Westinghouse Electric Corporation
Switchgear Division
East Pittsburgh, Pa. 15112

April, 1980
Supercedes DB36-653
dated August, 1967 and
TCS 36-722A dated June, 1978
mail to: E,D,C, /1971/DB

Indoor Current Limiting
Distribution Class
2.75 to 15.5 Kv
4 to 150 amperes
50/60 Hertz

Type CLT High Voltage Distribution Fuses

Application
The CLT fuse is designed specifically to provide complete fault protection on high capacity indoor and underground distribution systems. A general purpose current limiting fuse, the CLT meets or exceeds the requirements of the latest ANSI standards for this class of distribution fuse. The CLT fuse may be used in conjunction with the EFD load break switch, which meets the full switching requirements of underground distribution systems utilizing pad-mounted transformers. In addition, the CLT may be applied in pad-mounted transformer drawout wells or in conjunction with LBOR oil switches as a means of low cost transformer protection.

Fuse Ratings Available

Voltage	Amperes
2.75 Kv	5-150
5.5 Kv	8-60
8.3 Kv	5-45
14.4 Kv	30
15.5 Kv	4-18

Advantages

Quiet Safe Operation
A non-indicating fuse, the CLT will clear currents from minimum-melt to its maximum interrupting rating without any external disturbance or expulsion of gases.

Limits Fault Current
The let-through current for a high short circuit current is limited to a value far below the available peak current because the current is forced to zero before the first one-half cycle.

Arc-voltage Protection
CLT fuses control the arc-voltage that is produced during current limitation to less than three times the nominal voltage rating.

Maintains Non-Conductance After Interruption
Specially-designed cores prevent internal flash through when rated voltage remains across fuse after interruption.

Low Cost Transformer Protection
The CLT fuse can be used in EFD load break switches and dry well drawout fuse holders.

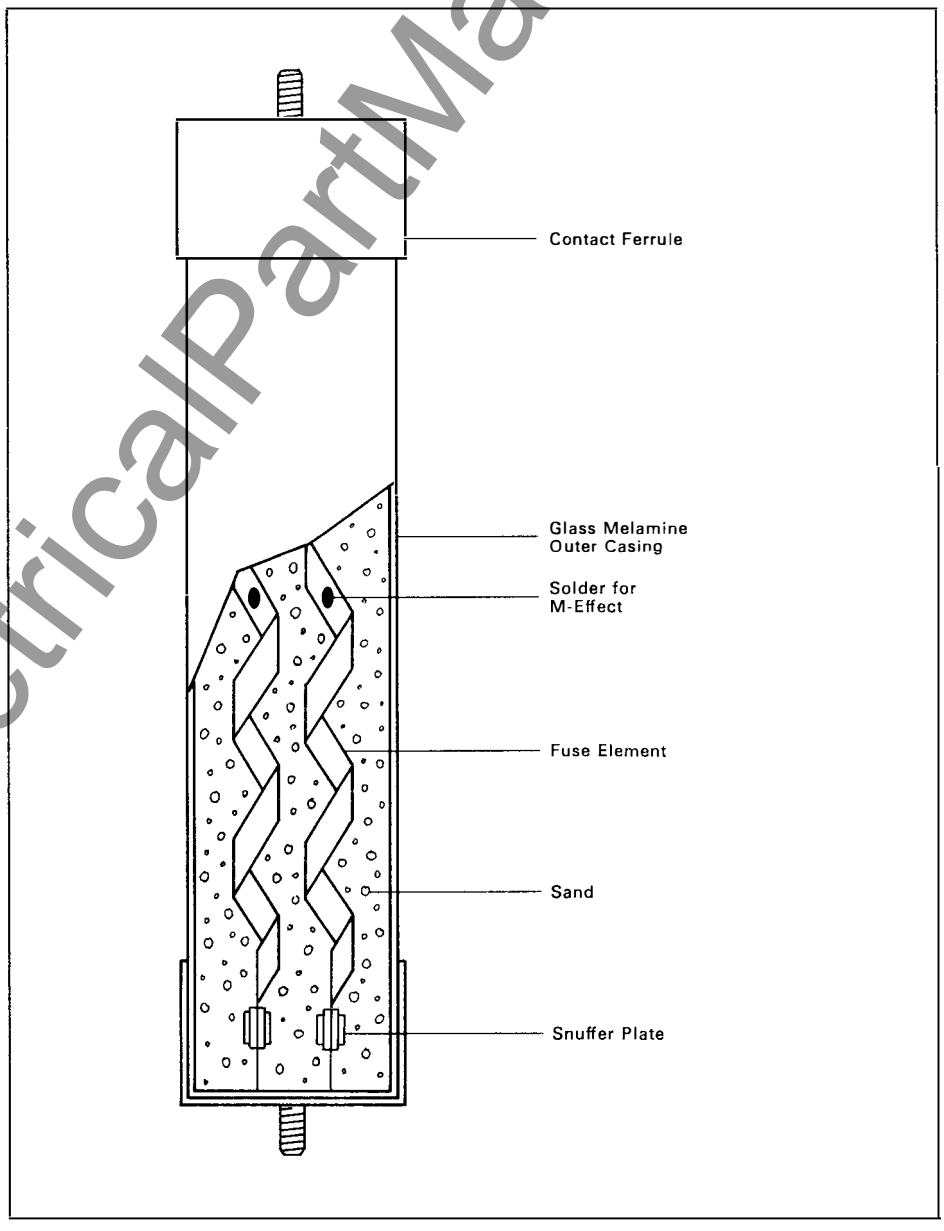
Construction and Operation
Type CLT fuses are constructed with pure silver fuse elements, a high-purity silica sand filler, a specially-assigned core, and a glass melamine outer casing.

