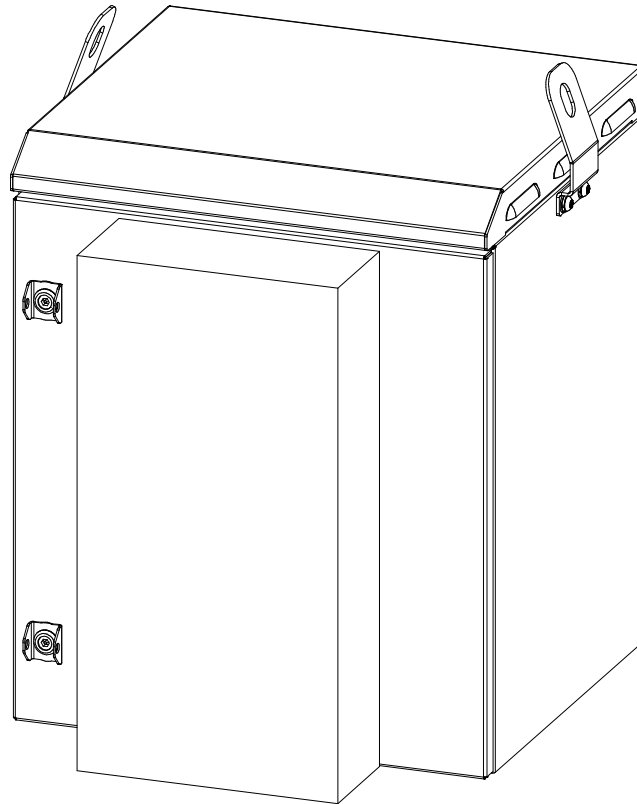


Technical Specifications



ThermalPro 60 Outdoor Equipment Cabinet

P/N 10600-5U-18-010
Publication B10600-5U-18-010-DOC
Issue A



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Releases to this Technical Documentation

Issue Level	Date	Description of Revision
A	12/12/07	Initial release

USING THIS TECHNICAL PRACTICE

This publication provides a description of the SPC TelEquip's model 10600-5U-18-010 ThermalPro Outdoor Cabinet. Typical applications, mechanical descriptions, installation instructions, safety guidelines, grounding instructions, and wiring diagrams are included.

Two types of messages appear throughout this manual, identified by the following icons:



Note - indicates special conditions.



Caution - indicates possibility of personal injury or equipment damage.

INSPECTING SHIPMENT

On receipt of the equipment:

- Inspect the shipping container(s) and note any signs of damage. Then unpack the container(s) and carefully inspect for damage to the contents. If the equipment has been damaged in transit, immediately report the extent of damage to the transportation company and to SPC TelEquip. Order replacement equipment, if necessary.
- Check the packing list to ensure complete and accurate shipment of all listed items. If the shipment is short or irregular, contact SPC TelEquip as described in the Warranty (Appendix D, Terms and Conditions). If the equipment must be stored for a prolonged period, do so in the equipment's original container. If equipment ever needs to be returned, please use the original packaging if available.

PUBLICATION

This practice provides specifications and installation instructions for the ThermalPro Model 60 Outdoor Cabinet (part no. 10600-5U-18-010).

PRODUCT OVERVIEW

The ThermalPro cabinet model 5U-18 is a pole or wall mounted outdoor telecommunications equipment cabinet. The cabinet has overall dimensions of 26 inches high x 19 inches deep x 22 inches wide. See the figures on the following pages for details.

The cabinet is constructed of aluminum with a powder coat painted finish for reduced weight and superior corrosion resistance. The front door is equipped with two quarter turn padlockable door latches. The top of the cabinet has a double wall construction to reduce the effects of solar radiation and for structural integrity.

Cooling is provided by an 11 W/F, 48VDC Heat Exchanger. The heat exchanger is mounted on the front door of the cabinet.

The left front of the equipment-mounting bay has 6U (10.5 inches) of 19" rack space provided for mounting to customer's equipment. One protection connect swing out 19" racks is provided on the right side of the equipment bay for mounting up to four 50 pair protection connect assemblies (200 pair capacity). The swing out rack has 4U of 19" rack space.

Cable entry and exit from the cabinet passes through two sealing boots located in the bottom rear of the equipment bay. The master grounding bus bar is located on the right side of rear. Two 10 GMT fuse distribution panel are mounted on the rear wall.

