

# WIRELINE SAFETY SWITCH PANEL

## ALS1A006

WIRELINE SELECTOR SWITCH

WIRELINE RESISTANCE TESTING

GALVOMETER FOR BLASTING CAP RESISTANCE TESTING

WIRELINE LOCK OUT KEY SWITCH



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## 1.0 INTRODUCTION

The purpose of this panel is to provide a safe method to prevent the accidental application of power to the wireline and a convenient method to switch between different wireline cables.

**The panel provides four basic functions.**

**1. Safety Lockout**

When the key switch is in the center (“SAFE”) position, power cannot be applied to the wireline. If the key is removed, the switch is locked into the safe position.

This prevents accidentally applying power to the wireline. When an explosive device is attached to the wireline, the key should always be in the safe position and in possession of one of the crew members working outside the unit.

**2. Line Select**

This feature allows the recording system to be easily connected to two different wirelines.

**3. Cable Resistance / Diode Resistance Test**

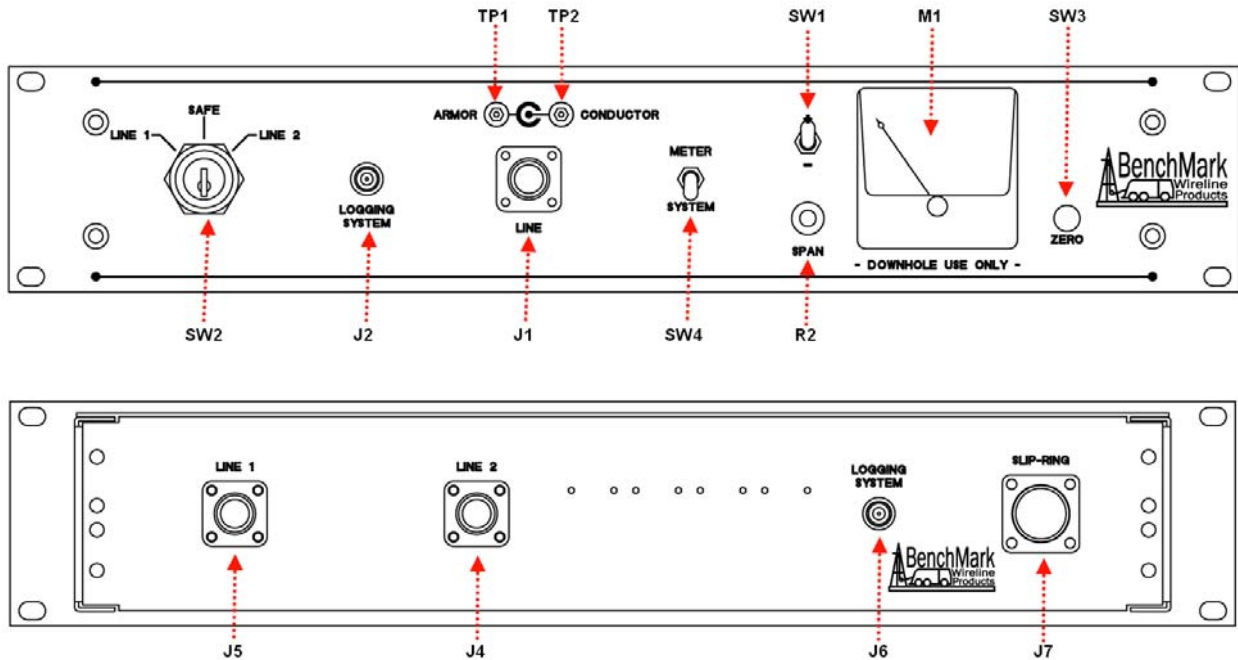
This feature provides a means to check the wireline for leakage or to check for the presence of diodes in a tool or sub connected to the wireline.

**WARNING: This panel includes a current limiting test circuit to limit the current. DO NOT MODIFY OR CHANGE ANY PART OF THIS CIRCUIT**

**4. Cable Conductor Access**

Jacks are provided on the front panel to provide easy access to the wireline. This makes it easy to test voltages or connect different equipment to the wireline.

## 2.0 FEATURE DESCRIPTION



**SW2:** This switch selects between wireline 1 and wireline 2. When the key is in the center position, both wirelines are grounded through two 10K ohm resistors connected in parallel (5k ohms). When in LINE 1 position, wireline 1 is connected through the switch to the LINE connector J1. When in LINE 2 position, wireline 2 is connected through the switch to LINE connector J1. The key can only be removed when the switch is in the safe position.

