

DPYH-1379U Installation Instructions

Form DPYH1379U II 11-24

NOTICE: The DPYH-1379U device is certified for use in Class I, Division 1 and 2, Group D hazardous locations when installed in accordance with these instructions.

WARNING: DEVIATION FROM THESE INSTALLATION INSTRUCTIONS MAY LEAD TO IMPROPER OPERATION OF THE MONITORED MACHINE WHICH COULD CAUSE PERSONAL INJURY TO OPERATORS OR OTHER NEARBY PERSONNEL.

APPLICATION NOTE:

The newer DPYH-1379U devices with S/N 2601 and higher may be setup to operate in either 2-point or 9-point modes. The selection is detailed in paragraphs 1.2 and 6.2. Earlier devices operate only as a 9-point device.

In the 2-point mode, this device replaces older Altronic digital temperature gauges:

DPYH-1301U-J or -K

DPYH-1392U-J or -K

NOTE: When replacing these older 1-point and 2-point gauges, see the NOTE at the beginning of section 3 for replacement wiring information.

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 2. Mounting
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1.0 DESCRIPTION

1.1 GENERAL - The Altronic DPYH-1379U pyrometer is an electronic instrument designed to monitor temperature using industry standard type J or K thermocouples. It is powered from a C.D. ignition system or from 12 to 48 Vdc. The device uses a microcontroller to process the input signal and non-volatile memory to store the setup and setpoint values. An LCD displays the channel number and the numeric temperature value in °F or °C. A front mounted keypad serves as the user interface. The instrument can read type J thermocouples between -76°F and 1382°F (-60°C and 750°C) and type K thermocouples between -76°F and 1472°F (-60°C and 800°C).

1.2 MODES - There are two operating modes as detailed in the chart below. There are two user settable over-temperature setpoints and output switches. See the chart below for how the channels and outputs are arranged and designated in the two modes.

2-Point Mode	9-Point Mode
2 Points Monitored: CH 0 and CH 1 NOTE: CHS 2 through 8 are not displayed or monitored.	9 Points Monitored: CHS 0 to 8
1st Setpoint: CH 0 Output SW0	1st Setpoint: CH 0 Output SW0
2nd Setpoint: CH 1 Output SW1	2 nd Setpoint: CHS 1, 2, 3, 4, 5, 6, 7, 8 Output SW1
Typical Applications: Engine/compressor jacket water Engine/compressor oil Compressor process stages	Typical Applications: Engine exhaust (channels 1-8) Turbo inlet (channel 0) Catalytic converter inlet (channel 0)

NOTE: Only devices with serial number 2601 and above have the 2-point and 9-point modes. Devices with lower serial numbers operate only in the 9-point mode.

1.3 FUNCTIONALITY - The pyrometer is designed to be versatile and simple to use. Type J or K thermocouples and °F or °C units can be selected by the keypad. The high limit setpoints can be set from the keypad. A View Alarms function allows the user to recall and display channels which have exceeded their setpoint. An escape key is provided to permit the user to exit any setup function and return to the normal display without any changes. A configurable software filter is also provided which can be used to stabilize readings where the thermocouple signal is fluctuating. Calibration can be performed using the keypad. Factory default configurations, including factory calibration settings, are outlined in this document.

2.0 MOUNTING

Mount the pyrometer inside a control panel or to a suitable flat surface so that the display is at a convenient viewing height. This device fits the industry standard cutout for a 4-1/2" round diameter gauge. NOTE: Avoid mounting the pyrometer with the LCD display facing direct sunlight. The operating temperature range of the pyrometer including the display is -40°F to +175°F (-40°C to +80°C).

3.0 WIRING (SEE WIRING DIAGRAMS)

NOTE: WHEN REPLACING OLDER ALTRONIC TEMPERATURE GAUGES:

REPLACING DPYH-1301U-J, -K: Wire the thermocouple leads to terminal 1 and use Output 1.

REPLACING DPYH-1392U-J, -K: These older Altronic 2-point temperature gauges identify the channels as 1 and 2. It is recommended to connect the former channel 1 thermocouples to channel 1 on the DPYH-1379U device and the former channel 2 thermocouples to channel 0. With this arrangement, the channel designation changes from (1,2) on the old device to (1,0) on the new one.

OUTPUT SWITCHES: The output switches in the DPYH-1379U operate normally open to ground (see paragraph 3.3). They are the equivalent of the N.O. terminals on the previous devices. A wiring change will be required if the N.C. terminals were used on the replaced device.

3.1 THERMOCOUPLES AND THERMOCOUPLE EXTENSION WIRE - Grounded or ungrounded (recommended) type J or K thermocouples may be used. Use thermocouple extension wire of the same type as the thermocouple probe. Use stranded thermocouple wire having a good moisture-resistant insulation such as PVC; for higher ambient temperatures, Teflon or B-fibre insulated thermocouple wire is recommended. To insure an accurate signal is transmitted to the instrument, avoid any added junctions, splices and contact with other metals. Take care not to damage the insulation when installing and take precautions against later damage from vibration, abrasion, or liquids in conduits.

NOTE: It is essential that the following practices be adhered to:

- All unused thermocouple inputs to the pyrometer must be shunted.
- All thermocouples must be the same type, either type J or K.
- Never run thermocouple wires in the same conduit as the ignition wiring or other high energy wiring such as AC line power.
- Keep secondary wires to spark plugs and other high voltage wiring at least eight inches (200mm) away from thermocouples and extension wiring.
- If it becomes necessary to check thermocouple to terminal strip wiring, first UNPLUG THE THERMOCOUPLE CONNECTORS from the pyrometer. This will prevent damage to the device's sensitive low voltage detection circuitry.

3.2 POWER WIRING - Power can be from either a 100 to 400 volt C.D. ignition system or from a 12 to 48 Vdc (10 mA max.) source.

C.D. IGNITION SYSTEM: Connect the ignition shutdown lead to terminal IGN IN. The ground terminal GND is connected to panel ground which should be the same as engine ground. DO NOT ground this device directly to the ignition system common coil ground.

12-48 VDC POWER: Connect the DC power input wires, plus to terminal DC+ IN and minus to terminal GND.

