



INSTRUCTION

SURGE SUPPRESSION PANELS

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The equipment covered in this manual has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

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SURGE PANELS

80026-XX SURGE PANELS

Safetran manufactures a number of surge suppression panels for both general and specific applications. Primary among these is the 80026 surge panel which is available in a variety of configurations to meet specific customer requirements. Each panel is equipped with the appropriate combination of equalizers and arresters to provide the necessary protection for battery and/or track circuits. Refer to table 1-1 for specific 80026 surge panel applications. For additional surge protection requirements and/or custom designed surge panels, contact Safetran Technical Support at 1-800-793-7233.

**Table 1-1
80026-XX Surge Panel Applications**

Surge Panel Part Number	Type/Number Of Circuits Protected	Mounting Style	Notes	Reference Figure
80026-01	Battery, 1; Track, 1	Wall		1-1
80026-02	Track, 1	Wall	Use with -01 panel for second track	1-1
80026-22	Track, 1	Wall	Use for six-wire applications	1-1
80026-31	Battery, 1; Track, 1	Wall or Rack		1-2
80026-32	Battery, 1; Track, 1	Wall or Rack	Use with -31 panel for second track and second battery	1-2
80026-33	Battery, 1	Wall or Rack	Used with -31 panel for second track	1-3
80026-34	Track, 1	Wall or Rack	Used with -31 panel for second track	1-3
80026-35	Track, 2	Wall or Rack		1-4
80026-36	Track, 1	Wall or Rack	Used with -31 panel for second track. Used with six-wire applications for transmit, receive, and check receive lead protection	1-4
80026-37, -37A	Battery, 1	Wall or Rack		1-5
80026-38	Track, 2	Wall or Rack	Used with -37 panel. Used in applications with six wires on one track and four on the other	1-6
80026-39	Battery, 4; Battery input/output line protection for two DAX or two UAX circuits	Wall or Rack	Normally used with second battery when line circuit protection is required	1-6
80026-41	110 VAC (Includes four 15-ampere resettable circuit breakers and one 15-ampere GFCI duplex output)	Wall or Rack	Used primarily when 20-ampere solid-state crossing controller (91070A) is used in conjunction with 3000 GCP	1-7
80026-41A	110 VAC (Includes three 15-ampere and one 25-ampere resettable circuit breakers and one 15-ampere GFCI duplex outlet)	Wall or Rack	Used primarily when 40-ampere solid-state crossing controller (91075A) is used in conjunction with 3000 GCP	1-7
80026-47	Battery, 1; Track, 1	Wall or Rack	Special application	1-8
80026-50	Input/output circuits, 4	Wall or Rack	Generally used for UAX input or DAX output	1-8

