



PRESIDOR™

Architectural Control Solutions Wall Stations Specifications

1. General

- 1.1. The Architectural Lighting Wall Stations shall be the Presidor™ PWS Series as manufactured by Johnson Systems Inc. or equivalent.
- 1.2. The PWS shall permit up to 70 color customizable DMX presets. These presets shall be recallable through scheduling via a real-time clock, dry contact trigger or manual activation.
- 1.3. The PWS shall operate via state-of-the-art capacitive touch technology. The use of electro/mechanical switches, buttons and sliders shall not be considered acceptable.
- 1.4. The PWS shall be available in white or black and contain integral automatic light sensors for both ambient light and proximity detect.
- 1.5. The PWS's are designed specifically for installation in standard single gang electrical back boxes. A series of custom color-matched adapter plates shall be available for retrofit application up to 6 gang.
- 1.6. The electrical connections for data and power of the system shall use daisy-chained Cat5/5e/6 cabling or existing Belden 9773 infrastructure allowing up to 15 PWS per room. PWS shall operate in a Main/Secondary configuration where only one Main per room/zone shall be allowed.
- 1.7. The lighting control input data shall be DMX512-A when used with an external DMX source for DMX snapshot recording.
- 1.8. The lighting control output data shall be:
 - 1.8.1.1. DMX512-A up to 512 channels on PWS Main Station.
 - 1.8.1.2. PMX (Presidor™ Multiplex 485) between Secondary stations and Secondary stations to their respective Main Station.
 - 1.8.1.3. UBD (Unipolar Bi-Directional) 4-wire between Secondary stations and Secondary stations to their respective Main station in legacy wire applications.
- 1.9. Presidor™ Room Linker Combiner (PRLC-4) shall permit direct room/zone control capable of expansion up to a maximum of 25 rooms/zones per DMX universe. Rooms/zones shall be linkable in any combination permitting universal room customization. Room linking hardware and/or software only allowing adjacent rooms to be linked shall not be considered acceptable.
- 1.10. PWS room/zone linking shall be achieved via:

1.10.1.1. A PWS-RDU-25R (Remote Display Unit) PWS wall station via color capacitive touch and customization. Up to 25 rooms/zones.

1.10.1.2. A set of 4 (four) programmable contact closure inputs per PRLC-4.

1.11. Each PWS wall station shall mount in a standard single gang electrical back box. Unique "Patent Protected" screw-less faceplate design shall provide an elegant appearance impervious to common dirt, dust and static discharge. Wall stations containing visible mounting screws or assembly hardware shall not be considered acceptable.

1.12. Each PWS shall operate with intuitive 'self-contained' programming permitting ease of configuration and set up. Wall stations requiring a PC or OS by others for set up and programming shall not be considered acceptable.

1.13. Each PWS wall station, when configured as a Main station, shall be capable of simple DMX snapshot recording of presets with an external DMX source. No PC shall be required during commissioning.

1.14. Optional Bluetooth connectivity shall permit remote programming, management and system support.

2. Mechanical

2.1. The wall station shall be designed specifically for installation in a standard single gang electrical back box. Color-matched adapter plates shall be available to permit installation in any gang box up to 6 gang in size.

2.2. Each wall station shall consist of a wall plate and a PWS sub-assembly only. Wall stations with more than two pieces or inserts requiring customization and multi-piece assembly and/or adjustment during installation shall not be considered acceptable.

2.3. The wall station faceplate subassembly and wall mounting plate shall be injection molded with a premium grade Poly Carbonite/ABS with a minimum flame-retardant rating of UL 94-V-0.

2.4. The wall station shall be available in white or black.

2.5. The wall station faceplate shall not contain any mounting screws and will provide an elegant appearance impervious to common dirt and dust. Wall stations containing visible mounting screws or assembly hardware shall not be considered acceptable.

2.6. The wall station shall be serviceable or replaceable with a standard 3/16" flathead screwdriver. The wall station subassembly shall automatically align with the wall-mounted plate when pressure "snapped" back into the guides.

3. Electrical

3.1. The electrical connection to each wall station shall be two wires for power and two twisted pairs for full-duplex RS485.

3.1.1. Integrators shall supply and certify Cat5, Cat5E, Cat6 or Belden 9773 or equivalent daisy-chain wiring between all wall stations and the Presidor™ Room Linker/Combiner (PRLC-4) in multi-room applications.

3.1.2. The first wall station in any room shall be configured via PCB dip switch as the room Main. All subsequent daisy-chained wall stations within the same room shall be configured as Secondary stations. Both the first and last wall stations on a room cable bus shall be terminated via PCB dip switch.

3.1.3. Multi-room applications using the Presidor™ Room Linker Combiner (PRLC-4) using Category cable or existing Belden 9773 can support a total cable bus length up to 300m (1000').

3.1.4. Premium terminal block "breakaway" style connectors will permit the use of standard DMX wiring.

3.2. System expansion of up to 25 rooms shall be achieved by simply cascading additional PRLC-4's together (4 rooms per PRLC-4).

3.3. PRLC-4 shall have opto-isolated DMX input ports supplying all wall station at 48VDC.

3.4. An optional PWS-RDU wall station will permit remote room linking via capacitance touch display. The RDU will connect directly to the PRLC-4 via Cat5/5e/6 cabling. This port shall also have full opto-isolation.