3.3 OUTPUT SWITCH WIRING - When the temperature of a channel exceeds its setpoint, the corresponding output will turn on to the GND terminal. The switches are rated 400 Vdc , 0.20 amp max. These switches can be wired to an Altronic annunciator system or to pilot duty relays as shown in the wiring diagrams.

3.4 HAZARDOUS AREA OPERATION - The DPYH-1379U pyrometer is CSA certified for *CLASS I, DIVISION 1 AND 2, GROUP D* areas as described below.

CLASS I, GROUP D, DIVISION 2: Certified when mounted in a suitable panel enclosure.

CLASS I, GROUP D, DIVISION 1: Certified as intrinsically safe if the following conditions are met:

- With a CD ignition power source, the pyrometer must be powered through an Altronic 690107 or 690108 barrier. With a DC power source, the pyrometer must be powered through a CSA-certified zener barrier rated 30 volts max., 120 ohms min.
- The switch outputs must be connected to the sensor inputs of an Altronic DA or DD annunciator system with the 690 series power supply.

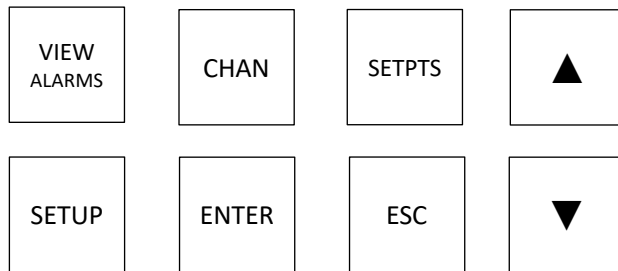
In addition, the following requirements must be met (see NFPA standard no. 493):

- The intrinsically-safe instrument wires within the panel enclosure must be kept at least two (2) inches away from other wiring. Run the thermocouple extension wires leaving the panel in a separate conduit from all other wiring and keep them separate throughout the installation.
- Wiring to the sensors must have a grade of insulation capable of withstanding an AC voltage of 500 volts RMS.
- Sensor wires must be run in separate conduits and junction boxes from high voltage wires such as ignition, fuel valve, and other high voltage wiring.

WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY AND/OR SUITABILITY FOR CLASS I, DIVISION 2.

DO NOT DISCONNECT EQUIPMENT IN A DIVISION 2 ENVIRONMENT UNLESS POWER IS SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS.

4.0 KEYPAD DESCRIPTION



KEYPAD - The pyrometer contains an eight-key front keypad which is used to view or change the setpoint values and to configure and calibrate the pyrometer. The eight front panel keys are shown above: VIEW ALARMS, SETUP, CHAN, ENTER, SETPTS, ESC, and ▲ ▼ (up and down arrow keys). Only one key should be pressed at a time.

VIEW ALARMS - Pressing VIEW ALARMS scrolls through all the channels in numerical order where the measured temperature has exceeded the setpoint value. Any channel that has not exceeded its setpoint value will not be displayed. This function does not affect the outputs. The “AL” indicator will stay on in this menu but does not necessarily indicate a fault condition. See paragraph 5.3 for more information.

SETUP - The SETUP key is used to scroll through the pyrometer setup menu.

CHAN - The channel key allows the user to increment the displayed channel and corresponding temperature value. Each press of the channel key increments to the next channel and corresponding temperature value, one at a time.

ENTER - The ENTER key is used to save new data or a new configuration in non-volatile memory. The setup will remain even through power-down.

SETPTS - The SETPTS (setpoints) key is used to view or change each setpoint value. When pressed, the message "StP" is displayed followed by the setpoint temperature for channel 0. Refer to section 7 for additional information.

ESC - The ESC (escape) key can be used at any time to return to the normal mode. When the ESC key is pressed in any configuration mode, the configuration returns to the previous stored values and the display returns to the normal reading.

▲ ▼ - The up and down arrow keys are used to scroll through the selections in the setup mode and to increase or decrease values for setpoints, calibration and the filter screen.

5.0 GENERAL OPERATION

5.1 NORMAL - When the DPYH-1379U gauge is in the "normal" mode, it displays the channel number, numeric temperature value and either °F or °C: "#:XXXX". The digit (#) to the left of the colon indicates the displayed channel. The numbers (XXXX) to the right of the colon indicate the temperature associated with that particular channel. Each press of the CHAN key increments to the next channel and corresponding temperature value.

5.2 ALARM - When any channel's measured temperature value exceeds its setpoint value, an LCD indicator "AL" (for alarm) will display and the associated output will turn on (see chart in section 1).

5.3 VIEW ALARMS FUNCTION - After an output has been activated, pressing the VIEW ALARMS key scrolls through all channels in numerical order that have exceeded their setpoint. In the 9-point mode, this feature will indicate which of the channels 1 through 8 has activated Output 1. Press the VIEW ALARMS key until the display shows "CLr" which indicates that all faulted channels have been displayed. At this point, pressing ENTER clears any channel not currently faulted. Pressing the ESC key will retain past alarms in the device memory. In general, it is recommended to clear the register after each fault occurrence so it will be evident which channel has caused the most recent alarm.

5.4 OUT OF RANGE - Certain conditions cause an out-of-range indication.

- A reading of "#:LO" indicates a monitored temperature below the minimum range of the instrument (-76°F or -60°C).
- A reading of "#:HI" indicates a monitored temperature above the maximum range of the instrument or an open thermocouple condition. The maximum range is 1382°F or 750°C for type J, 1472°F or 800°C for type K. In the case of an open or disconnected thermocouple, the output switch will also turn on. NOTE: All unused thermocouple inputs must be shunted to prevent this condition.

6.0 GAUGE CONFIGURATION

6.1 GENERAL - The pyrometer must be configured for proper operation. To configure the device, press the SETUP key as specified below. The attributes are listed on the next page:

- A flowchart is provided in the figures section that shows step-by-step progression through the pyrometer configuration procedure.
- During configuration, the pyrometer allows 15 seconds for first level and 60 seconds for other levels between keystrokes to view or change and save a new configuration. If the time lapses without a keystroke, the pyrometer will automatically return to the normal reading mode without making any changes. You can also exit the setup mode at any point before the final ENTER command by pressing the ESC key; the prior value will be retained in memory. New information is saved only if the ENTER key is pressed and the display reads "SAVE/donE".