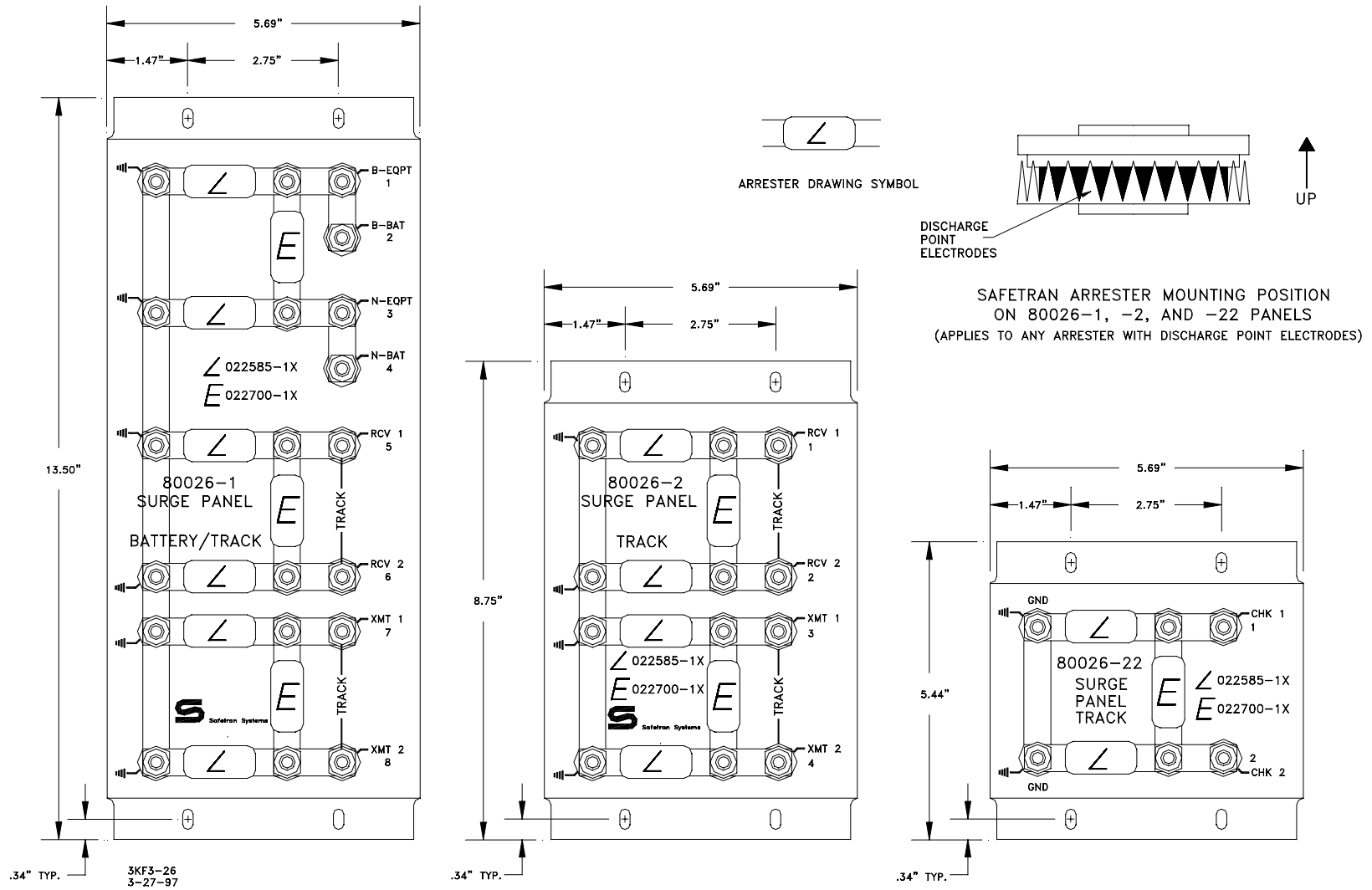
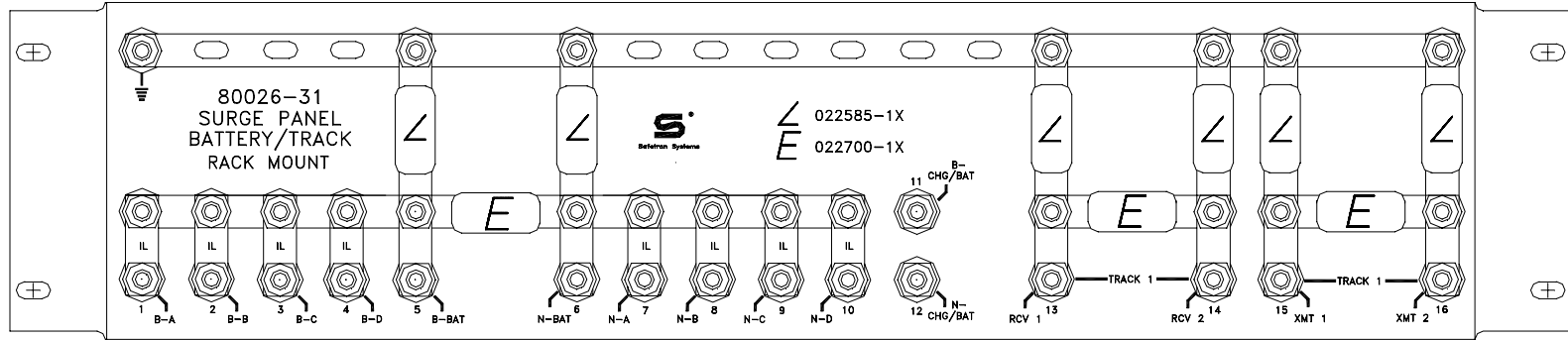
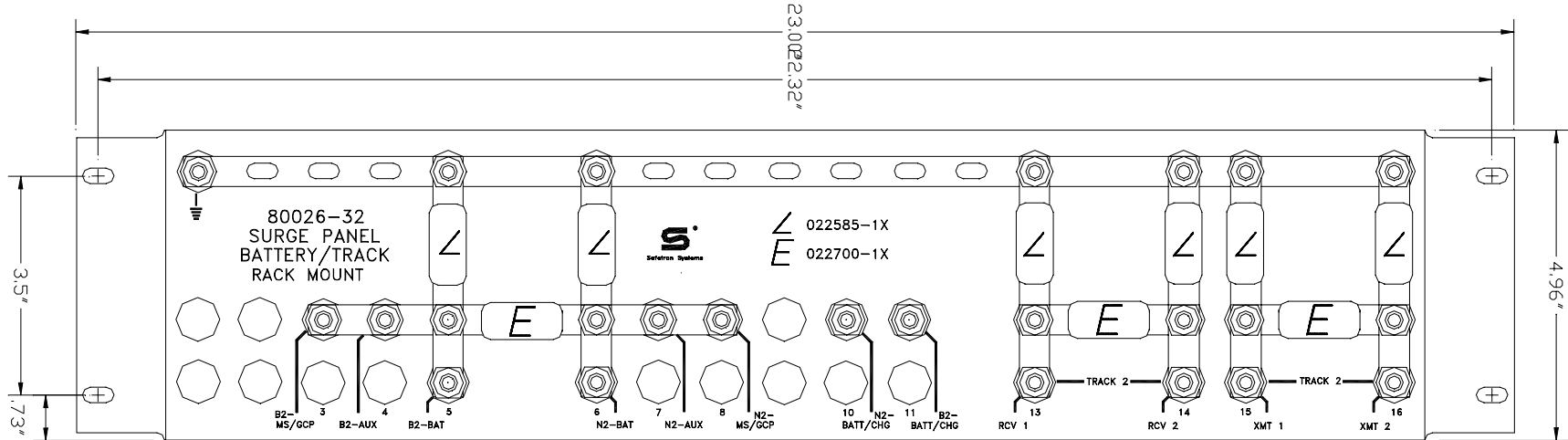


