Model 1190-I

International Data Collection Platform

User's Manual

1190-I-001
Rev. A

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1. INTRODUCTION

The Model 1190-I International Data Collection Platform (DCP) is used with Automated Weather Observing Systems (AWOS) to collect and process sensor signals. The DCP is located at the sensor station, and collects data from the sensors, performs error detection on the received information, converts the sensors' data into engineering units, and transmits a message packet containing sensor data and status information to the Central Data Platform (CDP) once every five seconds.

2. INSTALLATION

2.1 DCP INSTALLATION

The Model 1190-I DCP mounts to the sensor tower using Unistrut; optional barometric pressure (Model 7150) and radio kits mount inside the DCP enclosure. Installation drawings in the ***Drawings*** chapter of this manual illustrate the installation procedures. Refer to those drawings when installing the DCP (1190-007), the 7150 barometric pressure sensor (M403316-01-003), and the 20980-A radio (M403316-01-003).

The junction boxes, such as those used for AC power, Ceilometer and Visibility sensors, and landlines (present only when a radio data link is not used), that were installed during the site preparation procedure are located at the edge of the tower foundation. After installing the DCP on the tower, install flexible or rigid conduit between the junction boxes and the holes in the underside of the DCP enclosure. Route the wires from the junction boxes through the conduit into the DCP.

Wiring diagram 903-I-019 in the ***Drawings*** chapter of this manual illustrates the wiring connections described below.

2.2 SENSOR WIRING

The AWOS sensors are connected to the DCP at a series of terminal blocks along the left side of the backplane.

TB2

- The MARS (Motor Aspirated Radiation Shield), Wind Speed sensor, and Temperature/Relative Humidity sensor connect to TB2.

TB3

- The Day/Night sensor, Rain Gauge, Auxiliary sensor, and Wind Direction sensor connect to TB3.

TB4

- The Ceilometer, Visibility Sensor, and Present Weather Sensor interface to interconnecting daughter boards that mount to the backplane. They communicate via an RS-485 bus accessed at TB4. The Thunderstorm/Lightning Sensor's signal lines connect directly to TB4.

2.2.1 TB2—MARS Wiring

Power for a Model 8190 MARS unit is obtained at pins 9 and 10 of TB2.

1. Connect the WHITE positive lead of the MARS power cable to pin 9.
2. Connect the BLACK negative lead of the MARS power cable to pin 10.

2.2.2 TB2—Wind Speed Wiring

Either a Model 2030 Micro Response Anemometer or a Model 2100 Skyvane can be used to sense wind speed. The wind speed sensor is wired to pins 5–8 of TB2.

2030 Wiring

When wiring a Model 2030 Micro Response Anemometer to the DCP, connect as follows:

1. Connect the BLACK wire to pin 5 of TB2.
2. Connect the WHITE wire to pin 6 of TB2.
3. Connect the GREEN wire to pin 7 of TB2.
4. Connect the RED wire to pin 8 of TB2.

2100 Wind Speed Wiring

When wiring a Model 2100 Skyvane to the DCP, connect the wind speed portion as follows:

1. Connect the RED wire to pin 5 of TB2.
2. Connect the WHITE wire to pin 6 of TB2.
3. Connect the GREEN wire to pin 7 of TB2.
4. Connect the BLACK wire to pin 8 of TB2.

2.2.3 TB2—Temperature/Relative Humidity Wiring

The Model 5190 Temperature/Relative Humidity sensor is wired to pins 1-4 of TB2 as follows (refer to the sensor manual for corresponding wire colors):

1. Connect the BROWN temperature signal wire (TEMP) to pin 1 of TB2.
2. Connect the WHITE relative humidity signal wire (RH) to pin 2 of TB2.
3. Connect the GREEN positive power lead (V+) to pin 3 of TB2.
4. For a Model 5190-D or 5190-E Temperature/ Relative Humidity probe, connect the GRAY, BLUE, and SHIELD wires to pin 4 of TB2.

   For a Model 5190-F Temperature/Relative Humidity probe, connect the GRAY, YELLOW, and SHIELD wires to pin 4 of TB2.

2.2.4 TB3—Day/Night Sensor Wiring

The Model 83339-A Day/Night sensor's two wires connect to pins 9 and 10 of TB3.

1. Connect the positive lead to pin 9.
2. Connect the negative lead to pin 10.

Note: For 8364-E and 8365 Visibility Sensor installations, the visibility sensor provides the Day/Night sensor output, and the Model 83339-A is not installed.

2.2.5 TB3—Rain Gauge Wiring

The Model 6011 or 6021 Rain Gauge connects to pins 7 and 8 of TB3. These two pins are interchangeable, allowing the two rain gauge wires to be connected to either pin.

2.2.6 TB3—Auxiliary Sensor Wiring

An auxiliary voltage output sensor (such as a solar radiation sensor) can be connected to the DCP via pins 5 and 6 of TB3.

1. Connect the positive lead from the auxiliary sensor to pin 5 of TB3.
2. Connect the negative lead from the auxiliary sensor to pin 6 of TB3.

2.2.7 TB3—Wind Direction Wiring

The wind direction sensor is wired to pins 1–3 of TB3. Either a Model 2020 Micro Response Vane or a Model 2100 Skyvane can be used.

2020 Wiring

When wiring a Model 2020 Micro Response Vane to the DCP, connect as follows:

1. Connect the WHITE wire to pin 1 of TB3.
2. Connect the RED wire to pin 2 of TB3.
3. Connect the BLACK wire to pin 3 of TB3.

2100 Wind Direction Wiring

When wiring a Model 2100 Skyvane to the DCP, connect the wind direction portion as follows:

1. Connect the ORANGE wire to pin 1 of TB3.
2. Connect the GREEN wire to pin 2 of TB3.
3. Connect the BLUE wire to pin 3 of TB3.

2.2.8 TB3—+5 V Power

A +5 V output is available at pin 4 of TB3. This is used as a test point by the Model 11920 Sensor Simulator to verify the DCP's +5 V power supply.

2.3 COMMUNICATION CONNECTIONS

The DCP can communicate with the CDP (Central Data Platform) using one of four methods: RS-232, RS-485, UHF radio, or spread spectrum radio. Only one of these methods can be in use at any one time, with the active method determined by the settings of switch SW1. (Refer to the **DIP Switches** section of the ***Operation*** chapter of this manual for the required switch settings.) Connections for RS-232 and RS-485 communication are found at TB4.

2.3.1 TB4—RS-232 Wiring

Since the distance separating the DCP and CDP is generally too great for RS-232 communications, it is an impractical method for this use. The RS-232 port provided at pins 5-7 of TB4 is intended as a maintenance port, allowing DCP operation to be checked using a laptop computer. The three pins have the following functions:

1. Pin 5 is data transmit (TX), and should be connected to the laptop's data receive (RX) line.

2. Pin 6 is data receive (RX), and should be connected to the laptop's data transmit (TX) line.
3. Pin 7 is ground (GND).

Note: Remember that only one communication method can be in effect at any one time, determined by SW1's switch settings. If communication with the CDP is being maintained using RS-485 or UHF radio, when the RS-232 port is activated other communication will cease.

2.3.2 TB4—-5 V Power

A –5 V output is available at pin 8 of TB4. This is used as a test point by the Model 11920 Sensor Simulator to verify the DCP's –5 V power supply.

2.3.3 TB4—RS-485 Wiring

When RS-485 communication is used to communicate with the CDP, pins 9 and 10 of TB4 are used to make the connection.

1. Connect the positive lead of the RS-485 line from the CDP to pin 9 of TB4.
2. Connect the negative lead of the RS-485 line from the CDP to pin 10 of TB4.
3. Connect the ground lead of the RS-485 line from the CDP to pin 7 of TB4.

2.3.4 TB4—RS-485 Expansion Port

The two RS-485 connections on TB4 (1-2 and 3-4) are used to connect RS-485 sensors such as the 6490 Present Weather Sensor, the 8339/8340 Ceilometers, the 8364-E or 8365 Visibility Sensor, the 6500 Thunderstorm/Lightning Sensor, and the 6900 Runway Surface Sensor.

Model 6490 Present Weather Sensor

1. Connect the Model 6490's signal cable to pins 1 and 2 of terminal block TB4.
2. Connect the ground wire to pin 7 of terminal block TB4.

Model 8339/8340 Ceilometers

1. Connect the Ceilometers's signal cable to pins 3 and 4 of terminal block TB4.
2. Connect the ground wire to pin 7 of terminal block TB4.

Model 8364-E and 8365 Visibility Sensors

3. Connect the Visibility Sensor's signal cable to pins 3 and 4 of terminal block TB4.
4. Connect the ground wire to pin 7 of terminal block TB4.

Model 6500 Thunderstorm/Lightning Sensor

1. Connect the Thunderstorm/Lightning Sensor's signal cable to pins 1 and 2 of terminal block TB4.
2. Connect the ground wire to pin 7 of terminal block TB4.

Model 6900 Runway Surface Sensor

3. Connect the Runway Surface Sensor's signal cable to pins 1 and 2 of terminal block TB4.
4. Connect the ground wire to pin 7 of terminal block TB4.

2.4 SERIAL SENSOR WIRING

When using a 2040/2040H/2040HH Ultrasonic Wind Sensor, 6495 Freezing Rain Sensor, or 8364-C Visibility Sensor, a separate "daughter board" is added to the backplane to interface to the sensor. The daughter boards are connected to one another via an internal RS-485 bus. Connect the sensors' signal cables to their appropriate daughter boards at TB1 pins 1–3 on the daughter board.

2.5 POWER WIRING

AC Power Wiring

(*See drawing M404802-01-004 in the* ***Drawings*** *chapter.)* AC line power is input to the DCP via the AC Interface Board (M404802-01). Connect incoming AC power to TB1 on the AC Interface Board (***not*** TB1 on the DCP backplane) as follows:

1. Connect the AC LINE (hot) wire to TB1, pin 1.
2. Connect the AC NEUTRAL wire to TB1, pin 2.
3. Connect the AC GROUND wire to TB1, pin 3.

DC, Battery Backup, and Solar Power Wiring

TB1 on the DCP backplane provides input power connections for a +15VDC supply (provided by the AC Interface Board), backup battery power, and solar power.

2.5.1 +15 V DC Power

The DCP is usually powered by the AC Interface Board, which provides a +15VDC output. This +15 V is input to the DCP at pins 5 (+) and 6 (-) of TB1.

1. Connect the positive lead from the AC Interface Board to pin 5 of TB1.
2. Connect the negative lead from the AC Interface Board to pin 6 of TB1.

Battery Power

The DCP is equipped with a battery charging circuit that allows it to be powered by a rechargeable 12 V backup battery during short power outages. The battery connects to pins 1 (+) and 2 (-) of TB1.

1. Connect the battery's positive lead to pin 1 of TB1.
2. Connect the battery's negative lead to pin 2 of TB1.

The battery charging circuit supplies current to the battery at different levels and voltages depending on the state of the battery. If the battery is low, the circuit senses this and provides a trickle charge, and continues to charge the battery to full capacity. The state of the battery and the progress of the charging process are monitored by two LEDs on the DCP backplane.

When lit, the green **BATT. CHARGE** LED indicates that the battery is charged to operating levels.

When lit, the red **FLOAT CHARGE** LED indicates that the battery is being charged. When the battery is being charged after being largely depleted, the **BATT. CHARGE** LED will be off until the charging cycle is nearly complete.

The **FLOAT CHARGE** LED is off when a battery is not connected or is fully charged.

Solar Power

Where conditions permit, the DCP can be powered by a solar power kit rather than by the AC Interface Board. (Consult All Weather, Inc. for solar power requirements for a given site.) The solar power unit connects to TB1 at pins 3 (+) and 4 (-).

1. Connect the positive lead from the solar power unit to pin 3 of TB1.
2. Connect the negative lead from the solar power unit to pin 4 of TB1.

3. OPERATION

3.1 GENERAL

The Model 1190-I International Data Collection Platform (DCP) is designed for use with the All Weather, Inc. AWOS aviation weather systems. The DCP collects data from the AWOS sensors, performs error detection on the received information, converts the sensors' data into engineering units, and transmits a message packet containing sensor data and status information to the Central Data Platform (CDP) once every five seconds. The DCP interfaces to the following sensors:

- Model 2100 or Model 2030 Wind Speed Sensor
- Model 2100 or Model 2020 Wind Direction Sensor
- Model 2040/2040H/2040HH Ultrasonic Wind Sensor
- Model 3016/3022/3120 Solar Radiation Sensors
- Model 5190 Temperature and Relative Humidity Sensor
- Model 8190 Motor Aspirated Radiation Shield (MARS)
- Model 7150 and 7190 Barometric Pressure Sensors
- Model 6011-A/B or 6021-A/B Rain Gauge
- Model 83339-A Day/Night Sensor
- M403326 Day/Night Sensor
- Model 8360, 8362-A/B, 8364-A/B/C/D/E and 8365 Visibility Sensors
- Model 8329-A/B Cloud Height Sensor
- Model 8339-D/F/G and 8340 Ceilometers
- Model 6490 (OWI-120) Present Weather Sensor
- Model 6492 Optical Rain Gauge
- Model 6500 Thunderstorm/Lightning Sensor
- Model 6495 Freezing Rain Sensor
- Model 6900 Surface Sensor
- One auxiliary voltage input sensor (0–10 V DC)

3.2 MAINTENANCE SWITCH

A maintenance switch (SW3) is located on the DCP backplane, on the lower right side of the board. This momentary switch should be pressed any time maintenance is performed on any part of the AWOS system, prior to beginning maintenance. The switch closure will be recorded by the CDP, thereby alerting airport personnel that sensor data may be invalid (due to calibration or maintenance checks being performed), and keeping an ongoing log of maintenance activity at the site. The ON state of the switch (shown both on the DCP's LCD display and at the CDP) will be reset to OFF automatically after five minutes. This switch must be pressed to enable several maintenance functions from the keypad.

3.3 DIP SWITCHES

(Note: DIP switches SW1 and SW2 are set at the factory according to each system's specific configuration.)

Two DIP switch assemblies (SW1 and SW2) on the DCP backplane are used to set configuration parameters for the DCP. These switches are set at the factory and should not need to be changed.

The first set of switches, SW1, specifies the communication method in use between the DCP and CDP (RS-232, RS-485, or UHF Radio). **Table 1** shows the switch settings for each communication setup.

Table 1
SW1 Switch Settings

Comm. Input/Output	Switches							
	1	2	3	4	5	6	7	8
RS-232	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
RS-485	OFF	ON	OFF	OFF	ON	OFF	ON	ON
UHF Radio	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF

The spread spectrum radio uses the same switch settings as the UHF Radio.

The second set of switches, SW2, is used to set the station address, type of wind speed sensor, and the auxiliary input gain.

- The station address should normally be set to 0, unless multiple DCPs are used.
- The wind speed sensor setting should agree with the model sensor used (2100, 2040, or 2030).
- The auxiliary input gain can be set to 1, 10, or 50, depending on the type of sensor (if any) connected to the auxiliary input.

The setting combinations for switch SW2 are shown in **Table 2**.

The Solar Radiation Sensors use the auxiliary voltage input, whose gain must be set to 50 for these sensors.

Table 2
SW2 Switch Settings

Selection	Switches							
	1	2	3	4	5	6	7	8
Station 0	OFF	OFF						
Station 1	ON	OFF						
Station 2	OFF	ON						
Station 3	ON	ON						
2100 Wind Speed			OFF	OFF	ON			
2030 Wind Speed			OFF	ON	OFF			
2040/2040-H			ON	OFF	OFF			
Aux. Gain 1						ON	OFF	OFF
Aux. Gain 10						OFF	ON	OFF
Aux. Gain 50						OFF	OFF	ON

3.4 DISPLAY SCREENS

A keypad and an LCD display screen are located inside the DCP enclosure, and are used to view sensor data and perform maintenance checks. The DCP screens are explained in the following sections. Use the * and # keys on the keypad to move through the screens — press the # key to move down (to a higher numbered screen), or press the * key to move up (to a lower numbered screen).

