

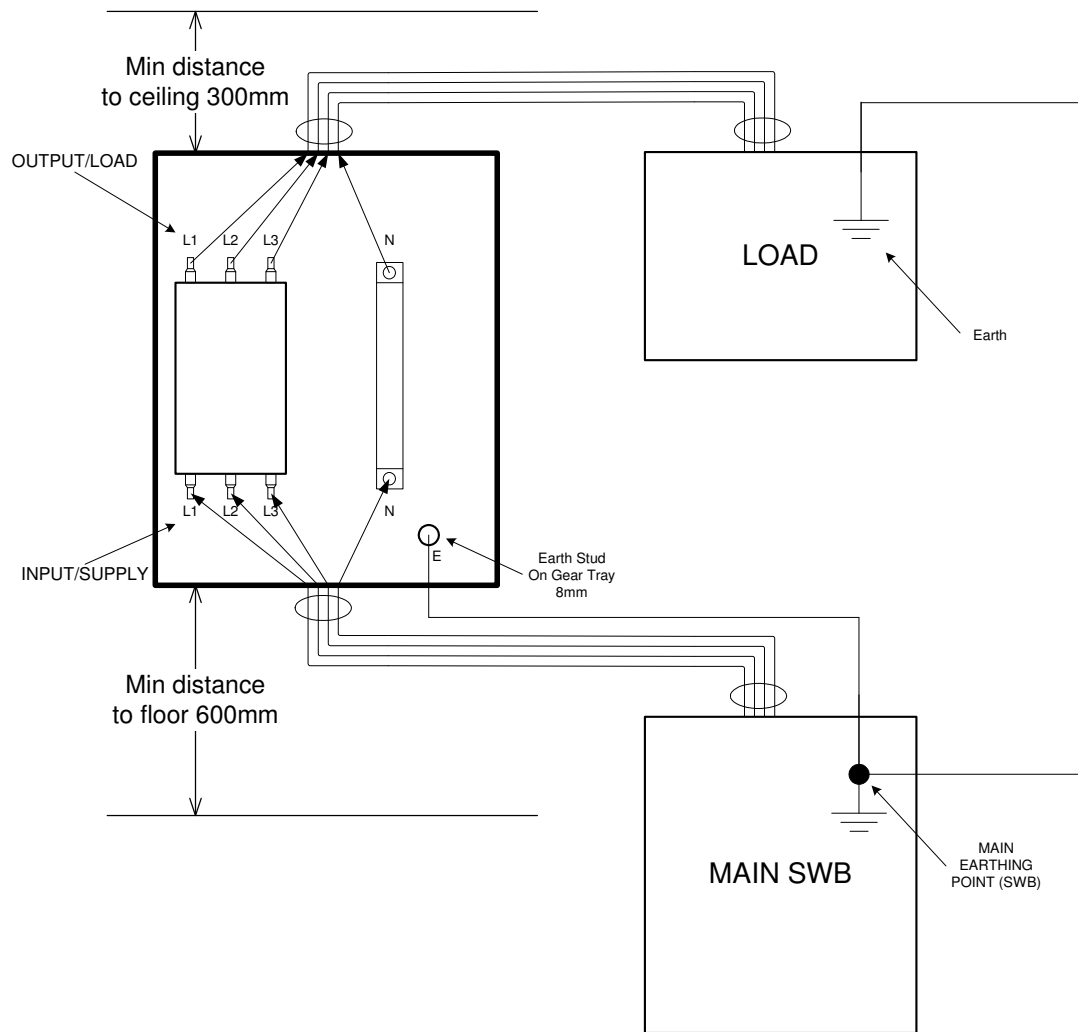
# SPFi Surge Filter Connection Diagram

For SPF1003CEi, SPF1003DEi, SPF1003EEi, SPF150CEi, SPF150DEi, SPF150EEi, SPF200CEi, SPF200DEi, SPF200EEi, SPF250CEi, SPF250DEi, SPF250EEi

This document is to be used in conjunction with 3 - Phase Surge Filter Installation Guide (Tvss Doc#510063)

## IMPORTANT NOTES:

1. All phase and neutral connections via 8mm bolts.
2. Earth connection via M8 stud, lower right of enclosure.
3. Refer to labelling for connection points.
4. Always run a separate earth cable, even if the unit is bolted to the SWB tray.
5. Keep input and output cables physically separated at all times. Min. separation distance 500mm.
6. HRC fuses are preferred to MCBs for connection to main SWB. See Page 2 on installation guide for details.
7. Unit is to be located within 3m (cable length) of the main system Earth and Neutral link for point-of-entry application. Greater lengths reduce protection.
- 8.1. Earth wiring: For proper operation of this SPF it is essential that a robust and physically short earth connection be made to the site earthing point. With reference to local wiring standards, earth cables are usually sized against a thermal rating, determined by expected fault currents, (5,000 to 25,000 amps). When installing an SPF however, the installer must be aware that surge currents can exceed 50,000 amps, and therefore heavier cables are generally required to limit voltage drops under surge conditions. To achieve these requirements, the earth cable size should be selected to be equal to, or greater than, the largest incoming cable into the SPF. This ensures that voltage drops on the earth cable are minimised.
- 8.2. Other wiring: All power-carrying conductors shall be sized according to locally-applicable standards. It is recommended that the incoming neutral conductor be sized the same as (or larger than) the phase conducts as it is the primary return for line-neutral surges.



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