The chart on the next page shows the configurable steps required to set-up the device.

The first two steps (*) below are required to properly operate the instrument. The remaining items allow the user to re-calibrate or customize the instrument to specific preferences; in many cases the factory default settings will suffice for these.

No. of Points : Units * (paragraph 6.1 A.)	2:dEG °F : 2:dEG °C : 9:dEG °F : 9:dEG °C
	↓
Thermocouple Type * (paragraph 6.1 B.)	Type J : Type K
	↓
Calibration (paragraph 6.1 C.)	New devices are factory calibrated. See section 8.
	↓
Scan (paragraph 6.1 D.)	Automatic (Yes) : Manual (No) Default is No
	↓
Protection (paragraph 6.1 E.)	ON : OFF Default is OFF
	↓
Filter (paragraph 6.1 F.)	1 to 255 Default is 230

A. "n:dEG °F" / "n:dEG °C" PTS. : UNITS - Set up the device for either 2-point mode or 9-point mode and select the temperature units °F or °C. The temperature indicators appear on the right side of the display.

1. Press the SETUP key until the display reads "2:dEG °F", "2:dEG °C", "9:dEG °F", "9:dEG °C". These indicate the number of channels to be displayed (2 or 9) and the temperature units (C. or F.). NOTE: Older devices with S/N below 2600 operate only as a 9-point device and will display a choice of either "dEG °F" or "dEG °C".
2. Use the ▲ or ▼ arrow key to select the desired choice and press ENTER to save the selection.

B. "J:tc / K:tc" THERMOCOUPLE TYPE - The instrument can read either type J or K thermocouples.

1. Press the SETUP key until the display reads either "J:tc" or "K:tc".
2. Use the ▲ or ▼ arrow key to select a thermocouple type and press ENTER to save the new thermocouple type.

NOTE: Pressing ENTER again here will return all of the adjustable parameters to factory default values. This includes the output switch setpoints resetting to default values of 185°F./185°F. for 2-point mode or 1000°F./900°F. for 9-point mode. When verifying the type, press ESC to exit without reloading the default values.

C. **"CAL" CALIBRATION** - see section 8 for calibration procedures.

D. **"SCAN"** - The SCAN function allows the user to select either auto ("YES") or manual ("no") display scan. If set to "YES", the pyrometer increments through the channels in numerical order at the rate of approximately two seconds per channel. If set to "no", the pyrometer is incremented manually through the channels using the CHAN key.

To set the SCAN function: (factory default is "no")

1. Press the SETUP key until the display reads "SCAN" and press the ENTER key.
2. Use the ▲ or ▼ arrow key to get the desired selection "no" or "YES" and press ENTER.

E. **"P:On / P:OFF" PROTECTION STATUS** - This feature allows the user an added layer of protection by preventing the setpoints from inadvertently being changed. When protection is "On", the user is able to view the setpoint values but is not able to change them. If the ▲ or ▼ arrow keys are pressed when protection is on with the display in the setpoints mode, the display will read "no" and return to the normal display mode.

To set the Protection Status: (factory default is "P:OFF")

1. Press the SETUP key until the display reads either "P:On" or "P:OFF".
2. Use the ▲ or ▼ arrow key to get the desired selection and press ENTER.

NOTE: To adjust the setpoint limits, the protection status must be set to "OFF" which will allow new settings per section 7. This feature may be turned on and off as many times as needed.

F. **"FILT" DISPLAY FILTER** - The display filter can be used to stabilize the display reading of a changing input. Filtering is done in both hardware and software. The software filter is an adjustable filter; the rate of change is slower for large values. The filter value is set in a number from 1 to 255, 1 being no filter value and 255 being maximum filter value. Below are some typical filter values and their effect on the display reading. Settling values are approximate times in seconds to reach 90% of a new reading.

To set the filter value: (factory default is 230)

1. Press the SETUP key until the display reads "FILT" and press ENTER. The display will read the previously set filter value.
2. Use the ▲ or ▼ arrow key to increase or decrease the filter value as desired and press ENTER to save the new filter value.

NOTE: The output switch reaction time is affected by the filter settling time.

FILTER VALUE	1	128	200	210	220	230	240	250	253	255
SETTLING TIME, SECS.	1.0	2.5	5.0	6.0	8.0	10	14	37	75	204

7.0 SETPOINTS

7.1 SETPOINTS - There are two individually adjustable high setpoints which can be set anywhere within the range of the gauge. When the SETPTS key is pressed, the display will show "n:XXXX". The number "n" to the left of the colon represents the setpoint being viewed (0 or 1). The number "XXXX" to the right of the colon is the numeric high limit value for that setpoint.

NOTE: The factory default values are as follows:

2-point mode: 0: 185°F, 1: 185°F

9-point mode: 0:1000°F., 1: 900°F

7.2 ADJUSTMENT - See paragraph 7.1 for default values.

To adjust the displayed value:

1. Press the SETPTS key until the 1st setpoint displays "0:XXXX".
2. Press the ▲ or ▼ arrow keys to increase or decrease the value until the desired high limit point is displayed.
3. Press ENTER to save the new value.
4. Then press the SETPTS key until the 2nd setpoint displays "1:XXXX" and repeat steps 2 and 3 above.

You can exit the setpoints process prior to step 3 above by either waiting 15 seconds without pressing a key or by pressing the ESC key. The prior value will be retained in memory.

NOTE: It is possible to lockout easy changes to the setpoint values - see Protection Status paragraph 6.1E.

7.3 HYSTERESIS - The setpoint has a fixed hysteresis value of 10°F or 5°C. Example: If the temperature setpoint is set to 900°F, the output switch will close when the temperature reaches 900°F and stay tripped or closed until the temperature drops below 890°F; at that point the switch will return to the open state.

8.0 CALIBRATION

8.1 GENERAL - The instrument is calibrated at the factory and should not require additional calibration. However, calibration can be performed in the field many times over the life of the gauge. The calibration mode is used to calibrate the zero and span values of the gauge. A thermocouple calibrator or simulator is required to provide a calibration reference.

