

918AC Series System Interface Lens Kit

918AC Series System Interface Indicator Board

Installation Instructions

There are three reasons to install a Lens Kit:

- To change the color of an existing indicator.
- To replace a damaged lens
- To add an Indicator when an Input Module has been added to the 918AC Series System Interface.

There are two reasons to install a new Indicator Board:

- To replace a damaged board
- To replace a board where an indicator is failing to illuminate.



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.

Specifications

<p>The 918AC Lens Kit comes in three colors:</p> <ul style="list-style-type: none">• Red (918AC-0107 AK)• Green (918AC-0134 AK)• Amber (918AC-1035 AK) <p>The kit is comprised of:</p> <ul style="list-style-type: none">• Colored lens• Lens lock washer• Lens nut• This document	<p>The 918AC Indicator Board comes with:</p> <ul style="list-style-type: none">• 918AC Indicator Board (918AC-0112 2B)• This document
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WARNING: This is an intrinsically safe device and must be wired in accordance with National Electrical Code Article 500. This device and its wiring may not share any junction box, conduit, or raceway with any other type circuit or wiring. Do not perform live maintenance. Do not substitute components with anything other than Morrison Bros. Co. components. Care must be taken to avoid an ignition hazard from impact or friction with the enclosure.

AVERTISSEMENTS: Cet appareil intrinsèquement sécuritaire doit être branché conformément à l'article 500 du code électrique national. Il se peut que ce dispositif et son câblage ne partagent pas de boîte de connexion, de conduit ou de canalisation avec un autre type de circuit ou de câblage. Ne menez pas de travaux de maintenance sous tension. Ne remplacez les composantes que par des composantes de Morrison Bros. Co. Assurez-vous d'éviter le risque d'inflammation pouvant découler d'un impact ou de friction avec l'enceinte.



Warning

- **Fire Hazard** – Death or serious injury could result from spilled liquids.
- You must be trained to install or maintain this alarm. Stop now if you have not been trained.
- Any modification of this unit beyond what is outlined in this instruction will void product warranty.
- For your safety, it is important to follow local, state, federal and/or OSHA rules that apply to working inside, above, or around the storage tank and piping area. Use all personal protective equipment required for working in the specific environment.
- This device is intended to be used as an auxiliary warning to the operator of an abnormal condition of the system, such as a possible overfill situation and should not be the only system in place to prevent an unwanted condition, such as preventing a tank from overfilling. It is the sole responsibility of the operator to continuously prevent any spillage regardless of the situation.
- Tanks could be under pressure. Vapors could be expelled from tank vents, piping, valves or fittings while performing maintenance. Vapors could catch fire or cause an explosion. **Avoid** sparks, open flame, or hot tools when working on tank system.
- Use a dampened cloth when cleaning the alarm enclosure to prevent static buildup and discharge.
- In the event of malfunction, contact Morrison Bros. Customer Service.



Avertissements

- **Risque d'incendie** – Un déversement de liquide pourrait entraîner des blessures graves ou la mort.
- Vous devez avoir reçu une formation pour installer cette alarme ou en assurer la maintenance. Arrêtez-vous immédiatement si vous n'avez reçu aucune formation à cet effet.
- Toutes les modifications apportées à cette unité autres que celles indiquées dans ces directives engendreront l'annulation de la garantie du produit.
- Pour assurer votre sécurité, il est important de vous conformer à la réglementation locale, d'État, fédérale ou OSHA régissant les travaux à l'intérieur, au-dessus ou autour du réservoir de stockage et de la zone de canalisation. Utilisez tout l'équipement de protection individuelle exigé pour travailler dans l'environnement spécifique.
- Cet appareil est destiné à être utilisé comme mécanisme avertissant l'opérateur d'un état anormal du système tel une situation de remplissage excessif et ne devrait pas être le seul système en place pour empêcher un état indésirable, par exemple, un réservoir qui se remplit trop. L'opérateur a l'entière responsabilité de s'assurer continuellement de prévenir tout déversement, quelle que soit la situation.
- Les réservoirs pourraient être sous pression. Des vapeurs pourraient être expulsées des conduits d'aération, des canalisations, des soupapes ou des raccords du réservoir durant la maintenance. Les vapeurs pourraient s'enflammer ou engendrer une explosion. Évitez les étincelles, les flammes nues ou les outils chauds lors de travaux menés dans le système du réservoir.
- Utilisez un linge humide pour nettoyer l'enceinte de l'alarme afin de prévenir l'accumulation d'électricité statique et les décharges.
- En cas de défaillance, communiquez avec le service à la clientèle de Morrison Bros.