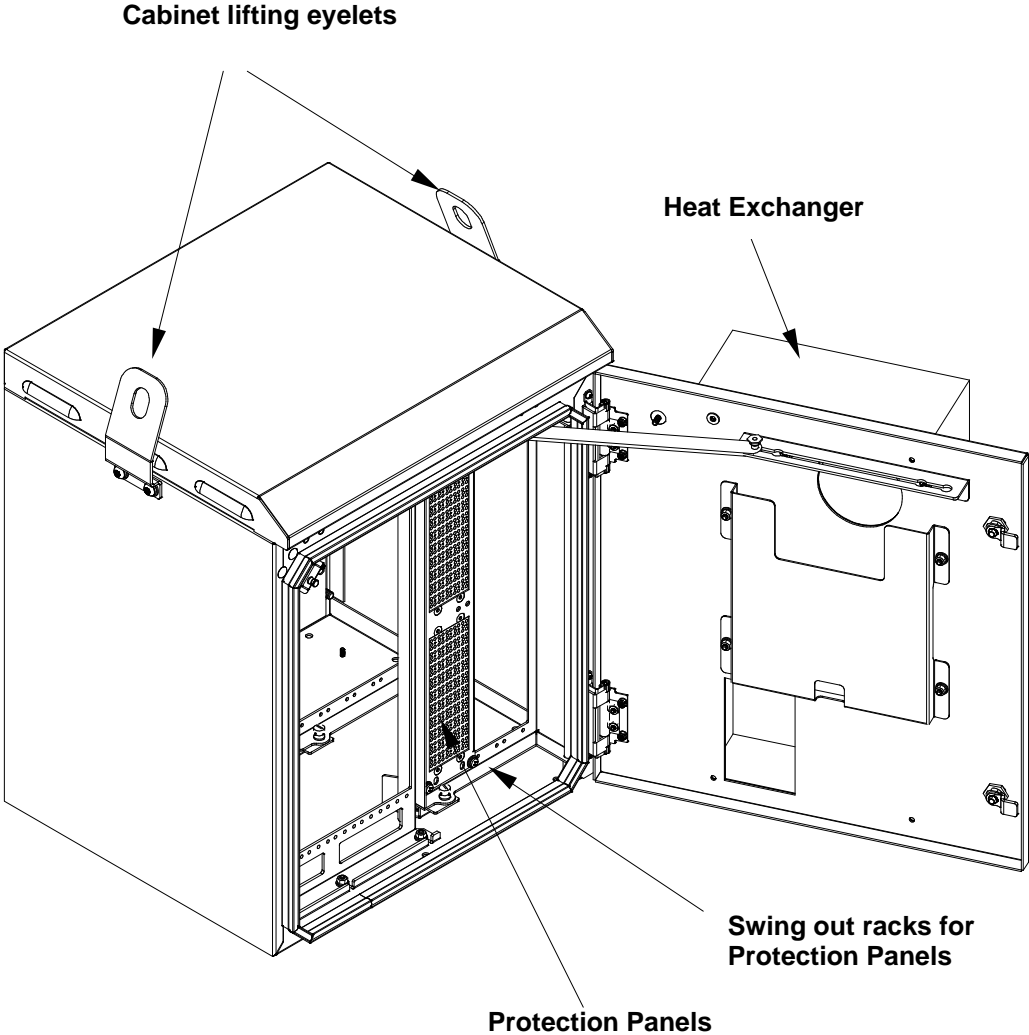
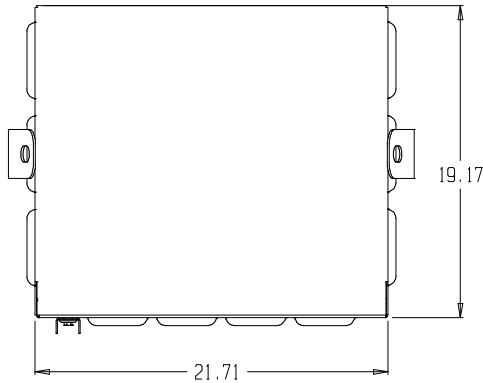


Figure A - Front views of cabinet with door open

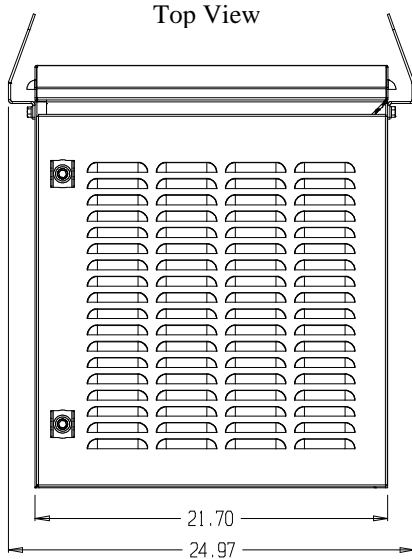
PRODUCT SPECIFICATIONS

10600-5U-18-010 – cabinet outer physical dimensions:

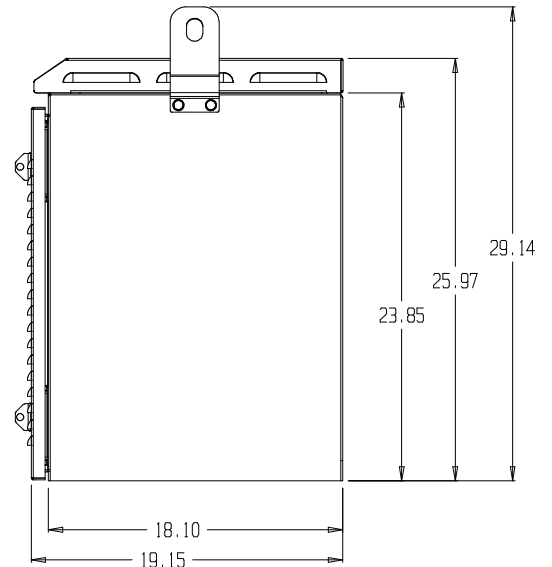
Height	–	26 inches
Width	–	22 inches
Depth	–	19 inches (internal)
Approx. Weight	–	80 pounds



Top View



Front View



Side View

Figure B – Cabinet overall dimensions

QUARTER TURN LOCKING DOOR LATCHES

The cabinet door is equipped with two quarter turn padlockable latches. The latches are secured by turning the 7/16" hex security bolt one quarter turn clockwise until the stop is reached. Convenient security locking hasps are factory installed to allow for a #1 Master lock (or equivalent) to be installed. With a padlock on the latch the electronics ThermalPro door cannot be opened, deterring vandalism.