NOTE: During calibration, the gauge allows 60 seconds between keystrokes to change or save a new calibration. If 60 seconds lapse without a keystroke, the gauge will automatically return to the normal mode with the previous values. The new calibration information is saved only if the ENTER key is pressed and the gauge reads "SAVE/donE".

8.2 CALIBRATION PROCEDURE - Connect the proper thermocouple simulator, either type J or K, using matching thermocouple extension wire to the pyrometer input channel 0. The pyrometer MUST be calibrated on channel 0 only but will apply to all channels. Be sure the units (°C or °F) of the calibrator match the units of the instrument before performing a calibration. To calibrate the pyrometer:

1. Press the SETUP key until the display reads "CAL" and press ENTER; the display will read "1:CAL".
2. Adjust the simulator for a very low reading (0° F.) and press ENTER.
3. Use the ▲ or ▼ arrow keys to increase or decrease the display reading to match the setting of the simulator and press ENTER. The display will now read "2:CAL".
4. Adjust the simulator for a very high reading (1000°F) and press ENTER.
5. Use the ▲ or ▼ arrow keys to increase or decrease the display reading to match the simulator and press ENTER. The display will read "SAVE/donE" and will return to the normal reading with the new calibration values stored in permanent memory.

"TWEAK" ADJUSTMENT - The pyrometer has a feature that allows a slight adjustment of either the zero or span values individually. This type of calibration can be used to "tweak" the readout to match that of a known value without actually performing a formal calibration procedure. This adjustment must be performed only on channel 0. NOTE: This type of adjustment will invalidate calibration settings resulting from the procedures in the CALIBRATION PROCEDURE paragraph above.

- Zero Adjustment Only - To make a small adjustment on the zero calibration value of the pyrometer:
 1. Press the SETUP key until the display reads "CAL" and press ENTER; the display will read "1:CAL".
 2. With the standard at or near 0, press ENTER and use the ▲ or ▼ arrow keys to increase or decrease the display reading to match the standard and press ENTER. The display will read "2:CAL".
 3. Press the SETUP key and the display will read "SAVE/donE" and will return to the normal reading with the new zero calibration value stored in permanent memory.
- Span Adjustment Only - To make a small adjustment on the span point of the pyrometer:
 1. Press the SETUP key until the display reads "CAL" and press ENTER; the display will read "1:CAL".
 2. Press the SETUP key and the display will read "2:CAL".
 3. With the standard at or near the desired span value, press ENTER and use the ▲ or ▼ arrow keys to increase or decrease the display reading to match the standard and press ENTER. The display will read "SAVE/donE" and will return to the normal reading with the new span calibration value stored in permanent memory.

FIGURES SECTION:

Configuration Worksheet

Mounting Dimensions and Specifications – DPYH-1379U

Flowchart

General Wiring Diagram

Wiring Diagram, Altronic Annunciator

Wiring Diagram, DC Relay

Wiring Diagram, Tattletale

DPYH-1379U CONFIGURATION WORKSHEET:

SITE: _____

SERIAL NO. _____

UNITS: _____ °F. _____ °C.

TC TYPE: _____ J _____ K

SCAN: _____ NO (Manual) (default is NO)
_____ YES (Auto scan)

SETPOINT
PROTECTION: _____ OFF _____ ON (default is OFF)

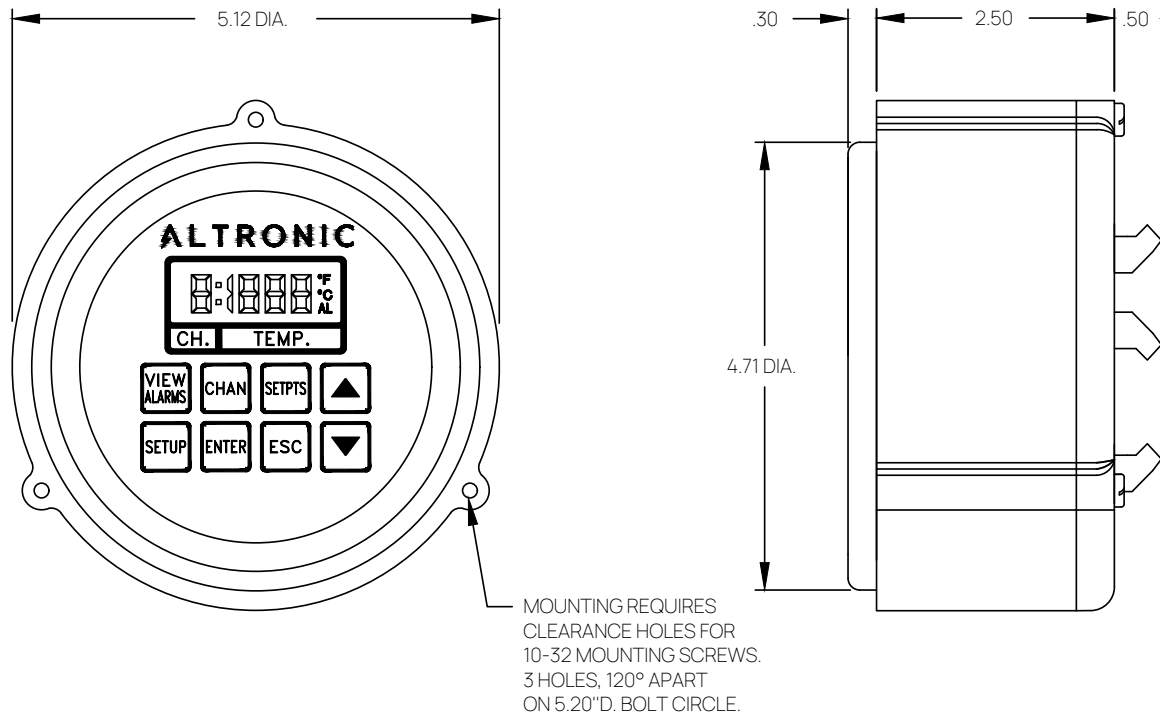
FILTER: _____ (1 min. to 255 max.) (default is 230)

SETPOINTS:

2-PT. MODE: #0 _____ °F or °C (default is 185°F)
#1 _____ °F or °C (default is 185°F)

9-PT. MODE: #0 _____ °F or °C (default is 1000°F)
#1 _____ °F or °C (default is 900°F)

DPYH-1379U MOUNTING DIMENSIONS AND SPECIFICATIONS



SPECIFICATIONS:

POWER REQUIRED: C.D. IGNITION POWERED 100-400V OR DC POWERED 12-48VDC 10MA MAX.

