

SHORT CIRCUIT PROTECTION

The National Electrical Code, state, county and municipal codes and/or regulations require that service entrance equipment shall be suitable for the short-circuit current available at its supply terminals. It is the responsibility of the customer to install service entrance equipment and protection devices (fuses and/or circuit breakers) capable of interrupting and withstanding the available fault current.

Single-Phase Customer

For the purpose of equipment specification and permitting **Service Provider** will design its underground facilities so that the maximum fault current at the line terminals of the metering equipment will be limited to not exceed the following:




- Residential Services 200A or less - maximum AFC 10,000A UG. Except if the cable length is less than 45 feet when being served from a transformer. Then the AFC will be 22,000A.
- Residential Services 201A-400A - maximum AFC 22,000A UG only
- Residential Services 401A-800A - maximum AFC 42,000A UG only
- Commercial Services 400A or less - maximum AFC 22,000A (UG secondary minimum 45 feet in length)
- Commercial Services 800A or less - maximum AFC 42,000A (any length UnderGround secondary)
- Residential Services 200A or less - maximum AFC 10,000A OH*. Except when served from a 3 phase transformer bank. Contact **Service Provider** for fault current.
- Residential Services 201A-600A OH* - contact **Service Provider** for fault current.
- Commercial Services 600A or less OH* - contact **Service Provider** for fault current.

*OH is defined as any service that originates from **Service Provider's** overhead distribution system.

Due to the size and location of transformers and service conductors, the actual fault current may be lower than the values stated above. Upon request, **Service Provider** will calculate the actual available fault current.

Three-Phase Customer

For three-phase customers, **Service Provider** will determine the available fault current for each installation. The available fault current will be marked on switchgear plans and redline service layout drawing for specific projects. For three phase service from a pad mounted transformer, the fault current posted will be the available fault current at the secondary terminals of the transformer and will not take into account any reduction in fault current due to customer owned conductors. For three phase service from overhead transformers, the fault current posted will be at the point of delivery and will take into account the fault current reduction due to **Service Provider** owned secondary conductors but will not take into account any fault current reduction due to customer owned conductors.

		INITIATED BY	DC	REVISION NO.	9	SR-510 
		ESR COMM.	9-77	ESR COMM.	10-17	
				EFFECTIVE DATE	10-17	Pg. 1 of 2

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Table 1 gives the available fault current for the size of customer's service entrance equipment installed. This chart has been published so that the customer can pre-order switchgear. However, care must be exercised in using this table, as it applies only when **Service Provider** is serving the customer's service entrance from an individual transformer which will be sized and installed for that load alone. Consult **Service Provider** for that decision.

TABLE 1 - AVAILABLE FAULT CURRENT BASED ON SIZE OF SERVICE ENTRANCE

SERVICE ENTRANCE EQUIPMENT CAPACITY (AMPS)	ASSUMED LOADING (AMPS) (80%)	MAXIMUM 3Ø FAULT CURRENT IN SYMMETRICAL AMPERES FOR SERVICE VOLTAGE LISTED				
		120/208V		120/240V	277/480V	
		POLE TYPE TRANSFORMER	PAD-MOUNT TRANSFORMER	POLE TYPE TRANSFORMER	POLE TYPE TRANSFORMER	PAD-MOUNT TRANSFORMER
200	160	13,900	13,900	12,100	12,100	12,100
400	320	20,900	27,800	18,100	24,100	24,100
600	480	27,800	55,600	31,900	35,500	32,600
800	640	36,800	55,600	42,500	35,500	32,600
1000	800	49,100	55,600	42,500		32,600
1200	960	77,400	75,100	67,00		32,600
1600	1280	77,400	75,100			32,600
2000	1600		75,100			32,600
2500	2000		75,100			52,300
3000	2400		75,100			52,300
4000	3200					52,300