Note: As defined in Article 501 – Class 1 Locations of NFPA 70, this apparatus and its connected wiring are intrinsically safe. Under normal conditions this apparatus and its wiring cannot release sufficient energy to ignite a specific ignitable atmospheric mixture by opening, shorting, or grounding.

WARNING:

Interconnect wiring between the sensor(s) and the System Interface unit must be kept totally isolated and separate from any other wiring. This wiring must not share any junction box, conduit, raceway, or fixtures with circuits other than those defined by NEC as being intrinsically safe for all Class 1 locations. These inputs are ground referenced and only require “basic insulation.”

AVERTISSEMENTS:

Le câblage d’interconnexion entre la jauge et l’unité d’alarme doit être complètement isolé et distinct du reste du câblage. Le câblage ne doit partager aucune boîte de connexion, aucun conduit, aucune canalisation, ni aucun accessoire avec des circuits autres que ceux définis par NEC comme étant intrinsèquement sécuritaires pour tous les emplacements de classe 1.

Ces entrées sont référencés à la masse et nécessitent seulement “isolation de base.”

Steps to replace Indicator Board

Preparation

1. Remove power from the 918AC System Interface.
2. Open the front cover of the System Interface by releasing the two cover latches and swinging the cover open.

Installation

1. Removing the Indicator Board

Removing the Indicator Board is accomplished in (6) steps to avoid stressing the board by bending it too much. These steps are:

- | | |
|--------------------------------|-----------------------|
| 1. Loosen first end | 4. Lift the middle |
| 2. Loosen the middle | 5. Lift the first end |
| 3. Loosen and lift the far end | 6. Remove the board |

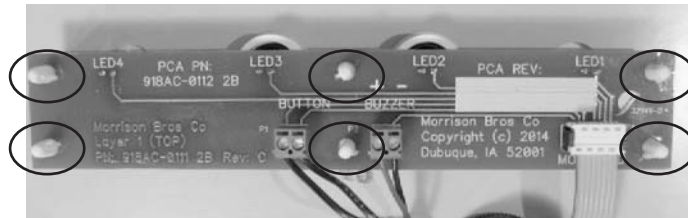


Figure 1 - Location of the (6) Indicator Board Supports

The Indicator Board is held in place with (6) latching plastic supports.

To release the board, the latching mechanism must be depressed. Depressing the latching mechanism while *gently* lifting the board will bring the board up high enough to keep the latching mechanism from re-latching.

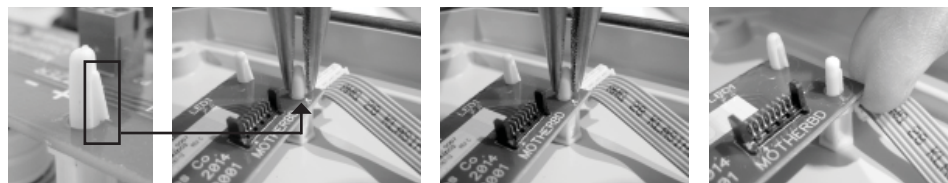


Figure 2 - Releasing the first support

- a. Disconnect the wires and cables from the board.
 - i. Disconnect the Ribbon Cable that connects the 918AC Motherboard to the Indicator Board.

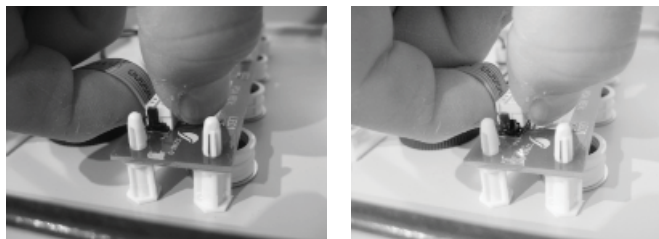


Figure 3 - Disconnecting the Ribbon Cable from the Indicator Board

- ii. Disconnect the Buzzer
 1. Using a 2.5mm *Straight Blade Screwdriver*, loosen the screws of the “BUZZER” connector (P2). See Figure 4.
 2. Gently pull the wires free of the connector.



Figure 4 - Disconnecting the Buzzer from the Indicator Board

- iii. Disconnect the Pushbutton Wires
 1. Using a 2.5mm *Straight Blade Screwdriver*, loosen the screws of the “BUTTON” connector (P1). See Figure 5
 2. Gently pull the wires free of the connector.