THERMOCOUPLE TYPE: "J" (IRON-CONSTANTAN) OR "K" (CHROMEL-ALUMEL) - ALL THE SAME

TEMPERATURE SCALE: PROGRAMMABLE °C OR °F.

DISPLAY: 0.4" 4-1/2 DIGIT LCD WITH °C, °F AND AL INDICATORS.

DISPLAY UPDATE RATE: 2.25 SECONDS NOMINAL

SCAN RATE: 1.5 SECONDS NOMINAL (2 OR 9 CHANNELS)

RANGE: TYPE "J" THERMOCOUPLE -60°C TO 750°C OR -76°F TO 1382°F.

TYPE "K" THERMOCOUPLE -60°C TO 800°C OR -76°F TO 1472°F.

OUTPUT SWITCH: 2-POINT, SW0 FOR CHANNEL 0, SW1 FOR CHANNEL 1

9-POINT, SW0 FOR CHANNEL 0, SW1 FOR CHANNELS 1 TO 8

RATED 400VDC 0.2 AMP CONTINUOUS. HYSTERESIS FIXED AT 5°C OR 10°F

SWITCH RESPONSE TIME: TIED TO FILTER VALUE AND DISPLAY READING

(WITH FILTER AT 1, MAX RESPONSE TIME APPROX. 1 SECOND)

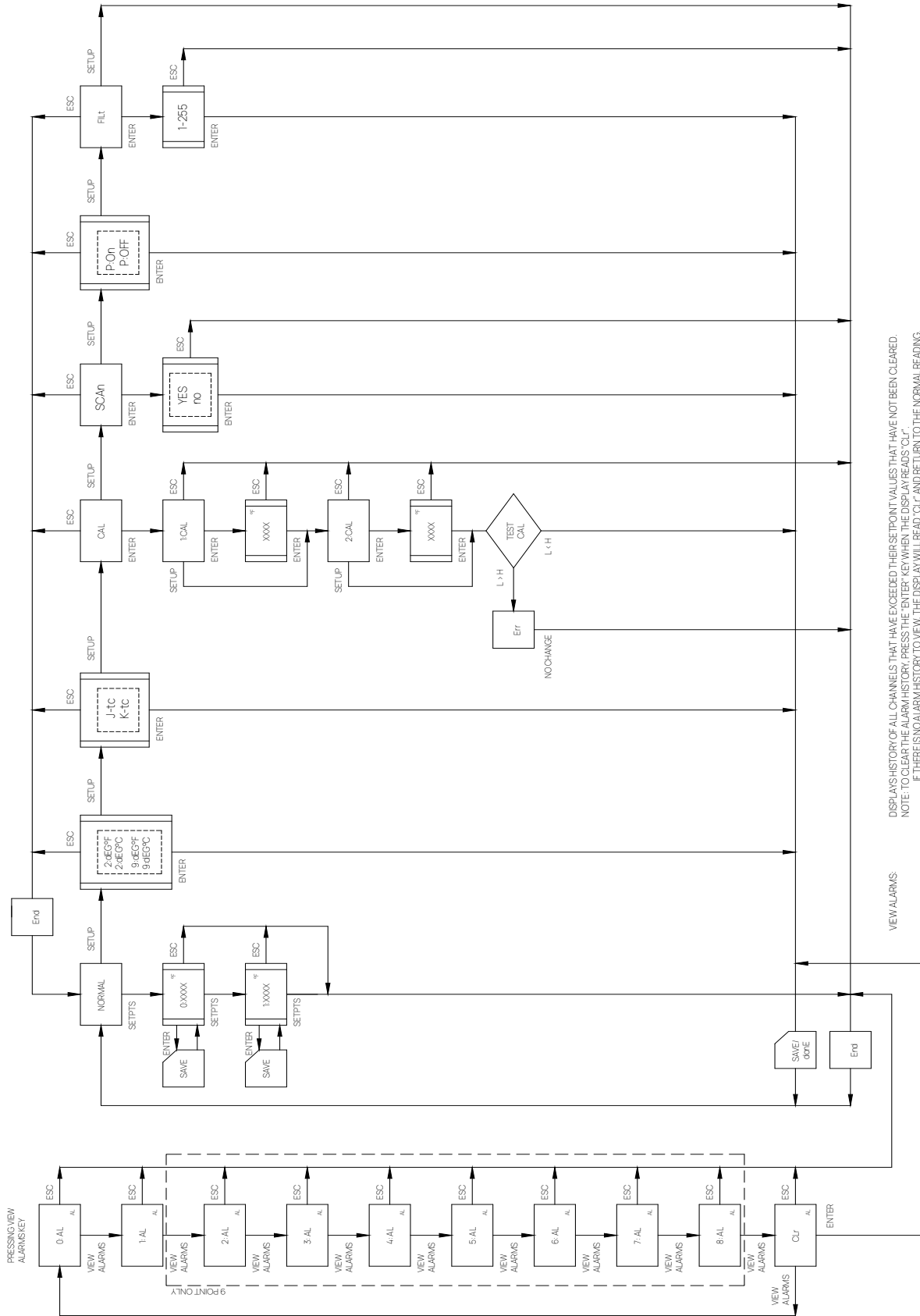
AMBIENT TEMPERATURE RANGE: -40°C TO 80°C OR -40°F TO 175°F.

INSTRUMENT ACCURACY: ±1%, ±3 DEGS (EXCLUSIVE OF THERMOCOUPLE ERROR)

HAZARDOUS ARE CLASSIFICATION: CLASS I, GROUP D, DIV. 2

CLASS I, GROUP D, DIV. 1 WHEN IGNITION POWERED FROM ALTRONIC 690107 OR 690108 BARRIER OR WHEN DC POWERED FROM A CSA CERTIFIED ZENER BARRIER RATED 30 VOLTS MAX., 120 OHMS MIN.