Figure 1-1
Surge Panels, 80026-01, -02 and -22

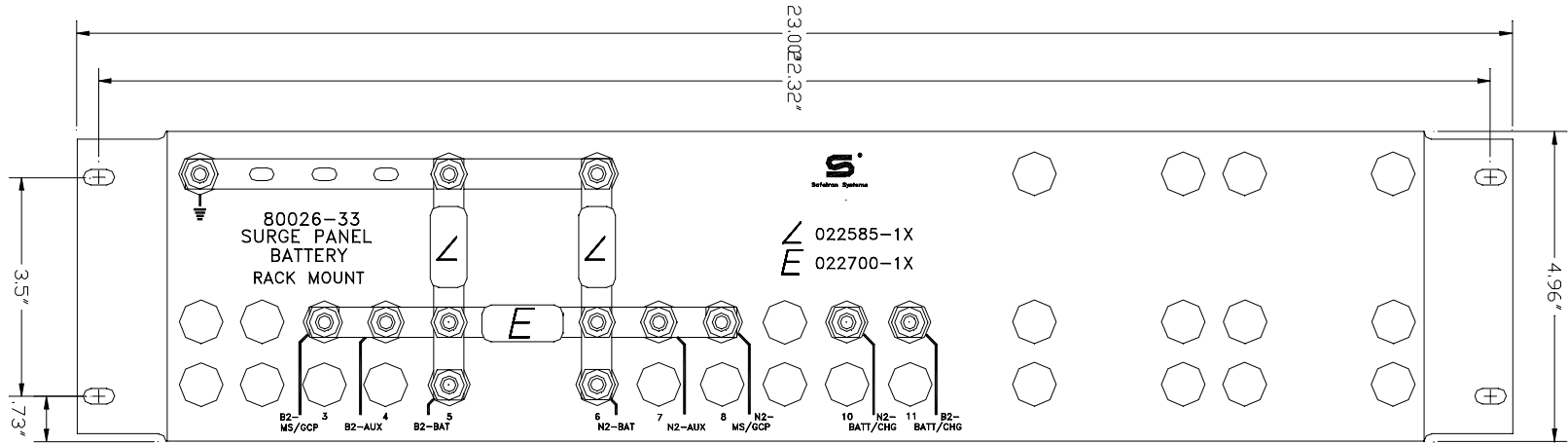


NOTE:
DIMENSIONS TYPICAL OF BOTH PANELS

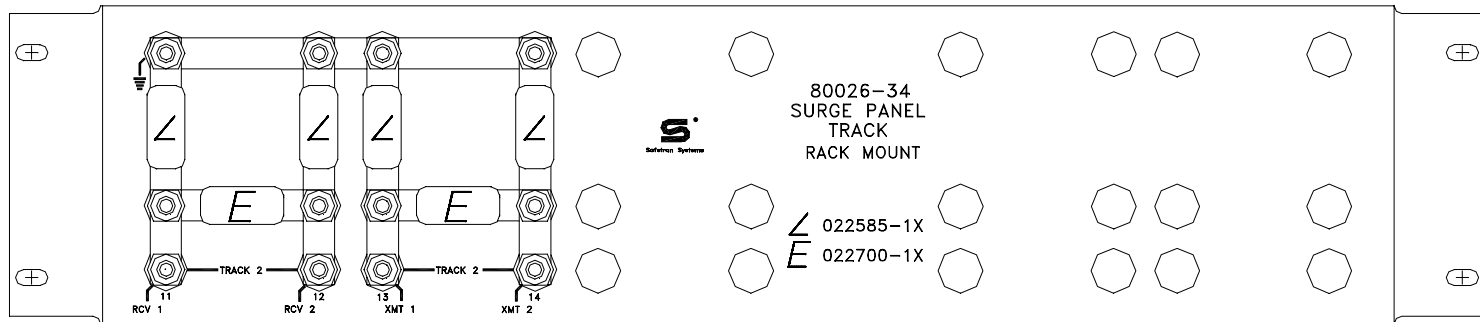


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Figure 1-2
Surge Panels, 80026-31 and -32

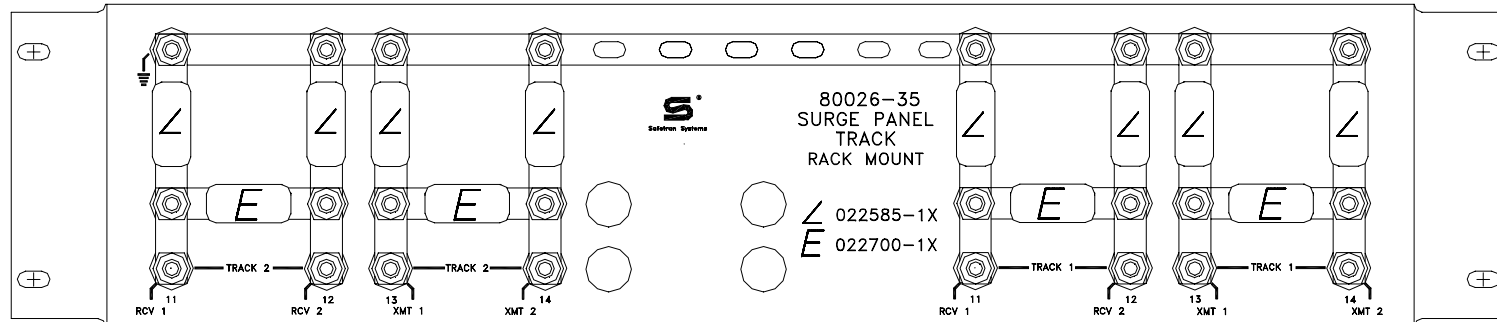


NOTE:
DIMENSIONS TYPICAL OF BOTH PANELS



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Figure 1-3
Surge Panels, 80026-33 and -34



