

A LS7631/LS7632 WALL DIMMER WITH A NEON LOCATOR BULB

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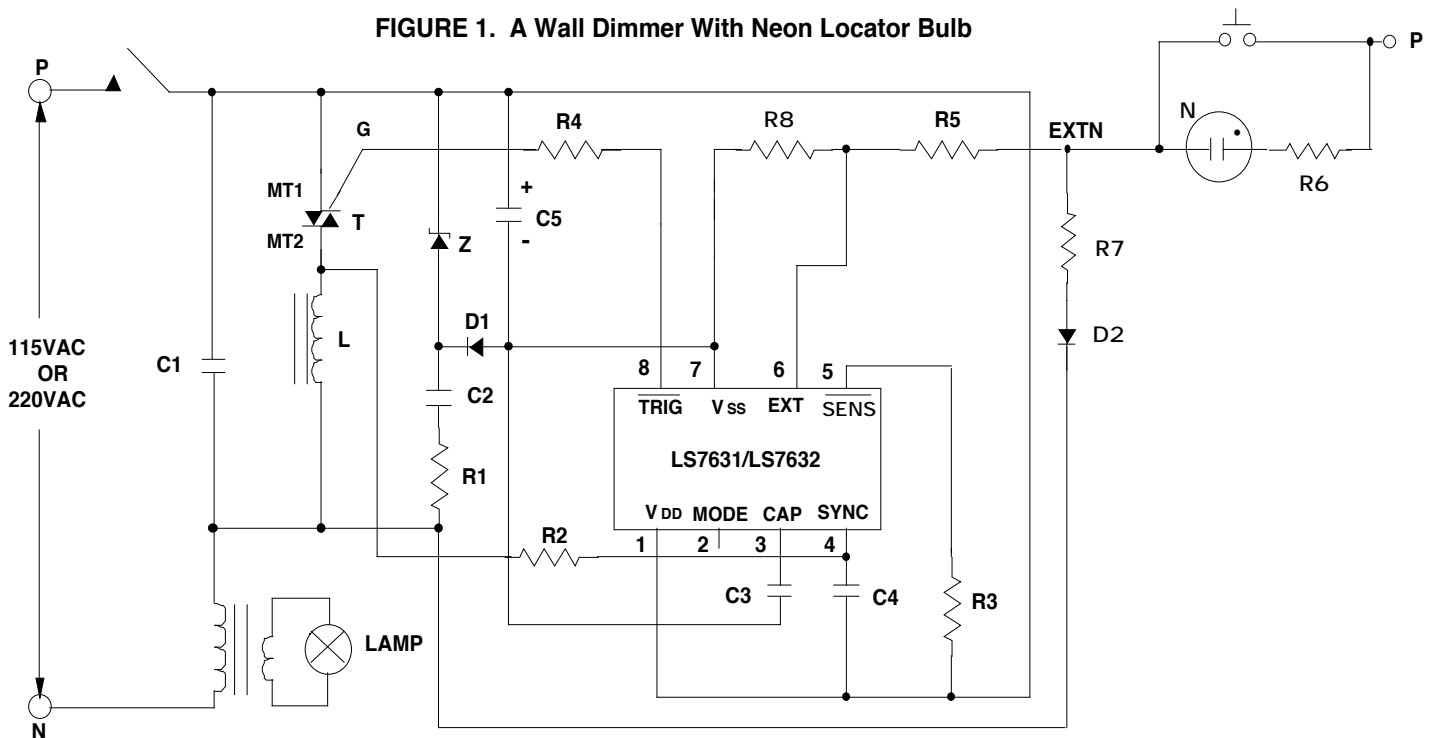
In certain applications, such as a hotel, it is desirable to add a neon bulb to a dimmer wall switch to make it easy for people unfamiliar with the surroundings to find the location of the wall dimmer in an unlit room or hallway.

The neon bulb is at its brightest during the time when the lamp driven by the triac is off. It will be at its dimmest when the lamp is at its brightest. A dome switch is used to control the wall dimmer.

A neon locator bulb can be added to the application schematic shown in Figure 5 of the LS7631/LS7632 data sheet as shown in Figure 1 of this Application Note.

Figure 2 of this Application Note shows how multiple dome switches, each with their own neon locator bulb, can be used to control one wall dimmer.

