

# Distribution Transformer Protection

## Sure Guard 9F59U Series ETP Fuses

### 8.3kV / 15.5kV / 23.0kV ETP fuses

The Sure Guard ETP back-up current-limiting fuses are designed to protect distribution transformers and are used in series with another protective device (such as an expulsion fuse). This combination limits the high-fault current to a safe level, thus providing protection through the complete range. As its name implies, the “ETP” is for External Transformer Protection. For conventional transformers protected by expulsion-fuses cutouts, the ETP can be installed in series with the cutout. For self protected transformers, the ETP can be applied on the high-voltage bushing in series with the internal transformer expulsion fuse.

### Features/Benefits:

- Various hardware options.
- Current-limiting for superior equipment protection.
- High fault current interrupting capability: I.R. Sym = 50kA at ETP voltage rating.

### Highlights:

- Outdoor use

### Applications:

- Overhead distribution systems

### Definitions:

#### Back-up Current-Limiting Fuses:

A back-up current-limiting fuse is a fuse that can interrupt any current between its rated minimum interrupting current and its maximum interrupting current. Back-up fuses are not designed or intended to open under overload conditions.

### Hardware Options:

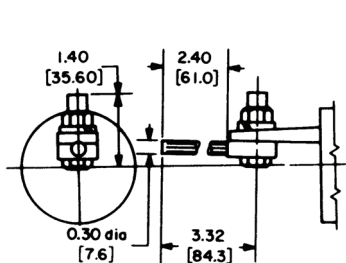


Fig. 1. Adapter only  
9F59AAW007

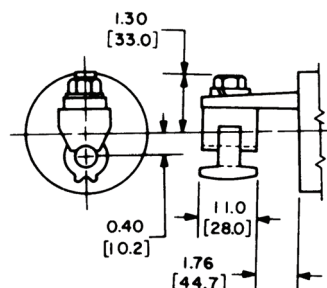


Fig. 2. Eyebolt only,  
for 6-2/0 cable  
9F59AAW008

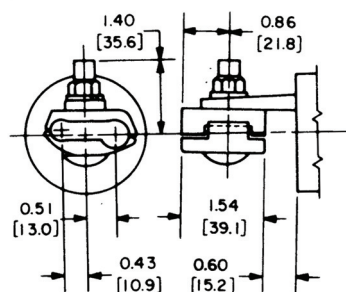


Fig. 3. Parallel groove only,  
for 2/0 to 250MCM cable  
9F59AAW009



### Ratings:

#### 9F50UBC:

Volts : 8.3kV AC

#### 9F50UBD:

Volts : 15.5kV AC

#### 9F50UBE:

Volts : 23.0kV AC

Catalog No. Suitable for Parallel Application	
Catalog Number	Max kV
9F59UBC208	8.3
9F59UBC218	8.3
9F59UBC228	8.3
9F59UBC238	8.3
9F59UBC248	8.3
9F59UBC258	8.3
9F59UBC268	8.3
9F59UBC278	8.3
9F59UBC288	8.3
9F59UBD208	15.5
9F59UBD218	15.5
9F59UBD228	15.5
9F59UBD238	15.5
9F59UBD248	15.5
9F59UBD258	15.5
9F59UBD268	15.5
9F59UBD278	15.5
9F59UBD288	15.5