## 2.0 FEATURE DESCRIPTION continued

- J2:** This connector is connected to J6 on the rear panel. This provides a path for power and signal from the Logging System. When connected to J1 through a jumper cable and the key switch SW2 is in either LINE 1 or LINE 2 position, the Logging System will be connected to the wireline.
- SW4:** This switch connects the J1 (Line Connector) to the test circuit. When the key switch SW2 is in either LINE 1 or LINE 2 position, the meter will be connected to the wireline. When the key switch is in the SAFE position, J1 is isolated from the wireline.
- TP1 & TP2:** These test points provide a means to connect a test meter to the wireline or connect the wireline to another panel or service. When the key switch is in the SAFE position, these test points are isolated from the wireline.
- SW3:** This switch provides a connection to meter M1
- R2:** This potentiometer adjusts the meter span. Press and hold the ZERO button then adjust this knob until the meter reads 0. If the meter cannot be set to 0, the batteries inside the panel may need to be replaced.
- SW1:** This switch sets the meter polarity when connected to the wireline. In the + position, positive voltage will be applied to the wireline conductor through J3 and J1 and negative voltage will be applied to armor. In the – position, negative voltage will be applied to the wireline conductor through J3 and J1 and positive voltage will be applied to armor. This provides a means to test diodes. When the key switch is in the SAFE position, J1 is isolated from the wireline and no power is applied.
- M1:** This meter displays the result of the voltage test (see SW1). The meter displays the resultant reading on an ohmmeter scale. The diode symbol on the meter indicates where the needle should point when reading through a diode.
- SW3:** This push button switch connects the internal battery to the meter so the zero value can be set. Refer to R2.

## 2.0 FEATURE DESCRIPTION continued

### J6: Logging System:

This connector is provided to connect to the cable going to the Logging System. It is also connected directly to the LOGGING SYSTEM jack on the front panel (J2).

### J7: Slip Ring:

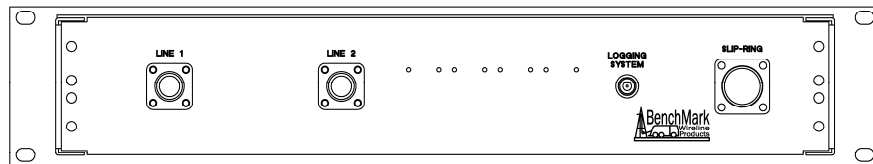
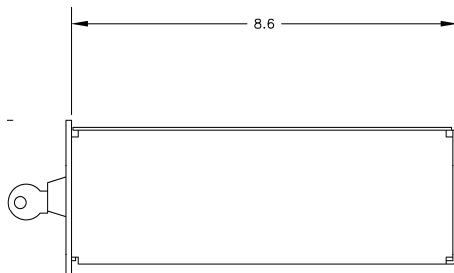
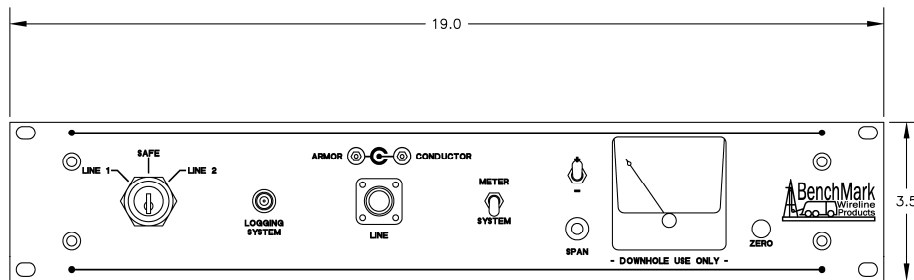
This connector is connected directly to the wireline. Line 1 is connected to Pins A (conductor) and D (armor). Line 2 is connected to Pins B (conductor) and E (armor).

**J4: Line 1:** Line 1 is connected to the Line 1 position on SW2.

**J5: Line 2:** Line 2 is connected to the Line 2 position on SW2

### 3.0 GENERAL SPECIFICATIONS

|         |         |         |
|---------|---------|---------|
| Height: | 3.5 in  | .089 m  |
| Width   | 19.0 in | .482 m  |
| Depth:  | 8.6 in  | .292 m  |
| Weight: | 2 lbs   | .907 kg |



