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APPLICATIONS NOTES

THE USE OF EARTH LEAKAGE CIRCUIT BREAKERS WITH POWER LINE FILTERS

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APPLICATIONS NOTES

THE USE OF EARTH LEAKAGE CIRCUIT BREAKERS WITH POWER LINE FILTERS

It is not recommended that earth leakage circuit breakers (ELCB=s) or residual current circuit devices (RCCD=s) are fitted on the supply side of high performance power line filters. This applies to all types of high performance filter circuit in both single and three phase versions, including low leakage designs. It is recommended that the ELCB is fitted on the load side of the filter.

Whilst low leakage and three phase filters will have lower continuous earth leakage currents, they will still trip ELCB=s in most circumstances. This is because their leakage current is dependent on a number of variable factors such as neutral to earth voltage, mains harmonic content, inrush current at switch-on, and load balance on three phase systems.

Under normal circumstances, a suitably rated over-current circuit breaker will operate satisfactorily when fitted in advance of any of these types of filter. It should, however, be borne in mind when selecting a circuit breaker that it needs to be capable of handling filter inrush current at switch-on as well as any load inrush current on top of its steady state rating.

For more detailed advice on specific applications, please consult our technical department.

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