



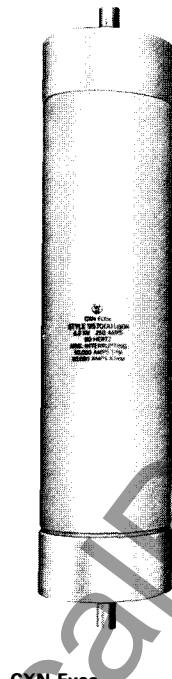
November, 1984
Supersedes Technical Data 36-731
dated March, 1982, and Descriptive Bulletin
36-732 dated March, 1982
Mailed to: E, D, C/36-600A

Current Limiting
2.5 kV to 15 kV
3.5 C to 300 C

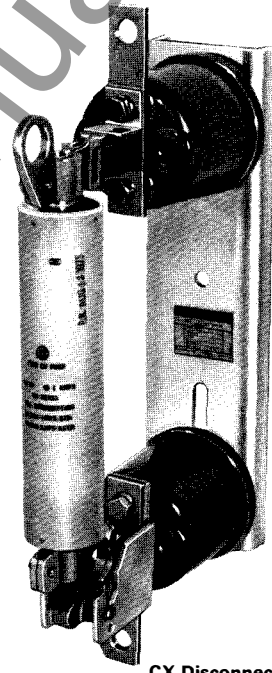
Type CX, CXN High Voltage Power Fuses



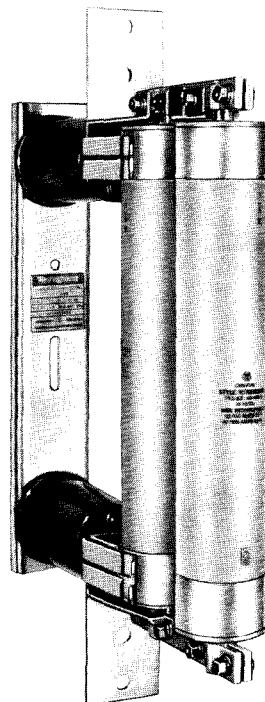
CX Fuses



CXN Fuse



CX Disconnect Mounting



CXN Parallel Fuses
in Mounting

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Type CX, CXN High Voltage Power Fuses

Application

The CX general purpose current limiting fuse was designed specifically to provide complete fault protection on high capacity indoor and underground distribution systems. A "C" rated fuse, the CX meets or exceeds the requirements of the latest ANSI standards for general purpose distribution current limiting fuses.

Fuse Ratings Available

Voltage	Amperes
2.8/4.3 KV	18 C to 100 C
5.5 KV	10 C to 75 C
8.3 KV	3.5 C to 40 C
15.5 KV	4.0 C to 40 C

CX fuses are applied in:

Padmounted and submersible three-phase and single phase transformers

Padmounted and submersible switch and fuse units

Station service protection

Primary switch and fuse units on mine rectifiers

Advantages

Quiet Safe Operation

A non-indicating fuse, the CX will clear currents from published 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

CX 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

Inorganic core with spaced arc guards prevent internal flash through when rated voltage remains across fuse after interruption.

Fits Many Mountings

The CX fuse can be used in disconnect and non-disconnect mountings, EFD load break switches (through 8.3 KV) and dry well draw-out fuse holders.

Interchangeable

The CX fuse is a direct replacement for, and interchangeable with competitive general purpose distribution class current limiting fuses.

Construction and Operation

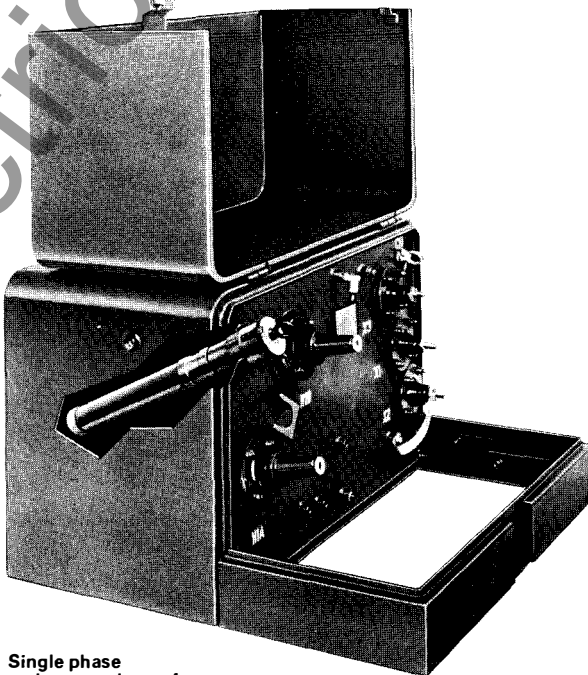
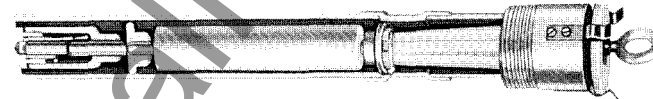
Type CX are constructed with pure silver fuse elements, a high-purity silica sand filler, an inorganic core with spaced arc suppressors, and glass melamine or epoxy outer casing.

