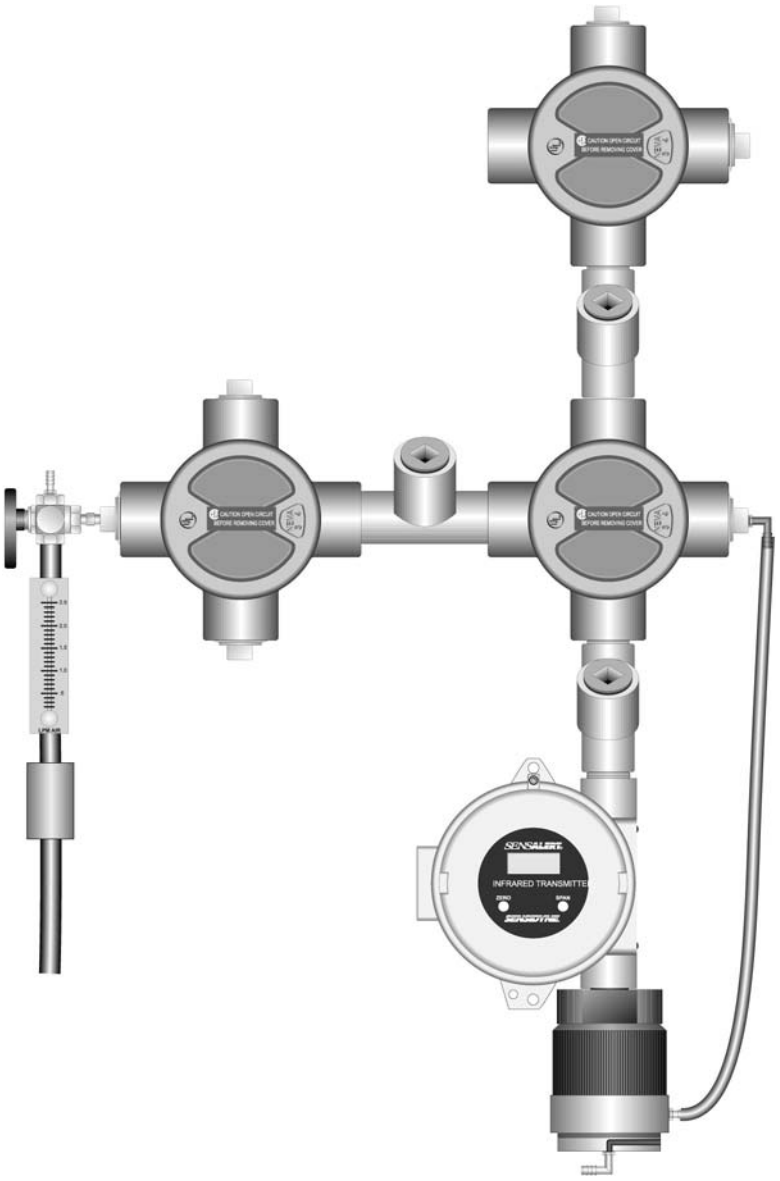
SENSALERT®

ACETYLENE SCALE UNIT

Document No. 360-0080-01

(Revision B)



IMPORTANT

Make certain you first read and understand 1) the Operation & Service Manual for your SensAlert Infrared Transmitter (particularly all warnings and precautions), and 2) these instructions before attempting to install or operate the Scale Unit.

SENSIDYNE®

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• OVERVIEW

Make certain you read and understand the Operation & Service Manual for your transmitter before installing the Acetylene Scale Unit. The Acetylene Scale Unit consists of an infrared transmitter with Acetylene sensor, PCA module, pump module, power supply module, rotameter, rotameter bracket, in-line filter, and tubing.

Refer to all NEC and local electrical codes to ensure compliance for proper installation. For hazaradous locations conduit seal must be installed adjacent to condulet enclosure.