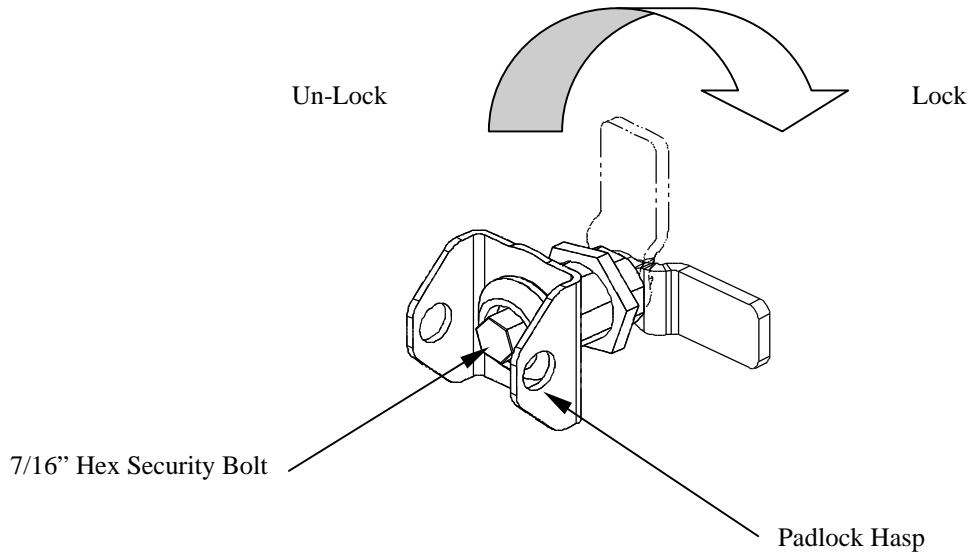


Figure C – Quarter turn locking door latches

INSTALLATION PROCEDURE

The 10600-5U-18-010 Series cabinet can be mounted on a pole or wall. See figures below.



Lifting eyelets are provided to facilitate hoisting if desired.



During cabinet mounting, fixture the cabinet securely to avoid personal injury or cabinet damage.

CLEARANCE REQUIREMENTS

When selecting a location to mount the cabinet, ensure that proper clearance is available to allow adequate ventilation and to allow the cabinet door to open fully. **See figure E below for top view of Cabinet footprint.**

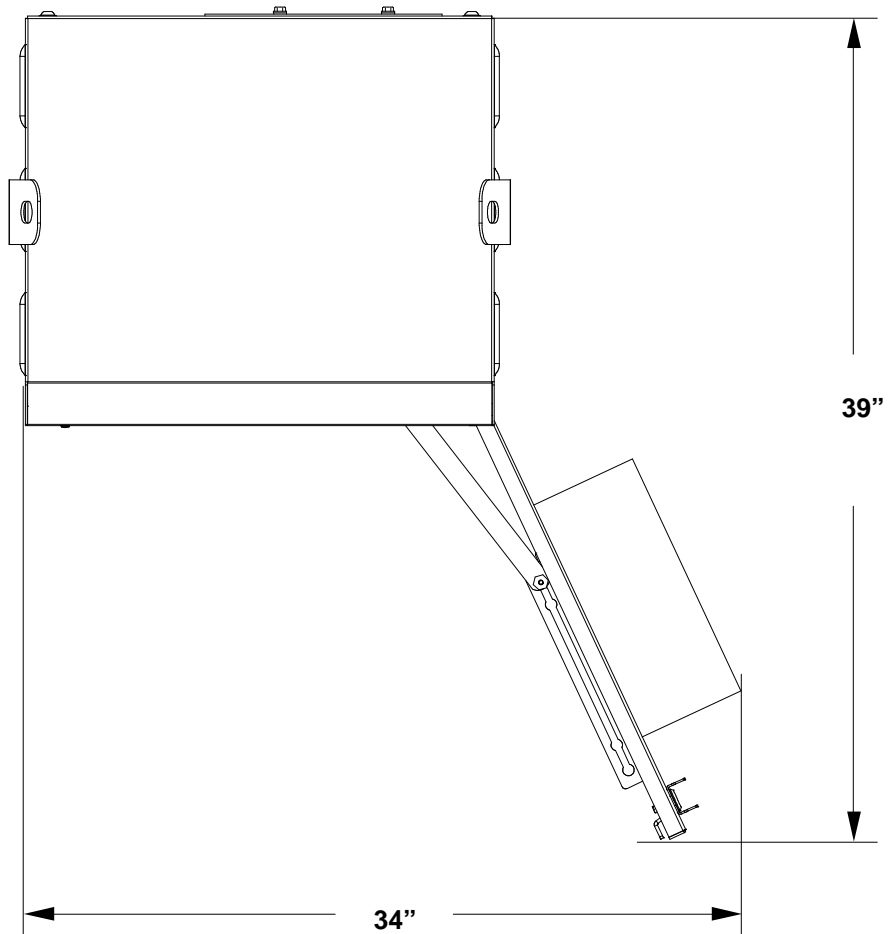
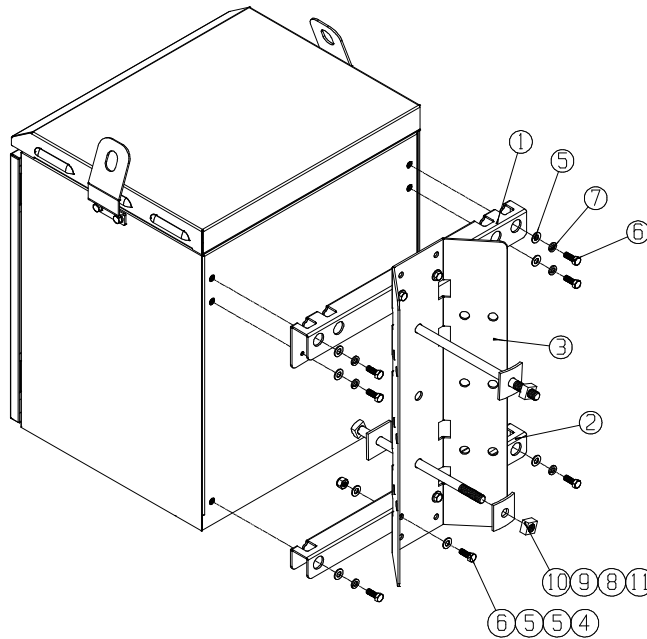


