VD-LCD Switch INSTRUCTIONS MANUAL

Introduction

- This product incorporates a liquid crystal glass, liquid crystal display driver and LED backlight. The user must build a control circuit to control the product

- Since this product does not have screen data installed, it is necessary for the user to create the data.

Important points regarding each part

1. LCD Module

Since the VD Switch incorporates only a liquid crystal display driver (LCD driver), to display the screen data created by preparing the IC for control and storage media externally, write it to the LCD driver of the VD Switch.

- Since the built-in LCD driver uses SED1528, manufactured by Seiko Epson Corporation, for details such as control commands and timing, refer to SED1526 Series in the SED1500 Data Book.
(For setting the commands of the VD Switch, see "Precautions for command setting" described later.)

- The interface of the built-in LCD driver is set as a serial interface. Moreover, since the boosting power circuit is also incorporated, the voltage to be applied externally is only 5V.

- Although the power section incorporates a condenser as a noise-prevention measure, use another noise-prevention measure or separate power when using the product in a place where ignition noise may be generated (when turning on and off high-voltage power supplies such as the motor and discharger).

- Arrange the wiring in the terminals 3 to 6 (DATA, CLOCK, COMAND/DATA, /SELECT) in a way that prevents noise from being generated, and make the wires as short as possible.
(For a type mounted on the panel, make this approximately 2 meters using the shielded wire.)

2. LED Backlight

- The backlight is independent from the LCD control and controlled separately. Construct the control circuit referring to "Backlight Rating" described in the catalog. In the case of a unit without resistance, calculate an appropriate resistance value from the Table of Rating and apply the protective resistance.

Note: Units with built-in resistance cannot be selected for multi-color. In the case of a dual-color illumination type with built-in 24V resistance, the two colors cannot be illuminated at the same time. In order to do this, select the type without resistance and obtain resistance externally.

- Since the VD Switch adopts a total transmission LCD, the letters cannot be recognized unless the backlight is turned on.

3. Switch

- Since Alloy #1 crossbar (using the same switch structure as our CH Switch) is used in the switch section, use it mainly as signal wires. When using it for other purposes, use it with the rate values of the switch section specified in the catalog.

4. Precautions for command setting

1. Since the VD Switch is set as a serial interface, the "status read" function, "display data read" function and other functions to read from built-in RAM are not available.

2. Set the "duty select" command at [1:1/32] and "duty +1 select" command at [1: duty +1].

Note) The horizontal line on the bottom of the screen is not displayed unless "Duty +1" is set.

3. Set all of the lower 3 bits of the "power control" commands D0, D1 and D2 at "1".

D0: "1" Voltage follower circuit ON

D1: "1" Voltage adjustment circuit ON

D2: "1" Boosting circuit ON

4. Set the "electronic volume" command at the user’s preferred value.

5. The "clock stop" command is not particularly necessary since it is not used.