

## D254.DIN Product Guide

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## Overview and General Concepts

The D254.DIN TRIAC (the D254.DIN) 2 channel light dimmer provides up to 1200W of dimming power, 600W per channel. The D254.DIN is a central component in Honeywell's INNCOM Integrated Room Automation System when used with S-Series, EVORA, Designer Series, or MODEVA switches.



Figure 1. D254.DIN

## Application

The D254.DIN can be used in many different lighting circuit topologies. Typically, the D254.DIN dims lighting loads when products such as the Glass Series or other low-voltage switches such as the S-and Designer-Series switches are configured for lighting control. In high-end applications, multiple D254.DINs can be easily daisy-chained and used in conjunction with other load bearing wall box dimmers such as the 400W dimmable S-Series S217 and EVORA. This allows the designer to create a seamless, multi-point lighting control application that meets nearly any interior design requirement.

The D254.DIN is specifically designed to meet applications where line-voltage wiring has been pulled to a centralized location, such as a load center. The D254.DIN can be integrated into the Room Automation System's low-voltage wiring using S5-bus or RF (Radio Frequency).

The D254.DIN provides up to 255 dimming levels. This provides fine control over specific light levels and light ramping speed in the guestroom to achieve the highest level of comfort and control.

## Features

- UL Listed dimmable loads up to 600W per channel
- Wired S5-bus communication for INNCOM Room Automation controls. Optional RF communication is also available.
- Daisy-chainable for multi-point, complex lighting applications
- Fully enclosed housing to protect electronic components
- Standard or DIN-rail mounting options with a compact mechanical design
- Air-gap switch for added safety
- FCC, CE Mark, and CQC listed for international applications

## Typical Wiring Applications

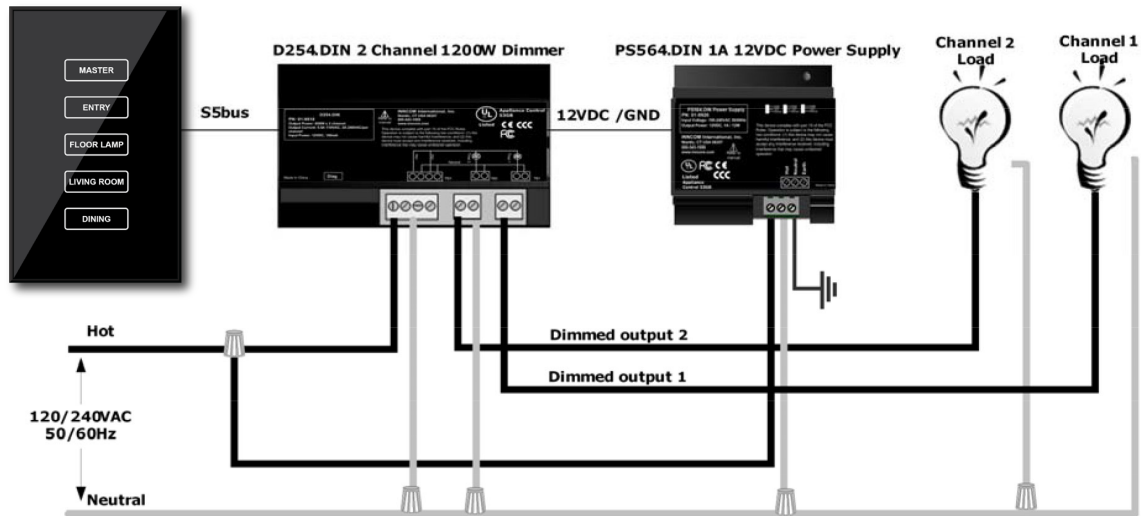


Figure 2. D254.DIN and MODEVA Glass Series Application

In this Room Automation configuration, the D254.DIN provides the load bearing capability for the MODEVA Glass Series switch. The 2- channel D254.DIN can be configured to provide a variety of light moods to meet the requirements of many specific applications.