Figure D - Cabinet Footprint

INSTALLATION PROCEDURE FOR POLE MOUNTING(Optional)

Use this procedure to mount the cabinet on a 6 to 8 inch diameter pole. See Figure below for a cabinet mounting illustration.



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	S10600-053	Bracket, Upper Pole Mount, TP60
2	1	S10600-054	Bracket, Lower Pole Mount, TP60
3	1	S10600-055	Bracket, Vertical Pole Mount, TP60
4	4	H38CPSLNNIZ	Nut, Nylon Top Lock 3/8"
5	14	H38NSSFW	Washer, 3/8" Stainless Steel, SAE, Flat
6	10	H38C100SSMSHH	Screw, 3/8-16 x 1", Stainless Steel, Cap
7	6	H38NPSLWZ	Washer, Split Lock, 3/8 ZP
8	2	H63C1600PSSHGV	Bolt, Square Head, 5/8-11 x 16 & Nut, Galvanized
9	2	H63NPSCWGV	Washer, Curved, 2 1/4 x 2 1/4 x 3/16, 5/8, Galvanized
10	2	H63NUT	Nut, 5/8, Galvanized (Included with Bolt)
11	2	H63NPSSWGV	Washer, Square, 2 1/4 x 2 1/4 x 3/16, 5/8, Galvanized

Have the following equipment ready before beginning this procedure:

- One drill
- One 3/4" x 12" drill bit
- One 9/16" wrench or socket
- Two 15/16" wrenches or sockets
- A pencil
- Optional pole mounting kit

Figure E - Pole Mounting Diagram

See Figure G on the previous page for a cabinet mounting illustration.

1. Pre-assemble the upper and lower horizontal brackets to the vertical bracket as shown in the above Figure.
2. Select a convenient mounting location on the pole.
3. Position the mounting bracket assembly against the pole and mark on the pole the location of the two (2) 5/8" bolts (item 8).
4. Place the mounting bracket assembly out of the way.
5. Drill two (2) 3/4" (19.05 mm) diameter holes completely through the pole at the locations marked in step 2.
6. Insert machine bolt (item 8) through mounting bracket and into the top mounting hole and press bolt and bracket flush against the pole.
7. Place round-cupped washer (item 9), with the concave side in, on bolt and finger tighten nut.
8. Repeat step 6 for remaining bolt.
9. Secure the mounting bracket assembly to the pole by securely tightening the machine bolts to 40 ft-lbs for wooden posts and 100 ft-lbs for metal posts.
10. Using proper lifting and safety equipment, place cabinet on mounting bracket assembly using supplied 3/8" hardware and tighten to 45 ft lbs. Lifting eyelets are provided on the cabinet for hoisting it in place.
11. If the cable stubs connect to an underground cable, dress the cable down the pole. If the cable stubs connect to an aerial cable, form a drip loop in the cable and dress it up the pole to the splice case.



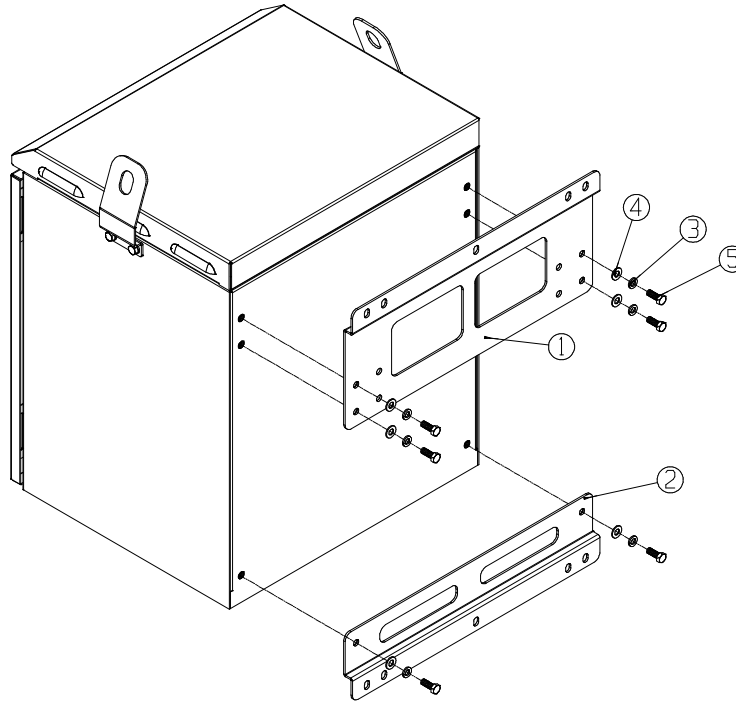
For mounting heights less than 7' above grade, excess bolt length may need to cut off in order to prevent a hazardous protrusion.



