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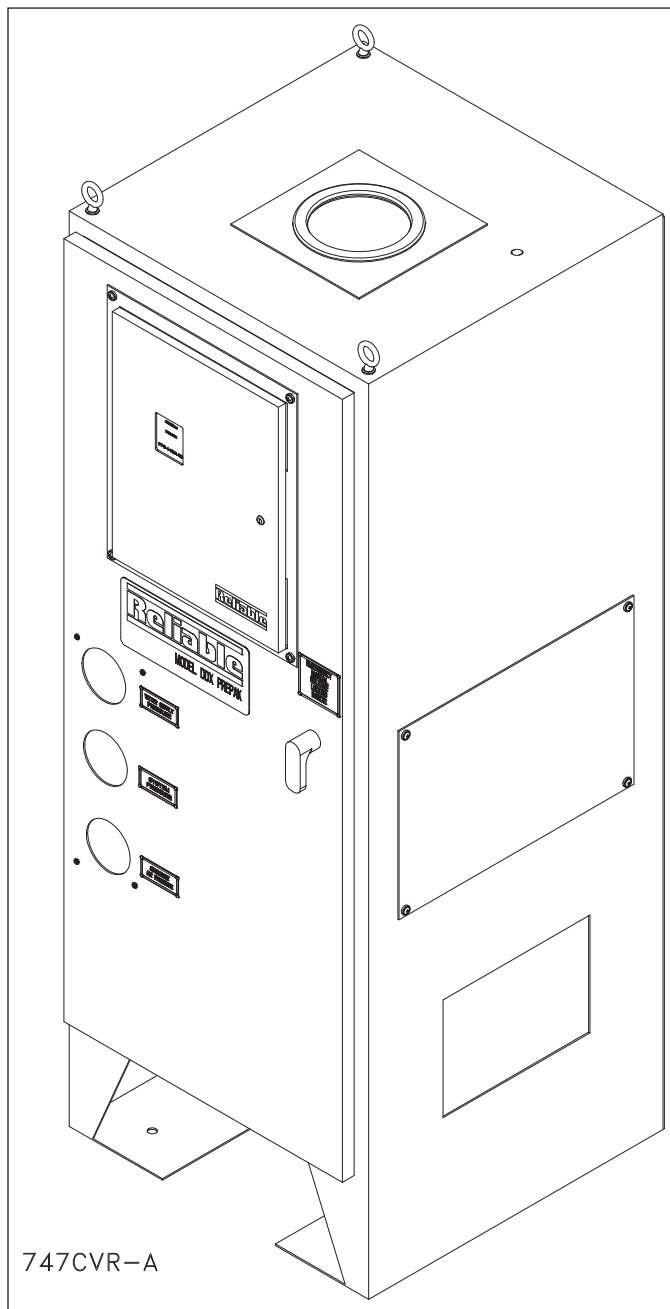
**Model DDX PrePaK, Type F
Preaction System**

**2" (50mm), 2½" (65mm), 3" (80mm),
4" (100mm), 6" (150mm) & 8" (200mm)**

Instructions for Installation, Operation, Care and Maintenance

**Double Interlock
Electric/Pneumatic Release**

10 psi - 26 psi (0.7 bar - 1.8 bar) Recommended Supervisory Pressure



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General Description

The Reliable Type F Model DDX PrePaK (Sizes 2" (50 mm), 2½" (65 mm), 3" (80 mm), 4" (100 mm), 6" (150 mm) and 8" (200 mm) is a completely self-contained, supervised preaction system that can be readily installed within a floor space of less than 7.5 square feet (0.70 square meters) (not including door swing). Refer to Fig. 1 for cabinet dimensions. Installation of the PrePaK (not including exterior devices, i.e., detectors and alarm bells), requires just three piping connections. These connections are the water supply, the sprinkler system and the drain. Reference locations of these piping connections are shown in Fig. 1. Also, two 120 / 220 VAC electrical power connections are required. **Note: The Type F Model DDX PrePaK is available with its air compressor and releasing/control panel wired for a 120 VAC / 60Hz or for a 220 VAC / 50 Hz power supply.**

Figures 15, 16, and 17 in this Bulletin identify standard and optional equipment available in Reliable DDX PrePaK, Type F, Preaction Systems.

The Reliable Type F PrePaK utilizes an optional Potter Model PFC-4410-RC Releasing/Control Panel. This fully programmable, microprocessor-based releasing panel is Underwriters Laboratories, Inc. Listed and is in compliance with NFPA 13 and NFPA 72. Because the PFC-4410-RC is totally zone and output programmable, the Reliable Type F PrePaK can be utilized in many different preaction applications without having to rewire any of the factory installed devices. Once the previously described connections are completed, the 24 VDC detectors, output devices, and relay contacts may be connected to achieve the desired system implementation.

The Type F PrePaK is designed specifically for double interlock applications. Reliable double interlock preaction systems are designed for water sensitive areas that require protection from inadvertent water flow into the sprinkler system piping.

The major benefits of a double interlock preaction System, when compared with a wet pipe system, are as follows:

- A. A fire alarm sounds prior to the flow of water from a sprinkler, which may enable extinguishment of the fire by handheld means before the operation of any sprinkler occurs.
- B. An annunciator signals whenever the integrity of piping or sprinklers is accidentally or intentionally disturbed; however, no water flow occurs at that time.
- C. Detection and notification of a fire condition are provided by fire detectors, without the delay associated with water delivery time in the event of a fire. Note that with a wet pipe system, the fire alarm is delayed until after water has begun flowing from and operated sprinkler.

To flow water into the system piping of a Type F double interlock preaction system, two events must take place:

- 1) A fire detection device must detect heat and/or smoke thereby causing the releasing/control panel to energize the normally-closed solenoid valve.
- 2) The sprinkler system piping must be purged of its supervisory air sufficiently enough for the Model LP Dry Valve Actuator to operate. This purging is usually

caused by the operation of an automatic sprinkler.

In the event that the system piping is ruptured, or a sprinkler head is accidentally opened, the Model LP Dry Valve Actuator will open and a low system air pressure alarm will sound. The Model DDX Deluge Valve, however, will not be released to flow water since the solenoid valve still remains closed. The same end result would occur if a fire detection device was falsely operated. The releasing/control panel will activate an alarm, but the Model DDX Deluge Valve will not flow water due to the fact that the Model LP Dry Valve Actuator still remains closed.

When using the Reliable Type F PrePaK, in double interlock applications, the sprinkler system is pressurized (supervised) with air provided by the optional factory-installed air compressor (or on-site Nitrogen supply) and is monitored by a system pressure switch. If Nitrogen is used as the supervisory gas, an optional Nitrogen Kit is available. This kit contains a regulator and an additional pressure switch that is used to monitor any low pressure conditions that may arise due to having a limited Nitrogen supply. Also, a "Low Nitrogen" LED is mounted onto the door of the releasing/control panel for visual confirmation. When using Nitrogen, the primary supervisory gas should be the Nitrogen (not standard air) due to dryness concerns (i.e. freezing conditions). The optional factory-installed air compressor should be utilized merely for make-up air until the Nitrogen supply can be replenished. **Note: This compressor supplied make-up air is not to be considered as dry air and may create ice plugs or freezing conditions in the sprinkler system piping.**

A Model B Hydraulic Manual Emergency Releasing station is standard equipment in the Type F PrePaK. It consists of an aluminum nameplate mechanically attached to a ball valve. The valve handle in its OFF position is guarded against accidental turning to the ON position (and system discharge) by a nylon cable tie provided with the PrePaK assembly. The cable tie is designed to allow, in case of an emergency, forceful turning of the valve handle to the ON position.

Listings and Approvals

1. Underwriters Laboratories, Inc. Listed and Certified for Canada* (cULus) as an assembled unit in the "Special System Water Control Valves Assembled Units" category, (VKYL).
*The system's pressure switches must be specified to meet Canadian requirements. This option is available.
2. Factory Mutual Approved as a Refrigerated Area Sprinkler System for use in refrigerated rooms or buildings. Refrigerated area sprinkler systems are FM Approved as complete systems. Systems are FM approved for use with thermal detectors and Class A detector wiring only.
3. Approved for use in New York City based on UL Listing.

Note: Although PrePak units are UL Listed, custom built units are sometimes supplied upon request. The components within these special units maintain their individual Listings/Approvals, whereas the assembled units do not.

ASSEMBLY DIMENSIONS

SYSTEM SIZE	A	B	C	D	E	F	G	H	J	K	L	M		N	P	DRAIN SIZE		
												GROOVE W/OUT SYSTEM C/VALVE	GROOVE WITH SYSTEM C/VALVE					
2" (50MM)	24 [61]	27 [69]	68.0 [173]	47.2 [120]	12 [30.5]	13.4 [34]	13.4 [34]	6.3 [16]	12.2 [31.0]	12.6 [32.1]	3.5 [8.9]	13.5 [34.3]	4.0 [10.2]	N/A	N/A	18.0 [45.7]	4.0 [10.2]	1-1/4" (32MM)
2½" (65MM)	24 [61]	27 [69]	68.0 [173]	47.2 [120]	12 [30.5]	13.4 [34]	13.4 [34]	6.3 [16]	12.2 [31.0]	12.9 [32.7]	3.5 [8.9]	13.5 [34.3]	4.0 [10.2]	N/A	N/A	18.0 [45.7]	4.0 [10.2]	
3" (80MM)	24 [61]	27 [69]	68.0 [173]	47.2 [120]	12 [30.5]	13.4 [34]	13.4 [34]	6.3 [16]	13.4 [34]	13.1 [33.4]	3.5 [8.9]	13.5 [34.3]	4.0 [10.2]	N/A	N/A	18.0 [45.7]	4.0 [10.2]	
4" (100MM)	25.7 [65.3]	28.9 [73.36]	68.0 [172.7]	50.5 [128.3]	13.5 [34.3]	13.8 [35.1]	13.8 [35.1]	6.3 [16.0]	12.6 [32.0]	13.6 [34.5]	1.9 [4.8]	11.9 [30.2]	7.4 [18.8]	N/A	N/A	23.7 [60.2]	15.5 [39.4]	2" (50MM)
6" (150MM)	25.7 [65.3]	28.9 [73.36]	68.0 [172.7]	50.5 [128.3]	13.5 [34.3]	13.8 [35.1]	13.8 [35.1]	5.8 [14.7]	12.6 [32.0]	14.7 [37.3]	1.9 [4.8]	10.4 [26.4]	N/A	N/A	23.7 [60.2]	15.5 [39.4]		
8" (200MM)	30.0 [76.2]	36.0 [91.4]	74.0 [188.0]	58.5 [148.6]	14.0 [35.6]	15.5 [39.4]	15.5 [39.4]	4.7 [12.0]	10.3 [26.0]	13.9 [35.3]	2.3 [5.8]	24.6 [62.5]	13.2 [33.5]	26.0 [66.0]	10.5 [26.7]	28.0 [71.1]	24.0 [61.0]	

DIMENSIONS: INCHES
[CM]

*SOME COMPONENTS
OMITTED FOR CLARITY*

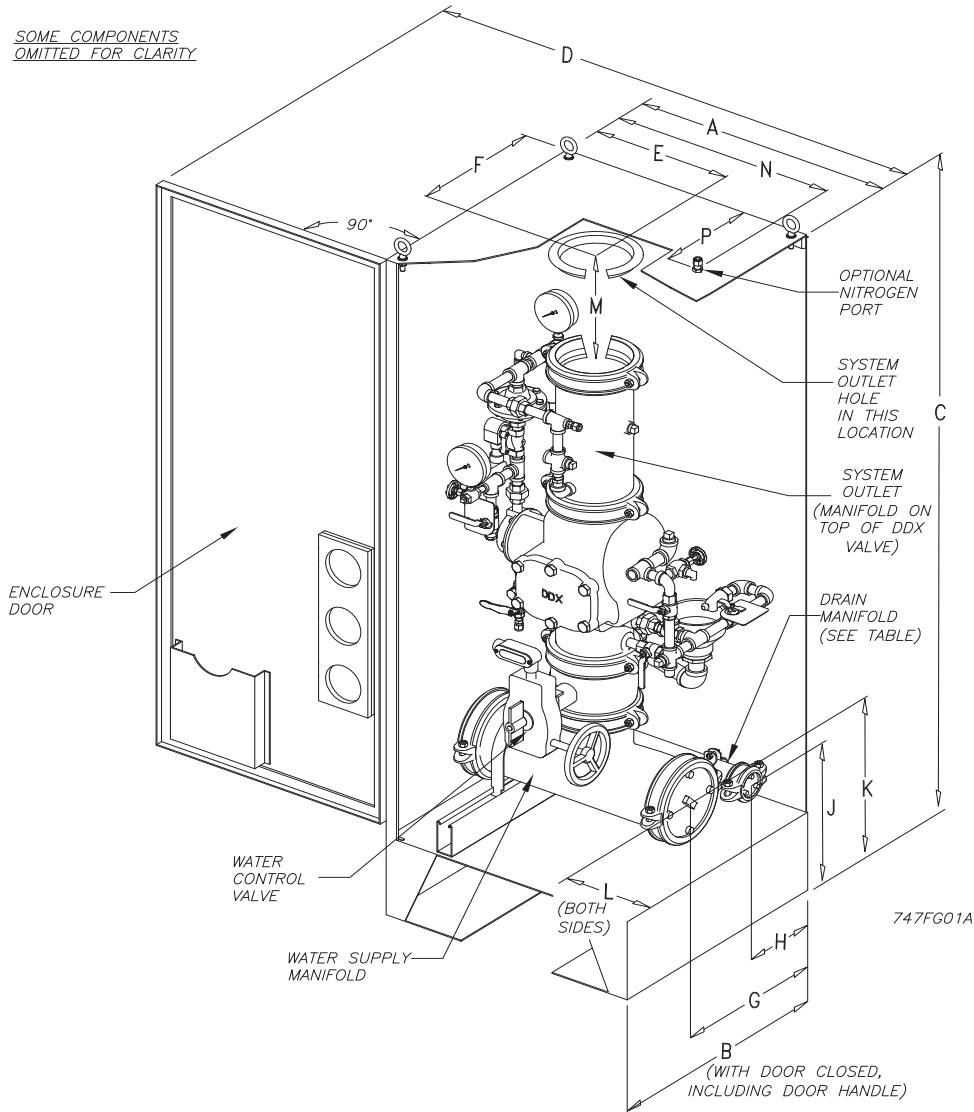


Fig. 1

PrePak units are also available without their door-mounted Potter PFC-4410-RC Releasing/Control Panel and Air Compressor. These units will still retain their Listings/Approvals, however the installing contractor should make sure that any remote controlled Releasing/Control Panels used with these units are Listed/Approved and programmed to handle the required sequence of operation necessary to operate the automatic sprinkler system. Any unauthorized modification or addition made on-site to a factory-built Listed/Approved unit will void the Listing/Approval. Such modifications or additions may void the unit's warranty as well. Consult Reliable's Technical Services Department before proceeding with any such modifications or additions.

Technical Data

- The Reliable Type F Model DDX PrePaK is rated for a minimum water supply pressure of 20 psi (1.4 bar) and a maximum water supply pressure of 250 psi (17.2 bar). Note: 1 bar = 100 kPa.
- Friction loss, expressed in equivalent length of Schedule 40 pipe and based on Hazen-Williams Formula is:

System Size:	Equivalent Length
2" (50mm)	19.4 ft (1.3 m)
2½" (65mm)	24.5 ft (1.8 m)
3" (80mm)	28.9 ft (3.8 m)
4" (100 mm)	32.8 ft (17.7 m)
6" (150 mm)	54.7 ft (21.8 m)
8" (200mm)	79.3ft (24.2m)

These values account for the Model DDX Deluge Valve, supply manifold tee, butterfly control valve, and small pipe/manifold located directly above Model DDX Deluge Valve.

3. Shipping Weight:

System Size	Weight
2" (50 mm), 2½" (65 mm) & 3" (80 mm)	554 lb. (252 kg)
4" (100 mm)	710 lbs (322 kg)
6" (150 mm)	800 lbs (363 kg)
8" (200mm)	1350lbs (531kg)

4. Dimensions:

System Size	Equivalent Dimensions
2" (50 mm), 2½" (65 mm) & 3" (80 mm)	24" W x 27" D x 68" H (0.61 m W x 0.69 m D x 1.73 m H)
4" (100 mm) & 6" (150 mm)	25.7" W x 28.9" D x 68" H (0.65 m W x 0.73 m D x 1.73 m H)
8" (200mm)	30.3" W X 36.6" D X 74" H (0.77 M X 0.93M X 1.87M)

(Refer to Fig. 1 for additional dimensions)

5. Grooved-End Connections

- ANSI/AWWA C606 grooved Inlet, Outlet & Drain.