# Distribution Transformer Protection

## Sure Guard 9F59U Series ETP Fuses

### Sure Guard rated 8.3kV

Catalog No.	ETP Rating	ETP Hardware	Minimum kV Class	Recommended Max. Expulsion	Max. Total Ft	I.C. Amperes	Min. Melt Curve	Total Clear Curve	Let-through Curve
9F59UBC101	8.3, Spade & Stud	Without Hardware	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC111	8.3, Spade & Stud	(1) Adapter	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC121	8.3, Spade & Stud	(1) Eyebolt Terminal	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC131	8.3, Spade & Stud	(1) Parallel Groove	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC201	8.3, Spade & Spade	Without Hardware	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC211	8.3, Spade & Spade	(1) Adapter	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC221	8.3, Spade & Spade	(1) Eyebolt Terminal	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC231	8.3, Spade & Spade	(1) Parallel Groove	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC241	8.3, Spade & Spade	Adapter & eyebolt terminal	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC251	8.3, Spade & Spade	Adapter & parallel groove	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC261	8.3, Spade & Spade	Eyebolt terminal & parallel groove	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC271	8.3, Spade & Spade	(2) Eyebolt terminals	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC281	8.3, Spade & Spade	(2) Parallel groove	15	8T or 12K	16000	440	GES-8228A	GES-8229A	GET-6693A
9F59UBC102	8.3, Spade & Stud	Without Hardware	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC112	8.3, Spade & Stud	(1) Adapter	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC122	8.3, Spade & Stud	(1) Eyebolt Terminal	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC132	8.3, Spade & Stud	(1) Parallel Groove	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC202	8.3, Spade & Spade	Without Hardware	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC212	8.3, Spade & Spade	(1) Adapter	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC222	8.3, Spade & Spade	(1) Eyebolt Terminal	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC232	8.3, Spade & Spade	(1) Parallel Groove	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC242	8.3, Spade & Spade	Adapter & eyebolt terminal	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC252	8.3, Spade & Spade	Adapter & parallel groove	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC262	8.3, Spade & Spade	Eyebolt terminal & parallel groove	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC272	8.3, Spade & Spade	(2) Eyebolt terminals	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC282	8.3, Spade & Spade	(2) Parallel groove	15	15T or 25K	50000	450	GES-8228A	GES-8229A	GET-6693A
9F59UBC104	8.3, Spade & Stud	Without Hardware	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC114	8.3, Spade & Stud	(1) Adapter	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC124	8.3, Spade & Stud	(1) Eyebolt Terminal	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC134	8.3, Spade & Stud	(1) Parallel Groove	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC204	8.3, Spade & Spade	Without Hardware	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC214	8.3, Spade & Spade	(1) Adapter	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC224	8.3, Spade & Spade	(1) Eyebolt Terminal	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC234	8.3, Spade & Spade	(1) Parallel Groove	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC244	8.3, Spade & Spade	Adapter & eyebolt terminal	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC254	8.3, Spade & Spade	Adapter & parallel groove	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC264	8.3, Spade & Spade	Eyebolt terminal & parallel groove	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC274	8.3, Spade & Spade	(2) Eyebolt terminals	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC284	8.3, Spade & Spade	(2) Parallel groove	15	25T or 40K	140000	560	GES-8228A	GES-8229A	GET-6693A
9F59UBC208	8.3, Spade & Spade	Without Hardware	15	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBC218	8.3, Spade & Spade	(1) Adapter	15	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBC228	8.3, Spade & Spade	(1) Eyebolt Terminal	15	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBC238	8.3, Spade & Spade	(1) Parallel Groove	15	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBC248	8.3, Spade & Spade	Adapter & eyebolt terminal	15	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBC258	8.3, Spade & Spade	Adapter & parallel groove	15	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBC268	8.3, Spade & Spade	Eyebolt terminal & parallel groove	15	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBC278	8.3, Spade & Spade	(2) Eyebolt terminals	15	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBC288	8.3, Spade & Spade	(2) Parallel groove	15	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A