Lifting eyelets are provided to facilitate hoisting if desired.

INSTALLATION PROCEDURE FOR WALL MOUNTING(Optional)

Use this procedure to mount the cabinet on a flat surface wall. See Figure below for a cabinet mounting illustration.



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	S10600-033	BRACKET, WALL MOUNT, UPPER
2	1	S10600-034	BRACKET, WALL MOUNT, LOWER
3	6	H38NSSFW	Washer, 3/8" Stainless Steel, SAE, Flat
4	6	H38NPSLWZ	Washer, Split Lock, 3/8 ZP
5	6	H38C100SSMSHH	Screw, 3/8-16 x 1", Stainless Steel, Cap

Have the following equipment ready before beginning this procedure:

- One drill
- One 3/8" drill bit
- One 9/16" wrench or socket
- A pencil
- Optional wall mounting kit

Figure F - Wall Mounting Diagram

See Figure on the previous page for a cabinet wall mounting illustration.

1. Pre-assemble the upper and lower wall mounting brackets to the cabinet as shown above.
2. Position the cabinet with mounting brackets against the wall and mark on the location of the mounting holes on the wall.
3. Drill six (6) 3/8" diameter holes completely through the wall at the locations marked in step 2.
4. Lift the cabinet with mounting brackets into position against the wall.
5. Insert 5/16" diameter bolts through the upper mounting bracket.
6. Secure the cabinet to the wall by installing 5/16" flat washers, lock washers and nuts to the bolts inserted in step 5.
7. Repeat steps 5 and 6 for the lower mounting bracket.



Lifting eyelets are provided to facilitate hoisting if desired.

CABINET GROUNDING INFORMATION

Bonding and grounding should be done in accordance with the operating telephone company's standard procedures and comply with local electrical codes.

GROUND WIRE

The ground wire protects the electronics from voltage surges. A #6 ground wire must be properly grounded to provide lightning surge protection for the cabinet. Please follow this practice for attaching the ground unless local policies dictate otherwise.

For safety and performance reasons it is imperative that a cabinet be properly grounded. The following guidelines should be used to ground the cabinet unless local practices, rules, or regulations dictate otherwise.

Each door and equipment rack is grounded to the cabinet frame. The cabinet frame is connected to the internal grounding bus by a stranded wire. A similar ground wire must be used to connect the ground bus to each equipment ground lug. These ground wires may need to be removed temporarily to troubleshoot ground faults. The wire may be removed by unscrewing the screws that secure the green wire to the ground bus. **Be sure to reattach these wires after troubleshooting and resolving any ground conflicts.**

Be sure to ground the cabinet before connecting power to the cabinet. This grounding must be in effect at all times to safeguard personnel.