Groove Dimensions (Inlet & Outlet)				
System Size	Outlet Diameter	Groove Diameter	Groove Width	Outlet Face to Groove
2" (50 mm)	2.375" (60mm)	2.250" (57mm)	5/16" (8mm)	5/8" (16mm)
2½" (65 mm)	2.875" (73mm)	2.720" (69mm)		
3" (80 mm)	3.500" (89mm)	3.344" (85mm)		
4" (100mm)	4.500" (114mm)	4.334" (110mm)	3/8" (10mm)	
6" (150mm)	6.625" (168mm)	6.455" (164mm)		
8" (200 mm)	8.625" (219mm)	8.441" (214mm)	7/16" (11mm)	3/4" (19mm)

Groove Dimensions (Drain)					
System Size	Outlet Diameter	Outer Diameter	Groove Diameter	Groove Width	Outlet Face to Groove
2" (50mm)	1¼" (32mm)	1.660" (42mm)	1.535" (39mm)	5/16" (8mm)	5/8" (16mm)
2½" (65mm)					
3" (80mm)					
4" (100mm)	2" (50mm)	2.375" (60mm)	2.250" (57mm)	3/8" (10mm)	
6" (150mm)					
8" (200mm)					

6. Flanged-End Connections

Flange Dimensions (Inlet & Outlet)						
System size:	Flange Type	Bolt Circle Diameter	Bolt Hole Diameter	Flange Outside Diameter	Flange thickness	Number of Bolts
8" (200mm)	ASME B16.5 Class 150	11¼" (298mm)	7/8" (22mm)	13½" (343mm)	1" (25.4mm)	8

Flange Dimensions (Drain)						
System size:	Flange Type	Bolt Circle Diameter	Bolt Hole Diameter	Flange Outside Diameter	Flange thickness	Number of Holes
8" (200mm)	ASME B16.5 Class 150	4¾" (120mm)	3/4" (19mm)	6" (150mm)	3/4" (19mm)	4

The following is a list of Technical Data Bulletins which describe the valves and devices which are used in the system:

Device	Reliable Bulletin # (unless otherwise noted)
Model DDX Deluge Valve	Reliable Bulletin 519
Type F Double Interlock Preaction Trim	Reliable Bulletin 751
Low Air Pressure Switch	Potter, 5401564
Alarm Pressure switch	Potter, 5400928
Nitrogen Pressure Switch	Potter, 5400930
Mechanical Sprinkler Alarm	Reliable Bulletins 612/613
Solenoid Valve	Reliable Bulletin 718
Releasing Control Panel	Potter Manual #5403550
Fire Alarm Devices	Reliable Bulletin 700
Desiccant Dryer	Wilkerson Catalog 9EM-TK-190-4

The following table provides a quick reference to the various programs (found in this bulletin and the Potter Manual #5403550) that may be utilized with a Type F PrePaK:

Desired Applications ⁽¹⁾	Description	Program No.
Double Interlock	Single Hazard, 2 Alarm Zones with 1 Waterflow Zone and 2 Supervisory Zones	Potter Program #6
Double Interlock, Cross-Zoned	Single Hazard, Cross-Zoned, 2 Alarm Zones with 1 waterflow Zone and 2 Supervisory Zones	Potter Program #7 ⁽²⁾

⁽¹⁾ Refer to Potter Manual # 5403550 included with the PrePaK, for other programming options available.

⁽²⁾ Factory Program setting

Installation Requirements

The automatic sprinklers, releasing devices, fire detection devices, manual pull stations, and signaling devices which are utilized with the Reliable Model DDX Type F PrePaK must be UL and/or ULC Listed or FM Approved, as applicable.

The steel enclosure and all the interconnecting piping must be located indoors in a readily visible and accessible location and in an area that can be maintained at a minimum temperature of 40°F (4°C). **Note:** Heat tracing is not permitted. The solenoid valve is operated and supervised by the Potter Model PFC-4410-RC Releasing/Control Panel. Details on the electrical connections of this system to the Potter Panel can be found in the Potter Manual #5403550, Installation, Operation and Instruction of PFC-4410-RC Releasing Control Panel (this manual is included with other pertinent manuals and shipped inside the enclosure). This panel is fully zone and output programmable and may be adapted to several applications.

Hydrostatic Testing of DDX Valves and DDX Systems

As required by NFPA 13, fire sprinkler systems with working pressures up to and including 150 psi are to be hydrostatically tested at a water pressure of 200 psi and maintain that pressure without loss for two hours. Fire sprinkler systems with working pressures above 150 psi are required to be hydrostatically tested at 50 psi above the system working pressure and maintain that pressure without loss for two hours. In addition to the hydrostatic tests described above, dry pipe and double interlock preaction systems require an additional low pressure air test.

In some cases, hydrostatic testing (in accordance with the NFPA 13 requirements noted above) will result in pressures that exceed the working pressure of the valve and trim kit for the two-hour test period. The valve and applicable trim kit have been tested, approved and listed under these conditions and as such, hydrostatic testing in accordance with NFPA 13 is acceptable. In addition, the clapper can remain in the closed position and the trim kit need not be isolated, as each has been designed to withstand hydrostatic testing as required by NFPA 13.

Hydrostatically testing the valve and trim to pressures higher than their rating is limited to the hydrostatic test as referenced by NFPA13. It does not address the occurrence(s) of a "water hammer" effect, which can indeed damage the valve. A "water hammer" in the water supply piping of the valve can create pressures in excess of the rated pressure and should be avoided by all necessary means. This condition may be created from improper fire pump settings, underground construction work, or an improper venting of trapped air in the water supply piping.

System Air / Nitrogen Pressure Requirements

The Model DDX Type F PrePaK includes gauges to read the pneumatic and water pressures of Model LP Dry Valve Actuator. Table A specifies the air or nitrogen pressure level to be applied to the Actuator. The factory installed Pressure Maintenance Device in the unit automatically provides adequate makeup air or nitrogen flow to maintain supervisory pressure with normal leakage for the system piping, while restricting the flow of makeup air or nitrogen to allow for system operation. Please note that when the optional Model B1 Accelerator is to be utilized to expedite water-delivery time, the pneumatic pressure must be not less than 15 psi (1.0 bar).

Table A

Water Pressure psi (bar)	Supervisory Air or Nitrogen Pressure in Sprinkler System, psi (bar)	
	Not Less Than	Not More Than
20 (1.4)	10 (0.7)	14 (0.9)
50 (3.4)	12 (0.8)	16 (1.1)
75 (5.2)	13 (0.9)	17 (1.2)
100 (6.9)	15 (1.0)	19 (1.3)
125 (8.6)	16 (1.1)	20 (1.4)
150 (10.3)	17 (1.2)	21 (1.4)
175 (12.1)	18 (1.2)	22 (1.5)
200 (13.8)	19 (1.3)	23 (1.6)
225 (15.5)	21 (1.5)	25 (1.7)
250 (17.2)	22 (1.5)	26 (1.8)

Note: During system set-up, a higher pneumatic pressure may be required in order to properly set the Model LP Dry Valve Actuator. The dew point of the air supply must be maintained below the lowest ambient temperature to which the preaction system will be exposed. Otherwise, accumulation of water (condensate) on the air side of the Actuator can lower the air pressure at which the Actuator opens, and possibly prevent proper system operation. Also, introduction of moisture into the system piping exposed to freezing temperatures can create ice blockage, which could prevent proper system operation. As a minimum, the supply of air should be taken from the area of lowest temperature within the protected area. The air supply system must be carefully designed to prevent

plugging by frost deposits. Special requirements, such as those in FME&R's "Installation Guidelines for Refrigerated Storage" may need to be incorporated.

Nitrogen used in refrigerated area systems minimizes a possibility of ice build-up and blockage inside the system piping that could inhibit proper system operation. The dew-point of nitrogen compressed to 20 psig (1.4 bar) pressure is -46°F (-43.3°C), and -52°F (-46.7°C) when compressed to 10 psig (0.7 bar). High-pressure nitrogen cylinders can typically be rented from a local source, with rental fees varying by supplier and cylinder sizes. Typical cylinders are described in Table B. The calculated nitrogen supply in lbs (kg) to pressurize various system capacities to 10 psi (0.7 bar) at different freezer temperatures is shown in Table C.

A Nitrogen Kit is available as an option, for installations where nitrogen is used as the supervisory gas. Installation of this kit is shown in Figs. 10, 11 or 12 depending on the system size. A "low-nitrogen" LED is mounted onto the door of the Potter Model PFC-4410-RC Releasing/Control Panel. It will illuminate when the nitrogen pressure switch detects that the available nitrogen supply has been depleted. The recommended setting for this switch is the maximum sensing pressure (100 psi). The nitrogen source should be replaced promptly upon operation of the pressure switch. If the nitrogen supply does happen to fall below the 100 psi threshold, the entire amount of make-up air will come solely from the unit's air compressor (if installed). Please note that this compressor supplied make up air is not considered as dry air.

Table B

Cylinder size	"Q"	"S"	"K"	"T"
Nitrogen Weight lbs. (kg)	5.50 (2.50)	10.28 (4.66)	16.51 (7.50)	22.01 (9.98)
Nitrogen Volume cu. ft. (m³)	76 (2.2)	142 (4.0)	228 (6.5)	304 (8.6)
Pressurized at psi (bar)*	2200 (151.7)	2200 (151.7)	2200 (151.7)	2460 (182.0)

Note: Initial pressure and thus nitrogen weight and volume can vary slightly. Check with your local supplier.

Table C

System Capacity Gal. (L)	Freezer Temperature					Approx. Fill Time (min.)*
	20°F (-6.7°C)	0°F (-18°C)	-20°F (-29°C)	-40°F (-40°C)	-60°F (-51°C)	
250 (946)	1.90 (.86)	1.90 (.86)	2.00 (.90)	2.10 (.95)	2.20 (1.00)	1
500 (1891)	3.64 (1.65)	3.80 (1.72)	4.00 (1.81)	4.20 (1.91)	4.40 (2.00)	2
750 (2840)	5.50 (2.50)	5.70 (2.60)	6.00 (2.72)	6.30 (2.86)	6.60 (3.00)	3
1,000 (3785)	7.30 (3.30)	7.60 (3.44)	8.00 (3.62)	8.33 (3.78)	8.80 (4.00)	4

Note: To obtain required nitrogen supply (lbs.) for 15 psi (1.0 bar) or 22 psi (1.5 bar), multiply the tabulated values by a factor of 1.5 or 2.2 respectively.
(1 bar = 100 kPa)

* When filled with the Rapid Air – Fill Shutoff Valve open (Valve "M" on Figs. 10, 11 or 12 depending on system size).

If the air compressor in the Model DDX Type F PrePaK is used to initially fill the sprinkler system with air, the steel enclosure's door should remain open to provide maximum intake air flow to the air compressor. The air compressor is connected to a storage tank. This tank functions as a reservoir, providing make-up air to compensate for small, intermittent leaks in the sprinkler system. It should be noted that significant leaks may overburden this storage tank, thereby causing the air compressor to continuously cycle on and off.

The factory-installed system air pressure switch (refer to Figs. 10, 11 or 12 depending on system size) may need on-site adjustment to correspond with the air pressure values found in Table A. Adjustment, if required, should be made according to Potter Bulletin 5401564 included with the switch.

System Electrical Requirements

All releasing, alarm, and detection devices in the Model DDX Type F PrePaK are supervised by an optional Potter Model PFC-4410-RC Releasing/Control Panel. To utilize one of the doors of the steel enclosure as a mount for the panel, all of the terminals are translated to two, water-tight terminal boxes mounted on the interior of the enclosure. **Note:** The EOL (End of Line) resistors have also been relocated. It is from these terminal boxes that all field wiring is connected.

There is one terminal box that contains the 24 VDC connections and one that contains the 120 / 220 VAC connections. In addition to the releasing/control panel, the Model DDX Type F PrePaK is available with the following factory-installed electrical devices:

1. A system air pressure switch, which is used to monitor sprinkler piping.
2. An alarm pressure switch, which indicates an actuation of the deluge valve.
3. An optional low nitrogen pressure switch, which indicates a depleted nitrogen supply.
4. A normally-closed, releasing solenoid valve, which is used to help actuate the deluge valve.
5. An optional air compressor (refer to the "General Description" section on page 2 of this bulletin for specifics).
6. A supervised butterfly water control valve.
7. A optional supervised system side butterfly water control valve.

The factory electrical connections of these devices are illustrated in Figs. 4, 5 or 6 (depending on system size). For information on how to install fire detection devices to initiating Zones 1 and 2 of the releasing/control panel, refer to Fig. 7 or Fig. 8. For information on how to install output devices, i.e., alarm bells or trouble annunciators, to the releasing/control panel, refer to Fig. 9. The power supply, standby emergency power supply, battery charger and rectifier circuitry are all contained within the releasing/control panel. Batteries that provide 90 hours of standby power are provided with the panel. For additional information and detailed wiring diagrams, refer to Potter Manual #5403550, Installation, Operation and Instruction of PFC-4410-RC Releasing Control Panel.

Note:

In order for the solenoid valve to maintain Reliable's warranty it must remain sealed as it came from the factory. If there are concerns about the valve's internal components, immediate replacement is recommended.

System Operation (Double Interlock)

To fully activate (water delivery to a fire) the Reliable Model DDX Type F PrePaK in a double interlock application, a fire detection device (smoke, heat, etc.) (two different detectors with cross-zoned detection) must activate and the sprinkler system's piping must be purged of its supervisory air pressure (i.e. from a discharged sprinkler head).

When the system is properly set for service, the water supply pressure simultaneously acts on both the underside of the deluge valve's clapper and on the valve's push rod by means of the pressurized push rod chamber. The resultant pressure force acting on the push rod, in unison with the mechanical advantage of the deluge valve's lever, is more than sufficient to hold the valve's clapper in the closed position against the water supply pressure.

Energizing the releasing solenoid valve is only one of the events required towards opening the deluge valve. Air pressure in the sprinkler system must also be reduced to a level low enough to activate the Model LP Dry Valve Actuator. **Both** of these events allows the deluge valve's pushrod chamber to be vented to drain through its outlet. Since the push-rod chamber's pressure cannot be replenished through its inlet restriction as rapidly as it is vented through its outlet, the pressure falls rapidly. When the push-rod chamber pressure drops below one-third of the water supply pressure, the opening force acting beneath the valve's clapper becomes greater than the push-rod force acting on the lever. This causes the clapper to open. Refer to Reliable Technical Bulletin 751 for further details.

Once the clapper has opened, the lever acts as a latch, preventing the clapper from returning to the closed position. Water from the supply flows through the deluge valve into the system piping. Water also flows through the deluge valve alarm outlet to activate any water flow alarm devices. Note that the solenoid valve will be maintained open by the Potter Model PFC-4410-RC Releasing/Control Panel's latching feature until it is reset for operation.

After system shutdown and draining, the Model DDX Deluge Valve is easily reset without special tools (see Figs. 10, 11 or 12 depending on system size). Restore detection devices by resetting or replacing any operated device. Once detection devices are restored and the Potter Model PFC-4410-RC Releasing/Control Panel is reset, water supply pressure may be re-applied to the deluge valve.

Maintenance

The Model DDX Type F PrePaK and associated equipment shall periodically be given a thorough inspection and test. NFPA 25, Inspection, Testing and Maintenance of water Based Fire Protection Systems, provides minimum maintenance requirements. Systems should be tested, operated, cleaned and inspected at least annually, and parts replaced as required. Periodically open the air/condensate drain valve (see Figs. 10, 11 or 12 depending on system size) beneath

the air tank to drain any condensate accumulation. Reliable Technical Bulletin 751 provide information for maintaining the Model DDX Deluge Valve. Potter Manual #5403550 provides information for maintaining the PFC-4410-RC Releasing/Control Panel.