NOTE:
DIMENSIONS TYPICAL OF BOTH PANELS

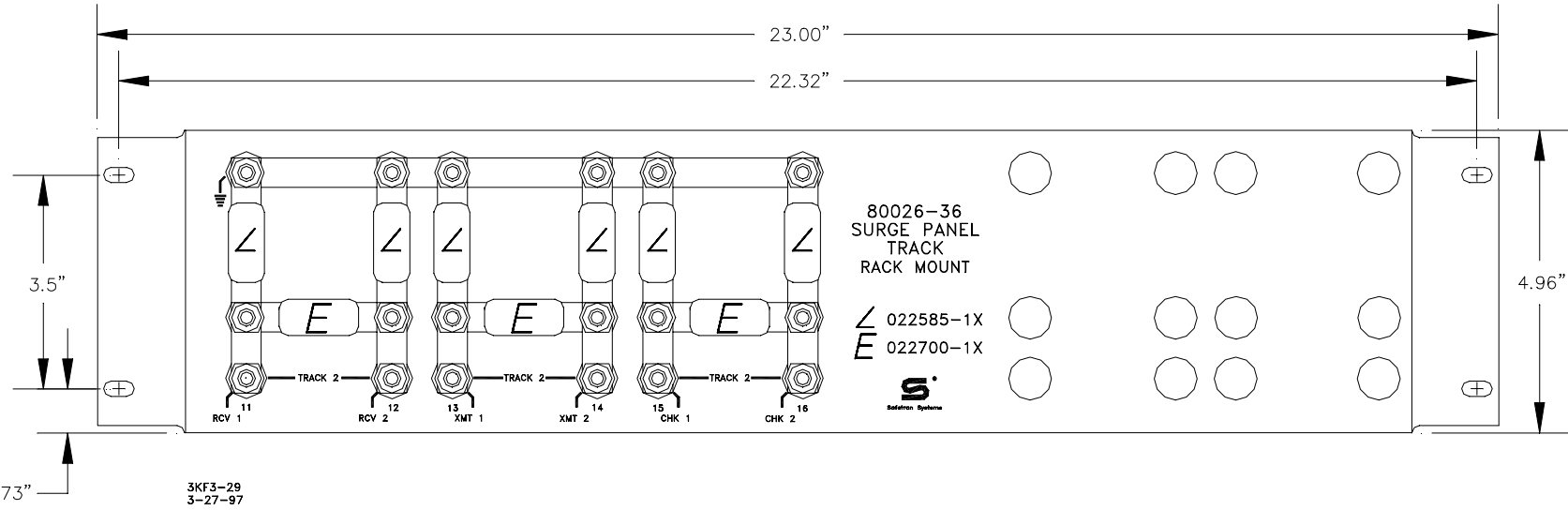
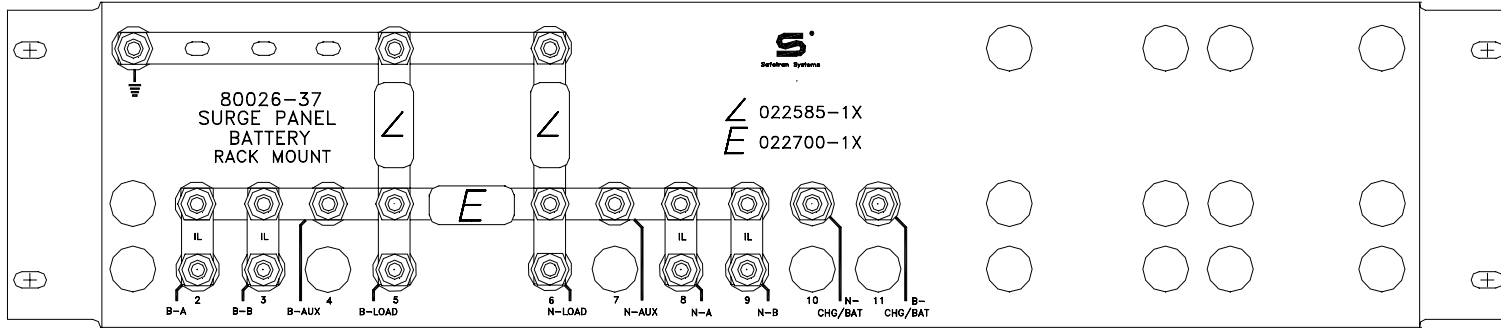


Figure 1-4
Surge Panels, 80026-35 and -36



NOTE:
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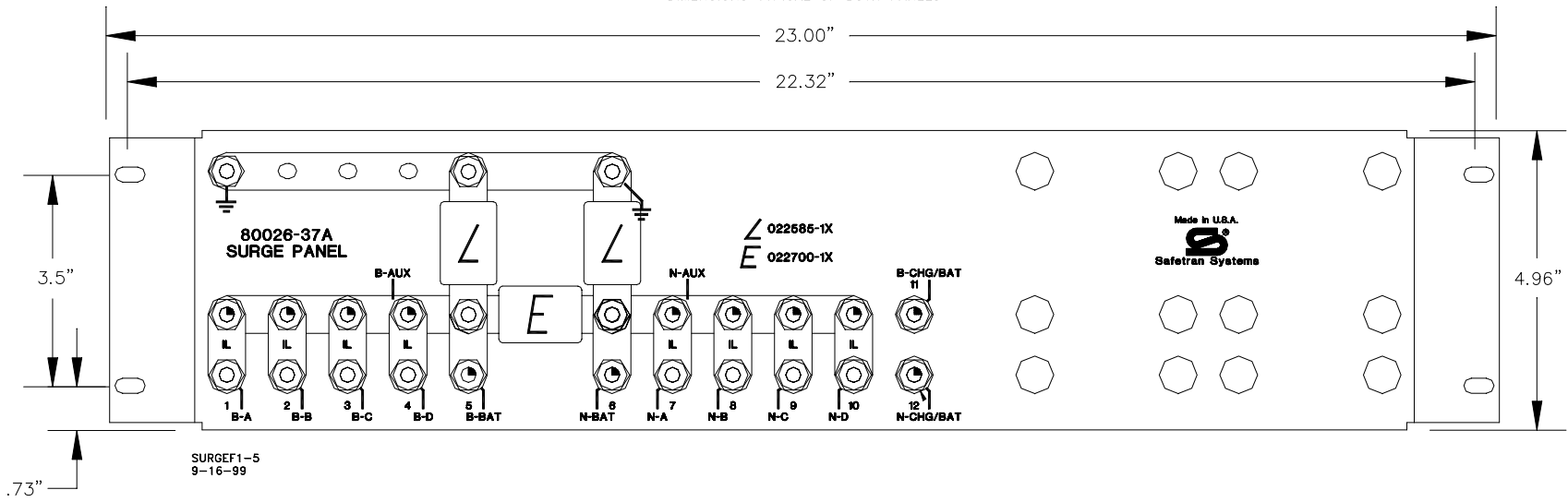
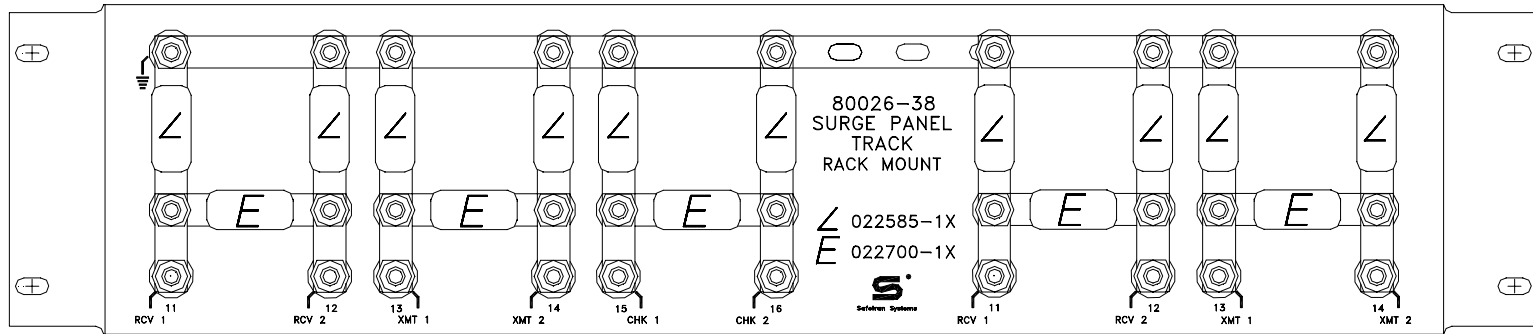