GROUNDING DIAGRAM AND PROCEDURE

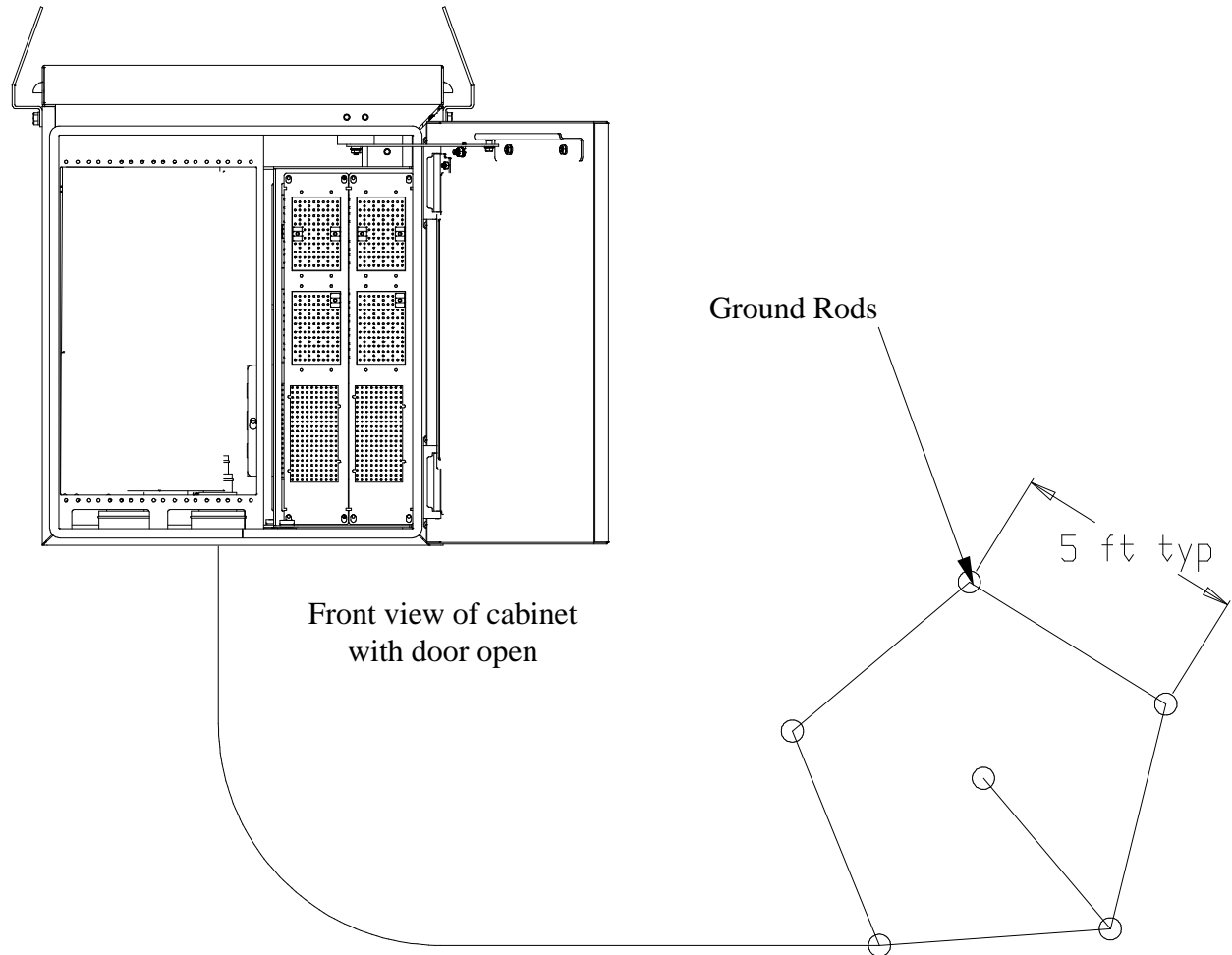


Figure G - Grounding Diagram

To ground the cabinet, see Figure above.

1. Drive the ground rods into the ground near the cabinet location.
2. Use a Megger-type ohmmeter to measure the resistance between cabinet ground and the ground rod. The resistance must be 25 ohms or less.
3. If the ohm requirement in step 2 is met proceed to step 4. Otherwise, follow local practices to lower the resistance to ground to comply with step 3 before proceeding to step 4.
4. Connect a #6 ground wire to the ground rod.