System Reset Procedure (All Sizes)

Refer to Figs. 10, 11 or 12 (depending on system size)

1. Close the main valve controlling water supply to the Model DDX deluge valve. Also, close the two ¼" valves, valves M (Rapid-Air Fill Shutoff Valve) and K (Regulated Air Shutoff Valve).
2. Close the pushrod chamber supply valve, valve A.
3. Open the main drain valve, valve B, and drain the system.
4. Open all drain valves and vents at low points throughout the system, closing them when flow of water has stopped. Open valve D. **Note:** The above steps accomplish the relieving of pressure in the pushrod chamber of the deluge valve.
5. Open valve N. Push in the plunger of ball drip valve, valve F, to force the ball from its seat, and drain any water in the alarm line. Close valve N.
6. With the Model B Manual Emergency Station, valve D, open, push in and rotate the deluge valve's external reset knob clockwise until you hear a distinct clicking noise, indicating that the clapper has closed. **Note:** The reset knob can be rotated only after pressure in the pushrod chamber is reduced to atmospheric conditions (0 psig).
7. Inspect and replace any portion of the sprinkler system subjected to fire conditions. Press the system reset button on the Potter PFC-4410-RC Panel to place the system in the ready condition. **Note:** All detection devices must be reset before the panel can be reset.
8. Verify that the following valves are in their respective positions prior to continuing:
Valve A – closed, Valve B – open, Valve C – open, Valve D – open, Valve E – closed, Valve G – open (if optional air compressor is installed), Valve H – closed, Valve J – open (if optional Nitrogen Kit is installed), Valve K – closed, Valve M – closed, Valve N – closed, Valve P – closed (if optional Model B1 Accelerator Kit is installed).
9. Open valve A and allow water to fill the deluge valve's pushrod chamber. Close valve D after any trapped air has had a chance to escape from the deluge valve's pushrod chamber. Close the main drain, valve B.
10. Bleed any residual air that may be located between the solenoid valve and the Model LP Dry Valve Actuator piping by energizing the solenoid valve. This is done by opening the factory-installed manual pull station that is assembled to the exterior of the PrePaK's 24VDC Terminal Box. Water should now be flowing freely through the solenoid valve as well as the Model LP Dry Valve Actuator into the drip cup. **Note:** This venting of all trapped air from this small location in the trim is very important to ensure proper system operation and avoidance of false-tripping the valve during an isolated electrical alarm.

11. Upon seeing this solid flow of water coming out of the Model LP Dry Valve Actuator, open valves M (Rapid-Air Fill Shutoff Valve) and K (Regulated Air Shutoff Valve), thereby rapidly applying compressed air or nitrogen into the Model LP Dry Valve Actuator (and the sprinkler system) until the pressure conforms to Table A levels, as indicated by the system air pressure gauge. The Model LP Dry Valve Actuator will eventually close during this pressurizing process and the water will stop flowing into the drip cup. At this point, the pressure gauge which indicates push-rod chamber pressure will equalize to the available water supply pressure. Once the actuator is setup correctly, close the Rapid-Air Fill Shutoff Valve, valve M. Keep the Regulated Air Shutoff Valve, valve K open. **Note:** If 1) the optional air compressor is installed and 2) the dryness of the supervisory air is critical (i.e. freezer applications), valve G should be closed during this step as to not let any moist air into the sprinkler system. Valve G may be re-opened once the Model LP Dry Valve Actuator has been successfully set up with a dry air supply (i.e., nitrogen) in order to provide any make up air that, if not supplied, could cause a potential low-air alarm condition.
12. Open valve N.
13. If the Model B1 Accelerator Kit is installed, open valve P. Prior to opening valve P, be sure that the Model B1 Accelerator has been successfully reset per Reliable Technical Bulletin 323. **Note:** The B1 Accelerator requires a minimum of 15 psi (1.0 bar) of supervisory gas pressure for proper operation.
14. Close the manual pull station that is assembled to the exterior of the PrePak's 24VDC Terminal Box and then press the system reset button on the Potter PFC-4410-RC Panel. **Note:** All other detection devices must be reset before the releasing/control panel can be reset.
15. Slightly open the main valve controlling water supply to the Model DDX Deluge Valve. This will fill the deluge valve's volume beneath its clapper with water. Slightly open the main drain valve, valve B, to vent any trapped air. Once any trapped air has been vented, close valve B. Making sure that valve N is open, observe if water leaks through the ball drip valve, valve F, into the drip cup (Or into the 1" Drain manifold through the clear tubing for 8" System). If no leakage occurs, the deluge valve's clapper is sealed. Fully open the main valve controlling the water supply to the Model DDX Deluge Valve. Visually verify by the position of its indicator flag that it is fully-opened.
16. Verify that valve A is open.
17. Secure the handle of the Model B Manual Emergency Station, valve D, in the OFF position with a nylon tie (supplied with the assembly).
18. Press the system reset button on the Potter PFC-4410-RC Panel to place the system in the ready condition. **Note:** All detection devices must be reset before the panel can be reset.

Inspection And Testing

Refer to Figs. 10, 11 or 12 (depending on system size)

1. **Water supply** — Verify that the valve controlling water supply to the deluge valve is opened fully and properly monitored.
2. **Alarm line** — Verify that valve C is opened and remains in this position.
3. **Other trimming valves** — Verify that valve N is open as well as all of the pressure gauge's ¼" 3-way valves. Valves D, E, and H should be closed.
4. **Ball drip valve F** — Push in on the plunger to be sure the ball check is off its seat. If no water appears, the deluge valve's water seat is tight. Inspect the small bleed hole located on the underside of the Model DDX Deluge Valve's pushrod chamber for leakage.
5. **System air pressure** — Verify that system's air pressure and water supply pressures are in conformance with the values posted in Table A.
6. **Releasing device** — Check the outlet of the releasing device (i.e., solenoid valve, Model LP Dry Valve Actuator or the Model B Manual Emergency Station, valve D) for leakage. Also verify that tubing drain lines from releasing devices are not pinched or crushed which could prevent proper releasing of the deluge valve.
7. **Testing alarms** — Open valve E permitting water from the supply to flow to the alarm pressure switch and to the mechanical sprinkler alarm (if present). After testing, close this valve completely. Push in on the plunger of ball drip valve F until all of the water has drained from the alarm line.
8. **Operational test** — Open the Model B Manual Emergency Station, valve D. **Note:** An operational test will cause the Deluge Valve to open and flow water into the sprinkler system.
9. Secure the Model B Manual Emergency Station, valve D, in the OFF position with a nylon tie (included with the assembly) after the deluge valve is reset.

Testing the Model DDX Deluge Valve Without Flowing Water

Refer to Figs. 10, 11 or 12 (depending on system size)

1. Close the valve controlling water supply to deluge valve and open the main drain valve B.
2. Verify that valve A is open, allowing water to enter the push rod chamber.
3. Close off the air/nitrogen supply to the sprinkler system.
4. Decrease pneumatic pressure in the system by opening the ¼" angle valve, valve H, deluge valve until the Model LP Dry Valve Actuator operates. This will be indicated by a sudden drop of water pressure on the air pressure gauge. This operation of the actuator will vent the water pressure from itself back to the solenoid valve which is still closed. The push-rod chamber of the deluge valve should still be pressurized at this point.

5. Open the factory-installed manual pull station that is assembled to the exterior of the PrePaK's 24VDC Terminal Box. This will energize the solenoid valve open. Doing so will result in a sudden drop of water pressure in the deluge valve's push rod chamber.
6. Reset the system per the directions listed in "System Setup" section of this bulletin.

Draining Excess/Condensate Water From System

Refer to Figs. 10, 11 or 12 (depending on system size)

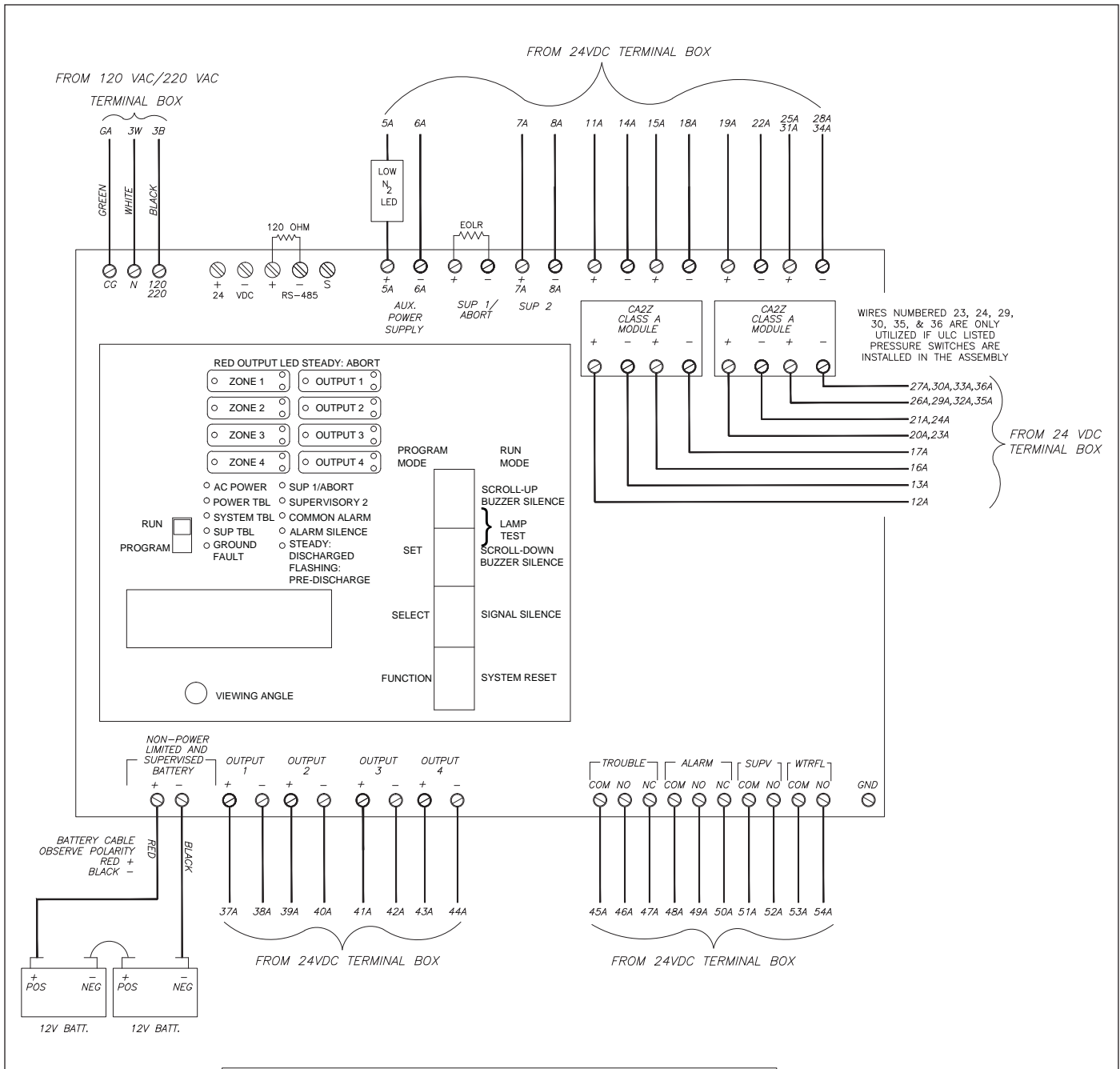
1. Close the main valve controlling water supply to deluge valve. Also close valve A and open main drain valve B.
2. Open condensate drain valve H until all water has drained. Close valve H. **Note:** Be sure not to keep valve H open for an extended period of time because that will cause enough system air to bleed off thereby actuating the Model LP Dry Valve Actuator (see Table A for pneumatic pressure values required to maintain the Model LP Dry Valve Actuator closed for a given water supply pressure). If the Actuator does happen to actuate, the entire system must be re-established in the correct order as to avoid any possibilities of false-tripping of the deluge valve. Proceed according to the directions listed in the "System Setup" section of this bulletin.
3. Close main drain valve B. If system contains pressurized air, allow air pressure to come back up to specification. Open valve A first, and then open the main valve controlling the water supply to the deluge valve.

SOLENOID VALVE INSPECTIONS, TESTS AND MAINTENANCE

WARNING: THE OWNER IS RESPONSIBLE FOR MAINTAINING THE FIRE PROTECTION SYSTEM IN PROPER OPERATING CONDITION. ANY SYSTEM MAINTENANCE OR TESTING THAT INVOLVES PLACING A CONTROL VALVE OR DETECTION SYSTEM OUT OF SERVICE MAY ELIMINATE THE FIRE PROTECTION OF THAT SYSTEM. PRIOR TO PROCEEDING, NOTIFY ALL AUTHORITIES HAVING JURISDICTION. CONSIDERATION SHOULD BE GIVEN TO EMPLOYMENT OF A FIRE PATROL IN THE AFFECTED AREA.

WARNING: PRIOR TO OPERATING THE SOLENOID VALVE, BE SURE TO CLOSE THE SYSTEM CONTROL VALVE TO AVOID UNINTENTIONAL OPERATION OF THE DELUGE VALVE

1. Inspections: It is imperative that the system be inspected and tested in accordance with NFPA 25 on a regular basis. The frequency of the inspections may vary due to contaminated water supplies, corrosive water supplies, or corrosive atmospheres. In addition, the alarm devices, detection systems, or other connected trim may require a more frequent schedule. Refer to the system description and applicable codes for minimum requirements.
2. The valve must be inspected at least monthly for cracks, corrosion, leakage, etc., cleaned and replaced as necessary.
3. If leakage is suspected through the solenoid valve, it should be replaced.

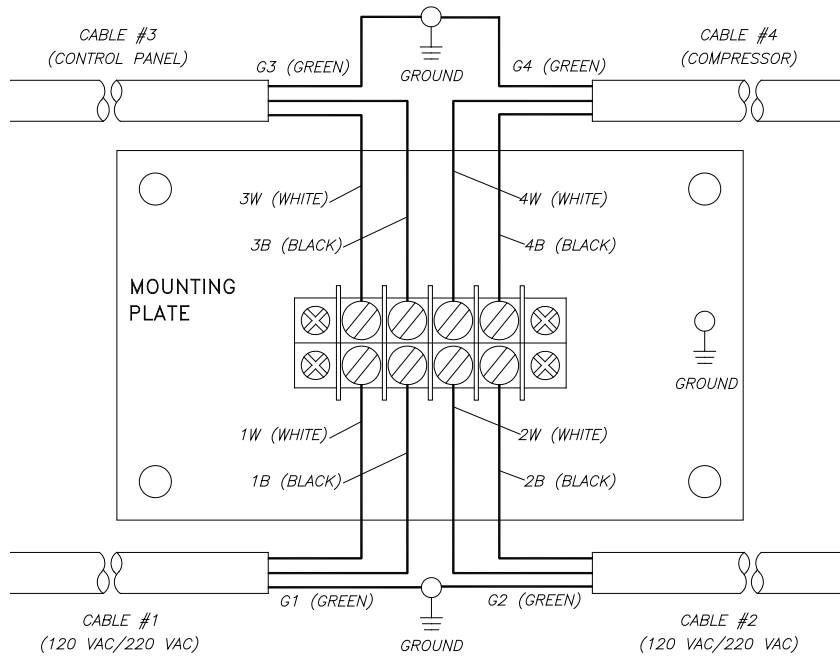


- NOTES:
1. Connect only UL listed 24VDC devices to outputs.
 2. Connect EOL diode assy. IN SERIES with solenoid on release circuit.
 3. Leave EOLR (provided) on all unused circuits.
 4. Polarity marked on outputs is for a normal, non-activated condition.
 5. Polarity reverses when output is activated.
 6. Max. current per output is 1 amp.
 7. Max. current for all outputs combined is 2.5 amps.
 8. All initiating and release circuits are supervised and power limited.