Figure 1-5
Surge Panels, 80026-37 and -37A



NOTE:
DIMENSIONS TYPICAL OF BOTH PANELS

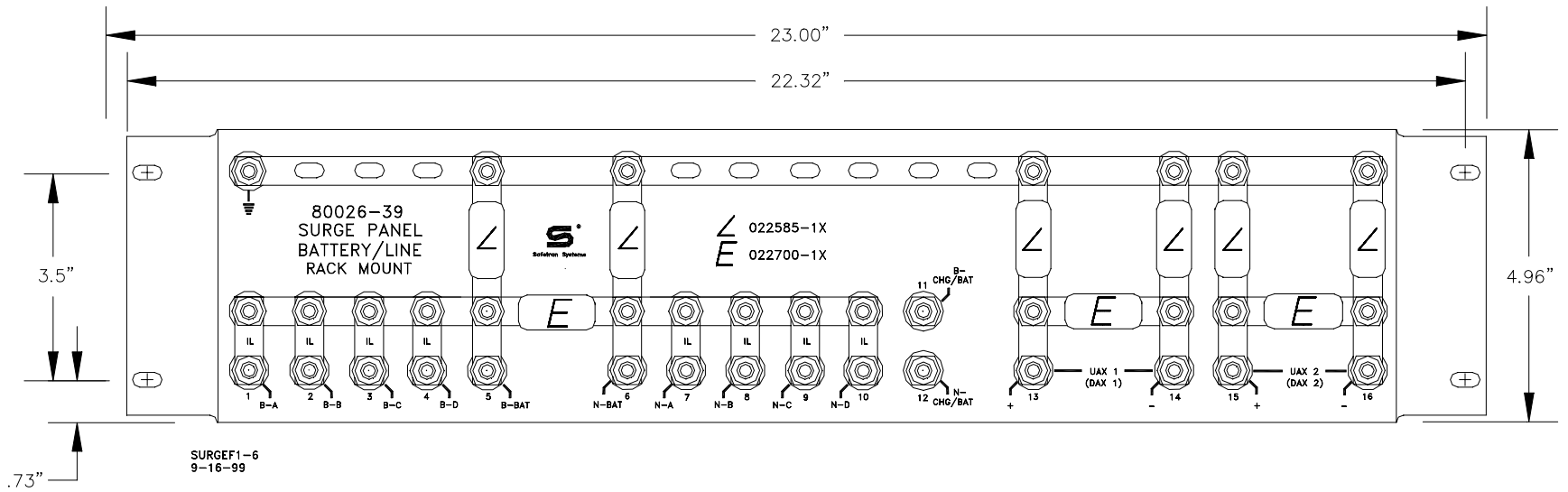
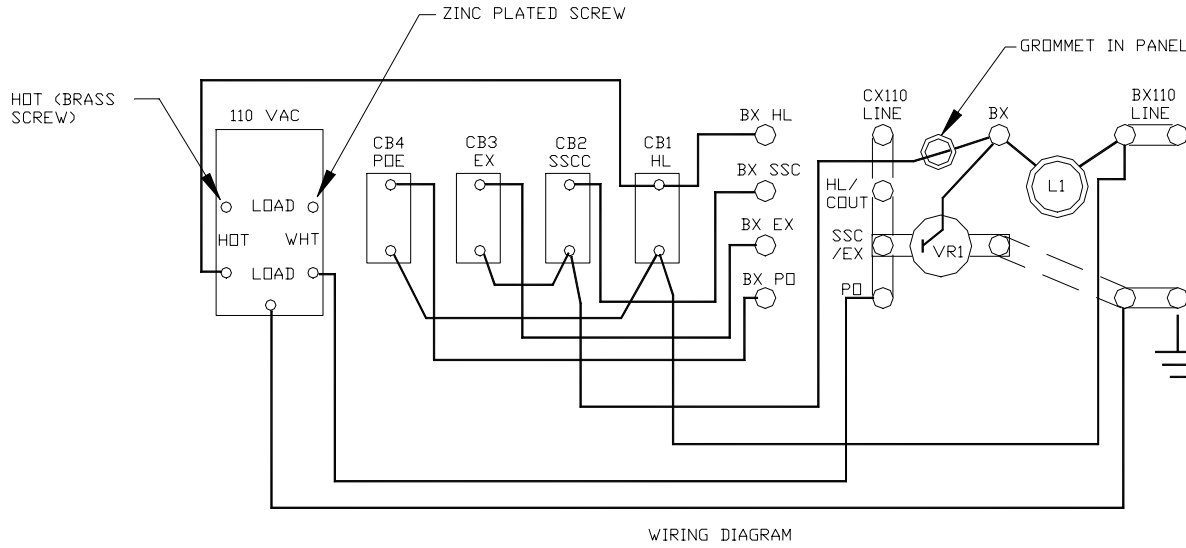


