



ASPIRE™ Specification Submittal

Project Name:	Prepared By:
Project Number:	Date:
Catalog Number:	Type:

PART 1 – GENERAL

1.01 SUMMARY

- A. Scope: Includes ASPIRE switches, dimmers, fan speed control and related devices as specified herein for the areas indicated on the drawings, specifications, and load schedules.
- B. Related Sections: Section 16570 (Dimming Controls).

1.02 REFERENCES

- A. UL 1472
- B. CSA
- C. NOM
- D. ANSI
- E. FCC Part 15, Class B

1.03 SYSTEM DESCRIPTION AND OPERATION

- A. Permanently installed, wallbox mounted switches, dimmers and accessories (remote units)
- B. Permanently installed, wallbox mounted fan-speed controls
- C. Permanently installed, wallbox mounted receptacles
- D. Permanently installed, wallbox mounted data, voice and cable jacks
- E. Screwless wallplates

1.04 SUBMITTALS

- A. Submit manufacturer's standard catalog data giving all product, application, wiring, and installation information on all basic components and wallplate kits. Provide test data and/or samples as required to demonstrate conformance with PART TWO of this specification.

1.05 QUALITY ASSURANCE

- A. Manufacturer shall have a minimum of 15 years continuous experience in manufacturing wallbox dimming products.
- B. Dimmers, switches and Fan-speed controls shall be UL listed, CSA and NOM approved specifically for each required load (i.e., tungsten, halogen, incandescent, electronic low voltage transformer, magnetic low voltage transformer, and fluorescent). Manufacturer shall provide file card or certificate upon request. Universal load-type dimmers shall not be acceptable.
- C. To assure compatibility, all dimming controls shall be obtained from a single source with complete responsibility over all lighting controls, including accessory products.

1.06 WARRANTY

- A. All devices shall be covered by a minimum two-year warranty.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Cooper Wiring Devices
- B. Unless otherwise noted, all basic components (dimmer, fan-speed control, switch, accessory units, receptacle, and communication outlets) shall be provided by one manufacturer.

2.02 EQUIPMENT

A. ASPIRE Lighting Controls

1. Performance

- a. Dimmers shall provide full-range, continuously variable control of light intensity.
- b. Wallbox mounted controls shall fit a decorator wallplate opening with a paddle switch.
- c. Controls shall have a two-tone color and/or finish (gloss or matte).
- d. Dimmer Controls shall provide both single-pole, 3-way control.
- e. Smart Dimmers shall provide multi-location control with up to 5 accessory dimmers.
- f. Matching Dimmer Accessories shall not require a neutral connection.
- g. Matching Dimmer Remote shall provide an amber LED On/Off indicator and green LED Brightness display.
- h. Controls shall provide air gap switch to totally disconnect power from load during OFF condition. Air gap switch shall be concealed during normal operation and shall be accessible without removing wallplate.
- i. Smart Dimmers shall provide an amber LED On/Off indicator that shall illuminate when the lights are OFF to facilitate easy access in the dark.
- j. Smart Dimmers shall provide a Dim/Bright bar that allows light level to be set by the user. A seven-step green LED indicator shall be integrated in the push pad to show relative load status. Push Pad with return-to-neutral design shall provide preset ON/OFF control independent of Dim/Bright bar.
- k. Smart Dimmers shall provide a default setting in which Push Pad preset ON switching returns lights to last selected level.
- l. Smart Dimmers shall provide switching from OFF to maximum brightness when Push Pad is pressed and held for two seconds.
- m. Smart Dimmers shall provide a delayed-off OFF of 10 seconds when Push Pad is pressed and held for two seconds when dimmer is in ON status.
- n. Smart Dimmers shall provide the ability to change the selected brightness level by pressing the Dim/Bright bar while the lights are OFF. LED display shall show selected level at a reduced brightness level.
- o. When ON, the slider shall change the light level/fan speed. When OFF, the slider shall set the preset the light level/fan speed the control will turn ON to.
- p. Paddle switch shall turn lights/fan ON to the preselected level, or OFF.
- q. Paddle switch and slider shall be captured internal to the control.
- r. 3-Way controls shall be capable of multi-location ON and mechanical air-gap OFF using standard 3-way and 4-way switches. Multi-location switches shall be ASPIRE decorator style with a gloss or matte finish (two-tone).
- s. Lighted Dimmer Controls shall be backlit with soft glow locator light.
- t. Within rated capacity, dimmers shall be available for direct control of incandescent, halogen, magnetic low voltage, electronic low voltage, and fluorescent. Matching fan-speed controls shall also be available.
- u. Controls shall be capable of operating at the rated capacity; this includes modified capacities for ganging configurations which require the removal of fins (tabs). Operation at rated capacity shall be possible across the full ambient temperature range, without shortening design lifetime.
- v. To ensure a precise color match between all plastic parts, color variation of any gloss finish control shall not exceed a delta E of 1, CIE L*a*b* color units, as defined in ASTM E 308-99.
- w. Dimmer shall provide smooth and continuous Square Law dimming curve, for the full slider travel.