DPYH-1379U FLOWCHART

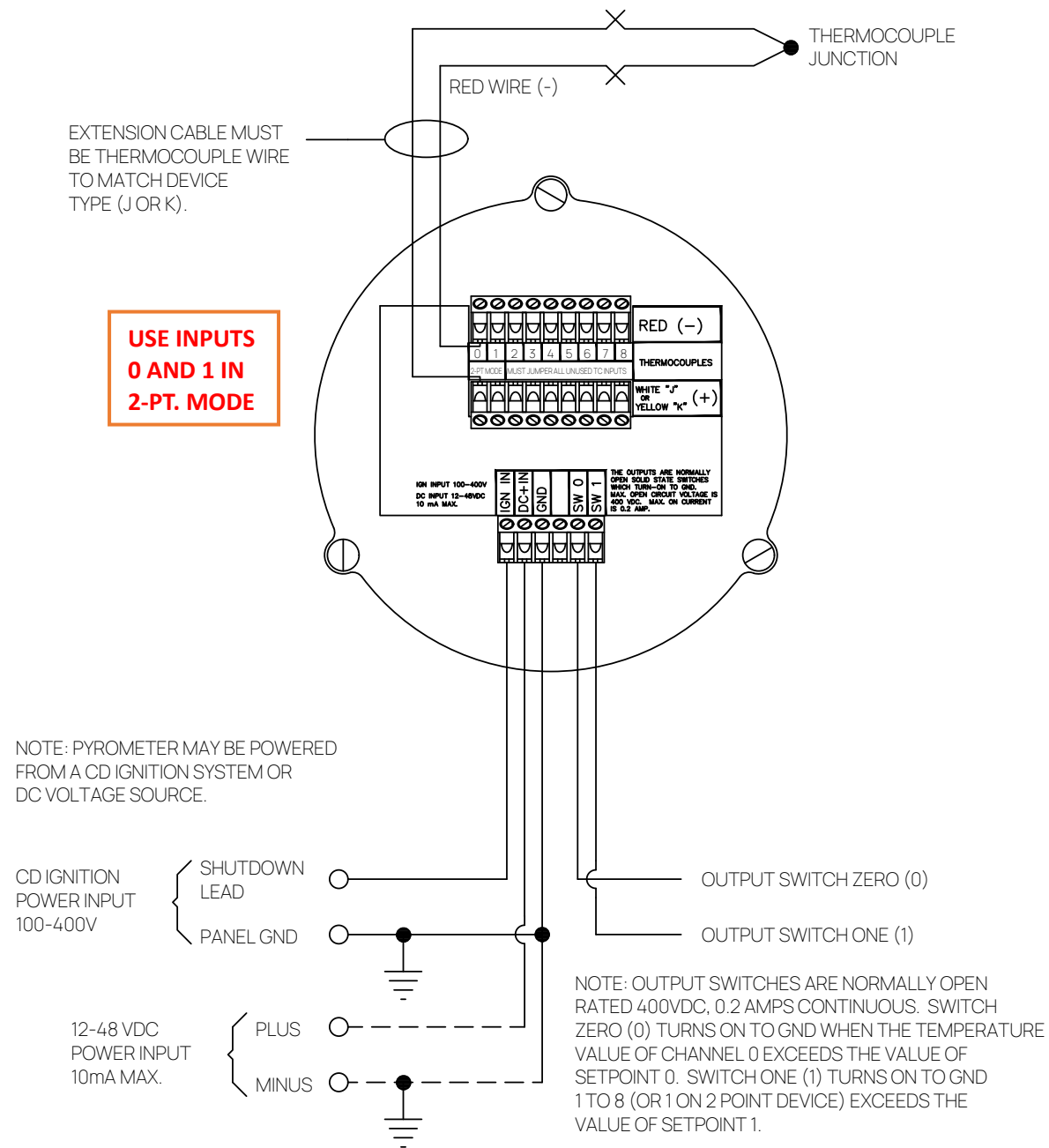


VIEW ALARMS: DISPLAYS HISTORY OF ALL CHANNELS THAT HAVE EXCEEDED THEIR SETPOINT VALUES THAT HAVE NOT BEEN CLEARED.
 NOTE: TO CLEAR THE ALARM HISTORY, PRESS THE "ENTER" KEY WHEN THE DISPLAY READS "CLJ".
 IF THERE IS NO ALARM HISTORY TO VIEW, THE DISPLAY WILL READ "CLJ" AND RETURN TO THE NORMAL READING.

CHAN: THE CHANNEL BUTTON, WHEN PRESSED, DISPLAYS THE NEXT CHANNEL NUMBER AND TEMPERATURE VALUE.

SETPTS: WHEN THE SETPTS KEY IS PRESSED THE SETPOINT WILL BE DISPLAYED FOR 16 SECONDS AND WILL AUTOMATICALLY REVERT BACK TO THE NORMAL DISPLAY MODE IF NO KEYS ARE PRESSED. IF THE UP/DOWN ARROW KEYS ARE PRESSED THE SETPOINT VALUE WILL INCREMENT OR DECREMENT AND REFRESH THE TIMER. PRESSING THE ENTER KEY SAVES THE NEW VALUE AND DISPLAYS THE SAME SETPOINT. PRESSING THE SETPOINTS KEY DOES NOT SAVE AND TAKES YOU TO NEXT SETPOINT. IF THE ESC KEY IS PRESSED THE DISPLAY WILL REVERT BACK TO THE NORMAL DISPLAY MODE AND RETAIN THE PREVIOUS SETPOINT VALUE.

