Smart AL series dimmers

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

AAL06

ARD

Description

Single pole & 3-Way
300W Dimmable LED/CFL
600 INC, HAL, FLR, MLV, ELV
120V/AC

Design features

• Preset feature allows user to return to previous light setting when turning lights ON

• Master/Accessory units for multi-location control

• Amber LED at bottom of LED display indicates ON/OFF load status

• Seven step green LED display indicates selected light level – and reduces brightness when OFF (nightlight feature)

• Pressing and holding push pad for 2 seconds when dimmer is OFF brings light to full brightness without affecting preset levels

• Offers a 10 second delayed-OFF feature by pressing and holding push pad for 2 seconds when dimmer is ON

• Aesthetically pleasing soft-ON/fade-OFF that extends lamp life

• Neutral is required for installation of device

• Programmable rapid start feature ensures lamp start-up even at low dim levels

• Adjustable low-level trim setting for optimal lamp compatability

• Faceplate is removable to allow for color change

• Air-gap switch disconnects power from load, forcing an OFF condition

• Adjustable high-level trim setting for additional energy savings

• Compatible with most common dimmable lighting loads (phase-cut)

• Color change kits are available with packout of 3 different colors for increased flexibility and convenience

Table 1. Smart AL Dimmers, Wire Leads

Catalog No.	Description	Compatible Lamp Types	Rating Watt	Rating V/AC	Color Suffix
☐ AAL06-__	Smart dimmer master, AL series, single pole/multi-location with presets and LEDs. Neutral required.	Dimmable LED/CFL	300	120	C1, C2, C4, C5
		INC, HAL, FLR, MLV, ELV	600	120	C1, C2, C4, C5
☐ ARD-__	Accessory dimmer, multi-location, with preset and LEDs. Must be used with AAL06	__	__	120	A, B, BK, C1, C2, GY, LA, V, W
☐ AMC-__-BP	Master dimmer color change faceplate	__	__	__	A, B, BK, GY, LA, V, W
☐ ARC-__-BP	Accessory dimmer color change faceplate	__	__	__	A, B, BK, GY, LA, V, W

Compliances, specifications and availability are subject to change without notice.

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Applications

The AL series smart dimmer provides smooth, full-range digital dimming for incandescent, halogen, electronic low-voltage, magnetic low-voltage, dimmable LED/CFL, and fluorescent lighting. In addition, an accessory dimmer is included in the product series for multi-location control for up to 5 locations. This line offers a combined single pole/multi-location unit for nearly all lamp loads. All AL smart dimmers are compatible with any decorator, designer-style wallplates.

Table 2. Specifications

| Catalog No.	AAL06, ARD, AMC-BP, ARC-BP Series
Device Type	**Smart AL Dimmers**
Wiring Type	6" pre-stripped wire leads, #14 AWG
Testing & Code Compliance	• cULus Listed to UL1472, file no. E47967 • NOM Certified
Environmental Specifications	**Flammability:** Meets UL 94 requirements; V2 rated **Temperature Rating:** 0ºC to 40ºC (32°F to 104°F)
Electrical Specifications	**Rating:** 120V/AC 60 Hz **Light Intensity Control:** Full-range, continuously variable dimming **Dimming Performance:** Smooth and continuous Square Law Dimming curve Solid State Dimming **Radio Frequency Interference:** Designed to reduce interference with radio, audio and video equipment **Lamp Ratings:** 300W dimmable LED/CFL 600W incandescent, halogen, dimmable fluorescent, electronic low-voltage, magnetic low-voltage
Mechanical Specifications	**Wiring Types:** Single pole & multi-location **LED Indicators:** Load status indicator, light level & locator **Air-gap Switch:** Meets UL1472 for inclusion of visible, accessible air-gap off switch **Voltage Ratings:** Permanently marked on device

Table 3. Materials

Catalog No.	AAL06, ARD, AMC-BP, ARC-BP Series
Top Housing	Polycarbonate
Bottom Housing	Polycarbonate
Strap	Aluminum
Form Factor	Decorator
Finish	Gloss

Table 4. De-Rating Chart - 600W Models

Lamp Type	1-Gang	2-Gang	3-Gange +
LED/CFL	300W max.	300W max.	300W max.
INC, HAL, ELV	600W max.	550W max.	500W max.
MLV	600W max.	550W max.	500W max.
FLR	See Ballast Performance Data pages		