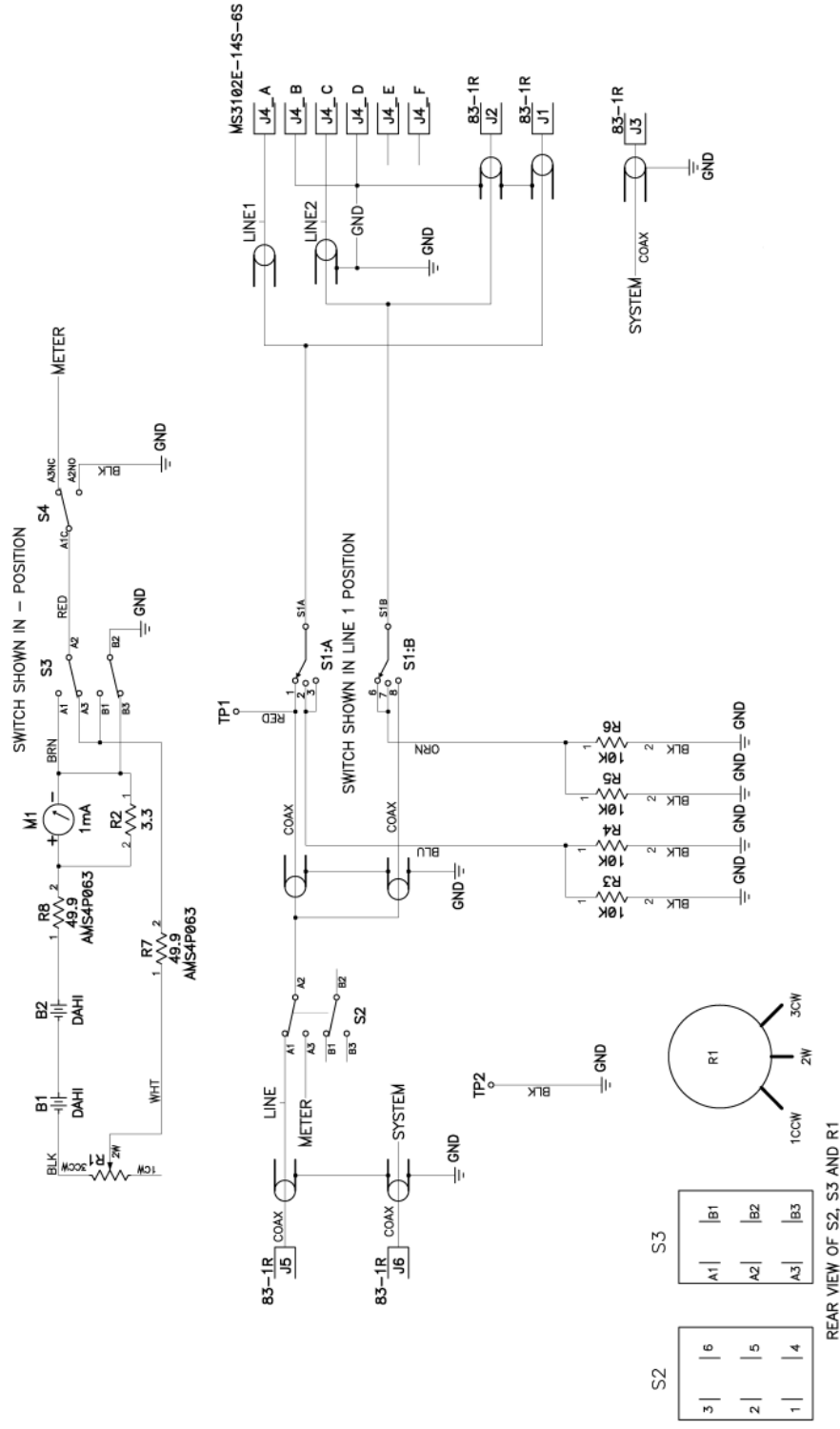
REAR VIEW

## 4.0 PARTS LIST

| P/N      | DESCRIPTION   | QTY |
|----------|---|-----|
| AMS5P191 | SWITCH SPDT MOM PUSHBUTTON NKK MB2011SS1W01-RO          | 1   |
| ACMU1P79 | CABLE COAX BELDEN 8259                                  | 0   |
| ALS1M003 | BRACKET TOP PANEL SAFETY SW                             | 1   |
| ALS1M021 | PANEL FRONT SAFETY SWITCH 2 X SINGLE COND W/METER 2U    | 1   |
| ALS1M024 | PANEL REAR 3 BATT 4 CON SAFESW                          | 1   |
| ALS1M125 | PANEL BTM 2AABATT 4 CON SAFESW                          | 1   |
| ALS1P003 | METER 0 - 1 MA DC SIMPSON                               | 1   |
| ALS1P004 | CONN AMP 83-1R PL259 UHF                                | 4   |
| ALS1P005 | SWITCH KEYLOCK 3 POS COLE                               | 1   |
| ALS1P006 | BATTERY SILVER CHLORIDE                                 | 2   |
| ALS1P007 | CHASSIS 3.50 X 19.0 X 8.50 AL                           | 1   |
| ALS1P008 | COVER CHASSIS 19.0 X 8.50DP AL                          | 1   |
| ALS1P011 | POT 250 OHM CLAROSTAT 381N250                           | 1   |
| ALS1P012 | SWITCH DPDT TOGGLE PNL MNT                              | 1   |
| ALS1P013 | JACK TIP RED STD TIP PLUG                               | 1   |
| ALS1P014 | JACK TIP BLK STD TIP PLUG                               | 1   |
| ALS1P017 | CLAMP LOOP RUBBER CUSHION 3/4"                          | 4   |
| ALS1P022 | RESISTOR 10KOHM 5W WW                                   | 4   |
| ALS1P025 | SCREW 2-56 X 3/8 BINDER HD SST                          | 8   |
| ALS1P026 | NUT 2-56 HEX MACHINE SST                                | 8   |
| ALS1P027 | WASHER #2 FLAT SST                                      | 8   |
| ALS1P028 | WASHER #2 LOCK SST                                      | 8   |
| ALS1P029 | CONN AMP BNC FRONT MOUNT BULKHEAD RECEPTACLE 31-221-RFX | 2   |
| ALS1P039 | CABLE ASSY BNC TO UHF 8 IN                              | 1   |
| ALS1P040 | BATTERY LITHIUM AA 1.5 V                                | 2   |
| AM5KP102 | CONN MS3106F-14S-6P                                     | 1   |
| AMS1P054 | WASHER #10 FLAT SS                                      | 6   |
| AMS4P018 | SWITCH SPDT PUSH MOM MPA-106F                           | 1   |
| AMS4P021 | SWITCH CAP ALCO C-22 BLACK                              | 1   |
| AMS4P063 | RESISTOR 49.9 OHM 1/8W 1%                               | 2   |
| AMS4P290 | TERMINAL INSULATED SOLDR 6-32                           | 2   |
| AMS4P714 | STRAP BATTERY 9V SNAP ON 6"LD KEYSTONE 2239             | 1   |
| AMS4P896 | RESISTOR 3.3OHM AXIAL                                   | 1   |
| AMS4P903 | SWITCH DPDT MOM NKK                                     | 1   |
| AMS5P182 | HOLDER BATT 2AA W 9V SNAP CON KEYSTONE 2474             | 1   |
| AMS5P191 | SWITCH SPDT MOM PUSHBUTTON                              | 1   |
| AMS5P192 | SWITCH CAP SCREW ON BLACK NKK AT407A                    | 1   |
| AMS7P034 | KNOB #KN500A-1/8 ALCOA                                  | 1   |
| AMS7P041 | DUST CAP MS25043-14DA RECEPT POWER IN                   | 1   |
| C276P027 | SCREW 10-32 X 3/8 PHIL PAN SST                          | 6   |
| C276P035 | WASHER #10 LOCK SS                                      | 6   |
| C276P193 | NUT 10-32 HEX MACHINE SST                               | 6   |
| C276P365 | CONN MS3102E-14S-6S                                     | 1   |