DPYH-1379U GENERAL WIRING DIAGRAM

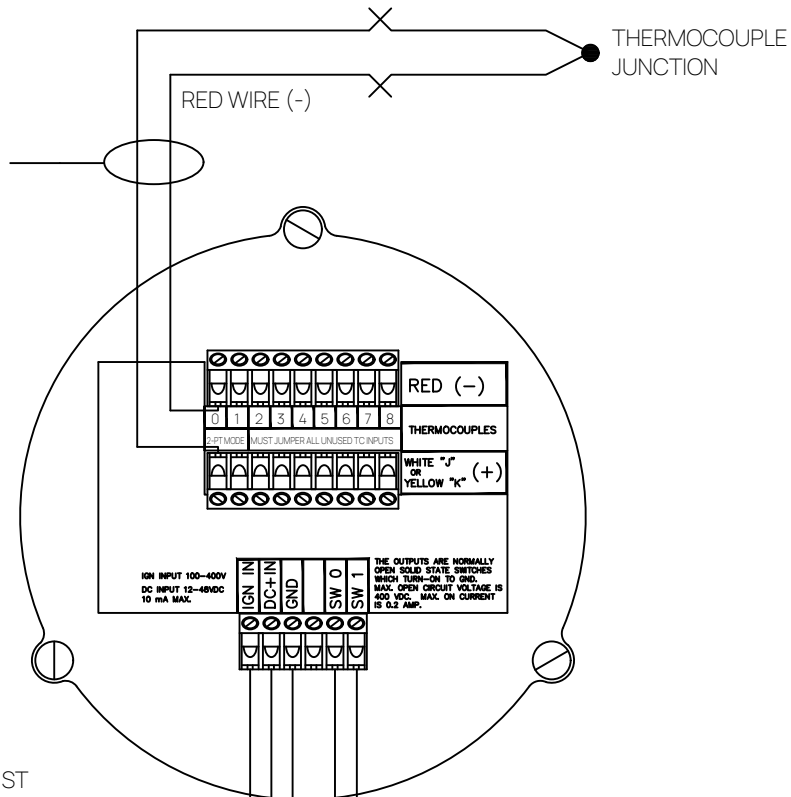


NOTES:

1. ALWAYS USE POINT (0) AND PROCEED IN SUCCESSION TO THE HIGHEST POINT REQUIRED.
2. ALL THERMOCOUPLES AND EXTENSION WIRE MUST BE OF THE SAME TYPE. ALL CONNECTIONS TO BE CLEANED, TIGHTLY TWISTED AND INSULATED WITH CERAMIC WIRE NUTS.
3. ALL UNUSED THERMOCOUPLE INPUTS MUST BE SHUNTED FOR PROPER OPERATION. (INCLUDING 2-8 ON 2 POINT DEVICE)
4. THERMOCOUPLES SHOULD BE EITHER ALL UNGROUNDED OR ALL GROUNDED.
5. FOR INTRINSICALLY SAFE OPERATION, POWER FROM ALTRONIC 690 107/108 BARRIER FOR IGNITION POWER OR FROM A CSA CERTIFIED ZENER BARRIER RATED 30V MAX., 120 OHMS MIN. FOR DC POWER.

DPYH-1379U WIRING DIAGRAM, ALTRONIC ANNUNCIATOR

EXTENSION CABLE MUST BE THERMOCOUPLE WIRE TO MATCH DEVICE TYPE (J OR K).

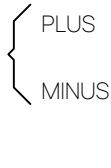


NOTE: FOR INTRINSICALLY SAFE OPERATION, IGNITION POWER MUST BE FROM AN ALTRONIC 690 107 OR 690 108 BARRIER OR DC POWER MUST BE FROM A CSA CERTIFIED ZENER BARRIER RATED 30 VOLTS MAX., 120 OHMS MIN. FOLLOW INSTALLATION INSTRUCTIONS SUPPLIED WITH BARRIER.

CD IGNITION POWER INPUT 100-400V



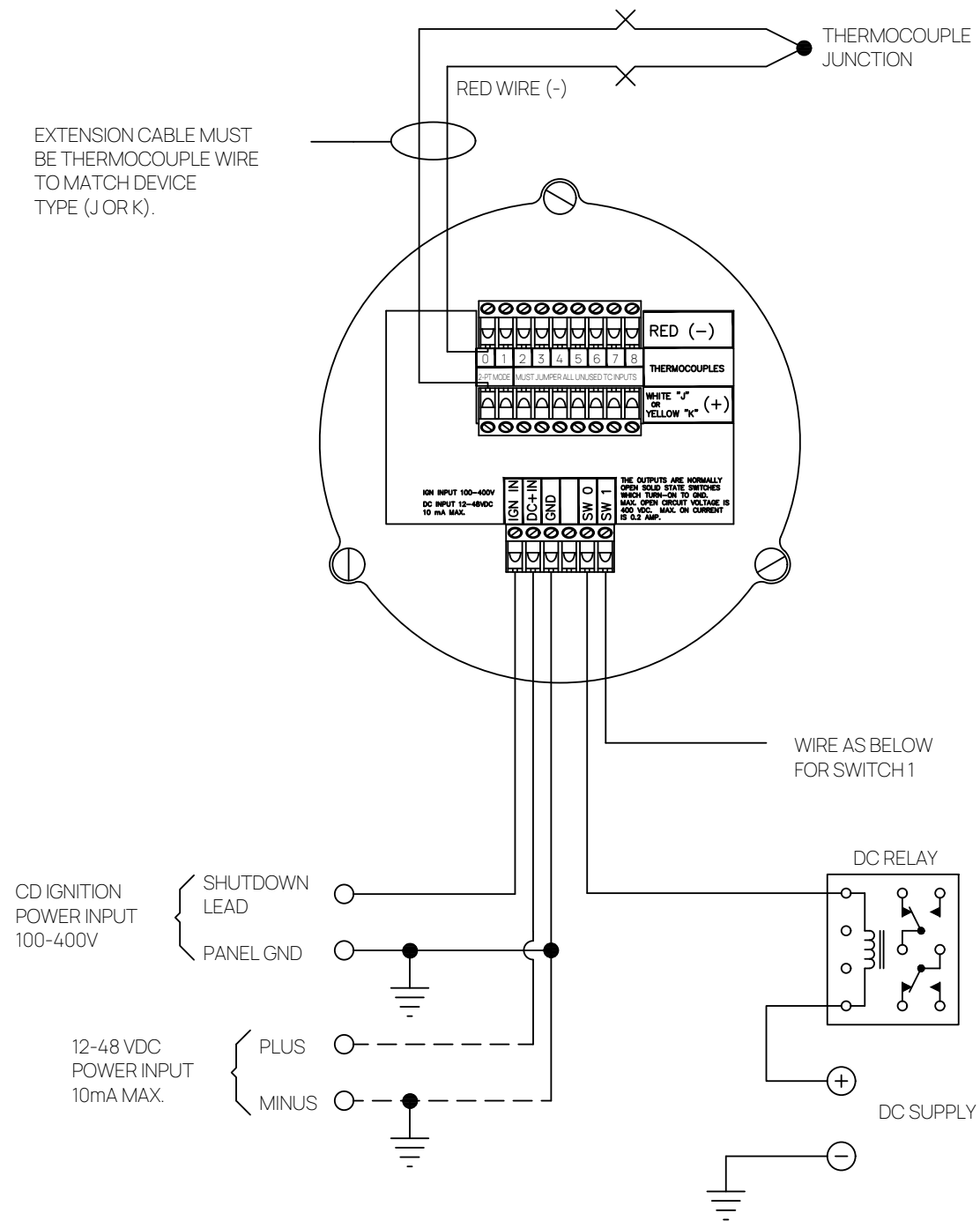
12-48 VDC POWER INPUT 10mA MAX.