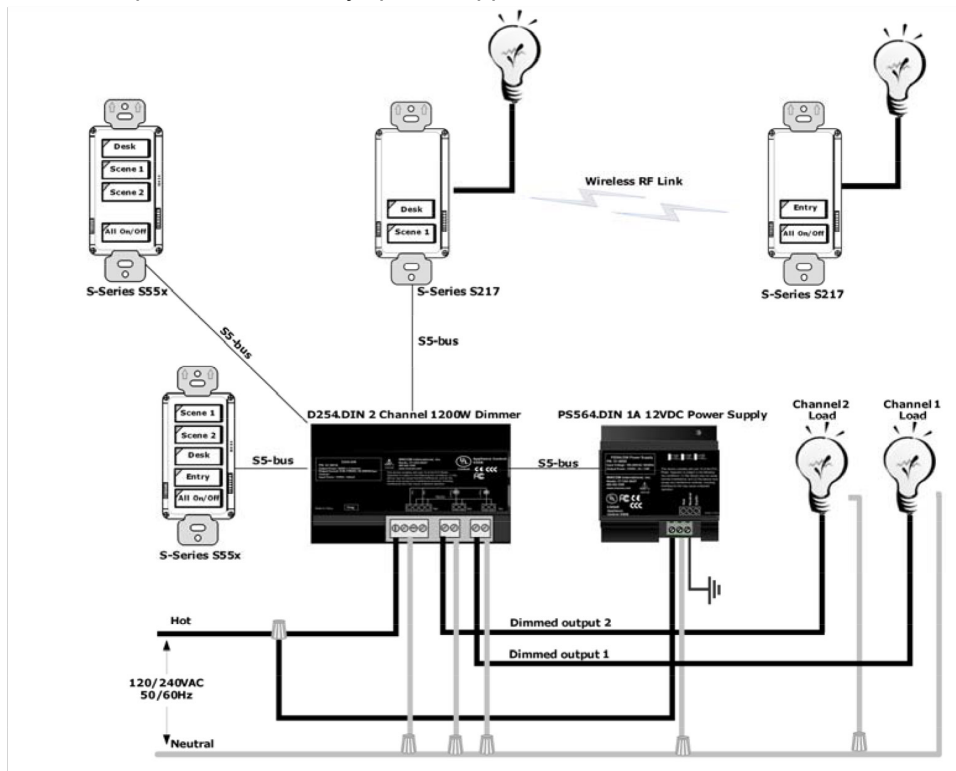


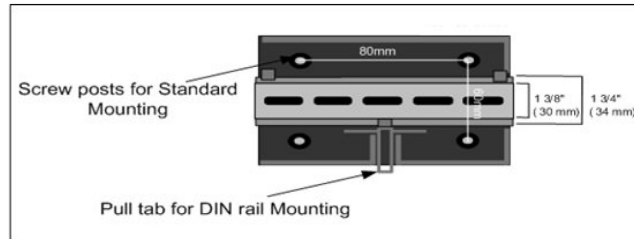
Figure 3. D254.DIN and EVORA or S-Series Application

In Figure 3, the D254.DIN provides the dimming capability for more complex lighting control. As shown, any EVORA or S-Series switch can dim either channel of the D254.DIN using RF and S5-bus network connections, as well as dimming its own load. This allows the designer to create many distinct lighting moods that can be controlled from anywhere within the guestroom. **Note:** The load bearing S-Series S217 products in this diagram require a phase and neutral to dim the local loads.

## Installation Requirements

The installer must be a trained, experienced service technician. When installing this product:

- 1) Read the instructions carefully. Failure to follow them could damage the product or cause hazardous conditions.



**Figure 4. D254.DIN mounting**

- 2) Check the ratings given in the product guide to make sure the product is suitable for your application.

## Mounting

The D254.DIN is provided with a DIN rail snap assembly and screw mounts in the bottom housing for multiple installation environments.

### ***DIN Rail Mounting:***

- 1) Mount the DIN rail (supplied separately) to the intended device (NEMA box, wall mount, etc.).
- 2) On the bottom housing, pull the plastic tab out and mount the D254.DIN on the DIN rail. Release the plastic tab. This locks the D254.DIN to the DIN rail mounting assembly.