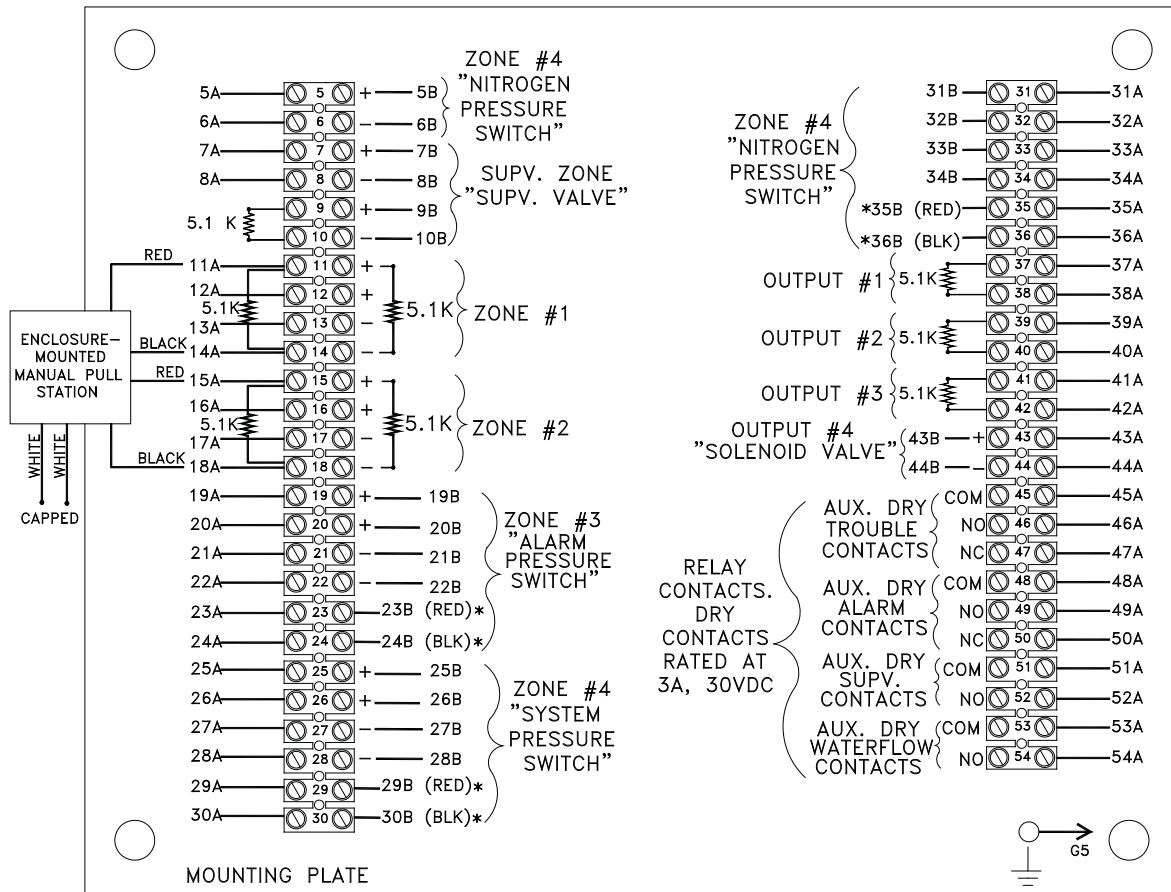
POTTER PFC-4410-RC RELEASING CONTROL PANEL

747FG02A

Fig. 2



120 VAC/220 VAC TERMINAL BOX (FACTORY CONNECTIONS)

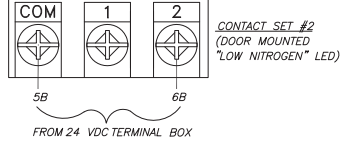
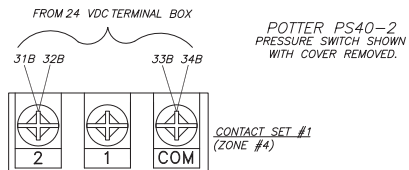
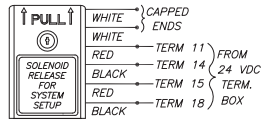
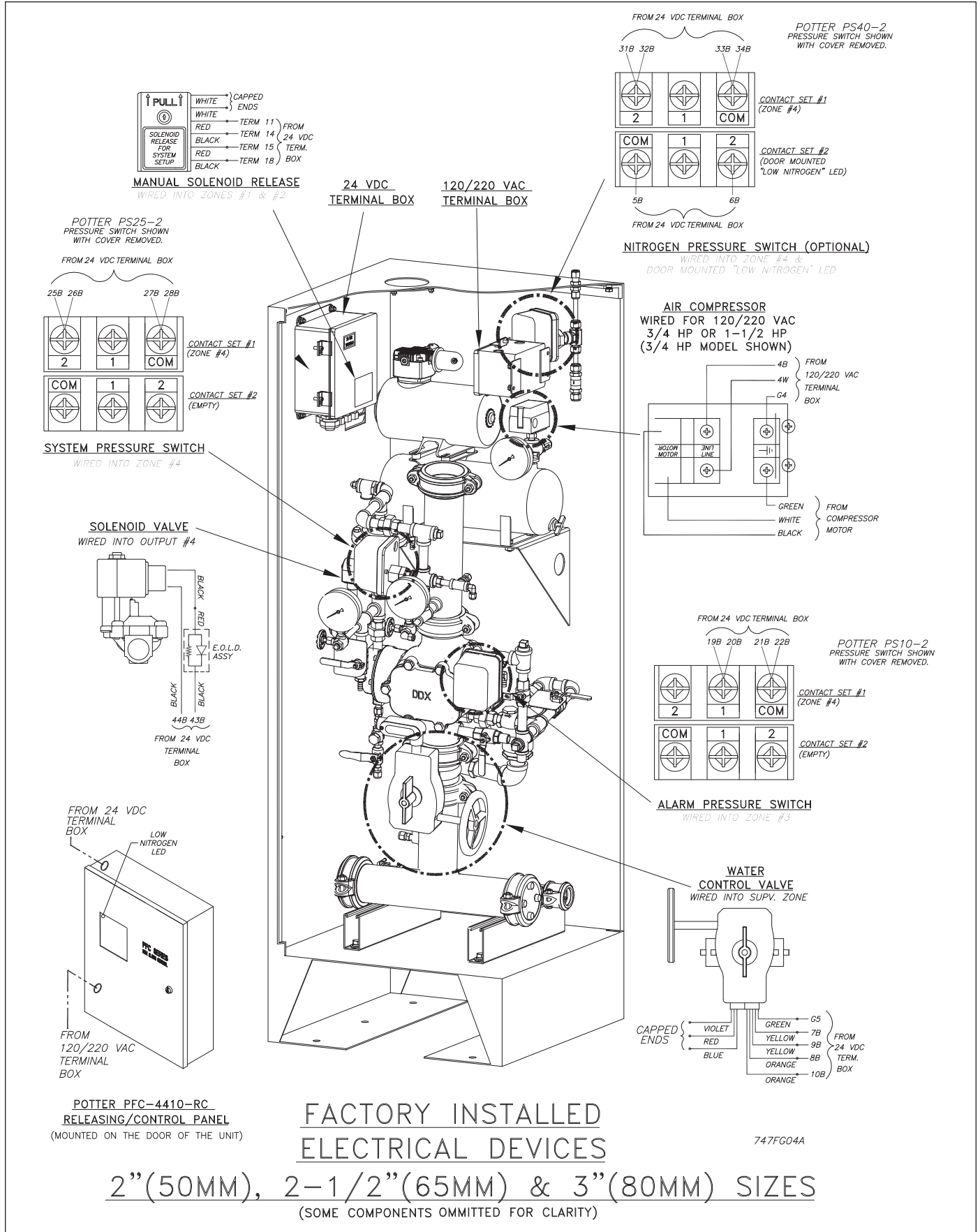


747FG03

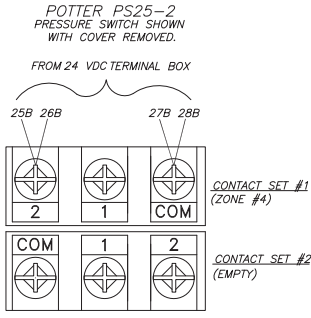
24 VDC TERMINAL BOX (FACTORY CONNECTIONS)

* TERMINALS & WIRES NUMBERED 23,24,29,30,35,36 ARE UTILIZED ONLY IF ULC LISTED PRESSURE SWITCHES ARE INSTALLED IN THE ASSEMBLY.

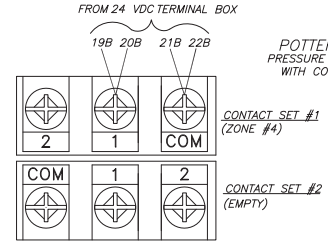
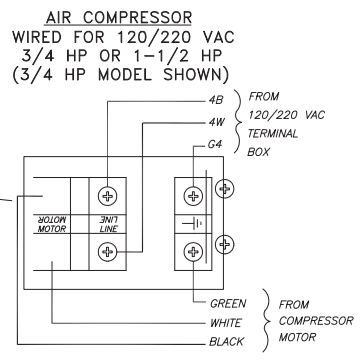
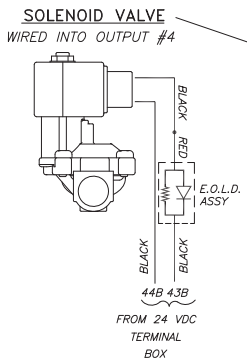
Fig. 3



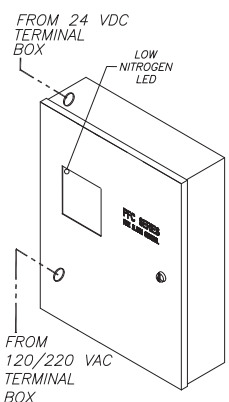
NITROGEN PRESSURE SWITCH (OPTIONAL)
WIRED INTO ZONE #4 & DOOR MOUNTED "LOW NITROGEN" LED



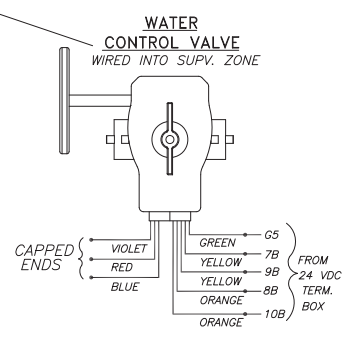
SYSTEM PRESSURE SWITCH
WIRED INTO ZONE #4



ALARM PRESSURE SWITCH
WIRED INTO ZONE #3



POTTER PFC-4410-RC
RELEASING/CONTROL PANEL
(MOUNTED ON THE DOOR OF THE UNIT)

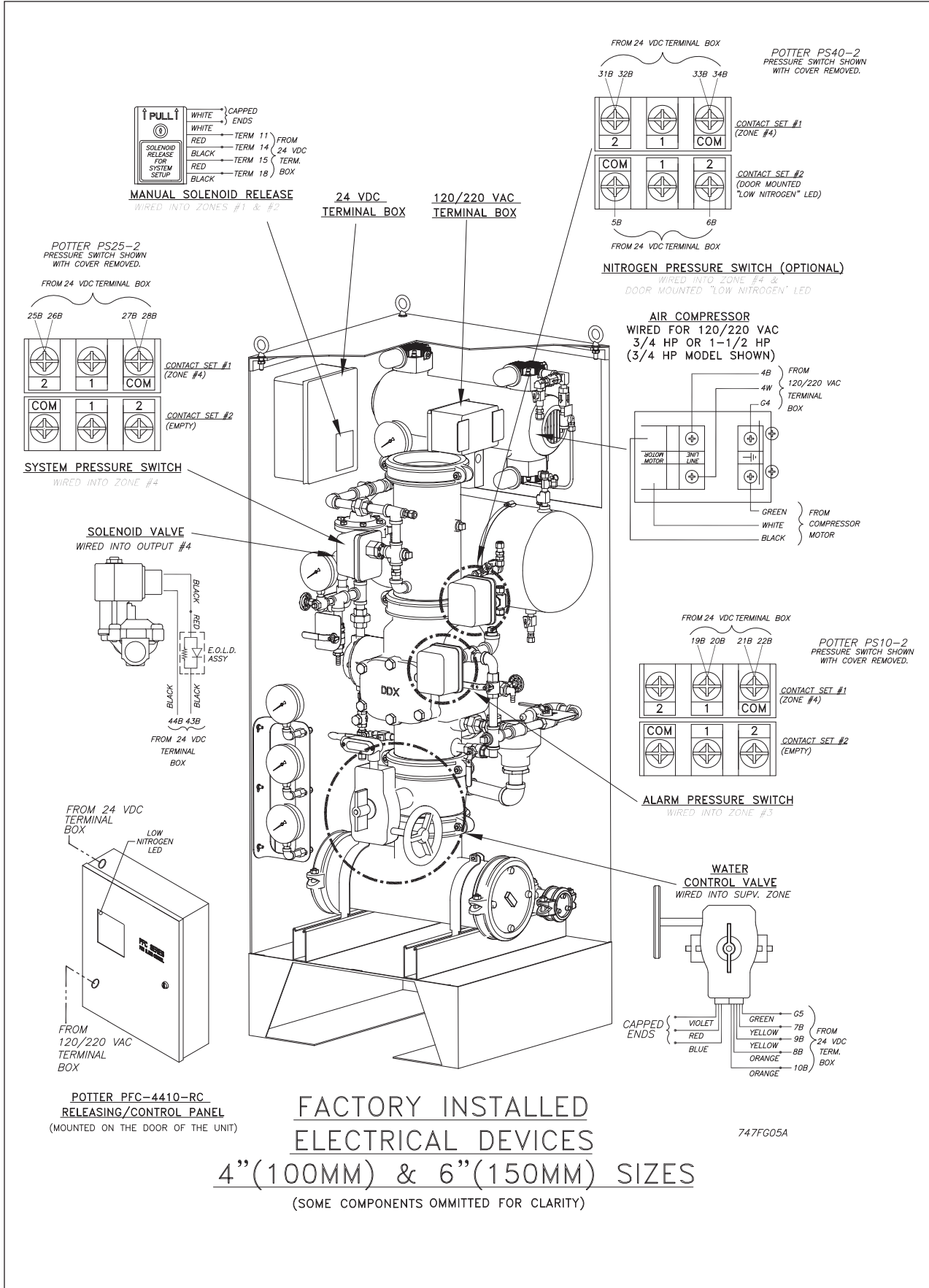


FACTORY INSTALLED ELECTRICAL DEVICES

747FG04A

2"(50MM), 2-1/2"(65MM) & 3"(80MM) SIZES
(SOME COMPONENTS OMMITTED FOR CLARITY)