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.

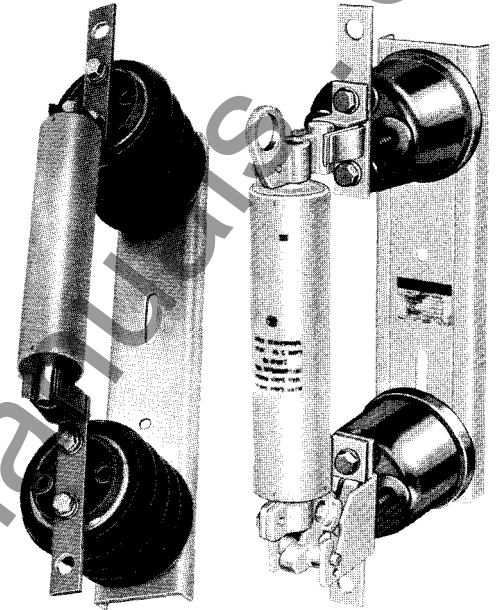
Current limiting action occurs only when the current is high enough to melt the silver fuse element before the peak value of current in the first half cycle.

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.

Typical Applications

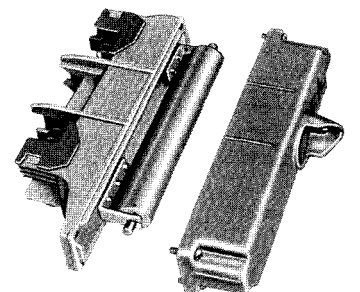
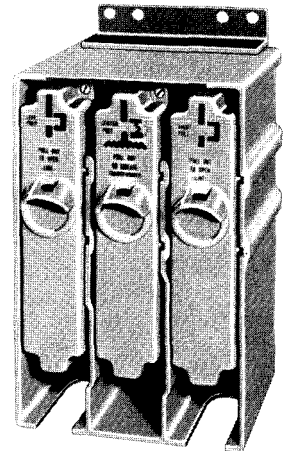


Single phase padmounted transformer with CV fuse in drywell drawout fuse holder.



Non-disconnect mounting

Disconnect mounting



EFD fused disconnect with CX fuse



Type CX, CXN High Voltage Power Fuses

Table A – Fuse Units, Type CX Minimum Order Quantity (3) Per Style. (No Returns)