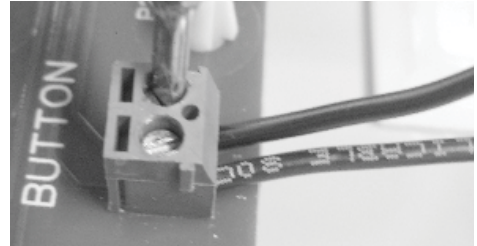


Figure 5 - Disconnecting the Pushbutton from the Indicator Board

- b. Using a pair of needle nosed pliers or equivalent, depress the latching mechanism of the first board support and gently lift the board just enough to prevent the latching mechanism from re-latching as shown in Figure 6.

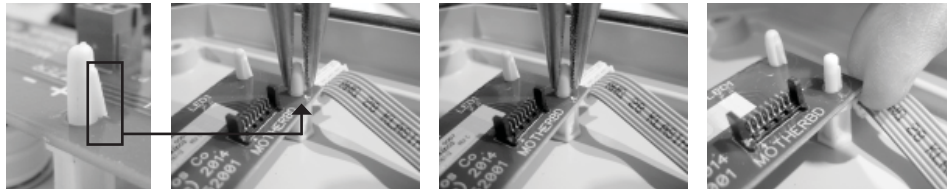


Figure 6 - Releasing the first support

- c. Repeat this process on its nearest neighbor. See Figure 7.

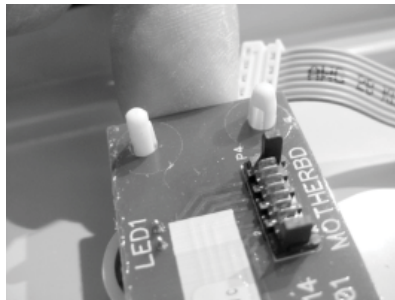


Figure 7 - The first end of the board is released

- d. Move to the two board supports in the middle of the board and repeat steps 1.a and 1.c above. See Figure 8.



Figure 8 - Center of the board is released from its supports

- e. Move to the far end of the board, repeat steps 1.a and 1.c above.
- f. Now gently lift the far end of the board up to the top of the board supports.
- g. Move to the middle supports and repeat step 1.f above.

h. Move back to the first end and repeat step 1.f above. See Figure 9.



Figure 9 - Board is completely released and ready to be removed

i. Now lift the board completely off of the supports. See Figure 10.

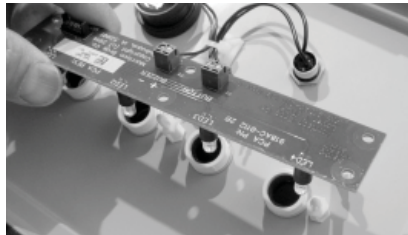


Figure 10 - Removing the Indicator Board

2. Install the New Indicator Board

a. Place the new Indicator Board on the top of the (6) supports as shown in Figure 11. **Do not press into place.**



Figure 11 - Place the Indicator Board back in place on its supports

b. Using two fingers as shown in Figure 12, gently press one end of the board partially down onto the supports.

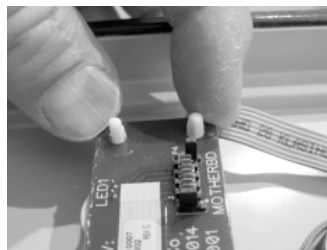


Figure 12 - Press the Indicator Board partially down on its supports

c. Move to the center of the board and repeat step Figure 13.



Figure 13 - Press the center of the Indicator Board partially down on its supports

d. Move to the end of the board. Using two fingers as shown in Figure 14, gently press this end of the Indicator Board completely down onto the nylon support. A quiet “click” may be heard when the supports lock into place.

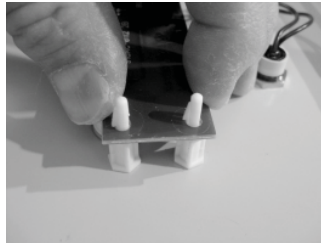


Figure 14 - Press the end of the Indicator Board completely down on its supports

e. Move to the middle of the board. Using two fingers as shown in Figure 15, gently press this end of the Indicator Board completely down onto the nylon support. A quiet “click” may be heard when the supports lock into place.



Figure 15 - Press the center of the Indicator Board completely down onto its supports

f. Move the first end of the Indicator Board. Using two fingers as shown in Figure 16, gently press the first end of the Indicator Board completely down onto the nylon supports. A quiet “click” may be heard when the supports lock into place.