During a high fault current the silver element melts almost instantly losing energy to the surrounding sand. The energy melts the sand forming a glass-like substance called fulgurite. The arc voltage rapidly increases to about three times the fuse voltage rating forcing the current to zero. The fault current is interrupted in one-half cycle or less without noise or expulsion of gases.

Current limiting action occurs only when the current is high enough to melt the silver fuse element before the peak value of current in the first half cycle.

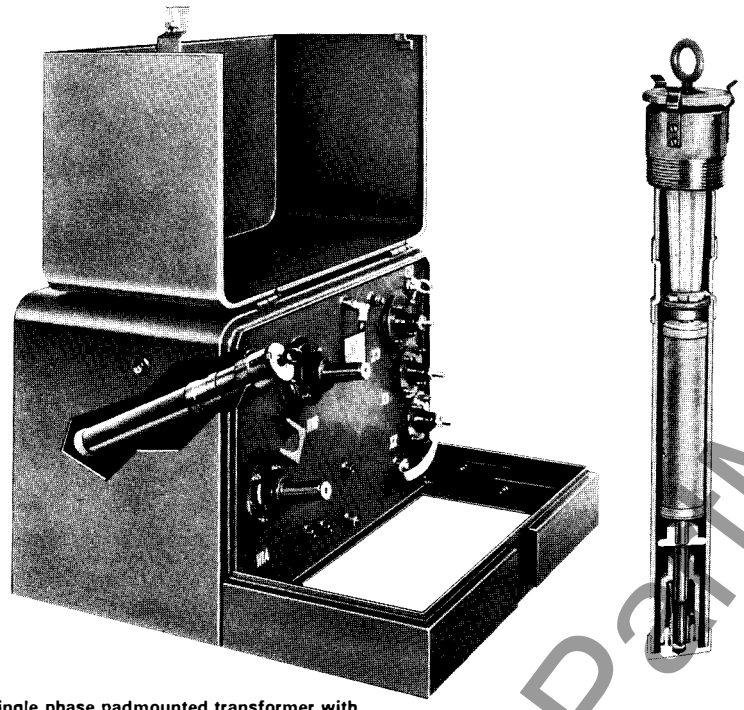
Low level currents are cleared by the melting of a solder drop on the fuse element which melts the silver element. The silver element then burns back until there is sufficient internal gap to interrupt the current. This is called the M-effect and may take several seconds to interrupt the current.