Table 5. Color Ordering Information

For ordering devices, include Catalog no. followed by the Color suffix: A (Almond), B (Brown), BK (Black), GY (Gray), LA (Light Almond), V (Ivory), W (White), C1 (Color Change Kit: A, W, V), C2 (Color Change Kit: LA, W, V), C4 (Color Change Kit: BK, W, V), C5 (Color Change Kit: BK, W, GY)

A	B	BK	GY	LA	V	W
(Almond)	(Brown)	(Black)	(Gray)	(Light Almond)	(Ivory)	(White)

A	W	V	LA	W	V	BK	W	V	BK	W	GY
C1 Color Kit A (Almond), W (White), V (Ivory)			**C2 Color Kit** LA (Light Almond), W (White), V (Ivory)			**C4 Color Kit** BK (Black), W (White), V (Ivory)			**C5 Color Kit** BK (Black), W (White), GY (Gray)		

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Product Dimensions
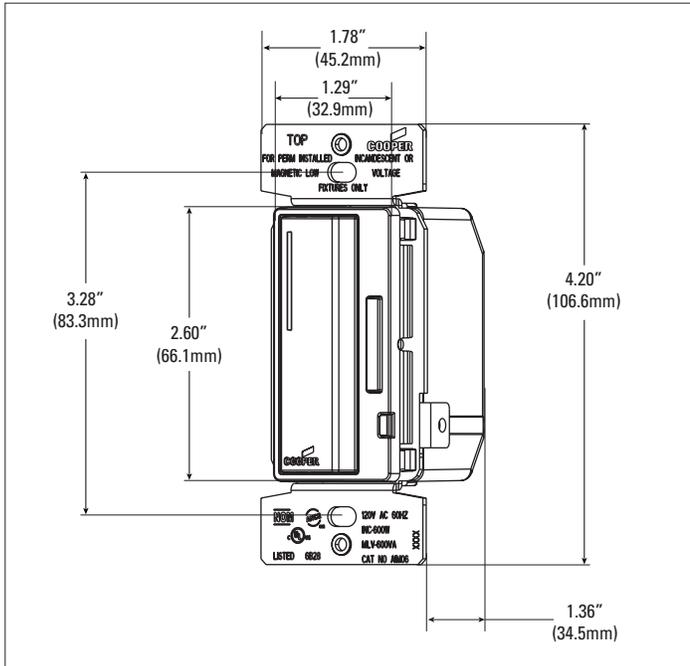

Figure 1. AAL06 Line Art with Dimensions
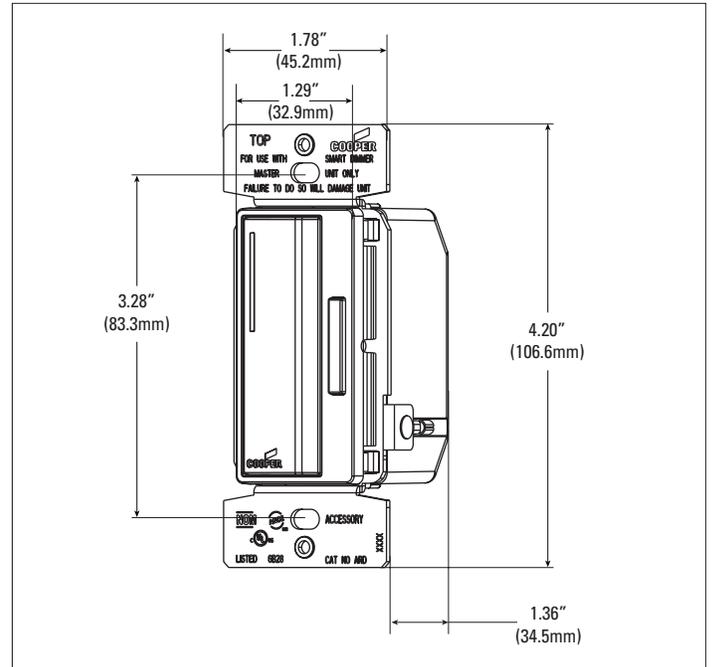
Figure 2. ARD Line Art with Dimensions