Figure 16 - Press the first end of the Indicator Board completely down on to its supports

- g. Reconnect the wires and cable to the board.
 - i. Connect the Buzzer to the Indicator Board(see Figure 17)

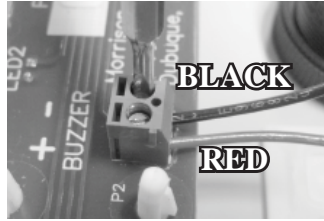


Figure 17 - Connecting the BUZZER to the INDICATOR BOARD

1. Twist the end of the two Buzzer wires to eliminate stray wire strands.
 2. Insert the RED wire into the (+) position of P2 (Buzzer) connector and snug down the associated screw using the 2.5mm Straight Bladed Screwdriver
 3. Gently tug on the wire to verify that the wire is securely connected.
 4. Insert the BLACK wire into the (-) position of P2 (Buzzer) connector and snug down the associated screw using the 2.5mm Straight Bladed Screwdriver
 5. Gently tug on the wire to verify that the wire is securely connected.
- ii. Connect the Pushbutton to the Indicator Board (See Figure 18)

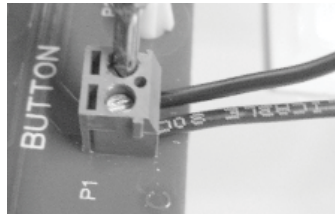


Figure 18 - Connecting the PUSHBUTTON to the INDICATOR BOARD

1. Twist the end of the two Pushbutton wires to eliminate stray wire strands.
 2. Insert one wire into either position of the P1 (BUTTON) connector and snug down the associated screw using the 2.5mm Straight Bladed Screwdriver
 3. Gently tug on the wire to verify that the wire is securely connected.
 4. Insert the second wire into the remaining position of the P1 (BUTTON) connector and snug down the associated screw using the 2.5mm Straight Bladed Screwdriver
 5. Gently tug on the wire to verify that the wire is securely connected.
- iii. Connect the Ribbon Cable to the Indicator Board
 1. Orient the Ribbon Cable so that the RED stripe is closest the buzzer and the mating side of the connector at the Indicator Board is facing P4 of the Indicator Board as shown in Figure 19. **Be sure to fully seat the connector.**

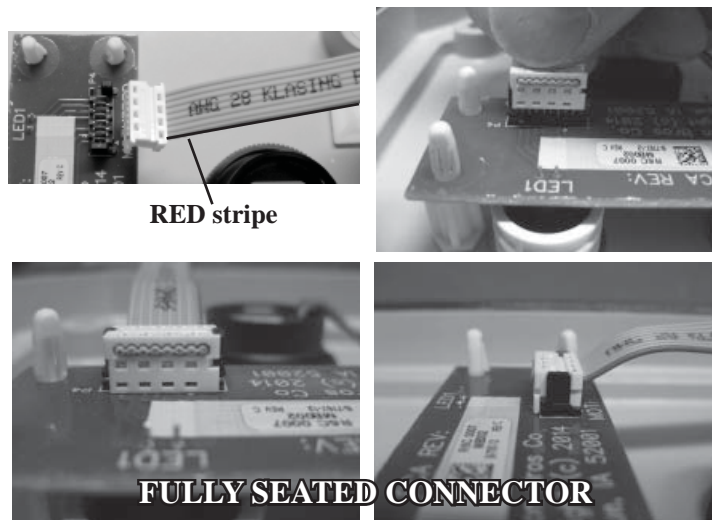


Figure 19 - Connecting the CABLE to the INDICATOR BOARD

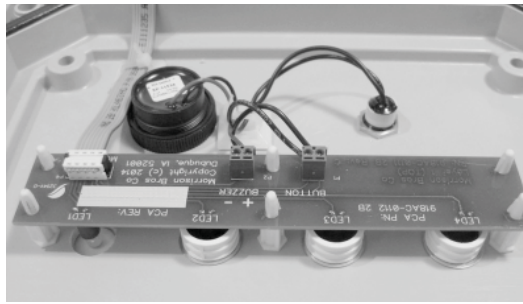


Figure 20 - Completely installed Indicator Board

3. Completion

- a. Close and latch the cover of the 918AC System Interface.
- b. Apply power to the system
- c. Test. Please refer to the Installation, Operation and Maintenance document for the 918AC System Interface (918AC-0142 PP) for Testing.

Steps to Install/Replace Lens Kit

Preparation

1. Remove power from the 918AC System Interface.
2. Open the front cover of the System Interface by releasing the two cover latches and swinging the cover open.

