



**NOTES**

1. Arresters and protectors other than those specified are not to be used without approval of the Chief Engineer C & S.
2. All ground wire leads to be as short and straight as possible, with no sharp bends. Wire size not to be smaller than No. 10 AWG.
3. Select protector reference Nos 37, 39, 41, 43, 45 and 47 to suit voltage and load requirements of circuit.
4. Resistance of earth grounds to be the lowest obtainable, not exceeding 5 ohms wherever solid state equipment is used.
5. Clearview arresters are to be mounted in self-cleaning position, that is, with the pointed elements projecting upward, when mounted horizontally.
6. Where local electric service is provided with a grounded 115 VAC or 230 VAC supply, or signal power line is a 115 VAC grounded supply, use a solid link in place of fuse or circuit breaker in grounded leg of the supply circuit.
7. Where solid state units and connected protector units are located more than one foot apart, the connecting leads must be twisted and cabled separately from other wires.
8. When the solid state device to be protected is either a GRS F50 unit, or a Safetran unit equipped with an internal protector, omit item 50.
9. Arrange arresters in groups not exceeding eight arresters. Run ground wires from ground straps at each end of arreser groups to prime ground grid.
10. Track circuit arresters and line circuit arresters are to be arranged in separate groups. Use item 2, heavy duty arreser for track circuit leads, item 4, clear view arresters for line circuits, and item 5, clear convn arresters for code lines.
11. Prime ground grid shall be connected to at least two ground rods with No. 6 AWG copper wire. Ground rods to be located at opposite ends of case or house.
12. Symbol  $\infty$  shown across a pair of wires indicates that the pair must be twisted at the rate of one turn per foot.
13. Where an equalizer is mounted externally across terminals of a protector, an additional equalizer is not required in that circuit across arreser terminals.

SHEET 1  
CONT'D ON SH 2

**CONRAIL**

CS-9001-A

STANDARD  
**TYPICAL LIGHTNING ARRESER  
APPLICATIONS**

JUN. 23, 1978

Approved by  
Chief Engineer C & S

PROTECTORS & ARRESTERS						PROTECTORS & ARRESTERS					
ITEM	DESCRIPTION	ACCT. NO.	MFR.	MFR'S NO.	RATING	ITEM	DESCRIPTION	ACCT. NO.	MFR.	MFR'S NO.	RATING
1						33					
2	Arrester, heavy duty	02-025706	Sfm	022645-DI	0-50VDC, 0-175VAC	34					
3						35	Protector SP20-2A	02-375754	Sfm	010807-6AX	115VAC, 20A
4	Arrester, clearview	02-025665	Sfm	022485-28X	0-50VDC, 0-175VAC	36					
5	Arrester, clear-comm	02-027702	Sfm	022485-50X		37	Protector SP18-2A	02-375770	Sfm	010806-4AX	18VDC, 5A
6						38					
7	Arrester	02-028522	GE	9L158CA006	0-600V	39	Protector SP19-2A	02-375796	Sfm	010806-3AX	18VDC, 10A
8						40					
9	Arrester	02-026001	GE	9LAJOC21	1-3KV	41	Protector SP24-2A	02-375812	Sfm	010811-3AX	18VDC, 25A
10						42					
11	Arrester	02-026100	WE	634AJ00A06	3-6KV	43	Protector SP18-2B	02-375838	Sfm	010805-4BX	32VDC, 5A
12						44					
13	Arrester	02-026753	GE	9LAJOC31	6-9KV	45	Protector SP19-2B	02-375853	Sfm	010806-3BX	32VDC, 10A
14						46					
15	Arrester	02-026159	WE	792CB46G05	9-18KV	47	Protector SP24-2B	02-375879	Sfm	010811-3BX	32VDC, 25A
16						48					
17						49					
18	Base assembly, porcelain	02-037067	Sfm	022485-23X		50	Protector SP26-6	02-375911	Sfm	010814-6X	5VDC, 25A
19						51					
20						52	Protector SP21-2	02-375895	Sfm	010805-5X	As required - code line
21	Clamp, ground rod	02-981403				53					
22						54					
23						55					
24	Equalizer	02-197950	Sfm	022700-DI	0-12VDC	56					
25						57	Rod, copperweld ground	02-992004			3/8" Dia X 9'-0" long
26						58					
27						59					
28						60					
29						61					
30						62					
31						63					
32						64					

SHEET 2



CS-900-A

TYPICAL LIGHTNING ARRESTER APPLICATION

JUN. 29, 1978

128

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