1. Description

This option was developed for applications where there are high levels of noise and/or harmonics on the supply. Noise and harmonics are usually generated by other dvices connected to the supply in the same building or on the same supply bus asthe DPI. Variable speed AC drives and any equipment using switch mode power supplies generate noise and harmonics that can radiate back to the supply. The DPI sensing algorithm will interpret high noise levels as voltage dips and this will result in a "nuisance" transfer to inverter power for the load. An occasional incident of this ure would not be a problem at all. However if there is a lot noise the DPI will transfer repeatedly with very little time between transfers. The high repletion transfers will not allow enough time for the storage capacitors to recharge. This will cause the inverter output voltage to drop with each successive transfer until a point is reached where the low inverter output voltage may cause the load to malfunction. In an extreme case the capacitors will run out of usable energy altogether and the DPI will drop the load.

The DPI can be desensitized by altering the sensing algorithm to increase the number of consecutive measurements required to confirm that a dip has occurred. A sensing window of 2.1ms has been chosen for the generic version of this option as it eliminates 99% of all noise problems while maintaining a fast transfer to theinverter supply. Other sensing window times can be programmed to fine tune specific applications.

A supply noise problem is indicated if the DPI "Inverter Running" indicator flashes frequently for no apparent reason. If this happens the supply should checked for harmonics and noise, if possible make a plot of the supply profile showing two complete cycles. Provide this information to Switching Systems and request the high noise immunity option for the affected DPI(s).

The DPI is programmed with a wider sensing window:-

2. Specifications for generic version with high noise immunity.

Sensing window: 2.1ms

For use with: All models in 52S and 52L series