

**SECURIPLEX**

# **FIRE-SCOPE<sup>®</sup> 2000**

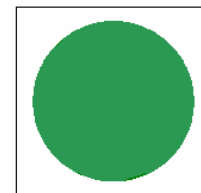
**TWIN FLUID SEMICONDUCTOR  
LOW PRESSURE WATER MIST SYSTEM**

**DATASHEET PACKAGE**

Doc number: DS-192922-00, REV.(-)  
KOETTER INTERNATIONAL  
FIRE PROTECTION

## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
STANDARD	
RNZ-15394-01	Jetmist nozzle, 5JET60, 60°, in-line unit, PVDF
RNZ-15394-11	Jetmist nozzle, 5JET60, 60°, end unit, PVDF
RNZ-15395-01	Jetmist nozzle, 5JET90, 90°, in-line unit, PVDF
RNZ-15395-11	Jetmist nozzle, 5JET90, 90°, end unit, PVDF
NON STANDARD	
RNZ-15394-00	Jetmist nozzle, 5JET60, 60°, in-line unit, Delrin
RNZ-15394-02	Jetmist nozzle, 5JET60, 60°, in-line unit, PPS
RNZ-15394-10	Jetmist nozzle, 5JET60, 60°, end unit, Delrin
RNZ-15394-12	Jetmist nozzle, 5JET60, 60°, end unit, PPS
RNZ-15395-00	Jetmist nozzle, 5JET90, 90°, in-line unit, Delrin
RNZ-15395-02	Jetmist nozzle, 5JET90, 90°, in-line unit, PPS
RNZ-15395-10	Jetmist nozzle, 5JET90, 90°, end unit, Delrin
RNZ-15395-12	Jetmist nozzle, 5JET90, 90°, end unit, PPS
SPARE PARTS	
346-15392-01	Nozzle base, in-line, PVDF
346-15392-11	Nozzle base, end, PVDF
346-15389-01	Cap, 60 deg., PVDF
346-15390-01	Cap, 90 deg., PVDF
346-15391-01	Insert PVDF
346-15432-00	O-Ring, fluorcarbon
346-14014-02	Test cap



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## WATER MIST NOZZLE SEMICONDUCTOR



### KEY FEATURES

- PVDF (Kynar) material for cleanroom environments
- Interchangeable with 60° or 90° caps
- Low air operating pressure and consumption
- Low water operating pressure and consumption
- Test cap available for pressure testing of tubing network



### DESCRIPTION

The Jetmist nozzle consists of three parts (cap, insert and base). The nozzle uses the existing Nitrogen and DI water systems in the fabrication area. No stand alone source of extinguishing medium is required. Water/deionized (DI) water and nitrogen (N<sub>2</sub>)/air are supplied independently to the nozzles through side ports. The nozzle is specifically designed to produce a desired spray pattern and angle, as well as to operate at a specific pressure and flow rate. Nozzle layout must conform to guidelines\*.

Nozzles may be mounted to either the sidewall of a compartment or over the surface of the protected area and supplied in a daisy chain configuration (maximum of three nozzles). They are to be installed on a piping network that is sized to supply each nozzle with the minimum water and air (or nitrogen) pressure.

The Securiplex water mist nozzles are approved by Factory Mutual and compliant with the National Fire Protection Association (NFPA) Standard no. 750.

