FPL ZERO-SEQUENCE SENSORS WITH LITTELFUSE RELAYS

Toroidal (Type T) zero-sequence sensors manufactured by Federal Pioneer Ltd. can be used with Littelfuse Startco ground-fault and motor-protection relays. Table 1 lists compatible FPL sensors and window sizes. These sensors can be used on resistance-grounded systems and on solidly grounded systems where the maximum ground-fault current is less than 50 kA.

FPL CATALOG NUMBER	WINDOW SIZE	
	INCHES	MM
T2A	1-7/8	48
T3A	2-3/4	70
T6A/T6A-S	5-3/4	146
T9A	8-3/4	222

TABLE 1

When using an FPL sensor with the SE-701 Ground-Fault Monitor, the CT-primary rating is 50 A. The SE-701 set-point range is 1 to 99% in 1% increments, which corresponds to 0.5 to 49.5 A in 0.5-A steps. If the ground-fault current can exceed 400 A, a voltage-clamping device must be used as shown in Fig. 1. An SE-EFVC is recommended for these applications.

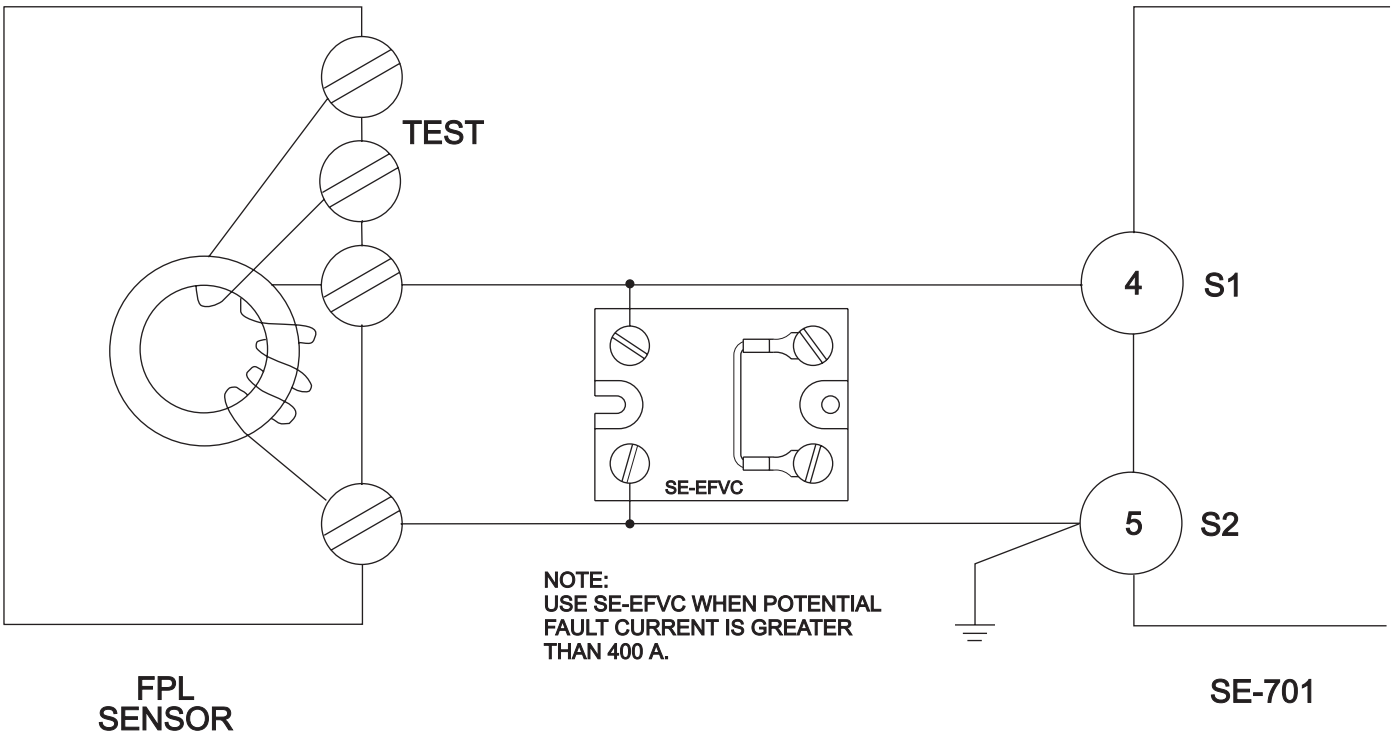


FIGURE 1. Connection Diagram for SE-701.

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When using an FPL sensor with an FPS, FPU-32, MPS, or MPU-32, the earth-fault CT-primary rating should be set to 50 A. This will provide correct earth-leakage metering information and trip levels. The set-point range is 1 to 100% in 1% increments, which corresponds to 0.5 to 50 A in 0.5-A steps. For the MPS, the set-point range is 5 to 100% in 1% increments, which corresponds to 2.5 to 50 A in 0.5-A increments.

If the earth-fault current can exceed 200 A, a voltage-clamping device must be used. An SE-EFVC is recommended for these applications, as shown in Figs. 2, 3a, and 3b.

