

National Electrical Safety Code Committee, Accredited Standards Committee C2

National Electrical Safety Code®

Interpretation

Section 23. Clearances

Rule 230 C1, General—Supply Cables (5 November 2003) IR533

Is our primary underground cable considered to be a 230C1 cable? It has multiple concentric neutral, is applied to a maximum voltage of 20.8 kV Y (12 kV line to ground), is on a solidly grounded Y-system with the concentric tied to ground, and has a semi-conducting shield over the insulation. In addition, the cable is jacketed, although perhaps this does not make a difference. Each phase is in its own duct, and it does not have a messenger.

The alternate point of view is that a jacketed primary cable is not a 230C1 cable, with the deciding factor relying on an exposed ground (messenger, sheath, or concentric strands) or an outside semi-conductive jacket with drain wires. This point of view would classify the old style underground cable with exposed concentric in this category on a Y-system.

Discussion: The application under examination is a primary dip pole where the requirement is to have the conduit extend 40" above the highest communication facility. Exception 1 of Rule 239G1 permits the primary cable (230C1 cable) to go through the communication zone without guarding, which would mean that if the riser ends at a point less than 40" above communication, there is no violation since no duct is required. Our interpretation is that the critical vertical distance is from the communication facilities to the base of the termination, so we would need at least 45" vertical clearance.

Interpretation

The Interpretations Subcommittee has considered the subject Interpretation Request and has developed a consensus report as follows:

“The primary cable described in your request for information meets the requirements of a Rule 230C1b cable. Rule 230C1 cables include both Rule 230C1a and 230C1b cables. Consequently, guarding of either type of cable is not required in the communication space, as allowed by Exception 1 of Rule 239G1, if the cable is not in the climbing space.”