Wiring Diagrams

Switch Functions
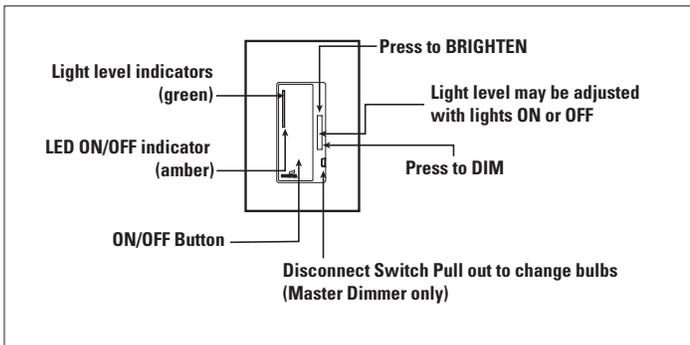
### Single Location Wiring Diagram
INC, HAL, LED/CFL, FLR, MLV, ELV
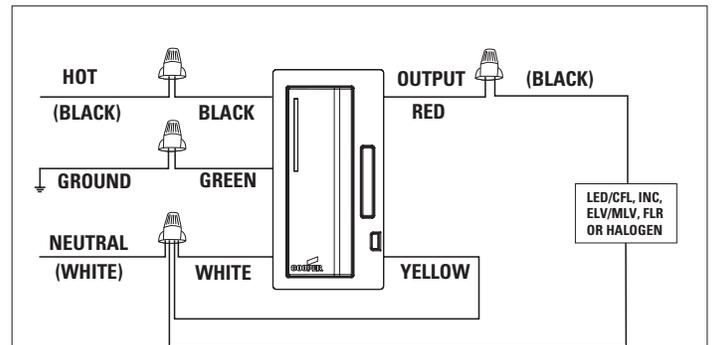
Two Location Installation Wiring Diagram
INC, HAL, LED/CFL, FLR, MLV, ELV
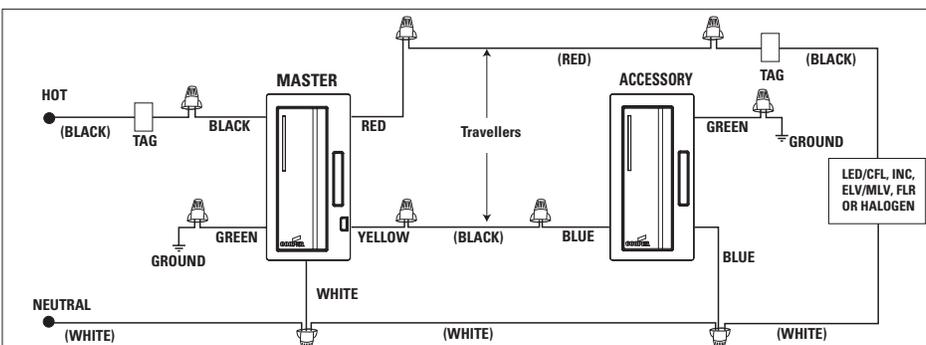
Project Name:	Prepared By:
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Wiring Diagrams

Three Location Installation Wiring Diagram
INC, HAL, LED/CFL, FLR, MLV, ELV
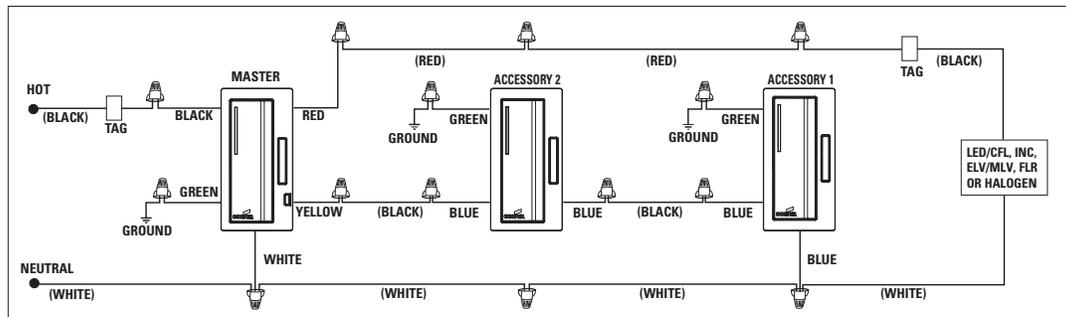
Certifications & Compliances