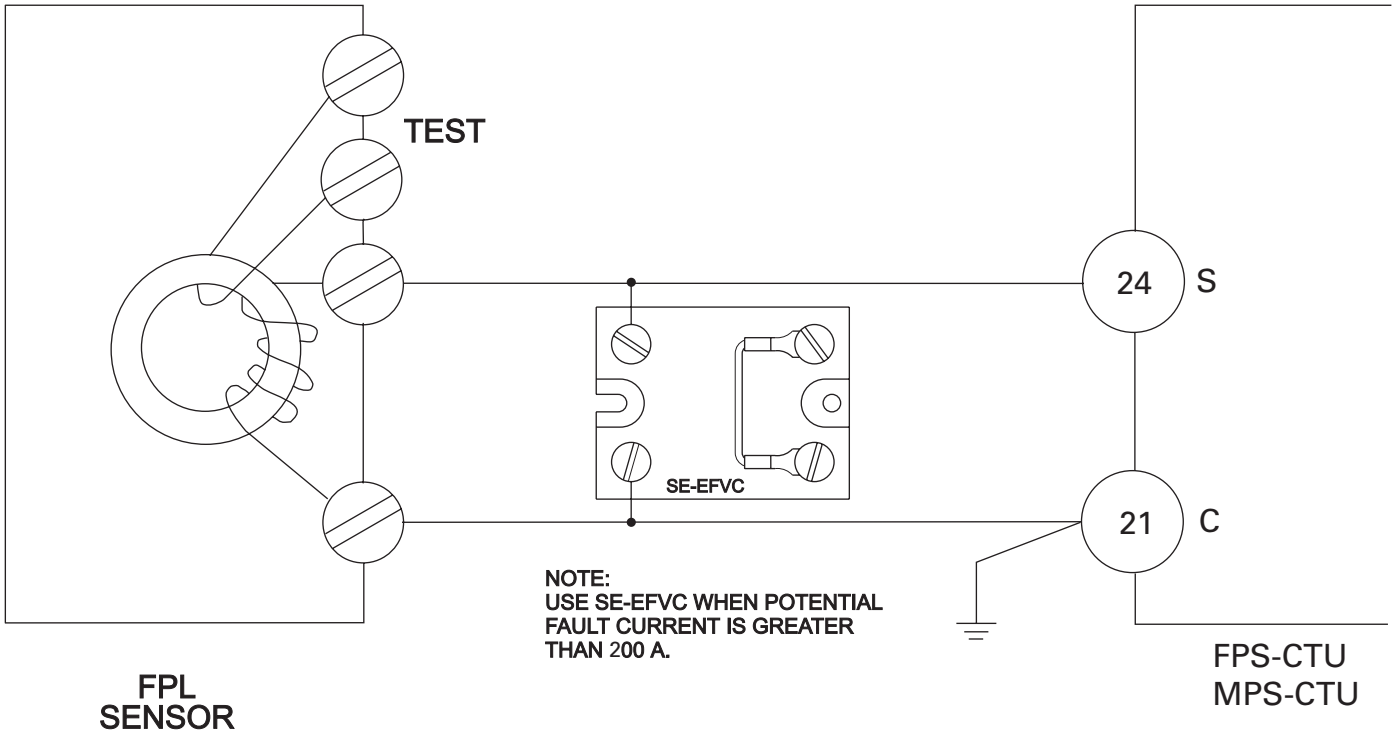


FIGURE 2. Connection Diagram for FPS or MPS.

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FPL