THE H/J FAMILY® OF COMPANIES
SINCE 1969

MERSEN

CURRENT LIMITING FUSES

As the demand for improved transformer and system protection against high fault currents continues to grow, the electric utility industry has increasingly adopted **current-limiting fuses.** Their energy-limiting characteristics help prevent catastrophic transformer failures by reducing fault energy to a manageable level.

H-J offers an extensive line of back-up Current-Limiting Fuses, a non-expulsion fuse type with a high interrupting capacity of up to **50,000 A**. These fuses are primarily used to isolate a failed transformer from the system, avoiding the failure to extend to users other than the ones served by the failed transformer.

H-J's back-up current-limiting fuses are engineered to interrupt all currents from their rated maximum down to the minimum interrupting current, as defined in IEEE C.37.40-2003. For internal transformer protection, these fuses are sealed against oil ingress and undergo a helium mass spectrometer leak test to ensure seal integrity.

Since it is a partial-range fuse, another over-current protective device must be used in series to give protection through the complete range.

Normally in distribution transformers, this in-serie device takes the form of an under-oil expulsion fuse. The oil-submersible, **Current Limiting Fuse** interrupts the high-fault currents while the expulsion fuse interrupts low-fault currents.

These two fuses are coordinated to protect each fuse beyond its capability and to achieve full range protection of the transformer.

H-J offers a classic Oil-Submerged Protection (OSP) Backup Current-Limiting Fuse along with a range of "Shorty" Current-Limiting Fuses, designed for maximum space efficiency.

STANDARD/SHORTY CURRENT LIMITING FUSE FEATURES:

- The "Shorty" design allows for maximum space utilization
- 8.3 kV ~ 38 kV Class Range
- 30 A ~ 200 A Current Ratings Range
- Up to 50,000 A interrupting rating
- Fuses can be paralleled for higher ratings
- 100% factory-tested for resistance and hermetic seal
- Tested to meet ANSI/IEEE standards.
- Fast lead times and available stock

CLASSIC CURRENT LIMITING FUSE FEATURES:

- 8.3 kV ~ 23 kV Class Range
- 30 A ~ 300 A Current Ratings Range
- 100% factory-tested for resistance and hermetic seal.

info@h-j.com www.h-j.com

H-J is able to **pre-mount** our entire line of **Current Limiting Fuses** including the **"Shorty"** line, in various configurations and mounting styles.
We can mount a single fuse on a standard **H-J "Universal"** mounting block. A single fuse or multiple fuses can also be installed on various styles of mounting boards for 3-phase or parallel applications.
To support parallel arrangements using two current-limiting fuses–and to ensure balanced impedance between the parallel branches–H-J offers a dedicated support bracket designed to connect both fuses securely.

H-J offers fuses pre-mounted utilizing a **Universal CL Fuse Holder** with Stainless Steel clamps.

FUSE & BREAKER COORDINATION

Our Fuse Coordination Software streamlines transformer design by allowing seamless coordination between expulsion fuses and partial-range current-limiting fuses. This approach ensures precise, cost-effective full-range protection, with adaptable solutions for various applications.

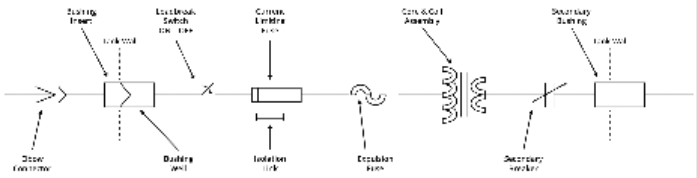
The H-J Fuse & Breaker Coordination Tool is specifically designed for electrical utility specification engineers, transformer designers, manufacturers, and power consultants. By entering the appropriate values and parameters, users receive real-time feedback to assist in selecting the optimal fuses and breakers.

To ensure accurate system protection, all results must be reviewed by an expert in selective coordination and system protection before finalizing device selection. Users are responsible for verifying input values and confirming coordination before implementation.

The H-J Family of Companies is proud to offer this Fuse Coordination Tool, available at:
www.h-j.com/fuse-coordination.

