Aspire RF smart dimmer system master

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

RF9540-NAW
Designer series

RF9540-NDW
Decorator series

Description

Single-pole, 3-way, 4-way
120V/AC, 60Hz
LED, CFL, incandescent, magnetic low-voltage, electronic low voltage, fluorescent, halogen

Design features for smart dimmer system master

- Adjustable low-level trim setting helps prevent flickering
- Adjustable high-level trim setting for additional energy savings
- Programmable rapid start feature ensures lamp start-up even at low dim levels
- Compatible with Aspire RF accessory dimmer (RF9542-Z) for wireless 3-way control, eliminating the need for traditional 3-way wiring or dedicated traveller wire
- Can be associated with up to 5 other devices
- Air-gap switch disconnects power from load forcing an OFF condition
- Neutral wire required for installation
- Decorator and designer series products offer the same functionality with two distinct styles
- Electro-mechanical push pad for ON/OFF operation with separate DIM/BRIGHT bar
- Seven step blue LED display alongside push pad indicates selected light level and reduces brightness when OFF (nightlight feature)
- Programmable rapid and delayed fading up to 4 minutes (default is 10 seconds)
- Adjustable ramp rate (up to 4 minutes)
- Child lockout feature
- Pressing and holding push pad for 2 seconds brings light to full brightness without affecting preset levels

Table 1. Aspire RF smart dimmer system master

Catalog No.	Description	Compatible Lamp Types	Watts	V/AC	Designer Color Suffix	Decorator Color Suffix
☐ RF9540-N_	RF master dimmer, all-load, single-pole/ multi-location with presets (neutral required)	Dimmable LED/CFL	300	120	AW, DS, SG, WS	DBK, DLA, DW
		INC, HAL, FLR, MLV, ELV	600	120		

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

Powering Business Worldwide

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

Applications for smart dimmer system master

Aspire RF dimmers replace regular switches to provide local and remote ON/OFF/DIM/BRIGHT control and are compatible with incandescent, magnetic low-voltage, electronic low-voltage, LED, CFL, halogen and fluorescent lighting loads. Aspire RF dimmers provide other programmable functions (scenes, events, association, child lockout, etc.) when used with Aspire RF or other Z-Wave® compliant controllers*. Each dimmer can be manually and remotely controlled by commands sent from an Aspire RF controller (RFTDCSG, RFHDCSG, RFTCP) or other Z-Wave compatible controllers or programs. Aspire RF dimmers utilize existing 120 V/AC 60Hz standard house wiring and fit into standard wallboxes. Neutral wire required for installation. No new wiring needed.*Note: some specific Aspire RF features may not be programmable

Table 2. Specifications

Catalog No.	Smart dimmer system master RF9540-N
Performance	Rating: 120V/AC, 60Hz Derating is required in multi-gang installations (See multi-unit installation chart listed below) Uses 300 Series Z-Wave Chip @ 40Kbs
Performance Consideration	An Aspire RF Z-Wave enabled device must be within 60 feet of another Z-Wave enabled device to participate in a Z-Wave wireless mesh network. Any one dimmer or switch can be associated with up to 5 devices (dimmers, switches, receptacles, or plug-in modules)
Installation & Programming	Please reference the Instruction Sheet included with the product for wiring installation. For programming of the device, see the Aspire RF User Manual, which is provided with either the handheld (RFHDCSG) or tabletop (RFTDCSG) controllers and are also accessible online at www.cooperwiringdevices.com/AspireRF
Testing & Code Compliance	cULus Listed 6B28. NOM Certified. Complies with FCC Part 15, Class B. Z-Wave Compliant Certified
Terminations	Dimmers have four 6" pre-stripped wire leads for line, load, ground and neutral
Material Characteristics	**Flammability:** Meets UL94 requirements; V2 rated **Temperature Rating:** 32°F to 104°F (0°C to 40°C)
Warranty	2-year limited product warranty

Table 3. Multi-Unit Installation Chart

Catalog No.	Load Type	1-Gang	2-Gang	3 or more Gangs
RF9540-N	INC/ELV/FLR/Halogen/MLV	600W/VA	600W/VA	600W/VA
	LED/CFL	300W	300W	300W

Table 4. Color Ordering Information

For ordering devices, include Catalog No. followed by the Color Suffix: AW (Alpine White), DS (Desert Sand), Silver Granite (SG), WS (White Satin), DBK (Decorator Black), DLA (Decorator Light Almond), DW (Decorator White).