In the screen explanations below, unchanging screen text is shown unbracketed, while explanations of the data values for specific parameters are shown in brackets.

Screen 1

This screen displays the value of the DCP address dip switch SW1 and the status of the maintenance switch. The maintenance switch will retain its ON value for 5 minutes after being pressed.

Address Switch = {dcp poll address}

Maint Switch {On / Off}

Screen 2

This screen identifies the type of wind speed sensor as configured by SW2.

Wind Speed Sensor

{2030 Micro Response, 2100 Skyvane, or 2040 Ultrasonic}

Screen 3

This screen displays the current wind speed in knots, and wind direction values. If the Model 2040 Ultrasonic sensor is used and an error is detected, the error will be displayed in place of wind data.

Wind Speed {speed in knots to the nearest .1 knot}

Wind Dir {direction} True; or Wind Dir 999 if missin

Screen 4

This screen displays the current temperature and dew point temperature in Celsius and the relative humidity (RH).

Temp {temperature in degrees Celsius to nearest .1 degree C} RH {rh value}

Dew Point {dew point temperature in degrees Celsius to nearest .1 degree C}

Values are set to 999 if missing.

Screen 5

This screen displays the current temperature and dew point temperature in Fahrenheit and the relative humidity (RH).

Temp {temperature in degrees Fahrenheit to nearest 0.1 degree F} RH {rh value}

Dew Point {dew point temperature in degrees Fahrenheit to nearest 0.1 degree F}

Values are set to 999 if missing.

Screen 6

This screen displays the status of the 8190 MARS fan and the system power source.

MARS Fan {OK or FAIL}

System Pwr: {AC or Battery}

If the fan fails, the 2090 CDP will stop reporting temperature and dew point.

Screen 7

This screen displays the current value in volts and counts of the auxiliary input channel.

Aux Inp {auxiliary input channel value in volts}

Counts=count value

Value is set to 99.999 if missing.

Screen 8

This screen displays the barometric pressure output including the offset in inches of mercury. The lowest sensor value that is with ±0.02 in Hg of the other sensor readings including the offset is displayed.

BP Output w/ Offset

Pres inHg

Values are reported to 0.001 inHg, and are set to 99.999 if missing.

Screen 9

This screen displays the barometric pressure offsets for the Model 7150 Barometric Pressure sensors using units of in Hg.

BP Offsets inHg

{offset value 1} {offset value 2} {offset value…}

Values are reported to 0.001 in Hg, and are set to 99.999 if missing.

Screen 10

This screen displays the barometric pressure readings from the Model 7150 Barometric Pressure sensors without offsets using units of in Hg.

BP w/o Offset inHg

{pressure value 1} {pressure value 2} …

Screen 11

This screen displays the barometric pressure readings from the Model 7150 Barometric Pressure sensors with offsets using units of in Hg.

BP w Offset inHg

{pressure value 1} {pressure value 2} …

Screen 12

This screen displays the rainfall counter.

Rainfall {rain tip counter} tips

Counter values range from 0 to 99.

Screen 13

This screen displays the status of the 83339-A Day/Night sensor if a Model 8364-E or 8365 Visibility Sensor is not installed.

Day - Night: {Day or Night}

Screen 14

This screen displays the output of the visibility sensor: extinction coefficient and status.

Vis Ext Coeff: {extinction coefficient}

Status: {OK or ERR} {eight digit sensor status code}

Screen 15

This screen displays error messages associated with the Visibility Sensor. If no errors are detected, the display will show:

Visibility Sensor

Configuration Normal

If an error is detected, one of the following messages will be displayed.

For Model 8364-E and 8365:	Setup Error Clean Lenses Configuration Error Data Missing 3 Headed Operation Other Error
For other models:	Clean Lenses Data Missing Vis Conf Err. Use STD 10s, 3min, ext, mi, 1200 CHECK Visibility POWER and COMM LINES

Screen 16

This screen displays fault information for the visibility sensor.

Visibility Failure

{visibility sensor decoded error(s)}

or

Visibility Sensor

{Status Normal or No input available}

Table 3 shows the visibility status codes that might be displayed when an error is detected, along with their meanings.

Screen 17

This screen displays status information for the 8364-E or 8365 Ambient Light Sensor.

Ambient Light Sensor

Status OK

or

Status Normal

or

Not Installed

or

ALS Err Clean Window

Screen 18

This screen displays the reporting value in candela of the Ambient Light Sensor.

Ambient Light Sensor

xxxx Candela

or

Not Installed

Table 3 Visibility Error Codes			
Model 8364-E		**Model 8364-C**	
Code	**Meaning**	**Code**	**Meaning**
MODE0D	Mode 0 direct error	MODE0	Mode 0 error
MODE0I	Mode 0 indirect error	MODE1	Mode 1 error
MODE1D	Mode 1 direct error	DIRECT	Direct count error
MODE1I	Mode 1 indirect error	OFFSET	Offset error
E0	Emitter 0 failure	CROSSCHK	Crosscheck error
E1	Emitter 1 failure	E0	Emitter 0 failure
D0	Detector 0 failure	E1	Emitter 1 failure
D1	Detector 1 failure	D0	Detector 0 failure
XCHK	Crosscheck error	D1	Detector 1 failure
E0HT	Emitter 0 heater failure	E0HTR	Emitter 0 heater failure
E1HT	Emitter 1 heater failure	E1HTR	Emitter 1 heater failure
D0HT	Detector 0 heater failure	D0HTR	Detector 0 heater failure
D1HT	Detector 1 heater failure	D1HTR	Detector 1 heater failure
ALHT	ALS head or Day/Night Sensor heater failure		
PS	Power supply failure		

Screen 19

This screen displays the status of the 8364-E or 8365 Day/Night Sensor

8364-E Day-Night

Missing

or

Day

or

Night

or

Not Installed

Screen 20

This screen displays the power status of the 8364-E or 8365.

8364-E

On Battery Power

or

On AC Power

or

Sensor Not Installed

Screen 21

This screen displays the status of the 8364-E or 8365 power supplies.

8364-E Power Supplies

OK

or

Sensor Not Installed

or

Fail {+5, +15, -15}

Screen 22

This screen displays counts of crc errors and timeout errors for the visibility sensor. A crc error indicates that data is not being received properly due to communication line problems. Timeout errors indicate that the sensor is not reporting. This may be caused by communication line problems or a fault with the sensor.

Visi00 CRC Err/Touts

{crc error counter and timeout error counter}

Screen 23

This screen displays cloud height sensor information: cloud height and sensor status.

{No Clouds Detected *or* Cloud Base {height} Ft *or* Cloud Data Missing}

Status: {OK or ERR} {four-digit sensor status}

Screen 24

This screen displays cloud height sensor status information.

Ceilometer Stat {sensor status}

{decoded sensor status message}

Screen 25

This screen displays cloud height sensor crc error counts and timeout error counts. CRC errors indicate that communication problems exist. Timeout errors indicate that the sensor is not communicating and may be caused by bad communication lines or a problem with the sensor.

Ceil00 CRC Err/Touts

{crc error counter and timeout error counter}

Screen 26

This screen displays the current present weather sensor data.

Present Weather Data

{present weather sensor information}

Present weather data is in the format

WwwPppppSssss

where:

ww is the present weather code (see **Table 4**)

pppp is the rain rate in 0.001 inches per hour

ssss is the sensor status word, normally 0000.

Screen 27

This screen displays the status values from the present weather sensor.

Present Weather Stat

{present weather status codes}

Present weather status is in the format:

XnnnLnnnKnnnHnnnTnnn

where: nnn is a three digit number

X indicates the start of the carrier raw data field

L indicates the start of the low raw data field

K indicates the start of the particle raw data field

H indicates the start of the high raw data field

T indicates the start of the temperature field

Table 4 Present Weather Codes as reported by Model 6490	
Code	**Meaning**
L-	Light Drizzle
L	Moderate Drizzle
L+	Heavy Drizzle
R-	Light Rain
R	Moderate Rain
R+	Heavy Rain
P-	Light Precipitation
P	Moderate Precipitation
P+	Heavy Precipitation
S-	Light Snow
S	Moderate Snow
S+	Heavy Snow
ZL	Freezing Drizzle
	Freezing Rain
I-	Light Ice Pellet (optional)
I	Moderate Ice Pellet (optional)
I+	Heavy Ice Pellet (optional)
A-	Light Hail (optional)
A	Moderate Hail (optional)
A+	Heavy Hail (optional)
	No Precipitation
—	Start-Up Indicator
ER	Error Condition
CL	Lenses require cleaning

Screen 28

This screen contains status information from the present weather interface computer. CRC errors indicate that the computer is communicating, but not correctly. It may indicate problems with the communications line. Timeout errors indicate that no data was received from the sensor when expected.

PRWX00 CRC Err/Touts

{crc error counter and timeout error counter}

Screen 29

This screen displays information about the data being received from the present weather sensor. BCC errors indicate that the sensor is communicating, but not correctly. The input message counter ("Inctr") shows the number of data packet requests from the DCP to the sensor since power-up.

PRWX00 BCC Err/Inctr

{present weather sensor internal crc error counter and input message counter}

Screen 30

This screen contains the counts for the Analog to Digital negative and positive reference voltages. These are normally 0 and 4095.

ADC Vref- {adc high reference count}

ADC Vref+ {adc low reference count}

Screen 31

This screen reports any detected lightning strikes within 10 miles of the installation site. If the strikes are less than 5 miles away, "TS Reported" will be displayed. This will be voiced in the AWOS voice output as "Thunderstorm at the airport". If the strikes are within 5-10 miles, "VCTS Reported" will be displayed. This will be voiced in the AWOS voice output as "Thunderstorm in the vicinity". If no strikes are detected, the message "No Strikes < 10 mi" will be displayed. This screen is updated every minute.

Lightning Sensor Pg1
{"TS Reported" or "VCTS Reported" }

Screen 32

This screen reports any detected lightning strikes more than 10 miles from the installation site, up to 30 miles away. If no strikes are detected, the message "No Strikes > 10 mi" will be displayed. If the data string exceeds the LCD's capacity (20 characters), the data will be continued on the next screen (**Screen 33**). This screen is updated every minute.

Lightning Sensor Pg2
{"LTG_DSNT_" followed by direction in octants}

Screen 33

This screen displays data continued from the previous screen when the amount of data for the 10-30 mile range exceeds the LCD's 20-character capacity. If the data does not exceed 20 characters, this screen is a duplicate of **Screen 29**.

Lightning Sensor Pg3
{"LTG_DSNT_" followed by direction in octants}

Screen 34

This screen reports the number of strikes detected within the full measuring area (200 nautical mile radius of the installation site) during the previous one minute. The value is reported in strikes per minute.

If no strikes were detected, the message "Strike Rate none" will be displayed. This screen is updated every minute.

Lightning Sensor Pg4
{number of strikes recorded during previous 1 minute}

Screen 35

This screen shows the current operating mode of the sensor. This should always read "Normal Weather Data", unless the sensor fails or is disconnected, in which case it will read "Sensor Not Reporting".

Lightning Sensor Pg5
Normal Weather Data

Screens 36 and 37

These two screens show the most recent status message received from the lightning sensor. The format of the status message is explained in the Model 6500 User's Manual. Due to the length of the message, it is split between two screens.

Lightning Sensor Pg6
{first 17 characters of status message; e.g., SPE00MAG@XXN00000}

Lightning Sensor Pg7
{remaining 11 characters of status message; e.g., R0000VB1.03}

Screen 38

The final lightning sensor status screen shows the number of CRC errors and timeouts detected since the sensor was last powered up.

LTNG00 CRC Err/Touts
{number of CRC errors/number of timeouts}

Screen 39

This screen shows the most recent freezing rain count. This is the probe's oscillating frequency, which is normally 40,000 Hz in non-icing conditions.

Freezing Rain Count

{probe frequency, in Hz, e.g., 40000 Hz}

Screen 40

This screen shows the freezing rain status. This should normally indicate "Sensor OK". If an error is detected, the screen will show the type of failure (e.g., "Probe Failure")..

Freezing Rain Status

Sensor OK

Screen 41

This screen shows the number of CRC errors and timeouts detected since the sensor was last powered up. CRC errors indicate that the computer is communicating, but not correctly. It may indicate problems with the communications line. Timeout errors indicate that no data were received from the sensor when expected.

ZR CRC Err/Touts

{number of CRC errors/number of timeouts}

Screen 42

This screen shows the number of deicing cycles initiated since power-up, along with the number of sensor CRC errors ("BccErr") and the number of data packet requests ("Inctr") from the DCP to the sensor since power-up.

ZR Deic/BccErr/Inctr

{number of deice cycles/sensor internal crc error counter/input message counter}

Screen 43

This screen contains information transmitted from the Central Data Processor every five seconds. Line one contains the airport identifier, date, and time. If communications are normal, the time should update every five seconds.

CDP information line 1 {airport identifier, date, time}

CDP information line 2 {other information from the CDP}

Screens 44 to 47

This series of screens displays data from each of up to four Model 6900 surface sensors.

Surface sensor …

Err:0 Tmp:23.1 St:3

An error code (0=normal, 1=error), temperature (°C), and status code (1–13) are reported. A value of M indicates that the data are missing, the sensor is not installed or is not working.

Screens 48 and 49

These screens display data from each of up to two subsurface sensors.

Surface sensor …

Err:0 Tmp:23.1 St:3

An error code (0=normal, 1=error) and temperature (°C) are reported. A value of M indicates that the data are missing, the sensor is not installed or is not working.

Note: Subsurface sensors have been installed on a limited basis at a small number of airports because of their availability.

Screen 50

This screen shows the communication and CRC errors detected since the Model 6900 surface sensors were last powered up.

RWY in/missing/CRC

-22157/000000/00076

Screen 51

This screen shows the present weather data, if any, reported to the Model 6900 surface sensors.

Runway WX update:

NONE

3.5 LED INDICATORS

The DCP backplane is equipped with seven LED indicators that provide a visual clue to the activity and status of several portions of the DCP circuitry.

PWR. IN

The green **PWR. IN** LED is lighted when a +15 V DC power source is connected to TB4, pins 5 and 6.

BATT. CHARGE

The green **BATT. CHARGE** LED is lighted when the backup 12V battery (if present) is fully charged.

STATUS

The green **STATUS** LED is not currently used.

RS-485 TX/RX

The red **RS-485 TX/RX** LED lights when data is being transmitted to or received from the CDP via the RS-485 port.

RS-232 RX

The red **RS-232 RX** LED lights when data is being received from the CDP via the RS-232 port.

RS-232 TX

The red **RS-232 TX** LED lights when data is being transmitted to the CDP via the RS-232 port.

FLOAT CHARGE

The red **FLOAT CHARGE** LED is lit when the 12 V rechargeable battery (if used) is being charged.

4. CALIBRATION

The Model 1190-I International Data Collection Platform does not require calibration.

5. MAINTENANCE

No regular maintenance is required with the Model 1190-I International Data Collection Platform, other than verifying periodically that all cables are connected and in good condition.

A 0.5 A slow-blow fuse protecting a connected MARS (Motor Aspirated Radiation Shield) is located at F1 on the DCP backplane. This should be checked if a MARS failure is detected.