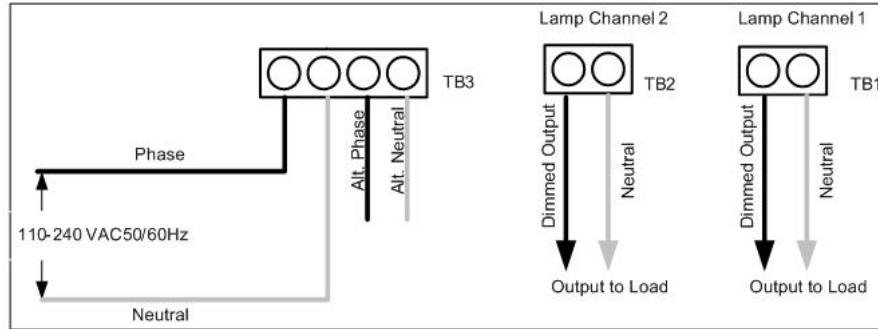
### ***Standard Mounting:***

- 1) Remove the top cover of the D254.DIN by pressing in the tabs at both ends of the unit to release it.
- 2) Remove the PCBA by pulling back on the 4 tabs locking the PCBA to the bottom housing.
- 3) Once the PCBA is removed, use the 4 countersunk mount posts in the base housing to screw the device to its intended application.
- 4) Place the PCBA back onto the bottom housing and confirm that it snaps into place.
- 5) Replace the top housing.

## Line Power Connections

### CAUTION

- The D254.DIN is intended for INDOOR USE ONLY.
- Separation of Class-1 and Class-2 Circuits must be observed.
- Use copper conductors ONLY.



**Figure 5. Line Voltage Connections**

- TB1, TB2, and TB3 screw terminals require a minimum 4.4 inch-pounds of torque to meet NEC requirements.
- For use in Pollution Degree 2 Environments Only.

**NOTE:** This product requires an air-gap switch such as a UL #20 switch with an identified off position between the line and load terminals. When using the D254.DIN.US with on-board relay, the red LED will blink to indicate the load is disconnected from the line power.

## Low Voltage Connections

The D254.DIN requires an external class-2 power supply such as the PS-564.DIN (P/N 01-9920). Earth GND must be connected to ensure proper communications function of the D254.DIN.

- Remove the top cover of the D254.DIN by pressing the tabs at both ends of the unit to release it.
- Connect S5-bus, 12VDC, and GND to either S5-bus 3-pin header as shown below.
- Connect the IR Eye5 cable to the IR5 header as shown below (where IR communications are necessary).
- Use the cable channels to route the low voltage wiring in and out of the unit enclosure.

