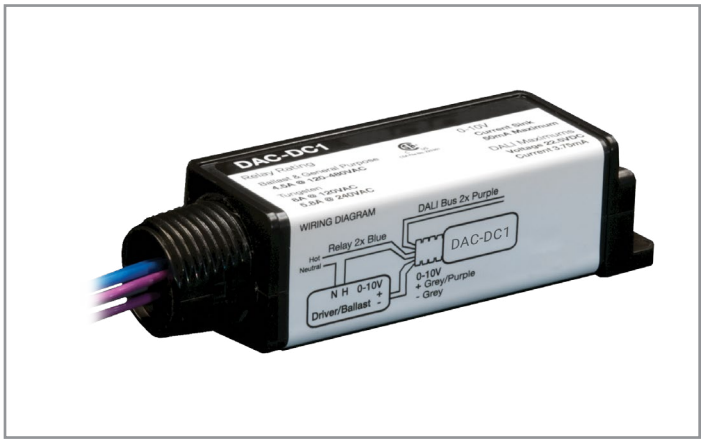
Project		Catalog #		Type	
Prepared by		Notes		Date	



Fifth Light

DAC-DC1 and DAC-DC2

Digital to Analog Converter

Typical Applications

Office • Education • Healthcare • Hospitality • Retail • Industrial • Manufacturing

Interactive Menu

Product Certification

Product Features

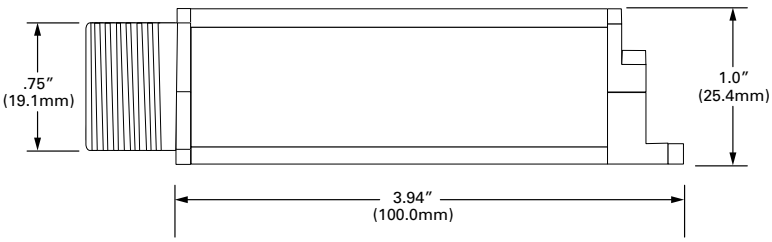
Connected Systems · powered by fifthlight · Two-Wire Bus · Task Tuning

Top Product Features

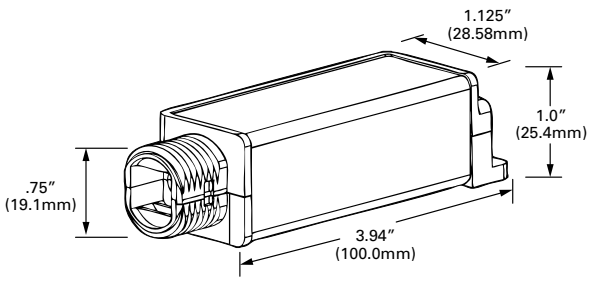
- Built-in latching relay and 0-10V current sinking interface
- All DAC's device settings configured through the software
- Automatic detection of Fifth Light two-wire local bus control loss of power for Emergency lighting control (UL924)
- Available for Class 1 or Class 2 wiring configurations
- Ultra-low profile form factor designed

Dimensional Details

Side View



Angled View



additional product diagrams

Order Information

Catalog Number

Catalog Number	Description
DAC-DC1	Digital to Analog Converter - wiring exits with line voltage wiring for Class 1 installations of the two wire communications bus.
DAC-DC2	Digital to Analog Converter - wiring exits with line voltage wiring for Class 2 installations of the two wire communications bus.

Product Specifications

Key Features

- Built-in latching relay and 0-10V current sinking interface used to integrate individual or a group of dimmable 0-10V ballasts/drivers
- All DAC's device settings (fade, scenes and groups) configured through the software, eliminating the need for manual adjustments
- Automatic detection of the Fifth Light two-wire communication bus power loss with default to closed and full bright (100% lighting)
- Available for Class 1 or Class 2 wiring configurations
- Ultra low profile form factor designed to fit inside driver/ballast compartment of most standard luminaires
- Easily mountable to fixture housing through standard knockout using supplied 90° elbow and mounting clip
- Powered by the Fifth Light two-wire communication bus. Line in and load out connection to driver/ballast, neutral & ground connection are not required.

