

Introduction

DP064 is a digital potentiometer to be used with Landmark inverters for LCD screen luminance control. It provides a 64-level luminance control using two push buttons.

DP064 is compatible with the following Landmark inverters

BI200AT, BI206C, BI208A
BI224B1
BI320A, BI330C

With these inverters, the DP064 digital potentiometer provides a 100:1 dimming ratio. That is, the LCD screen luminance can be adjusted from 100% down to about 1% of the full brightness.

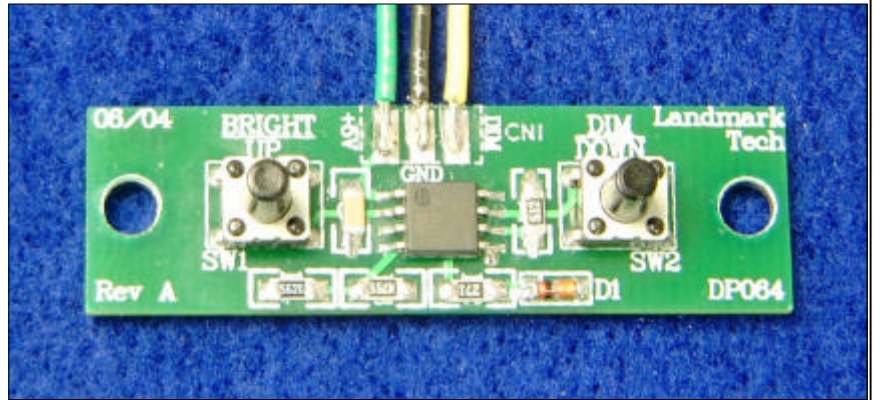


Fig. 1

Connecting to the Inverter

There are three wire connections on the DP064 digital potentiometer board:

Wire Color	Connect to
Green	Inverter +5V output
Black	Ground
Yellow	Inverter dimming input

Figure 2 below illustrates the connections to the input connector CN1 of the inverter. Please refer to individual

Landmark Inverter data sheets for the detailed pin assignment of the CN1 connector and the part number of the mating connector.

There are two push buttons (SW1 and SW2) on the DP064 board. Pushing SW1 moves the dimming steps up which increases the screen brightness. Pushing SW2 moves the steps down which reduces the screen brightness.

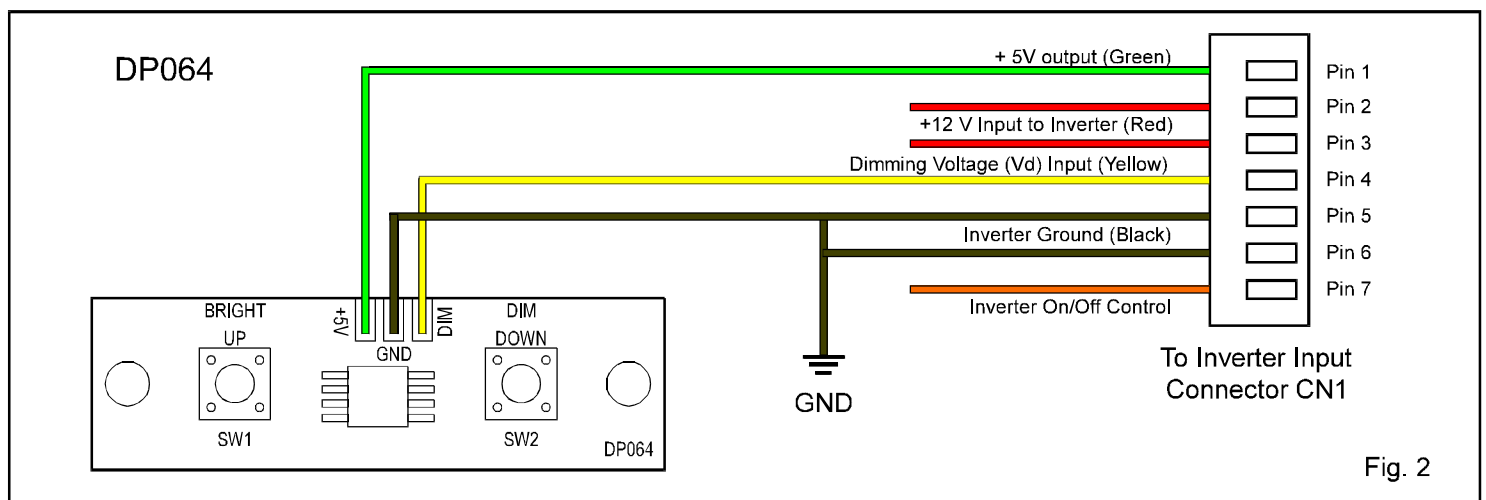


Fig. 2

Typical Characteristics

DP064 digital potentiometer provides 64 steps of LCD screen brightness control. The typical dimming characteristics when used with compatible Landmark inverters are shown in Figure 3. The vertical axis is the LCD screen luminance as the percent of its maximum level.

To cite an example, a Landmark LM152C LCD module has 1,800 nits full screen brightness. Using a DP064 to control the BI224B1 inverter that operates the LM152C module, the screen luminance will reach 1,800 nits (or 100%) when the DP064 is set at step 63. Using the push button SW2 to decrease the setting to step 31 dims the screen luminance to about 900 nits (or 50%). Finally at step 0, the screen luminance is adjusted down to slightly less than 18 nits (or 1%).

