
Electrical Distribution Safety

TECHNICAL AWARENESS – CABLE GUARDS

This Bulletin supplies technical information for LDCs installing only DB2/ES2 PVC conduit as cable guards on riser poles. While CSA C22.3 No.7-94 does not make specific reference to this issue, the OESC does.

C22.3 No. 7- 94 (Reaffirmed 2000) Underground Systems states:

“All riser cables of supply systems shall be protected by a covering that gives suitable mechanical protection for the full length of the run from at least 0.3 m below the surface of the earth.” (3.5.6.2)

“All exposed metal riser pipes and guards in contact with supply cables shall be grounded, unless such cables are covered with a grounded metal sheath.” (3.5.6.6)

The Ontario Electrical Safety Code 23rd Edition states:

“Rigid Types EB1 and DB2/ES2 conduit and fittings **shall not** be used above ground except as permitted by Paragraph (b) of Rule 12-1150.” (12-1152)

OESC RATIONALE

The Ontario Electrical Safety Code does not recognize DB2/ES2 conduit as a safe means for protecting conductors on riser poles, without masonry or poured concrete. DB2/ES2 conduit is relatively brittle in comparison with metallic cable guards. Car impacts or any other sharp impacts can cause DB2/ES2 conduit to break and expose the cable. Metallic cable guard's properties will allow bending in order to protect the riser cable from these impacts.



ESA RECOMMENDS

ESA recommends the installation of metallic cable guards at all riser poles as:

- Sole protection; or
- Additional protection over the DB2/ES2 conduit, from 0.3m below ground level up to a reasonable height (as determined by the LDC) and be grounded

In addition, ESA recommends that power cables be installed on the pole's side not facing street traffic. This will allow the pole to act as a barrier in case of a car collision.

ADDITIONAL INFORMATION

If you can provide additional information on this Bulletin or any other Utility issue, please contact ESA to share your experiences. Additional information requests, and follow-up information, may be directed to ESA. Please be prepared to quote Bulletin “DTB-06/06”.