Actylene Scale Unit Power Supply Module mounts to 3/4” wiring conduit via 3/4” NPT female connectors. Shielded cable must be used to achieve maximum RFI/EMI immunity. The scale unit must be mounted vertically (± 45° from center) with the sensor assembly pointing down.

Refer to Figure 3 for wiring diagram for AC supply, Earth ground and strobe wiring. All other wiring and seals are factory installed between power supply, pump, and transmitter modules.

NOTE

Consult factory if uninterrupted 4-20 mAoutput is desired

• FLOW FAULT ALARM RELAY

The flow fault alarm relay (K2) is 1 Form C relay with the following specification: 5 amp @ 250 VAC. It is factory wired as shown in Figure 3.

• ADJUSTING THE FLOW

Refer to Figure 4.

1) Get confirmation from the safety officer, or other appropriate person, that the area is safe and free of hazardous atmospheres.

2) Remove the PCA condulet cover, if not already removed.

3) Turn the potentiometer on the motor control clockwise to increase flow and counterclockwise to decrease flow.

4) The flow should be set to a minimum of 1000 cc/min.

5) Replace the pump condulet cover. Ensure that the condulet cover and conduit seal plugs are fully threaded to maintain XP rating.

6) Go to Section Three in the Infrared Transmitter Manual (PN° 7013313M) to perform start-up.

• INLET FILTER

The inlet filter on the pumped sample draw accessory has a low pressure drop, large area hydrophobic (PTFE) filter element and performs two functions.

The filter removes all particulates with a high efficiency protecting the flow switches and the pump from particulate contamination.

As a second function it will not pass water, and acts to prevent the ingress of water into the switches, pump, and sensor. If water enters the filter in small quantities it is blocked and eventually evaporates and passes through the filter.

If a sufficient quantity accumulates it will block flow through the filter and cause a flow fault. Periodically the filter should be replaced to keep the pressure drop low. The interval will depend on the amount of particulate matter in the sample. If the filter clogs during operation it will cause a flow fault.