ZERO-SEQUENCE SENSORS WITH LITTELFUSE RELAYS

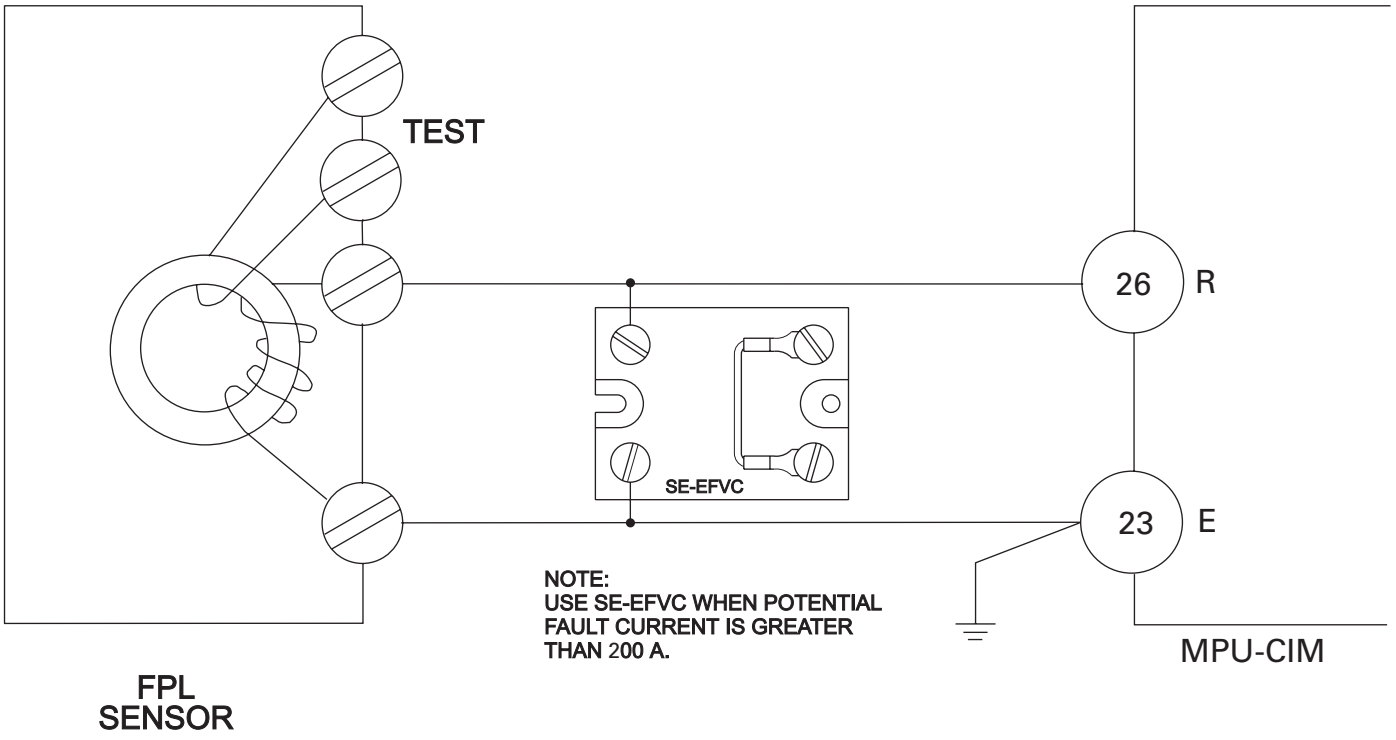


FIGURE 3a. Connection Diagram for FPU-32 or MPU-32 with MPU-CIM.