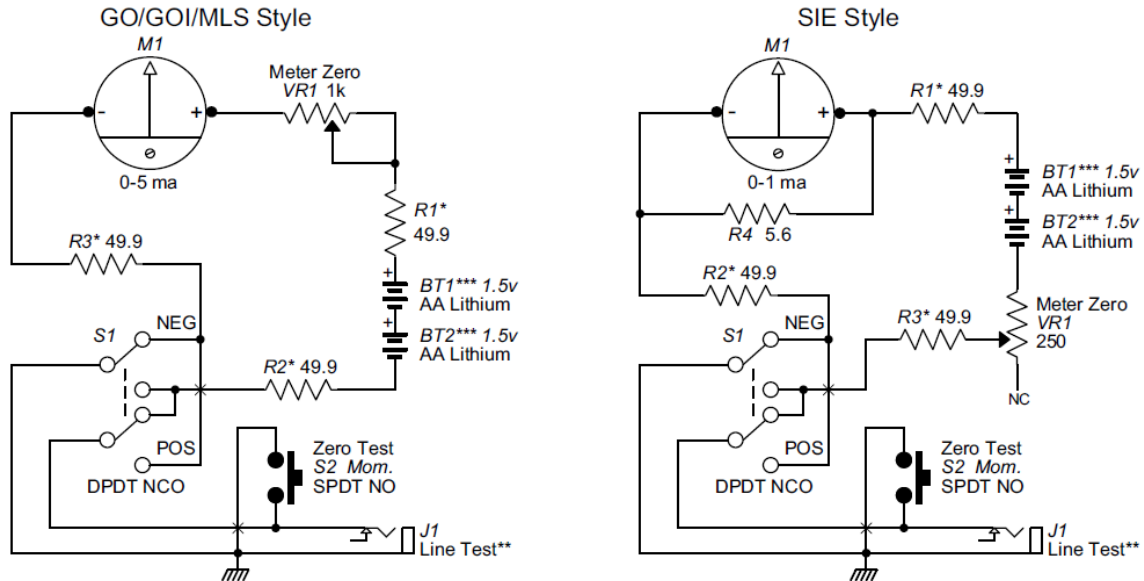


## 5.0 SCHEMATICS



## 5.0 SCHEMATICS continued

### CONTINUITY METER



This circuit provides a current limit of 20ma.

**DO NOT MODIFY OR CHANGE  
ANY PART OF THIS CIRCUIT**

## 6.0 WIRE LIST

|     |  |
|-----|--|
| S1  | KEY SWITCH                                 |
| S2  | MOMENTARY TOGGLE SWITCH                    |
| S3  | +/- SWITCH                                 |
| S4  | ZERO SWITCH ON THE FRONT PANEL             |
| M1  | METER ON FRONT PANEL                       |
| TP1 | RED PLUG ON FRONT PANEL                    |
| TP2 | BLACK PLUG ON FRONT PANEL                  |
| B1  | BATTERY 1                                  |
| B2  | BATTERY 2                                  |
| R1  | SPAN KNOB ON THE FRONT PANEL               |
| R2  | ON THE FRONT PANEL                         |
| R3  | ON THE REAR PANEL                          |
| R4  | ON THE REAR PANEL                          |
| R5  | ON THE REAR PANEL                          |
| R6  | ON THE REAR PANEL                          |
| R7  | 49.9 OHM RESISTOR IN HARNESS               |
| R8  | 49.9 OHM RESISTOR IN HARNESS               |
| J1  | LINE 1 CONNECTOR ON THE REAR PANEL         |
| J2  | LINE 2 CONNECTOR ON THE REAR PANEL         |
| J3  | LOGGING SYSTEM CONNECTOR ON THE REAR PANEL |
| J4  | SLIP RING CONNECTOR ON THE REAR PANEL      |
| J5  | LINE CONNECTOR FRONT PANEL                 |
| J6  | LOGGING SYSTEM CONNECTOR FRONT PANEL       |

