Apprentice 3
Essentials Applications Guide
Rev 1 March 2024
AP3 Overview

Features

• Programmable lighting control panel (Made in the USA)
• Network up to 48 control points and up to 64 addresses
• Program panels with the 4-line LCD display or using our free Apprentice 3 software
• Remote mounted add-on modules are available to expand capabilities
• Time scheduling for 48 available timers
• Power available for up to 10 LightSync devices before a PSR4 is required
Panels Sizes & Relays

- Only 1 standard panel allowed per network which can have up to 32 relays
- Expansion panels can only have 4, 8, or 16 relays
- All AP3 panels are shipped fully populated with (AP3R-1) 1-pole relays
- Panels can have a maximum of 4 (AP3R-2) 2-pole relays per panel
- Relays are rated for 16 amps of lighting load and are plug-load compatible
- Maximum of 48 relays for the entire AP3 network

The below example is an expansion panel with 16 1-pole relays (AP3-16X)
Add-on Modules

Input Module (AP3IM)

- Supplies up to 4 low-voltage inputs
- Momentary or maintained with 2 or 3 wire configurations
- 1 AP3IM is included in each panel
- Max per panel: AP3-04: 1, AP3-08: 2, AP3-16: 4, AP3-24: 6, AP3-32: 8
- Perfect for the GMDS-W switch from Cooper

Dimming Modules (LSDM-R)

- Each module provides 4 independent channels of 0-10v dimming
- Sink up to 100mA per channel
- Remote mounted only
Add-on Modules (cont.)

**Occupancy Module (LSOSM-R)**

- 8 occupancy sensor inputs that provide up to 800mA across all inputs
- Conditional logic for each input which allows for “AND”/“OR” logic schemes
- Can be programmed to control any relays in any or all panels
- Remote mounted only

**Photo Sensors (LSPSC-IND-R and LSPSC-OUT-R)**

- Monitors light levels and allows the user to select 8 individual ON/OFF set points
- Indoor & outdoor versions available
- Includes photo sensor head
- Remote mounted only
Add-on Modules (cont.)

Power Supply Repeater (LSPSR4)

- Required when there are more than 10 LightSync devices
- Provides power and data for an additional 20 LightSync devices
- One input and 4 outputs for going up to 4 directions

BACnet Interface (AP3BAC-IP and AP3BAC-MSTP)

- Allows integration with your BACnet control system
- Basic control & status
- Panel mounted
Compatible Wall Stations

Digital Switch (LSG3)
- Digital switch station comes pre-configured as a non-dim switch or multi-zone dimmer.
- Scene and Scene/MZD stations are not compatible
- LED status lights

Digital Key Switch (LSKS)
- Momentary or maintained key switch for ON/OFF operation
- LED pilot light for current control status

Momentary Switch (GMDS)
- Momentary decorator switch from Cooper
- Tie into input module (AP3IM) via 2-wire connection

NOTE: Slide dimmers not recommended for AP3 applications
Example Riser

- All expansion panels, add-on modules, and digital switches daisy chain back to the standard panel with CAT-5
- Addressing of LightSync devices should follow the same hexadecimal system as LightLEEDer applications
- Standard panels and expansion panels are configured in the software and do not require a physical address

NOTE: Contact Chris Walker for AP3 AutoCAD Riser Builder
chris.walker@ilc-usa.com
Start-up

- Connect & Program AP3 panels and LightSync devices using a USB port on a laptop and our free Apprentice 3 Configuration Software.
- Please see our AP3 Essentials Start Up Guide for information on programming.
- **NOTE:** ILC does not provide Factory Start-up (FSU) or Factory Submittal Package (FSP) for AP3 applications. Reps are allowed to quote Rep Start-up (RSU) at their discretion.

Software download
1. Follow this link to the software downloads page [https://www.ilc-usa.com/resources/softwaredownloads](https://www.ilc-usa.com/resources/softwaredownloads)
2. Scroll down to the “Apprentice 3 Configuration Software (V1.02)” and select the file to download
If further assistance is needed, please call ILC Tech Support: 952-842-2588