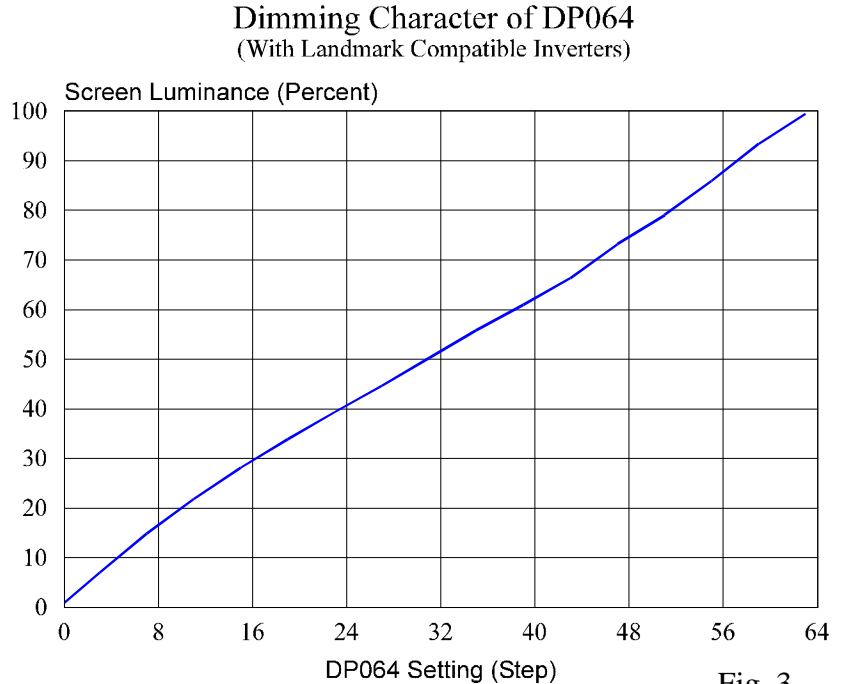


Fig. 3

Mechanical Dimensions

The mechanical dimensions of the DP064 digital potentiometer is shown in Figure 4 below.

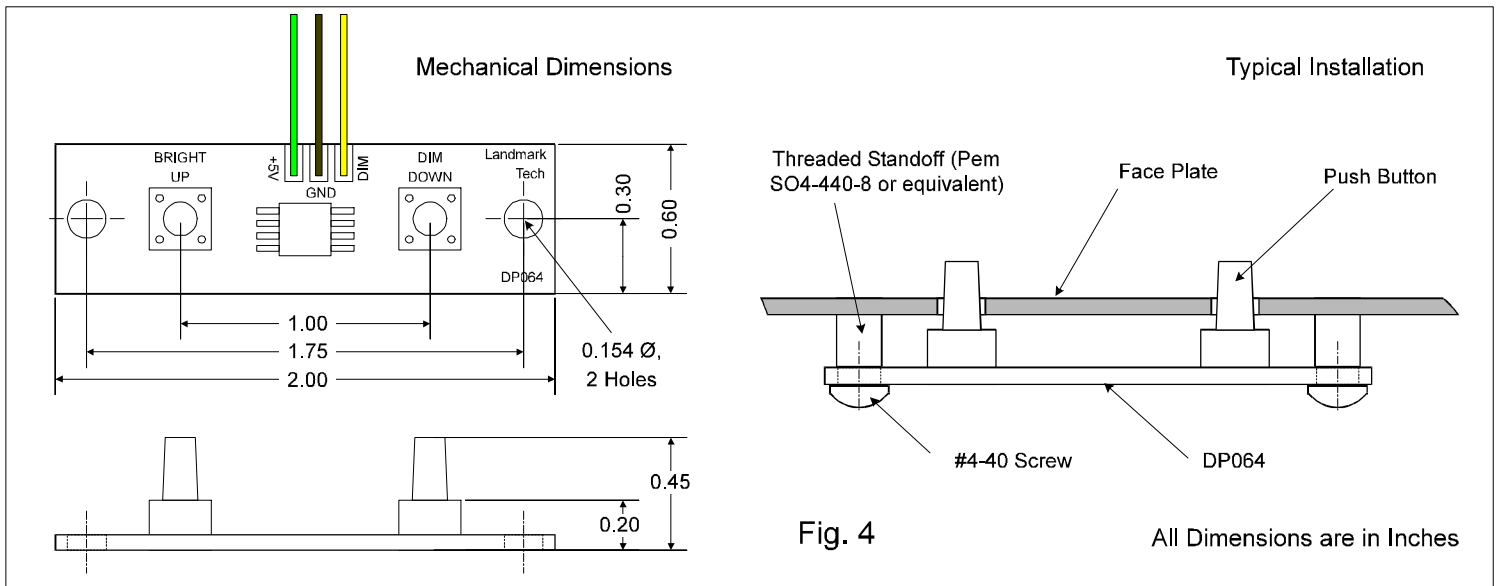


Fig. 4

All Dimensions are in Inches

Accessories

Two connector assemblies are available to provide an easy connection between the DP064 and the Landmark Inverter used to drive the VHB backlight. Please select from the table for the correct part number. The detailed specifications are on the next page.

Part Number	For Inverters
CA105	BI206C, BI208A
CA107	BI200AT, BI224B1 BI320A, BI330C



Fig. 5

Pin Assignments and Wire Colors

Pin #	Wire Color	To Inverter CN1
1	Green	+5V output
2	Red	+12V input
3	Yellow	Dimming control
4	Black	Ground
5	Orange	On/Off control

CA105

Pin #	Wire Color	To Inverter CN1
1	Green	+5V output
2.	Red	+12V input
3.	Red	+12V input
4.	Yellow	Dimming control
5.	Black	Ground
6.	Black	Ground
7.	Orange	On/Off control

CA107

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