## 6.0 WIRE LIST continued

| S1 - KEY SWITCH ON THE FRONT PANEL |                                     |                  |      |             |  |             |
|------------------------------------|-------------------------------------|------------------|------|-------------|--|-------------|
| FROM                               |                                     |                  |      | TO          |  | SIGNAL NAME |
| S1 - C1                            | COAX, THIS END TIE SHIELDS TOGETHER | COAX CENTER WIRE | COAX | J4 - A      | SLIP RING CONNECTOR ON THE REAR PANEL      | LINE 1      |
| S1 - C1                            | COAX, THIS END TIE SHIELDS TOGETHER | COAX CENTER WIRE | COAX | J1 - CENTER | LINE 1 CONNECTOR ON THE REAR PANEL         | LINE 1      |
| S1 - C2                            | COAX, THIS END TIE SHIELDS TOGETHER | COAX CENTER WIRE | COAX | J4 - C      | SLIP RING CONNECTOR ON THE REAR PANEL      | LINE 2      |
| S1 - C2                            | COAX, THIS END TIE SHIELDS TOGETHER | COAX CENTER WIRE | COAX | J2 - CENTER | LINE 2 CONNECTOR ON THE REAR PANEL         | LINE 2      |
| S1 - 1                             | JUMPER                              | RED              | 20   | S1 - 8      | KEY LOCK SWITCH ON THE FRONT PANEL         | LINE        |
| S1 - 8                             |                                     | RED              | 20   | TP1         | TEST POINT ON THE FRONT PANEL              | LINE        |
| TP - 1                             | TEST POINT ON THE FRONT PANEL       | COAX CENTER WIRE | COAX | S2 - 2      | TOGGLE MOMENTARY SWITCH ON THE FRONT PANEL | LINE        |
| S1 - 2                             | JUMPER                              | BLU              | 20   | S1 - 3      |  | LINE 1      |
| S1 - 3                             |                                     | BLU              | 20   | R3 - 1      | RESISTOR ON THE REAR PANEL                 | LINE 1      |
| R3 - 1                             |                                     | BLU              | 20   | R4 - 1      | RESISTOR ON THE REAR PANEL                 | LINE 1      |
| S1 - 3                             | (REF)                               | YEL              | 20   | S1 - 2      | KEY LOCK SWITCH ON THE FRONT PANEL         | LINE 1      |
| S1 - 6                             | JUMPER                              | ORN              | 20   | S1 - 7      | KEY LOCK SWITCH ON THE FRONT PANEL         | LINE 2      |
| S1 - 7                             |                                     | ORN              | 20   | R5 - 1      | RESISTOR ON THE REAR PANEL                 | LINE 2      |
| R5 - 1                             |                                     | ORN              | 20   | R6 - 1      | RESISTOR ON THE REAR PANEL                 | LINE 2      |
| S1 - 7                             | JUMPER (REF)                        | ORN              | 20   | S1 - 6      | KEY LOCK SWITCH ON THE FRONT PANEL         | LINE 2      |
| S1 - 8                             | (REF)                               | COAX CENTER WIRE | COAX | S1 - 1      | KEY LOCK SWITCH ON THE FRONT PANEL         | LINE        |
| S1 - 8                             | (REF)                               | COAX CENTER WIRE | COAX | S2 - 2      | TOGGLE MOMENTARY SWITCH ON THE FRONT PANEL | LINE        |
| S1 - 8                             | (REF)                               | COAX CENTER WIRE | COAX | TP1         | TEST POINT ON THE FRONT PANEL              | LINE        |

## 6.0 WIRE LIST continued

| S2 - MOMENTARY TOGGLE SWITCH |  |                  |      |             |                                |             |
|------------------------------|--|------------------|------|-------------|--------------------------------|-------------|
| FROM                         |  |                  |      | TO          |                                | SIGNAL NAME |
| S2 - 3 - NO                  |  | RED              | 20   | S4 - NC     | ZERO SWITCH ON THE FRONT PANEL | METER       |
| S2 - 1 - NC                  |  | COAX CENTER WIRE | COAX | J5 - CENTER | LINE CONNECTOR FRONT PANEL     | LINE        |

