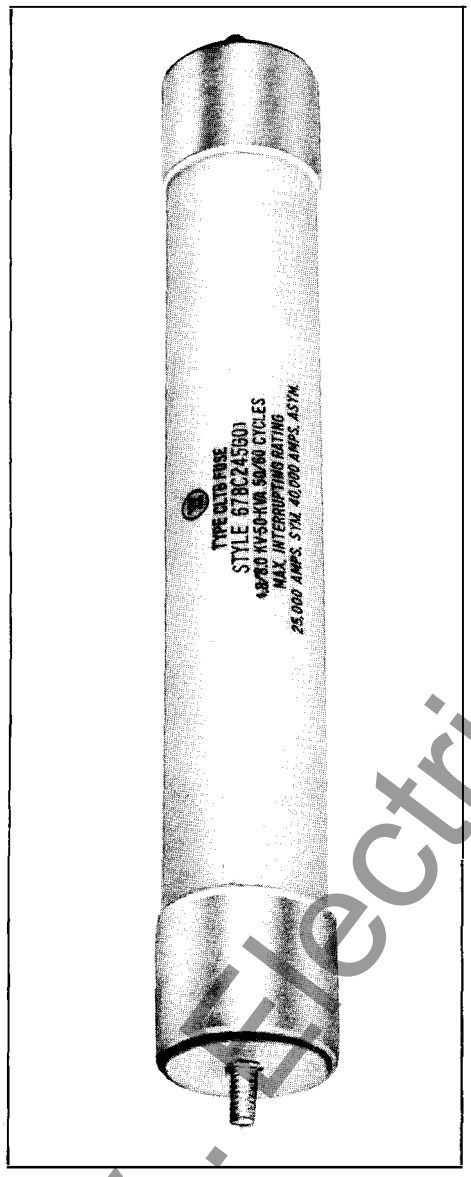
Westinghouse Electric Corporation
Distribution and Control Business Unit
Electrical Components Division
Pittsburgh, Pennsylvania, U.S.A. 15220

September 1990
Supersedes Descriptive Bulletin 36-744,
pages 1-2, dated April 1980
Mailed to: E, D, C/36-600C

Indoor Current Limiting Distribution Class
8.3 to 22 KV
18 to 30 Amperes
50/60 Hertz

Type CLTB High Voltage Distribution Fuses



Application

The CLTB high voltage current limiting bushing fuse is designed to provide protection against extremely high fault currents which exceed the interrupting rating of the protective link. It is mounted in the high voltage bushing of pole type distribution transformers and is in series with an expulsion protective link.

In the few cases of major transformer insulation failure with a direct fault across the high voltage winding, a low impedance fault would develop which is larger than the interrupting rating of the protective link. The partial range, current limiting CLTB fuse is designed for such contingencies. The CLTB fuse also limits the fault energy at lower fault currents.

The CLTB is capable of interrupting fault currents up to a maximum of 40,000 RMS symmetrical amperes and should be coordinated with the protective link so that it does not operate in the low current range. Full coordination with the secondary breaker can be provided so that all secondary faults are cleared by the breaker, not the CLTB fuse.

The CLTB fuse is mounted in the transformer at time of manufacture. The fuse is not field retrofitable. Care should be taken when applying the CLTB to be sure the fuse is properly coordinated with the protective link. See current limiting fuse Application Data 36-686 for further coordination information.

