

# INSTALLATION AND OPERATING INSTRUCTIONS

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## UNIVERSAL ALARM INTERFACE UNIT (P/N 4520M13)

### 1.0 PURPOSE AND FEATURES

This unit provides the user with an alarm interface that is capable of operating with a variety of contact-closure or contact-open type alarm devices. It replaces all previous alarm interface units. Features of the Universal Alarm Interface are as follow:

- a. Contains two (2) identical alarm interface circuits with separate input connections for accepting alarm inputs from equipment such as air dryers, pipe alarm panels, etc.
- b. Can operate with alarm inputs from contact devices that either close or open an alarm.
- c. Each of the two (2) alarm interface circuits provides two (2) separate outputs as described below:
  1. A dry contact, form "C" output.
  2. An output that can be selected by the user to be either dry contact, form "C" or standard contactor 540/270 K ohms. (Other resistance values are available upon request.)
- d. Can be used with central office alarms that operate from either a "close on alarm" or an "open on alarm" dry contact output.

### 2.0 MOUNTING DETAILS

For mounting the Universal Alarm Interface Unit, select a surface that is flat and convenient for wiring the unit to the equipment to be monitored. Refer to Figure 1 and proceed as follows:

- a. Remove cover from case. (PC board with components are mounted on rear of cover.)
- b. Locate the two (2) holes in the base of the case.
- c. Using the base as a template, attach the case to the selected mounting surface with two (2) Number 8 round head or pan head (flat) screws.
- d. Turn the cover of the unit around so that the PC board is exposed and oriented in the position shown in Figure 2.
- e. Place cover, with PC board exposed, back on the mounted case temporarily secure it in this position to permit connection of external wires.

### 3.0 ALARM INTERFACE WIRING (Ref to Figure 2.)

#### NOTES:

1. The procedure given below provide wiring instructions for interfacing the unit with air dryer alarms. However, these instructions can also be used for interfacing dry contact alarms from other devices.
2. When connecting external wires to the unit, run them along the top of the terminal blocks and in a direction so that they will exit at the slot in the case as shown in Figure 1 when the cover is placed back in its proper position.

### 4.0 AIR DRYER I INPUT

#### 4.1 C.O. Alarm

- a. Connect ground lead from C.O. to terminal 10 (COM).
- b. Connect C.O. Alarm lead to terminal 8 for "close on alarm" operation.

- c. Connect C.O. Alarm lead to terminal 9 for “open on alarm” operation.

#### 4.2 **ESS Alarm**

- a. For “open on alarm” operation, connect pair from ESS to terminal 9 and 10.
- b. For “close on alarm” operation, connect pair from ESS to terminals 8 and 10.

#### 4.3 **Monitoring System 1**

##### a. Dry Contacts Operation

1. Place jumper (option plug) W3 across pins 2 and 3.
2. For “close on alarm” type input, connect pair from monitoring system to terminals 5 and 6.
3. For “open on alarm” type input, connect pair from monitoring system to terminals 5 and 7.

##### b. 540/270 K ohms Contacts Operation

1. Place jumper (option plug) W3 across pins 1 and 2.
2. Connect pair from monitoring system to terminals 5 and 6.

#### 5.0 **AIR DRYER 2 INPUT**

- a. Connect one (1) lead from alarm output of air dryer to terminal 11 (GND).
- b. Connect other lead from alarm output of air dryer to terminal 12.
- c. If input from air dryer is “close on alarm” type, place jumper (option plug) W1 across pins 1 and 2. For an “open on alarm” type input, place jumper (option plug) W1 across pins 2 and 3.

#### 5.1 **Air Dryer 2 Output**

#### 5.2 **C.O. Alarm**

- a. Connect ground lead from C.O. to terminal 20 (COM).
- b. Connect C.O. Alarm lead to terminal 18 for “close on alarm” operation.
- c. Connect C.O. Alarm lead to terminal 19 for “open on alarm” operation.

#### 5.3 **ESS Alarm**

- a. For “open on alarm” operation, connect pair from ESS to terminal 19 and 20.
- b. For “close on alarm” operation, connect pair from ESS to terminal 18 and 20.

