SD2 - Status Display, Dual 7-Segment Display

Installation and Operation Instructions

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Overview

The SD2 is an ETA module that is used to indicate a program error code which requires a manual reset. The module includes a manual reset switch that can be pressed to route a reset signal to a controller.

The polarity of the reset switch can be set to Normally Open (NO) or Normally Closed (NC) operation via the jumper on J2. When the reset switch is pressed, Terminals #3 and #4 of J1 are either connected or disconnected. Two 7-segment displays are available at the edge of the module, denoting where the input signal is within the range.

The SD module receives an input signal from a controller, and then displays a number from 0 to 10 up to 0 to 50, depending on the jumper position of J3. It can accept a current input of either 0 to 20mA or 4 to 20mA or a voltage input of 0 to 10V or 2 to 10V.

The unit is typically mounted in a BP2, BP4, BP8 or BP4V Backplane with power provided by the Backplane; however, the unit can be powered directly with an alternate DC supply. The green LED indicates that power is available to the module.

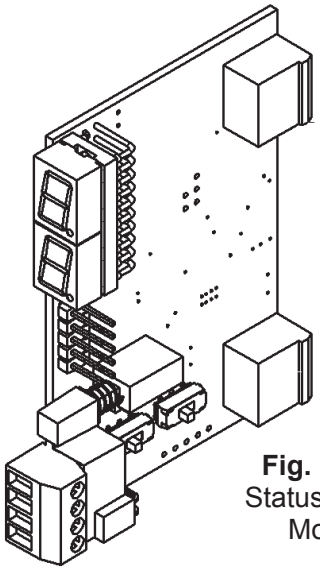

Fig. 1: SD2 Status Display Module

Mounting

The SD2 Module plugs into either a BP2, BP4 or BP8 Backplane or BP4V Vertical Backplane as shown in Fig. 2.

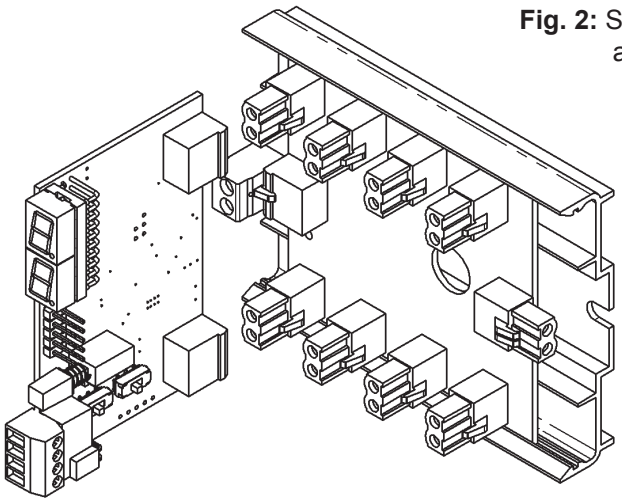

Fig. 2: SD2 Module plugging into a BP4 Backplane

Specifications

- **Power Supply:** MCP2456 switching regulator. Supplies 12V which is then dropped down by linear regulator MCP1703 to 5V for the on-board circuitry, and acts as the reference for the ADC.
- **Microprocessor:** PIC16F1938 utilizing on-board ADC, LCD driver, UART, ISP and GPIO.
- **Dual 7-segment display:** LTS-1802

Power Voltage: 16 to 35VDC

Power Current: 50mA Max

Specifications subject to change without notice.

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Termination

The SD2 is an ETA module that is used to indicate a program error code which requires a manual reset. The module includes a manual reset switch that can be pressed to route a reset signal to a controller.

The SD module receives an input signal from a controller on Terminal 2 of J1, and then displays a number from 0 to 10 up to 0 to 50, depending on the jumper position of J3. It can accept a current input of either 0 to 20mA or 4 to 20mA or a voltage input of 0 to 10V or 2 to 10V. The type of input signal, current or volts, must be selected via switch SW2, and the span of that input signal must be selected via switch SW3.

The green LED indicates that power is available to the module.