When performing maintenance on any other part of the system, remember to press the maintenance switch (SW3) prior to beginning maintenance as explained in the ***Operation*** chapter of this manual.

6. WARRANTY

This equipment has been manufactured and will perform in accordance with requirements of FAA Advisory Circular 150/5220-16C. Any defect in design, materials, or workmanship that may occur during proper and normal use during a period of 1 year from date of installation or a maximum or 2 years from shipment will be corrected by repair or replacement by All Weather Inc.

7. SPECIFICATIONS

Parameter	Specification
Power Supply	110/220 V AC, 10 W
Operating Temperature	-40°C to +60°C
Storage Temperature	-40°C to +60ºC
Display	2 line × 20 character LCD
Fuses *Backplane* F1 (MARS) *Power Interface Board* F1 F2	 0.5 A, 250 V slow-blow 10 A, 250 V slow-blow 5 A, 250 V slow-blow
Supported Sensors	Model 2100, 2040/2040H/2040HH, and Model 2020/2030 Wind Sensors Model 3016/3022/3120 Solar Radiation Sensors Model 5190 Temperature and Relative Humidity Sensor Model 8190 Motor Aspirated Radiation Shield (MARS) Model 7150 and 7190 Barometric Pressure Sensors Model 6011-A/B and 6021-A/B Rain Gauges Model 83339-A Day/Night Sensor Model 8360, 8362-A/B, 8364-A/B/C/D/E, 8365 Visibility Sensors Model 8329-A/B Ceilometer Model 8339-D/F and 8340 Ceilometers Model 6490 (OWI-120) Present Weather Sensor Model 6495 Freezing Rain Sensor Model 6500 Thunderstorm/Lightning Sensor Model 6900 Surface Sensor M403326 Day/Night Sensor (with 8364-E or 8365 only) M105068 Ambient Light Sensor (with 8364-E or 8365 only) One auxiliary voltage input sensor (0–10 V DC)
Communication (to/from CDP)	RS-232, RS-485, UHF radio, spread-spectrum radio
Dimensions	38 cm × 42 cm × 16 cm (15"W × 16.5"H × 6.25"D)
Weight	6.8 kg (15 lb)

8. DRAWINGS

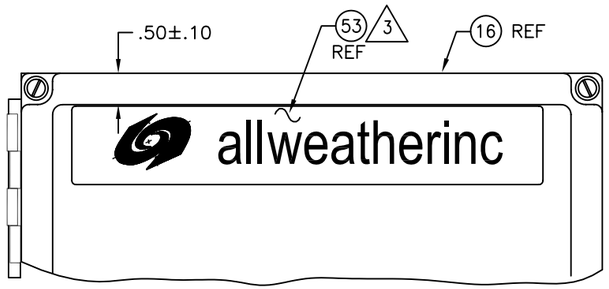
The following pages contain drawings to aid in the use and maintenance of the Model 1190-I DCP.

M403316-01-003	AWOS International DCP Assembly Drawing
M403316-01-019	AWOS International DCP Control Board Wiring Diagram
1190-007	Installation Drawing, 1190 DCP Tower Mounting
M404802-01-003	Power Interface PCB Assembly
M404802-01-004	Power Interface Schematic
903-I-019	AWOS International DCP Sensor Wiring Diagrams

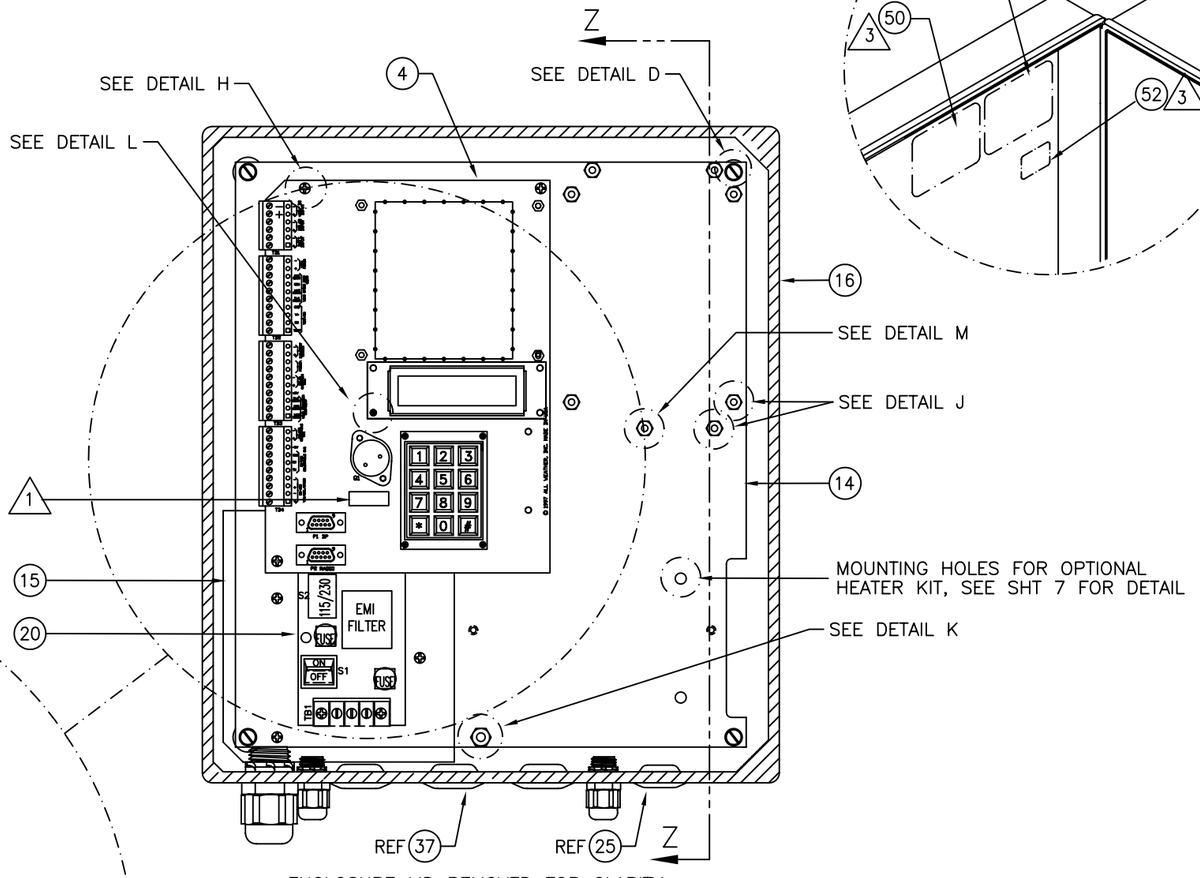
NOTES: UNLESS OTHERWISE SPECIFIED;

* SEE SHEET 6 FOR NOTES.

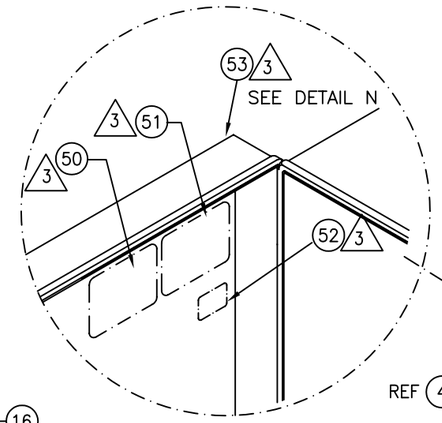
REVISIONS			DWG NO M403316-01-003	
REV	ECO	DESCRIPTION	DATE	APPROVED
A	1110	INITIAL RELEASE FOR INTERNATIONAL USE	1/7/08	BRG
B	1400	RELOCATED BATTERY, RE-ROUTE BP & RADIO CABLE	8/28/08	BRG
C	1251	ADD NEW BACKPLATE HOLES, REVISE H/W M488181(PG 7)	9-4-08	PMK
D	1745	ADDED NEW HOLES FOR 2040H 7 AMP XFMR	12-30-08	J.CONNER
E	1459	REVISED SHT.8, GILL DC PWR CONNECTION	9/9/09	BRG
F	1995	CHANGE TO VYNIKER ENCLOSURE	01/21/10	JPATTERSON

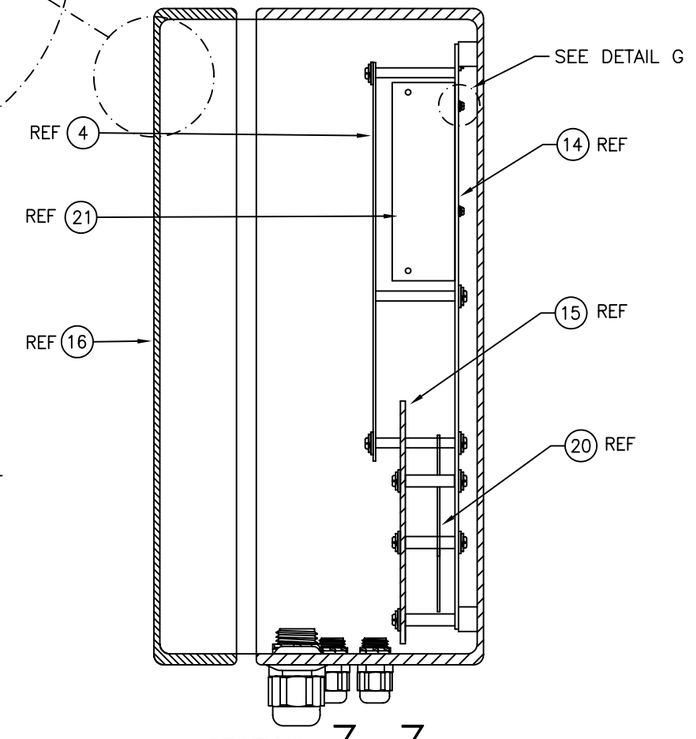


DETAIL N
DETAIL OF FRONT COVER
SHOWING PLACEMENT
OF LABEL ITEM (53)

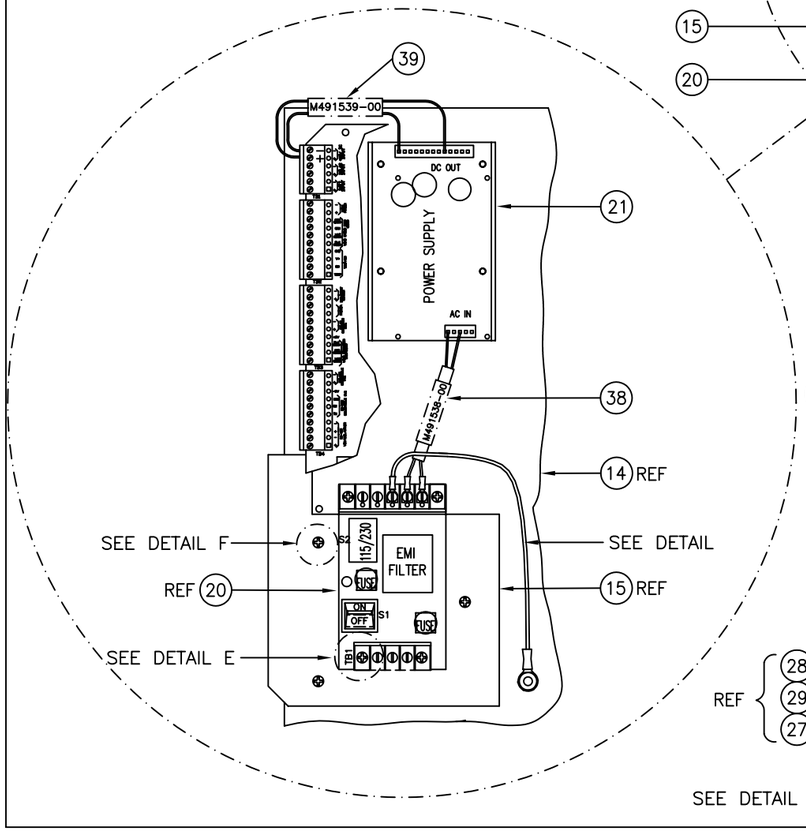


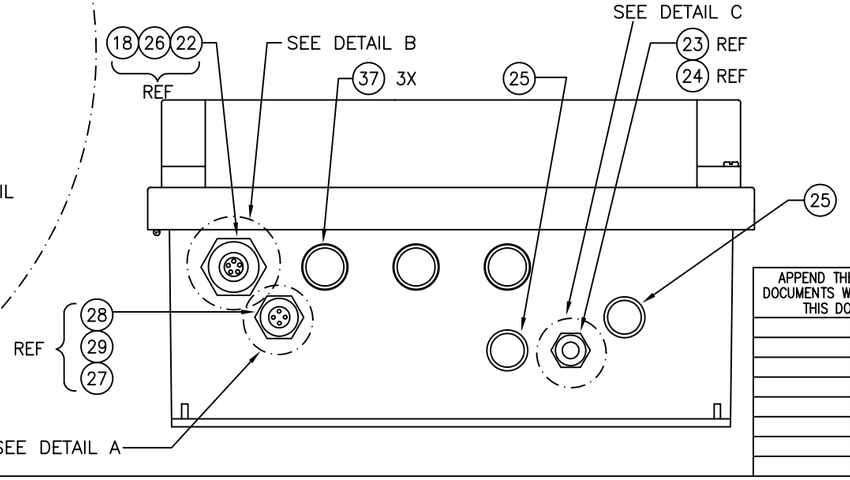
ENCLOSURE LID REMOVED FOR CLARITY

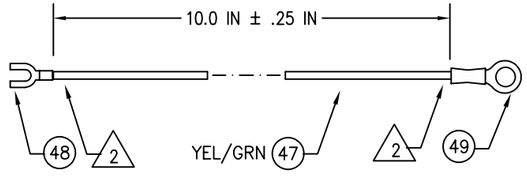




SECTION Z–Z







DETAIL M

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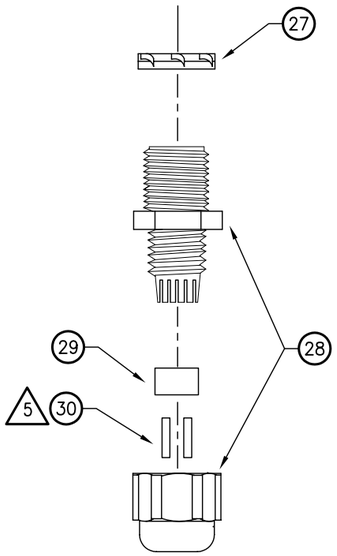
F	F	F	F	F	F	B	F	REV	REV STATUS OF SHEETS
8	7	6	5	4	3	2	1	SHEET	

APPEND THE FOLLOWING DOCUMENTS WHEN CHANGING THIS DOCUMENT:	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES XX=±.010 ANGLES ±1/2' XXX=±.005 CONCENTRICITY: .003 TIR DO NOT SCALE DRAWING	DRAWN BY: BRG	1/7/08	TITLE: ASSEMBLY DRAWING, AWOS DCP, INTL
	MATL: SEE BILL OF MATERIALS	REVISED BY: J PATTERSON	01/21/10	allweatherinc
	FINISH: AS ISSUED	CHECKED BY:		SIZE D DWG NO. M403316-01-003
	TREATMENT	DESIGN ENGINEER: J. PATTERSON	1/30/08	
		PROJECT MANAGER:		
		APPROVALS	DATE	SCALE 1/2 RELEASE DATE 1/7/08 SHEET 1 OF 8



