



## CONNECTION RECOMMENDATIONS

### MOTOR LEAD TERMINATION FOR FLYING LEADS WITHOUT TERMINAL BLOCK LOW VOLTAGE MOTORS (1Kv AND LESS)

1. Properly sized crimp style ring terminals
  2. Ensure all strands of wire are inserted into the lug.
  3. Using the appropriate sized crimping device for the lug, crimp the lug onto the wire.
  4. Connect the lugs using properly sized bolts, washers on each side and locking washers (do not drill out ring terminals to fit bolts, do not use LOC-TITE)
  5. Tape the connection using 2 layers of cambric tape adhesive side up
  6. Tape the cambric layer with 130°C rubber tape, 4 half lapped layers stretched to 1/3 of original width
  7. Tape final layer with 33 Plus Electrical Tape, 2 half lapped layers extended two tape widths beyond the rubber tape. Pull with tension to compress the runner tape.
  8. Ensure no wire is exposed on any of the leads.
    - Or multiple wire connectors like the Burndy-Hubbell series
    - Or split bolt style connectors can be used ensuring the multi strand type is used when connecting more than two wire. Tape as above.
- **Twist on connectors (wire nuts) are expressly prohibited**
    - NFPA 79-2007, Clause 13.5.9.2 states, "Electrical connections at motor terminal boxes shall be made with an identified method of connection. Twist-on wire connections shall not be used for this purpose."
    - NEC 70HB-2014 695.6 Power Wiring (D) Pump Wiring. All wiring from the controllers to the pump motors shall be in rigid metal conduit, intermediate metal conduit, electrical metallic tubing, liquidtight flexible metal conduit, or liquidtight flexible nonmetallic conduit Type LFNC-B, listed Type MC cable with an impervious covering, or Type MI cable. Electrical connections at motor terminal boxes shall be made with a listed means of connection. Twist-on, insulation-piercing-type, and soldered wire connectors shall not be permitted to be used for this purpose.

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