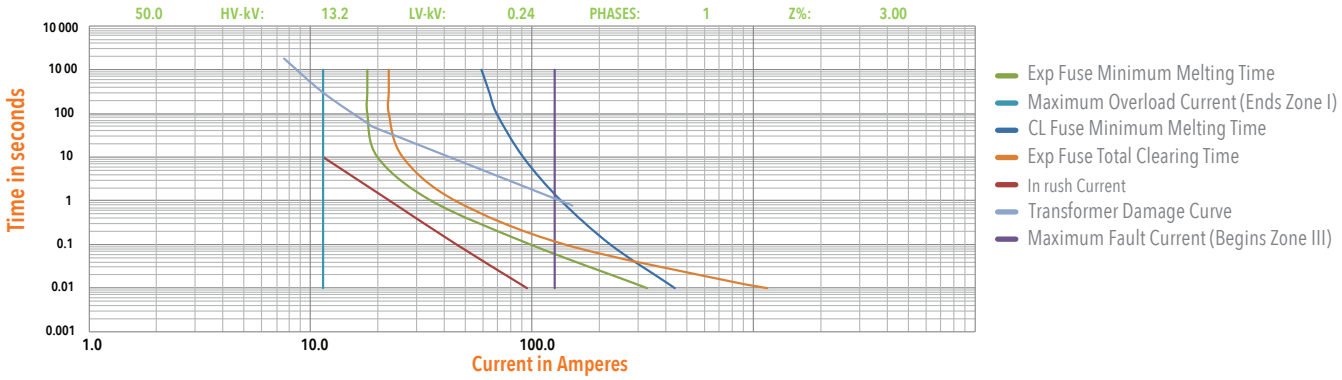
Support to Parallel CLFs
Part numbers: DFS-25-00 & DFS-38-00

Parallel Arrangement 9F59CDF200, 38 kV 200 Amp Fuse

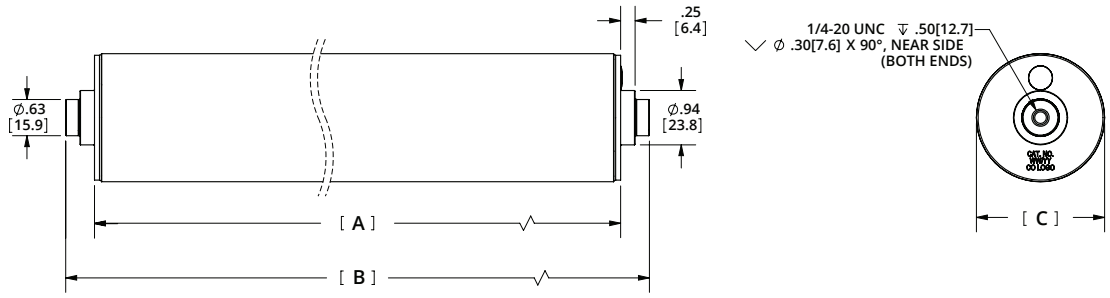


Connecting diagram for a padmounted transformer in a radial circuit.

COORDINATION CURVES - CURRENT LIMITING AND EXPULSION FUSE



SHORTY-STANDARD OSP CURRENT-LIMITING FUSE

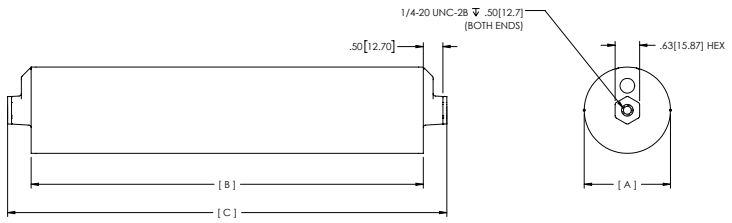


MAXIMUM VOLTAGE RATING	CONTINUOUS CURRENT RATING	MAXIMUM INTERRUPTING RATING	H-J CAT. #	DIMENSIONS (INCHES)		
KV	RMS AMPS	RMS AMPS SYMMETRICAL	--	BODY LENGTH "A"	OVERALL LENGTH "B"	FUSE DIAMETER "C"
8.3 kV	30	50,000	9F59CBC030	6.09	7.09	2.21
	40	50,000	9F59CBC040	6.09	7.09	2.21
	125	50,000	9F59CBC125	9.89	10.92	2.21
	150	50,000	9F59CBC150	9.89	10.92	2.21
	165	50,000	9F59CBC165	9.89	10.92	2.21
	200	50,000	9F59CBC200	9.89	10.92	2.21
10.0 kV	50	50,000	9F59CBC050	6.68	7.70	2.21
	65	50,000	9F59CBC065	6.68	7.70	2.21
	80	50,000	9F59CBC080	6.68	7.70	2.21
	100	50,000	9F59CBC100	6.68	7.70	2.21
15.5 kV	165	50,000	9F59CBD165	15.49	16.53	2.21
17.2 kV	30	50,000	9F59CBD030	8.17	9.17	2.21
	40	50,000	9F59CBD040	8.17	9.17	2.21
	50	50,000	9F59CBD050	8.17	9.17	2.21
	65	50,000	9F59CBD065	11.01	12.01	2.21
	80	50,000	9F59CBD080	11.01	12.01	2.21
	100	50,000	9F59CBD100	11.01	12.01	2.21
	125	43,500 *	9F59CBD125	15.49	16.49	2.21
	150	43,500	9F59CBD150	15.49	16.49	2.21
25.5 kV	30	50,000	9F59CBE030	11.68	12.68	2.21
	40	50,000	9F59CBE040	11.68	12.68	2.21
	50	50,000	9F59CBE050	11.68	12.68	2.21
	65	50,000	9F59CBE065	15.29	16.29	2.21
	80	50,000	9F59CBE080	15.29	16.29	2.21
	100	50,000	9F59CBE100	15.29	16.29	2.21
38.0 kV	65	50,000	9F59CCF065	18.32	19.32	3.29
	80	50,000	9F59CCF080	18.32	19.32	3.29
	100	50,000	9F59CCF100	18.32	19.32	3.29
	125	50,000	9F59CCF125	18.32	19.32	3.29
	140	50,000	9F59CCF140	20.97	21.97	3.29
	165	50,000	9F59CCF165	20.97	21.97	3.29
	200	50,000	9F59CDF200**	20.97	25.97	3.29