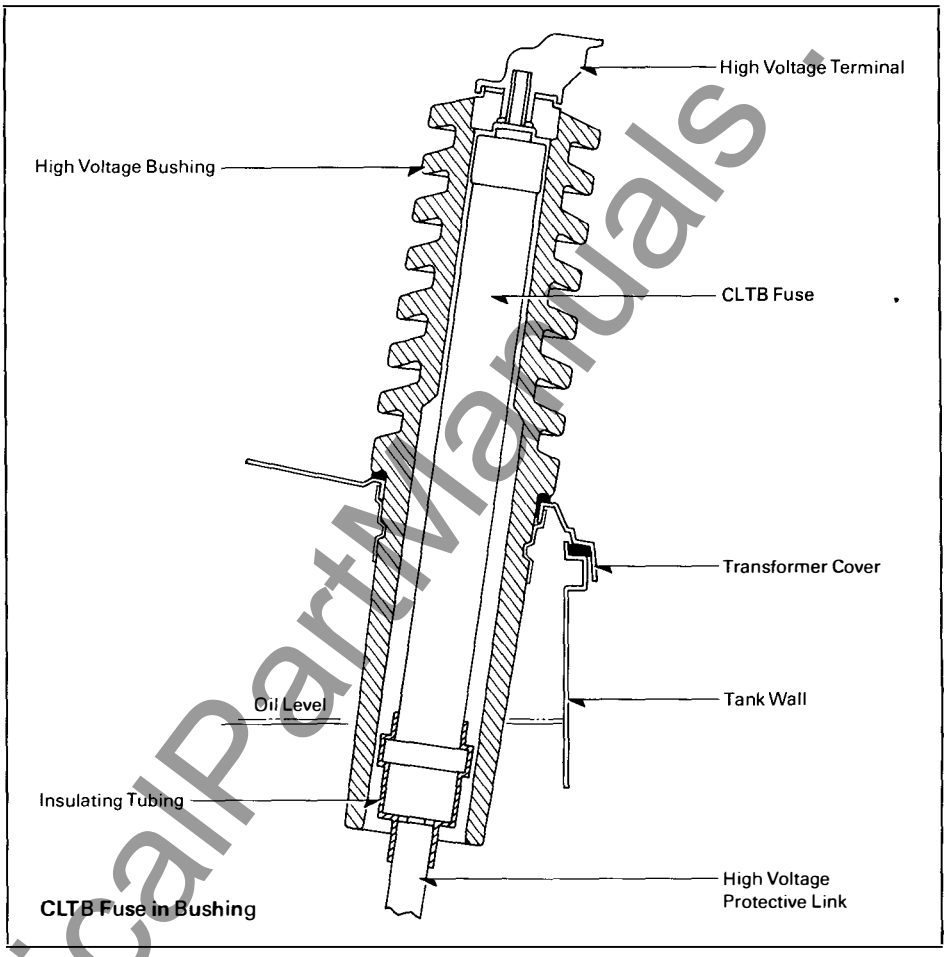
Fuse Ratings Available

Voltage	Amperes
8.0 KV	18
8.0 KV	20
12.9 KV	30
15.5 KV	30
22.0 KV	18

Advantages

- Quiet safe operation
- Reliable protection
- Easier coordination with other equipment
- Economical high fault current protection
- Low fuse arc voltage assures excellent arrestor coordination
- Reduced let-through energy
- Clean appearance
- Low installed cost

Construction
CLTB fuses use silver elements which are either bent or spiralled prior to construction. This method of bending or spiralling at regular intervals results in a fuse element that is structurally stronger and distributes expansion uniformly. A silver fuse element packaged in high purity silica sand of controlled grain size provides the current limiting protection, enabling the fuse to withstand the most severe type of duty cycling without failure.

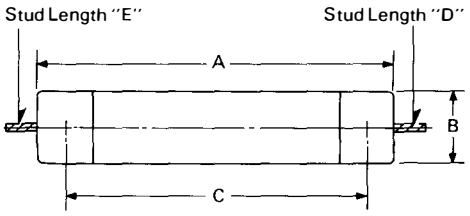


CLTB Fuse in Bushing

Ratings and Dimensions

Maximum Design Voltage①	Amperes	Interrupting Rating at Rated KV②		Fuse Dimensions, Inches						
		Total RMS Amperes Symmetrical	Total Amperes Asymmetrical	A	B	C	D	E	F	G
8300	18	25,000	40,000	12.00	1.13	11.00	.38	1.25	.250-28	.375-16
8300	20	25,000	40,000	10.9	1.60	9.41	.38	1.25	.250-28	.375-16
12900	30	25,000	40,000	14.80	1.60	13.44	.38	1.25	.250-28	.375-16
15500	30	25,000	40,000	14.80	1.60	13.44	.38	1.25	.250-28	.375-16
22000	18	40,000	64,000	14.80	1.60	13.44	.38	1.25	.250-28	.375-16

① Caution—Select fuse unit of nearest voltage rating above line to line voltage. Do not over-insulate with higher voltage rated fuse unit as overvoltage may occur during interruption.
② Three phase KVA values are determined as follows: three phase KVA=KV x 1.73 x rated interrupting amperes.



"F" = Thread Size for Stud Length "D"
"G" = Thread Size for Stud Length "E"

Further Information
PL 36-609
AD 36-745
TD 36-743

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Electrical Components Division
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Westinghouse Electric Corporation
Switchgear Division
East Pittsburgh, Pa. 15112

