# **Quadruplex XLPE Service Drop. AAAC 6201 Alloy 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: AAAC Neutral

### **APPLICATIONS AND FEATURES:**

Used to supply power, usually from a pole-mounted transformer, to the user's service head where connection to the service entrance cable is made. To be used at voltages of 600 volts phase-to-phase or less and at conductor temperatures 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 B400 Standard Specification for Compact Round 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





**SPEC 83240** Stock #: TBA

# **Table 1 – Weights and Measurements**

| Code Word        | Phase Cond.<br>Size | Phase<br>Strand | Dia. Over Phase<br>Conductor | Phase Insul.<br>Thickness | Dia. Over Phase<br>Insulation | Neutral Cond.<br>Size | Approx.<br>OD | Approx.<br>Weight |
|------------------|---------------------|-----------------|------------------------------|---------------------------|-------------------------------|-----------------------|---------------|-------------------|
|                  | AWG/Kcmil           | No.             | inch                         | mil                       | inch                          | AWG/Kcmil             | inch          | lb/1000ft         |
| French-<br>Coach | 6                   | 7               | 0.178                        | 45                        | 0.268                         | 6                     | 0.647         | 146               |

All dimensions are nominal and subject to normal manufacturing tolerances

## **Table 2 – Electrical and Engineering Data**

| Code Word        | Phase Cond.<br>Size | Neutral Rated Breaking<br>Strength | DC Resistance @<br>25°C | AC Resistance @<br>75°C | Inductive Reactance @<br>60Hz | GMR    | Allowable Ampacity In<br>Air 90°C |
|------------------|---------------------|------------------------------------|-------------------------|-------------------------|-------------------------------|--------|-----------------------------------|
|                  | AWG/Kcmil           | lb                                 | Ω/1000ft                | Ω/1000ft                | Ω/1000ft                      | ft     | Amp                               |
| French-<br>Coach | 6                   | 1110                               | 0.6653                  | 0.853                   | 0.0365                        | 0.0054 | 75                                |

#### 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. Sizes of AAAC neutrals are not the AAAC size, but are the size of an ACSR of equal diameter.
- 7. 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         | Akron     | 0.198       |
| #4-7         | Alton     | 0.250       |
| #2-7         | Ames      | 0.316       |
| 1/0-7        | Azusa     | 0.398       |
| 2/0-7        | Anaheim   | 0.447       |
| 3/0-7        | Amherst   | 0.502       |
| 4/0-7        | Alliance  | 0.563       |





<sup>1.</sup> The actual number of strands may differ for single input wire per ASTM B901