Installation

1. Removing the Indicator Board

Removing the Indicator Board is accomplished in (6) steps to avoid stressing the board by bending it too much. These steps are:

- | | |
|----------------------|-----------------------|
| 1. Loosen first end | 4. Lift the middle |
| 2. Loosen the middle | 5. Lift the first end |
| 3. Lift the far end | 6. Remove the board |

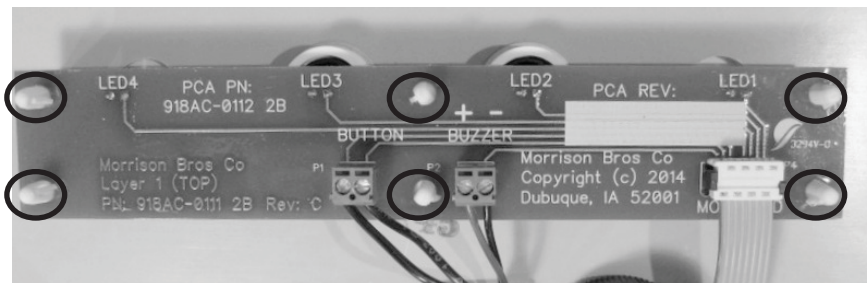


Figure 21 - Location of the (6) Indicator Board supports

The Indicator Board is held in place with (6) latching plastic supports.

To release the board, the latching mechanism must be depressed. Depressing the latching mechanism while ***gently*** lifting the board will bring the board up high enough to keep the latching mechanism from re-latching.

- a. Depress the latching mechanism of the first board support and gently lift the board just enough to prevent the latching mechanism from re-latching as shown in Figure 21.
- b. Repeat this process on its nearest neighbor. See Figure 22.



Figure 22 - The end of the board is released

- c. Move to the two board supports in the middle of the board and repeat steps 1.a and 1.c above. See Figure 23



Figure 23 - Center of the board is released from its supports

- d. Move to the far end of the board, repeat steps 1.a and 1.c above.
- e. Now gently lift the far end of the board up to the top of the board supports.
- f. Move to the middle supports and repeat step 1.f above.
- g. Move back to the first end and repeat step 1.f above. See Figure 24.



Figure 24 - Board is completely released and ready to be removed

h. Now lift the board completely off of the supports and roll it back over out of the way. You may choose to use a piece of tape to hold it back and out of the way. See Figure 25.

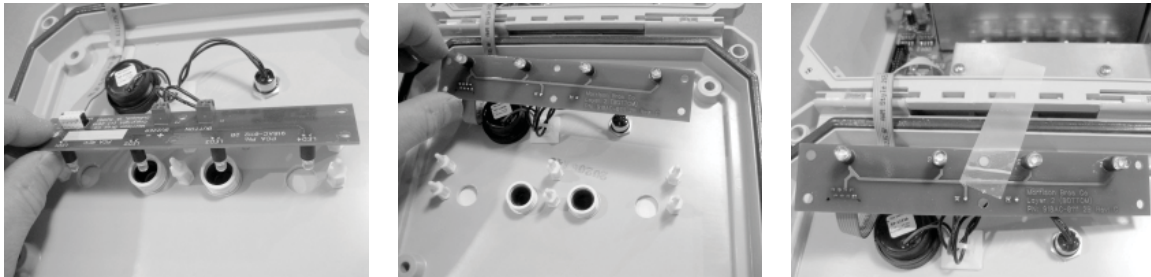


Figure 25 - Moving the Indicator Board out of the way

i. If ...

- i. Replacing a lens, jump to step 2.
- ii. Installing a lens in a new location, jump to 3 below.

2. Removing an Existing Lens

a. Firmly grasp the Lens with one hand and the Lens Nut with your other hand. Rotate the nut counterclockwise as shown in Figure 26 and completely remove the Lens Nut.