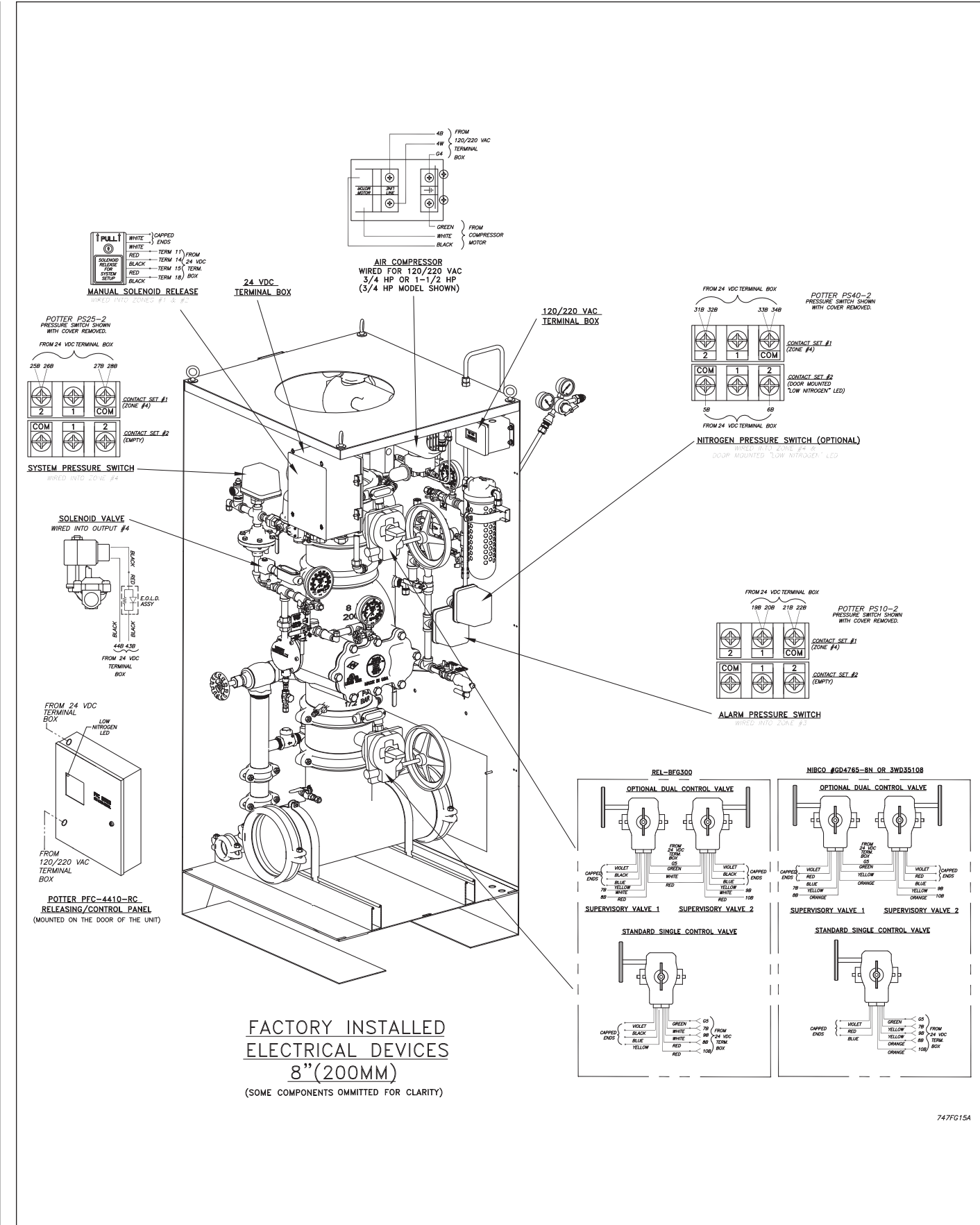
Fig. 4



**FACTORY INSTALLED
ELECTRICAL DEVICES**
4"(100MM) & 6"(150MM) SIZES
 (SOME COMPONENTS OMITTED FOR CLARITY)

747FG05A

Fig. 5

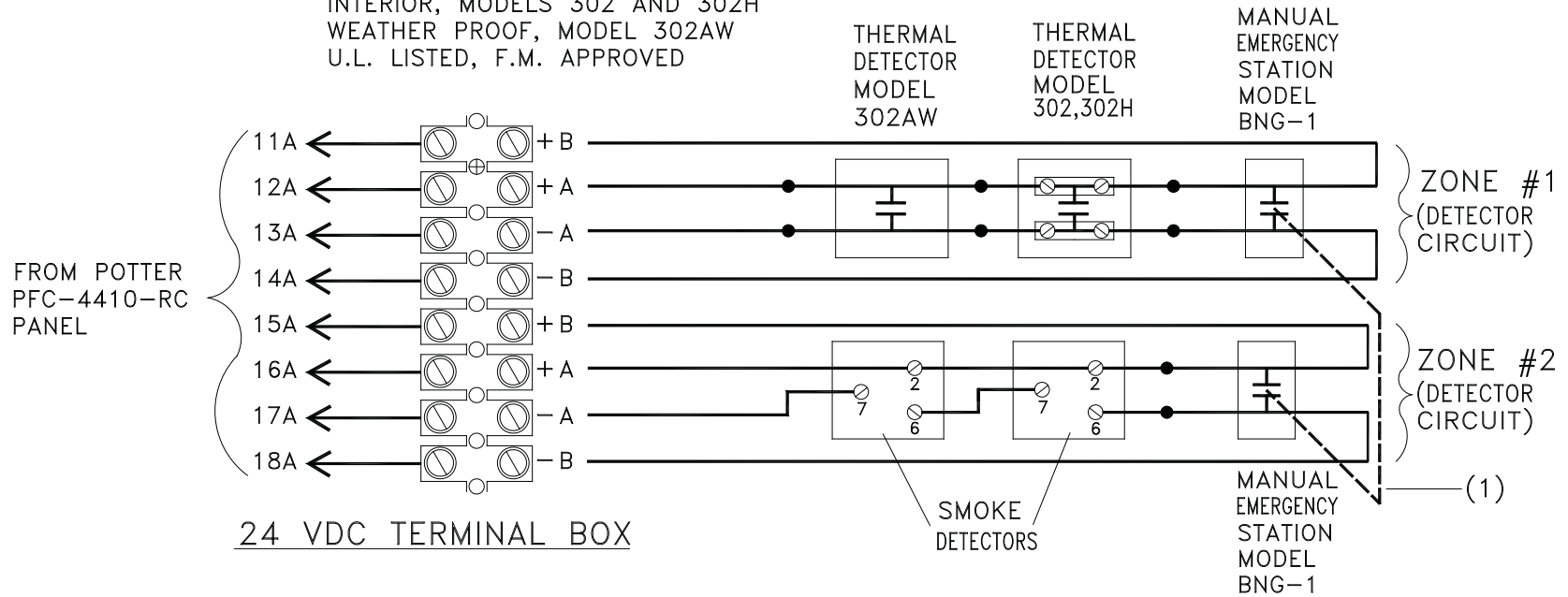


**FACTORY INSTALLED
ELECTRICAL DEVICES**
8" (200MM)
 (SOME COMPONENTS OMITTED FOR CLARITY)

Fig. 6

SMOKE DETECTOR:
 PHOTOELECTRIC, MODEL PSD 7125, BASE MODEL 70-201000-001
 IONIZATION, MODEL CPD 7021, BASE MODEL 70-201000-001
 U.L. LISTED

THERMAL DETECTOR:
 INTERIOR, MODELS 302 AND 302H
 WEATHER PROOF, MODEL 302AW
 U.L. LISTED, F.M. APPROVED



CLASS 'A' DETECTOR CIRCUIT WIRING

- (1) USE MANUAL EMERGENCY STATION MODEL BNG-1F WHEN USING EITHER CROSS-ZONED DETECTION* OR THE DOUBLE INTERLOCK PREACTION SYSTEM OPTION. THIS STATION ACTIVATES BOTH DETECTION CIRCUITS SIMULTANEOUSLY.

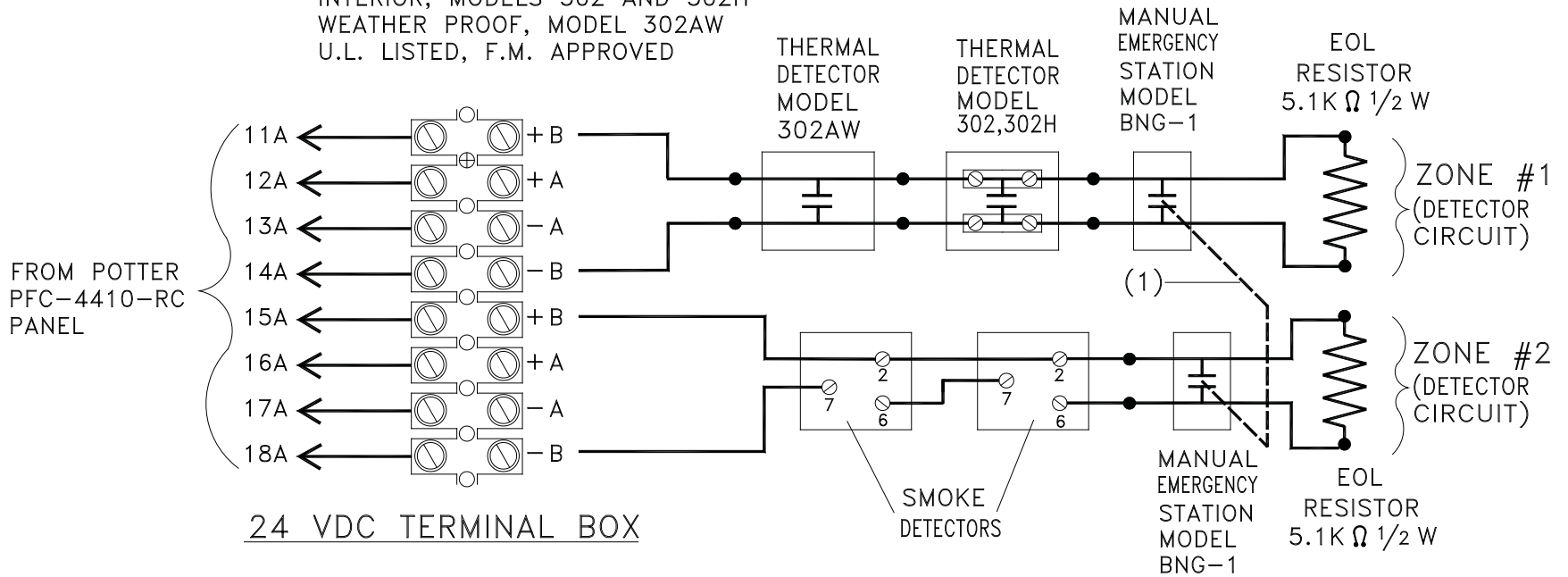
*NOT PERMITTED IN NEW YORK CITY.
 *NOT FM APPROVED.

747FG06

Fig. 7

SMOKE DETECTOR:
 PHOTOELECTRIC, MODEL PSD 7125, BASE MODEL 70-201000-001
 IONIZATION, MODEL CPD 7021, BASE MODEL 70-201000-001
 U.L. LISTED

THERMAL DETECTOR:
 INTERIOR, MODELS 302 AND 302H
 WEATHER PROOF, MODEL 302AW
 U.L. LISTED, F.M. APPROVED



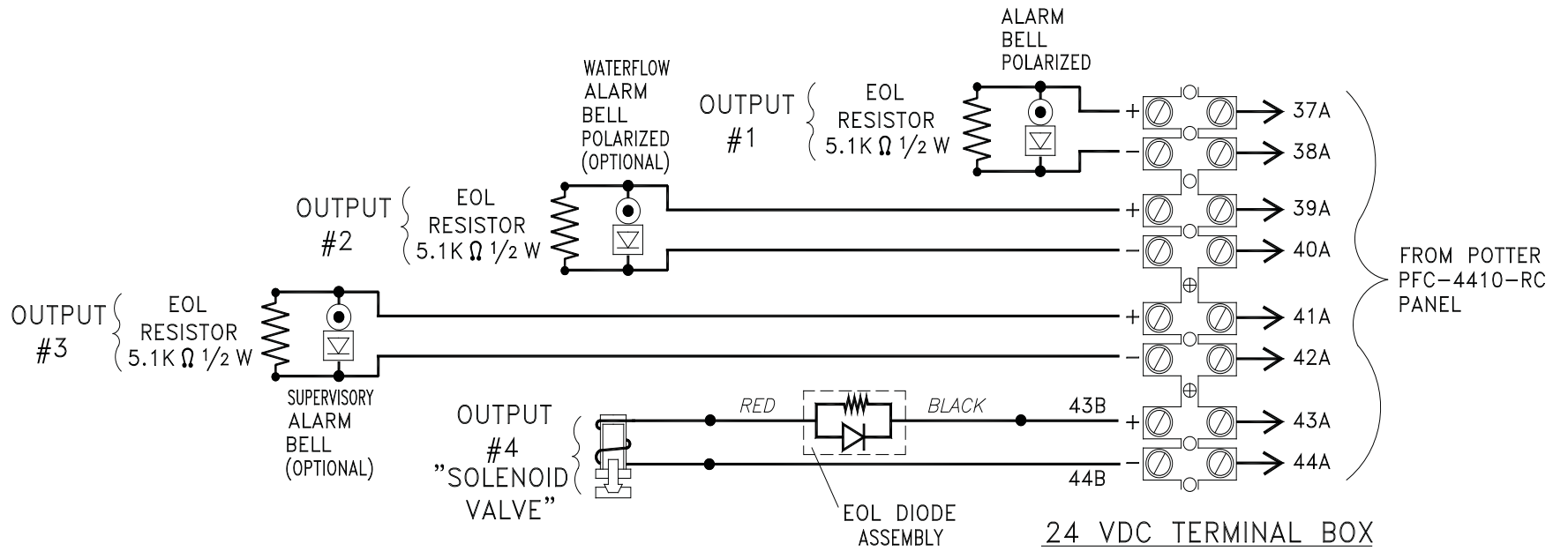
CLASS 'B' DETECTOR CIRCUIT WIRING

(1) USE MANUAL EMERGENCY STATION MODEL BNG-1F WHEN USING EITHER CROSS-ZONED DETECTION* OR THE DOUBLE INTERLOCK PREACTION SYSTEM OPTION. THIS STATION ACTIVATES BOTH DETECTION CIRCUITS SIMULTANEOUSLY.

*NOT PERMITTED IN NEW YORK CITY.
 *NOT FM APPROVED.

747FG07

Fig. 8

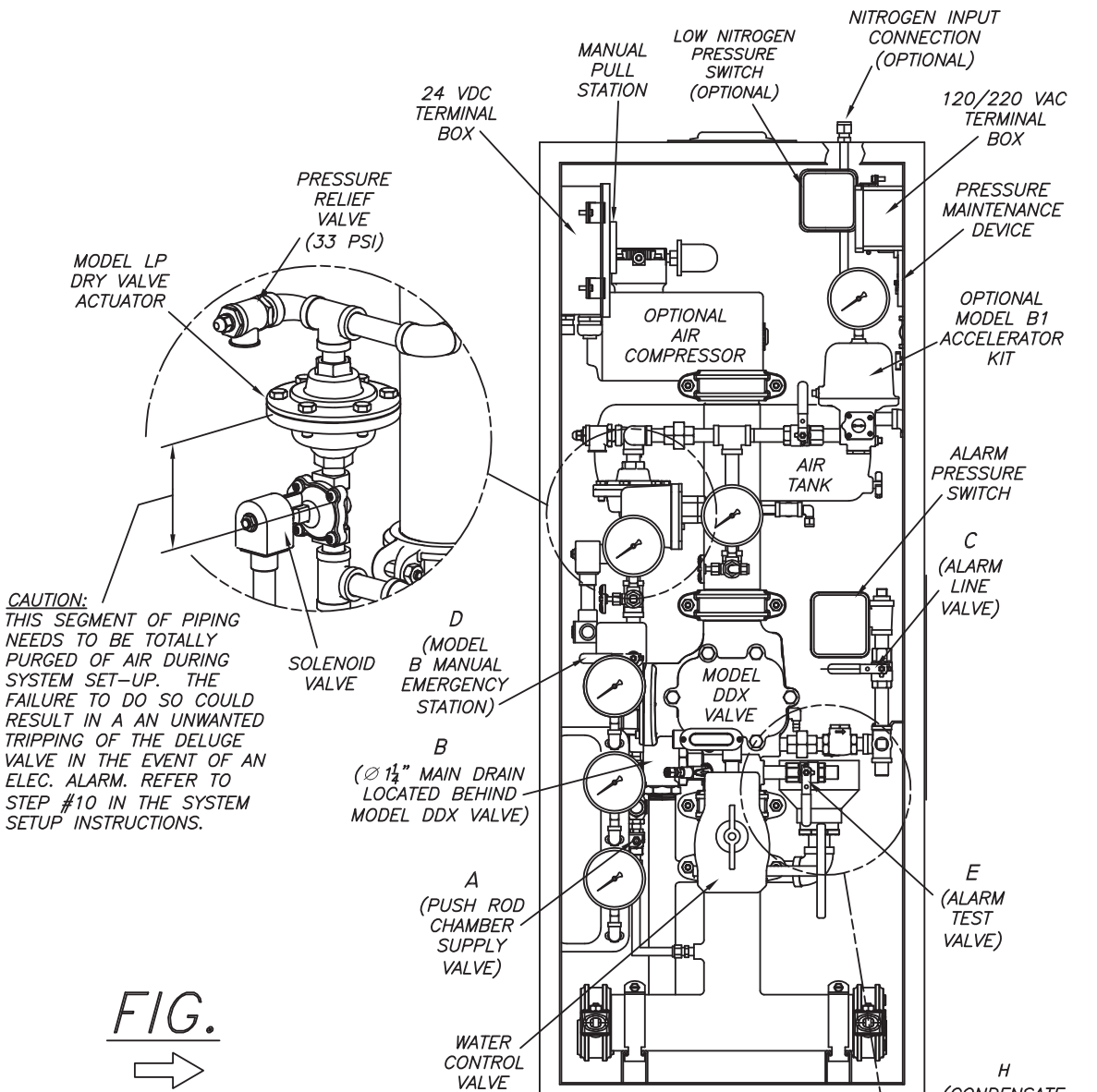


OUTPUT DEVICE CIRCUIT WIRING

747FG08

Fig. 9

SYSTEM SETUP - 2"(50MM), 2-1/2"(65MM) & 3"(80MM) SYSTEMS



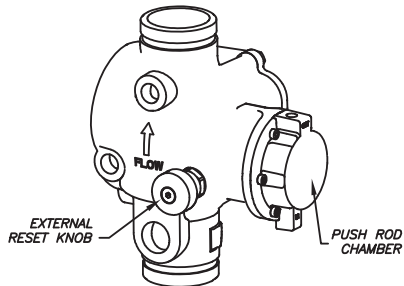
CAUTION:
THIS SEGMENT OF PIPING NEEDS TO BE TOTALLY PURGED OF AIR DURING SYSTEM SET-UP. THE FAILURE TO DO SO COULD RESULT IN AN UNWANTED TRIPPING OF THE DELUGE VALVE IN THE EVENT OF AN ELEC. ALARM. REFER TO STEP #10 IN THE SYSTEM SETUP INSTRUCTIONS.

