



**GAI-TRONICS®**  
A HUBBELL COMPANY

# Model 13118-009

## Modular TVP Barrier Assembly

### Confidentiality Notice

This manual is provided solely as an operational, installation, and maintenance guide and contains sensitive business and technical information that is confidential and proprietary to GAI-Tronics. GAI-Tronics retains all intellectual property and other rights in or to the information contained herein, and such information may only be used in connection with the operation of your GAI-Tronics product or system. This manual may not be disclosed in any form, in whole or in part, directly or indirectly, to any third party.

### General Information

Electrical and electronic systems and networks are subjected to disturbances from external sources of electrical energy. These sources include electric power circuits and natural phenomena, such as lightning and low energy static influences. Such disturbances may damage equipment and/or create hazards to users and maintenance personnel.

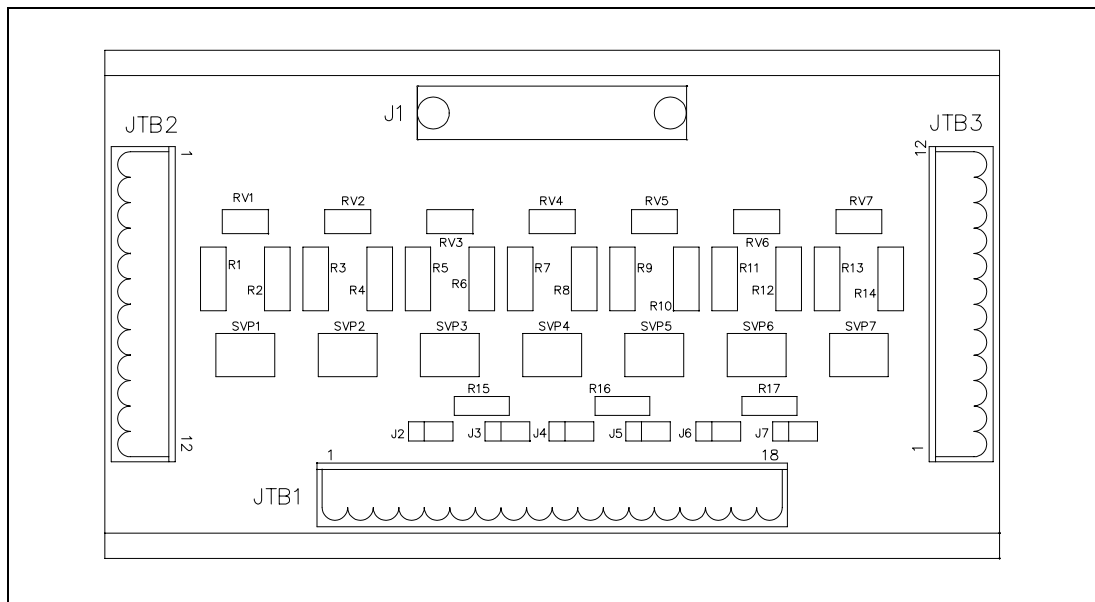


Figure 1. Model 13118-009 TVP Barrier Assembly

## How to Use the Assembly/Model

### Applications

The Model 13118-009 Transient Voltage Protection (TVP) Barrier Assembly is designed to prevent energy induced on the Page/Party® system cable from damaging the Page/Party® Interface printed circuit

board assembly (PCBA). This assembly also allows party lines 3, 4 or 5 of the local zone to either connect with, or be isolated from, stations in other zones on the selected party line without the need for additional line balancing.

## Connections

Table 1. Modular Terminal Block 1 (JTB1) Field Wiring

Pin No.	Function	Remarks
1	Page Line – L1	The red/blue wire of the page pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
2	Page Line – L2	The blue/red wire of the page pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
3	Party Line 1 – L1	The red wire of the party line #1 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
4	Party Line 1 – L2	The tan/red wire of the party line #1 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
5	Party Line 2 – L1	The purple wire of the party line #2 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
6	Party Line 2 – L2	The tan/purple wire of the party line #2 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
7	Party Line 3 – L1	The blue wire of the party line #3 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
8	Party Line 3 – L2	The tan/blue wire of the party line #3 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
9	Party Line 4 – L1	The brown wire of the party line #4 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
10	Party Line 4 – L2	The tan/brown wire of the party line #4 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
11	Party Line 5 – L1	The yellow wire of the party line #4 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
12	Party Line 5 – L2	The tan/yellow wire of the party line #4 pair contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block.
13	Relay+	No field connection (for internal use only)
14	Relay–	No field connection (for internal use only)
15	CLS+	The spare orange wire contained within the Page/Party <sup>®</sup> cable is attached to this position of the terminal block when All-Call control is referenced to ground at field stations.
16	CLS–	This terminal is used with CLS+ when dry contact All-Call control is employed at field stations via a separate pair of wires.
17	EGND	Earth ground
18	EGND	Earth ground

**NOTE:** Terminal blocks JTB2 and JTB3 are for internal cabinet wiring only. Do not connect any field cables to either of these terminal blocks.