Catalog No.	cULus	NOM 426
AAL06	•	•
ARD	•	•
AMC-BP	•	•
ARC-BP	•	•

KEY: cULus cULus   NOM 426 NOM

Table 6. Listed Dimmable CFL Bulb List

Make	Catalog Number		Make	Catalog Number
Ecosmart	ES5M814DIM		Neptune	24514-ADIM
	ES5M10123			32016-ADIM
	ES5R214DIM50K		Sylvania	CF5EL/B10/C/DIM/827
	ES5CCDF052			CF5EL/A15/DIM/827
	ES5R315DIM			CF5EL/DECO/DIM
Feit	BPESL15T/DM			CF24EL/TWIST/827/DIM
	LBP13TC/DM			CF19EL/BR40/827/DIM
	BPESL23T/DIM			CF15EL/BR30/DIM/827
	ESL15R30/DM			CF14EL/TWIST/827/DIM
	BPESL15R30/DM			CF14EL/R20/827/DIM
GE	FLE15/2/DV/R30		TCP	40114
	FLE15HT3/2/DV/			40123
	FLE26/2/DV/R40			2R2014DIM
	FLE26HT3/2/DV/			2R3016DIM
Globe	CCFL R20			2R4019DIM
	CCFL VANITY			10123
	CCFL A-TYPE			8T03CL
	CCFL PAR20			8T05CL
Phillips	EL/ES Dim 20 Alto			8T08CL
	EL/A R30 DIM 16W			8TC05F
	EL/A R40 DIM 20W			8A08WH
	EL/A PAR38 DIM 20W			8TF05F
	EL/A R40 Dim 20W (150725)			2G2514DIM
	EL/mDT DIM 20W			
	EL/Dt dim 32W			
	EL/mdT Dim 15W			
	EL/A R30 DIM 16W (150417)			

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Catalog Number:	Type:

Table 7. Listed Dimmable LED Bulb List

Make	Catalog Number	Make	Catalog Number
Cooper Lighting	H455ICAT120D H455RICAT120D ML706827 ML706830 ML706835 ML706840 ML709827ICAT120D ML709830ICAT120D ML709835ICAT120D ML709840ICAT120D RL706830E26WBS RL706830WBS	**Philips**	EnduraLED 7A 2700 A19 Dimm (407956) EnduraLED 11W 2700K PAR30S Dimmable (408096) EnduraLED 11W 3000K PAR30S Dimmable (408104) EnduraLED 11W 4200K PAR30S Dimmable (408112) EnduraLED 11W 2700K PAR30L Dimmable (408120) EnduraLED 11W 3000K PAR30L Dimmable (408138) EnduraLED 11W 4200K PAR30S Dimmable (408146) EnduraLED 11W 4200K PAR30S Dimmable (410134) EnduraLED 11W 2700K PAR30L Dimmable (410142) EnduraLED 16W 2700K 120V PAR38 Dimmable (408153) EnduraLED 16W 3000K 120V PAR38 Dimmable (408161) EnduraLED 16W 4200K 120V PAR38 Dimmable (408179) EnduraLED 6W 3000K R20 Dimm (408203) 423400 (9290002192 on bulb) with 2+ lamps 423798 (9290002544 on bulb) 424382 (9290002268A on bulb) 425264 (9290002296A on bulb) 432195 (9290002596 on bulb) 433227 (9290002707 on bulb) 433235 (9290002709 on bulb)
Cree	BA19-08027OMF-12DE26-1U100 BA21-16050OMF-12DE26-1U110 BBR30-06527FLF LR6 LR6-DR650 LR6-DR1000 LE6 CR6 LR4E-15 LR4E-30	**Satco**	S873X (PAR20) S874X, S877X (PAR30) S875X (PAR 38)
		Solaris	LR30/10/30/750 LR30/25/30/750 LR30LN/10/30/850 LR30LN/25/30/850 LR38/10/30/1000 LR38/25/30/1000
Ecosmart (Home Depot)	ECO-575L ECS19WW120 ECS20WWFL120 ECS30WWFL120 ECS38WWFL120 ECS25WW120		
Feit	BPAG1100DM/5K/LED BPCEBR30/DM/LED BPCEG25/LED/3 BPCEPAR38/930/LED	**Sylvania**	LED15PAR30LN/DIM/830/FL40 LED15PAR30LN/DIM/830/NFL25 LED15PAR30LN/DIM/827/NFL25 LED15PAR30LN/DIM/827/FL40 LED18PAR38/DIM/830/NFL25 LED18PAR38/DIM/830/FL40 LED18PAR38/DIM/827/NFL25 LED18PAR38/DIM/827/FL40 LED8A/DIM/F/830 LED8A/DIM/F/827 LED8G25/DIM/F/830 LED8G25/DIM/827 LED8PAR20/DIM/830/NFL25 LED8PAR20/DIM/830/FL36 LEDPAR20/DIM/827/NFL25 LEDPAR20/DIM/827/FL36
G7 Power	G7BR301527D		
HitLights/Dura	HL-LED_5WWW_GU10		
Lighting Ever	200039 (not compatible with AAL06) 200055-WW-US 600026-WW-US		
Lighting Science	DFN20NWFL120 DFN38NWFL120 DFN30NWFL120 DFN19NW120 DFN25NWFL120	**Triangle**	55961
		Utilitech	0599032 0519042 0113539 0519037
		Uber Haus	15735007 15735004 15735005