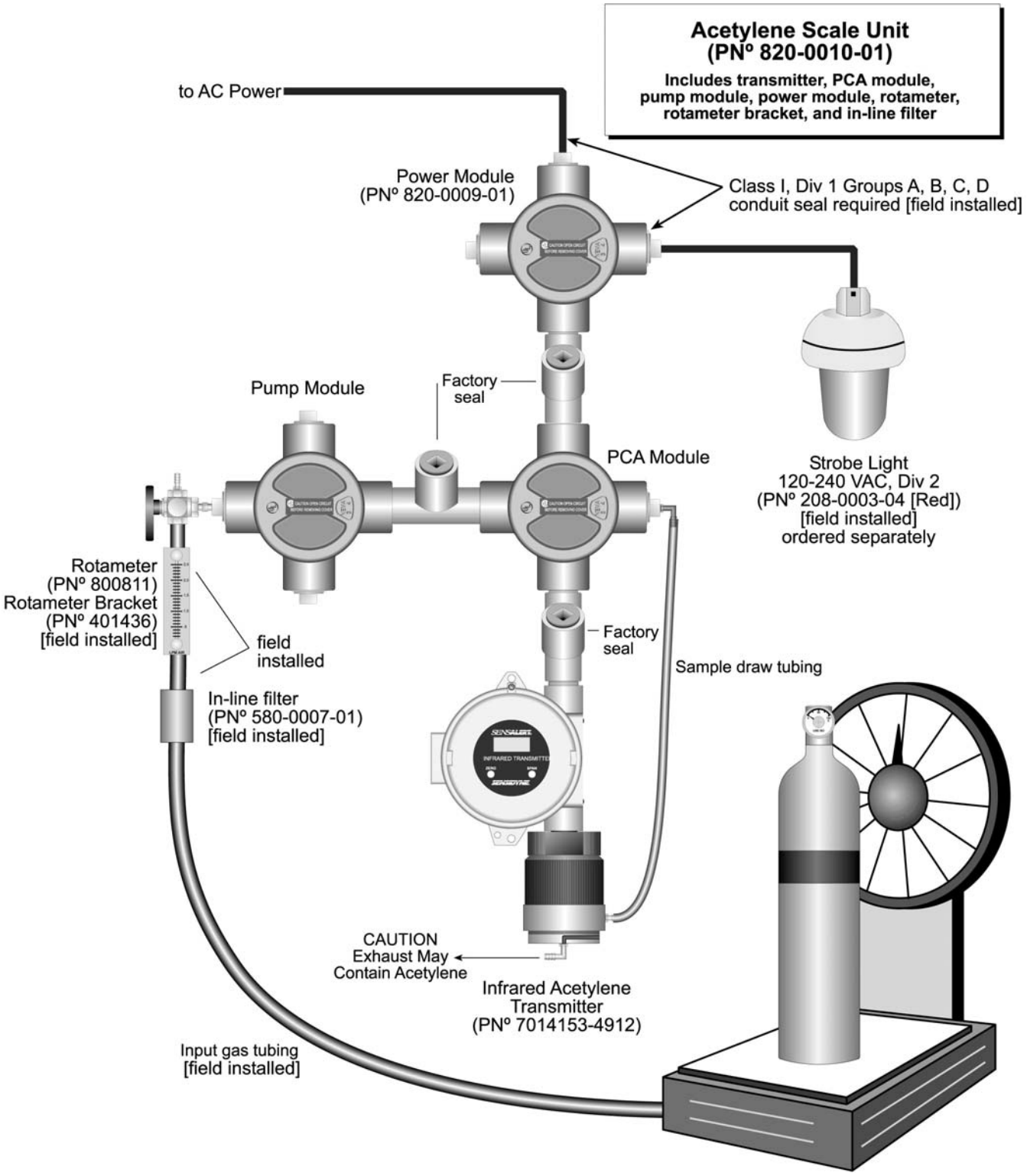

Figure 1
Acetylene Scale Unit

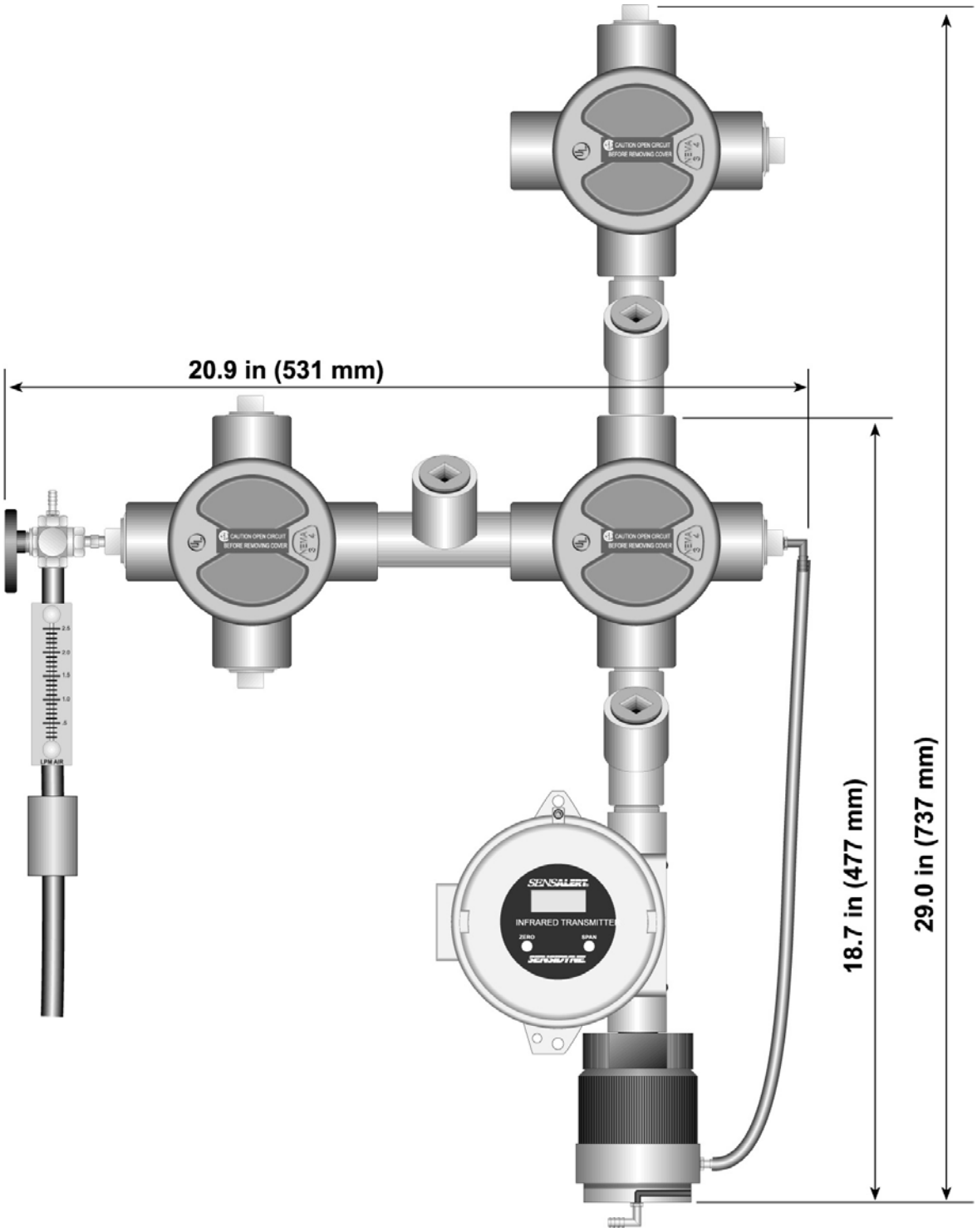

Figure 2
Acetylene Scale Unit Dimensions

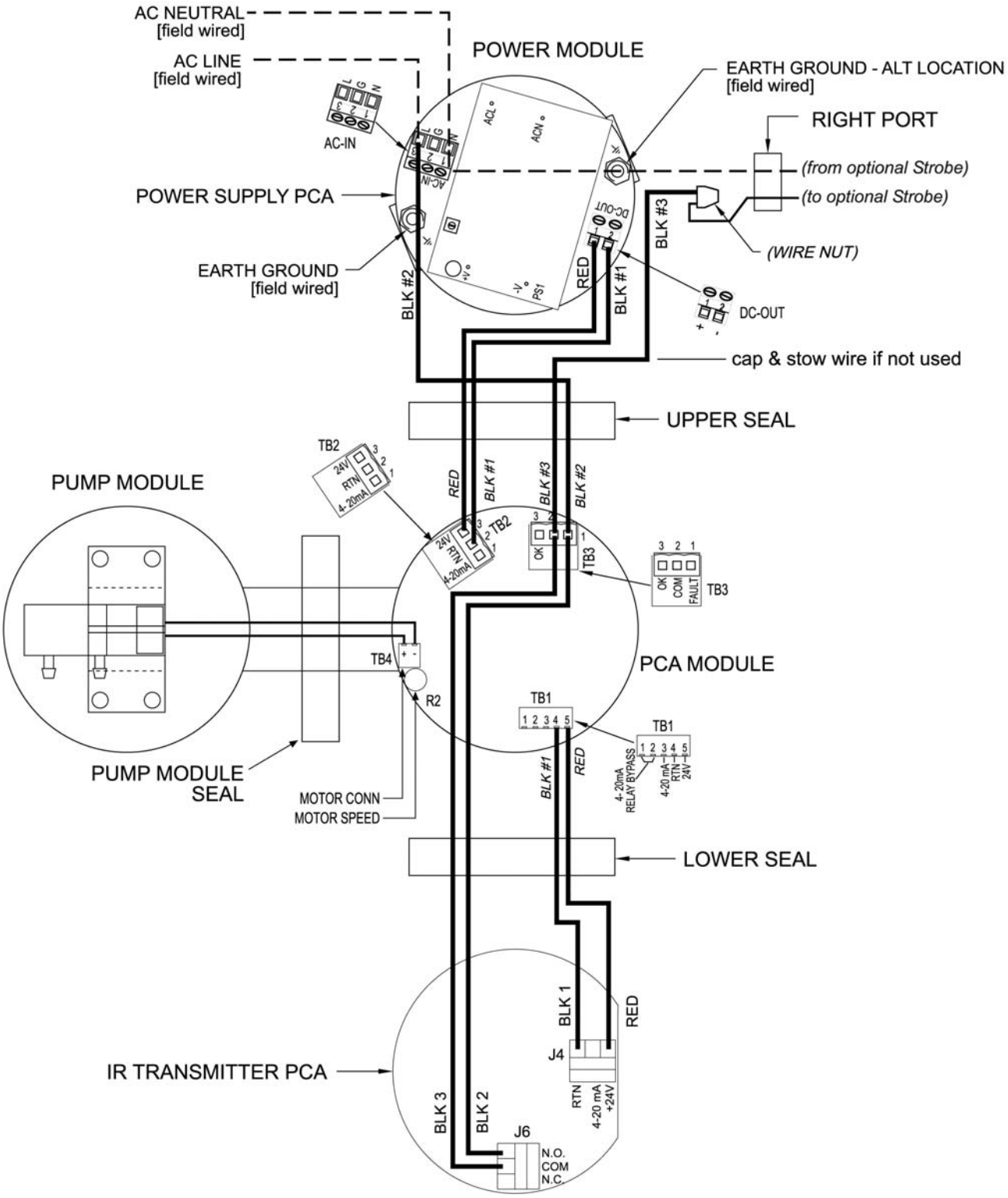

Figure 3
Acetylene Scale Unit Wiring diagram

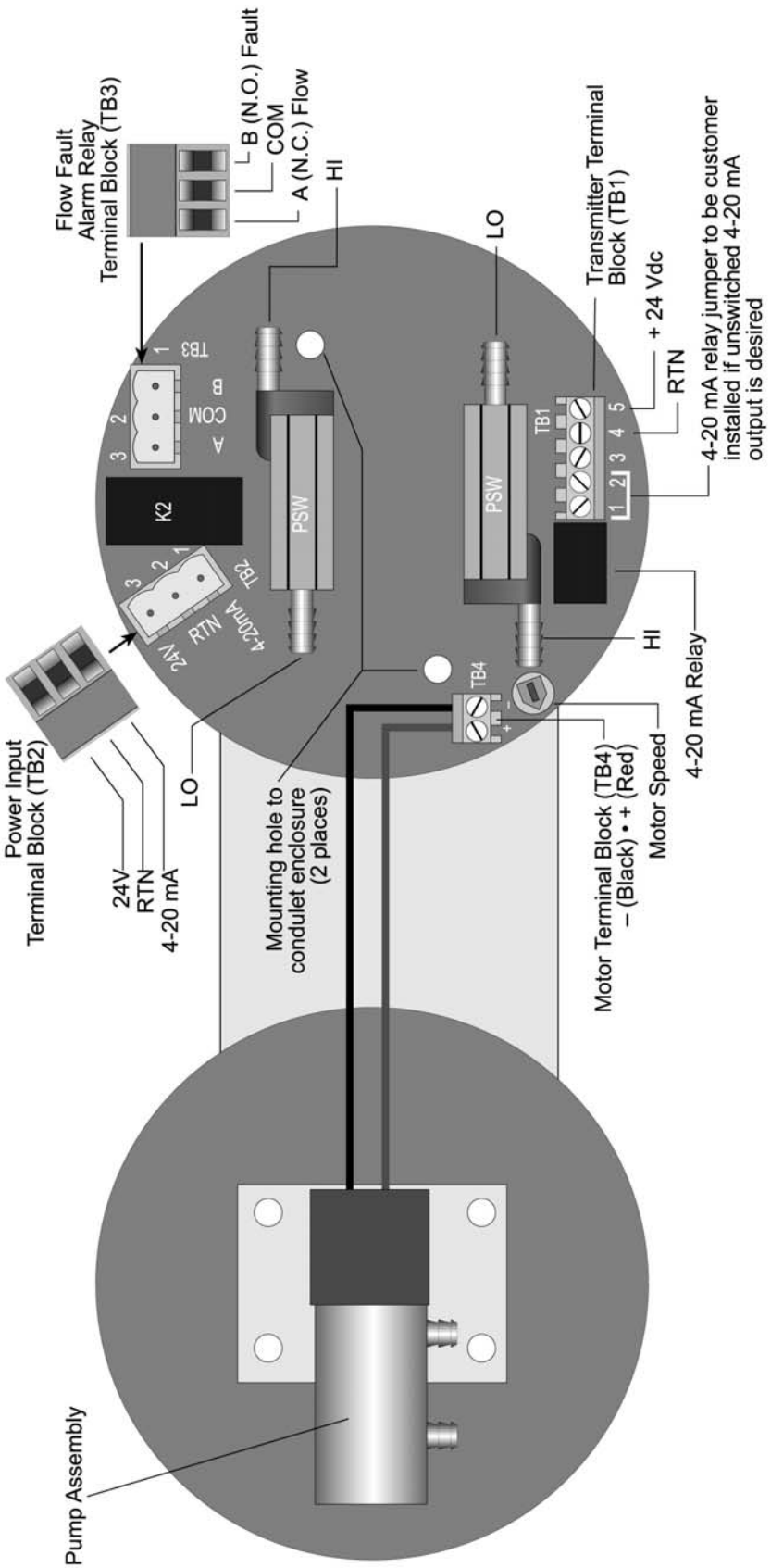

Figure 4
Pump and PCA Modules: PCBs

SPECIFICATIONS

General Specifications

Conduit ..... 3/4” NPT