| S3 - +/- SWITCH ON THE FRONT PANEL |        |     |    |                           |   |             |
|------------------------------------|--------|-----|----|---------------------------|---|-------------|
| FROM                               |        |     |    | TO                        |   | SIGNAL NAME |
| S3 - A1                            | JUMPER | BRN | 20 | S3 - B3, M1 - (-), R2 - 1 | +/- SWITCH ON THE FRONT PANEL, METER ON FRONT PANEL, RESISTOR ACROSS M1 | METER -     |
| S3 - A2                            |        | RED | 20 | S4 - C                    | ZERO SWITCH ON THE FRONT PANEL  | METER       |
| S3 - A3                            | JUMPER | WHT | 20 | S3 - B1, R7 - 2           | +/- SWITCH ON THE FRONT PANEL, R7 IN HARNESS                            |             |
| S3 - B1                            | (REF)  | WHT | 20 | S3 - A3                   | +/- SWITCH ON THE FRONT PANEL   |             |
| S3 - B1                            | (REF)  | WHT | 20 | R1 - 2W                   | SPAN KNOB ON THE FRONT PANEL  |             |
| S3 - B2                            |        | BLK | 20 | GND BUS BAR               | GND BUS BAR ON THE REAR PANEL   | GND         |
| S3 - B3                            | (REF)  | BRN | 20 | S3 - A1                   | +/- SWITCH ON THE FRONT PANEL   | METER -     |
| S3 - B3                            | (REF)  | BRN | 20 | M1 - (-)                  | METER ON FRONT PANEL  | METER -     |
| S3 - B3                            | (REF)  | BRN | 20 | R2 - 1                    | RESISTOR INSTALLED ACROSS THE METER LEADS                               | METER -     |

| S4 - ZERO SWITCH ON THE FRONT PANEL |       |     |    |             |  |             |
|-------------------------------------|-------|-----|----|-------------|--|-------------|
| FROM                                |       |     |    | TO          |  | SIGNAL NAME |
| S4 - C                              | (REF) | RED | 20 | S3 - A2     | +/- SWITCH ON THE FRONT PANEL              | METER       |
| S4 - NO                             |       | BLK | 20 | GND BUS BAR | GND BUS BAR ON THE REAR PANEL              | GND         |
| S4 - NC                             | (REF) | RED | 20 | S2 - 3      | TOGGLE MOMENTARY SWITCH ON THE FRONT PANEL | METER       |

## 6.0 WIRE LIST continued

| M1 - METER ON FRONT PANEL |       |          |    |                |   |             |
|---------------------------|-------|----------|----|----------------|---|-------------|
| FROM                      |       |          |    | TO             |   | SIGNAL NAME |
| M1 - (-)                  | (REF) | BRN      | 20 | S3 - A1        | +/- SWITCH ON THE FRONT PANEL               | METER -     |
| M1 - (-)                  | (REF) | BRN      | 20 | R2 - 1         | RESISTOR INSTALLED ACROSS THE METER LEADS   | METER -     |
| M1 - (-)                  | (REF) | BRN      | 20 | S3 - B3        | +/- SWITCH ON THE FRONT PANEL               | METER -     |
| M1 - (+)                  |       | RED LEAD | 20 | R8 - 2, R2 - 2 | RESISTOR IN HARNESS & RESISTOR ACROSS METER | METER +     |

| TP1 - RED PLUG ON FRONT PANEL |       |                  |      |        |  |             |
|-------------------------------|-------|------------------|------|--------|--|-------------|
| FROM                          |       |                  |      | TO     |  | SIGNAL NAME |
| TP1                           | (REF) | RED              | 20   | S1 - 1 | KEY LOCK SWITCH ON THE FRONT PANEL         | LINE        |
| TP1                           | (REF) | COAX CENTER WIRE | COAX | S2 - 2 | TOGGLE MOMENTARY SWITCH ON THE FRONT PANEL | LINE        |
| TP1                           | (REF) | COAX CENTER WIRE | COAX | S1 - 8 | KEY LOCK SWITCH ON THE FRONT PANEL         | LINE        |

| TP2 - BLACK PLUG ON FRONT PANEL |  |     |    |             |                               |             |
|---------------------------------|--|-----|----|-------------|-------------------------------|-------------|
| FROM                            |  |     |    | TO          |                               | SIGNAL NAME |
| TP2                             |  | BLK | 20 | GND BUS BAR | GND BUS BAR ON THE REAR PANEL | GND         |

| B1 - BATTERY 1 INSTALLED IN THE CHASSIS |  |     |    |          |                              |             |
|---|--|-----|----|----------|------------------------------|-------------|
| FROM                                    |  |     |    | TO       |                              | SIGNAL NAME |
| B1 - (-)                                |  | BLK | 20 | R1- 3CCW | SPAN KNOB ON THE FRONT PANEL |             |