J2 - Reset Switch Mode Jumper
Denotes whether the switch is Normally Open (NO) or Normally Closed (NC).
Pins 1-2 = NC
Pins 2-3 = NO (Factory Default)

SW2 - Input Mode Switch
Switches in the correct load to scale the input for the microprocessor and denotes to the processor what input type is selected, mA or Volts. Factory default is Volts.

SW3 - Span Switch
Denotes whether the span of the input signal is 4 to 20mA or 0 to 20mA for current input, or 0 to 10V or 2 to 10V for voltage input. Factory default is 4 to 20mA/2 to 10V.

J3 - Display Range Selection Jumper
Sets the Display Range for the 7-Segment Display. Factory default is 0 to 10.

Pins 1-2 = 0 to 10 (Factory Default)
Pins 3-4 = 0 to 20
Pins 5-6 = 0 to 30
Pins 7-8 = 0 to 40
Pins 9-10 = 0 to 50

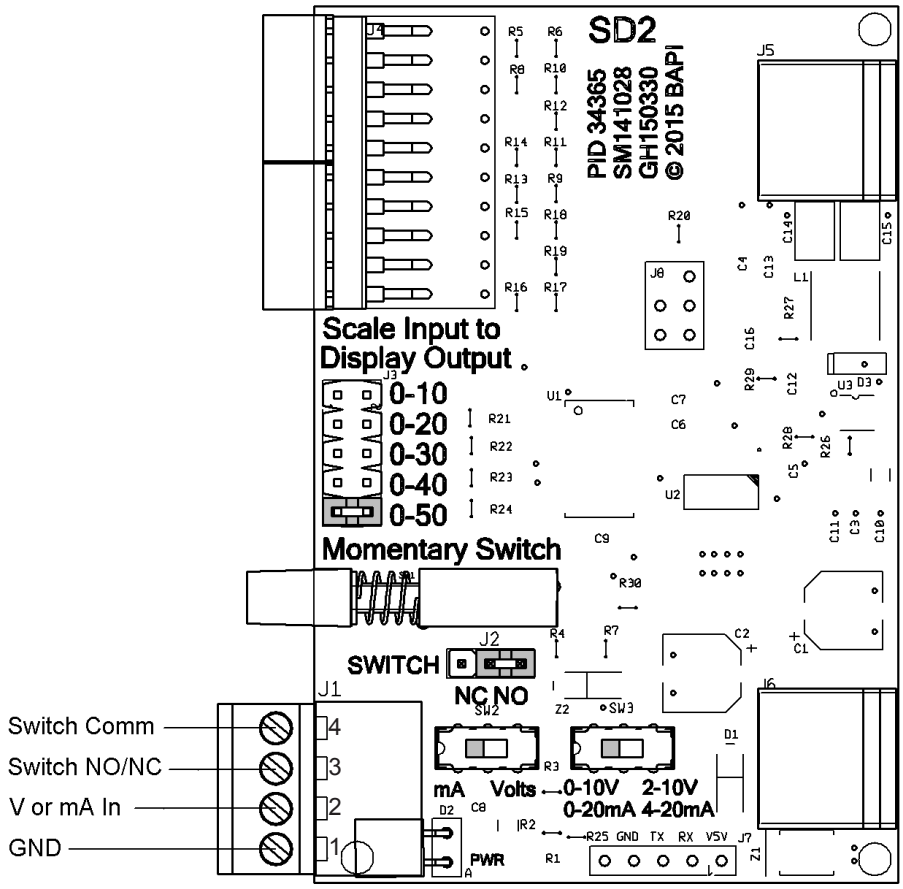

Fig. 3: SD2 Module component locator

Diagnostics

PROBLEMS	SOLUTIONS
Green Power LED doesn't light	- Check to see if the SD2 is firmly inserted into the BP – Backplane - Check the power cable to the BP – Backplane - Check the power to the PS17 (or other external power supply that is supplying power to the BP – Backplane) to see that it is supplying power
No display on the digital output	- Check to see if jumpers are correctly configured - Check configuration of SW2 and SW3 - Check connections to J1

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