918AC Series Expansion Board

Installation, Operation, and Maintenance Instructions

The 918AC Expansion Board is designed to provide additional output configurability to the 918AC series System Interface. The additional output configurations include: non-persist, auto-timeout with configurable timeout value, and latching modes.

Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury or death.

Le fait de ne pas se conformer à l'un ou l'autre des avertissements ou à l'une ou l'autre des directives apparaissant dans ce document pourrait donner lieu à des déversements de liquides dangereux, lesquels pourraient engendrer des dommages matériels, des risques de contamination environnementale, d'incendie ou d'explosion, des blessures graves ou la mort.

Contents

Installation

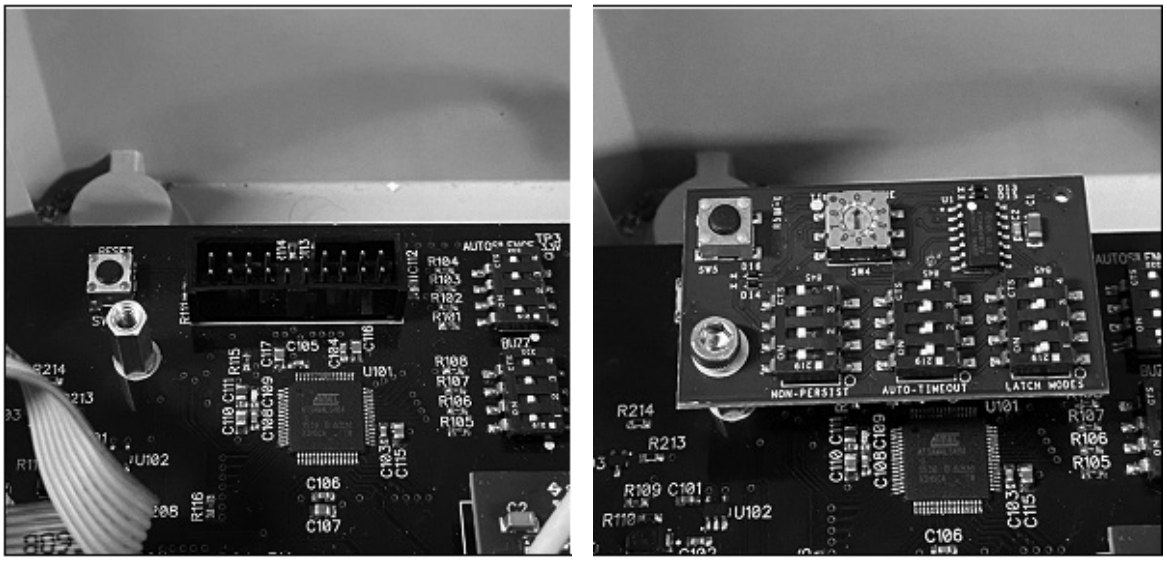

Figure 1 - Standoff and Module Installation

1. Turn off the power to the 918AC Console.
2. Remove and retain the screw that is in the 918AC Motherboard, located to the left of the P101 connector and below the reset button. It is the same location in which the standoff is installed in Figure 1.
3. Install the standoff provided in the kit into the same threads the screw was in, shown in Figure 1.
4. Install the 918AC Expansion Module by plugging it into the P101 connector on the 918AC Motherboard with the orientation shown in Figure 1.

   NOTE: If the 918AC Expansion Module does not fit correctly, do not force it. First, verify the orientation of the expansion board shown in Figure 1. Then check that the motherboard version is compatible. Compatible motherboards will have a pin removed corresponding to the keyed pin on the expansion module.

5. Install the screw that was removed in step 1 into the standoff and through the mounting hole of the 918AC Expansion Module as shown in Figure 1.
6. After the 918AC Expansion Module has been installed, restore power to the 918AC Console.
7. Once the 918AC Expansion Module is connected, configure the settings then press the reset button on the Module. The reset button will need to be pressed ***any time*** the settings are changed.

Steps to Configure the 918AC Series System Interface Motherboard

Non-Persistent Output Function

The Non-Persistent relay output function allows each relay output to be reset to its normal condition once the active alarm has been acknowledged.

