

SECTION 16142 (26 05 83)

ELECTRICAL CONNECTIONS – 600V and below

Part 1 -Design Directives

Details of electrical connections need not be included in the drawings. Reference to methods and products in the specification is adequate to convey the requirements of this section.

Part 2 -Products

Wire Connectors, where not subject to vibration:

- Ideal “twister” brand splicing device (wire nut) or approved equal for wire sizes up to #10 and where not subject to vibration.
- Polaris connectors or equivalent for feeders.

Motor Connections (and other connections subject to vibration):

- Bolted stub connections on ring-type compression terminations with Raychem type RVC motor connection insulation OR split-bolts with layered tape insulation (varnished cambric, or 3M vinyl, followed with rubber, finally 3M vinyl) for motor connections,
- Crimp and Cap for motor connections at or under 1 HP.

Grounding Electrodes: Compression crimps for grounding electrode systems shall use Burndy type YGHC-C HYTAP connectors and type YGL-C HYGRID cross connectors or approved equals.

Exterior Locations:

- Must be listed for wet location.
- Insulated mechanical splice connectors (“Polaris”) are not allowed at exterior locations.
- Exterior splices shall be made with compression type or split-bolt type connectors.

Part 3 -Execution

Splicing shall be made by wire nut for all conductors up to and including #10 and by compression crimp connector for all conductors larger than #10. Careful attention shall be paid to the allowable number of conductors (as defined by the manufacturer) joined by a single wire nut.

Motor splices shall be made using ring type compression connectors attached to the feeders and motor leads. The ring type connectors shall be bolted together with machine screws to facilitate removal and re-connection. Insulation used on these splices shall be applied so as to minimize any residue that will hinder future disconnection and reconnection activities. (i.e., rubber compound that melts into the connectors and onto the insulation shall be separated from the joint by a dry insulating material before application) Raychem type RVC motor insulation is the preferred method. Exception – Crimp and Cap connections may be used for fractional, up to one HP motors.

All connections of grounding electrode conductors shall be made using compression crimp or exothermic welding processes. Single and multiple hole setscrew lugs shall not be used anywhere on the grounding system except at grounding bushings and where supplied on equipment by the manufacturer.

All splices shall be covered with electrical insulating material to provide an insulation rating equivalent to or greater than the insulation rating of the conductors that are being spliced.

Direct buried underground splicing of conductors is not allowed under any circumstances.

Medium Voltage Electrical Connections – Refer to Section 16301 (26 05 13) Medium Voltage Cable and Terminations for all electrical connections over 1000V.