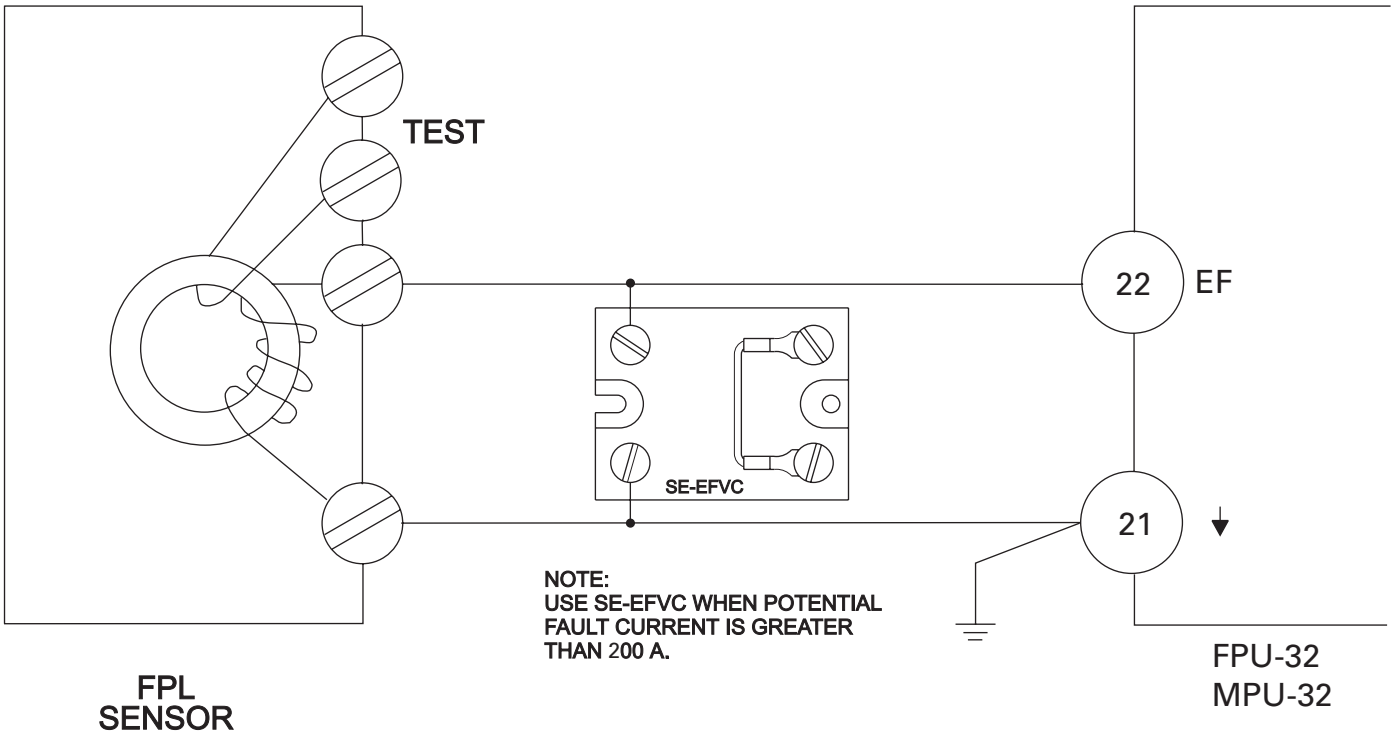


FIGURE 3b. Connection Diagram for FPU-32 or MPU-32 without MPU-CIM.

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