Figure 1-6
Surge Panels, 80026-38 and -39



WIRING DIAGRAM

DIMENSIONS TYPICAL OF -41 AND -41A PANELS

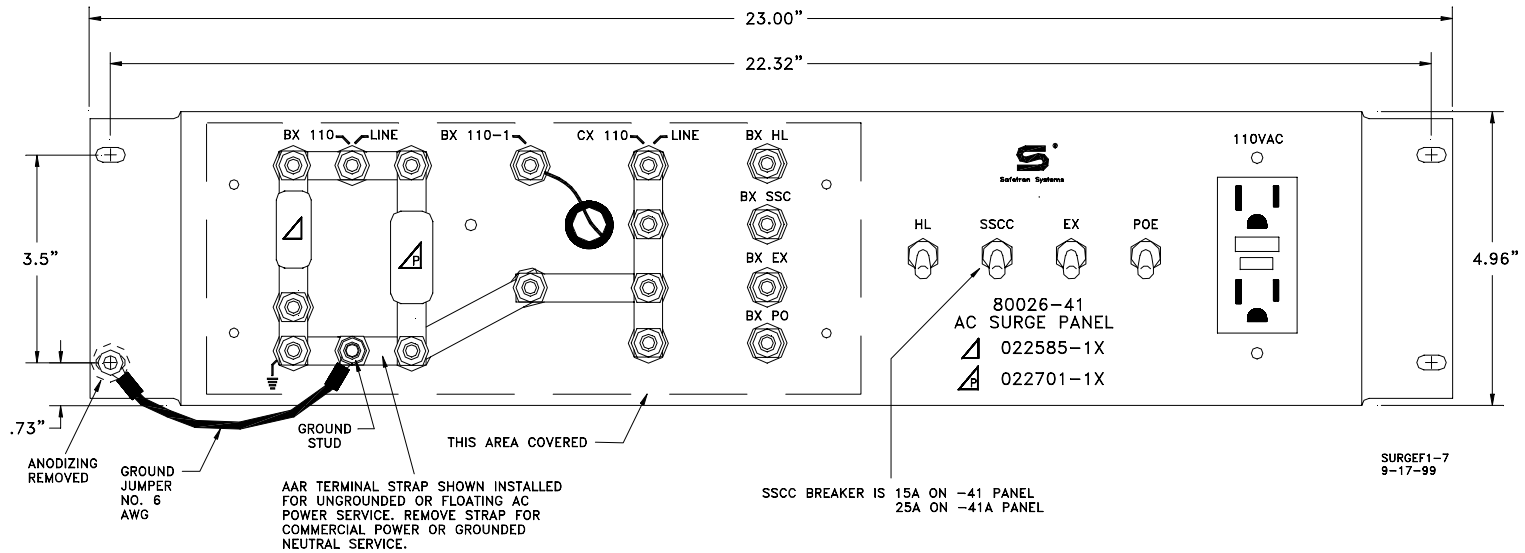
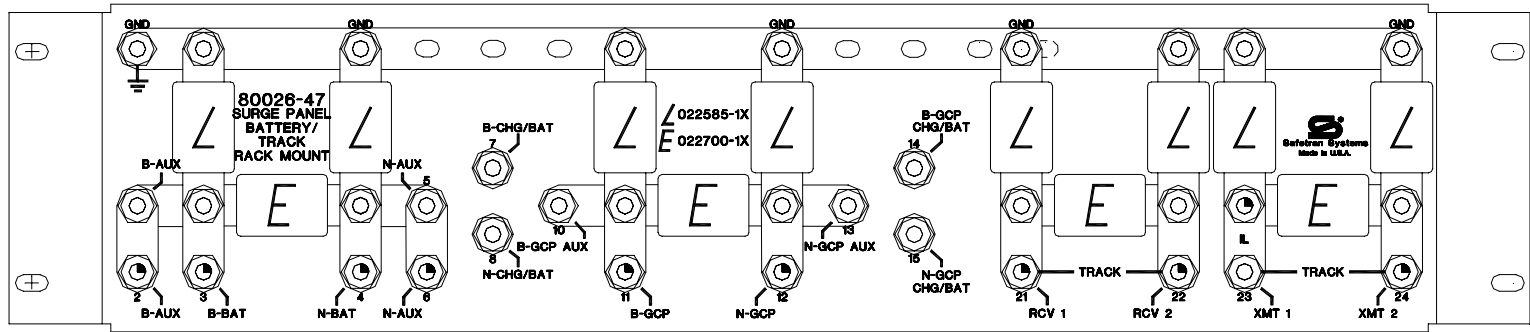


