# Duplex XLPE Service Drop. AAC Neutral - Messenger

Aluminum Conductors With Crosslinked Polyethylene Insulation.

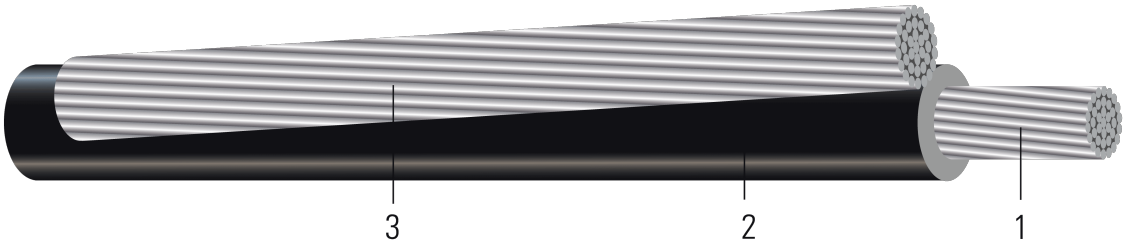


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Conductors are stranded, compressed 1350-H19 aluminum
2. **Insulation:** Cross Linked Polyethylene (XLPE)
3. **Messenger:** AAC Neutral

## APPLICATIONS AND FEATURES:

Primarily used for 120 volt overhead service applications such as street lighting, outdoor lighting, and temporary service for construction. To be used at voltages of 600 volts phase-to-phase or less and at conductor temperatures not to exceed 90°C for crosslinked polyethylene (XLP) insulated conductors.

## SPECIFICATIONS:

- ASTM B230 Aluminum, 1350-H19 Wire for Electrical Purposes
- ASTM B231 Standard Specification for Concentric-Lay-Stranded Aluminum 1350 Conductors
- ASTM B901 Standard Specification for Compressed Round Stranded Aluminum Conductors Using Single Input Wire Construction. *(The number of strands for both phase and neutral may differ)*
- ICEA S-76-474 Standard for Neutral-Supported Power Cable Assemblies with Weather-Resistant Extruded Insulation Rated 600V


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## Table 1 – Weights and Measurements

| Stock Number | Code Word | Phase Cond. Size | Phase Strand | Dia. Over Phase Conductor | Phase Insul. Thickness | Dia. Over Phase Insulation | Neutral Cond. Size | Neutral Strand | Approx. OD | Approx. Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | | AWG/Kcmil | No. | inch | mil | inch | AWG/Kcmil | No. | inch | lb/1000ft |
| 103416 | Doberman | 2 | 7 | 0.282 | 45 | 0.372 | 2 | 7 | 0.666 | 147 |

All dimensions are nominal and subject to normal manufacturing tolerances
1. The actual number of strands may differ for single input wire per ASTM B901
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

## Table 2 – Electrical and Engineering Data

| Code Word | Phase Cond. Size | Neutral Rated Breaking Strength | DC Resistance @ 25°C | AC Resistance @ 75°C | Inductive Reactance @ 60Hz | GMR | Allowable Ampacity In Air 75/90°C |
|---|---|---|---|---|---|---|---|
| | AWG/Kcmil | lb | Ω/1000ft | Ω/1000ft | Ω/1000ft | ft | Amp |
| Doberman | 2 | 1350 | 0.266 | 0.320 | 0.045 | 0.008 | 135 / 150 |

Notes:
1. DC resistances include a 1% length factor for plexing.
2. Inductive reactance assumes the neutral is carrying current.
3. Phase conductors assumed to be reverse lay stranded, compressed construction.
4. Phase spacing assumes cables are touching.
5. Resistances shown are for the phase conductor only.
6. Ampacity based on conductor temperature of 90°; ambient temperature of 40°C; emissivity 0.9; 2 ft./sec. wind in sun.

## Neutral Code Word

| Size-Strands | Code Word | OD (inches) |
|---|---|---|
| #6-7 | Peachbell | 0.184 |
| #4-7 | Rose | 0..232 |
| #2-7 | Iris | 0.292 |
| 1/0-7 | Poppy | 0.368 |


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