NOTE: The Non-Persistent function can be used with the Auto-Timeout function (see page 3). However, the relay output Latching Mode (see page 4) takes precedence over the Non-Persistent function.

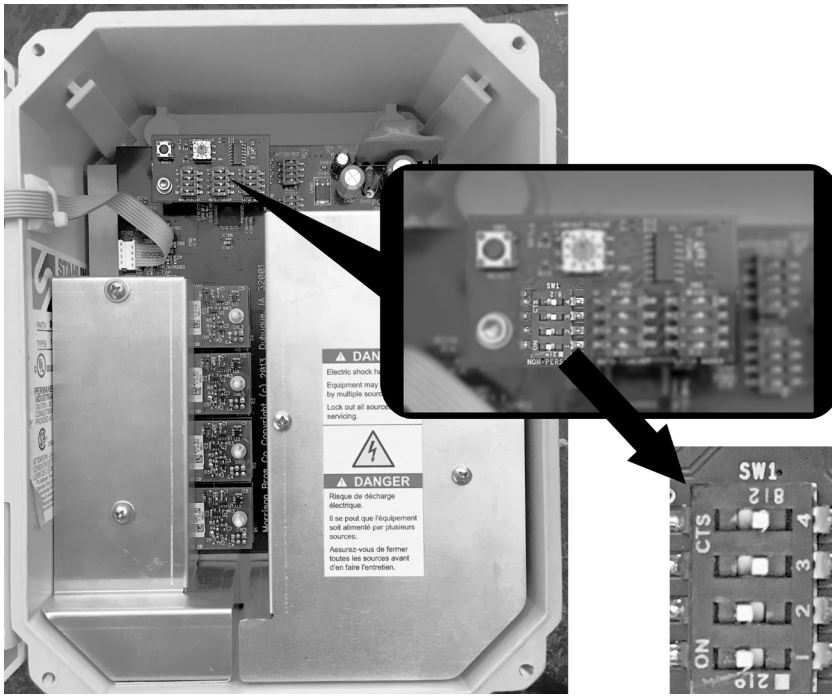

Figure 2 - Non-Persistent Relay Output Configuration

1. Locate the four position, Non-Persist switch, SW 1, on the expansion board (see Figure 2).
2. Place the DIP switch Position One in the “ON” position to configure the Motherboard to reset the channel 1 relay output when the triggering alarm condition(s) have been acknowledged. Place the DIP switch Position One in the “OFF” position to prevent the alarm acknowledgement from changing the state of the channel 1 relay output.
3. Place the DIP switch Position Two in the “ON” position to configure the Motherboard to reset the channel 2 relay output when the triggering alarm condition(s) have been acknowledged. Place the DIP switch Position Two in the “OFF” position to prevent the alarm acknowledgement from changing the state of the channel 2 relay output.
4. Place the DIP switch Position Three in the “ON” position to configure the Motherboard to reset the channel 3 relay output when the triggering alarm condition(s) have been acknowledged. Place the DIP switch Position Three in the “OFF” position to prevent the alarm acknowledgement from changing the state of the channel 3 relay output.
5. Place the DIP switch Position Four in the “ON” position to configure the Motherboard to reset the channel 4 relay output when the triggering alarm condition(s) have been acknowledged. Place the DIP switch Position Four in the “OFF” position to prevent the alarm acknowledgement from changing the state of the channel 4 relay output.
6. Locate the reset push button on the expansion board.
7. Press and release the reset push button to complete the configuration of the Non-Persist relay output settings.

Auto-Timeout Output Function

The Auto-Timeout relay output function allows each relay output to be reset to its normal condition after a configurable amount of time. The Timeout value can be adjusted in 3 minute increments from 3 to 30 minutes using the rotary switch. The timeout value is calculated using the following formula:

$$Timeout\ (minutes) = (n + 1)\ x\ 3$$

The value of *n* in the formula is set using the rotary switch. For example, a value of 0 will set the Auto-Timeout to 3 minutes and a value of 2 will set the Auto-Timeout to 9 minutes.

NOTE: The Auto-Timeout function can be used with the Non-Persistent function (see page 2). However, the relay output Latching Mode (see page 4) takes precedence over the Auto-Timeout function.