Figure 1-7
Surge Panels 80026-41 and -41A



NOTE:
DIMENSIONS TYPICAL OF -47 AND -50 PANELS

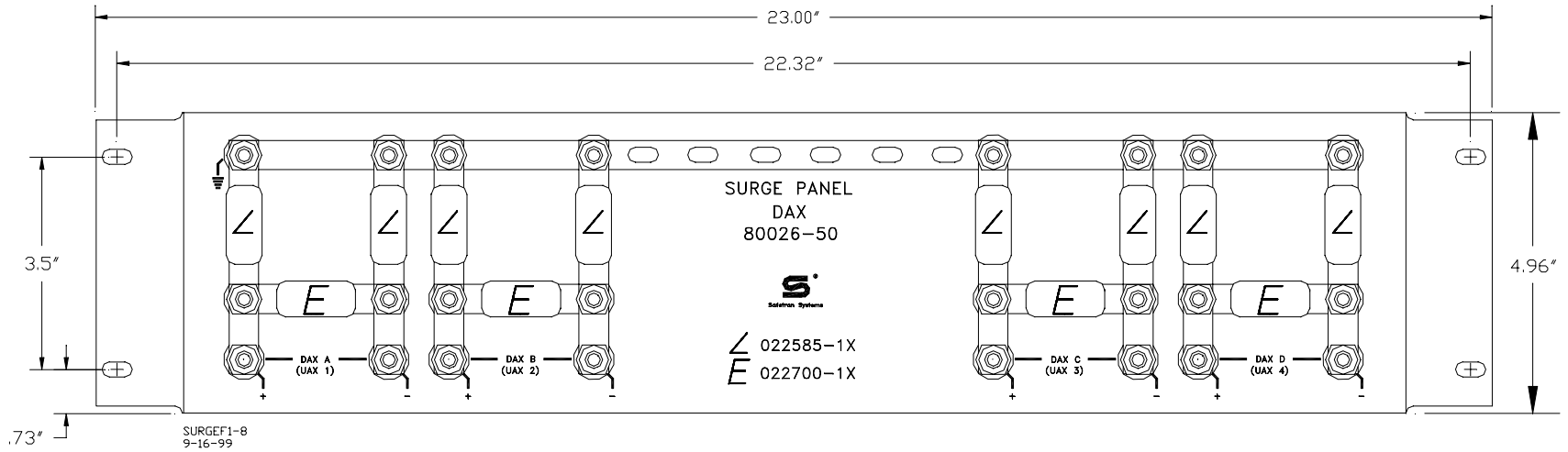


Figure 1-8
Surge Panels, 80026-47 and -50

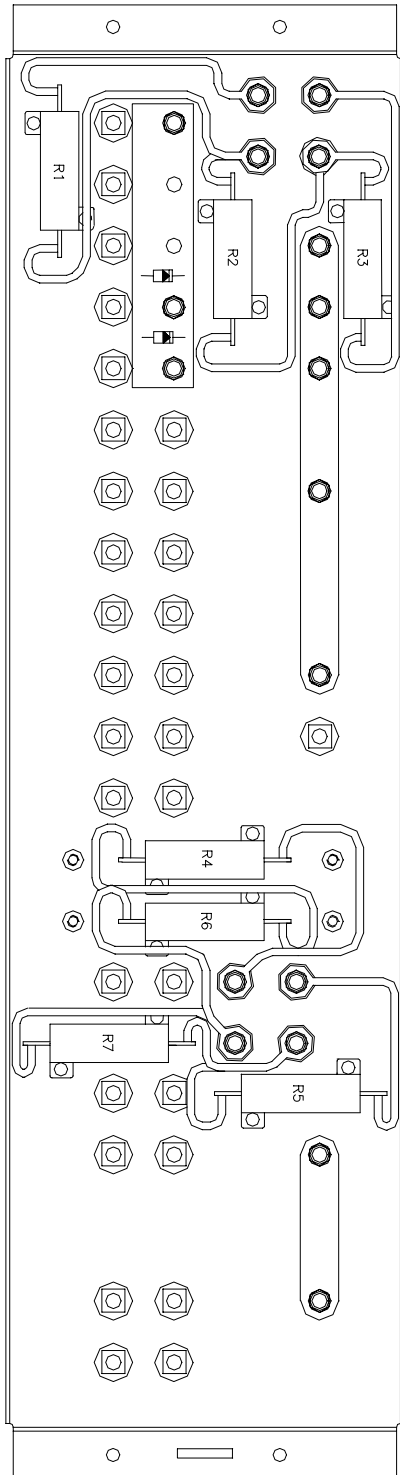
90978-XX SURGE PANELS

Three lighting/surge panels are available for use with Safetran solid-state crossing controllers (SSCC). The panels provide the interface between the external crossing gates, bells, and lamp circuit wiring and the crossing controller. Each panel is equipped with standard AAR-type stud terminals which accommodate connections to the battery (90978-12 and -14 panels only), bells, gate, and lamp circuit equalizers. Also included are two lamp adjusting resistor units which are used to set the level of the voltage supplied to the crossing lamps.

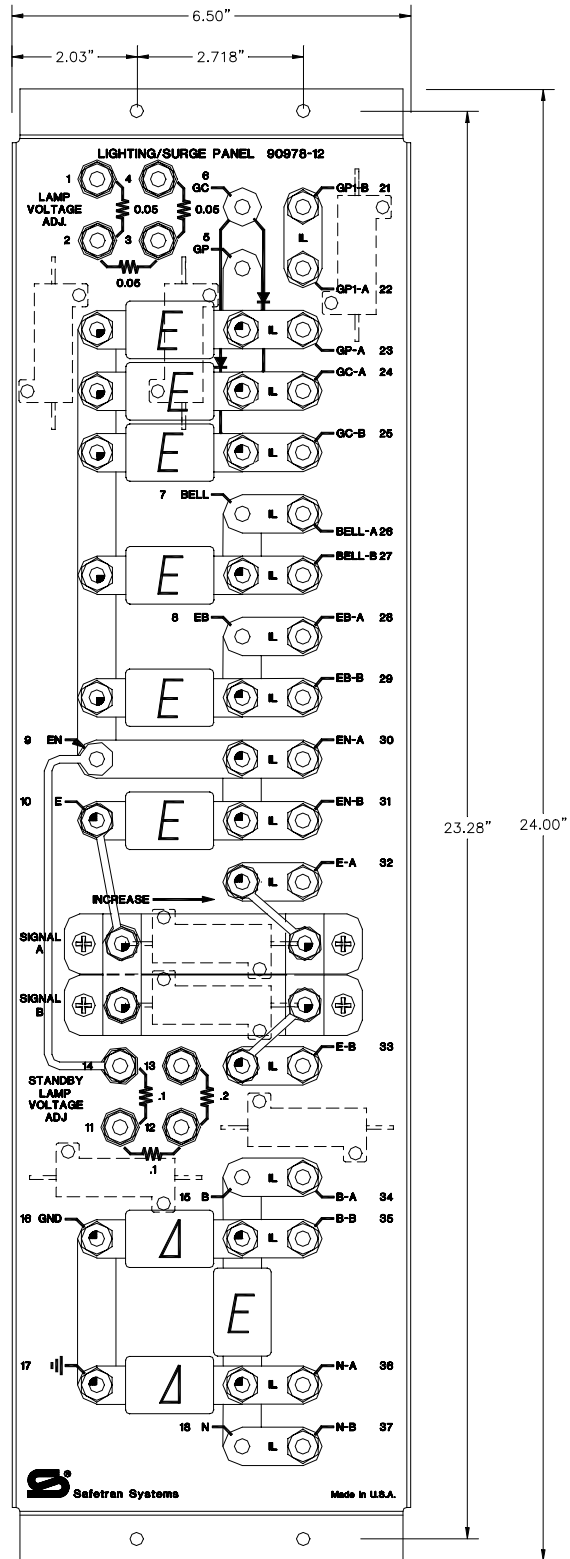
Applications for the three panels are indicated in table 1-2.