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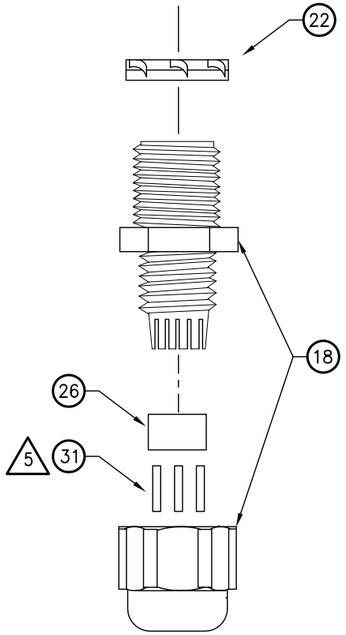

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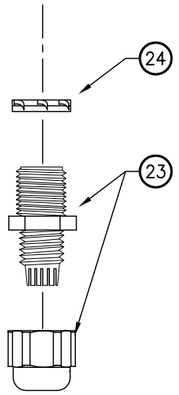

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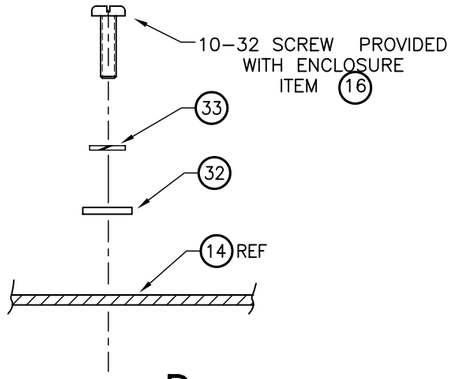
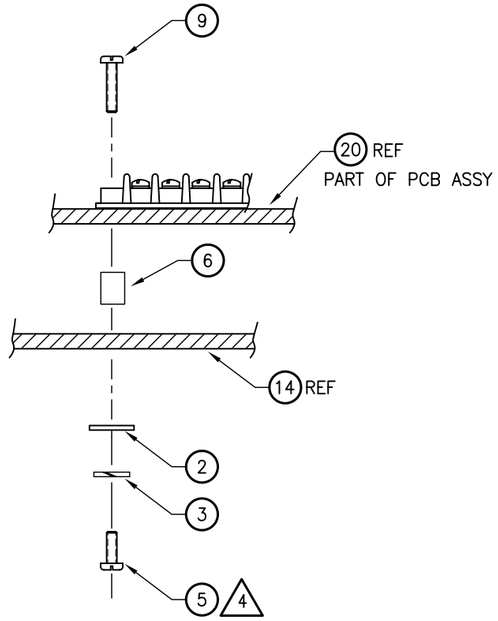
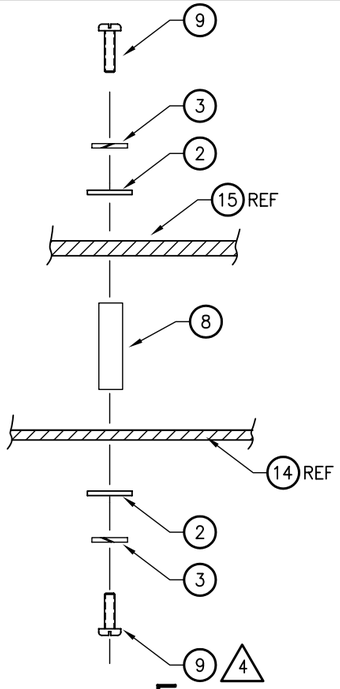


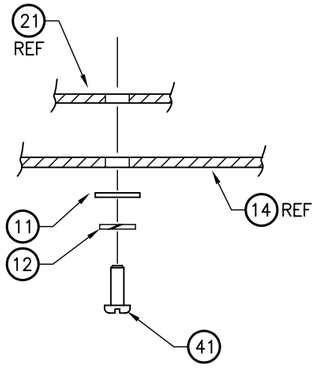
DETAIL D
4 PLACES



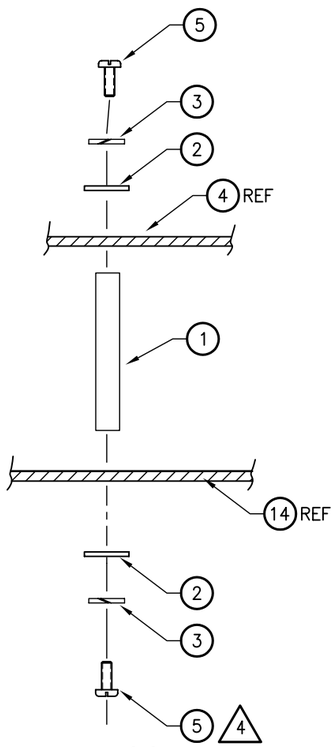
DETAIL E
4 PLACES



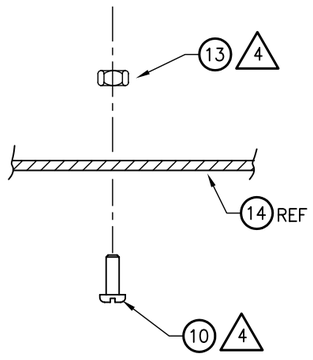
DETAIL F
3 PLACES



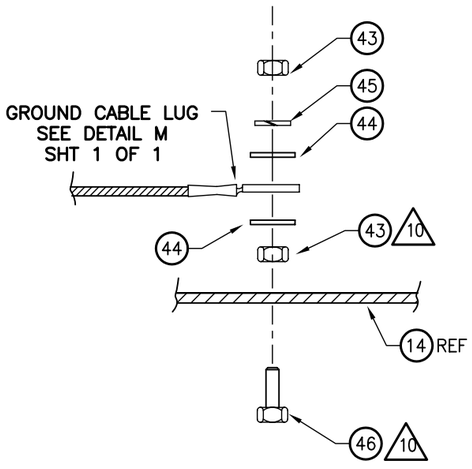
DETAIL G
HARDWARE MOUNTING FOR ITEM 21
4 PLACES



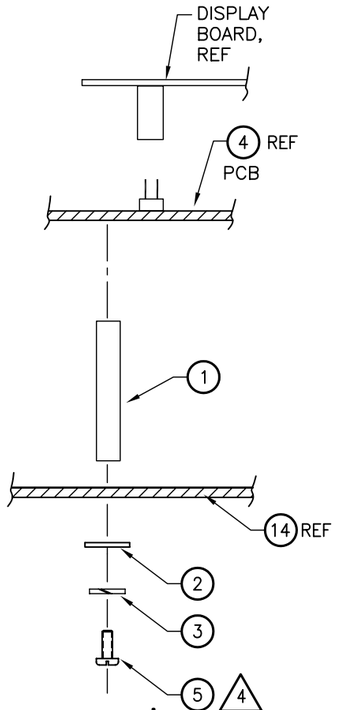
DETAIL H
4 PLACES



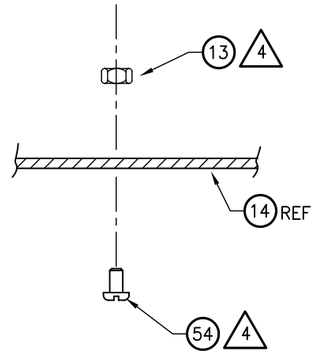
DETAIL J
7 PLACES
HARDWARE MOUNTING FOR OPTIONAL BP SENSOR AND OPTIONAL 7 AMP XFMR



DETAIL K
HARDWARE MOUNTING FOR GROUND CABLE



DETAIL L



DETAIL M
1 PLACES

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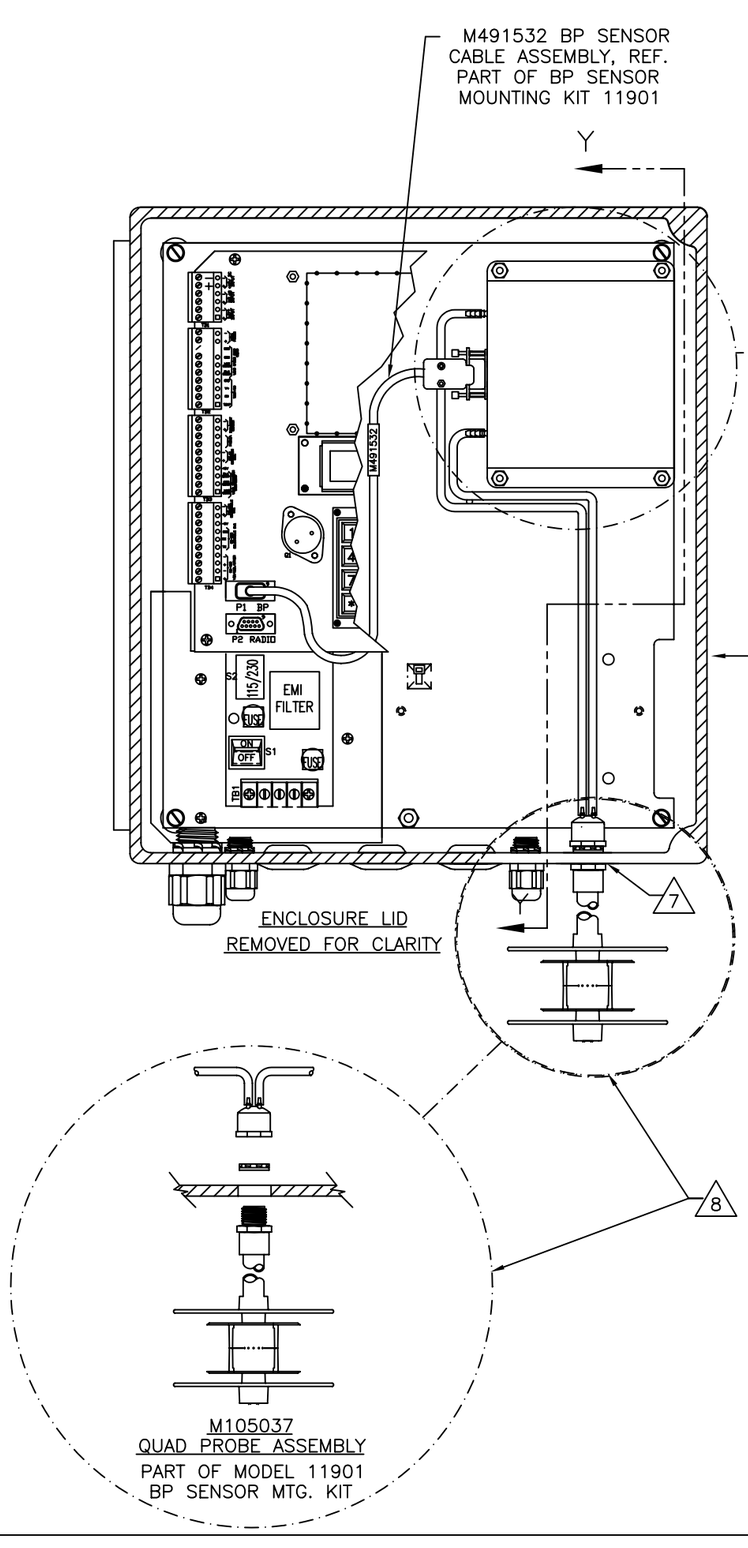
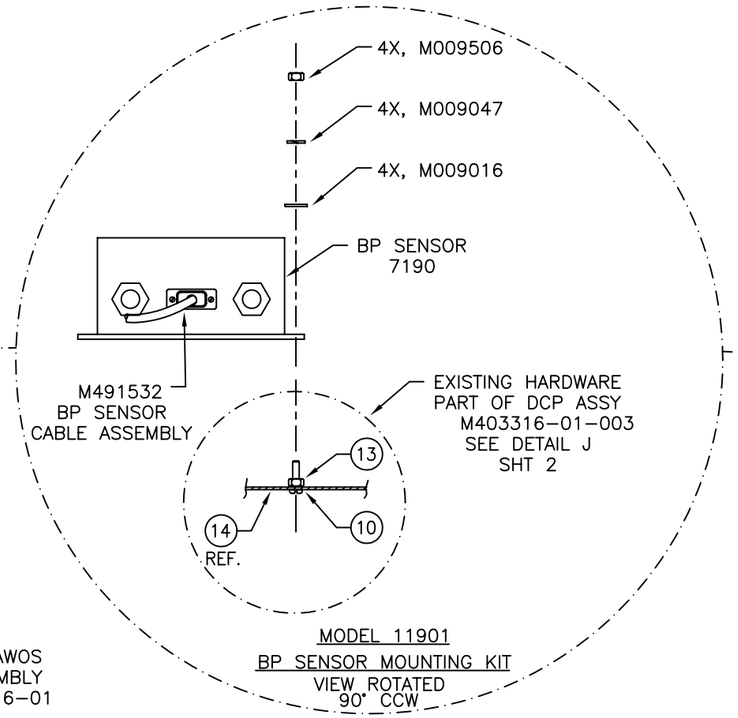
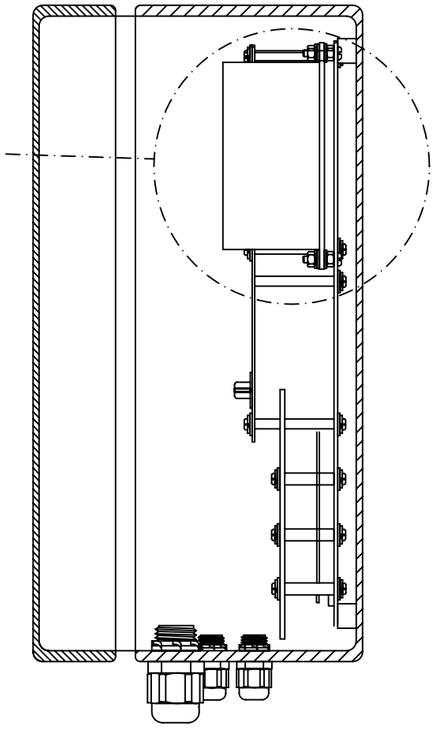
SIZE	DWG NO.	
D	M403316-01-003	
SCALE 1/1	REV LTR B	SHEET 2 OF 8





MODEL 11901
BP SENSOR MOUNTING KIT
VIEW ROTATED
90° CCW



SECTION Y–Y

MODEL 11901
BP SENSOR MOUNTING KIT

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SIZE	DWG NO.	
D	M403316-01-003	
SCALE 1/2	REV LTR F	SHEET 3 OF 8