- x. Controls shall meet the applicable requirements of UL 20 and UL 1472 referring to the inclusion of a visible, accessible air-gap off switch and the limited short circuit test.
 - y. Controls shall meet ANSI/IEEE Std. C62.41-1980, tested to withstand voltage surges of up to 6000V and current surges of up to 200A without damage.
 - z. Dimmers shall be designed to reduce interference with radio, audio, and video equipment.
 - aa. Controls shall incorporate power-failure memory. Should power be interrupted and subsequently returned, the lights or fans will come back on to the same levels set prior to the power interruption. Restoration to some other default level is not acceptable.
 - ab. Controls shall not be susceptible to damage or loss of memory due to static discharge.
 - ac. Controls shall operate in an ambient temperature range of 0°C (32°F) to 40°C (104°F).
 - ad. 3-Way controls shall wire using conventional 3-way and 4-way wire runs.
2. Incandescent & Magnetic Low Voltage (MLV) Transformer Dimmers
 - a. Provide unit operating as single-pole/3-way incandescent/magnetic low voltage dimmers in 600 Watts (9534) and 1000 Watts (9536) capacities.
 - b. Dimmer shall be capable of being wired as either a single-pole or 3-way device.
 3. Electronic (Solid State) Low Voltage (ELV) Transformer Dimmers
 - a. Provide ELV dimmers for direct control of up to 600 watts (9535) and 1000 watts (9537) of electronic low voltage loads.
 - b. Dimmer shall be capable of being wired as either a single-pole or 3-way device.
 - c. Dimmers shall contain circuitry specifically designed to control the input of electronic (solid state) low voltage transformers.
 - d. Dimmers shall be designed to withstand a short, per UL 1472 section 5.10, between load hot and either neutral or ground without damage to the dimmer.
 4. Fluorescent Dimming Ballast Dimmers
 - a. Provide 8A (9580) and 8A (9568) Fluorescent dimmers for direct control of fluorescent dimming ballasts up to the manufacturers specified rating.
 - b. Dimmers shall be designed to operate the following ballasts:
 - 1) Advance Mark 10® Powerline
 - 2) Advance Ambistar®
 - 3) Tu-Wire™ High Performance Dimming Ballasts (5% 2-wire)
 - b. Dimmer shall be capable of being wired as either a single-pole or 3-way device.
 5. ASPIRE Fan-Speed Controls:
 - a. Fan-speed controls shall be UL Listed, CSA and NOM approved, ASPIRE style.
 - b. Quiet fan-speed model (9544) shall provide three speed settings with paddle providing preset on and off.
 - c. Quiet fan-speed control shall provide single-pole/3-way control of one paddle fan (1.5A max.).
 - d. Fully-variable fan-speed model (9543) shall provide full-range fan control with paddle providing preset on and off
 - e. Fully-variable fan-speed control shall provide a single-pole/3-way control of one paddle fan (5A max.).
- B. ASPIRE Accessories
1. ASPIRE Switch Components
 - a. Switches shall provide on/off control of any 120/277 VAC load up to 15A or 20A.
 - b. Switches shall be UL Listed as general-use AC switches
 - c. Switches shall be available in single-pole (9501, 9515), 3-way (9503, 9516), double-pole (9502) and 4-way (9504) configurations.
 - d. Single-pole (9511), 3-way (9513) and 4-way (9514) switches will also be available in lighted versions.

