



TECHNICAL BULLETIN #14_09_4-1
Product: eDIN #1004 - Demultiplexer
Subject: 0-10V Dimming of Non-Isolated LED Drivers
Scope: Applies to all model revisions

## OVERVIEW

Use of the eDIN #1004 Demultiplexer with non-isolated LED fixture drivers is not recommended.

The eDIN #1004 16-channel Demultiplexer is designed to provide sinking control of LED fixture drivers that have a secondary Class 2 dimming circuit that is isolated from the mains power input. Connection of the Demultiplexer to non-isolated drivers, or drivers with Class 1 rated dimming circuits, will cause damage to the Demultiplexer.

**This damage is considered non-warranty for the purpose of repair and replacement.**

## DETAILS

Pathway has determined that one or more LED luminaire manufacturers are now providing non-isolated fixture drivers with non-Class 2, 0-10V volt dimming option. The lack of isolation between the mains power leads and the low voltage wiring in the drivers results in transient voltages on the low voltage control leads. The transient voltages may be as high as or higher than 120V.

In compliance with ANSI C82.11c Low Voltage Control Interfaces for Controllable Ballasts, the #1004 Demultiplexer will accept voltages between -15V and +15V with no damage. Application of voltages outside this range to any of the analog outputs may result in damage to all outputs on the Demultiplexer. Damage will result in reduced dimming range or loss of dimming capability altogether.

The damage caused by this misapplication of the product is readily determined when Demultiplexers are returned for repair. Repairs to Demultiplexers deemed to be damaged by connection to non-isolated LED fixture drivers will only be performed on a non-warranty basis, and all non-warranty repair fees and policies will apply.

## EXAMPLE

A popular choice for 0-10V control of dimmable LED fixtures is the Philips Xitanium product line. Care must be taken to choose the fully isolated version of these drivers. Isolated Xitanium drivers are typically identified by the letters "DO" at the end of the model number. Non-isolated Xitanium drivers are typically identified by the letters "DN" or "DL" at the end of the model number. It is the responsibility of the installer to determine the compatibility of the fixture driver and the #1004 Demultiplexer.

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