EXISTING AWOS
DCP ASSEMBLY
M403316-01

9

P2 RADIO

M491532
M491541

S2
115/230
EMI
FILTER
FUSE

ON
OFF
S1

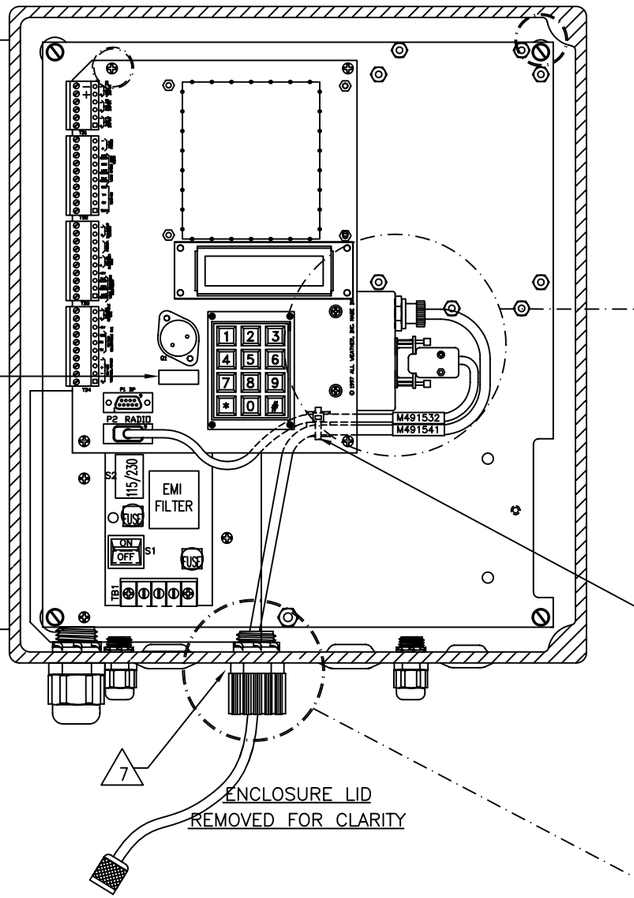
FUSE

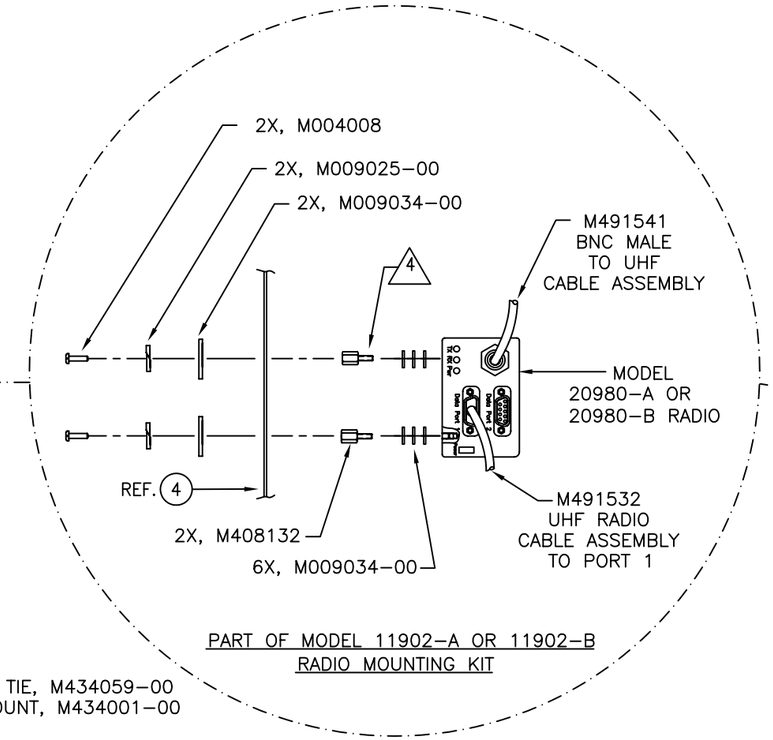
TB1

CABLE TIE, M434059-00
TIE MOUNT, M434001-00

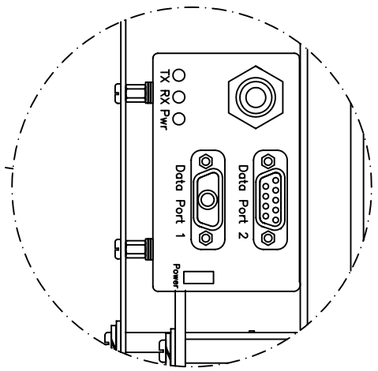
7

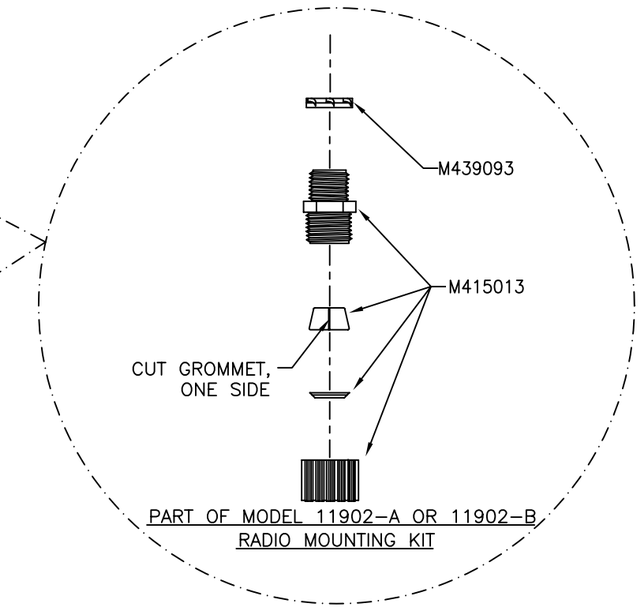
ENCLOSURE LID
REMOVED FOR CLARITY





PART OF MODEL 11902-A OR 11902-B
RADIO MOUNTING KIT





PART OF MODEL 11902-A OR 11902-B
RADIO MOUNTING KIT

MODEL 11902-A OR 11902-B
RADIO MOUNTING KIT

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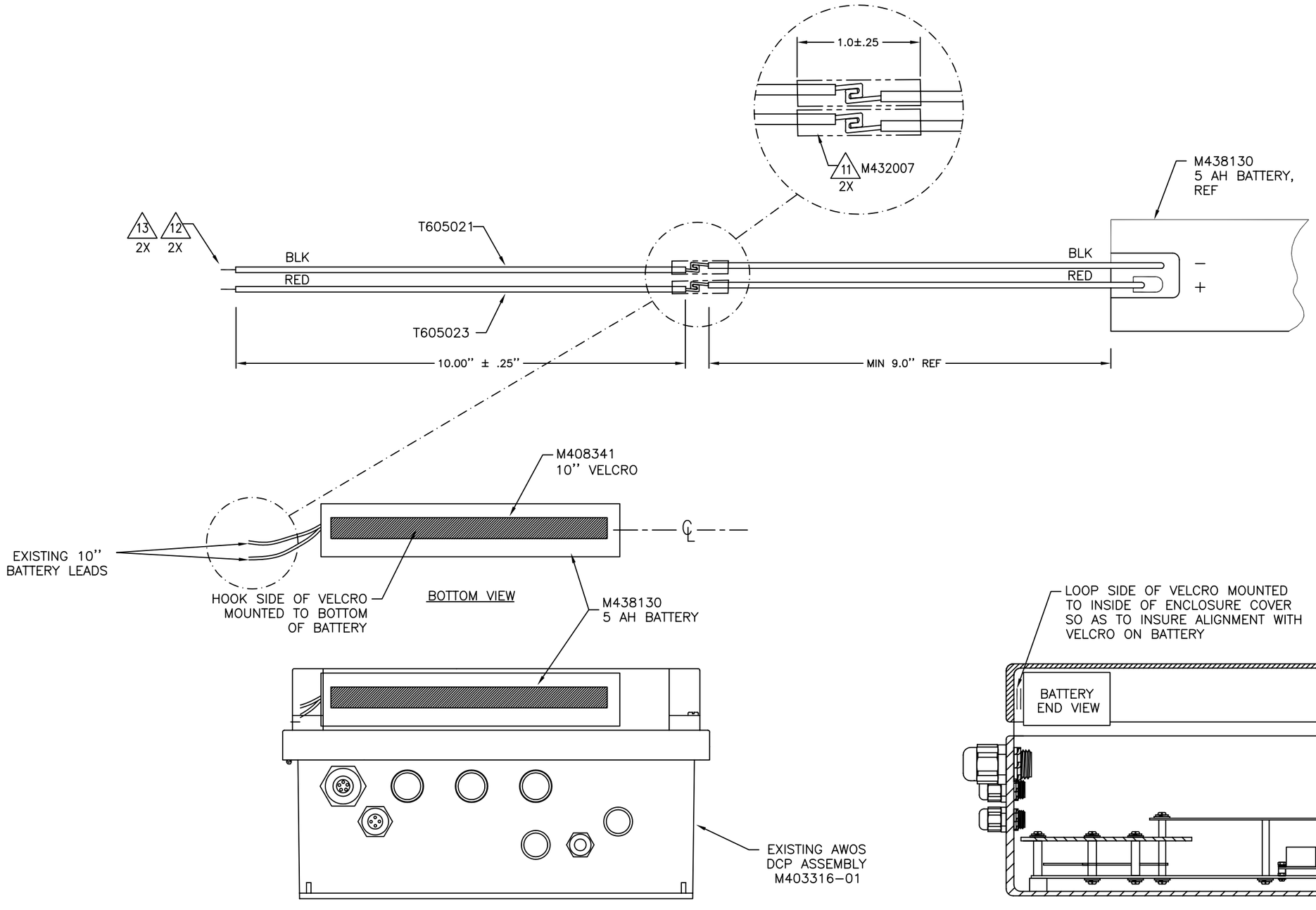
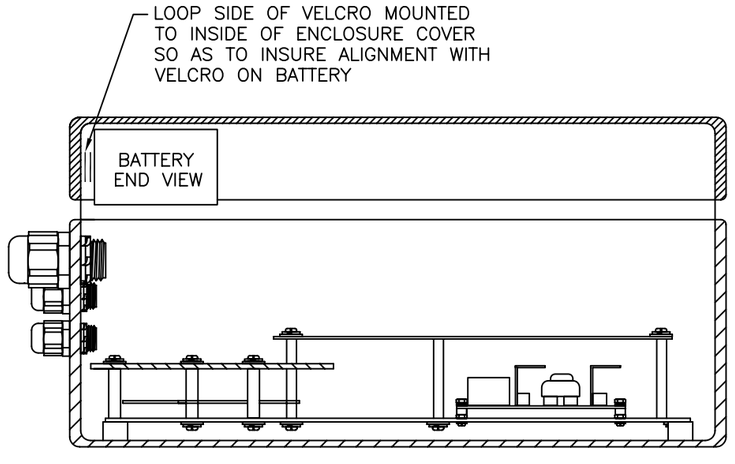
SIZE	DWG NO.	
D	M403316-01-003	
SCALE 1/2	REV LTR F	SHEET 4 OF 8



ENCLOSURE BOTTOM VIEW

ENCLOSURE LID SHOWN AS
A SECTION FOR CLARITY



ENCLOSURE SIDE VIEW SECTION

BATTERY KIT
11903

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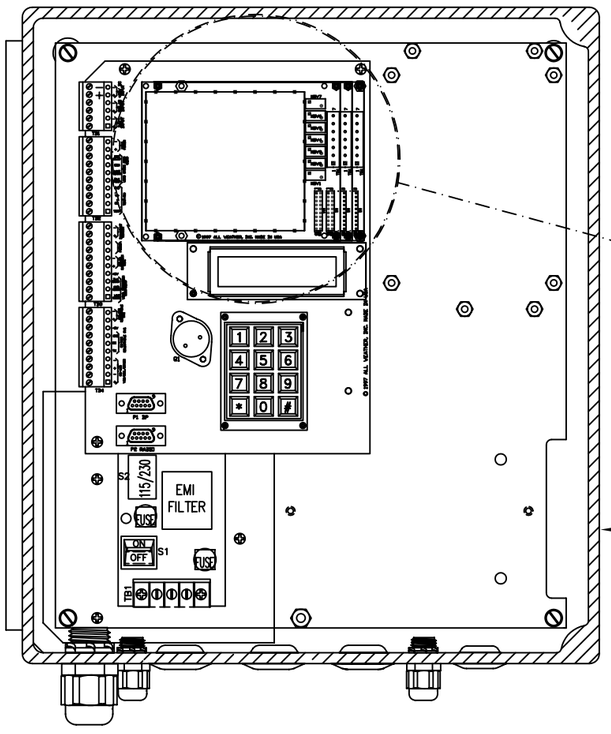
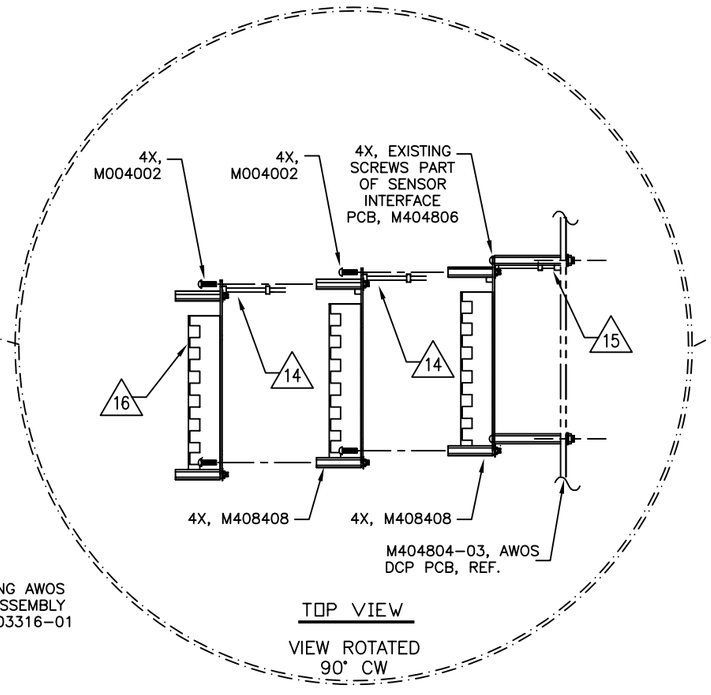
SIZE	DWG NO.	
D	M403316-01-003	
SCALE 1/2	REV LTR F	SHEET 5 OF 8

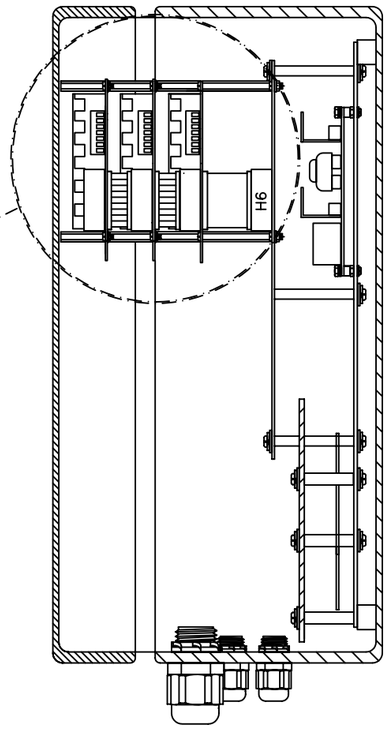
NOTES: UNLESS OTHERWISE SPECIFIED;

1. SET DIP SWITCH, SW1, ON ITEM 4, TO ''RS-485'' SETTINGS PER SILK SCREEN SETTINGS ON BOARD. (SET TO ''UHF RADIO'' WHEN RADIO OPTION IS INSTALLED).
2. REMOVE (.25 $^{+.00}_{-.10}$) INSULATION, THIS END.
3. INSTALL LABELS ITEM 50, 51 AND 52 ON THE INSIDE OF THE UPPER RIGHT HAND CORNER OF ENCLOSURE COVER. INSTALL LABEL ITEM 53 ON THE OUTSIDE OF ENCLOSURE COVER.
4. APPLY A SMALL AMOUNT OF LOCTITE 222.
5. CUT TO 1'' LONG AT ASSEMBLY. INSERT INTO BUSHING, (ITEM 29 ON 26) FOR PLUGS.
6. DELETED
7. REMOVE HOLE PLUG.
8. DO NOT INSTALL THESE PARTS. PACKAGE AND SHIP WITH UNIT TO BE INSTALLED LATER.
9. SET DIP SWITCH, SW1, ON ITEM 4, TO ''UHF RADIO'' SETTINGS PER SILK SCREEN SETTINGS ON BOARD.
10. APPLY A SMALL AMOUNT OF LOCTITE 242.
11. HOOK SPLICE AND COVER WITH HEAT SHRINK TUBING, M432007.
12. REMOVE (.38 $^{+.00}_{-.10}$) INSULATION, THIS END. TIP TIN ONLY.
13. COVER WITH REMOVABLE TAPE TO PREVENT SHORTING OF BATTERY.
14. CONN. H1 ON DAUGHTER BOARD CONNECTS TO H4 ON DAUGHTER BOARD AS SHOWN.
15. CONN. H1 ON DAUGHTER BOARD CONNECTS TO H6 ON MOTHER BOARD AS SHOWN.
16. ENSURE EACH APPROPRIATE SENSOR INTERFACE MODULE (11905-X) ARE LABELED PER INSTRUCTIONS ON LABEL SET.