SCHEMATIC WIRING DIAGRAMS

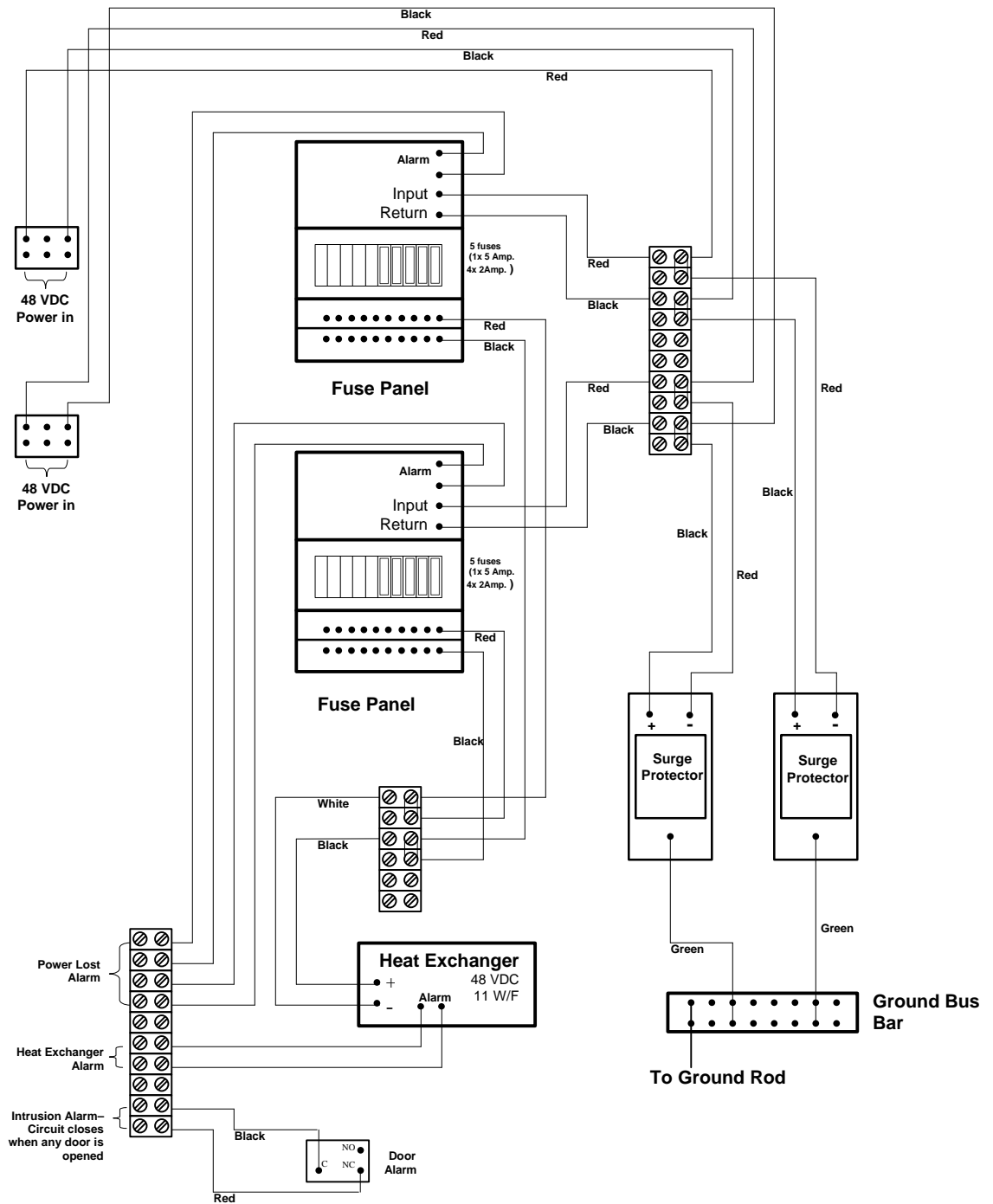


Figure H – Schematic Wiring Diagram

APPENDIX A

PRODUCT SUPPORT

This section contains information for product support contact and ordering/repair/replacement information and instructions.

TECHNICAL SUPPORT

Technical assistance is available 9 AM to 4 PM Central Time.
Contact SPC TelEquip at:

Telephone	877-491-8088 (toll free)
Fax	913-491-8444

When calling, please have available, or if faxing, be sure to provide:

- The product's Serial Number
- Date of Purchase
- Date of Installation

ORDERING PROCEDURE

You may place orders by telephone, fax, or mail:

Telephone:	877-491-8088 (Toll Free)
Fax:	913-491-8444
Mail:	SPC TelEquip 8540 Hedge Lane Terrace Shawnee, KS 66227

When placing an order, please provide the following information:

- Customer purchase order number
- Ship-to and bill-to addresses
- Part numbers and quantities required
- Requested delivery date
- Preferred method of shipment

APPENDIX B

RETURN FOR REPAIR POLICY and PROCEDURE

CORPORATE POLICY

SPC TelEquip warrants this product to be free of defects and to be fully functional for a warranty period beginning from the date of original shipment, given correct customer installation and regular maintenance. SPC TelEquip will repair or replace any unit without cost during its warranty period if the unit is found to be defective for any other reason other than abuse or incorrect use or incorrect installation.



Do not try to repair the unit. If it fails, replace it with another unit and return the faulty unit to SPC TelEquip for repair. Any modification of the unit by anyone other than an authorized SPC TelEquip representative voids the warranty.

RMA PROCEDURE

If a unit needs repair, call SPC TelEquip at 877-491-8088 (toll free) for an RMA Number and return the defective unit, freight prepaid to:

SPC TelEquip
Shipping & Receiving
8540 Hedge Lane Terrace
Shawnee, KS 66227
Attn: Repair Dept.

When preparing the unit for shipment:

- Use the original packaging
- Provide the following information (required):
- The RMA Number posted on outside of shipping container



(SPC TelEquip will not accept return shipments without an RMA)

- A statement inside the shipping container with the following details:
- The RMA Number
- Description and quantities of equipment being returned
- Brief description of the problem
- Your billing address
- Your shipping address

You will be notified of the reparability of your returned equipment within 2 weeks of receipt of your shipment at the address above.

SPC TelEquip will provide needed equipment repair beyond the warranty period for a nominal charge. Contact your SPC TelEquip sales representative for details and pricing.

APPENDIX C

SPC STANDARD TERMS AND CONDITIONS

ALL QUOTATIONS AND SALES ARE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS AS WELL AS THOSE CONTAINED ON THE ORIGINAL QUOTATION.

1. PAYMENT TERMS: Standard Payment Terms are **Net amount of invoice in full within 30-days** of date of invoice. Net plus 1 1/2% interest will be added per month after 30-days. SPC TelEquip invoice payments should be sent to SPC TelEquip, PO Box 876890, Kansas City MO 64187-6890.

2. SHIPMENT: All prices are list plus freight, prepaid and billed, from the SPC TelEquip factory located at 8540 Hedge Lane Terrace, Shawnee, KS 66227. Method and route of shipment are at the discretion of SPC TelEquip, unless the BUYER supplies explicit instructions. Some instances may require shipment of goods from another manufacturing location, freight, prepaid and billed. All shipments are via ground unless otherwise requested. All shipping costs are the responsibility of the BUYER.

3. TAXES. The amount of the present or future sales, revenue, excise, or other taxes applicable to the products listed herein shall be added to the purchase price and shall be paid by the BUYER, or in lieu thereof the BUYER shall provide SPC TelEquip with a tax exemption certificate acceptable to the taxing authorities.

4. QUOTATIONS AND PRICES: Quotations are good only for the period stated on the quote. Prices are subject to change without notice or as otherwise agreed to in writing by SPC TelEquip. All prices are F.O.B. SPC TelEquip's warehousing facilities.

5. CANCELLATION: A cancellation charge equal to 25% of sale price will be charged in order to cover liabilities and restocking expenses. Charges for Custom made products will be prorated and billed based on the actual expenses incurred at the time of the cancellation.