Construction



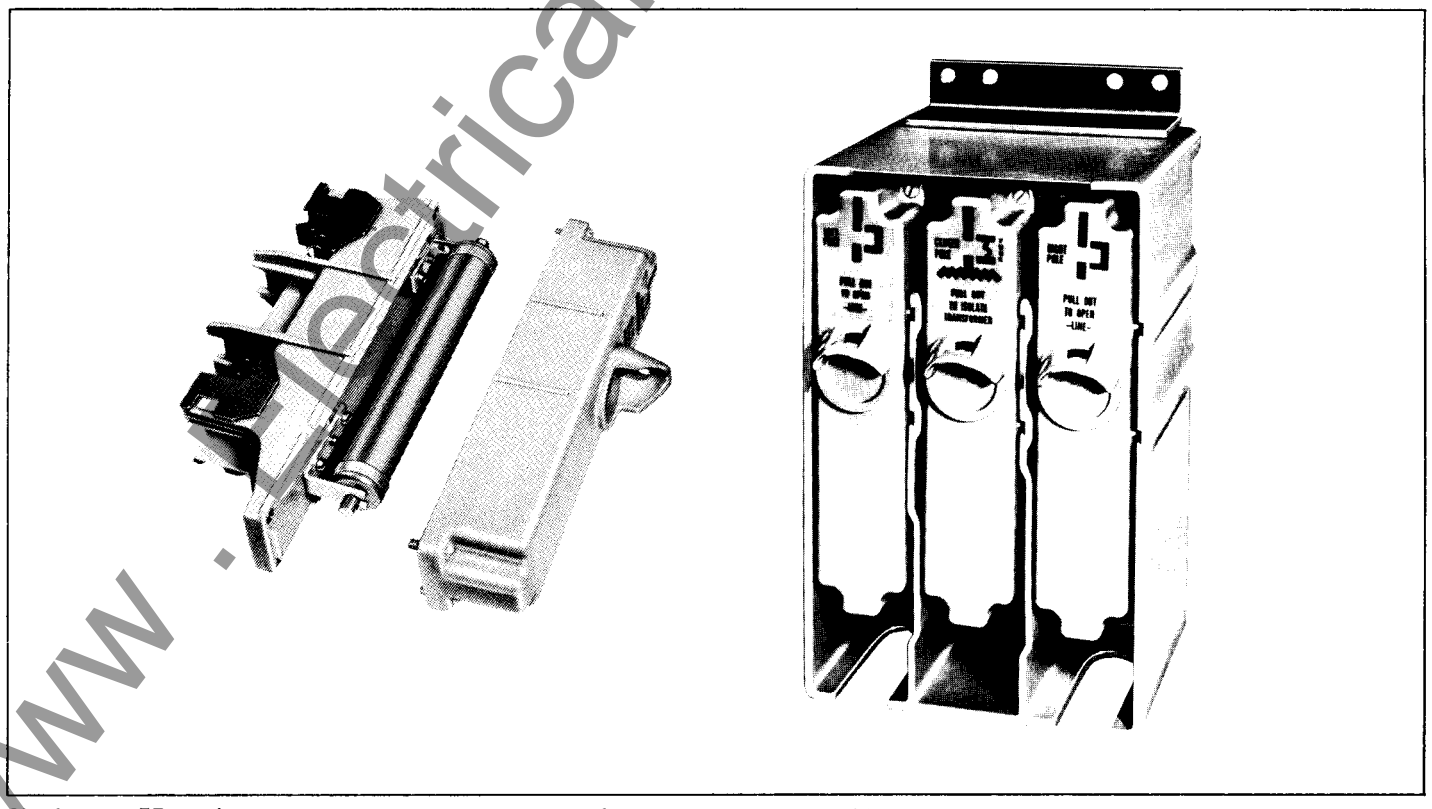
Cross-section drawing showing component parts of a typical strap-wound CLT fuse unit.

Typical Applications



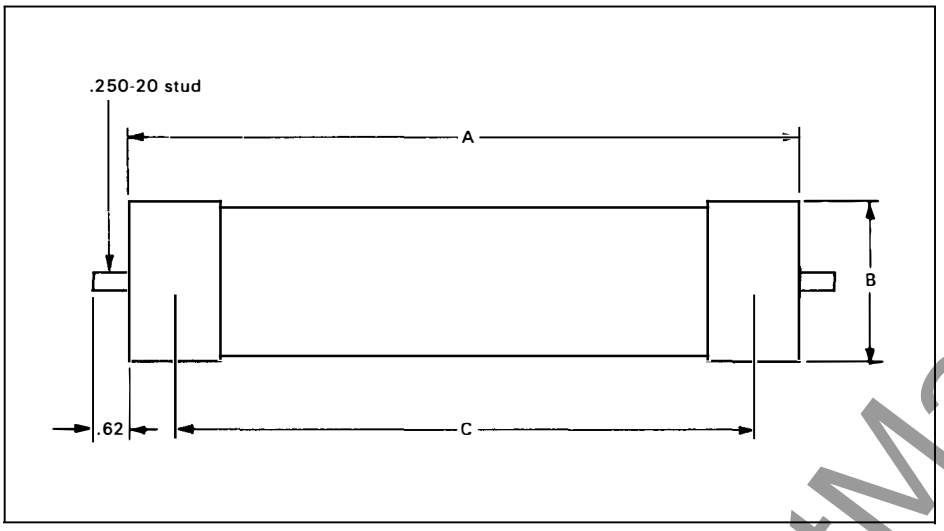
Single phase padmounted transformer with drywell drawout fuse holder.

Drawout Drywell Fuse Holders with CLT fuses are used in pad-mounted and submersible single phase and three-phase transformers and oil filled switching units.



CLT fuses in EFD switches are used on pad-mounted transformers and switching cubicles.