ENCLOSURE FRONT VIEW LID REMOVED



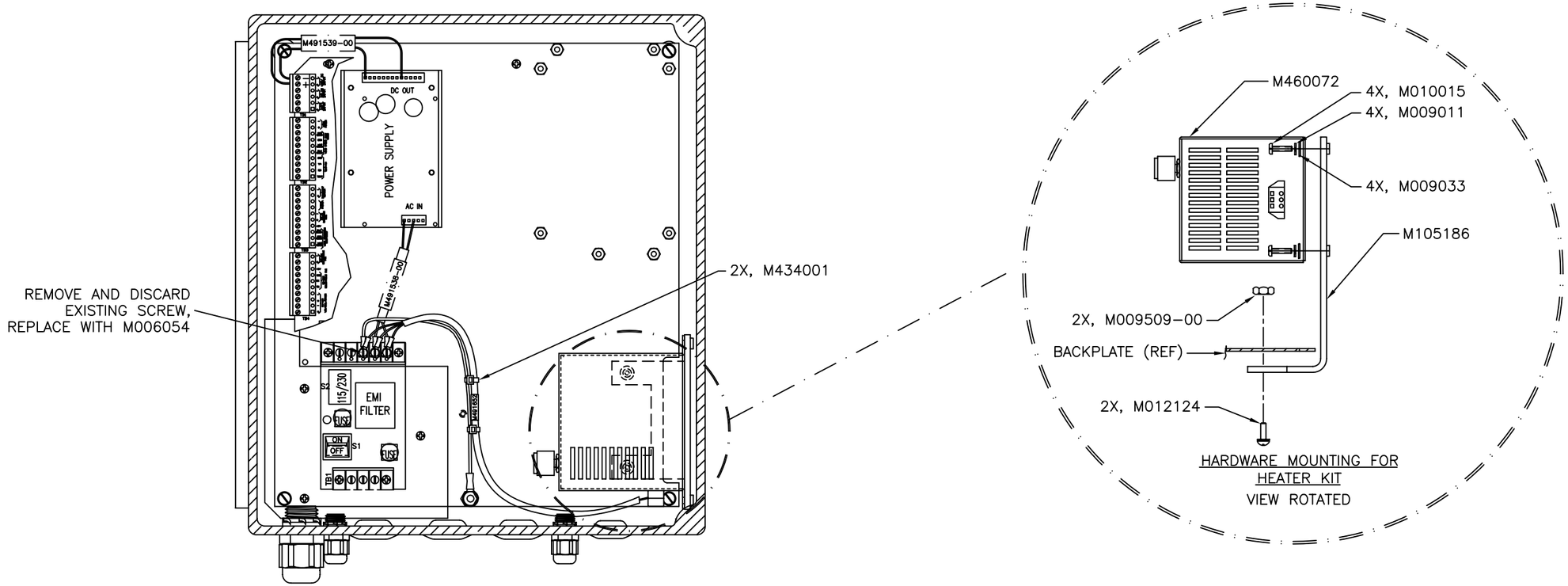


ENCLOSURE SIDE VIEW SECTION

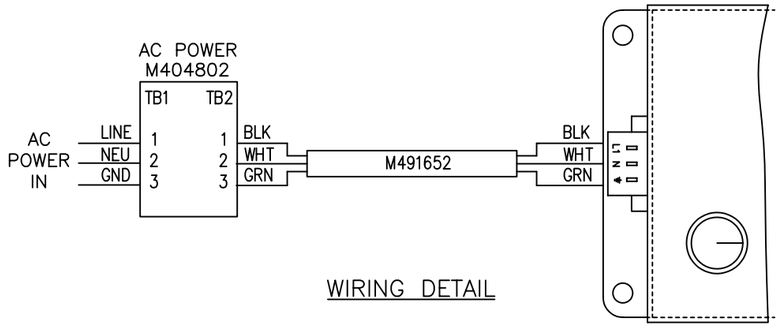
SERIAL SENSOR INTERFACE KIT M404806

EXCEPT AS MAY OTHERWISE BE SPECIFIED BY CONTRACT, THIS DOCUMENT AND THE DATA DISCLOSED HEREIN AND HEREWITH, IS NOT TO BE USED, REPRODUCED OR DISCLOSED, IN WHOLE OR IN PART, TO ANYONE WITHOUT THE WRITTEN PERMISSION OF ALL WEATHER, INC..

SIZE	DWG NO.	
D	M403316-01-003	
SCALE 1/2	REV LTR F	SHEET 6 OF 8



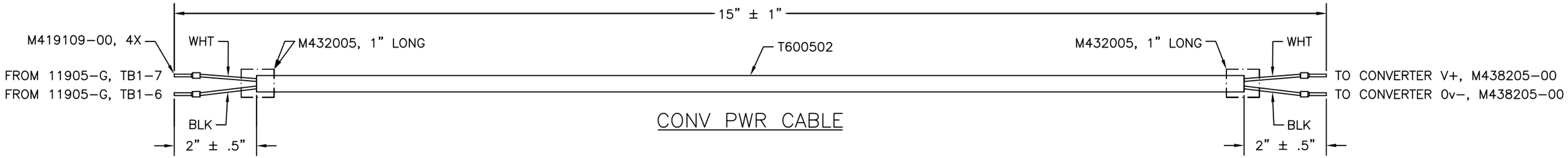
ENCLOSURE LID AND PCB's
REMOVED FOR CLARITY



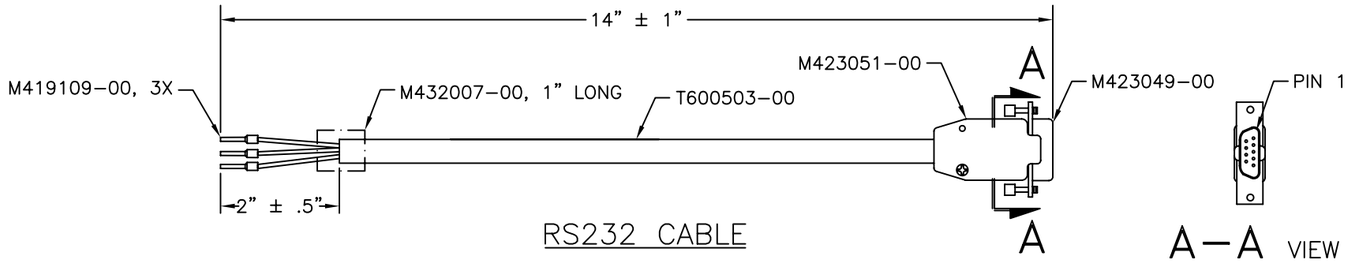
WIRING DETAIL

M488181
OPTIONAL HEATER KIT

EXCEPT AS MAY OTHERWISE BE SPECIFIED BY CONTRACT, THIS DOCUMENT AND THE DATA DISCLOSED HEREIN AND HEREWITH, IS NOT TO BE USED, REPRODUCED OR DISCLOSED, IN WHOLE OR IN PART, TO ANYONE WITHOUT THE WRITTEN PERMISSION OF ALL WEATHER, INC.

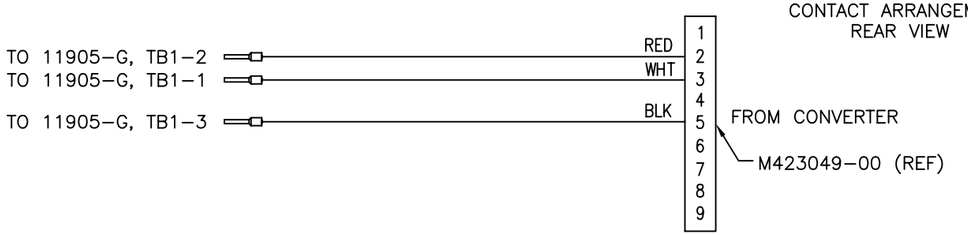


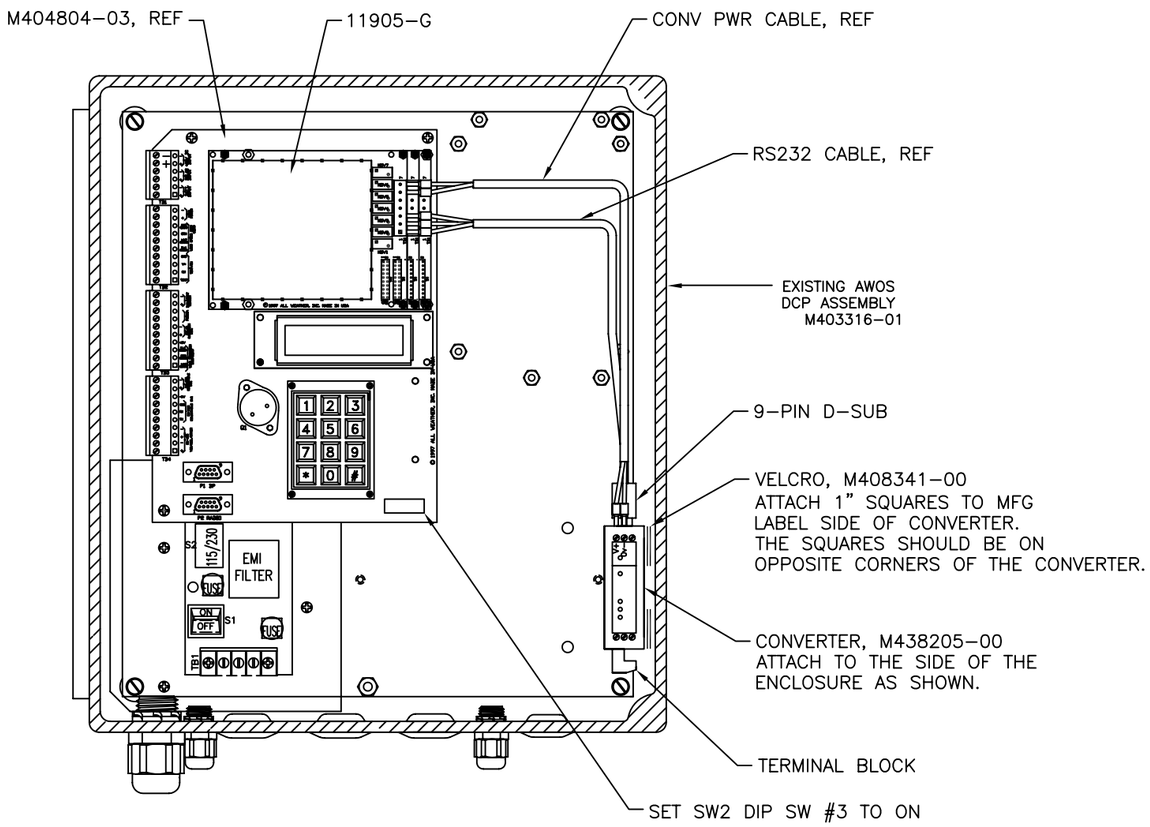
CONV PWR CABLE



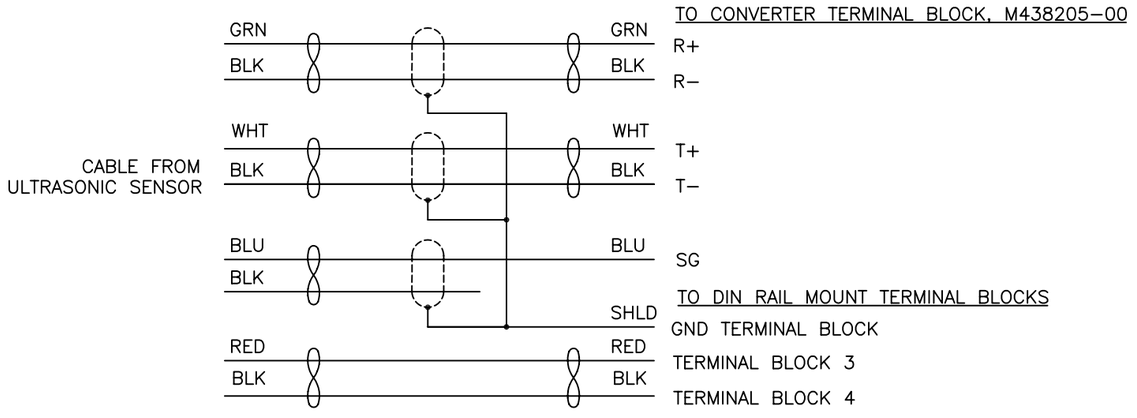
RS232 CABLE

A-A VIEW
CONTACT ARRANGEMENT
REAR VIEW





ENCLOSURE FRONT VIEW LID REMOVED



ULTRASONIC WIRING

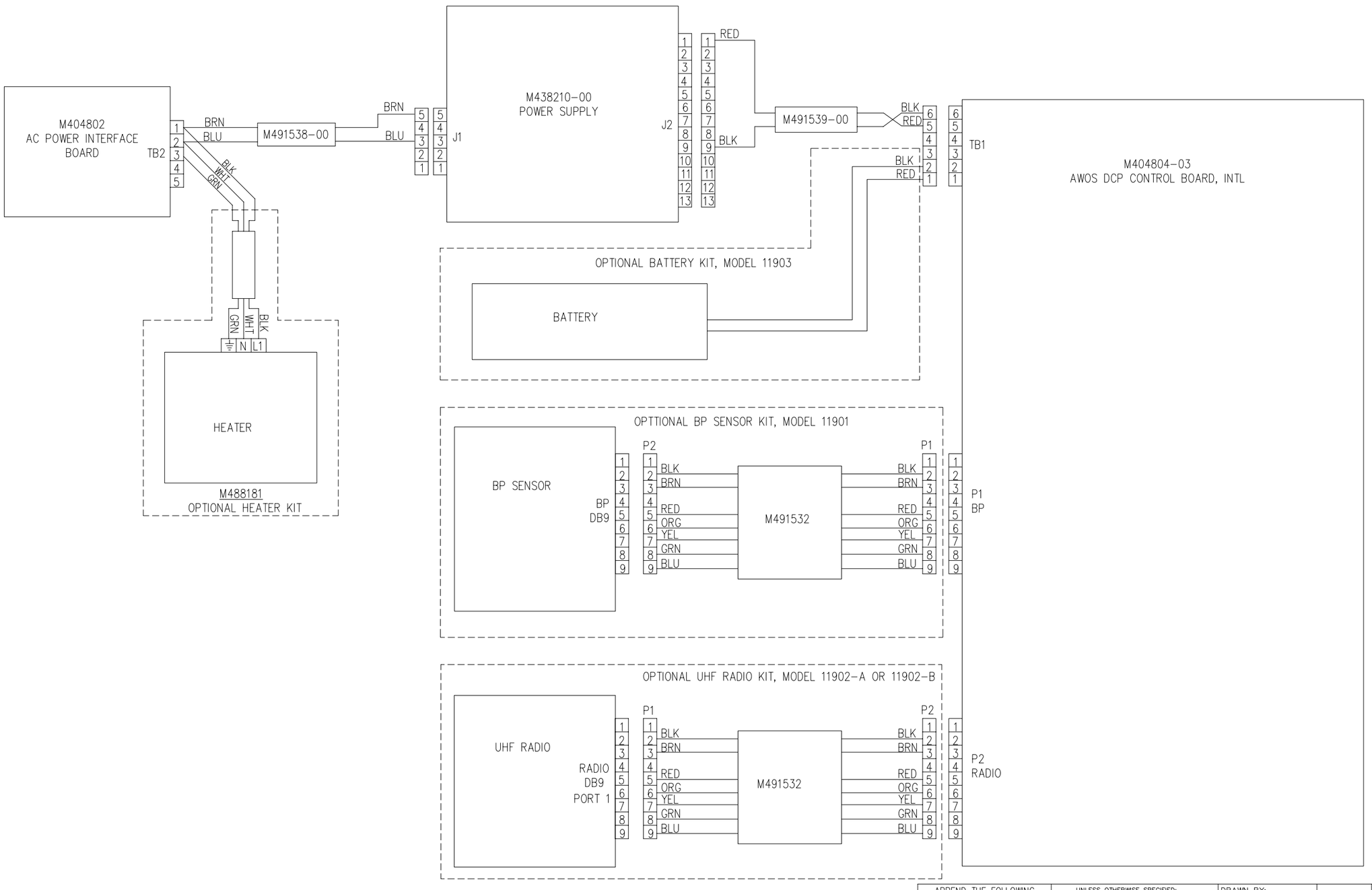
ULTRASONIC DCP INTERFACE KIT

M488271-00

EXCEPT AS MAY OTHERWISE BE SPECIFIED BY CONTRACT, THIS DOCUMENT AND THE DATA DISCLOSED HEREIN AND HEREWITH, IS NOT TO BE USED, REPRODUCED OR DISCLOSED, IN WHOLE OR IN PART, TO ANYONE WITHOUT THE WRITTEN PERMISSION OF ALL WEATHER, INC..