Designer series color options:

Alpine White | Desert Sand | Silver Granite | White Satin

Decorator series color options:

Decorator Black | Decorator Light Almond | Decorator White

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

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

Table 5. Device Configuration Parameters

Parameter	Description	Value range
1	Delayed OFF time	*0 to 127 -128 to -1
2	Panic ON time	*0 to 127 -128 to -1
3	Panic OFF time	*0 to 127 -128 to -1
4	Basic set value	*0 to 127 -128 to -1
5	Power up state	1=OFF, 2=ON, 3=Last state
6	Panic mode enable	0=OFF, 1=ON
7	Dimmer ramp time	*0 to 127 -128 to -1
8	Kickstart enable/disable	0 disables, 1 enables
9	Reset max/min levels to factory default	0
11	Set minimum dimming level	*** 4 to 99
12	Set maximum dimming level	*** 4 to 99

*The configuration value is a signed single byte number. This value may represent a value with no units or may represent a value such as time. 0 to 127 (decimal) represents 0 to 127 seconds of time. -128 to -1 (negative decimal numbers) represents 128 to 255 seconds as calculated by this formula.
Config value = desired time in seconds (or desired value) -256
For an example of 172 seconds: config value = 172 - 256 = -84 (decimal) or 0xAC (hex)
**Normally this parameter will not be changed and should be left at factory default unless specific associated devices require a fixed value. It is included to ensure Z-Wave® certification requirements. If a value other than 0 is configured, then the device will send the configured value rather than the actual value of the dim level to associated devices. Changing this value from 0 will result in undesired operation in most cases.
***Please note that these values are not normally used except for possible technical support troubleshooting in the case of attempting to set the dimming level to determine solutions to lamp incompatibility issues.The minimum level must always be at least 13 below the maximum level.
The customer may change this level by following the instructions in the intruction sheet for the product. These instructions tell the customer to press and hold the ON/OFF button for a specified period of time, observe the LEDs, and take certain actions to be able to make these adjustments.

Table 6. Device Association Information

Association Groups for RF9540-N	
Group 1	5 nodes maximum
Group 2 - 254	0 nodes maximum
Group 255	1 node maximum

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

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

Product Dimensions

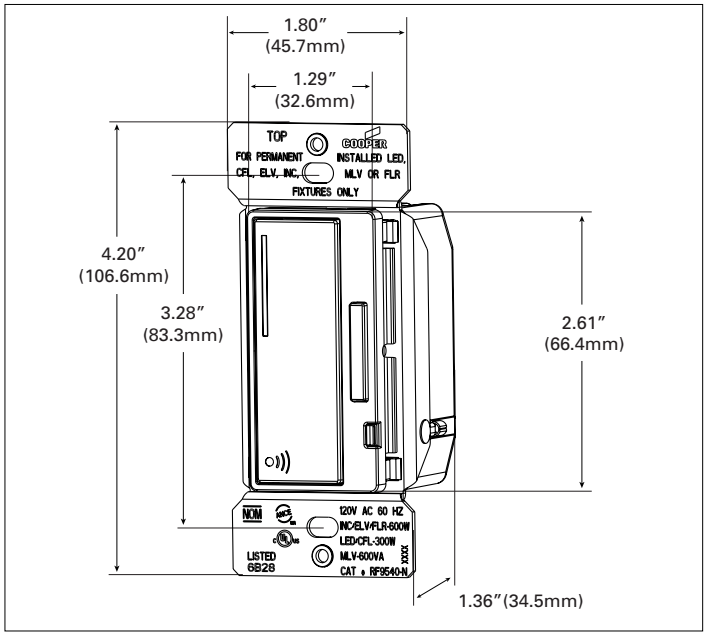
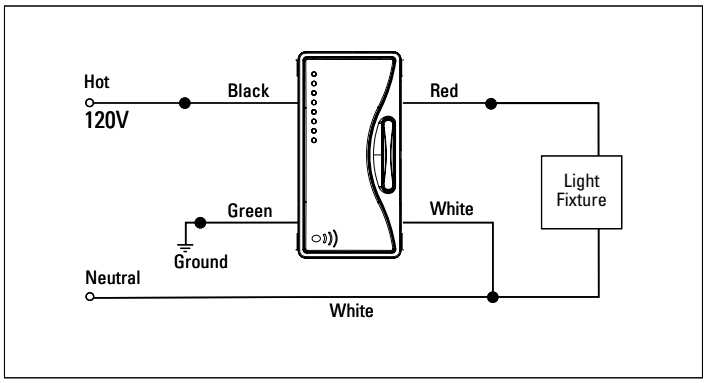
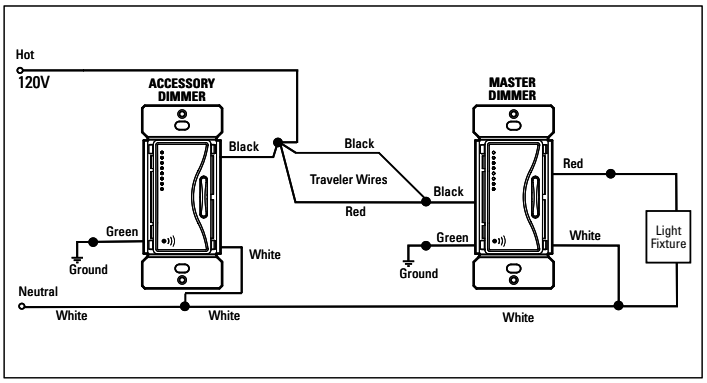