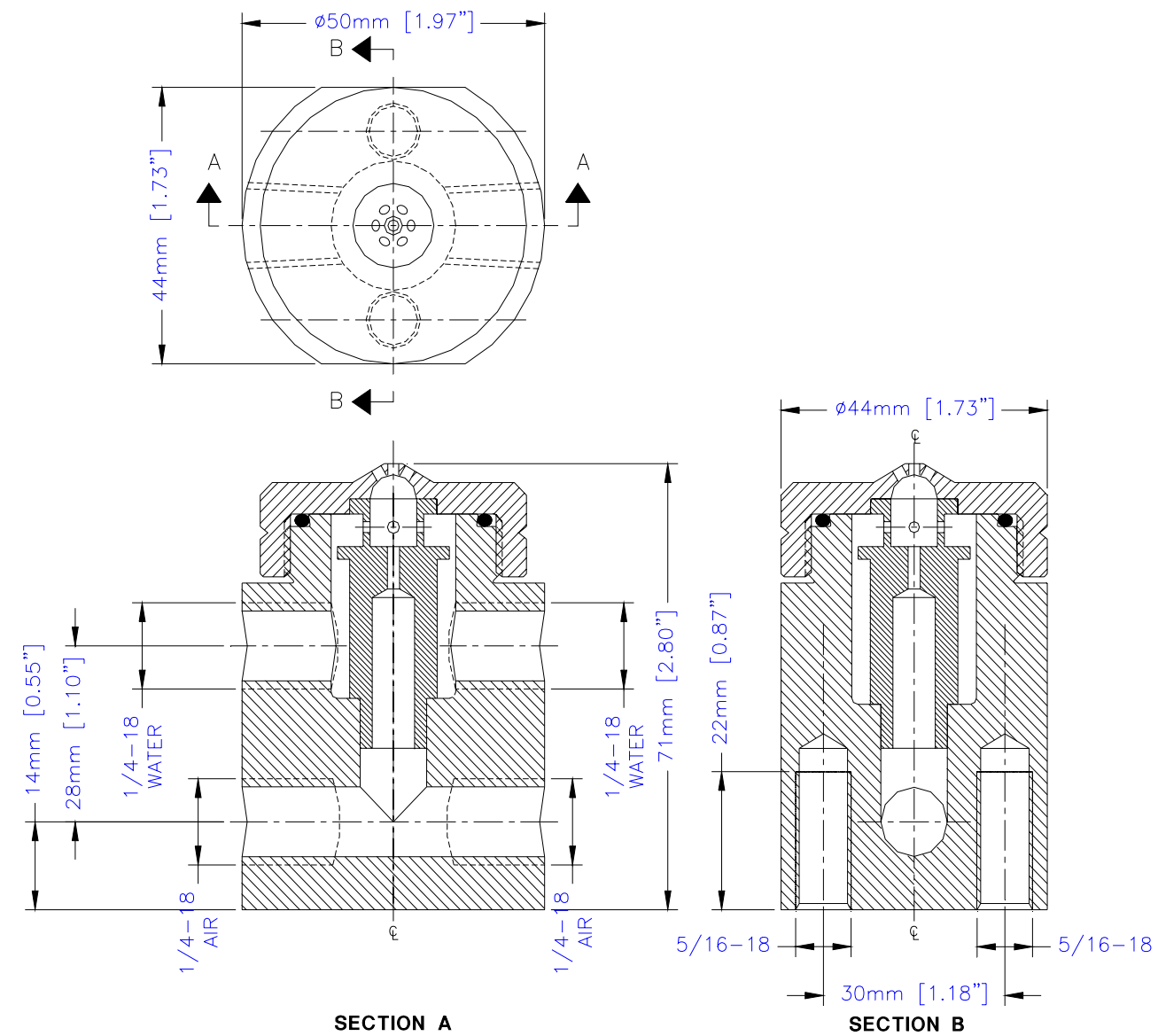
\*For design guidelines refer to Securiplex Design, Installation, Operation & Maintenance Manual, Doc. No. E0-15427-00.



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FIRE-SCOPE® 2000 COMPONENTS



SECTION A

SECTION B

DIMENSIONAL WATER MIST NOZZLE

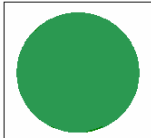
NOZZLE	NOMINAL OPERATING PRESSURE AND FLOW				APPLICATION
	WATER		AIR		
	FLOW gpm (lpm)	PRESSURE psig (KPA)	FLOW scfm (sl/min)	PRESSURE psig (KPA)	
5JET60	0.90 - 1.30 (3.4 - 4.1)	40 - 45 (275 - 300)	7.00 - 7.75 (200 - 220)	60 - 65 (410 - 450)	Plenum/head case compartment
5JET90	0.90 - 1.30 (3.4 - 4.1)	40 - 45 (275 - 300)	7.00 - 7.75 (200 - 220)	60 - 65 (410 - 450)	Surface/robot area

## TECHNICAL SPECIFICATIONS

5. 4-2 MULTI-WAY SOLENOID VALVE	
Material - body	Thermoplastic (polyamide)
Pressure rating	9.7 bar (140 psig)
Connection	1/8" NPT(female)
Voltage	24 VDC
Power consumption	2W
Voltage tolerance	+/- 10%
Rating	NEMA 4 (with cable plug)
ZONE VALVE ASSEMBLY	
SUPPLY	OPERATING PRESSURE RANGE
Air/N <sub>2</sub> network	4.13 TO 6.89 bar (60 to 100 psig)
Water/DI water network	2.75 to 6.89 bar (40 to 100 psig)
Weight	9.97 kg (22 lbs) approx.