SIZE	DWG NO.	
D	M403316-01-003	
SCALE 1/2	REV LTR F	SHEET 8 OF 8

REVISIONS			DWG NO M403316-01-019	
REV	ECO	DESCRIPTION	DATE	APPROVED
A	1110	INITIAL RELEASE FOR INTERNATIONAL USE	1/7/08	BRG



EXCEPT AS MAY OTHERWISE BE SPECIFIED BY CONTRACT, THIS DOCUMENT AND THE DATA DISCLOSED HEREIN AND HEREWITH, IS NOT TO BE USED, REPRODUCED OR DISCLOSED, IN WHOLE OR IN PART, TO ANYONE WITHOUT THE WRITTEN PERMISSION OF ALL WEATHER, INC..

APPEND THE FOLLOWING DOCUMENTS WHEN CHANGING THIS DOCUMENT:

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES
.XX=±.010 ANGLES ±1/2°
.XXX=±.005 CONCENTRICITY: .003 TIR
DO NOT SCALE DRAWING

MATL: SEE BILL OF MATERIALS

FINISH: AS ISSUED

TREATMENT: NONE

DRAWN BY: BRG	1/7/08	
REVISED BY: –	–	
CHECKED BY:		
DESIGN ENGINEER: –	–	
PROJECT MANAGER:		
APPROVALS	DATE	

TITLE: WIRING DIAGRAM, AWOS DCP, INTL

allweatherinc

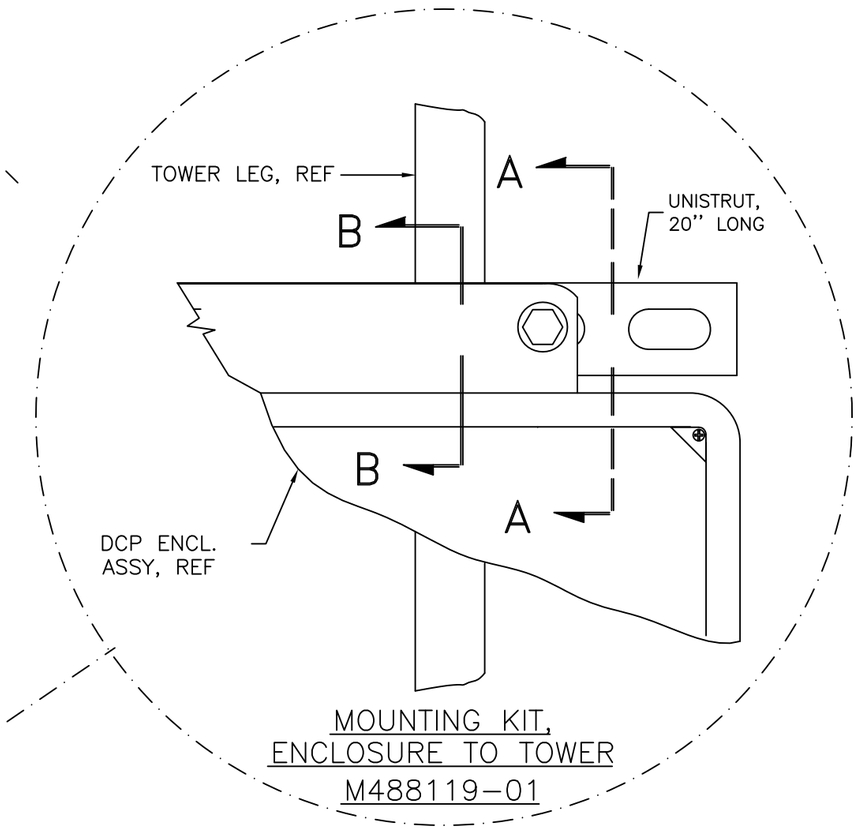
SIZE D | DWG NO. M403316-01-019

SCALE NONE | RELEASE DATE 1/7/08 | SHEET 1 OF 1

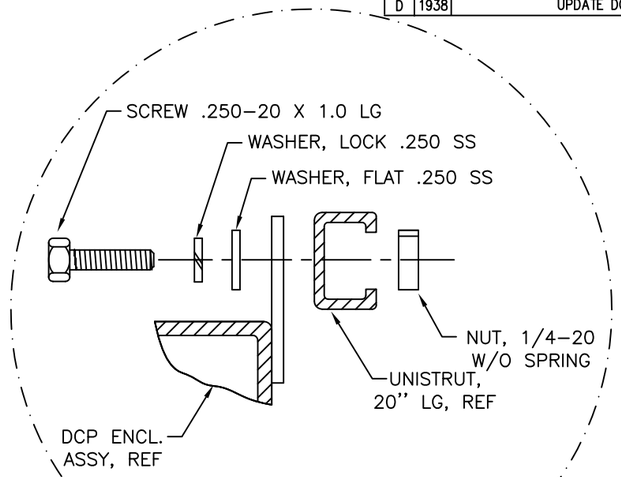
NOTES: UNLESS OTHERWISE SPECIFIED;

1. WHEN USING MODEL 8518–A FOLDOVER TOWER, MOUNT TO HINGED SIDE OF TOWER.

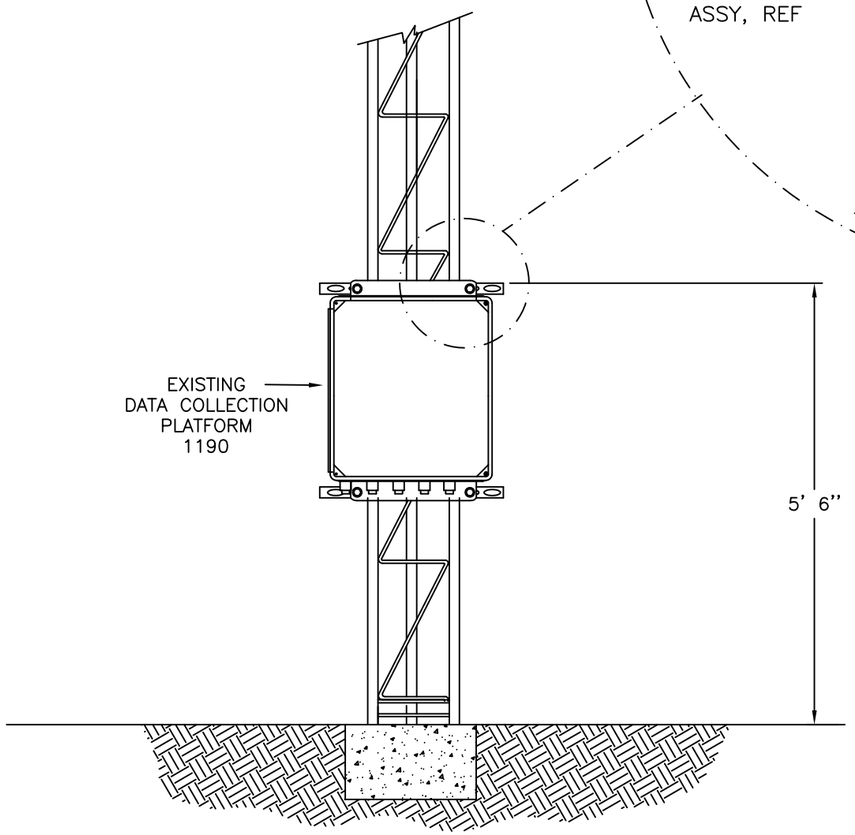
REVISIONS			DWG NO. 1190–007	
REV	ECN	DESCRIPTION	DATE	APPROVED
A	4769	INITIAL RELEASE	2/23/98	CSP
B	4981	ADD NOTE FOR FOLD OVER TOWER MOUNTING		
C	1400	UPDATE DWG FOR CORROSION RESISTANT MTG KIT	9/2/08	BRG
D	1938	UPDATE DCP BOX	03/24/10	TI

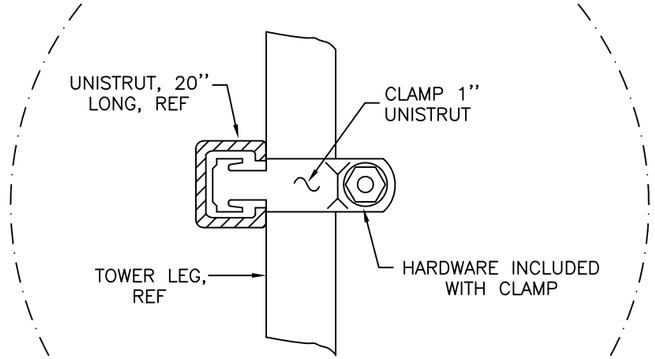


MOUNTING KIT, ENCLOSURE TO TOWER M488119–01



SECTION A–A



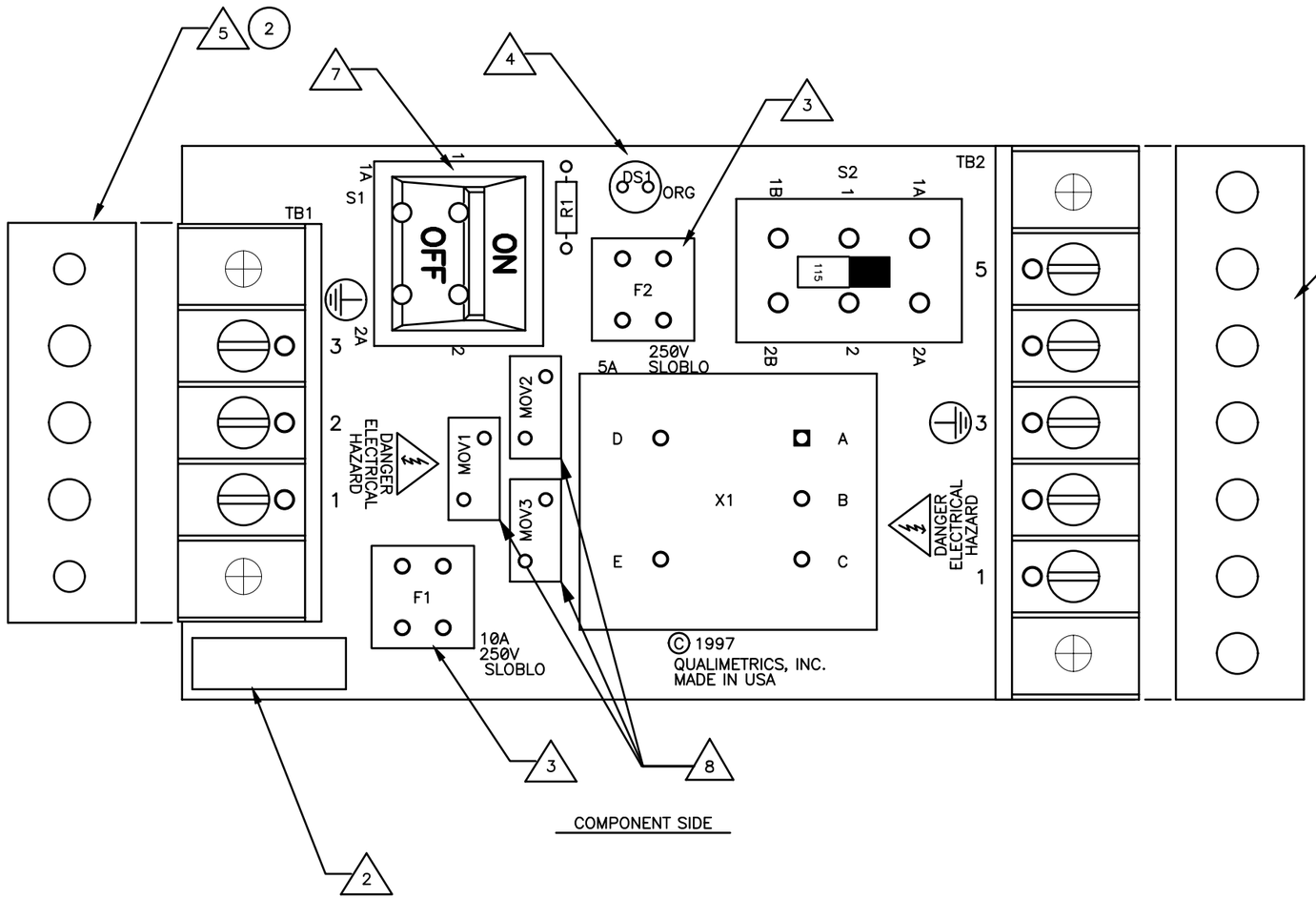


SECTION B–B

EXCEPT AS MAY OTHERWISE BE SPECIFIED BY CONTRACT, THIS DOCUMENT AND THE DATA DISCLOSED HEREIN AND HEREWITH, IS NOT TO BE USED, REPRODUCED OR DISCLOSED, IN WHOLE OR IN PART, TO ANYONE WITHOUT THE WRITTEN PERMISSION OF ALL WEATHER INC.