Type	Amps	Max. Design Voltage	Interrupting Rating RMS Amps (Sym.)	Interrupting Rating RMS Amps (Asym.)	Style Number	Curve Number	Approx. Ship Wt. Lbs.	Fuse Mtg.	Fuse Ferrule Dia. (Inches)
CX	18C	4300	50,000	80,000	5978C62G01	5, 6, 13, 15, 19	1.0	A	1.13
	25C	4300	50,000	80,000	5978C62G02	5, 6, 13, 15, 19	1.0	A	1.13
	35C	4300	50,000	80,000	5978C62G03	5, 6, 13, 15, 19	1.0	A	1.13
	45C	4300	50,000	80,000	5978C66G01	5, 6, 13, 15, 19	2.0	A	2.0
	50C	4300	50,000	80,000	5978C66G02	5, 6, 13, 15, 19	2.0	A	2.0
	60C	4300	50,000	80,000	151D253G06	3, 4, 13, 15, 19	2.0	A	2.0
	65C	4300	50,000	80,000	5978C66G03	5, 6, 13, 15, 19	2.0	A	2.0
	75C	4300	50,000	80,000	5978C66G04	5, 6, 13, 15, 19	2.0	A	2.0
	80C	4300	50,000	80,000	151D253G08	3, 4, 13, 15, 19	2.0	A	2.0
	100C	4300	50,000	80,000	5978C66G05	5, 6, 13, 15, 19	2.0	A	2.0
CX	10C	5500	50,000	80,000	151D254G11	7, 8, 13, 16, 20	1.0	A	1.13
	12C	5500	50,000	80,000	151D254G12	7, 8, 13, 16, 20	1.0	A	1.13
	18C	5500	50,000	80,000	5978C70G01	7, 8, 13, 16, 20	1.0	A	1.13
	20C	5500	50,000	80,000	5978C70G02	7, 8, 13, 16, 20	2.0	A	2.0
	21C	5500	50,000	80,000	151D254G04	3, 4, 13, 16, 20	2.0	A	2.0
	25C	5500	50,000	80,000	5978C70G03	7, 8, 13, 16, 20	2.0	A	2.0
	30C	5500	50,000	80,000	5978C70G04	7, 8, 13, 16, 20	2.0	A	2.0
	35C	5500	50,000	80,000	151D254G06	3, 4, 13, 16, 20	2.0	A	2.0
	40C	5500	50,000	80,000	5978C70G05	7, 8, 13, 16, 20	2.0	A	2.0
	50C	5500	50,000	80,000	5978C70G06	7, 8, 13, 16, 20	2.0	A	2.0
	60C	5500	50,000	80,000	151D254G09	3, 4, 13, 16, 20	2.0	A	2.0
	65C	5500	50,000	80,000	5978C70G07	7, 8, 13, 16, 20	2.0	A	2.0
	75C	5500	50,000	80,000	5978C70G08	7, 8, 13, 16, 20	2.0	A	2.0
CX	13.5C	8300	50,000	80,000	151C255G01	1, 2, 14, 17, 21	1.0	B	1.13
	4C	8300	50,000	80,000	151C255G02	1, 2, 14, 17, 21	1.0	B	1.13
	4.5C	8300	50,000	80,000	5978C62G04	9, 10, 14, 17, 21	1.0	B	1.13
	6C	8300	50,000	80,000	5978C62G05	9, 10, 14, 17, 21	1.0	B	1.13
	7C	8300	50,000	80,000	151D255G03	1, 2, 14, 17, 21	1.0	B	1.13
	8C	8300	50,000	80,000	5978C62G06	9, 10, 14, 17, 21	1.0	B	1.13
	10C	8300	50,000	80,000	151D255G11	9, 10, 14, 17, 21	1.0	B	1.13
	12C	8300	50,000	80,000	151D255G12	9, 10, 14, 17, 21	1.0	B	1.13
	15C	8300	50,000	80,000	151D255G06	3, 4, 14, 17, 21	2.0	B	2.0
	18C	8300	50,000	80,000	5978C72G01	9, 10, 14, 17, 21	2.0	B	2.0
	20C	8300	50,000	80,000	5978C72G02	9, 10, 14, 17, 21	2.0	B	2.0
	25C	8300	50,000	80,000	5978C72G03	9, 10, 14, 17, 21	2.0	B	2.0
	30C	8300	50,000	80,000	5978C72G04	9, 10, 14, 17, 21	2.0	B	2.0
	35C	8300	50,000	80,000	151D255G09	3, 4, 14, 17, 21	2.0	B	2.0
	40C	8300	50,000	80,000	5978C72G05	9, 10, 14, 17, 21	2.0	B	2.0
CX	4C	15,500	50,000	80,000	151D883G01	11, 12, 14, 18, 22	2.5	C	2.0
	6C	15,500	50,000	80,000	9570D12G06	11, 12, 14, 18, 22	2.5	C	2.0
	7C	15,500	50,000	80,000	151D883G02	1, 2, 14, 18, 22	2.5	C	2.0
	8C	15,500	50,000	80,000	9570D12G07	11, 12, 14, 18, 22	2.5	C	2.0
	10C	15,500	50,000	80,000	151D883G11	11, 12, 14, 18, 22	2.5	C	2.0
	12C	15,500	50,000	80,000	9570D12G08	11, 12, 14, 18, 22	2.5	C	2.0
	15C	15,500	50,000	80,000	151D883G05	3, 4, 14, 18, 22	2.5	C	2.0
	18C	15,500	50,000	80,000	9570D12G01	11, 12, 14, 18, 22	2.5	C	2.0
	20C	15,500	50,000	80,000	9570D12G02	11, 12, 14, 18, 22	2.5	C	2.0
	25C	15,500	50,000	80,000	9570D12G03	11, 12, 14, 18, 22	2.5	C	2.0
	30C	15,500	50,000	80,000	9570D12G04	11, 12, 14, 18, 22	2.5	C	2.0
	40C	15,500	50,000	80,000	9570D12G05	11, 12, 14, 18, 22	2.5	C	2.0