## ORDERING INFORMATION

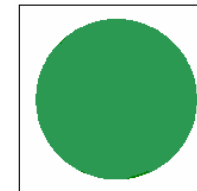
COMPLETE ASSEMBLIES		
PART NUMBER	DESCRIPTION	
ZVA-16233-00	3/4" zone valve assembly (air/N <sub>2</sub> - water/deionized water)	
SPARE PARTS		
ITEM	PART NUMBER	DESCRIPTION
1	WFS-13950-20 (21)	Flow confirmation switch, PVDF base, 6.8k Ohm (47k Ohm)
2	SWA-15418-21 (22)	High/low supervisory pressure switch, PVDF base, 6.8k Ohm (47k Ohm)
3	376-15760-03	3/4" SS-316L pneumatic angle globe valve
4	376-15944-00 (01)	3/4" ball valve PP, (PVDF)
5	376-15947-00	Low pressure solenoid 4-2 multi-way



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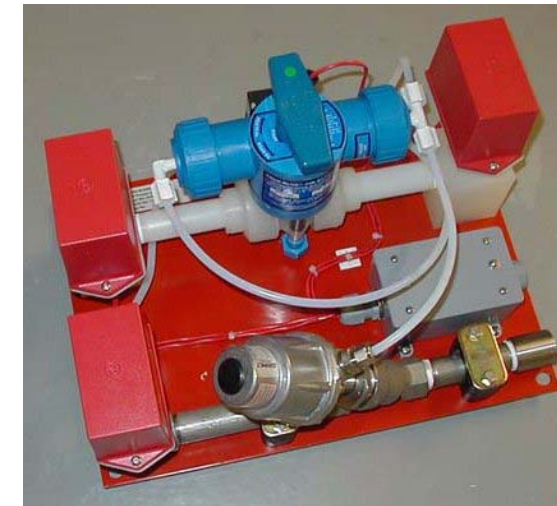
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It is our intention to keep the product information current and accurate. We cannot cover specific applications or anticipate all requirements. Some features may not yet be listed. All specifications are subject to change without notice. For more information or questions relative to this Data Sheet, contact Securiplex.



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## ZONE VALVE ASSEMBLY SEMICONDUCTOR



### KEY FEATURES

- PVDF (Kynar) material for potable water / deionized (DI) water valve
- Stainless steel (SS) 316L material for air/N<sub>2</sub> valve
- Water ball valve made of non metallic materials for corrosive atmospheres
- Water/DI water re-circulation return connection (no dead leg)
- Normally closed
- Pneumatically operated
- Electrically operated solenoid control