#### 5.4 **Monitoring System 2**

##### a. Dry Contact Operation

1. Place jumper (option plug) W2 across pins 2 and 3.
2. For “close on alarms” type input, connect pair from monitoring system to terminals 15 and 16.
3. For “open on alarm” type input, connect pair from monitoring system to terminals 15 and 17.

##### b. 540/270 K ohms Contact Operation

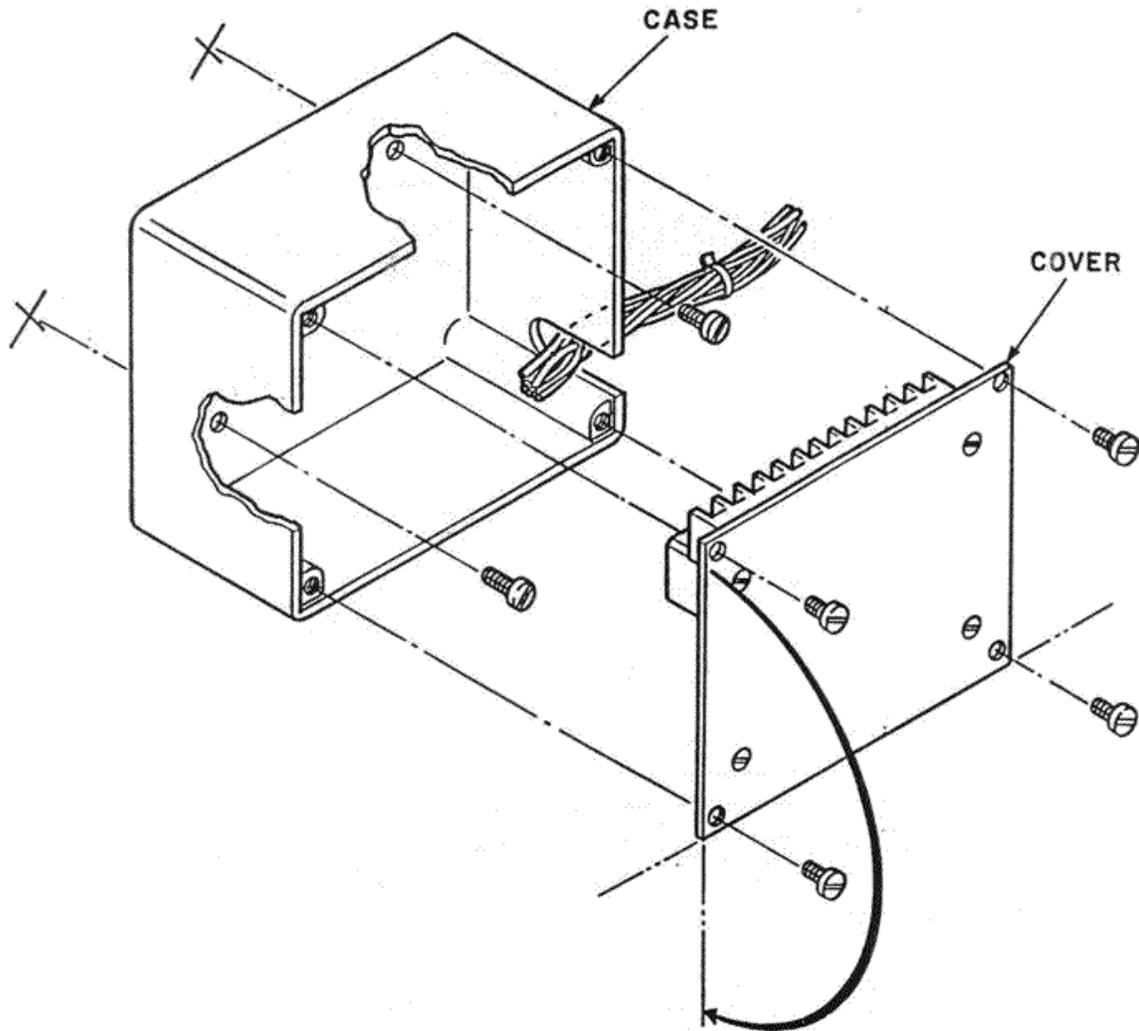
1. Place jumper (option plug) W2 across pins 1 and 2.
2. Connect pair from monitoring system to terminals 15 and 16.