Figure 26 - Removing the Lens Nut from an existing Indicator

b. Remove the Lens Lock Washer

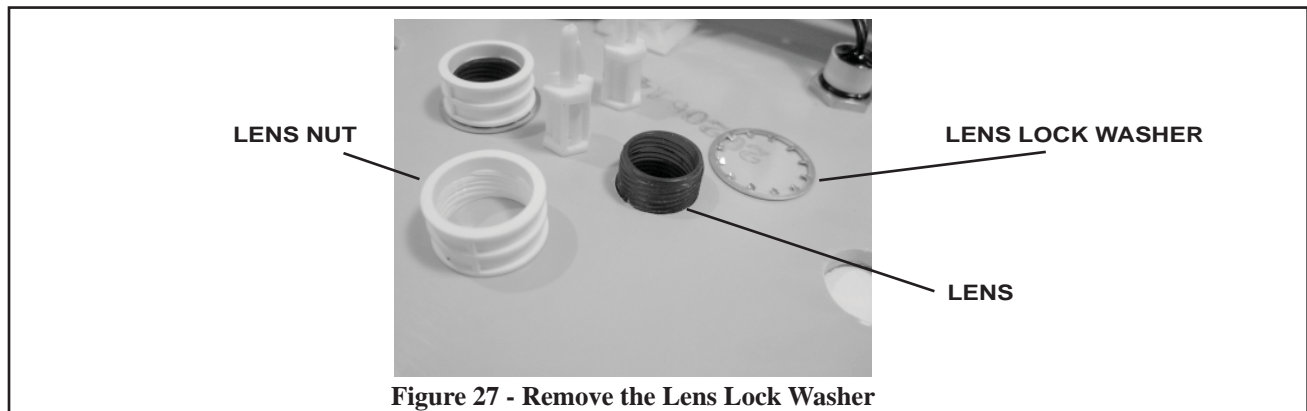


Figure 27 - Remove the Lens Lock Washer

c. Remove the Lens, it will simply push/pull out of its hole.

3. Preparing to Add a Lens for a New Channel

If an Input Module has been added to an existing 918AC and that System Interface does not have as many Indicator Lenses installed as it has Input Modules, then the visual indication of an activated input is not available to the user/operator. While the Indicator itself and the hole for its Lens does exist in the 918AC enclosure, they are covered by the front panel Overlay. To correct this, carefully cut a hole in the Overlay to allow the installation of the additional Lens so that the channel's indicator may be seen.

IMPORTANT NOTE:

To preserve the NEMA 4X rating of the 918AC Enclosure, care must be used when cutting the hole for the Indicator Lens so that the cut hole in the Overlay does not exceed the size of the hole in the Enclosure's Front Panel.

a. Determine where to cut the Overlay using Figure 28 as a guide.