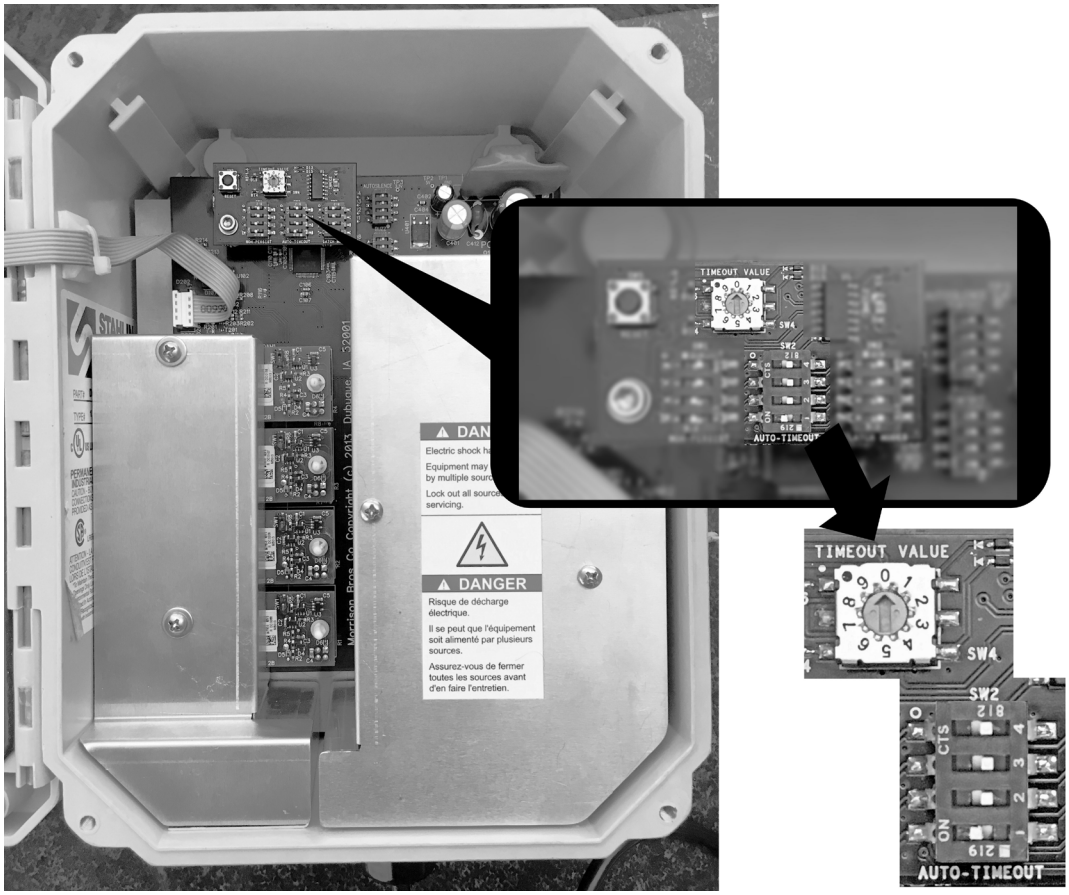

Figure 3 - Auto-Timeout Relay Output Configuration

1. Locate the rotary switch, Timeout Value, SW 4, on the expansion board mezzanine (see Figure 3).
2. Use a small screwdriver to turn the rotary dial to the desired auto-timeout value. A value of "0" corresponds to a 3 minute timeout value. The timeout value will start at 3 minutes (position "0" of the dial) and increase by 3 minutes for each count of the rotary dial, up to the maximum timeout of 30 minutes (position "9" of the dial).

NOTE: The auto-timeout value is applied to all outputs with the auto-timeout setting enabled. Different values cannot be set for individual outputs.

3. Locate the four position, Auto-Timeout switch, SW 2 on the Motherboard (see Figure 3).
4. Place the DIP switch Position One in the "ON" position to configure the Motherboard to reset the channel 1 relay output when the auto-timeout timer has expired. Place the DIP switch Position One in the "OFF" position to prevent the auto-timeout timer from changing the state of the channel 1 relay output.