Figure 1. RF9540-N

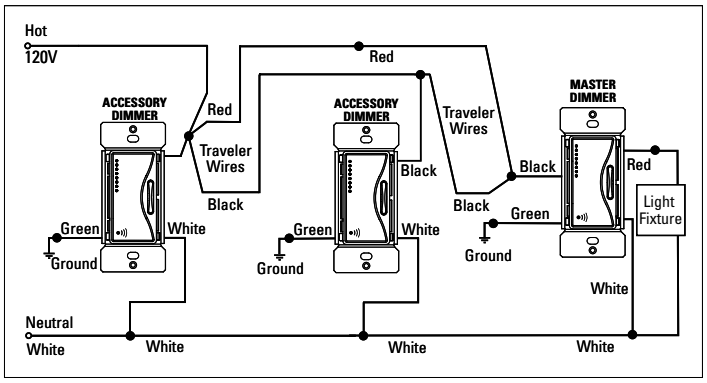
Single-Pole Location Wiring Diagram



3-Way Location Wiring Diagram



4-Way Location Wiring Diagram



Note: Accessory dimmer in diagram is RF9542-Z. For multi-location control, use RF smart dimmer masters direct wired to light along with RF accessory. The RF accessory does not require direct connections to the light (use RF association function).

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

Aspire RF smart dimmer system master

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

Certifications & Compliances

Catalog No.	cULus	NOM 426	FC
RF9540-N	•	•	•

KEY: cULus cULus NOM 426 NOM FC FCC

Related Products

Aspire RF controllers

RFHDCSG, RFTDCSG, RFWC5WS

Aspire RF products

RF9542-NDW, RF9501DW, RFTR9505-T

Aspire products

9566TRWS, 9544DS, 9521WS

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

Electrical Sector
203 Cooper Circle
Peachtree City, GA 30269
United States
Eaton.com
Cooperwiringdevices.com

Electrical Sector
Canada Operations
5925 McLaughlin Road
Mississauga, Ontario, L5R 1B8
Canada
EatonCanada.ca
Cooperwiringdevices.com

Electrical Sector
Mexico Operations
Carr. Tlalnepantla -
Cuautitlan Km 17.8 s/n
Col. Villa Jardin esq.
Cerrada 8 de Mayo
Cuautitlan, Mexico CP 54800
Mexico
Eaton.mx
Cooperwiringdevices.com

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Printed in USA
Publication No. E125-0118-14
February 2014

Powering Business Worldwide

CEDIA CUSTOM ELECTRONIC DESIGN & INSTALLATION ASSOCIATION Member

Z-wave.me Alliance