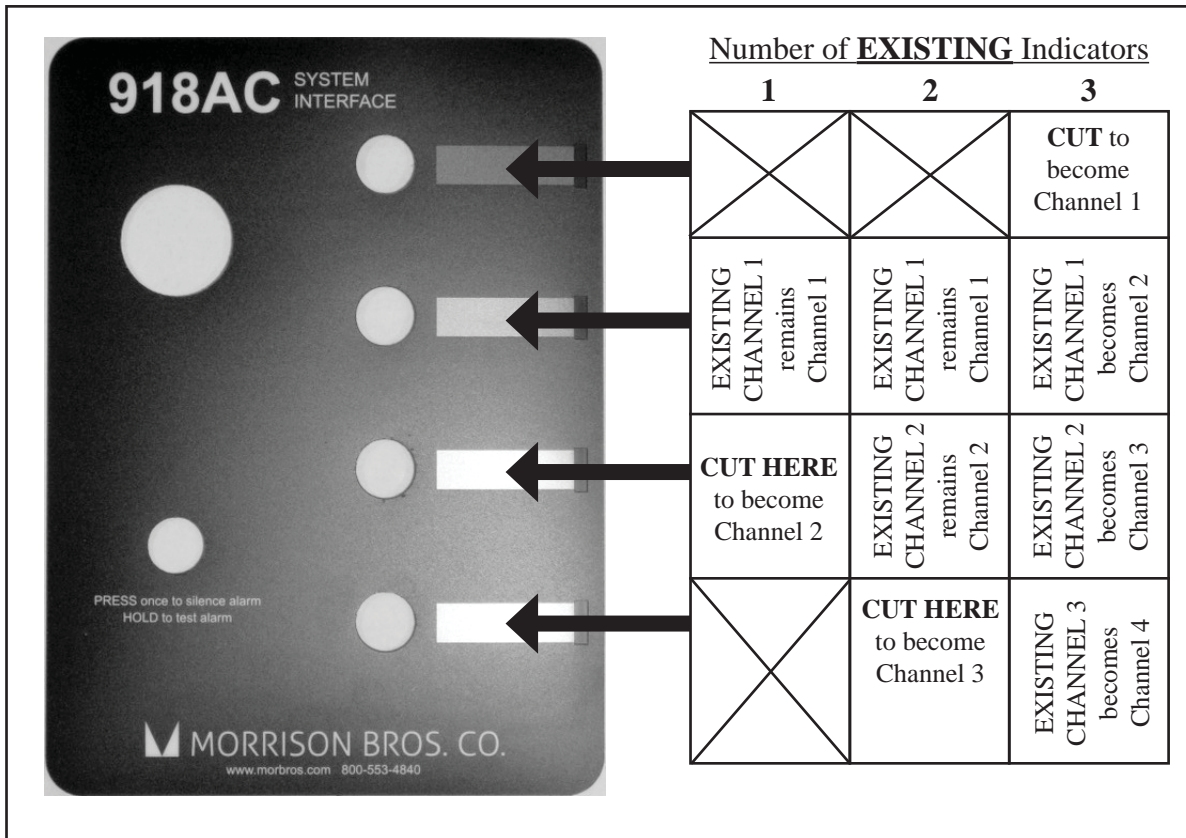


Figure 28 - Determining where to cut the new Lens Hole

b. Working from the back and using a very sharp X-Acto knife, or equivalent, cut around the perimeter of the Indicator Hole as shown in Figure 29.

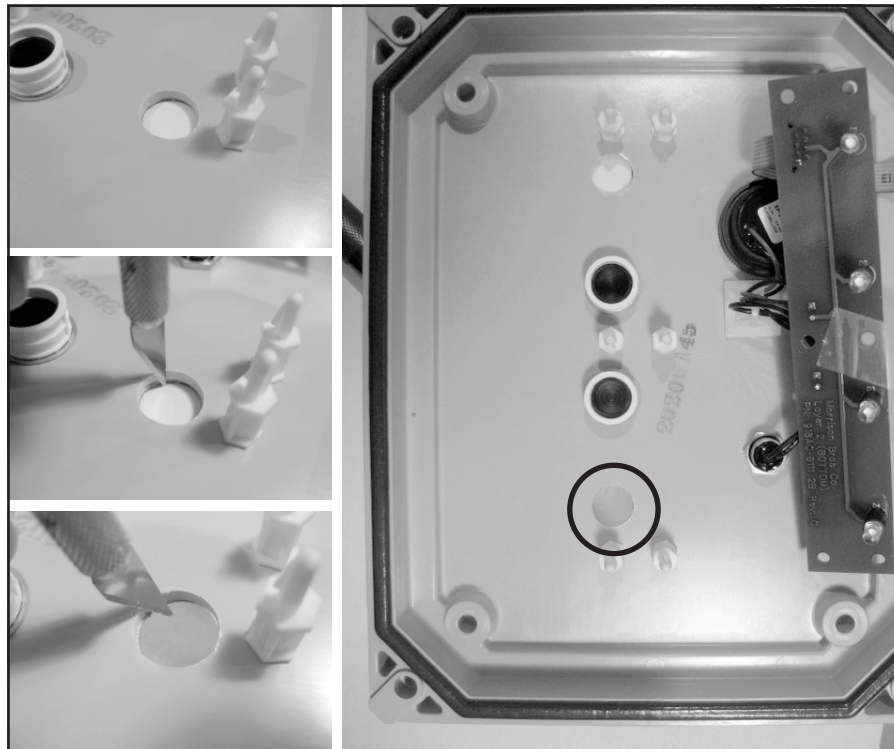


Figure 29 - Cutting the hole in the overlay (Channel (3) shown here)

4. Installing the Indicator Lens Kit

A Lens Kit consists of (3) pieces:

- Lens
- Lens Lock Washer
- Lens Nut

a. Insert the Lens through the Enclosure's Front Panel from the outside as shown in Figure 30.



Figure 30 - Insert the Lens through the enclosure's front panel from the outside

b. Install the Lens Lock Washer on the Lens on the back side of the Enclosure's Front Panel as shown in Figure 31.

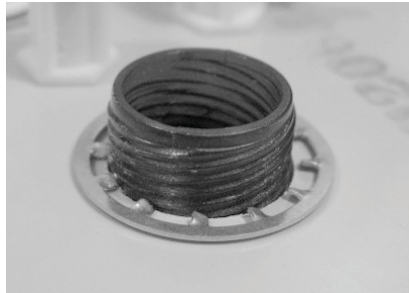


Figure 31 - Install the Lens Lock Washer on the Lens

c. Orient the Lens Nut properly with the threaded end of the Lens Nut closest to the panel as shown in Figure 32.



Figure 32 - Orient the Lens Nut properly

d. Install the Lens Nut on the Lens turning it clockwise and snug it down firmly as shown in Figure 33. Be careful not to over tighten as it is possible to strip the threads on this nylon nut.