Table B – Fuse Units, Type CXN Minimum Order Quantity (3) Per Style (No Returns)

Type	Amps	Max. Design Voltage	Interrupting Rating RMS Amps (Sym.)	Interrupting Rating RMS Amps (Asym.)	Style Number	Curve Number	Approx. Ship Wt. Lbs.	Fuse Mtg.	Clip Center (Inches)
Fuses for use on Transformer Protection, 3 Inch and 4 Inch Dia. Ferrule General Purpose									
CXN 50/60 Hertz	60C	8300	50,000	80,000	9570D01G01①	1, 2, 3	8	D/G	14½
	100C	8300	50,000	80,000	9570D01G02①	1, 2, 3	8	D/G	14½
	125C	8300	50,000	80,000	9570D01G03②	1, 2, 3	14	D/G	14½
	150C	8300	50,000	80,000	9570D01G04②	1, 2, 3	14	D/G	14½
	200C	8300	50,000	80,000	9570D01G05②	1, 2, 3	14	F/H	14½
	250C	8300	50,000	80,000	9570D01G06②	1, 2, 3	14	F/H	14½
	300C	8300	50,000	80,000	②④	7, 8	28	F	14½
	45C	15,000	50,000	80,000	9570D02G02①	4, 5, 6	8	D/G	14½
	60C	15,000	50,000	80,000	9570D02G03①	4, 5, 6	8	D/G	14½
	75C	15,000	50,000	80,000	9570D02G04②	4, 5, 6	14	D/G	14½
	85C	15,000	50,000	80,000	9570D02G05②	4, 5, 6	14	D/G	14½
	100C	15,000	50,000	80,000	9570D02G06②	4, 5, 6	14	D/G	14½
	120C	15,000	50,000	80,000	①⑥	9, 10	16	E	14½
	150C	15,000	50,000	80,000	②⑥	9, 10	28	F	14½
	175C	15,000	50,000	80,000	②⑦	9, 10	28	F	14½

① 3 Inch Ferrule Diameter.

② 4 Inch Ferrule Diameter.

③ Disconnect mountings include base, insulators, live parts and fuse fittings.

④ Fuse consists of qty 2 9570D01G04 fuses and qty 1 set of 7275A85G02 clamps.

⑤ Fuse consists of qty 2 9570D02G03 fuses and qty 1 set of 7275A85G02 clamps.

⑥ Fuse consists of qty 2 9570D02G04 fuses and qty 1 set of 7275A85G02 clamps.

⑦ Fuse consists of qty 2 9570D02G05 fuses and qty 1 set of 7275A85G02 clamps.