# Installation



**Safety Note:** If GAI-Tronics Page/Party<sup>®</sup> cable is used, ensure the ac power conductors are disconnected from any power source during the installation.

1. Snap the Modular TVP Barrier assembly onto one of the vertical DIN mounting rails located in the rear of the cabinet.
2. Connect the appropriate Page/Party<sup>®</sup> cable to modular terminal block JTB1 per Table 1 using the mating plug provided.
3. Attach the appropriate ribbon cable to the DB-25 connector (J1).
4. Attach a ground wire to JTB1-17 or JTB1-18.
5. If this module is replacing a damaged module, re-connect (plug-in) any pre-wired harnesses to/from other modules at JTB2 and JTB3.
6. Check and/or set positioning of the party line jumper clips J2 through J7 per the following table:

Table 2.

Jumper Clip Pair	Party Line	Position 1	Position 2
J2/J3	3	Connected	Isolated
J4/J5	4	Connected	Isolated
J6/J7	5	Connected	Isolated

**\*NOTE:** All jumper clips are factory set to position 1. Setting any jumper clip pair to the “Isolated” position automatically applies 33-ohm line balancing to the designated line.

## Operation

None.

## Software Configuration

None.

# Specifications

## Electrical

Differential input signal voltages ..... 0–20 volts peak

Protected side load resistance ..... 33 ohms (minimum)

## Withstand Transients

Signal line ..... UL864 Par38

## Mechanical

Dimensions ..... 5.75 H × 7.00 W inches

## Environmental

Temperature range ..... –30° C to +70° C

Humidity ..... 95% non-condensing relative humidity

## Replacement Parts

None.

# Reference Material

## Reference to Assembly/Model Drawings

Published by	Title	GAI-Tronics Ref. No.
GAI-Tronics	13118-009 Modular TVP Barrier Assembly Drawing	13118-009

# Warranty

---

Equipment. GAI-Tronics warrants for a period of one (1) year from the date of shipment, that any GAI-Tronics equipment supplied hereunder shall be free of defects in material and workmanship, shall comply with the then-current product specifications and product literature, and if applicable, shall be fit for the purpose specified in the agreed-upon quotation or proposal document. If (a) Seller's goods prove to be defective in workmanship and/or material under normal and proper usage, or unfit for the purpose specified and agreed upon, and (b) Buyer's claim is made within the warranty period set forth above, Buyer may return such goods to GAI-Tronics' nearest depot repair facility, freight prepaid, at which time they will be repaired or replaced, at Seller's option, without charge to Buyer. Repair or replacement shall be Buyer's sole and exclusive remedy. The warranty period on any repaired or replacement equipment shall be the greater of the ninety (90) day repair warranty or one (1) year from the date the original equipment was shipped. In no event shall GAI-Tronics warranty obligations with respect to equipment exceed 100% of the total cost of the equipment supplied hereunder. Buyer may also be entitled to the manufacturer's warranty on any third-party goods supplied by GAI-Tronics hereunder. The applicability of any such third-party warranty will be determined by GAI-Tronics.

Services. Any services GAI-Tronics provides hereunder, whether directly or through subcontractors, shall be performed in accordance with the standard of care with which such services are normally provided in the industry. If the services fail to meet the applicable industry standard, GAI-Tronics will re-perform such services at no cost to buyer to correct said deficiency to Company's satisfaction provided any and all issues are identified prior to the demobilization of the Contractor's personnel from the work site. Re-performance of services shall be Buyer's sole and exclusive remedy, and in no event shall GAI-Tronics warranty obligations with respect to services exceed 100% of the total cost of the services provided hereunder.

Warranty Periods. Every claim by Buyer alleging a defect in the goods and/or services provided hereunder shall be deemed waived unless such claim is made in writing within the applicable warranty periods as set forth above. Provided, however, that if the defect complained of is latent and not discoverable within the above warranty periods, every claim arising on account of such latent defect shall be deemed waived unless it is made in writing within a reasonable time after such latent defect is or should have been discovered by Buyer.

Limitations / Exclusions. The warranties herein shall not apply to, and GAI-Tronics shall not be responsible for, any damage to the goods or failure of the services supplied hereunder, to the extent caused by Buyer's neglect, failure to follow operational and maintenance procedures provided with the equipment, or the use of technicians not specifically authorized by GAI-Tronics to maintain or service the equipment. **THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES AND REMEDIES, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

## Return Policy

---

If the equipment requires service, contact your Regional Service Center for a return authorization number (RA#). Equipment should be shipped prepaid to GAI-Tronics with a return authorization number and a purchase order number. If the equipment is under warranty, repairs or a replacement will be made in accordance with the warranty policy set forth above. Please include a written explanation of all defects to assist our technicians in their troubleshooting efforts.

Call 800-492-1212 (inside the USA) or 610-777-1374 (outside the USA) for help identifying the Regional Service Center closest to you.