

**CUSTOMER SUPPORT DEPARTMENT
APPLICATION NOTE**

AN0103

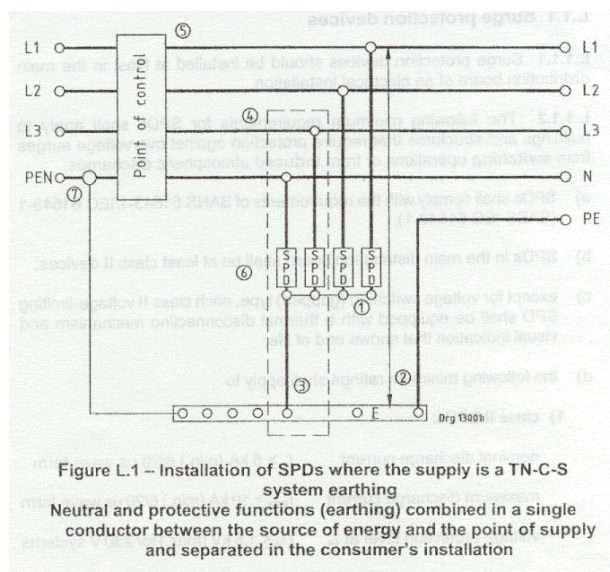
SUBJECT SPDs INSTALLED INTO TN-C-S SYSTEMS

BRIEF

According to the South African code of practice for the wiring of premises, SANS 10142-1:2003 (edition 1.1 as amended in 2003) for TN-C-S earthing systems, a Surge Protective Device (SPD) should also be fitted between Neutral and Earth only if a certain distance is exceeded, as explained below

REMARKS

The figure below from SANS 10142-1 explains the TN-C-S earthing system, and shows the installation requirements for 3-phase and single-phase cases, the latter being the block in dotted lines.



According to note 6 of the code, “install an SPD between N and E only if they (N and E) are at a distance exceeding 20 m from the separating point (7)”.

Why?

Because (without the SPD), due to the RF impedance of long wires, the induced voltage surge may compromise the protection of the installation.



APPLICATION NOTES DISTRIBUTION LIST

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