Ratings and Dimensions



Maximum Design Voltage ①	Amperes	Interrupting Rating at Rated KV Total RMS Amperes Symmetrical	Total Amperes Asymmetrical	Maximum Three Phase KVA ② Symmetrical	Fuse Dimensions, Inches A	B	C
2750	5 to 75	25,000	40,000	119,000	9.75	1.60	8.25
5500	8 to 25	25,000	40,000	238,000	9.75	1.60	8.25
8300	5 to 25	25,000	40,000	359,000	9.75	1.60	8.25
8300	30	25,000	40,000	359,000	11.00	1.60	9.63
2750	90-150	25,000	40,000	119,000	9.75	2.25	8.25
5500	30 to 60	25,000	40,000	238,000	9.75	2.25	8.25
8300	30-45	25,000	40,000	359,000	9.75	2.25	8.25
14400	30	25,000	31,500	623,000	9.75	2.25	8.25
15500	4 to 18	25,000	40,000	670,000	9.75	2.25	8.25

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 × 1.73 × rated interrupting amperes.

Further Information
PL36-609
AD36-723
TD36-721

Westinghouse Electric Corporation
Switchgear Division
East Pittsburgh, Pa. 15112

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Indoor General Purpose Current Limiting
2750 to 15,500 Volts 50/60 Hertz
4 to 150 Amperes

Type CLT High Voltage Distribution Fuses

Fuse Units

Type	Amps	Maximum Design Voltage	Interrupting Rating RMS Amps (Sym.)	Interrupting Rating RMS Amps (Asym.)	Style Number①	Curve Number	Ramad ②	Approx. Ship. Wt. Lbs.	Fuse Mounting	Fuse Clip Center (Inches)
Fuses for use on EFD Switches, Transformer Drawout Wells, LBOR Switches, 1½ Inch Dia. Ferrule, Full Range Protecting (Minimum Order Quantity (3) (No Returns))										
CLT	5	2750	25,000	40,000	678C248G01	1, 2, 3	69899	1¼	None	8¼
	12	2750	25,000	40,000	678C249G01	1, 2, 3	69900	1¼		8¼
50/60	18	2750	25,000	40,000	678C276G01	1, 2, 3	18808	1¼		8¼
Hertz	25	2750	25,000	40,000	678C276G04	1, 2, 3	18884	1¼		8¼
	30	2750	25,000	40,000	678C277G04	1, 2, 3	18347	1¼		8¼
	75	2750	25,000	40,000	678C282G01	1, 2, 3	18203	1¼		8¼
	8	5500	25,000	40,000	678C248G05	1, 2, 3	18596	1¼	None	8¼
	12	5500	25,000	40,000	678C249G02	1, 2, 3	18619	1¼		8¼
	18	5500	25,000	40,000	678C276G02	1, 2, 3	18729	1¼		8¼
	25	5500	25,000	40,000	678C276G05	1, 2, 3	18909	1¼		8¼
	5	8300	25,000	40,000	678C248G03	1, 2, 3	18546	1¼	None	8¼
	8	8300	25,000	40,000	678C248G06	1, 2, 3	18569	1¼		8¼
	12	8300	25,000	40,000	591C273G03	1, 2, 3	13782	1¼		8¼
	18	8300	25,000	40,000	678C276G03	1, 2, 3	18863	1¼		8¼
	25	8300	25,000	40,000	678C276G06	1, 2, 3	18975	1¼		8¼
	30	8300	25,000	40,000	678C290G01	1, 2, 3	15922	1½		9⅝
Fuses for use on EFD Switches, Transformer Drawout Wells, LBOR Switches, 2¼ Inch Dia. Ferrule (Minimum Order Quantity (3) (No Returns))										
CLT	90	2750	25,000	40,000	680C387G02	1, 2, 3	69922	1½	None	8¼
	150	2750	25,000	40,000	680C387G01	1, 2, 3	16210	1½		8¼
50/60										
Hertz	30	5500	25,000	40,000	680C386G02	1, 2, 3	16208	1½	None	8¼
	45	5500	25,000	40,000	680C386G05	1, 2, 3	69920	1½		8¼
	60	5500	25,000	40,000	680C386G03	1, 2, 3	16209	1½		8¼
	30	8300	25,000	40,000	680C386G01	1, 2, 3	54117	1½	None	8¼
	45	8300	25,000	40,000	680C386G06	1, 2, 3	82001	1½		8¼
	4	15,500	25,000	40,000	678C295G05	4, 5, 3	16205	1½	None	8¼
	5	15,500	25,000	40,000	678C295G04	4, 5, 3	16203	1½		8¼
	8	15,500	25,000	40,000	678C295G03	4, 5, 3	16202	1½		8¼
	12	15,500	25,000	40,000	678C295G02	4, 5, 3	16201	1½		8¼
	18	15,500	25,000	40,000	678C295G07	4, 5, 3	16207	1½		8¼
	30	14,400	20,000	31,500	9570D10G01	4, 5, 3	78654	1½		8¼

Printed in U.S.A.

① See DB 36-722 for Dimensions.
② Send orders to TOPS, carried in W-16 stock.

Further Information:
Descriptive: DB 36-722
Prices: PL 36-609