Conduit Seal ..... One seal provided with 820-0004-01 & 820-0005-01 module, copper-free aluminum, classified by Underwriters Laboratories, Inc. for use in areas rated Class I, Div 1, Groups A, B, C, D

3-Way Valve ..... Brass, supplied with 1/4” hose fittings

Housing..... Iron condulet, classified by Underwriters Laboratories, Inc. for use in areas rated Cl I, Div 1, Grps A, B, C, D

Dimensions..... 4.90” (Depth) 124.5 mm (see Figure 2 for dimensions)

Weight..... 18.0 lbs (8.2 kg)

Temperature Range ..... -4° to 104°F (-20° to 40°C)

Electrical Specifications

Flow Fault Alarm Setpoint ..... Preset Trip Point 400-800 cc/min

Flow Fault Relay..... SPDT, 1 form C contact, normally energized, 5 amps 250 VAC

Power Input Requirements..... 18-30 VDC or Power Module accessory

Wire Size ..... TB2 & TB3 terminal blocks: 14-24 AWG, shielded cable recommended TB1 terminal block: 16-24 AWG

Nominal Power Consumption.... 3.0 Watts

Parts (also refer to Figure 1)

Acetylene Scale Unit 820-0010-01

SensAlert IR Transmitter 7014153-4912

Power Module..... 820-0009-01

Strobe Light [Red]..... 208-0003-04

Pump Assembly..... AA120BNSNF50VC1

Rotameter..... 800811

Rotameter Bracket..... 401436

In-Line Disposable Filter..... 580-0007-01

Conduit Seal Fitting 7017432

Calibration Cup (w/tubing)..... 7011668-2

Calibration Gas..... 009824-68

Regulator 009827-1

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