# Distribution Transformer Protection

## Sure Guard 9F59U Series ETP Fuses

### Sure Guard rated 15.5kV

Catalog No.	ETP Rating	ETP Hardware	Min kV Class	Recommended Max. Expulsion	Max. Total I <sup>2</sup> t	I.C. Amperes	Min. Melt Curve	Total Clear Curve	Let-through Curve
9F59UBD101	15.5, Spade & Stud	Without Hardware	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD111	15.5, Spade & Stud	(1) Adapter	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD121	15.5, Spade & Stud	(1) Eyebolt Terminal	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD131	15.5, Spade & Stud	(1) Parallel Groove	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD201	15.5, Spade & Spade	Without Hardware	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD211	15.5, Spade & Spade	(1) Adapter	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD221	15.5, Spade & Spade	(1) Eyebolt Terminal	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD231	15.5, Spade & Spade	(1) Parallel Groove	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD241	15.5, Spade & Spade	Adapter & eyebolt terminal	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD251	15.5, Spade & Spade	Adapter & parallel groove	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD261	15.5, Spade & Spade	Eyebolt terminal & parallel groove	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD271	15.5, Spade & Spade	(2) Eyebolt terminals	25	8T or 12K	16000	510	GES-8228A	GES-8229A	GET-6693A
9F59UBD102	15.5, Spade & Stud	Without Hardware	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD112	15.5, Spade & Stud	(1) Adapter	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD122	15.5, Spade & Stud	(1) Eyebolt Terminal	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD132	15.5, Spade & Stud	(1) Parallel Groove	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD202	15.5, Spade & Spade	Without Hardware	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD212	15.5, Spade & Spade	(1) Adapter	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD222	15.5, Spade & Spade	(1) Eyebolt Terminal	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD232	15.5, Spade & Spade	(1) Parallel Groove	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD242	15.5, Spade & Spade	Adapter & eyebolt terminal	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD252	15.5, Spade & Spade	Adapter & parallel groove	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD262	15.5, Spade & Spade	Eyebolt terminal & parallel groove	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD272	15.5, Spade & Spade	(2) Eyebolt terminals	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD282	15.5, Spade & Spade	(2) Parallel groove	25	15T or 25K	50000	480	GES-8228A	GES-8229A	GET-6693A
9F59UBD104	15.5, Spade & Stud	Without Hardware	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD114	15.5, Spade & Stud	(1) Adapter	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD124	15.5, Spade & Stud	(1) Eyebolt Terminal	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD134	15.5, Spade & Stud	(1) Parallel Groove	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD204	15.5, Spade & Spade	Without Hardware	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD214	15.5, Spade & Spade	(1) Adapter	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD224	15.5, Spade & Spade	(1) Eyebolt Terminal	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD234	15.5, Spade & Spade	(1) Parallel Groove	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD244	15.5, Spade & Spade	Adapter & eyebolt terminal	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD254	15.5, Spade & Spade	Adapter & parallel groove	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD264	15.5, Spade & Spade	Eyebolt terminal & parallel groove	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD274	15.5, Spade & Spade	(2) Eyebolt terminals	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD284	15.5, Spade & Spade	(2) Parallel groove	25	25T or 40K	140000	890	GES-8228A	GES-8229A	GET-6693A
9F59UBD208	15.5, Spade & Spade	Without Hardware	25	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBD218	15.5, Spade & Spade	(1) Adapter	25	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBD228	15.5, Spade & Spade	(1) Eyebolt Terminal	25	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBD238	15.5, Spade & Spade	(1) Parallel Groove	25	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBD248	15.5, Spade & Spade	Adapter & eyebolt terminal	25	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBD258	15.5, Spade & Spade	Adapter & parallel groove	25	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBD268	15.5, Spade & Spade	Eyebolt terminal & parallel groove	25	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBD278	15.5, Spade & Spade	(2) Eyebolt terminals	25	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A
9F59UBD288	15.5, Spade & Spade	(2) Parallel groove	25	50T or 80K	88000	1200	GES-8228A	GES-8229A	GET-6693A

# Distribution Transformer Protection

## Sure Guard 9F59U Series ETP Fuses

Sure Guard rated 23.0kV

Catalog No.	ETP Rating	ETP Hardware	kV Class	Recommended Max. Expulsion	Max. Total Pt	Minimum I.C. Amperes	Min. Melt Curve	Total Clear Curve	Let-through Curve
9F59UBE101	23.0, Spade & Stud	Without Hardware	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE111	23.0, Spade & Stud	(1) Adapter	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE121	23.0, Spade & Stud	(1) Eyebolt Terminal	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE131	23.0, Spade & Stud	(1) Parallel Groove	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE201	23.0, Spade & Spade	Without Hardware	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE211	23.0, Spade & Spade	(1) Adapter	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE221	23.0, Spade & Spade	(1) Eyebolt Terminal	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE231	23.0, Spade & Spade	(1) Parallel Groove	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE241	23.0, Spade & Spade	Adapter & eyebolt terminal	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE251	23.0, Spade & Spade	Adapter & parallel groove	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE261	23.0, Spade & Spade	Eyebolt terminal & parallel groove	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE271	23.0, Spade & Spade	(2) Eyebolt terminals	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE281	23.0, Spade & Spade	(2) Parallel groove	35	8T or 12K	16000	280	GES-8228A	GES-8229A	GET-6693A
9F59UBE102	23.0, Spade & Stud	Without Hardware	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE112	23.0, Spade & Stud	(1) Adapter	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE122	23.0, Spade & Stud	(1) Eyebolt Terminal	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE132	23.0, Spade & Stud	(1) Parallel Groove	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE202	23.0, Spade & Spade	Without Hardware	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE212	23.0, Spade & Spade	(1) Adapter	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE222	23.0, Spade & Spade	(1) Eyebolt Terminal	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE232	23.0, Spade & Spade	(1) Parallel Groove	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE242	23.0, Spade & Spade	Adapter & eyebolt terminal	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE252	23.0, Spade & Spade	Adapter & parallel groove	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE262	23.0, Spade & Spade	Eyebolt terminal & parallel groove	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE272	23.0, Spade & Spade	(2) Eyebolt terminals	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A
9F59UBE282	23.0, Spade & Spade	(2) Parallel groove	35	15T or 25K	70000	460	GES-8228A	GES-8229A	GET-6693A