5. Place the DIP switch Position Two in the “ON” position to configure the Motherboard to reset the channel 2 relay output when the auto-timeout timer has expired. Place the DIP switch Position Two in the “OFF” position to prevent the auto-timeout timer from changing the state of the channel 2 relay output.
6. Place the DIP switch Position Three in the “ON” position to configure the Motherboard to reset the channel 3 relay output when the auto-timeout timer has expired. Place the DIP switch Position Three in the “OFF” position to prevent the auto-timeout timer from changing the state of the channel 3 relay output.
7. Place the DIP switch Position Four in the “ON” position to configure the Motherboard to reset the channel 4 relay output when the auto-timeout timer has expired. Place the DIP switch Position Four in the “OFF” position to prevent the auto-timeout timer from changing the state of the channel 4 relay output.
8. Locate the reset push button on the expansion board mezzanine.
9. Press and release the reset push button to complete the configuration of the Auto-Timeout relay output settings.

Latching Mode Output Function

The relay output Latching Mode allows the relay output to be latched during an active alarm and remain latched until a configurable reset condition occurs. The Latching Modes can only be configured for relay output channels 1 and 2. See the ‘Output Modules’ section on page 8 for details on configuring the outputs to be triggered by input channel alarms.

Channel 1 Latching Mode	Channel 2 Latching Mode
Disabled	Disabled
Reset by Input 2	Reset by Input 1
Reset by Input 3	Reset by Input 3
Reset by Input 4	Reset by Input 4

NOTE: The Latching Mode function takes precedence over the Non-Persistent and Auto-Timeout functions.

