

Overview

The SS-AC Selector Switch/Alarm Counter will monitor up to 8 dry contacts and output one or two voltage or mA signals. The output signals are based on the highest contact when the module is in Selector Mode, or the number of closed contacts with the module is in Counter Mode.

The SS-AC is a small 2" x 3" board containing 4 DPDT slide switches, some LEDs and I/O connectors. The board has two selectable primary modes or functions (SS or AC).

The Switch Selector (SS) mode monitors two switch input signal groups (four inputs per group). An on-board PIC calculates a respective output signal indicating which input signal is active with the highest priority, while ignoring all other inputs. The board has two output signals with the output signals selectable as either a 2-10Vdc voltage or a 4-20mA current. The user can also select if the PIC will use the combined input signal groups for developing Output 1 only or use each respective input signal group individually to develop its' respective output at Output 1 and Output 2.

The Alarm Counter (AC) mode counts how many input signal lines (Alarms or Status Contacts) are active and the on-board PIC calculates a respective output signal indicating the count. Similar to the SS mode, the output signals are selectable as either a 2-10Vdc voltage or a 4-20mA current and the outputs are also selectable as representing combined or individual signal groups.

For the combined input signal groups, the calculation is:
 $\text{mA} = 4 + ([\# \text{ of active inputs}] \times 2)$ at Output 1.

For the individual input signal groups, the calculation is
 $\text{mA} = 4 + ([\# \text{ of active inputs}] \times 4)$ for each respective Output group.

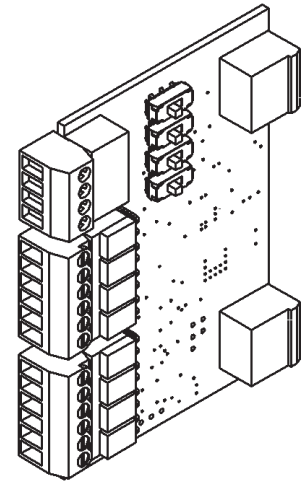


Fig. 1: SS-AC Selector Switch/Alarm Counter Module

Mounting

The SS-AC Module plugs into either a BP4 or BP8 Backplane as shown in Fig 2.

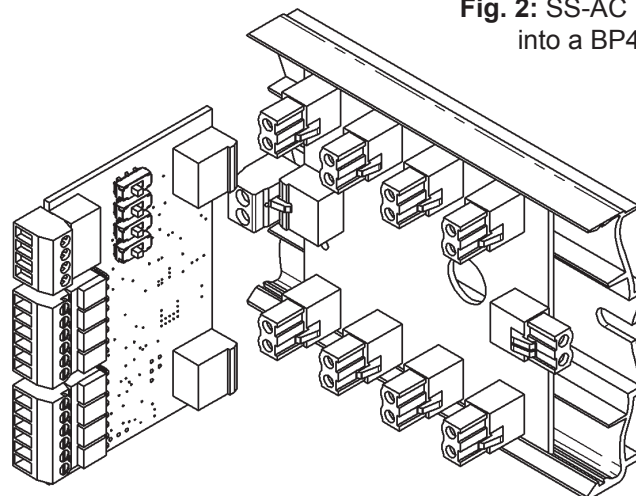


Fig. 2: SS-AC Module plugging into a BP4 Backplane

Specifications

Power Voltage: 26 to 36V

Power Current: 50mA Maximum

Specifications subject to change without notice.

Termination

Configure the SS-AC Module as shown in the tables below.

Selector Switch (SS) Mode - Outputs at Out 1 (For Combined Input Signal Groups)				
Highest Input on J2	Highest Input on J1	Output %	Volts Output on Out 1	mA Output on Out 1
0	0	4	0.4	0.8
0	1	8	0.8	1.6
0	2	12	1.2	2.4
0	3	16	1.6	3.2
0	4	20	2.0	4.0
1	0	24	2.4	4.8
1	1	28	2.8	5.6
1	2	32	3.2	6.4
1	3	36	3.6	7.2
1	4	40	4.0	8.0
2	0	44	4.4	8.8
2	1	48	4.8	9.6
2	2	52	5.2	10.4
2	3	56	5.6	11.2
2	4	60	6.0	12.0
3	0	64	6.4	12.8
3	1	68	6.8	13.6
3	2	72	7.2	14.4
3	3	76	7.6	15.2
3	4	80	8.0	16.0
4	0	84	8.4	16.8
4	1	88	8.8	17.6
4	2	92	9.2	18.4
4	3	96	9.6	19.2
4	4	100	10.0	20.0