6. CLAIMS. Claims for defective merchandise, shortages, delays, or failures in shipment or delivery or for any other delays, or failures in shipment or delivery or for any other cause, shall be deemed waived and released by the BUYER, unless made in writing within ten days after arrival of the merchandise. THE SELLER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES AS TO THE MERCHANTABILITY OR AS PURPOSE, AND SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF SUCH MERCHANDISE OR FOR CONSEQUENTIAL DAMAGES. It is the responsibility of the BUYER to thoroughly inspect the shipment as soon as received. If any of the merchandise called for on the packing slip is damaged or quantities are short, DO NOT ACCEPT UNTIL THE CARRIER AGENT MAKES A DAMAGED NOTATION ON YOUR FREIGHT BILL OR EXPRESS RECEIPT. If any concealed loss or damage is discovered, the buyer must NOTIFY THE DELIVERY SERVICE AGENT AT ONCE to request an inspection. Unless this action is taken, the transportation company WILL NOT ENTERTAIN ANY CLAIMS FOR LOSS OR DAMAGE.

7. STANDARD WARRANTY. SPC TelEquip warrants that the goods to be supplied hereunder will conform to the description of the face hereof. SPC TelEquip will convey good title thereto; and that such goods will be delivered free from any lawful security interest or other lien or encumbrance unknown to CUSTOMER. Such goods will be free from defects in material and workmanship, for a period of twelve months from the date stamp on equipment or the original invoice date. The BUYER must give SPC TelEquip notice of any such defect within thirty days after the discovery of such defect. SPC TelEquip warranty applies to only those products manufactured by SPC TelEquip. All warranty related remedies are available F.O.B. SPC TelEquip's Service Center. Other product warranties outside this realm will be honored by the warranty terms of the product manufacturer. SPC TelEquip MAKES NO WARRANTY THAT THE GOODS SHALL BE MERCHANTABILITY OR FIT FOR ANY PARTICULAR PURPOSE. SPC TelEquip MAKES NO WARRANTY, EXPRESSED OR IMPLIED, EXCEPT SUCH AS IS EXPRESSLY SET FORTH HERE.

8. CABINET WARRANTY. Any third party products installed within the SPC manufactured cabinets are covered under the original equipment manufacturer's warranties. This applies typically to products, such as batteries, heat exchangers, air conditioners, etc. This warranty will not extend to any product that has been misused, modified from its original design, improperly installed, improperly transported, improperly repaired or abused in any way. This warranty contains buyer's sole and exclusive remedies and is in lieu of all other remedies, whether in law or equity. All warranties of merchantability and fitness for a particular purpose hereby are expressly disclaimed. Except as stated above, SPC makes no other warranty expressed or implied.

9. REPAIR AND RETURN. SPC TelEquip shall not be liable for any incidental or consequential damage for any breach of warranty. SPC TelEquip's liability and CUSTOMER'S exclusive remedy being expressly limited to SPC TelEquip choice of (A) the repair of defective goods, or (B) the replacement thereof with conforming goods at the point of manufacturing, or (C) the repayment of the purchase price. Repair or Replacement of defective goods or repayment of the purchase price therefore will be made only upon request, and after a return material authorization, (RMA) number is issued by SPC TelEquip. An RMA number may be received by contacting SPC TelEquip (877) 491-8088. All cartons must be marked with the Return Material Authorization number and freight prepaid or the shipment will be refused. SPC TelEquip will pay return freight (regular UPS) on product under warranty and reimburse owner their prepaid freight charges not to exceed the amount of regular UPS charges. The CUSTOMER is responsible for freight on out-of-warranty products, Out-of-warranty repair charges of material, and labor not to exceed current list price of product. If SPC TelEquip determines product is beyond repair, customer will be contacted and unit returned if customer requests.

10. DELIVERIES: Deliveries shall be subject to, and contingent upon, strikes, labor difficulties, riot, civil unrest, war, fire, delay or defaults of common carriers, failure or curtailment in the SELLERS usual sources of supply, governmental decrees, reasonable control, and the SELLER shall not be liable for any loss or damage arising therefrom. The SELLER shall have the additional right, at its option, to cancel this contract or any part thereof without any resulting liability. Shipments made within 20 days after specified date of delivery shall constitute a good delivery. Any delivery not in dispute shall be paid for regardless of other controversies relating to other delivered merchandise.

11. PATENTS. The BUYER shall hold the SELLER harmless from, and released and not make claim or suit against the SELLER because of any suits, claims, losses, or other liability made against, or suffered by, the BUYER arising from any claim of, infringement of, patent, copyright, trademark, or other proprietary right, at common-law, or claims of unfair trade or of unfair competition, resulting from, or occasioned by, the BUYER'S use, possession, sale, or delivery of the merchandise sold to the BUYER by the SELLER.

12. SELLERS RIGHT OF POSSESSION. The SELLER shall have the right, in addition to all others it may possess, at any time, for credit reasons or because of the BUYER default or defaults, to withhold shipments, in whole or in part, and to recall goods in transit, retake same and repossess all goods which may be stored with SELLER for the BUYER'S account, without the necessity of taking any other proceedings, and the BUYER consents that all the merchandise so recalled, retaken, or repossessed shall become the absolute property of the SELLER, provided that the BUYER is given full credit therefore. The foregoing shall not be construed as limiting, in any manner, any of the rights or remedies available to the SELLER because of any default of the BUYER under the Uniform Commercial Code.

13. PURCHASE ORDER. If the quotation is accepted and the BUYERS order form is used for the purpose, it is expressly understood and agreed that the terms and conditions herein set forth shall prevail insofar as the same may in any way conflict with the terms and conditions set forth in such order form, and the issuance of such order by the BUYER shall be deemed to note the BUYER'S assent to the foregoing.

NOTE: *This offering is not a contract; all orders are subject to acceptance by SPC TelEquip at its principal office in Shawnee, Kansas*



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