Mechanical

Dimensions: 1"H x 3.94"W x 1.125"L (25.4mm x 100mm x 28.6mm)

Mounting:

- In fixture or junction box mounting only.
  Refer to Wiring Diagram section of spec sheet for proper wiring details
- Mounts to 3/4" (19.1mm) junction box knockout

Enivironment:

- **Temperature:** 32°F to 140°F (0°C to 60°C)
- **Relative Humidity:** 10% to 90% (non-condensing). For indoor use only.

Electrical

Relay Output:

- **Input Voltage:** 120-480 VAC +/- 10%
- **Maximum Ballast/General Load for operating temperature lower than 104F:** 4.5A @ 120-480 VAC
- **Maximum Ballast/General Load for operating temperature higher than 104F:** 3A @ 120-480VAC
- **Maximum Tungsten Load:** 8A @ 120 VAC, 5.8A @ 240 VAC
- **Input Frequency:** 50/60 Hz

Control Specification:

- **Communication Interface:** Fifth Light two-wire communication bus (topology, polarity free)
- **Current Draw:** 3.75mA
- **Analog Dimming Current Draw:** 0-10 VDC, 50mA max current sink only
  Note: Upon first power up allow 4-6 seconds before sending commands

Wiring:

- **Relay:** 18 AWG solid TFN non-polarized pair
- **0-10V Dimming:** 18 AWG solid TFN polarized pair
- **Communication:** 18 AWG stranded PTGE plenum rated non-polarized pair

Standards/Ratings

- cULus Listed - Energy Management Equipment (UL916)
- Manufactured in an ISO 9001 certified factory
- Meets ASHRAE Standard 90.1 requirements
- Meets IECC 2015 requirements
- Meets CEC Title 24 requirements

Warranty

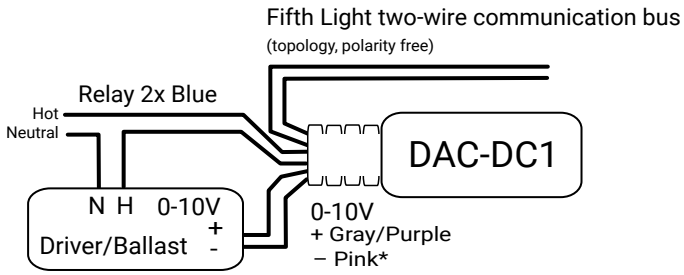
Five year warranty standard

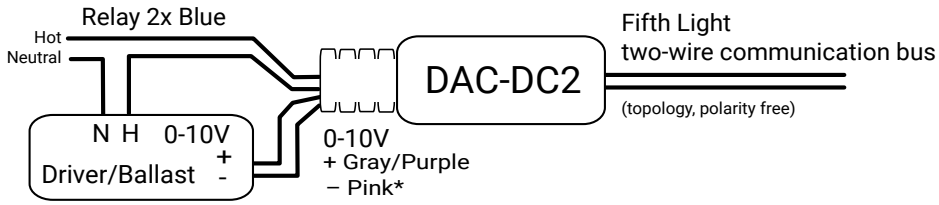
Overview

The Digital to Analog Converter (DAC) is a lighting control device used to control any standard 0-10V current sourcing dimmable ballast/driver. It allows dimming control by sending 0-10V dimming and on/off commands to the DAC via the Fifth Light two-wire communication bus.

