

Quadruplex 600 Volt USE-2 Underground Service Entrance

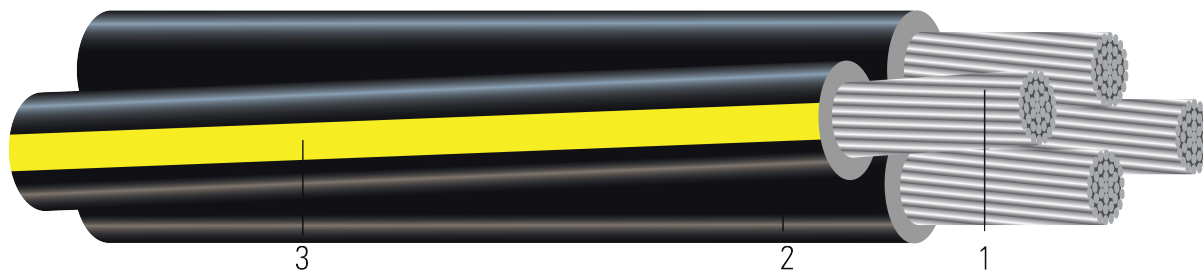


Image not to scale. See Table 1 for dimensions.

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 cabled together to produce the quadruplex cable configuration. 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

SAMPLE PRINT LEGEND:

SOUTHWIRE E32071 {UL} AWG XX AL TYPE USE-2 XX MILS XLP INSULATION 600 VOLTS {MMM/DD/YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET.



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
274332	Tulsa	4	7	0.225	60	0.345	4	7	60	0.345	0.833	255
274340	Dyke	2	7	0.282	60	0.403	4	7	60	0.345	0.973	342
274357	Wittenberg	2	7	0.282	60	0.403	2	7	60	0.403	0.973	378
274365	Notre Dame	1/0	9	0.361	80	0.512	2	7	60	0.403	1.236	534
274373	Purdue	1/0	9	0.361	80	0.512	1/0	9	80	0.512	1.236	589
274381	Syracuse	2/0	11	0.405	80	0.555	1	9	80	0.473	1.340	657
274399	Lafayette	2/0	11	0.405	80	0.555	2/0	11	80	0.555	1.340	713
274407	Swarthmore	3/0	17	0.456	80	0.603	1/0	9	80	0.512	1.456	798
274415	Davidson	3/0	17	0.456	80	0.603	3/0	17	80	0.603	1.456	868
274423	Wake Forest	4/0	18	0.512	80	0.555	2/0	11	80	0.555	1.588	972
274431	Earlham	4/0	18	0.512	80	0.658	4/0	18	80	0.658	1.588	1062
340844	Niagara	350	30	0.661	95	0.831	350	30	80	0.831	2.006	1705
274902	Slippery Rock	350	30	0.661	95	0.658	4/0	18	80	0.658	2.006	1531
303727	Wofford	500	34	0.789	95	0.956	350	37	95	0.831	2.308	2177
TBA	Westminster	750	61	0.968	110	1.159	350	30	95	0.831	2.802	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
Tulsa	4	3.3	801	0.424	0.511	0.048	0.007	85	120
Dyke	2	3.9	1274	0.266	0.320	0.045	0.009	115	155
Wittenberg	2	3.9	1274	0.266	0.320	0.045	0.009	115	155
Notre Dame	1/0	6.2	2027	0.167	0.201	0.044	0.011	150	200
Purdue	1/0	6.2	2027	0.167	0.201	0.044	0.011	150	200
Syracuse	2/0	6.7	2555	0.133	0.159	0.043	0.012	170	225
Lafayette	2/0	6.7	2555	0.133	0.159	0.043	0.012	170	225
Swarthmore	3/0	7.3	3221	0.105	0.126	0.042	0.014	195	250
Davidson	3/0	7.3	3221	0.105	0.126	0.042	0.014	195	250
Wake Forest	4/0	7.9	4062	0.084	0.100	0.041	0.016	225	290
Earlham	4/0	7.9	4062	0.084	0.100	0.041	0.016	225	290
Niagara	350	12.0	6720	0.050	0.062	0.040	0.020	305	385
Slippery Rock	350	12.0	6720	0.050	0.062	0.040	0.020	305	385
Wofford	500	13.8	9600	0.035	0.044	0.039	0.025	370	465
Westminster	750	16.8	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.
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.