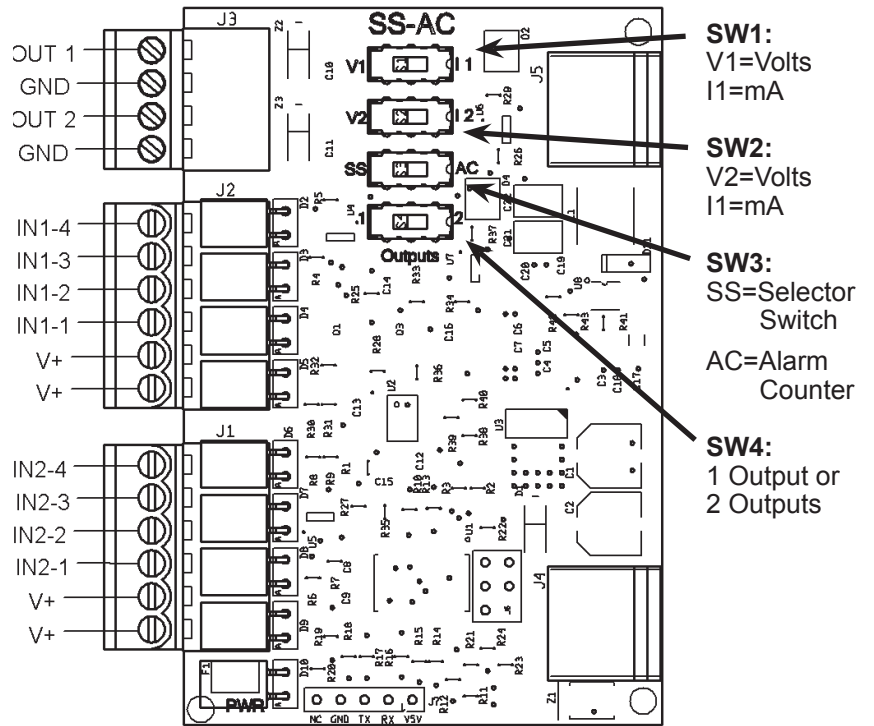


Fig. 3: SS-AC Module component locator

Alarm Counter (AC) Mode - Outputs at Out 1 (For Combined Input Signal Groups)				
# of Inputs on J2	# of Inputs on J1	Output %	Volts Output on Out 1	mA Output on Out 1
0	0	20	2.0	4.0
0	1	30	3.0	6.0
0	2	40	4.0	8.0
0	3	50	5.0	10.0
0	4	60	6.0	12.0
1	0	30	3.0	6.0
1	1	40	4.0	8.0
1	2	50	5.0	10.0
1	3	60	6.0	12.0
1	4	70	7.0	14.0
2	0	40	4.0	8.0
2	1	50	5.0	10.0
2	2	60	6.0	12.0
2	3	70	7.0	14.0
2	4	80	8.0	16.0
3	0	50	5.0	10.0
3	1	60	6.0	12.0
3	2	70	7.0	14.0
3	3	80	8.0	16.0
3	4	90	9.0	18.0
4	0	60	6.0	12.0
4	1	70	7.0	14.0
4	2	80	8.0	16.0
4	3	90	9.0	18.0
4	4	100	10.0	20.0

Selector Switch (SS) Mode - Outputs at Out 1 (For Individual Input Signal Groups)			
Highest Input on J2	Output %	Volts Output on Out 1	mA Output on Out 1
0	20	2.0	4.0
1	40	4.0	8.0
2	60	6.0	12.0
3	80	8.0	16.0
4	100	10.0	20.0

Selector Switch (SS) Mode - Outputs at Out 2 (For Individual Input Signal Groups)			
Highest Input on J1	Output %	Volts Output on Out 2	mA Output on Out 2
0	20	2.0	4.0
1	40	4.0	8.0
2	60	6.0	12.0
3	80	8.0	16.0
4	100	10.0	20.0

Alarm Counter (AC) Mode - Outputs at Out 1 (For Individual Input Signal Groups)			
# of Inputs on J2	Output %	Volts Output on Out 1	mA Output on Out 1
0	20	2.0	4.0
1	40	4.0	8.0
2	60	6.0	12.0
3	80	8.0	16.0
4	100	10.0	20.0

Alarm Counter (AC) Mode - Outputs at Out 2 (For Individual Input Signal Groups)			
# of Inputs on J1	Output %	Volts Output on Out 2	mA Output on Out 2
0	20	2.0	4.0
1	40	4.0	8.0
2	60	6.0	12.0
3	80	8.0	16.0
4	100	10.0	20.0

Specifications subject to change without notice.



SS-AC Selector Switch/Alarm Counter 8, ETA Module

Installation and Operation Instructions

35787_ins_SS_AC.pdf

rev. 11/12/15

Diagnostics

PROBLEMS

Green Power LED doesn't light

Incorrect output to the VFD

SOLUTIONS

- Check to see if the SS-AC Module 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

- Verify that Switches SW1 through SW4 are configured correctly for the desired output
- Check the wiring to the termblocks

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