### DESCRIPTION

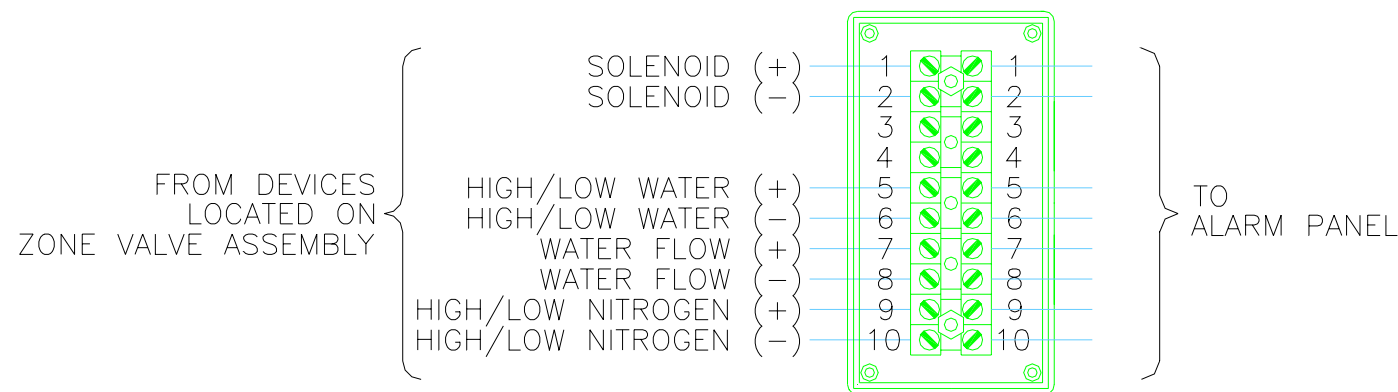
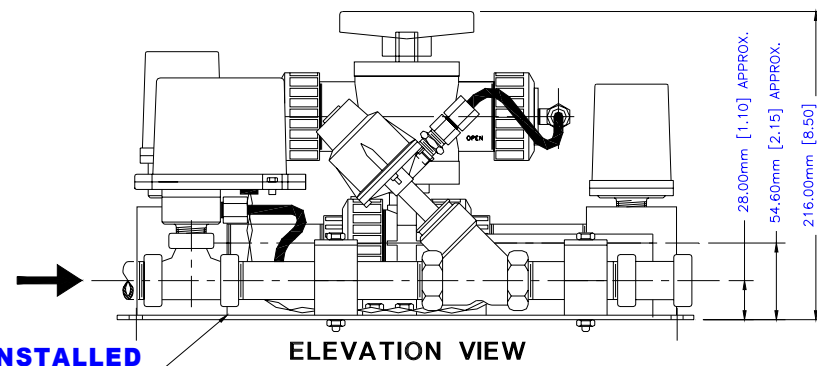
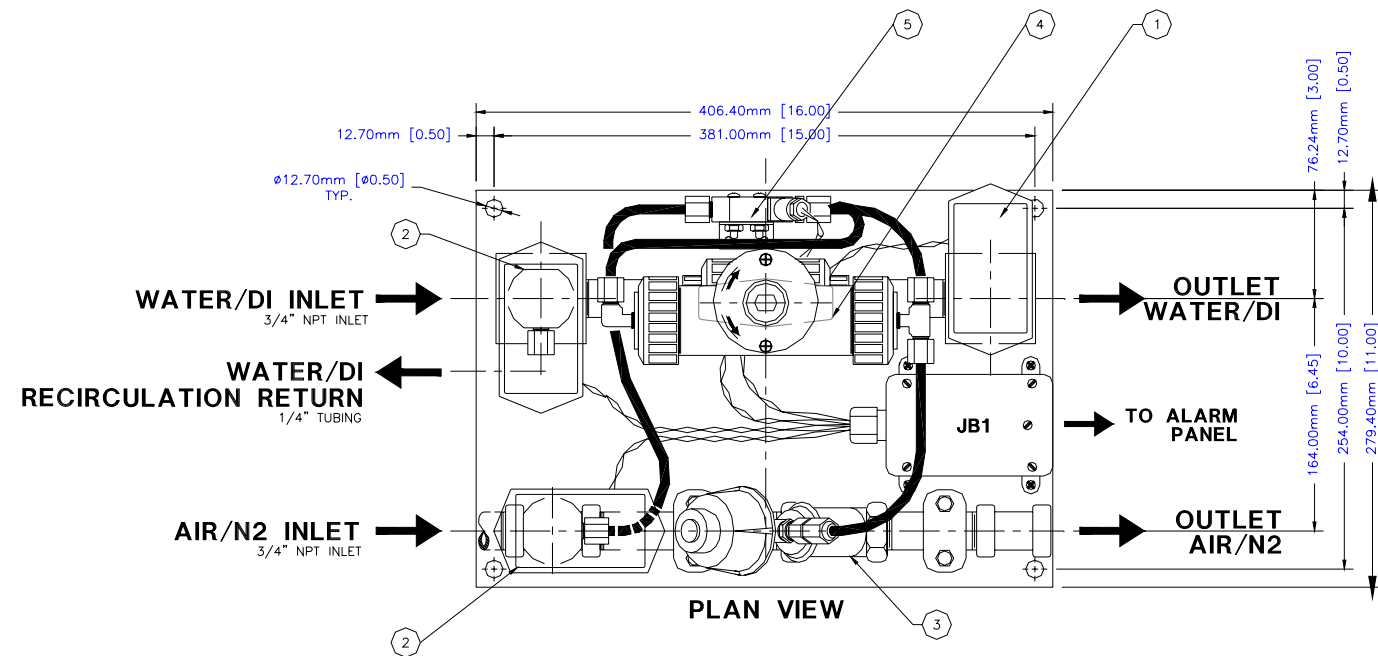
The zone valve assembly is used to control the air/N<sub>2</sub> and water/DI water discharge to the twin fluid, low pressure, water mist nozzles.

