

APPENDIX A

LOW VOLTAGE MULTICONDUCTOR CABLE WITH BARE NEUTRAL, 0-300 VOLTS

Multiconductor cable with bare neutral for circuits of not more than 300 volts attached to poles at clearances less than those specified in Table 1, Column D, Cases 8 and 9, and where so attached, the following rules shall apply. The term "messenger", when used in the following rules, in addition to the definition set forth in Rule 21.9 of General Order No. 95 also includes the bare neutral conductor when used as the principal supporting member of the cable.

I Material and Strength

- (1) Messenger: The conditions specified in Rule No. 57.3 of General Order No. 95 shall apply.
- (2) Insulation: The phase conductors shall be insulated with a material that during the life of the installation is able to withstand 900 volts, 60 cycles, for 1 minute.
- (3) Jumpers: Phase jumpers shall be insulated as per Rule I(2). Neutral jumpers may be bare when 15 inches or more from the surface of the pole.

II Clearances and Climbing Space

A. POLE ARRANGEMENT AND CLEARANCES

- (1) General: The clearances specified, in General Order No. 95 in the opening conditions of Rule 57.4, and in Rules 57.4A, 57.4B, 57.4D and 57.4E shall apply.
- (2) Between Conductors in Cables: The conditions specified in Rule 57.4C shall apply and in addition, no specified clearance is required between the insulated phase conductors and the bare neutral of such 0-300-volt multiconductor cables.
- (3) Clearance from Poles: 0-300-volt multiconductor cable with bare neutral shall be supported on an insulator and shall have a clearance of not less than $2\frac{1}{2}$ inches from the surface of the pole.
- (4) Vertical Clearance: When attached less than 15 inches from surface of pole such messenger and cable shall be not less than 6 feet vertically above or below unprotected conductors of any other circuit, except such messenger or cable may be less than 6 feet but not less than 4 feet above unprotected conductors on crossarms, guarded conductors in rack construction, or guarded cables attached to surface of pole.
- (5) Conductor Arrangement: In tangent construction, cable shall not be attached to more than one side of a pole (there being 4 sides) and conductors attached to the cable at the cable level shall not be attached to more than one side of the pole other than the side occupied by the cable. Climbing space in conjunction with these attachments shall be maintained as specified in Rule II-B.
- (6) At Cable Terminals: The clearances required in Rule II-A(4) between a cable and unprotected conductors shall not be held to apply between a cable (and its grounded messenger) and unprotected conductors of the same circuit on poles where unprotected conductors enter (or leave) a cable. On such poles no grounded messenger shall be less than 36 inches from surface of the pole where the unprotected conductors are supported in rack construction or 72 inches from the surface of the pole where the unprotected conductors are supported on crossarms.

- (7) Conductor Spacing: The vertical separation between individual phase conductors when supported in individual clevises or a multiconductor rack shall be not less than 6 inches.
- (8) Dead-end Construction: On poles with the messenger dead-ended in more than one direction, the grounded messenger or insulated phase conductors of the cable shall not be within 15 inches of the surface of a pole. Sectionalized, ungrounded portions of the messenger may contact adjacent sides of a pole but service drops shall not be supported within 15 inches of the surface of the pole. The climbing space shall be as in Rule II-B-(2).

B. CLIMBING SPACE IN MULTICONDUCTOR CABLE CONSTRUCTION

A climbing space shall be maintained through the level of conductors supported in cable construction and for a vertical distance of not less than 4 feet above and below the cable. The position of the climbing space through the levels of conductors in cable construction shall be related to climbing spaces through conductor levels above and below the cable in accordance with requirements of Rule 54.7-A of General Order No. 95.

- (1) Climbing Space with Cable $2\frac{1}{2}$ Inches or More from the Surface of Pole: The clearances specified in Rule 54.9-F of General Order 95 for climbing space in rack construction shall apply to cables supported $2\frac{1}{2}$ inches or more from surface of the pole.
- (2) Climbing Space in Corner Dead-End Construction: On corner dead-end poles the climbing space shall be in the quadrant opposite the quadrant between the two dead-ended cables and shall be a 30-inch square with one corner at the center line of the pole.
- (3) Guys, vertical conductors attached to the surfaces of poles, and terminals which are listed in Rule 54.7-A4 of General Order No. 95 as allowable climbing space obstructions, are not permitted in climbing spaces specified in Rule II-B.

III Service Drops

Phase conductors of service drops taken from multiconductor cables shall have insulation equivalent to that specified in Rule I-(2). Where service drops are supported on ACSR or aluminum messenger, the messenger shall be protected against abrasion. Services supported on the messenger shall not be attached less than 15 inches from the center line of the pole.

IV Fastenings

The provisions of Rule 57.5 of General Order No. 95 shall apply.

V Extended Messenger

Extended messengers in 0-300-volt multiconductor cable construction may be installed less than one span in length, provided a sectionalizing insulator is placed 6 feet to 9 feet from the dead-end pole.

VI Sags

The provisions of Rule 57.9 of General Order No. 95 shall apply.