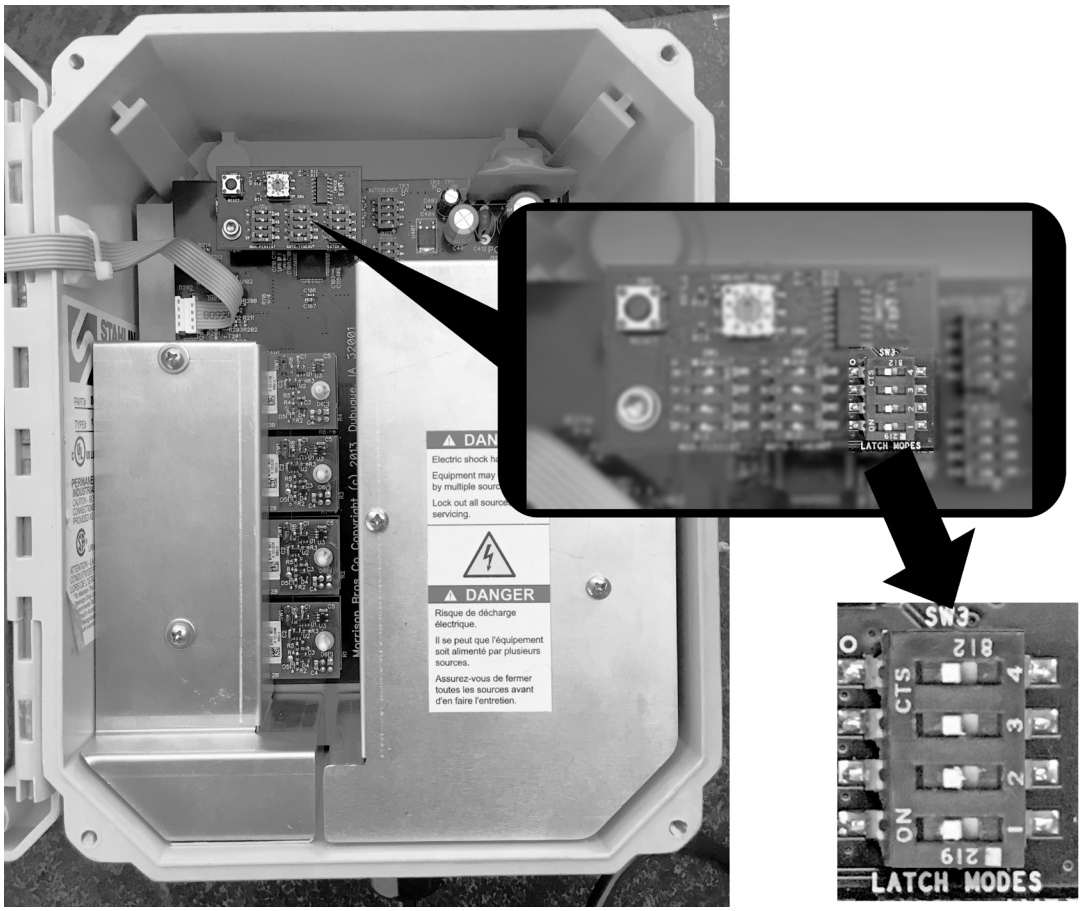

Figure 4 - Latching Mode Relay Output Configuration

1. Locate the four position, Latch Modes switch, SW 3, on the expansion board mezzanine (see Figure 4).
2. Use DIP switch Positions One and Two to set the Latching Mode for the channel 1 relay output
    a. To disable the channel 1 relay output latching mode place DIP switch Positions One and Two in the "OFF" position.
    b. To enable the channel 1 relay output latching mode and configure the channel 2 input as the reset condition place DIP switch Position One in the "ON" position and Position Two in the "OFF" position.
    c. To enable the channel 1 relay output latching mode and configure the channel 3 input as the reset condition place DIP switch Position One in the "OFF" position and Position Two in the "ON" position.
    d. To enable the channel 1 relay output latching mode and configure the channel 4 input as the reset condition place DIP switch Position One and Two the "ON" positions.
3. Use DIP switch Positions Three and Four to set the Latching Mode for the channel 2 relay output
    a. To disable the channel 2 relay output latching mode place DIP switch Positions Three and Four in the "OFF" position.
    b. To enable the channel 2 relay output latching mode and configure the channel 1 input as the reset condition place DIP switch Position Three in the "ON" position and Position Four in the "OFF" position.
    c. To enable the channel 2 relay output latching mode and configure the channel 3 input as the reset condition place DIP switch Position Three in the "OFF" position and Position Four in the "ON" position.
    d. To enable the channel 2 relay output latching mode and configure the channel 4 input as the reset condition place DIP switch Position Three and Four in the "ON" positions.
4. Locate the reset push button on the expansion board mezzanine.
5. Press and release the reset push button to complete the configuration of the Non-Persist relay output settings.

DIP Switch Configuration Tables

Input Module

Table 1 Expansion board SW1 – Non-Persistent Output

Position	Setting	
	ON This output channel relay will be reset to its normal condition when the alarm has been acknowledged	**OFF** The alarm acknowledgement has no effect on this output
1	Channel 1	Channel 1
2	Channel 2	Channel 2
3	Channel 3	Channel 3
4	Channel 4	Channel 4

Table 2 Expansion board SW2 – Output Auto-Timeout

Position	Setting	
	ON This output channel relay will be reset to its normal condition when the auto-timeout timer has expired	**OFF** The auto-timeout timer has no effect on this output
1	Channel 1	Channel 1
2	Channel 2	Channel 2
3	Channel 3	Channel 3
4	Channel 4	Channel 4

Table 3 Expansion board SW4 – Output Timeout Value

Position	Setting
	Relay Output Auto-Timeout
0	3 minutes
1	6 minutes
2	9 minutes
3	12 minutes
4	15 minutes
5	18 minutes
6	21 minutes
7	24 minutes
8	27 minutes
9	30 minutes

Table 4 Expansion board SW3 – Latch Modes

Position		Setting
1	2	
OFF	OFF	Channel 1 Latching Mode Disabled
ON	OFF	Channel 1 Latching Mode Enabled - Input 2 Reset
OFF	**ON**	Channel 1 Latching Mode Enabled - Input 3 Reset
ON	**ON**	Channel 1 Latching Mode Enabled - Input 4 Reset

Position		Setting
3	4	
OFF	OFF	Channel 2 Latching Mode Disabled
ON	OFF	Channel 2 Latching Mode Enabled - Input 1 Reset
OFF	**ON**	Channel 2 Latching Mode Enabled - Input 3 Reset
ON	**ON**	Channel 2 Latching Mode Enabled - Input 4 Reset