The zone valve assembly consists of the following main items:

- PVDF ball valve for potable water/deionized (DI) water
- Stainless steel (SS) - 316L pneumatic angle globe valve for air/N<sub>2</sub>
- Flow confirmation switch
- High/low supervisory pressure switches for air/N<sub>2</sub> & water/deionized water
- Low pressure solenoid valve

The water/DI water zone valve assembly may also be provided in polypropylene material, based on customer specific requirements.

*\*The operating pressures for the high/low supervisory pressure switches are set based on the individual customer installations.*



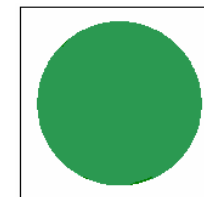
JB1  
WIRING DIAGRAM  
(LOCATED ON ASSEMBLY)

1. CONFIRMATION FLOW SWITCH	
Material - enclosure	Cover: Die cast with red powder coat finish base: PVDF (Kynar)
Maximum operating pressure	17.2 bar (250 psig)
Maximum operating temperature	60°C (140°F)
Pressure connection	1/2" NPT (male)
Switch contacts (non adjustable)	1 Set SPDT Form C
Pressure adjustment (factory set)	Operates on pressure increase at 6 +/- 1 psig
Rating	30 VDC, 2 Amp
2. HIGH/LOW PRESSURE SWITCH	
Material - enclosure	Cover: die cast with red powder coat finish base: PVDF (Kynar)
Maximum operating pressure	17.2 bar (250 psig)
Maximum operating temperature	60°C (140°F)
Pressure connection	1/2" NPT (male)
Switch contacts (adjustable)	2 Sets SPDT Form C
Maximum adjustable pressure range	0.68 to 12 bar (10 - 175 psig)
Rating	30 VDC, 2.5 Amp
3. PNEUMATIC ANGLE GLOBE VALVE	
Material - body	Stainless steel 316L
Material - actuator casing	Aluminium
Material - seating	Teflon (PTFE)
Maximum operating pressure	10.34 bar (150 psig)
Control pressure range	4.1 to 10.3 bar (60 to 150 psig)
Actuator connection	1/4" BSPP (F)
4. BALL VALVE	
Material dry	PVC
Material wet	* PVDF (Kynar)
Maximum operating pressure	9.65 Bar (140 psig)
Material seating	Virgin Teflon
O-rings	Viton
Actuator connection	3/4" NPT (Female)

\* Optional material available

## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
PNL-16345-00 (05)	Model 10CR, 8-SI, 4-SO, 4-Relay, LED, 24 VDC, English (French)
PNL-16345-10 (15)	Model 10CR-X, 8-SI, 4-SO, 4-Relay, 110 VAC, English (French)
PNL-16345-20 (25)	Model 10CR-X, 8-SI, 4-SO, 4-Relay, 220 VAC, English (French)
PNL-16345-01 (06)	Model 10CG, 8-SI/4-20 mA, 4-SO, 4-Relay, LCD, 24 VDC, English (French)
PNL-16345-11 (16)	Model 10CG-X, 8-SI/4-20 mA, 4-SO, 4-Relay, LCD, 110 VAC, English (French)
PNL-16345-21 (26)	Model 10CG-X, 8-SI/4-20 mA, 4-SO, 4-Relay, LCD, 220 VAC, English (French)
PNL-16345-03 (07)	Model 10CM, 8-SI, 4-SO, 4-Relay, LCD, 24VDC, Marine, English (French)
PNL-16345-13 (17)	Model 10CM-X, 8-SI, 4-SO, 4-Relay, LCD, 110VAC, Marine, English (French)
PNL-16345-23 (27)	Model 10CM-X, 8-SI, 4-SO, 4-Relay, LCD, 220VAC, Marine, English (French)
<b>OPTIONAL PARTS</b>	
PCA-14508-04	Dual RS485 Expansion Card
PCA-14508-05	Dual RS485 Expansion Card, Marine
PCA-16456-00	16 relays Expansion Card
PCA-16456-01	16 relays Expansion Card, Marine