Wiring Diagram

DAC-DC1 and DAC-DC12





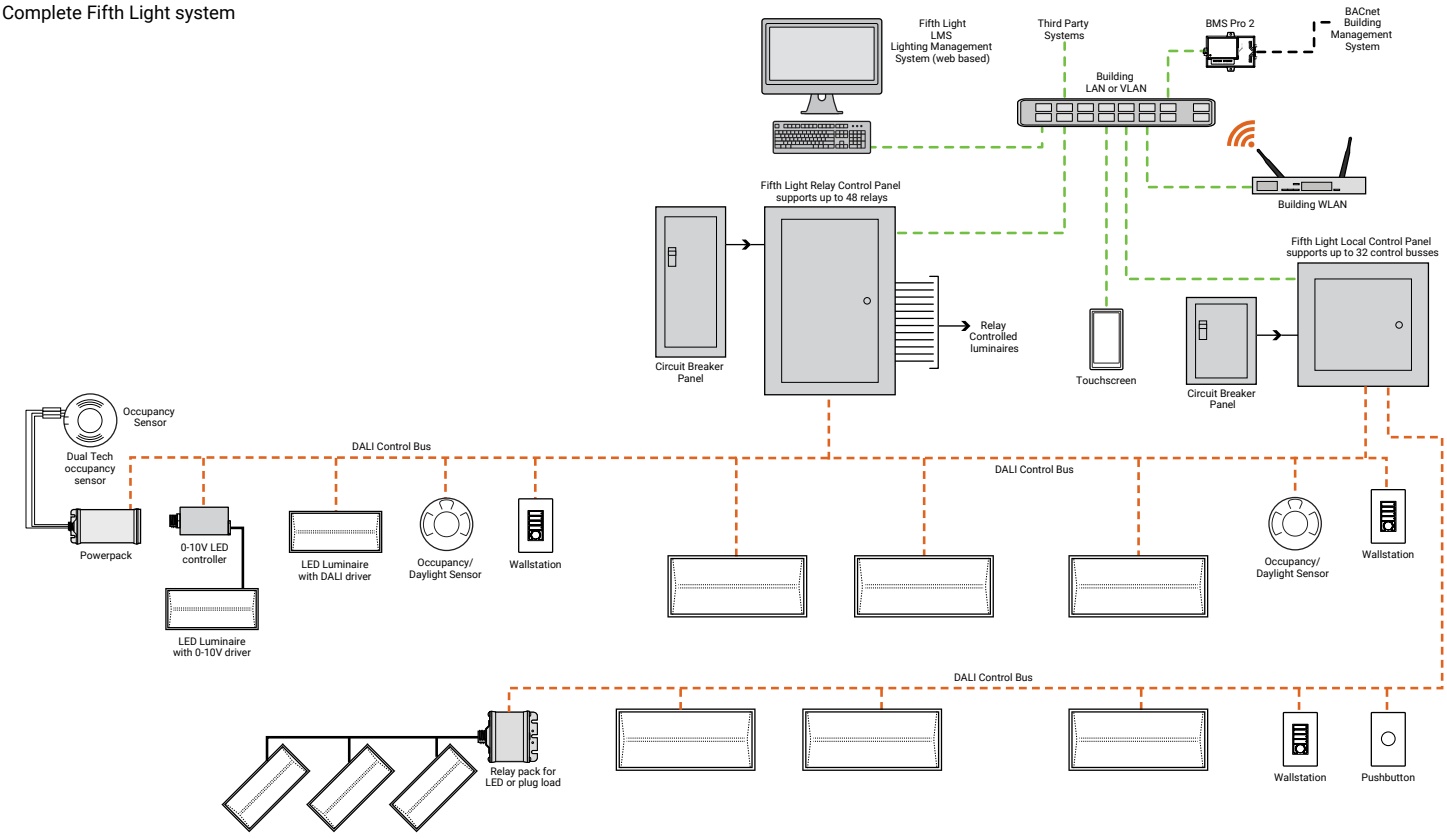
Note: Install in accordance with all applicable National and local electrical and building codes. Specifications subject to change without notice.

* Constructions built before Jan 2023 may have gray wire for 0-10 dimming control present. In these cases, the installer will label the gray building wire as a 0-10 dimming wire and connect to our product's pink 0-10V dimming control wire. Reference NFPA70 (2020 NEC), section 410.69

System Architecture

This diagram illustrates the main components of the Fifth Light system. The DALI wallstations, DALI multi-sensors, DALI field relay, DALI dimming module, DALI DAC and DALI dimmable drivers/ballasts communicate with the Lighting Control Panel over the DALI bus while the touchscreen communicates with the Central Manager via ethernet.

Complete Fifth Light system



Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com