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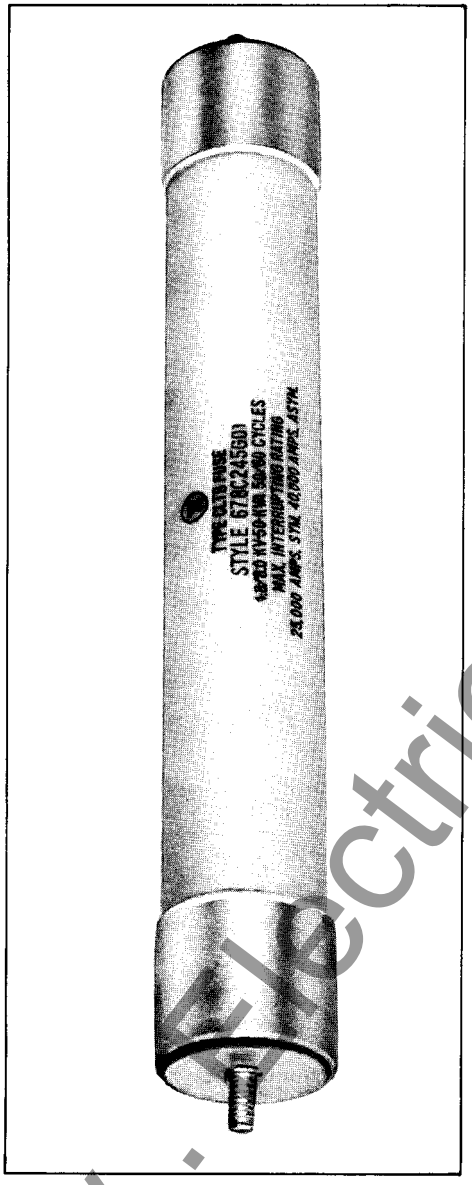

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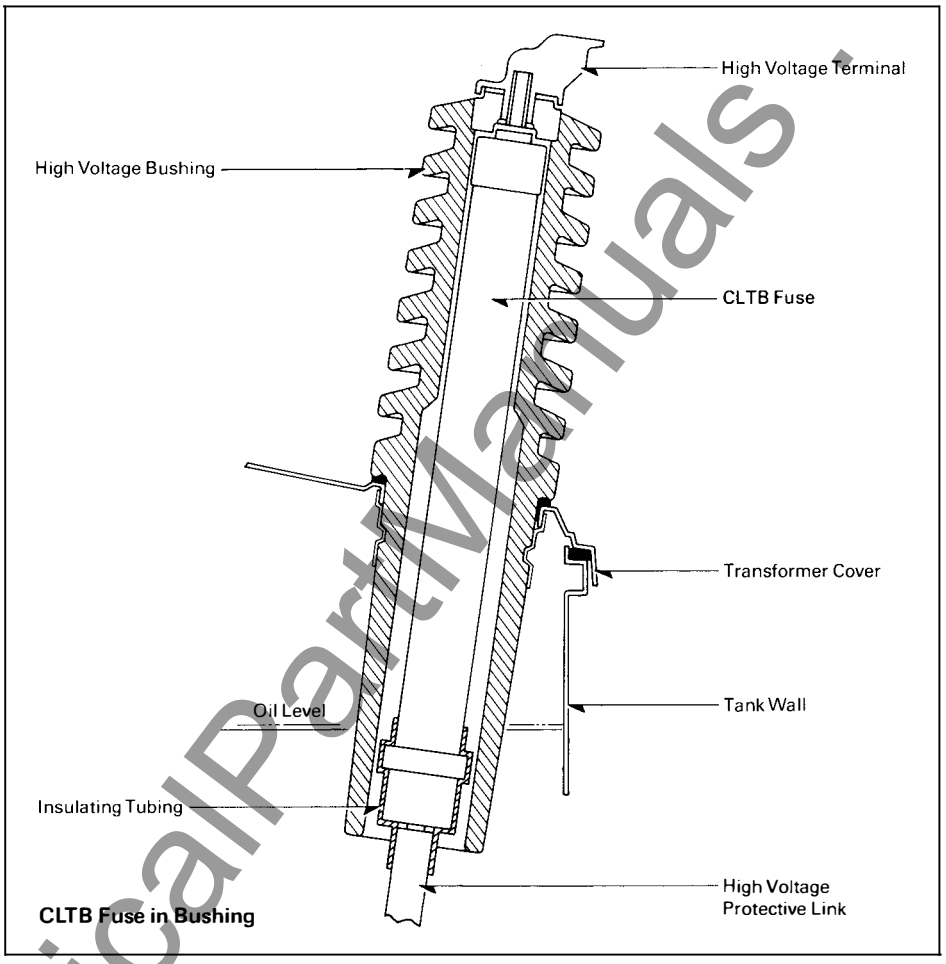

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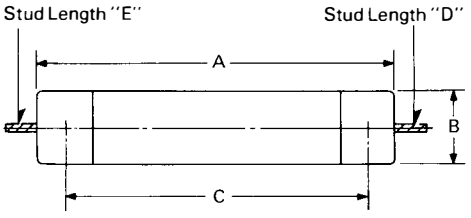

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