FIG.

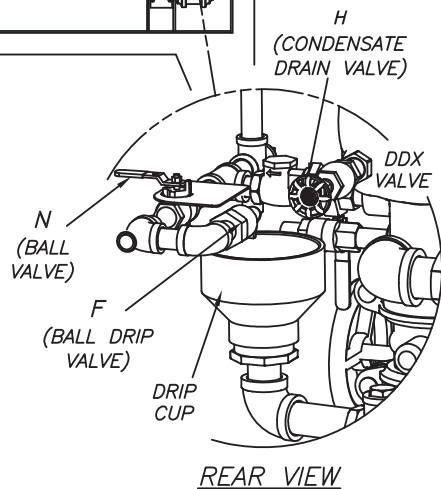


CONTINUED ON NEXT PAGE

MODEL DDX DELUGE VALVE



PUSH INWARD AND ROTATE KNOB CLOCKWISE TO RESET CLAPPER. DO SO ONLY WHEN PUSH ROD CHAMBER IS UNPRESSURIZED (0 PSIG).



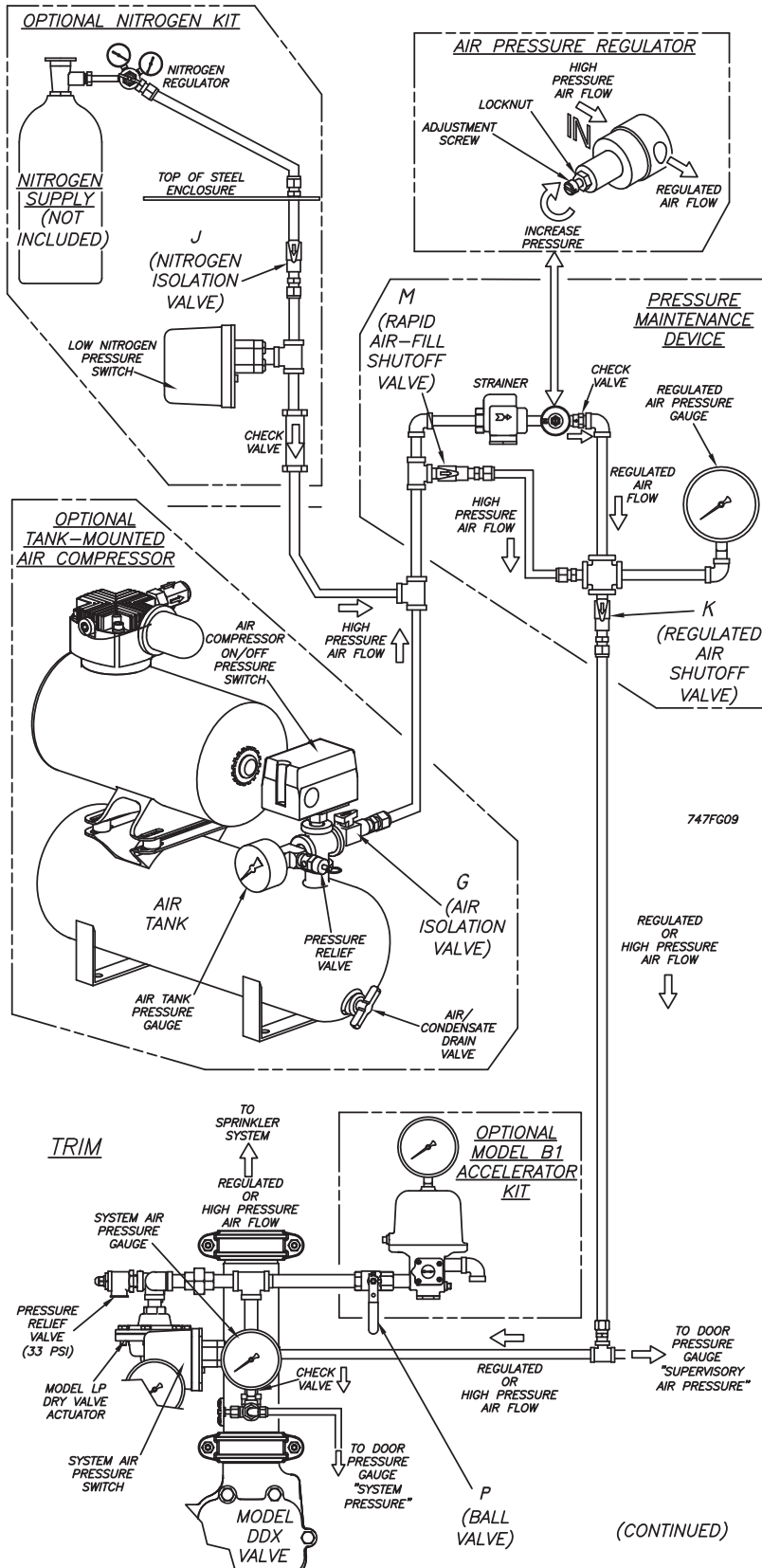
REAR VIEW

SOME COMPONENTS OMITTED FOR CLARITY

747FG09B

**SYSTEM SETUP - 2"(50MM), 2-1/2"(65MM) & 3"(80MM) SYSTEMS
CONTINUED**

PNEUMATIC COMPONENTS



SYSTEM SETUP - 4"(100MM) & 6"(150MM) SYSTEMS

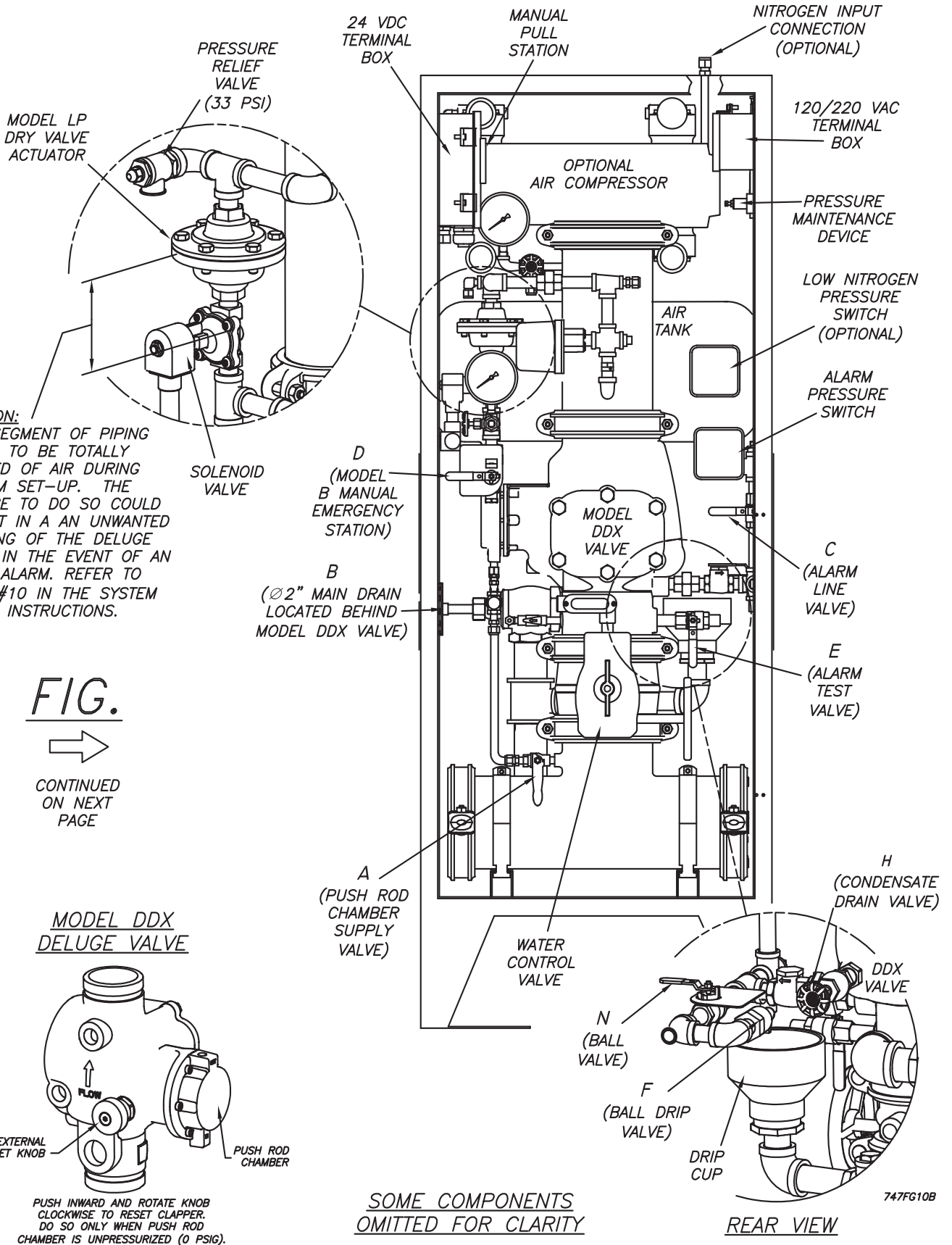
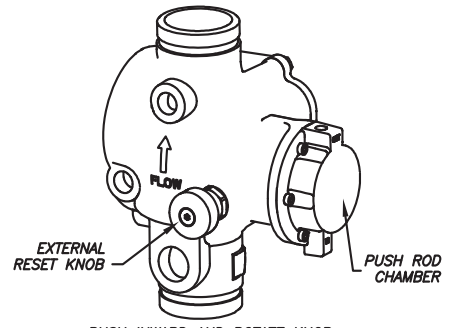


FIG.



CONTINUED ON NEXT PAGE

MODEL DDX DELUGE VALVE



PUSH INWARD AND ROTATE KNOB CLOCKWISE TO RESET CLAPPER. DO SO ONLY WHEN PUSH ROD CHAMBER IS UNPRESSURIZED (0 PSIG).

SOME COMPONENTS OMITTED FOR CLARITY

REAR VIEW

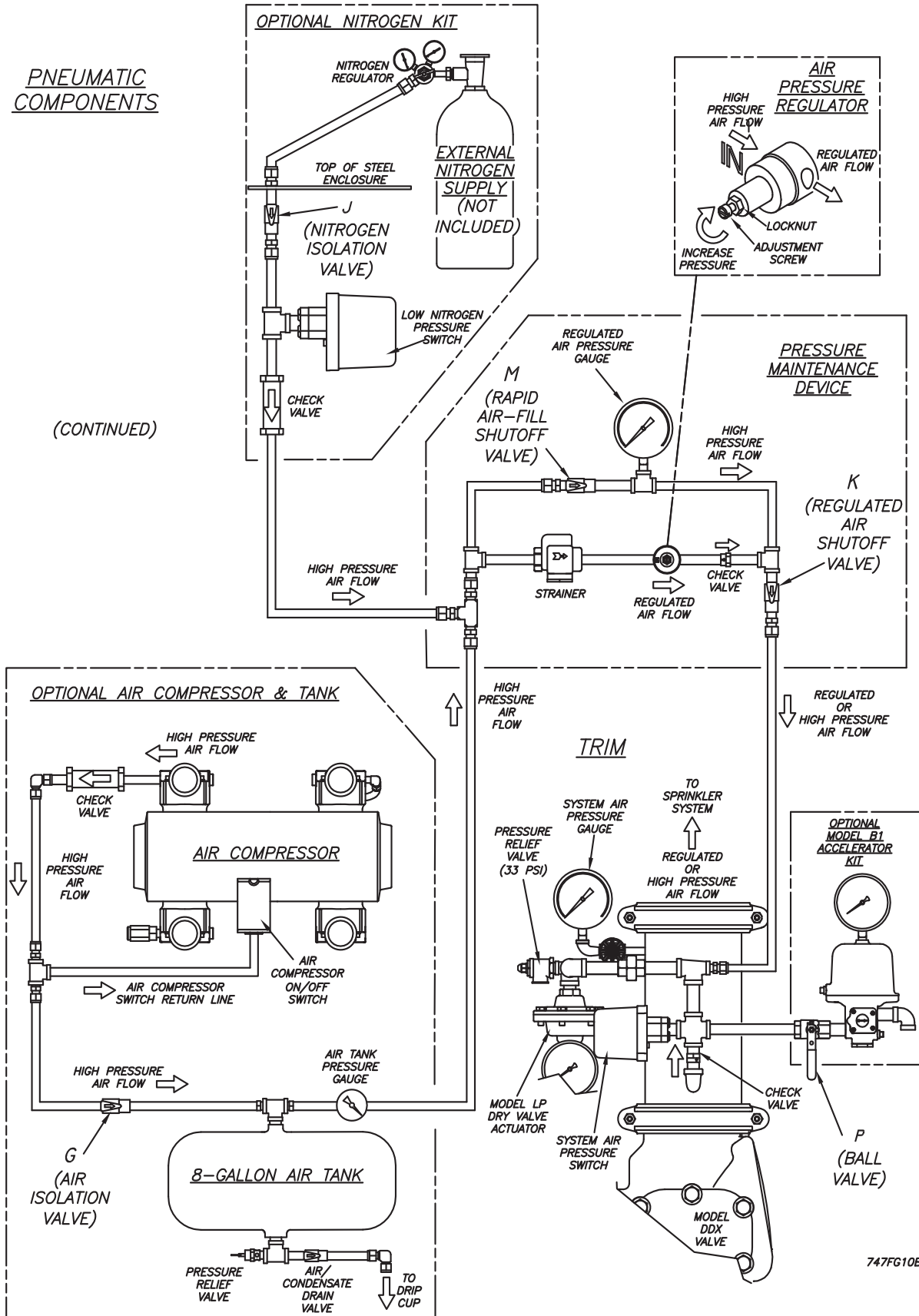
747FG10B

Fig. 11

**SYSTEM SETUP - 4" (100MM) & 6" (150MM) SYSTEMS
CONTINUED**

PNEUMATIC COMPONENTS

(CONTINUED)