FIGURE 1. A Wall Dimmer With Neon Locator Bulb



C1 = 0.15 μ F, 200V
 *C1 = 0.15 μ F, 400V
 C2 = 0.15 μ F, 200V
 *C2 = 0.082 μ F, 400V
 C3 = 0.02 μ F, 10V
 C4 = 0.002 μ F, 10V
 C5 = 100 μ F, 10V
 C6 = 0.1 μ F, 10V

R1 = 270 Ω , 1/2W
 *R1 = 1k Ω , 1W
 R2 = 680k Ω , 1/4W
 *R2 = 1.5M Ω , 1/4W
 R3 = 1.5M Ω , 1/4W
 R4 = 62 Ω , 1/4W
 R5 = 150k Ω , 1/4W

R6 = 0 (no R needed)
 *R6 = 100k Ω , 1/4W
 R7 = 22k Ω , 1/4W
 *R7 = 22k Ω , 1/2W
 R8 = 1.5M Ω , 1/4W
 D1 = 1N4148
 D2 = 1N4003
 *D2 = 1N4004

Z = 5.6V, 1W (Zener)
 T = Q4004L4 Typical Triac
 T = Q5003L4 Typical Triac
 L = 100 μ H (RFI Filter)
 L = 200 μ H (RFI Filter)
 N = 125VAC Neon Bulb
 *N = 250VAC Neon Bulb

* = Component change for 250VAC

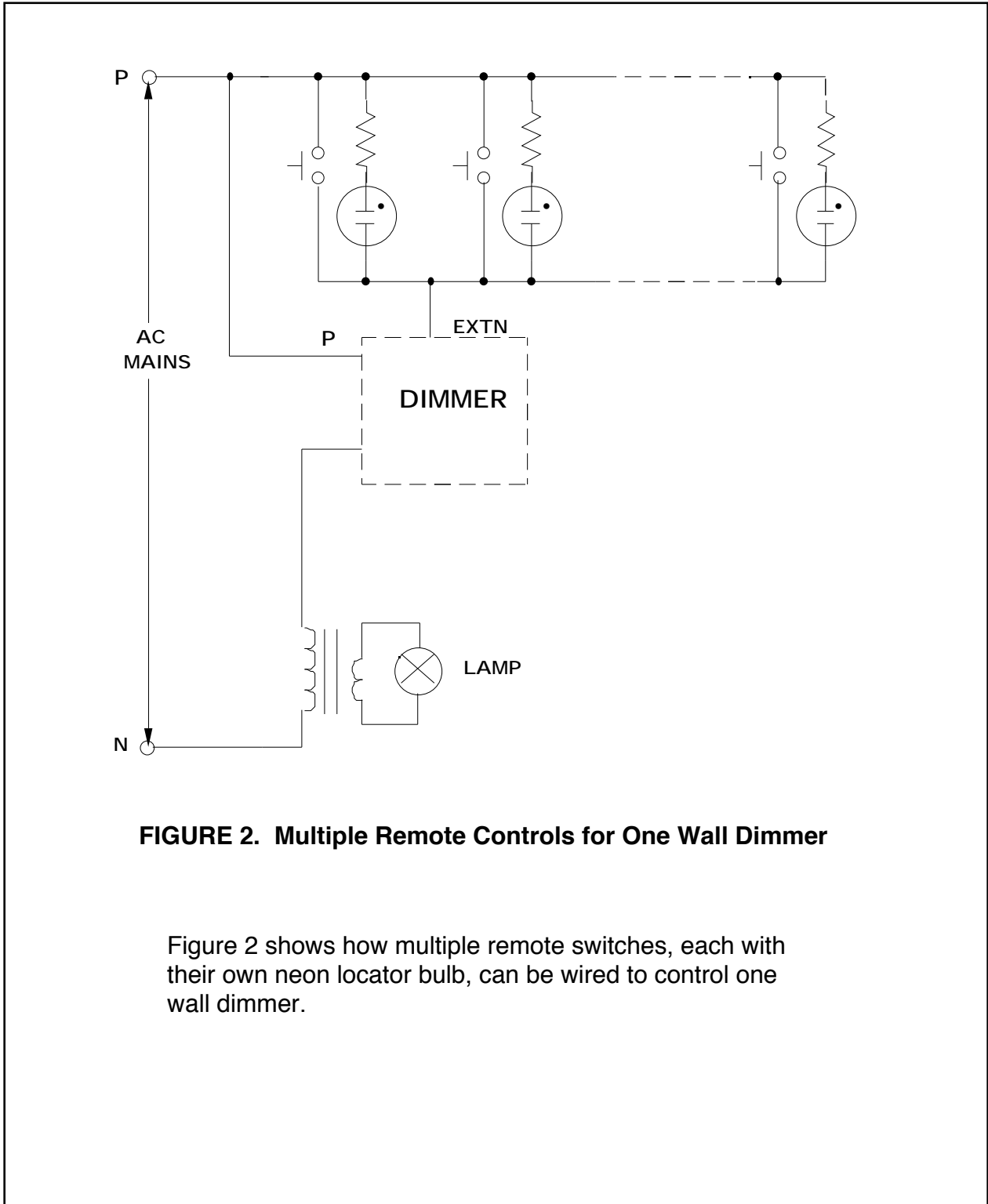


FIGURE 2. Multiple Remote Controls for One Wall Dimmer

Figure 2 shows how multiple remote switches, each with their own neon locator bulb, can be wired to control one wall dimmer.