Table 1-2
90978-XX Surge Panel Applications

Surge Panel Part Number	Mounting	Notes	Reference Figure
90978-12	Wall mount	Use for 20-ampere SSCC-TC, 91070(A)	1-9
90978-13	Rack mount	Rack-mount version of 90978-12 panel but without terminals and arresters for battery connection	1-10
90978-14	Wall mount	Use with 90978-12 for 40-ampere SSCC-TC.	1-11



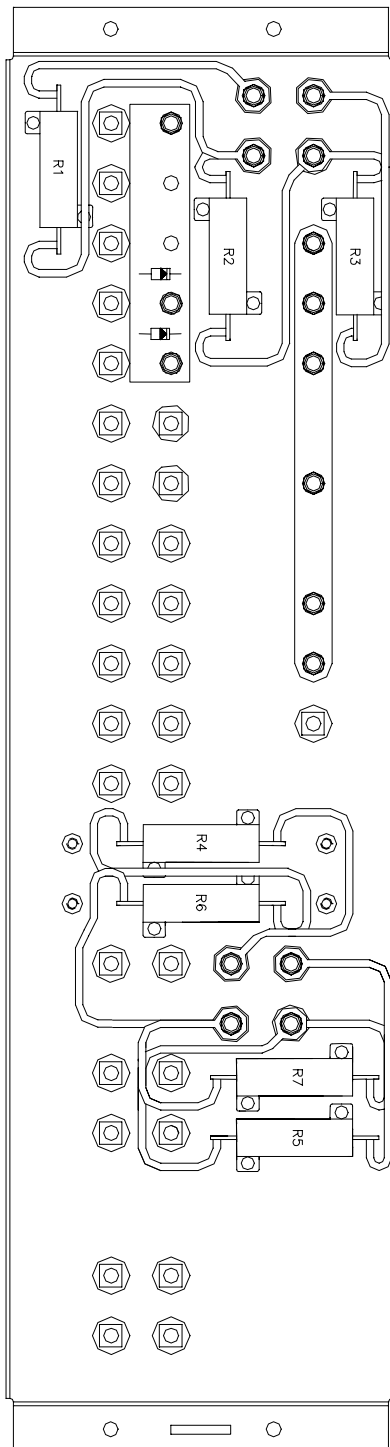
REAR VIEW



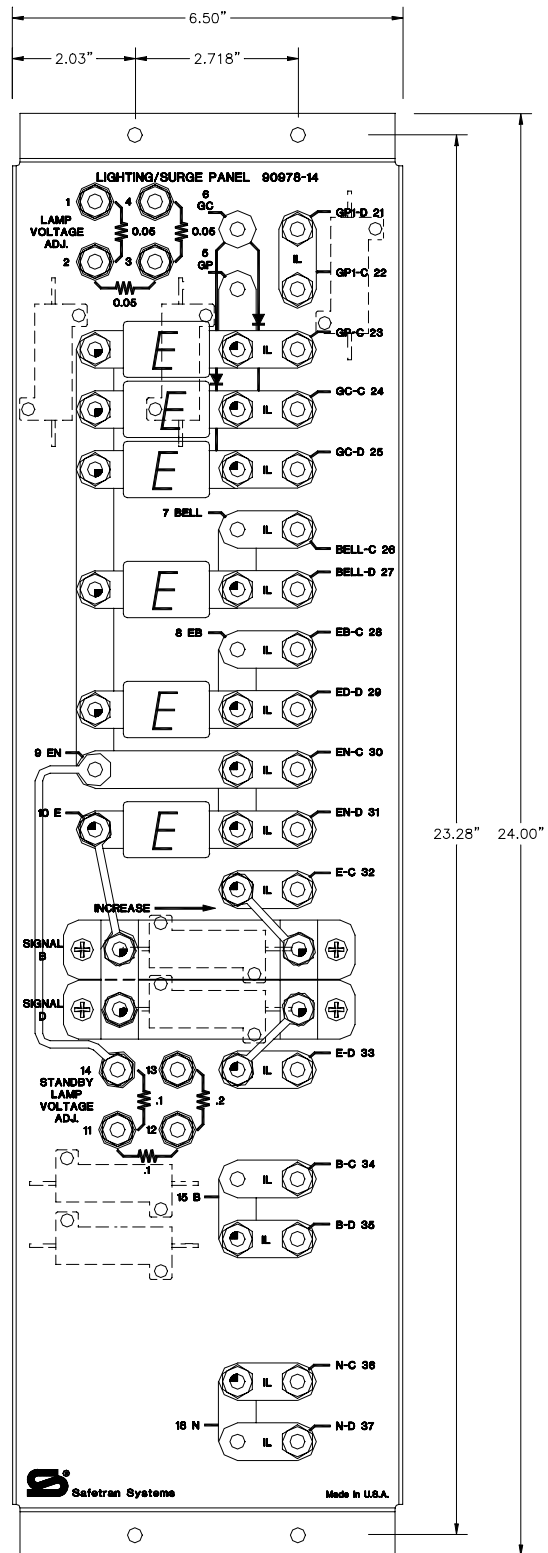
FRONT VIEW

Figure 1-9
Lighting/Surge Panel, 90978-12

SURGEF1-9
9-16-99



REAR VIEW



FRONT VIEW

Figure 1-11
Lighting/Surge Panel, 90978-14

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NOTES

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