APPEND THE FOLLOWING DOCUMENTS WHEN CHANGING THIS DOCUMENT:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES XX=±.010 ANGLES ±1/2' XXX=±.005 CONCENTRICITY: .003 TIR DO NOT SCALE DRAWING	DRAWN BY: P Kooyman	10FEB98	TITLE: INSTALLATION DRAWING, 1190 DCP TOWER MOUNTING
		MATL: SEE BILL OF MATERIALS	REVISED BY: T IWANOWSKI	03/24/10	allweatherinc
		FINISH: AS ISSUED	CHECKED BY:		SIZE D / DWG NO. 1190–007
		TREATMENT	DESIGN ENGINEER:		
			PROJECT MANAGER:		
			APPROVALS	DATE	SCALE NONE / RELEASE DATE / SHEET 1 OF 1

REVISIONS			DWG NO. M404802-01-003	
REV	ECO	DESCRIPTION	DATE	APPROVED
A	2098	INITIAL RELEASE	05/27/10	BRG



NOTES: UNLESS OTHERWISE SPECIFIED:

1. TRIM ALL COMPONENT LEADS IN COMPLIANCE WITH AWI WORKMANSHIP MANUAL.

2. ENSURE PCB ASSEMBLY IS CORRECTLY LABELED IN COMPLIANCE WITH QAI228.

3. INSTALL XF1 AND XF2 PRIOR TO INSTALLATION OF F1 AND F2.

4. INSTALL IT-1 PRIOR TO INSTALLATION OF DS1. (NOT INSTALLED ON THIS ASSEMBLY)

5. PRESS-FIT IT-2 ONTO TB1 AFTER INSTALLATION.

6. PRESS-FIT IT-3 ONTO TB2 AFTER INSTALLATION.

7. S1 MUST BE HAND SOLDERED TO PREVENT CONTAMINATION. DO NOT WAVE SOLDER.

8. MOV1 – MOV3 NOT INSTALLED.

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APPEND THE FOLLOWING DOCUMENTS WHEN CHANGING THIS DOCUMENT:	

REFERENCE DOCUMENTS	
A/W	M405570-011
FAB	M405570-012
SCH	M404802-01-004

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES
XX= +/- .010 ANGLES= +/- 1/2 DEGREE
XXX= +/- .005 FRACTIONS= +/- .02
DO NOT SCALE DRAWING

MATL: SEE BILL OF MATERIALS

FINISH: AS ISSUED

TREATMENT:

DRAWN BY:	KEITH HOEK	03APR97
REVISED BY:	B. GALARPE	05/27/10
CHECKED BY:	J. PATTERSON	05/27/10
DESIGN ENGINEER:	MICHAEL HOOVER	5-9-97
PROJECT MANAGER:		
APPROVALS		DATE

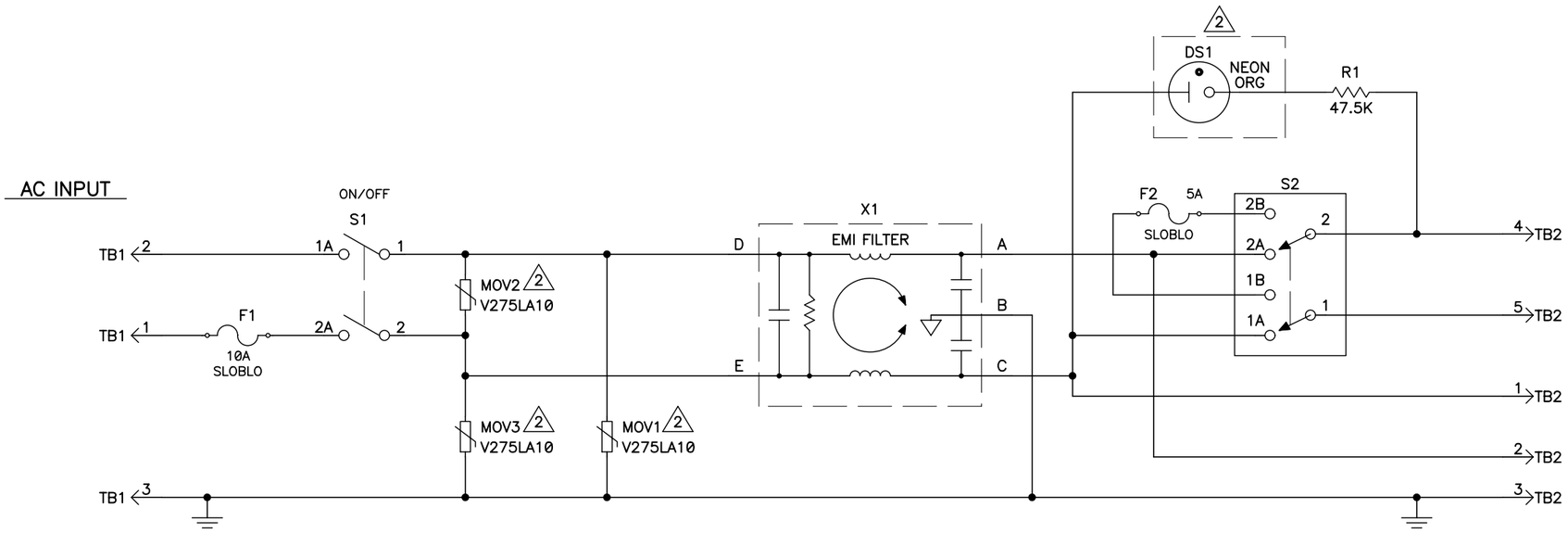
TITLE: PCB ASSEMBLY
7.5/3.75 AMP, A/C
POWER INTERFACE
115/230 VOLT

allweatherinc

SIZE C | DWG NO. M404802-01-003

SCALE 2 : 1 | RELEASE DATE | SHEET 1 OF 1

REVISIONS			DWG NO. M404802-01-004	
REV	ECO	DESCRIPTION	DATE	APPROVED
A	2098	INITIAL RELEASE	05/27/10	BRG



NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTANCE IS IN OHMS, 1/4W, 1%.
2. DS1, MOV1–MOV3 NOT INSTALLED.

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APPEND THE FOLLOWING DOCUMENTS WHEN CHANGING THIS DOCUMENT:	

REFERENCE DOCUMENTS	
A/W	M405570-001
FAB	M405570-012
ASSY	M404802-01-003

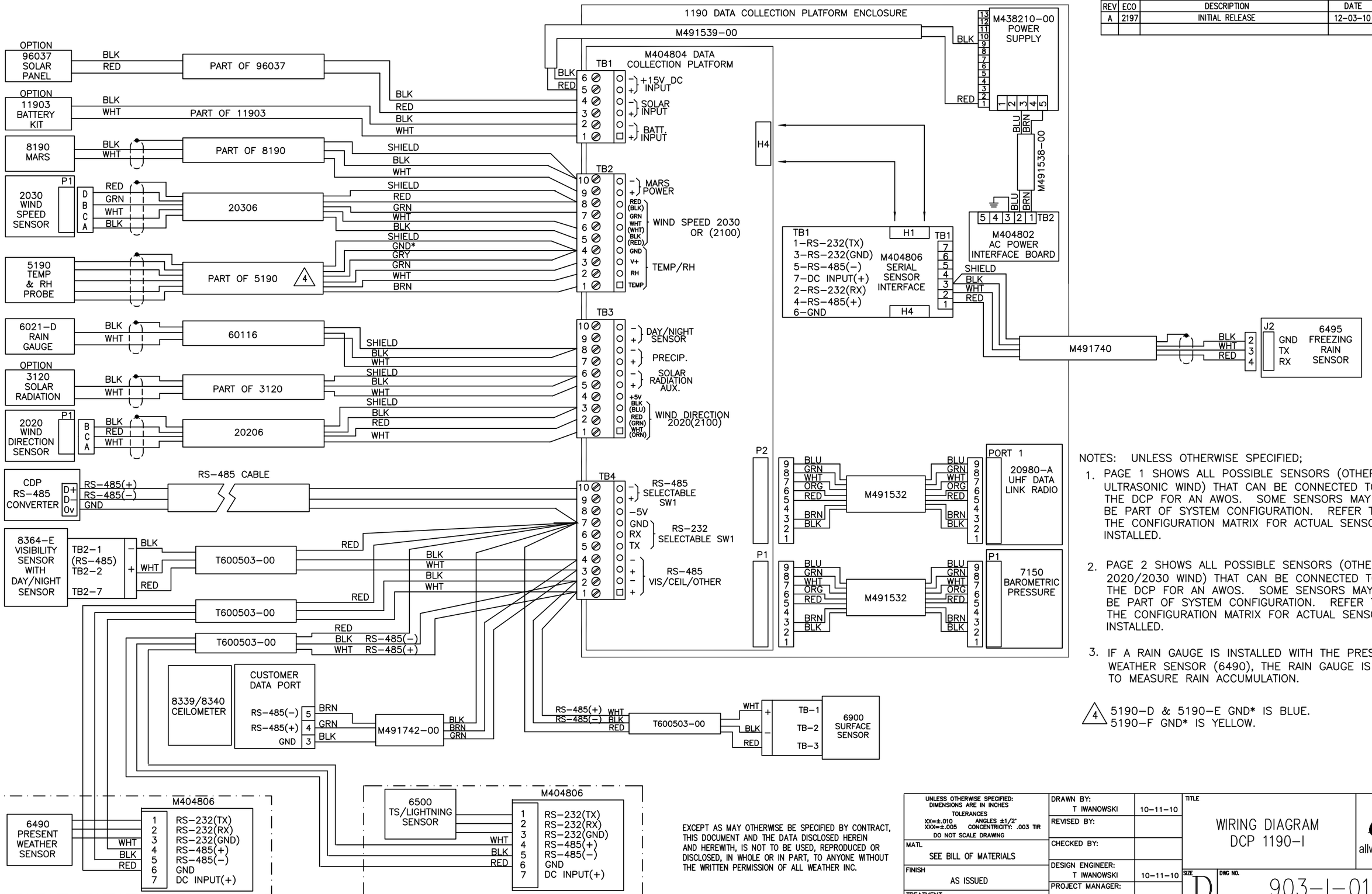
REFERENCE DESIGNATIONS	
LAST USED	NOT USED
DS1	
F2	
MOV3	
R1	
S2	
TB2	
X1	

DRAWN BY: KEITH HOEK	03APR97	TITLE: SCHEMATIC DIAGRAM 7.5/3.75 AMP, A/C POWER INTERFACE 115/230 VOLT
REVISED BY: B. GALARPE	05/27/10	
CHECKED BY: J. PATTERSON	05/27/10	
DESIGN ENGINEER: MICHAEL HOOVER	5-9-97	
PROJECT MANAGER:		
APPROVALS	DATE	

allweatherinc

SIZE	DWG NO.	
C	M404802-01-004	
SCALE NONE	RELEASE DATE	SHEET 1 OF 1

REVISIONS			DWG NO. 3000-A-019	
REV	ECO	DESCRIPTION	DATE	APPROVED
A	2197	INITIAL RELEASE	12-03-10	TIWANOWSKI



NOTES: UNLESS OTHERWISE SPECIFIED;

1. PAGE 1 SHOWS ALL POSSIBLE SENSORS (OTHER THAN ULTRASONIC WIND) THAT CAN BE CONNECTED TO THE DCP FOR AN AWOS. SOME SENSORS MAY NOT BE PART OF SYSTEM CONFIGURATION. REFER TO THE CONFIGURATION MATRIX FOR ACTUAL SENSORS INSTALLED.

2. PAGE 2 SHOWS ALL POSSIBLE SENSORS (OTHER THAN 2020/2030 WIND) THAT CAN BE CONNECTED TO THE DCP FOR AN AWOS. SOME SENSORS MAY NOT BE PART OF SYSTEM CONFIGURATION. REFER TO THE CONFIGURATION MATRIX FOR ACTUAL SENSORS INSTALLED.

3. IF A RAIN GAUGE IS INSTALLED WITH THE PRESENT WEATHER SENSOR (6490), THE RAIN GAUGE IS USED TO MEASURE RAIN ACCUMULATION.

4 5190-D & 5190-E GND* IS BLUE.
5190-F GND* IS YELLOW.

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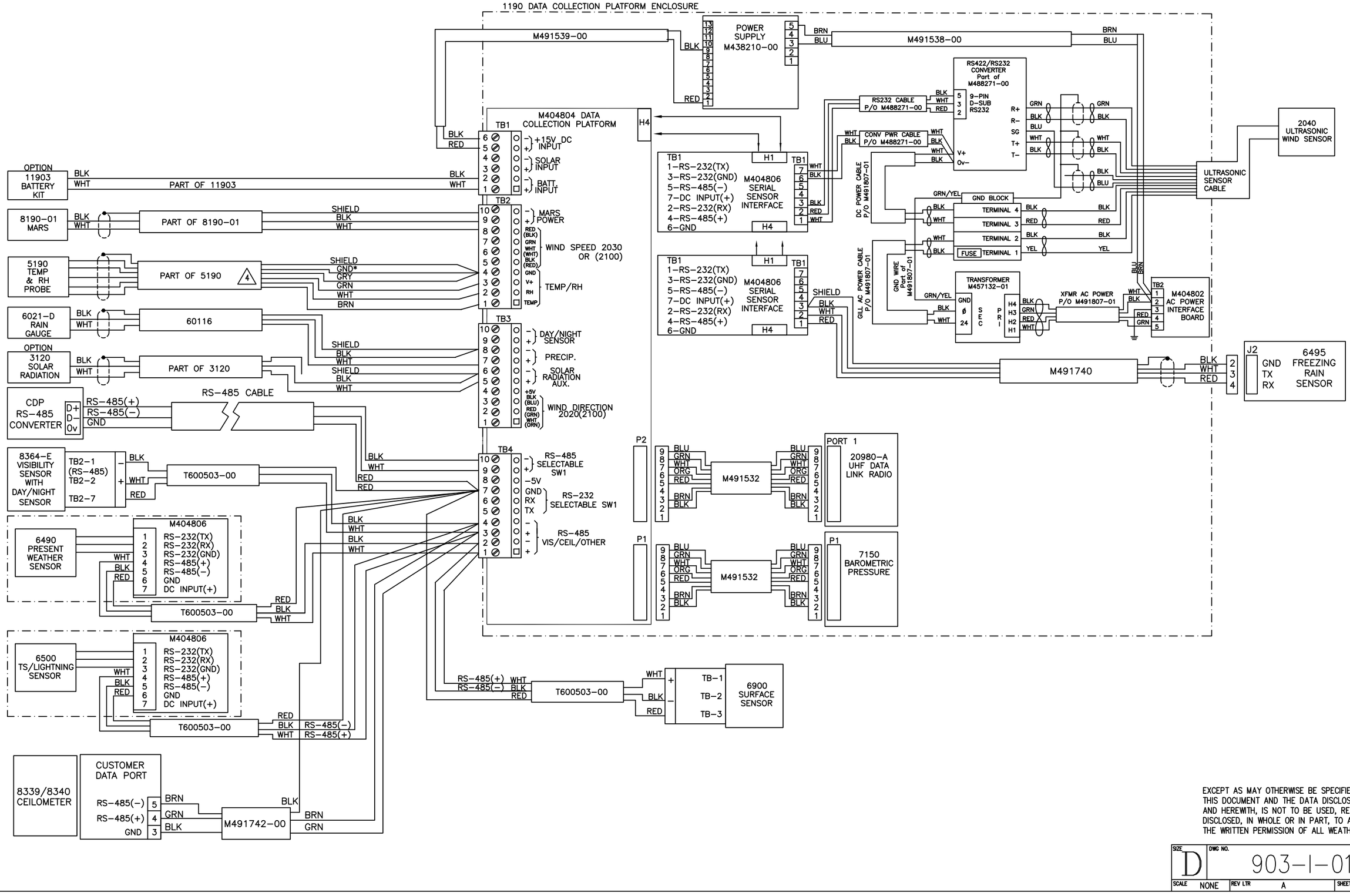
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES XX=±.010 ANGLES ±1/2° XXX=±.005 CONCENTRICITY: .003 TIR DO NOT SCALE DRAWING	DRAWN BY: T IWANOWSKI	10-11-10	TITLE: WIRING DIAGRAM DCP 1190-I
MATL: SEE BILL OF MATERIALS	REVISED BY:		allweatherinc
FINISH: AS ISSUED	CHECKED BY:		
TREATMENT	DESIGN ENGINEER: T IWANOWSKI	10-11-10	SIZE D DWG NO. 903-I-019
	PROJECT MANAGER:		
	APPROVALS	DATE	SCALE NONE RELEASE DATE SHEET 1 OF 2



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SIZE	DWG NO.	
D	903-I-019	
SCALE NONE	REV LTR A	SHEET 2 OF 2

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Sacramento, CA 95818
Fax: 916.928.1165
Phone: 916.928.1000
Toll Free: 800.824.5873

1190-I-001
Revision A
November, 2010