Figure 33 - Lens Nut properly installed on Lens

5. Reinstall the Indicator Board

- a. Flip the Indicator Board over and back into place on the top of the (6) supports as shown in Figure 34. **Do not press into place.**

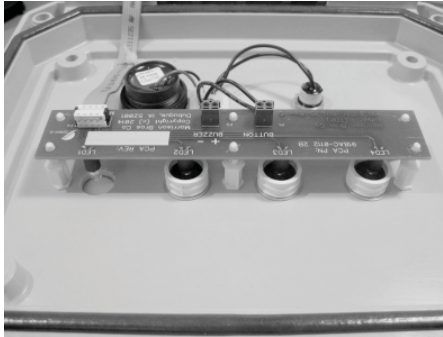


Figure 34 - Place the Indicator Board back in place on its supports

- b. Using two fingers as shown in Figure 35, gently press one end of the board partially down onto the supports.

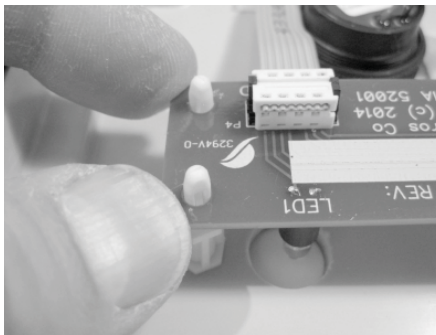


Figure 35 - Press the Indicator Board partially down on its supports

- c. Move to the center of the board and repeat step Figure 36.

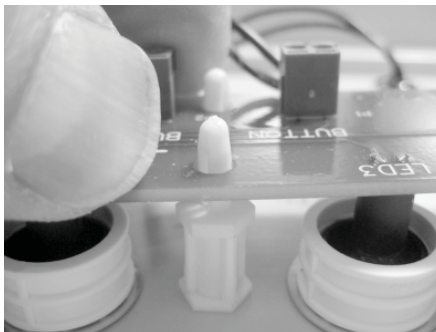


Figure 36 - Press the center of the Indicator Board partially down on its supports

- d. Move to the end of the board. Using two fingers as shown in Figure 37, gently press this end of the Indicator Board completely down onto the nylon support. A quiet “click” may be heard when the supports lock into place.

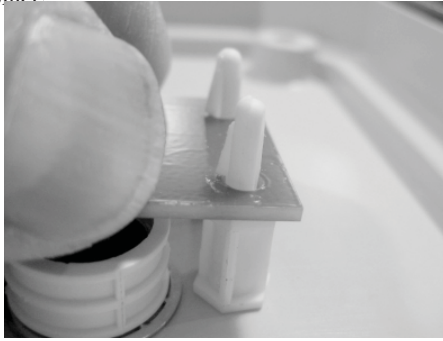


Figure 37 - Press the end of the Indicator Board completely down on to its supports

- e. Move to the middle of the board. Using two fingers as shown in Figure 38, gently press this end of the Indicator Board completely down onto the nylon support. A quiet “click” may be heard when the supports lock into place.

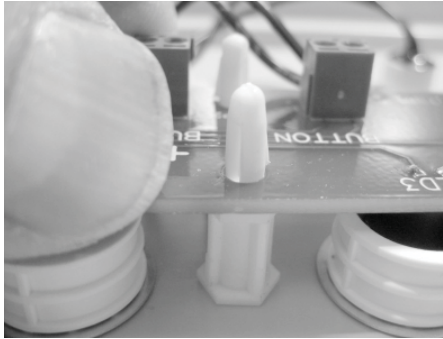


Figure 38 - Press the center of the Indicator Board completely down onto its supports

- f. Move the first end of the Indicator Board. Using two fingers as shown in Figure 39, gently press the first end of the Indicator Board completely down onto the nylon supports. A quiet “click” may be heard when the supports lock into place.

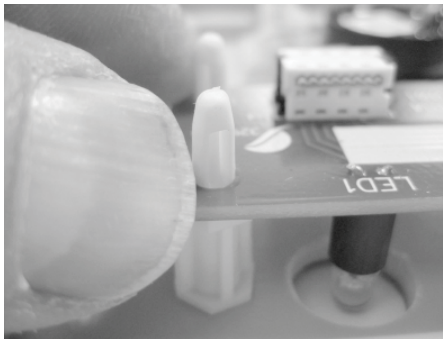


Figure 39 - Press the first end of the Indicator Board completely down on to its supports

6. Completion

- a. Close and latch the cover of the 918AC System Interface.
- b. Apply power to the system
- c. Test. Please refer to the Installation, Operation and Maintenance document for the 918AC System Interface (918AC-0142 PP) for Testing.