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# PROPAK ALARM CONTROL PANEL



## KEY FEATURES

- 8 initiating circuits - conventional or 4-20 mA device
- Three alarm levels for gas detection
- Available with 4 line x 24 LCD display
- 4 supervised solid state control outputs
- 4 relay or 16 relay outputs
- Common alarm and trouble relays
- PC programmable
- Suitable for releasing device service
- Service mode feature for testing
- RS-485 MODBUS interface capability

## DESCRIPTION

The PROPAK Alarm Control Unit is a compact panel design providing detection and control of local and auxiliary alarm systems. Approved for releasing service, it performs fire as well as gas detection and can be easily programmed for the control of various auxiliary functions such as fire suppression supervision and release, fire door and ventilation control, emergency shutdown of equipment as well as communication to the fire services. The unit is designed and constructed in accordance with UL-864, ULC-S527 and complies with the requirements of NFPA 72.

The PROPAK has a windows-based built-in field programming capability. This allows the user to select the type of input, select sensor range, alarm level and time delays between detection and activation. Outputs can be programmed to operate with any input or combination of inputs using AND/OR Boolean logic. A laptop computer loaded with the field programming software is used to communicate with the PROPAK and upload the desired programming.

### PROPAK Capacity

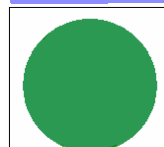
The PROPAK has eight (8) analog inputs, four (4) supervised outputs and four (4) relays.

**Conventional Detection:** the analog inputs will accept conventional detection and supervision devices. The analog inputs provide a regulated voltage, current limited supply to the field devices while monitoring current draw for trouble, fault and alarm conditions.

**Gas Detection:** each input is individually configurable to communicate with any 4-20 mA device. With the digital Liquid Crystal Display unit, the PROPAK is capable of continuously displaying the concentration of gas levels in PPM, LEL, and %/ Volume.

Each of the four (4) supervised output circuits provides 24 volts DC and is rated for 1 amp (inductive load). A total of 2 Amps is available for all four (4) outputs. The supervised outputs are short circuit protected, automatically resetting upon removal of a short circuit condition.

The relays can be used to initiate related functions and communications. An option of sixteen (16) relays is also available.



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## DESCRIPTION

### Enclosures

Two (2) enclosure versions are available. The most compact panel version is supplied in a 6"x 9" (130mm x 215mm) enclosure and can be flush mounted or installed in a 19" rack (3U x 42HP). It has no integral power supply therefore it is designed to be used where local UPS 24 VDC is available.

The X version of the PROPAK is an extended version where the panel is packaged in a drip-proof enclosure with a power supply and a charger for 2-12 Volt batteries. It requires 110/220 VAC to operate. The power supply is short-circuit protected, automatically resetting upon removal of a short-circuit condition. A built-in battery charger maintains the batteries at required voltages through an automatic routine test and recharges the batteries after a discharge.

### Annunciation and Operator Controls (all panels)

The annunciation functions of the PROPAK panel provide continuous status of all active inputs and outputs. LEDs adjacent to each input or output zone annunciate the alarm/fault status. Dedicated LEDs on the annunciation panel are used to annunciate Loss of Primary Power, Battery Fault and Ground Fault.

### PANEL MODELS

#### Model 10CR

This PROPAK model provides 32 LED's individually identifying the status of the devices to annunciate the alarm and fault of each zone. It is designed to be used where local 24 VDC, 200mA supply is available. It is ideal for the semiconductor industry for fire detection on wet processing units. It can be easily incorporated into the processing tool compartment. Model 10CR-X is also available.

