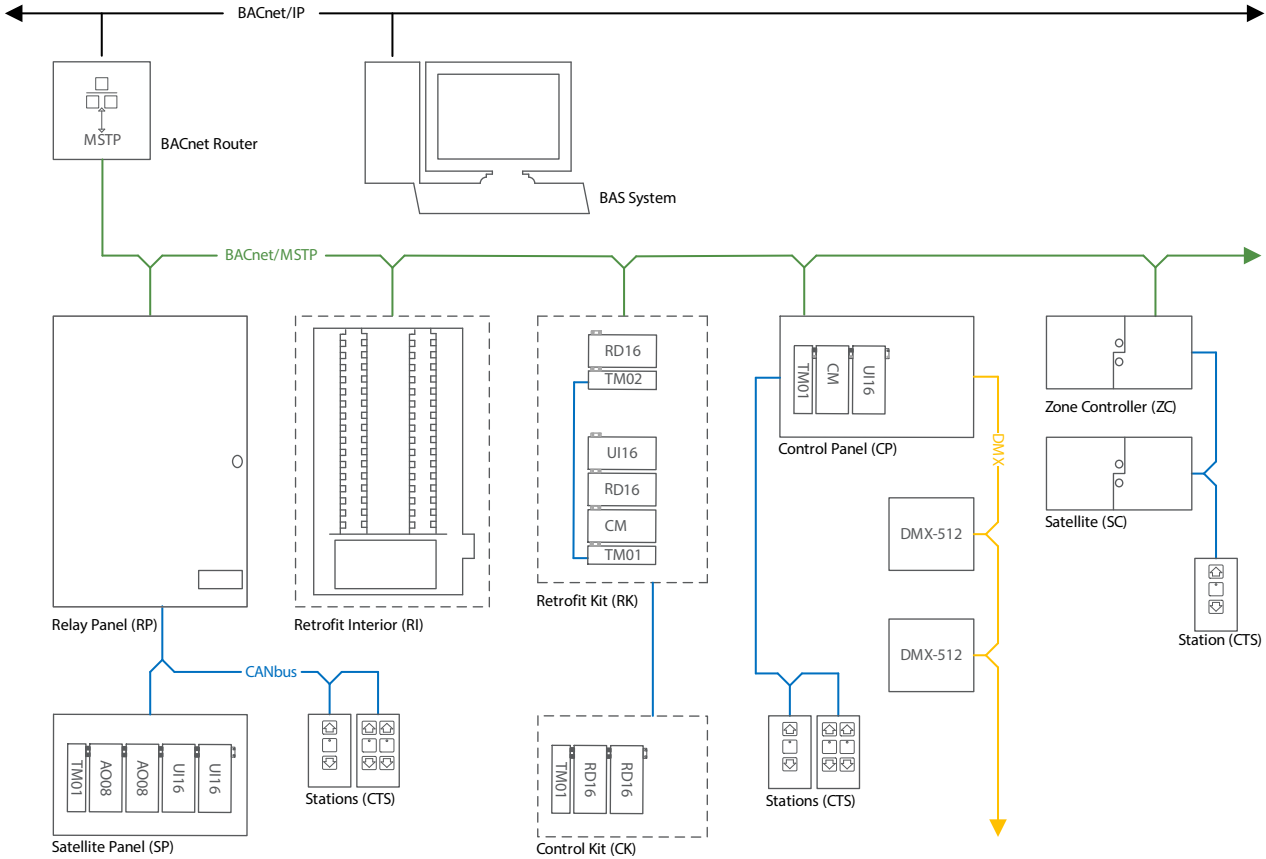Points: See *PIC Statement*

CANbus Specifications

Compatible with CTS and Satellite devices. See data sheet for details.
Not compatible with DDN devices

System Architecture

Ordering Information

Part Number	Description
RK1DS	Retrofit Kit Dimming Standard for Legacy Panels, Includes two 16 to 20 pin ribbon cable adapters. (Not compatible with DDN devices)
RK1DS-MX	Retrofit Kit Dimming Standard for Maxiom Panels Only (Not compatible with DDN devices)