NORMALLY OPEN ANNUNCIATOR INPUTS #10-57

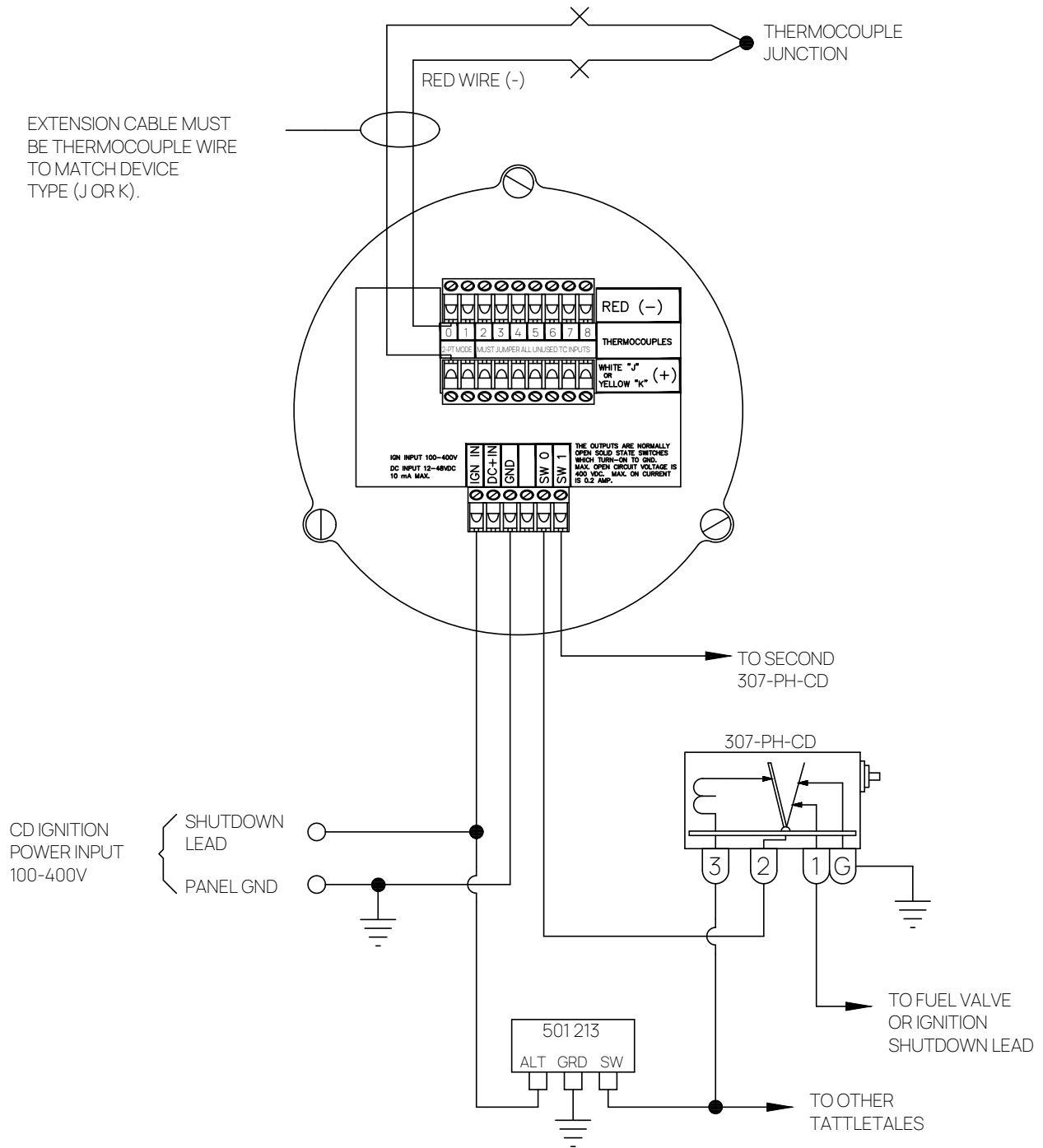
NOTE: OUTPUT SWITCHES ARE NORMALLY OPEN RATED 400VDC, 0.2 AMPS CONTINUOUS. SWITCH ZERO (0) TURNS ON TO GND WHEN THE TEMPERATURE VALUE OF CHANNEL 0 EXCEEDS THE VALUE OF SETPOINT 0. SWITCH ONE (1) TURNS ON TO GND WHEN THE TEMPERATURE VALUE OF ANY CHANNEL 1 TO 8 (OR 1 ON 2 POINT DEVICE) EXCEEDS THE VALUE OF SETPOINT 1.

DPYH-1379U WIRING DIAGRAM, DC RELAY



NOTE: OUTPUT SWITCHES ARE NORMALLY OPEN
RATED 400VDC, 0.2 AMPS CONTINUOUS.

DPYH-1379U WIRING DIAGRAM, IGNITION-POWERED TATTLETALE



NOTE: OUTPUT SWITCHES ARE NORMALLY OPEN RATED 400VDC, 0.2 AMPS CONTINUOUS.