747FG10B

SYSTEM SETUP - 8"(200MM) SYSTEMS

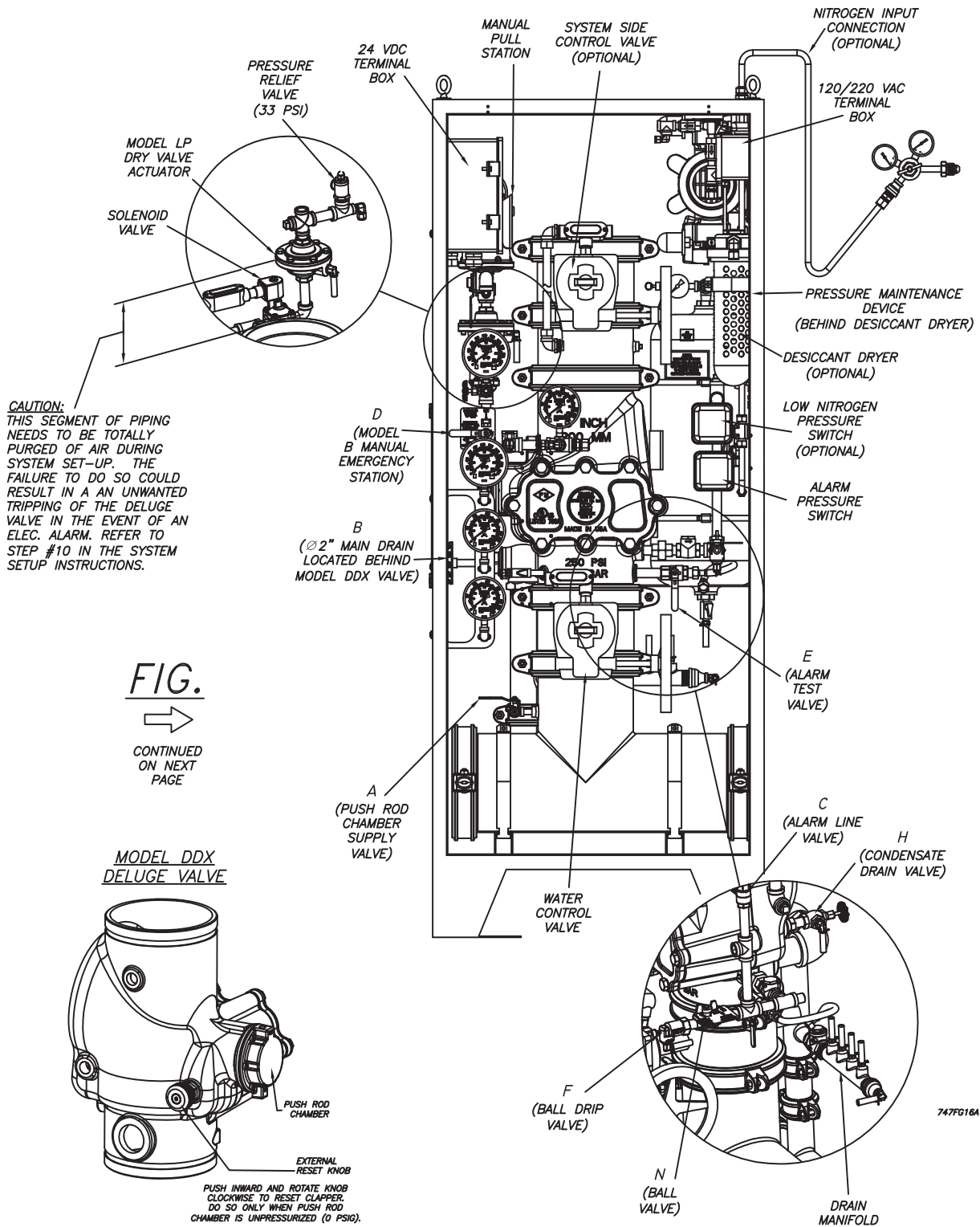
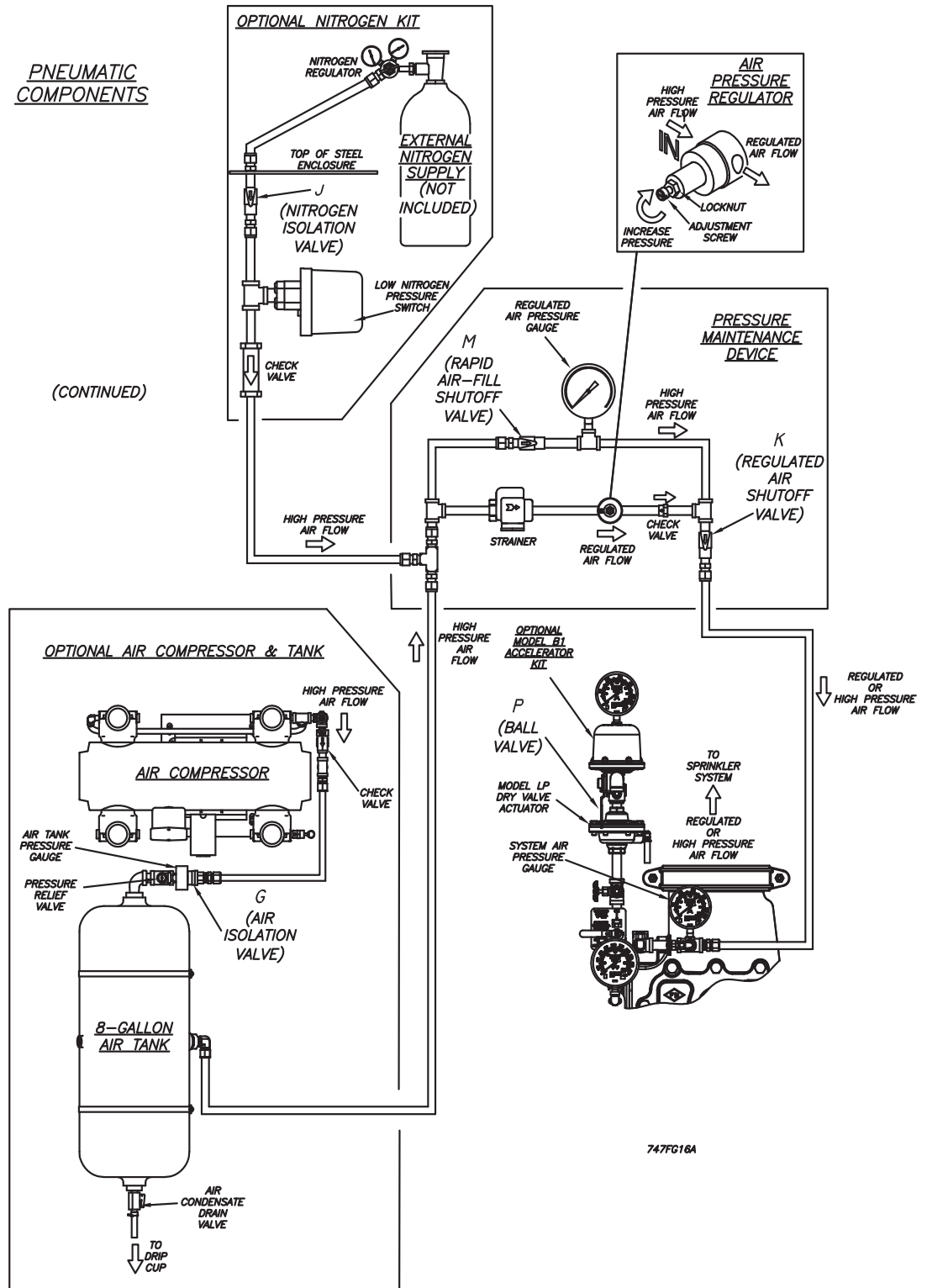


Fig. 12

**SYSTEM SETUP - 8"(200MM) SYSTEMS
CONTINUED**

PNEUMATIC COMPONENTS

(CONTINUED)



747FG16A

Potter Program #6

Double Interlock Programming Instructions (Single Hazard; 2 Alarm Zones, 1 Waterflow Zone, and 2 Supervisory Zones)

1. Apply power to panel.
2. Slide the program switch down.
3. Press the FUNCTION button until the display reads "PASSWORD=000."
4. To enter a password, press the SELECT button until the proper number is displayed above the "^" symbol; then press the SET button to move to the next digit. After entering the third number the display will change. (All panels are shipped with a "000" password.)
5. Press the FUNCTION button until the display reads "PROGRAM ##." (the second "#" character refers to the current program number between "0" and "24").
6. Press the SELECT button until the display reads "PROGRAM #6."
7. Press the SET button
8. The panel is completely programmed except for the custom banner and zone messages. Slide the program switch back up.

POTTER PROGRAM #6

OUTPUTS	ZONES				
	*Supervisory 2	#1 Conventional	#2 Manual Release	#3 Waterflow	#4 Low Air Supervisory
#1 ALARM		X	X		
#2 ALARM				X	
#3 SUPERVISORY	X				X
#4 RELEASE		X	X		

INPUTS: 1 conventional zone, 1 manual release zone, 1 waterflow zone, 1 low air zone, 1 supervisory zone.

OUTPUTS: 1 general alarm bell, 1 waterflow bell, 1 supervisory bell, 1 solenoid release circuit.

OPERATION: Activation of either the conventional zone or the manual release will operate the solenoid release circuit and the general alarm bell. Activation of the waterflow zone will operate the waterflow bell. Activation of either the low air zone or the supervisory zone will operate the supervisory bell. When either Zone #1 or #2 is in alarm, Output #1 (general alarm) and Output #4 (solenoid release) will operate. When Zone #3 is in alarm, Output #2 (waterflow bell) will operate. When either Zone #4 or the supervisory zone is activated, Output #3 (supervisory bell) will operate.

*** The Butterfly valve in the PrePaK assembly is connected to Supervisory 2 input of the Potter PFC-4410RC Releasing/Control panel**

Refer to the "Installation, Operation and Instruction Manual" for the PFC-4410-RC Releasing Control Panel for Additional Information.

POTTER PROGRAM #6 WIRING DIAGRAM

SINGLE HAZARD, 2 ALARM ZONES 1 WATERFLOW ZONE AND 2 SUPERVISORY ZONES

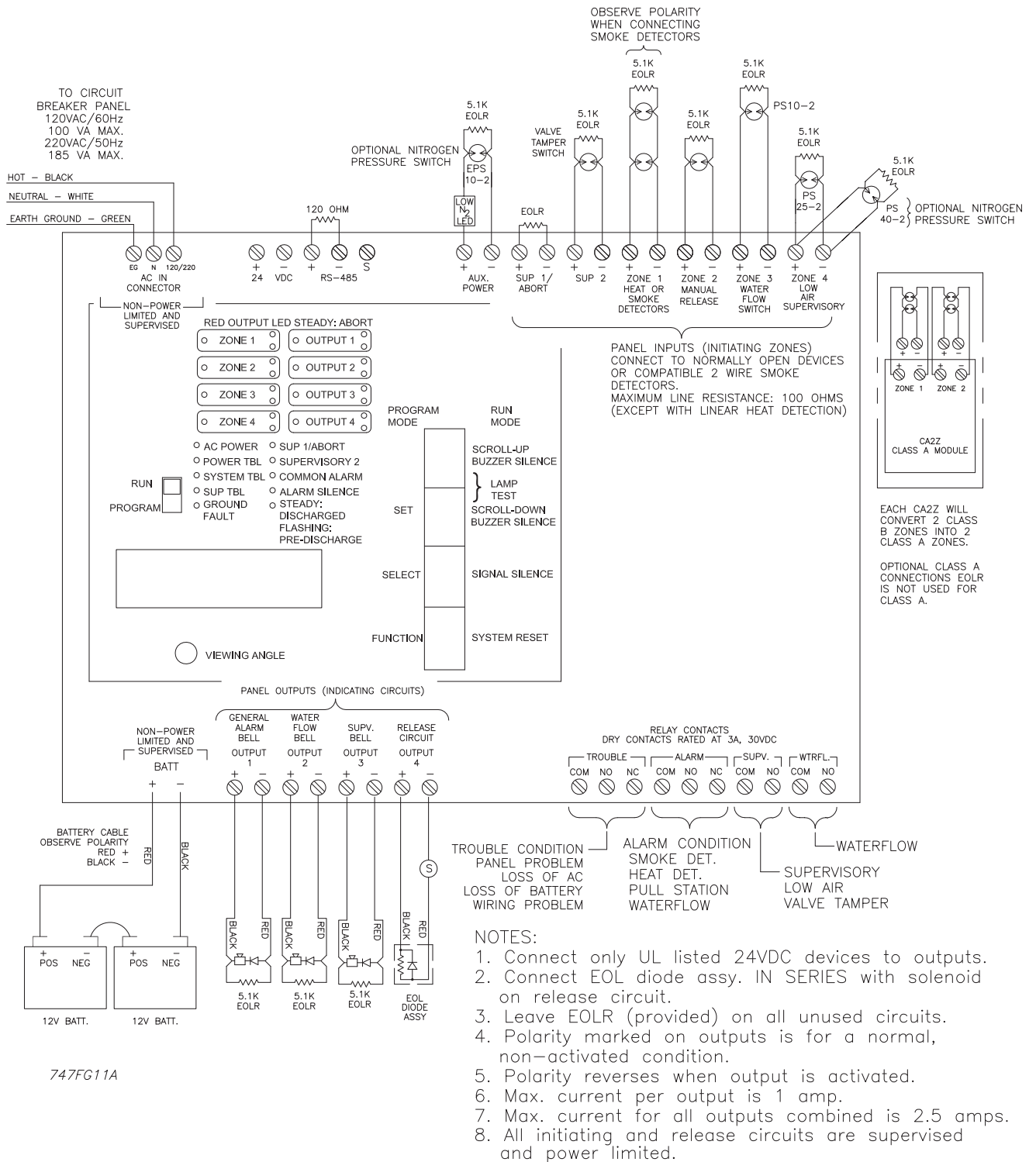


Fig.13

Potter Program #7

Double Interlock Programming Instructions (Single Hazard - Cross-Zoned, 2 Alarm Zones, 1 Waterflow Zone and 2 Supervisory Zones)

1. Apply power to panel.
2. Slide the program switch down.
3. Press the FUNCTION button until the display reads "PASSWORD = 000."
4. To enter a password, press the SELECT button until the proper number is displayed above the "^" symbol; then press the SET button to move to the next digit. After entering the third number the display will change. (All panels are shipped with a "000" password).
5. Press the FUNCTION button until the display reads "PROGRAM ##." (the second "#" character refers to the current program number between "0" and "24").
6. Press the SELECT button until the display reads "PROGRAM #7."
7. Press the SET button.
8. The panel is completely programmed except for the custom banner and zone messages. Slide the program switch back up.

POTTER PROGRAM #7

OUTPUTS	ZONES				
	*Supervisory 2	#1 Conventional	#2 Conventional	#3 Waterflow	#4 Low Air Supervisory
#1 ALARM		X	X		
#2 ALARM				X	
#3 SUPERVISORY	X				X
#4 RELEASE		X	X		

INPUTS: 2 conventional zones (cross-zoned), 1 waterflow zone, 1 low air zone, 1 supervisory zone.
 OUTPUTS: 1 general alarm bell, 1 waterflow bell, 1 supervisory bell, 1 solenoid release circuit.
 OPERATION: Activation of both conventional zones at the same time will operate the solenoid release circuit and the general alarm bell. Activation of either conventional zone will operate the general alarm bell. Activation of the waterflow zone will operate the waterflow bell. Activation of either the low air zone or the supervisory zone will operate the supervisory bell. When either Zone #1 or #2 is in alarm, Output #1 (general alarm) will operate. When Zones #1 and #2 are in alarm at the same time, Output #4 (solenoid release) and Output #1 (general alarm) will operate. When Zone #3 is in alarm, Output #2 (waterflow bell) will operate. When either Zone #4 or the supervisory zone is activated, Output #3 (supervisory bell) will operate.

*** The Butterfly valve in the PrePaK assembly is connected to Supervisory 2 input of the Potter PFC-4410RC Releasing/Control panel**

Refer to the "Installation, Operation and Instruction Manual" for the PFC-4410-RC Releasing Control Panel for Additional Information.

