



LR21F600

Phase Angle Dimmer

Overview

The LR21F600 is a versatile 0 – 10 V controlled phase angle dimmer compatible with 120 VAC to 277 VAC power inputs and capable of handling up to 600 W at 120 VAC or 1300 W at 277 VAC. Designed for dimming incandescent and halogen lighting, it features selectable dimming modes (leading/trailing edge) and a user-configurable low-end dimming threshold. The dimmer automatically detects current sink or source 0 – 10 V controllers. Compliant with UL, C-UL, and RoHS standards and housed in a NEMA 1 enclosure, the LR21F600 is suitable for a range of applications but is not intended for use with magnetic low voltage (MLV) loads.

Physical Specification

Dimensions:	4.00" H x 4.00" W x 1.81" D (102 mm x 102 mm x 46 mm)
Mounting:	Flat Mount or 1/2-14 NPT Threaded Stem *See OEM Spec Sheet for mounting screw pattern.
Temperature Rating:	-30 °F to 122 °F (-34 °C to 50 °C)
Humidity Range:	5% to 95% (noncondensing)
Approvals:	UL Listed, UL924, C-UL, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Dim to Off:	Yes
Selectable Dimming Mode:	Yes
Selectable Low Dim Threshold:	Yes



Features

- » Wide Voltage Input Range compatible with 120 VAC to 277 VAC, offering flexibility for various power systems.
- » High Load Capacity supports up to 600 W at 120 VAC and 1300 W at 277 VAC, accommodating substantial lighting loads.
- » Selectable Dimming Mode allows a user to switch between leading and trailing edge dimming for compatibility with different lighting types, though a power cycle is needed for the change to take effect.
- » Automatic Controller Detection works with both current sink and current source 0 – 10 V controllers.
- » Adjustable Low Dim Threshold allows users to set a minimum dimming level, preventing lights from turning off completely and potentially eliminating flicker.

Electrical

Power Input Ratings:	10 mA @ 120 VAC to 277 VAC; 60 Hz
Max Lighting Load:	600 W @ 120 VAC 1300 W @ 277 VAC
Min Lighting Load:	1 W



Terminal Identification



1. Low Dim Threshold Button
2. Power Input Status LED
3. Switch

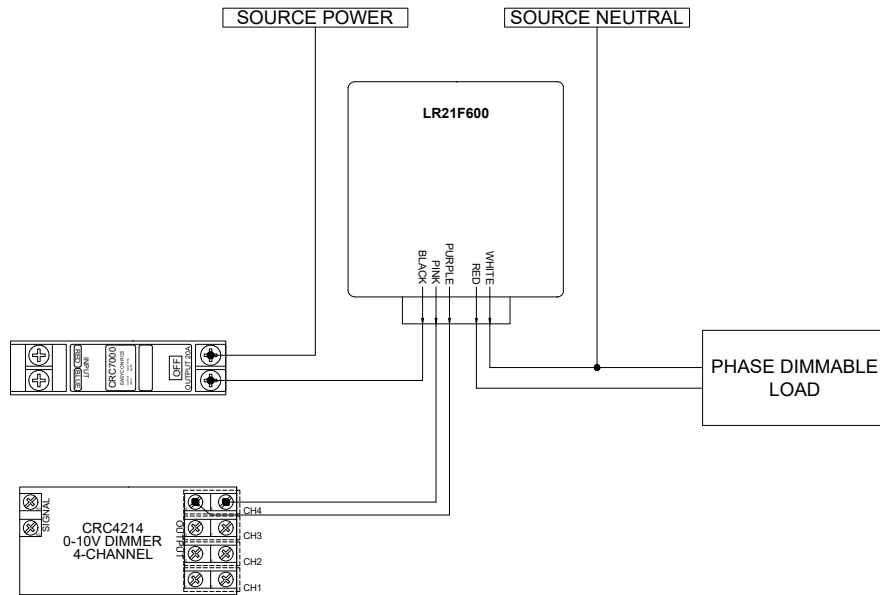
BLK	Line 120 VAC / 277 VAC
WHT	Neutral
RED	Load 120 VAC / 277 VAC
PNK	0 – 10 V (-)
VIO	0 – 10 V (+)

Notes

- » Switch on side of unit will change dimming between leading or trailing edge. Requires power cycle for change to take effect.
- » Violet and pink wires are used with both Current Sink 0 – 10 V controllers and Current Source 0 – 10 V controllers. The LR21F600 will automatically detect the controller type.
- » “Low Dim Threshold” set with push button during operation. Pressing and holding the button for one second will log the present 0 – 10 V value and turn off the load when 0 – 10 V signal drops below that value.
- » To reset “Low Dim Threshold”, short together or send 0 V to Violet and Pink. Then press and hold the button for 1 second.
- » The above method will set the “Low Dim Threshold” to the minimum value. However, factory default “Low Dim Threshold” is set slightly above this mark. Some lighting fixtures flicker at very low values.
- » For use with 60Hz only.
- » Not for use with Magnetic Low Voltage (MLV) loads.
- » It is best practice to run a separate Neutral for each phase dimmer to avoid common neutral interaction.
- » The 0 – 10 V wires (Violet and Pink) are Class 2 conductors.



Wiring Diagrams



R21F600 DETAIL