## 6.0 WIRE LIST continued

| B2 - BATTERY 2 INSTALLED IN THE CHASSIS |       |          |    |          |                          |             |
|---|-------|----------|----|----------|--------------------------|-------------|
| FROM                                    |       |          |    | TO       |                          | SIGNAL NAME |
| B2 - (+)                                |       | RED LEAD | 20 | R8 - 1   | RESISTOR IN HARNESS      |             |
| B2 - (-)                                | (REF) | RED      | 20 | B1 - (+) | BATTERY 1 IN THE CHASSIS |             |

| R1 - SPAN KNOB ON THE FRONT PANEL |       |     |    |          |                               |             |
|-----------------------------------|-------|-----|----|----------|-------------------------------|-------------|
| FROM                              |       |     |    | TO       |                               | SIGNAL NAME |
| R1 - 2W                           |       | WHT | 20 | R7 - 1   | RESISTOR IN HARNESS           |             |
| R1 - 2W                           | (REF) | WHT | 20 | S3 - A3  | +/- SWITCH ON THE FRONT PANEL |             |
| R1 - 3CCW                         | (REF) | BLK | 20 | B1 - (-) | BATTERY 1 IN THE CHASSIS      |             |

| R2 - 3.3K INSTALLED ACROSS M1 |       |     |    |          |                               |             |
|-------------------------------|-------|-----|----|----------|-------------------------------|-------------|
| FROM                          |       |     |    | TO       |                               | SIGNAL NAME |
| R2 - 1                        | (REF) | BRN | 20 | S3 - A1  | +/- SWITCH ON THE FRONT PANEL |             |
| R2 - 1                        | (REF) | BRN | 20 | S3 - B3  | +/- SWITCH ON THE FRONT PANEL |             |
| R2 - 1                        | (REF) | BRN | 20 | M1 - (-) | METER ON FRONT PANEL          |             |
| R2 - 2                        | (REF) | RED | 20 | M1 - (+) | METER ON FRONT PANEL          |             |
| R2 - 2                        | (REF) | RED | 20 | B3 - (+) | BATTERY 2 IN THE CHASSIS      |             |

| R3 - INSTALLED ON THE REAR PANEL |       |     |    |             |                                    |             |
|----------------------------------|-------|-----|----|-------------|------------------------------------|-------------|
| FROM                             |       |     |    | TO          |                                    | SIGNAL NAME |
| R3 - 1                           | (REF) | BLU | 20 | S1 - 2      | KEY LOCK SWITCH ON THE FRONT PANEL | LINE 1      |
| R3 - 1                           | (REF) | BLU | 20 | S1 - 3      | KEY LOCK SWITCH ON THE FRONT PANEL | LINE 1      |
| R3 - 1                           | (REF) | BLU | 20 | R4 - 1      | RESISTOR ON THE REAR PANEL         | LINE 1      |
| R3 - 2                           |       | BLK | 20 | GND BUS BAR | GND BUS BAR ON THE REAR PANEL      | GND         |

| R4 - INSTALLED ON THE REAR PANEL |       |     |    |             |                                    |             |
|----------------------------------|-------|-----|----|-------------|------------------------------------|-------------|
| FROM                             |       |     |    | TO          |                                    | SIGNAL NAME |
| R4 - 1                           | (REF) | BLU | 20 | S1 - 2      | KEY LOCK SWITCH ON THE FRONT PANEL |             |
| R4 - 1                           | (REF) | BLU | 20 | S1 - 3      | KEY LOCK SWITCH ON THE FRONT PANEL |             |
| R4 - 1                           | (REF) | BLU | 20 | R3 - 1      | RESISTOR ON THE REAR PANEL         |             |
| R4 - 2                           |       | BLK | 20 | GND BUS BAR | GND BUS BAR ON THE REAR PANEL      | GND         |

## 6.0 WIRE LIST continued

| R5 - INSTALLED ON THE REAR PANEL |       |     |    |             |                                    |             |
|----------------------------------|-------|-----|----|-------------|------------------------------------|-------------|
| FROM                             |       |     |    | TO          |                                    | SIGNAL NAME |
| R5 - 1                           | (REF) | ORN | 20 | S1 - 6      | KEY LOCK SWITCH ON THE FRONT PANEL |             |
| R5 - 1                           | (REF) | ORN | 20 | S1 - 7      | KEY LOCK SWITCH ON THE FRONT PANEL |             |
| R5 - 1                           | (REF) | ORN | 20 | R6 - 1      | RESISTOR ON THE REAR PANEL         |             |
| R5 - 2                           |       | BLK | 20 | GND BUS BAR | GND BUS BAR ON THE REAR PANEL      | GND         |

| R6 - INSTALLED ON THE REAR PANEL |       |     |    |             |                                    |             |
|----------------------------------|-------|-----|----|-------------|------------------------------------|-------------|
| FROM                             |       |     |    | TO          |                                    | SIGNAL NAME |
| R6 - 1                           | (REF) | ORN | 20 | S1 - 6      | KEY LOCK SWITCH ON THE FRONT PANEL |             |
| R6 - 1                           | (REF) | ORN | 20 | S1 - 7      | KEY LOCK SWITCH ON THE FRONT PANEL |             |
| R6 - 1                           | (REF) | ORN | 20 | R6 - 1      | RESISTOR ON THE REAR PANEL         |             |
| R6 - 2                           |       | BLK | 20 | GND BUS BAR | GND BUS BAR ON THE REAR PANEL      | GND         |