2. ASPIRE Receptacle Components

- a. All receptacles shall be UL Listed, CSA and NOM approved.
- b. Receptacles shall be two-pole, three wire ground and rated for 15A or 20A at 125VAC. All receptacles shall be NEMA configuration type 5-15R or 5-20R.
- c. Receptacles shall be available in single (9507TR, 9508TR) and duplex (9505TR, 9510TR) models.
- d. Ground-fault interrupter receptacles (GFCI) shall be two-pole, three-wire ground and rated 15A (9566TR) or 20A (9569TR) at 125VAC Configuration shall be of the duplex type with rectangular NEMA WD-6 design. Receptacles shall have a 5 milliampere ground-fault trip level and a 0.025 sec. response time with "test" and "reset" buttons.
- e. All receptacles shall provide compliance with the 2008 NEC® section 406.11 specification that states all receptacles installed in dwelling units must be tamper resistant.

3. ASPIRE Telephone Jack and Cable TV Jack Components

- a. Contractor shall provide an appropriate barrier (partition) to isolate jack from high-voltage wiring when ganged with a dimmer, fan-speed control, switch, or receptacle. This complies with NEC Articles 800-3 and 820-13.
- b. Data jack (9557) shall be designed to mate with standard 8-conductor modular jacks and be compatible with 2, 4, 6, 8 conductor lines.
- c. Telephone jack (9556) shall be designed to mate with standard 4- or 6-conductor modular jacks, and be compatible with 2, 4, or 6 conductor lines. Telephone jacks shall meet FCC Part 68, paragraph F standards to ensure compatibility with U.S. telephone systems.
- d. Cable TV jacks (9555) shall be the coaxial type, designed for use with standard 75-Ohm cables.

C. ASPIRE Screwless Wallplates

1. Wallplates shall be manufactured from durable polycarbonate plastic with gloss finish, and shall attach to the basic components without using exposed hardware or screws.
2. Multigang wallplates shall provide a continuous, seamless cover for up to six-ganged (9521, 9522, 9523, 9524, 9525, 9526, 9527) decorator-style control and accessory combinations with no exposed hardware or screws.
3. Modular communication mid-size wallplates shall provide a seamless cover for up to six ports (9550, 9551, 9552, 9553, 9554) for use with jacks and adapters with no exposed hardware or screws.
4. Multigang wallplates shall include an adapter plate for proper device alignment and wallplate attachment.
5. Control, accessory and wallplate profiles shall not exceed 0.30 inches from wall surface to faceplate front surface.
6. To ensure a precise color match between all plastic parts, color variation of any gloss finish control or wallplate shall not exceed a delta E of 1, CIE L*a*b* color units, as defined in ASTM E 308-99.
7. Visible parts of dimmers, switches, standard receptacles, cable jacks or any wallplate shall exhibit ultraviolet stability when tested with multiple actinic light sources as defined in ASTM D4674-89.

2.03 SOURCE QUALITY CONTROL

- A. All controls shall be 100% functionally tested at the time of manufacture. Statistical sampling plan shall not be acceptable.

PART 3 — EXECUTION

3.01 INSTALLATION

- A. Contractor shall furnish all devices, labor and other services necessary for the proper installation of the devices as indicated on the drawings and specified herein.
- B. Contractor shall be responsible for de-rating lighting controls capacity in multi-gang installations.

- C. Devices shall be installed utilizing manufacturer's recommended application, wiring and installation instructions.
- D. Contractor shall provide frameless wallplate covers per specification 2.02 for all devices ganged in a common box. Contractor shall provide barriers within the box where required by code.

3.02 FIELD QUALITY CONTROL

- A. Cooper Wiring Devices technical hotline available 8:00AM–6:00PM E.S.T. Monday–Friday: 1-866-853-4293
- B. Supplemental information shall be provided on the Cooper Wiring Device website at www.cooperwiringdevices.com

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