Type CX, CXN High Voltage Power Fuses

**Table C – CX Current Limiting Fuse
Competitive Interchangeability Chart** ① ②

Cont. Current Rating "C"	Voltage kV	Westinghouse – CX		McGraw – NX		General Electric – GP		RTE-ELX	
		Style No.	Mtg. Size ③	Style No.	Mtg. Size ③	Style No.	Mtg. Size	Style No.	Mtg. Size
18	2.8/4.3	5978C62G01	A	FA1H18	4	9F59KAA018	NA	3563018M11	4
25	2.8/4.3	5978C62G02	A	FA1H25	4	9F59KAA025	NA	3563025M11	4
35	2.8/4.3	5978C62G03	A	FA1H35	4	9F59KAA035	NA	3563035M11	4
45	2.8/4.3	5978C66G01	A	FA1H45	4	NA	NA	3563045M11	4
50	2.8/4.3	5978C66G02	A	FA1H50	4	9F59KBA050	NA	NA	NA
60	2.8/4.3	151C253G06	A	NA	4	NA	NA	NA	NA
65	2.8/4.3	5978C66G03	A	FA1H65	4	NA	NA	NA	NA
75	2.8/4.3	5978C66G04	A	FA1H75	4	9F59KBA065	NA	NA	NA
80	2.8/4.3	151D253G08	A	NA	NA	NA	NA	NA	NA
100	2.8/4.3	5978C66G05	A	FA1H100	4	9F59KBA100	NA	NA	NA
10	5.5	151D254G11	A	FA2H10	4	9F59KAB010	NA	NA	NA
12	5.5	151D254G12	A	FA2H12	4	9F59KAB012	NA	3563012M11	4
18	5.5	5978C70G01	A	FA2H18	4	9F59KAB018	NA	3563018M11	4
20	5.5	5978C70G02	A	FA2H20	4	NA	NA	3563020M11	4
21	5.5	151D254G04	A	NA	4	NA	NA	NA	NA
25	5.5	5978C70G03	A	FA2H25	4	9F59KBB025	NA	3563025M11	4
30	5.5	5978C70G04	A	FA2H30	4	NA	NA	3563030M11	4
35	5.5	151D254G06	A	NA	4	NA	NA	NA	NA
40	5.5	5978C70G05	A	FA2H40	4	9F59KBB040	NA	3563040M11	4
50	5.5	5978C70G06	A	FA2H50	4	NA	NA	NA	NA
60	5.5	151D254G09	A	NA	NA	9F59KBB060	NA	NA	NA
65	5.5	5978C70G07	A	NA	NA	NA	NA	NA	NA
75	5.5	5978C70G08	A	NA	NA	NA	NA	NA	NA
3.5	8.3	151D255G01	B	NA	NA	NA	NA	NA	NA
4	8.3	151D255G02	B	NA	NA	NA	NA	NA	NA
4.5	8.3	5978C62G04	B	FA3H4	4	NA	NA	3563004M11	4
6	8.3	5978C62G05	B	FA3H6	4	NA	NA	3563006M11	4
7	8.3	151D255G03	B	NA	4	NA	NA	NA	NA
8	8.3	5978C62G06	B	FA3H8	4	9F59KAC008	NA	3563008M11	4
10	8.3	151D255G11	B	FA3H10	4	9F59KAC010	NA	NA	NA
12	8.3	151D255G12	B	FA3H12	4	9F59KAC012	NA	3563012M11	4
15	8.3	151D255G06	B	NA	4	9F59KAC015	NA	NA	NA
18	8.3	5978C72G01	B	FA3H18	4	NA	NA	3563018M11	4
20	8.3	5978C72G02	B	FA3H20	4	NA	NA	3563020M11	4
25	8.3	5978C72G03	B	FA3H25	4	NA	NA	3563025M11	4
30	8.3	5978C72G04	B	FA3H30	4	NA	NA	3563030M11	4
35	8.3	151D255G09	B	NA	4	NA	NA	NA	NA
40	8.3	5978C72G05	B	FA3H40	4	9F59KBC040	NA	3563040M11	4
4	15.5	151D883G01	C	NA	NA	NA	NA	3564004M11	5
6	15.5	9570D12G06	C	FA4H6	5	9F59KBD006	NA	3564006M11	5
7	15.5	151D883G02	C	NA	NA	NA	NA	NA	NA
8	15.5	9570D12G07	C	FA4H8	5	9F59KBD008	NA	3564008M11	5
10	15.5	151D883G11	C	FA4H10	5	9F59KBD010	NA	NA	NA
12	15.5	9570D12G08	C	FA4H12	5	9F59KBD012	NA	3564012M11	5
15	15.5	151D833G05	C	NA	NA	9F59KBD015	NA	NA	NA
18	15.5	9570D12G01	C	FA4H18	5	NA	NA	3564018M11	5
20	15.5	9570D12G02	C	FA4H20	5	9F59KBD020	NA	3564020M11	5
25	15.5	9570D12G03	C	FA4H25	5	9F59KBD025	NA	3564025M11	5
30	15.5	9570D12G04	C	FA4H30	5	9F59KBD030	NA	3564030M11	5
40	15.5	9570D12G05	C	FA4H40	5	9F59KBD040	NA	3564040M11	5

- ① Fuses are physically and electrically interchangeable as indicated.
- ② All have 50,000 sym. amperes I.C.
- ③ For single or parallel clip mountings disconnect or non-disconnect type.
- ④ GE fuses are not 2.8/4.3 rated. Maximum voltage rating is 2.8 kV.

Further Information
Application: AD 36-733
Dimensions: TCS 36-710
Prices: PL 36-609

Westinghouse Electric Corporation
Distribution and Protection Business Unit
Commercial Division
Sumter, SC 29150