## 6.0 INPUT POWER CONNECTIONS (Refer to Figure 2)

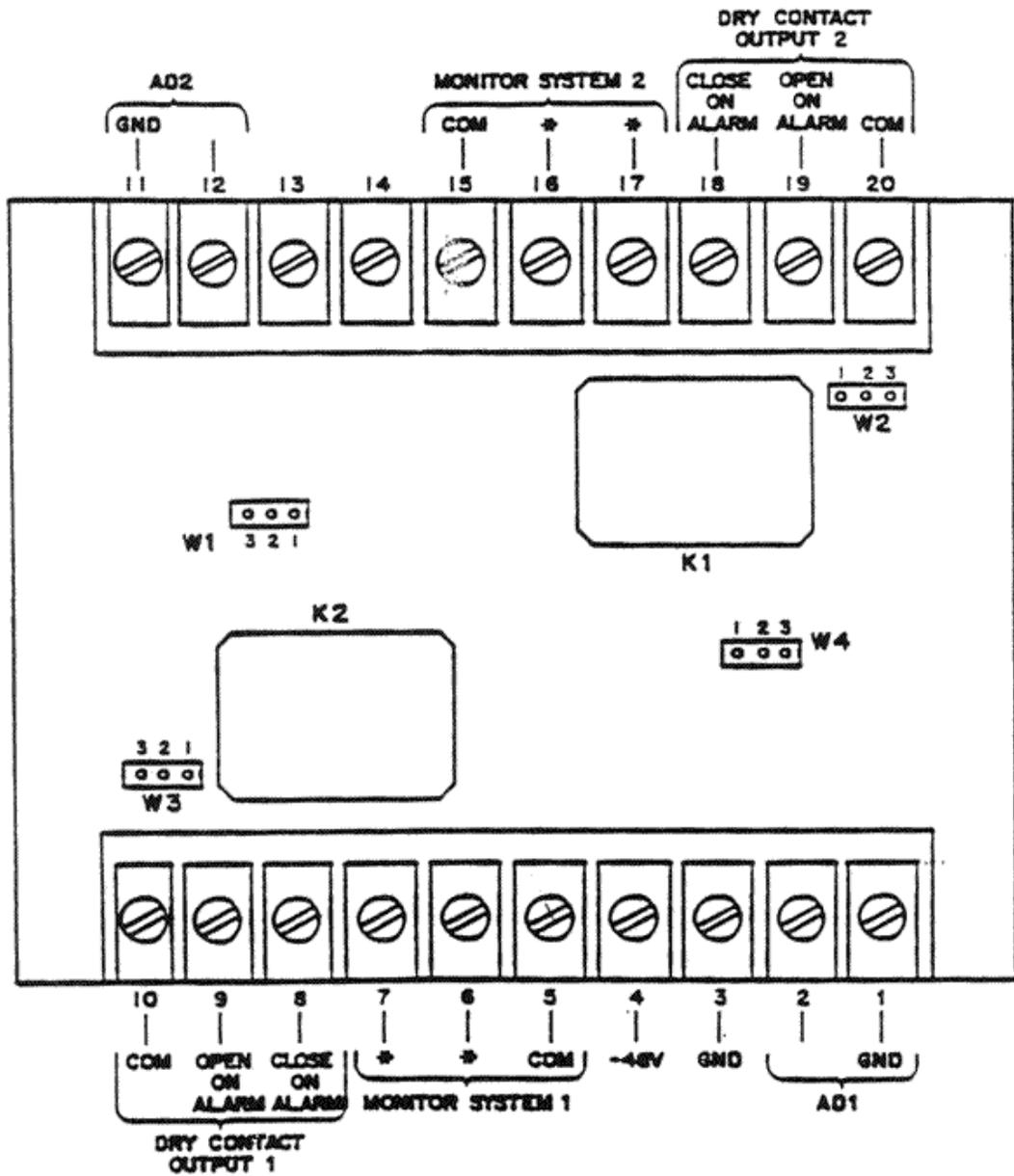
- a. Connect -48VDC to terminal 4.
- b. Connect ground to terminal 3.

After completing all external wiring to the unit, perform the following:

- a. Make sure all wire connections are tight.
- b. Remove cover from its temporary mounting position. Dress all wires properly so that they will not interfere when the cover is placed back in its proper position.
- c. Where wires enter through the slot in the case, wrap them with spiral wrap (included).
- d. Place cover back into unit as shown in Figure 1 and secure with screws.