POTTER PROGRAM #7 WIRING DIAGRAM

SINGLE HAZARD, CROSS ZONED, 2 ALARM ZONES
1 WATERFLOW ZONE AND 2 SUPERVISORY ZONES

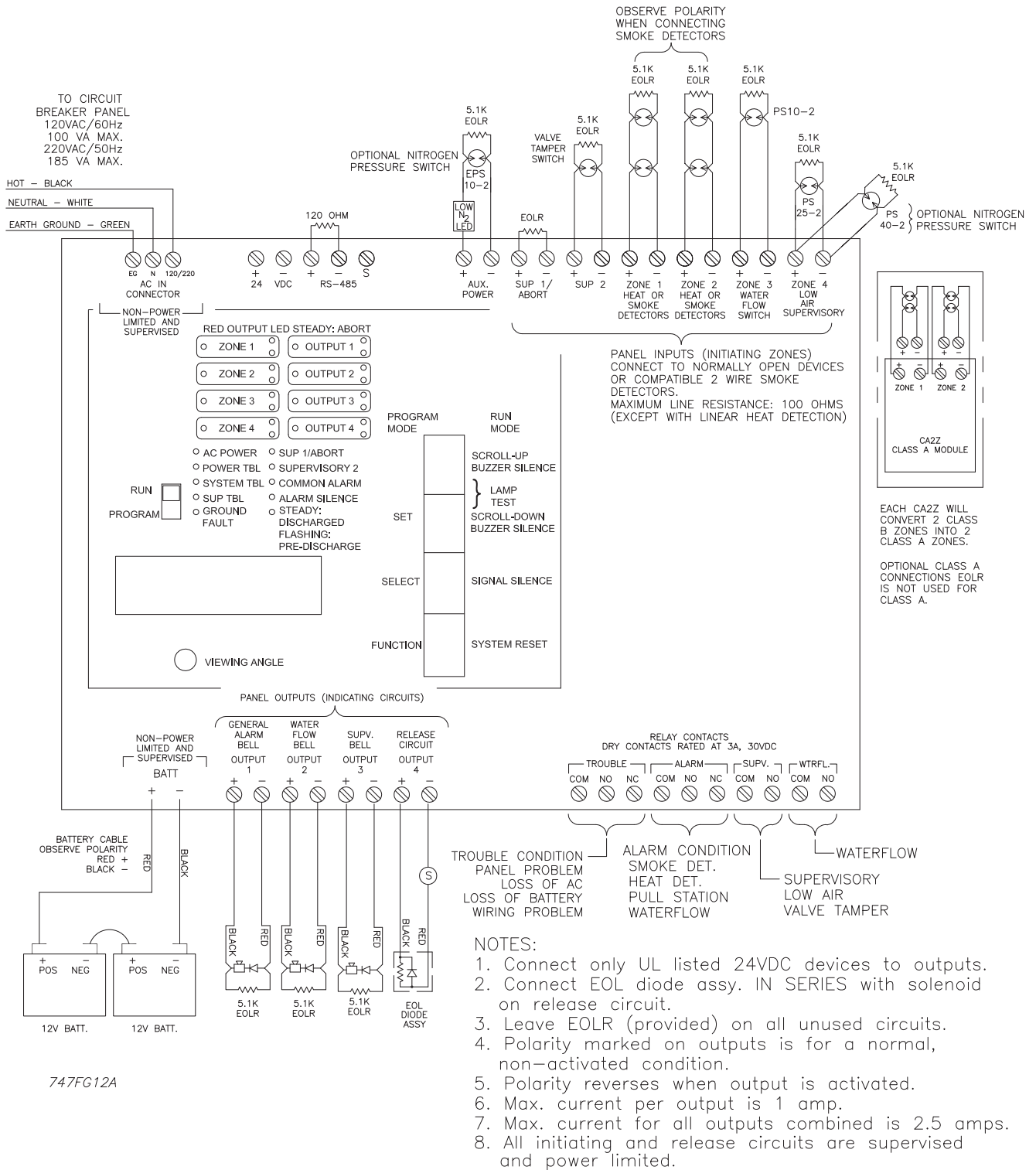
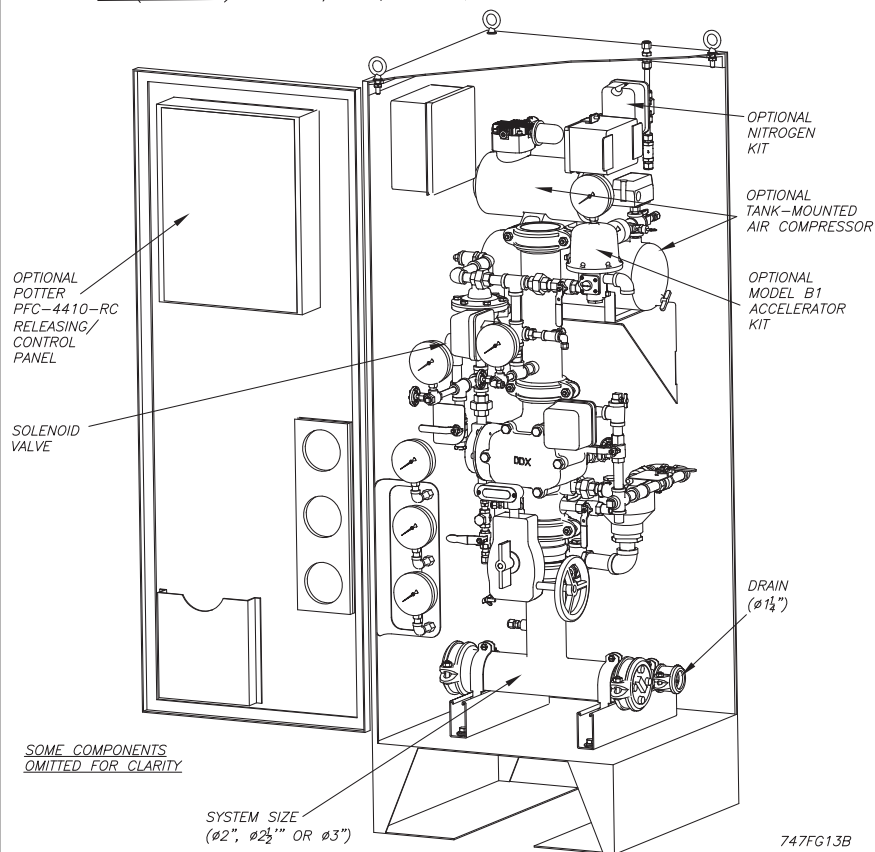


Fig.14

MODEL DDX TYPE F PREPAK ORDERING OPTIONS
2"(50MM), 2-1/2"(65MM) & 3"(80MM) SYSTEMS

ORDER # _____



747FG13B

BASIC SYSTEM

SYSTEM SIZE:

- 2" (50 MM) P/N 6552002201
- 2½" (65 MM) P/N 6552002702
- 3" (80 MM) P/N 6552003201

SOLENOID VALVE RATED PRESSURE:

- 175 PSI (12,1 BAR) P/N 6871020030
- 175 PSI (12,2 BAR) EXPLOSION PROOF P/N 6871020032
- 250 PSI (17,2 BAR) P/N 6871020031

OPTIONS

RELEASING/CONTROL PANEL:

- NONE P/N 6611772001
- POTTER PFC-4410-RC (110VAC@60HZ / 220VAC@50HZ) P/N 6611772000

AIR COMPRESSOR & TANK:

- NONE
- 1/6 HP, 110VAC@60HZ P/N 6702001001
- 1/6 HP, 220VAC@50HZ P/N 6702001002
- 1/3 HP, 110VAC@60HZ P/N 6702001003
- 1/3 HP, 220VAC@50HZ P/N 6702001004

SYSTEM SIDE CONTROL VALVE:

- NONE
- 2" P/N 6501200021
- 2 1/2" P/N 6501200023
- 3" P/N 6501200025

MODEL B1 ACCELERATOR KIT:

- NONE
- MODEL B1 ACCELERATOR KIT P/N 6516000006

DESICCANT DRYER:

- NONE
- DESICCANT KIT P/N 6501200003

RCDS-1:

- NONE
- RCDS-1 KIT P/N 6501200002

NITROGEN KIT:

(CONTAINS EXTERNAL REGULATOR, PRESSURE SWITCH, PANEL-MOUNTED LED, AND ALL REQUIRED FITTINGS)

- NONE
- NITROGEN KIT W/ UL/FM APPROVED PRESSURE SWITCH P/N 6304030200
- NITROGEN KIT W/ ULC APPROVED PRESSURE SWITCH P/N 6304030201

EXTERNAL NITROGEN TANK BRACKET

- NONE
- TANK BRACKET P/N 6899190002

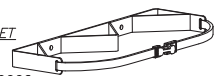
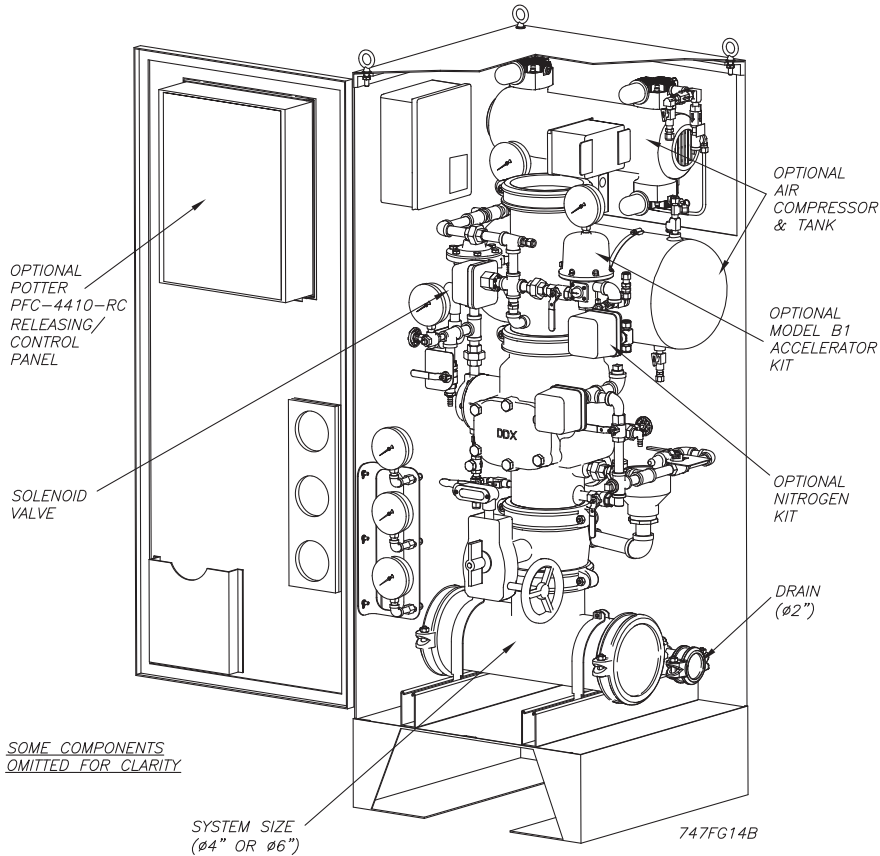


Fig.15

MODEL DDX TYPE F PREPAK ORDERING OPTIONS
4"(100MM) & 6"(150MM) SYSTEMS



ORDER #

BASIC SYSTEM

SYSTEM SIZE:

- 4" (100MM) P/N 6552001202
- 6" (150 MM) P/N 6552001206

SOLENOID VALVE RATED PRESSURE:

- 175 PSI (12,1 BAR) P/N 6871020030
- 175 PSI (12,2 BAR) EXPLOSION PROOF P/N 6871020032
- 250 PSI (17,2 BAR) P/N 6871020031

OPTIONS

RELEASING/CONTROL PANEL:

- NONE P/N 6611772003
- POTTER PFC-4410-RC (110VAC@60HZ / 220VAC@50HZ) P/N 6611772002

AIR COMPRESSOR & TANK:

- NONE
- 3/4 HP, 110VAC@60HZ P/N 6702001005
- 3/4 HP, 220VAC@50HZ P/N 6702001006
- 1/2 HP, 110VAC@60HZ P/N 6702001007
- 2 HP, 220VAC@50HZ P/N 6702001008

SYSTEM SIDE CONTROL VALVE:

- NONE
- 4" P/N 6501200026
- 6" (ONLY AVAILABLE WITH SYSTEMS WITHOUT RELEASING PANEL) P/N 6501200027

MODEL B1 ACCELERATOR KIT:

- NONE
- MODEL B1 ACCELERATOR KIT P/N 6516000006

DESICCANT DRYER:

- NONE
- DESICCANT KIT P/N 6501200003

RCDS-1:

- NONE
- RCDS-1 KIT P/N 6501200002

NITROGEN KIT:

(CONTAINS EXTERNAL REGULATOR, PRESSURE SWITCH, PANEL-MOUNTED LED, AND ALL REQUIRED FITTINGS)

- NONE
- NITROGEN KIT W/ UL/FM APPROVED PRESSURE SWITCH P/N 6304030212
- NITROGEN KIT W/ ULC APPROVED PRESSURE SWITCH P/N 6304030213

EXTERNAL NITROGEN TANK BRACKET

- NONE
- TANK BRACKET P/N 6899190002

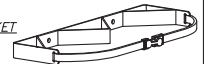
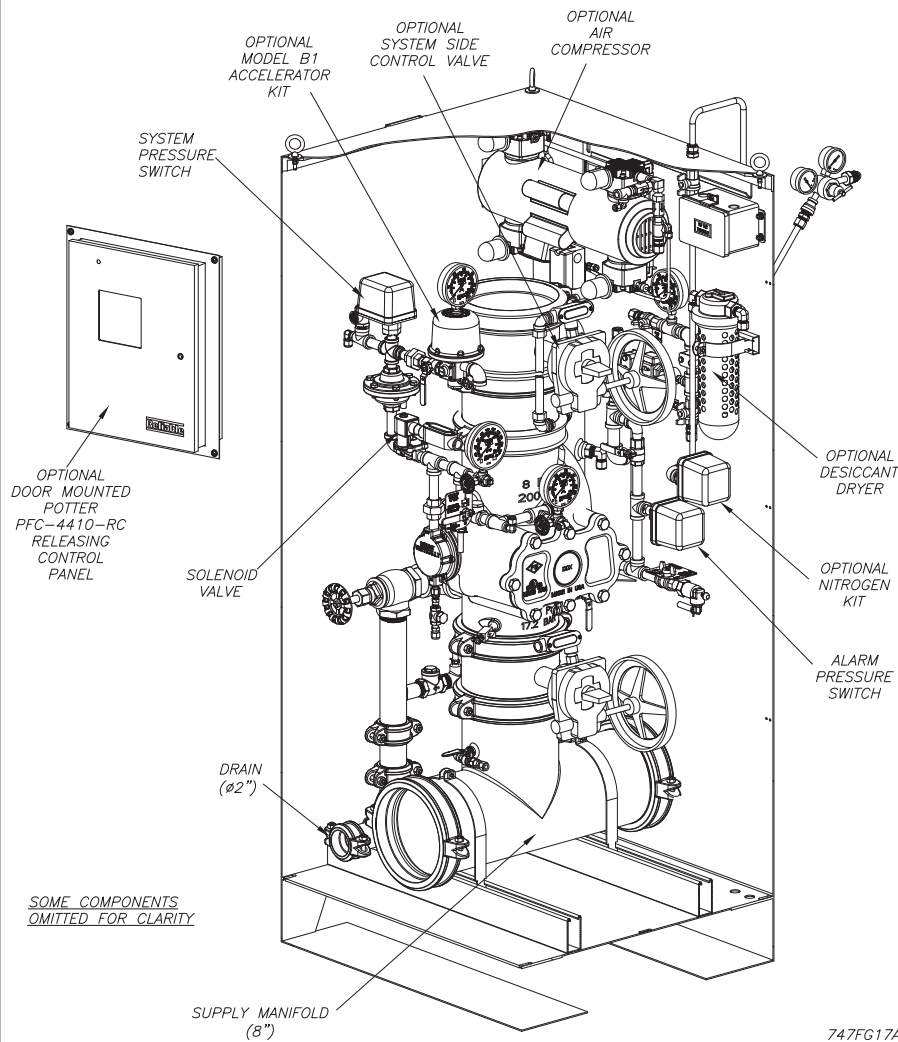


Fig.16

MODEL DDX TYPE F PREPAK ORDERING OPTIONS 8" (200MM) SYSTEM

ORDER # _____



SOME COMPONENTS OMITTED FOR CLARITY

747FG17A

BASIC SYSTEM

MANIFOLDS (SUPPLY, DRAIN & OUTLET):

- FLANGE P/N 6552001229
- GROOVE P/N 6552001228

SOLENOID VALVE RATED PRESSURE:

- 175 PSI (12.1 BAR) P/N 6871020030
- 175 PSI (12.2 BAR) EXPLOSION PROOF P/N 6871020032
- 250 PSI (17.2 BAR) P/N 6871020031

OPTIONS

RELEASING/CONTROL PANEL:

- NONE P/N 6611772013
- POTTER PFC-4410-RC (110VAC@60HZ / 220VAC@50HZ) P/N 6611772010

AIR COMPRESSOR & TANK:

- NONE
- 1/2 HP, 110VAC@60HZ P/N 6702001009
- 2 HP, 220VAC@50HZ P/N 6702001010

SYSTEM SIDE CONTROL VALVE:

- NONE
- FLANGE P/N 6501200031
- GROOVE P/N 6501200028

MODEL B1 ACCELERATOR KIT:

- NONE
- MODEL B1 ACCELERATOR KIT P/N 6516000006

DESICCANT DRYER:

- NONE
- DESICCANT KIT P/N 6501200003

RCDS-1:

- NONE
- RCDS-1 KIT P/N 6501200002

NITROGEN KIT:

(CONTAINS EXTERNAL REGULATOR, PRESSURE SWITCH, PANEL-MOUNTED LED, AND ALL REQUIRED FITTINGS)

- NONE
- NITROGEN KIT W/ UL/FM APPROVED PRESSURE SWITCH P/N 6304030204
- NITROGEN KIT W/ ULC APPROVED PRESSURE SWITCH P/N 6304030205

EXTERNAL NITROGEN TANK BRACKET

- NONE
- TANK BRACKET P/N 6899190002

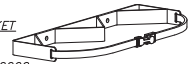


Fig.17

The equipment presented in this bulletin is to be installed in accordance with the latest published Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable. Products manufactured and distributed by Reliable have been protecting life and property for almost 100 years.

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