* The fuse provides a maximum interrupting current rating of **50 kA at 15.5 kV.**

**The fuse is configured in a parallel arrangement.

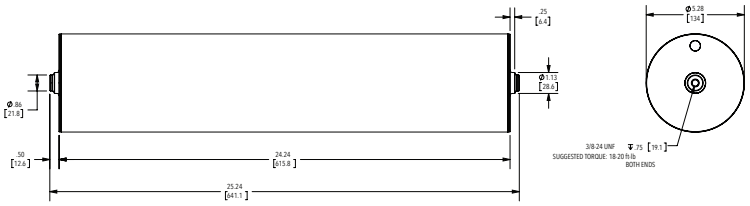
CLASSIC OSP CURRENT-LIMITING FUSE



MAXIMUM VOLTAGE RATING	CONTINUOUS CURRENT RATING	MAXIMUM INTERRUPTING RATING	H-J CAT. #	DIMENSIONS (INCHES)		
KV	RMS AMPS	RMS AMPS SYMMETRICAL	--	FUSE DIAMETER "A"	BODY LENGTH "B"	OVERALL LENGTH "C"
8.3 kV	40	50,000	9F59TBC040	2.2	10	11.2
	50	50,000	9F59TBC050	2.2	10	11.2
	65	50,000	9F59TBC065	2.2	10	11.2
	80	50,000	9F59TBC080	2.2	10	11.2
	100	50,000	9F59TBC100	2.2	10	11.2
	125	50,000	9F59TCC125	3.3	10	1 1.2
	150	50,000	9F59TCC150	3.3	10	11.2
	200	50,000	9F59TCC200	3.3	10	11.2
	250	50,000	This rating is achieved by paralleling 2-9F59TCC225 fuses.			
	300	50,000	This rating is achieved by paralleling 2-9F59TCC150 fuses.			
15.5 kV	40	50,000	9F59TBD040	2.2	15.42	16.62
	50	50,000	9F59TBD050	2.2	15.42	16.62
	65	50,000	9F59TBD065	2.2	15.42	16.62
	80	50,000	9F59TBD080	2.2	15.42	16.62
	100	50,000	9F59TCD100	3.3	15.42	16.62
	125	50,000	9F59TCD125	3.3	15.42	16.62
	150	50,000	9F59TCD150	3.3	15.42	16.62
	250	50,000	This rating is achieved by paralleling 2-9F59TCD125 fuses.			
	300	50,000	This rating is achieved by paralleling 2-9F59TCD150 fuses.			
23.0 kV	40	50,000	9F59TBE040	2.2	15.42	16.62
	50	50,000	9F59TBE050	2.2	15.42	16.62
	65	50,000	9F59TBE065	2.2	15.42	16.62

XL OSP CURRENT LIMITING FUSE

To help **protect padmounted transformers up to 12 MVA,** H-J and Mersen have developed a high-energy fuse, known as the XL, with the following characteristics:



MAXIMUM VOLTAGE RATING	CONTINUOUS CURRENT RATING	MAXIMUM INTERRUPTING RATING	H-J CAT. #	DIMENSIONS (INCHES)		
KV	RMS AMPS	RMS AMPS SYMMETRICAL		BODY LENGTH	OVERALL LENGTH	FUSE DIAMETER
38.0 kV	150	50,000	9F59CXL150	24.24	25.24	5.28

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