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Table 8. Maximum Fluorescent Lamp Wattage

The following table lists the maximum number of Mark 10® or AmbiStar® ballasts that can be connected to a dimmer for single and multi-device installations in a wallbox.

Ballast Cast#	Lamp Type	# of Lamps	Lamp Watts	Max # of Ballasts per Dimmer for Multiganging		
				One Gang	Two Gang	Three Gange
REB-2S26	CFQ26W/G24q	1	26	20	18	16
REB-2S26	CFQ26W/G24q	2	26	10	9	8
REB-2S26	CFTR32W/GX24q	1	32	15	14	12
REB-2S26	CFTR42W/GX24q	1	42	11	10	9
REZ-1Q18	CFQ18W/G24q	1	18	26	23	21
REZ-1Q18	CFTR18W/GX24q	1	18	26	23	21
REZ-2Q18	CFQ18W/G24q	2	18	13	11	10
REZ-2Q18	CFTR18W/GX24q	2	18	13	11	10
REZ-2Q26	CFQ26W/G24q	2	26	9	8	8
REZ-2Q26	CFTR26W/GX24q	2	26	9	8	8
REZ-1T42	CFQ26W/G24q	1	26	18	16	14
REZ-1T42	CFTR26W/GX24q	1	26	18	16	14
REZ-1T42	CFTR32W/GX24q	1	32	14	13	12
REZ-1T42	CFTR42W/GX24q	1	42	11	10	9
REZ-2T42	CFTR32W/GX24q	2	32	7	6	6
REZ-2T42	CFTR42W/GX24q	2	42	5	5	4
REZ-2T42	CFTR57W/GX24q	1	57	8	7	7
REZ-2T42	CFTR70W/GX24q	1	70	7	6	5
IEZ-2S24	FT24W/2G11	2	24/27	9	8	8
IEZ-2S24	F24T5/HO	2	24	9	8	8
REZ-1TTS40	FT36W/2G11	1	36/39	14	13	12
REZ-1TTS40	FT40W/2G11/RS	1	40	14	13	12
REZ-2TTS40	FT36W/2G12	2	36/40	7	6	6
REZ-2TTS40	FT40W/2G11/RS	2	41	6	6	5
REZ-154	F54T5/HO	1	54	8	8	7
REZ-154	FC12T5/HO	1	55	9	8	7
REZ-154	FT55W/2G11	1	55	9	8	7
REZ-2S54	F54T5/HO	2	54	4	4	3
REZ-2S54	FC12T5/HO	2	55	4	4	4
REZ-2S54	FT55W/2G12	2	55	4	4	4
REZ-132	F17T8, FBO16T8	1	17	23	21	19
REZ-132	F25T8, FBO24T8	1	25	18	16	14
REZ-132	F32T8, FBO31T8	1	32	16	14	13
REZ-2S32	F17T8, FBO16T9	2	17	14	13	12
REZ-2S32	F25T8, FBO24T9	2	25	10	9	8
REZ-2S32	F32T8, FBO31T9	2	32	8	7	6
REZ-3S32	F17T8, FBO16T10	3	17	10	9	8
REZ-3S32	F25T8, FBO24T10	3	25	7	6	5
REZ-3S32	F32T8, FBO31T10	3	32	5	4	4

Lutron Tu-Wire® ballast. The total of all line currents for the ballasts connected to the dimmer should be less than: 4-70A for one gang; 4-30A for two gang and 3-90A for three gang installations.

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