3.5. The wall station shall have an auxiliary contact input to permit external trigger from a building management system (BMS), fire alarm, occupancy sensor, photocell, etc. This input shall be configurable as momentary or maintained and assigned in one of five different modes of operation.

3.6. The Model #PWS-70P-DMX wall stations shall operate over a range of 5 to 48VDC when being used in single room applications. Model #PWS-RETRO wall stations shall operate over a range of 24-48VDC.

3.7. The wall station bus within each room shall use a proprietary PMX (Presidor™ Multiplex 485) protocol on Model #PWS-70P-DMX and proprietary UBD (Unipolar Bi-Directional) protocol on Model #PWS-20P-RETRO.

3.8. The wall stations shall comply with the International Energy Association's "1 Watt Initiative" with a total power consumption of less than 1 Watt. Wall station power consumption shall be less than ¼ Watt when in sleep or standby mode.

3.9. The wall stations shall be compatible with any DMX512-A source when being used as a simple snapshot device and playback controller.

3.10. The wall station printed circuit boards (PCB's) shall be FR4/G10 with a minimum UL 94V-0 Flame Class Rating.

4. Functionality

4.1. The wall stations shall facilitate the control of lighting and associated DMX receiving systems via a user-friendly capacitive touch screen interface.

4.2. Each PWS station shall be configurable as a "Main" or "Secondary". A maximum of one (1) Main PWS and fourteen (14) Secondary PWS will be permitted per room.

4.3. The Model #PWS-70P-DMX wall station shall be capable of storing up to a minimum of 70 DMX presets in 7 distinct high-resolution colors. Presets can be limited from a single preset to 70 or any combination between. "Fat finger" presets shall automatically apply for 4 presets or less. Model #PWS-20P-RETRO shall be capable of up to 20 presets.

4.4. Each PWS preset shall be individually selectable as either a dimmer or a non-dim and shall be capable of manual override or edit with password override.

4.5. The station shall be configurable for the number of DMX channels to output. Any combination of channels (1-512) can be assigned to any station. Any of the 512 channels can be assigned as either a dimmer, a non-dim or a task light. Assignment of DMX channels as task lights shall permit them to operate exclusively within a given preset as non-dims from multiple wall station locations.

4.5.1. Programmable settings for each station shall include:

- DMX channel configuration.

- DMX input selection of Priority or HTP (Highest Takes Priority).

- Aux input mode selection/configuration.

- Schedule of presets from the RTC (Real-Time Clock).

- Preset enable to select the number of desired presets and color.

- Day/Time setting of the RTC.

- Audio activation, selection of audio type (click or beep) and volume.

- Ambient light sensitivity selection for backlight auto dimming.

- Proximity sensitivity selection for automatic "wake-up".

- Clean Screen activation.

- Security Password selection.

- Synchronization of Main and Secondary stations per room/zone.

- Information page to display model, hardware version, software version, serial number, operating voltage, and station room number.

- Factory Default selection.

- Bluetooth enable/disable.

- Sleep (low power mode) activation.

- PWS lockout with PIN enable.

4.6. The wall station shall permit "stand-alone" recording of DMX presets with an external programmer, PC or DMX source.

4.7. The wall station shall display a "live" grid displaying all 512 DMX channels with levels being received from an external DMX source when in "live" or "snapshot" mode. Each active DMX channel shall be displayed as color intensity within the grid. Wall stations not providing visual confirmation of snapshot DMX data being received/recorded shall not be considered acceptable.

4.8. The wall station shall contain an active display of last preset executed (live output preset).

- 4.9. The wall station shall allow edits of pre-recorded presets or manual operation by means of digital sliders specific to each channel contained in the preset. The use of mechanical sliders shall not be considered acceptable.
- 4.10. The wall station shall permit alphanumeric preset labeling specific to each preset.
- 4.11. The station will contain Bluetooth connectivity for remote programming via a personal portable device running a PWS application.
- 4.12. The wall station shall contain dual integrated light pipes to permit ambient light sensing for automatic display dimming and proximity detection. Both shall be customizable for sensitivity by the operator.
- 4.13. The wall station shall contain a real-time clock for automatic preset trigger (on or off) via the scheduling. The scheduling shall be capable of triggering any preset, any minute of any day 24/7/365. The station will operate in a Last Action Takes Precedence (LTP) mode.
- 4.14. The wall station presets shall each be capable of fine high-resolution time fades from instant to 99 minutes with an active display of time-fade in progress with percentage readout. Preset fade-time selection from 0 seconds to 59 minutes and 59 seconds specific to individual presets.
- 4.15. Programmable sleep screen icon will permit the upload of JPG graphics for corporate display opportunities.
- 4.16. The wall station will be password protected for customized security. The password shall be at least 5 digits for enhanced security. It shall be possible for an authorized user to change a password easily by the touch screen display/interface.
- 4.17. The wall station shall display a small "lock" symbol in red for all protected screens. It shall be necessary to enter an authorized password to access protected screens or change programming.
- 4.18. The wall station shall display a clear warning of data change and overwrite when any programming changes are attempted. It shall be necessary to confirm changes before a programming overwrite will occur.
- 4.19. The wall station shall incorporate automatic low power "green" sleep mode. The mode will automatically enable after a user-selectable time.

Patent Protected

Specifications subject to change without notice.

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