**Figure 1. Mounting Details**



\*Refer to wiring instructions in the attached procedure

Figure 2. Alarm External Connections

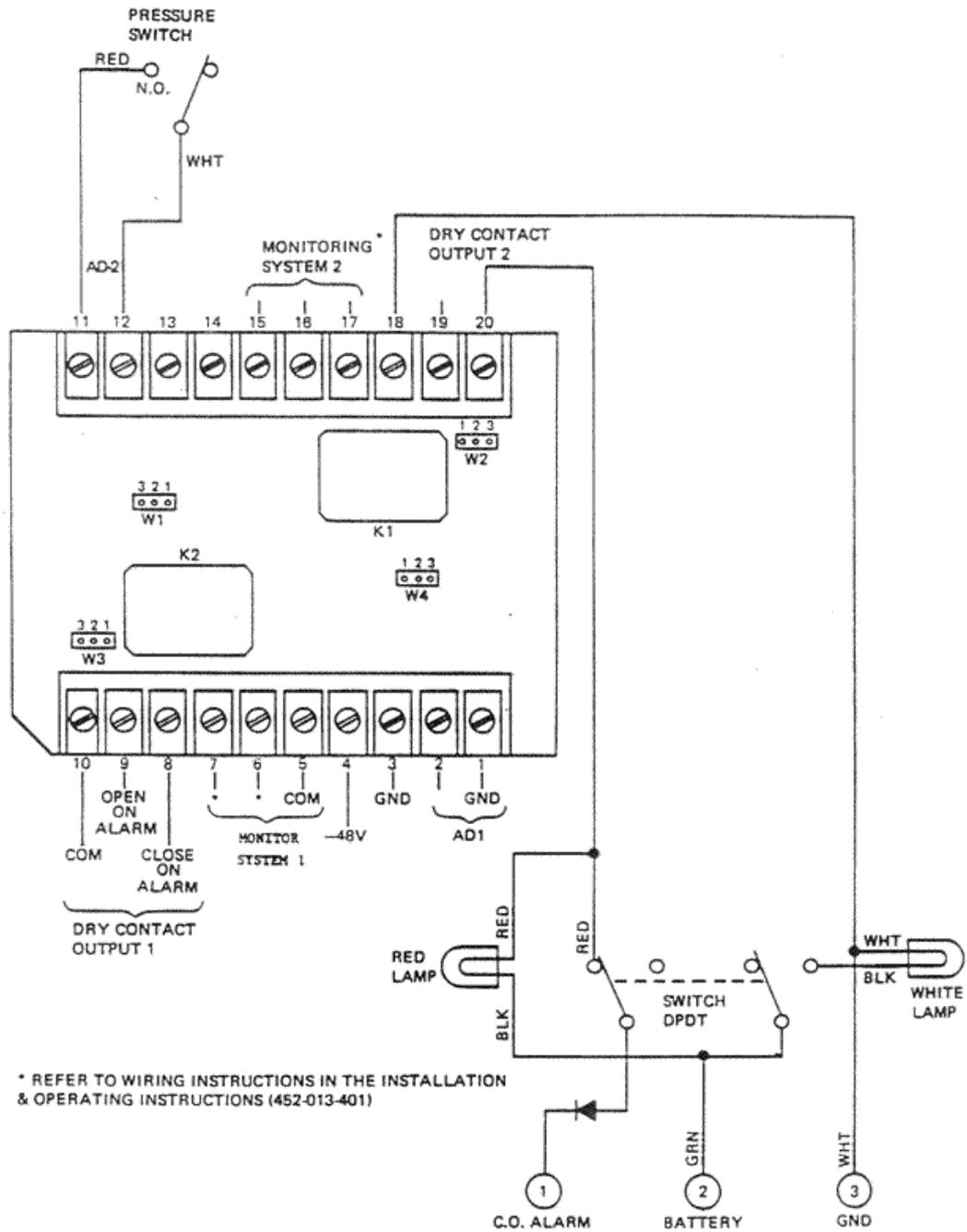


Figure 3. Interfacing PAP 1500 with universal alarm interface unit (p/n 4520M13)