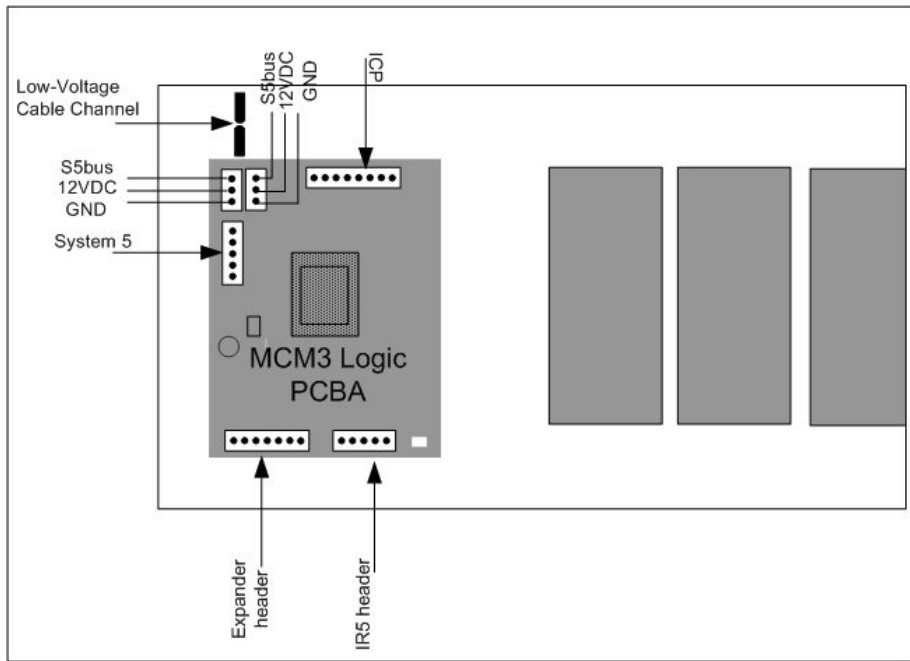


Figure 6. Low Voltage Connections

## Regulatory Approvals

The following table provides the safety and regulatory standards for the load ratings and types.

Listing	Specification
UL/CSA	220-240VAC 50/60Hz Input UL 508
CE-Mark	EN60669-1: 1999+A1 2002 EN60669-2-1: 2004
CQC	GB15092.1-2003

## Listed Load Ratings

Load Types	UL Listed US Ratings 100-120 VAC	UL Listed US Ratings 100-120 VAC	International Ratings CE Mark, CQC 100-240 VAC
Tungsten/Filament Lamp Load	60hz 5.5A	60hz 2.5A	50/60hz 2.5A
Inductive/Magnetic Transformer Load	60hz 5.5A	60hz 2.5A	50/60hz 2.5A
Resistive/Electronic Transformer Load	60hz 5.5A	60hz 2.5A	50/60hz 2.5A
Electronic Ballast for FL Load*	60hz 1.0A	60hz 1.0A	50/60hz 1.0A
Line Voltage LED Light Load	60hz 1.5A	60hz 1.5A	50/60hz 0.5A

The purpose of testing and approving these specialty light fixtures is to assure that ballast noise and start-up behavior can meet the application requirements.

## Environmental Specification

Specification	Condition	MIN	NOM	MAX	Units
Operating Temperature	100% load	0	25C°	40/104	C°/F°
Storage Temperature	-	-40	-	70/158	C°/F°
Relative Humidity	Non-Condensing	5	-	95%	%RH

## Technical Specification

Dimension	Measure
Class-2 Input/ Current Consumption	12VDC, 100mA
Parameter memory	Non-volatile

## Physical Specification

Dimension	Measure	Unit
Length	157.2/6.18	mm/in.
Height	49.6/1.95	mm/in.
Width	86.6/3.40	mm/in.

## Ordering Information

Model Number	Part Number	Description
D254.DIN.110.US	01-9918.110.US	The D254.DIN.110.US is UL and CE Mark listed for use in U.S. and International lighting applications (excluding China). For UL listed applications, the D254.DIN.110.US is rated for 110-120VAC lighting applications. To comply with UL 508, it requires UL #20 switches or X06.DIN.US in-line with the load to provide an air-gap switch. For CE Mark and international usage, the D254.DIN.110.US is rated for 100-240VAC lighting applications and does not require an air-gap switch. See <b>Table 2</b> for specific load ratings.
D254.DIN.US	01-9918.US	The D254.DIN.US is designed specifically to comply with UL 244A and UL 508 for use with 100-120VAC lighting application requiring a UL listing. The D254.DIN contains an on-board relay in-line with the load that meets the UL 508 air-gap switch requirement. This product is not CE Mark listed.
D254.DIN.CN	01-9918.CN	The D254.DIN.CN is used for the Chinese market only. This product has the same feature set as the D254.DIN.110.US but has a modified BOM construction that meets the specific requirements of the CQC listing certifications.

## Document Revision History

Revision	Date issued	Reason for change
v1.0	20-Mar-2009	First Release
v1.1	06-Jan-2010	Updated load ratings
v1.2	01-Jun-2011	Added technical specification table
v1.3	03-Jul-2012	Added note on D254 FET and corrected part number
v1.4	31-Aug-2012	Corrected figures 2 and 3
v2.0	3-May-2017	Update to meet Honeywell Branding Specifications

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