Quad Parallel 600 Volt USE-2 Underground Service Entrance

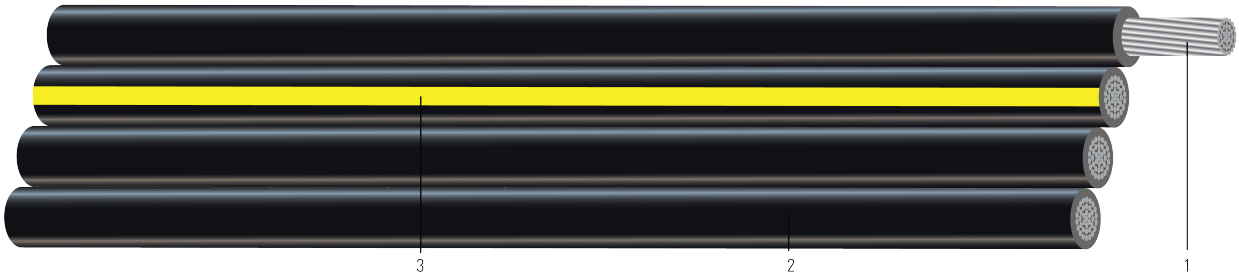

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Conductors are stranded, compressed 1350-H16/H26 (3/4 Hard) aluminum
2. **Insulation:** Cross Linked Polyethylene (XLPE)
3. **Neutral:** Cross Linked Polyethylene (XLPE) with three Yellow Extruded Stripes (YES)

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APPLICATIONS AND FEATURES:

Conductors are stranded, compressed 1350-H16/H26 (3/4 Hard) aluminum, insulated with cross-linked polyethylene. Neutrals are identified by three yellow extruded stripes. Cables with "YES" neutrals have sequential footage markers. Conductors are durably surface printed for identification. Three-phase conductors and one neutral conductor are quad paralleled. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. UL listed as USE-2 per UL 854 Service-Entrance Cables.

SPECIFICATIONS:

- ASTM B231 Standard Specification for Concentric-Lay-Stranded Aluminum 1350 Conductors
- ASTM B609 Standard Specification for Aluminum 1350 Round Wire, Annealed and Intermediate Tempers, for Electrical Purposes
- 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)
- UL 854 Service Entrance Cable
- ICEA S-105-692 Standard For 600 Volt Single Layer Thermoset Insulated Utility Underground Distribution Cables

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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	Neutral Insul. Thickness	Dia. Over Neutral Insulation	Approx. OD	Approx. Weight
		AWG/ Kcmil	No.	inch	mil	inch	AWG/ Kcmil	No.	mil	inch	inch	lb/1000ft
TBA	Aims	4	7	0.225	60	0.345	4	7	60	0.345	1.380	252
TBA	Goshen	2	7	0.282	60	0.403	4	7	60	0.345	1.554	338
TBA	Linfield	2	7	0.282	60	0.403	2	7	60	0.403	1.612	367
TBA	Kellogg	1/0	9	0.361	80	0.512	2	7	60	0.403	1.939	529
TBA	Cerritos	1/0	9	0.361	80	0.512	1/0	9	80	0.512	2.048	583
TBA	Itasca	2/0	11	0.405	80	0.555	1	9	80	0.473	2.138	650
TBA	Avila	2/0	11	0.405	80	0.555	2/0	11	80	0.555	2.220	706
TBA	Carlow	3/0	17	0.456	80	0.603	1/0	9	80	0.512	2.321	790
TBA	Laney	3/0	17	0.456	80	0.603	3/0	17	80	0.603	2.412	860
TBA	Hiwassee	4/0	18	0.512	80	0.658	2/0	11	80	0.555	2.529	962
TBA	Alfred	4/0	18	0.512	80	0.658	4/0	18	80	0.658	2.632	1047
TBA	Joliet	350	30	0.661	95	0.831	4/0	18	80	0.658	3.151	1512
TBA	Sullins	500	34	0.789	95	0.956	300	37	95	0.784	3.652	2542
TBA	Wilkes	750	61	0.968	110	1.158	350	30	95.0	0.831	4.306	3691

All dimensions are nominal and subject to normal manufacturing tolerances

Notes:

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

Table 2 – Electrical and Engineering Data

Code Word	Phase Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	GMR	Allowable Ampacity in Duct 90°C	Allowable Ampacity Directly Buried 90°C
	AWG/ Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	ft	Amp	Amp
Aims	4	6.9	801	0.424	0.511	0.048	0.007	85	120
Goshen	2	7.8	1274	0.266	0.320	0.045	0.009	115	155
Linfield	2	8.1	1274	0.266	0.320	0.045	0.009	115	155
Kellogg	1/0	9.7	2027	0.167	0.201	0.044	0.011	150	200
Cerritos	1/0	12.3	2027	0.167	0.201	0.044	0.011	150	200
Itasca	2/0	12.8	2555	0.133	0.159	0.043	0.012	170	225
Avila	2/0	13.3	2555	0.133	0.159	0.043	0.012	170	225
Carlow	3/0	13.9	3221	0.105	0.126	0.042	0.014	195	250
Laney	3/0	14.5	3221	0.105	0.126	0.042	0.014	195	250
Hiwassee	4/0	15.2	4062	0.084	0.100	0.041	0.016	225	290
Alfred	4/0	15.8	4062	0.084	0.100	0.041	0.016	225	290
Joliet	350	18.9	6720	0.050	0.062	0.040	0.020	305	385
Sullins	500	21.9	9600	0.035	0.044	0.039	0.025	370	465
Wilkes	750	25.8	14400	0.024	0.031	0.038	0.031	470	580

Notes:

1. Inductive reactance assumes cables are cradled in conduit, and the neutral is carrying no current.
2. Triple parallel inductive reactance calculation assumes the phase conductors are adjacent to one another.
3. Conductors assumed to be reverse lay stranded, compressed construction.

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4. Phase spacing assumes cables are touching.
5. Resistances shown are for the Phase conductors only.
6. Ampacity based on 90°C conductor temperature, 20°C ambient, RHO 90, 100% load factor.