| J1 - LINE 1 CONNECTOR ON THE REAR PANEL |                          |                  |      |         |                                       |             |
|---|--------------------------|------------------|------|---------|---------------------------------------|-------------|
| FROM                                    |                          |                  |      | TO      |                                       | SIGNAL NAME |
| J1 - CENTER                             | (REF)                    | COAX CENTER WIRE | COAX | S1 - AW | KEY LOCK SWITCH ON THE FRONT PANEL    | LINE 1      |
| J1 - CENTER                             | (REF)                    | COAX CENTER WIRE | COAX | J4 - A  | SLIP RING CONNECTOR ON THE REAR PANEL | LINE 1      |
| J1 - SHIELD                             | CONNECT THE SHIELD TO J1 | COAX SHIELD      |      | GND     | GND LUG                               | GND         |

| J2 - LINE 2 CONNECTOR ON THE REAR PANEL |                          |                  |      |             |                                       |             |
|---|--------------------------|------------------|------|-------------|---------------------------------------|-------------|
| FROM                                    |                          |                  |      | TO          |                                       | SIGNAL NAME |
| J2 - CENTER                             | (REF)                    | COAX CENTER WIRE | COAX | S1 - BW     | KEY LOCK SWITCH ON THE FRONT PANEL    | LINE 2      |
| J2 - CENTER                             | (REF)                    | COAX CENTER WIRE | COAX | J4 - C      | SLIP RING CONNECTOR ON THE REAR PANEL | LINE 2      |
| J2 - SHIELD                             | CONNECT THE SHIELD TO J2 | COAX SHIELD      |      | GND         |                                       | GND         |
| J2 - GND LUG                            |                          | BLK              | 20   | GND BUS BAR | GND BUS BAR ON THE REAR PANEL         | GND         |



## 6.0 WIRE LIST continued

| J3 - SYSTEM CONNECTOR ON THE REAR PANEL |  |                  |      |             |                                     |             |
|---|--|------------------|------|-------------|-------------------------------------|-------------|
| FROM                                    |  |                  |      | TO          |                                     | SIGNAL NAME |
| J3 - CENTER                             |  | COAX CENTER WIRE | COAX | J6 - CENTER | SYSTEM CONNECTOR ON THE FRONT PANEL | SYSTEM      |
| J3 - SHIELD                             | SOLDER THE SHIELD TO THE GND LUG OF J3 | COAX SHIELD      | COAX | GND         | GND                                 | GND         |
| J3 - GND LUG                            |  | BLK              | 20   | GND BUS BAR | GND BUS BAR ON THE REAR PANEL       | GND         |

| J4 - SLIP RING CONNECTOR ON THE REAR PANEL |       |                  |      |             |                                    |             |
|--|-------|------------------|------|-------------|------------------------------------|-------------|
| FROM                                       |       |                  |      | TO          |                                    | SIGNAL NAME |
| J4 - A                                     | (REF) | COAX CENTER WIRE | COAX | S1 - AW     | KEY LOCK SWITCH ON THE FRONT PANEL | LINE 1      |
| J4 - A                                     | (REF) | COAX CENTER WIRE | COAX | J1 - CENTER | LINE 1 CONNECTOR ON THE REAR PANEL | LINE 1      |
| J4 - C                                     | (REF) | COAX CENTER WIRE | COAX | J2 - CENTER | LINE 1 CONNECTOR ON THE REAR PANEL | LINE 2      |
| J4 - C                                     | (REF) | COAX CENTER WIRE | COAX | J2 - CENTER | LINE 1 CONNECTOR ON THE REAR PANEL | LINE 2      |
| J4 - B                                     |       | BLK              | 20   | GND BUS BAR | GND BUS BAR ON THE REAR PANEL      | GND         |
| J4 - D                                     |       | BLK              | 20   | GND BUS BAR | GND BUS BAR ON THE REAR PANEL      | GND         |

| J5 - LINE CONNECTOR ON THE FRONT PANEL |                          |                  |      |             |  |             |
|--|--------------------------|------------------|------|-------------|--|-------------|
| FROM                                   |                          |                  |      | TO          |  | SIGNAL NAME |
| J5 - CENTER                            | (REF)                    | COAX CENTER WIRE | COAX | S2 - 1      | TOGGLE MOMENTARY SWITCH ON THE FRONT PANEL | LINE        |
| J5 - SHIELD                            | CONNECT THE SHIELD TO J5 | BLK              | 20   | GND         | GND LUG                                    | GND         |
| J5 - GND LUG                           |                          | BLK              | 20   | BUS BAR GND | GND BUS BAR ON THE REAR PANEL              | GND         |

## 6.0 WIRE LIST continued

| J6 - SYSTEM CONNECTOR ON THE FRONT PANEL |  |                  |      |             |                                    |             |
|--|--|------------------|------|-------------|------------------------------------|-------------|
| FROM                                     |  |                  |      | TO          |                                    | SIGNAL NAME |
| J6 - CENTER                              | (REF)                                  | COAX CENTER WIRE | COAX | J3 - CENTER | SYSTEM CONNECTOR ON THE REAR PANEL | SYSTEM      |
| J6 - SHIELD                              | SOLDER THE SHIELD TO THE GND LUG OF J6 | COAX SHIELD      | COAX | GND         | GND LUG                            | GND         |
| J6 - GND LUG                             |  | BLK              | 20   | GND BUS BAR | GND BUS BAR                        | GND         |