#### Model 10CG

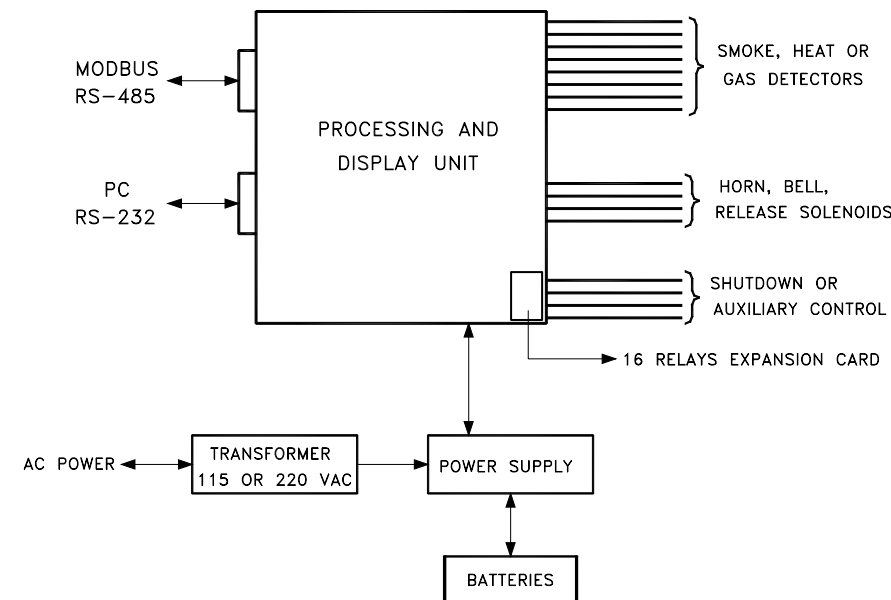
This PROPAK model is supplied with a Liquid Crystal Display (LCD) to advise all environmental and gas hazard conditions as well as panel and device status. The LCD has 4 x 24 characters of which 3 lines are available for user defined messages. This model is a perfect solution for turbine or diesel enclosures where local gas and fire detection and suppression is crucial. Model 10CG-X is also available.

#### Model 10CM

This PROPAK model designed for shipboard applications. All internal components of this panel are conformably coated to withstand the sea environment. It is designed to meet all USCG requirements. Model 10CM-X is also available.

#### OPTION: MODBUS Interface

An optional plug-in module provides two RS485 serial data ports. The RS485 port can be configured to communicate with a RS485 device/system using MODBUS protocol.



## TECHNICAL SPECIFICATIONS

ELECTRICAL	
<b>Primary Supply</b>	
Operating Voltage	115 or 220 Vac ± 15%
Frequency	47 - 63 Hz
Maximum Power	220 Watts
<b>Standby Supply</b>	
Internal Battery	Space for up to 12 Ah capacity batteries
Charging Current	1 A
Supply Voltage	22 Vdc =/- 10%
Current Limit	30 mA Max.
Max Standby Current per Input	2 mA Max.
End of Line Resistor	6.8 kOhms
<b>Signaling/Control Circuits</b>	
Output Voltage	28 Vdc ± 10%
Current Rating	1 Amp +/- 10% (continuous)
Short Circuit Trip Current	1.5 Amp ± 30%
Field Device Power	2.0 Amp
Relay Outputs	1 form "C" contact, 5A @ 28 Vdc, 0.5 A @ 115 Vac
<b>Alarm/Trouble Relays</b>	
One Alarm	2 Form "C" Contacts
One Trouble	1 A @ 28 Vdc, 0.5A @ 115 Vac
ENVIRONMENTAL	
Operating Temperature	from -2° to 50°C (28°F to 122°F)
Storage Temperature	from -40°C to + 60°C (-40°F to + 140°F)
Relative Humidity	95% @ 35°C (95°F)
MODEL CR-X & CG-X (W/BATTERY & POWER SUPPLY)	
Width	356 mm (14")
Height	406 mm (16")
Depth	152 mm (6.0")
MODEL CR & CG (W/O POWER SUPPLY)	
Width	215 mm (9")
Height	130 mm (6")
Depth	57 mm (2.25")