

Installation Manual

Fluorescent ballast (0V-10V)

V1.0



Content:

1. Installation stages *page 3*
2. DC control Inputs *page 4*
3. Connection Diagram *page 5*
4. Example description *page 6*



Introduction:

The S-BUS G4 Fluorescent ballast controls Any kind of 0V to 10V ballast in the market. 6 channel control with relay cut off.



Figure 1 (0-10)V G4 Ballast controller

Installation Stages:

- 1- *S-BUS Network* (same as Dimmers and Relays, refer to their installation manual)
- 2- Ballast termination:

The G4 Ballast controller has a normal relay and a 0v to 10v output. There are plenty of types of ballasts in the market, what we are facing here is the Dimmable Ballast, and more specifically the 0 to 10 Vdc ones.



Figure 2 Dimmable Ballast example

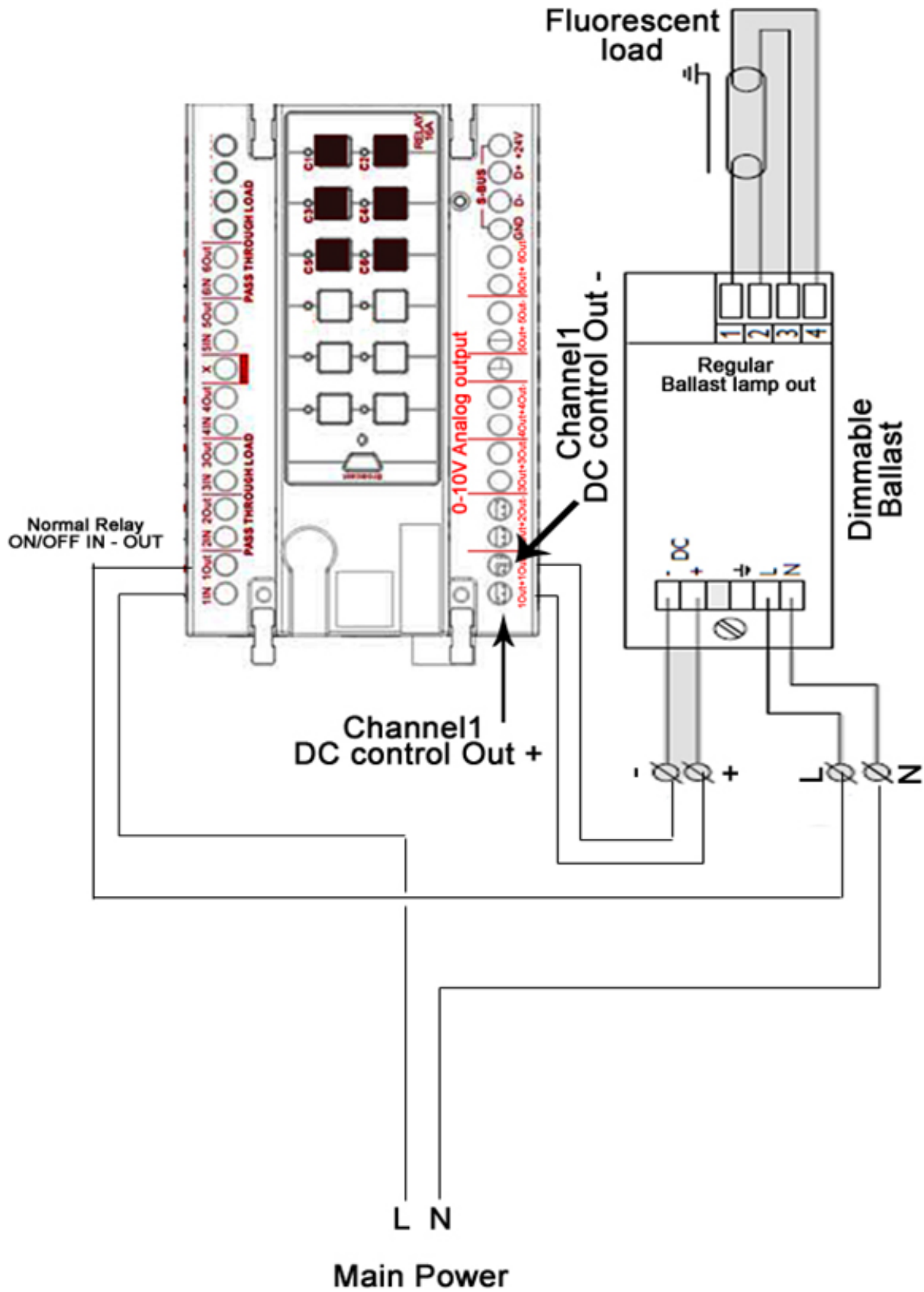
In the figure above, an example of those ballast, those ballasts simply has a normal 220 AC power input (hot and neutral), and the normal also lamps output like any other normal ballast.

While the dimmable type has an extra DC input (+Vdc, -Vdc), Fig 3 below, that takes DC voltage varying between 0Vdc and 10Vdc where it dim the lamps accordingly.



Figure 3 DC input controls

Here comes the role of the S-BUS G4 Ballast controller it provides both inputs of the Dimmable ballast, the AC input, which are connected to the normal relay at the upper side of the G4 module, and the DC input, which are connected to the DC 0 to 10 Volts outputs at the down side of the G4 Module. Check Fig 4 below.



Now, The programming of the ballast is the same exactly like programing a dimmer (Refer to Dimmers and Relays Programing manual), the software will treat the 0-10V G4 module as a 6 channel Dimmers, the Difference is in the hardware operation of the Module.

Taking the example in fig 4, where there is only one channel connected to the dimmable ballast which is also connected to one lamp (For information on how to connect the lamps, refer to your supplier's manuals and documents).

If we set the DDP to control this channel, with dimming enabled, when you press on the button you programmed, the normal Ch1 relay will be on giving direct 220 AC for example to the input of the dimmable ballast, and the Vdc value at the 1Out+,1Out- ports would be 10Vdc.

Now let's try to dim it by pressing and holding the same button, when the dimming value goes from 100% to 0%, the Vdc value at the 1Out+,1Out- will go from 10Vdc to 0Vdc, having these value at the input of the dimmable ballast, it will do it's job of dimming the Lamp.

Once you reach 0% diming, the Vdc would be 0V and the relay will switch off the AC power. The same goes the other way around.

