

Quadruplex 600 Volt Underground Service Entrance

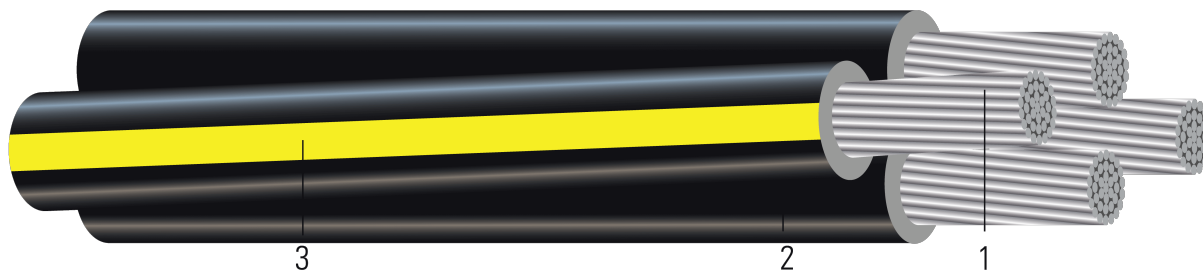


Image not to scale. See Table 1 for dimensions.

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)

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.

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)*
- 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	0.283	60	0.403	4	7	60	0.345	0.973	342
274357	Wittenburg	2	7	0.283	60	0.403	2	7	60	0.403	0.973	378
274365	Notre Dame	1/0	9	0.352	80	0.512	2	7	60	0.403	1.236	534
274373	Purdue	1/0	9	0.352	80	0.512	1/0	9	80	0.512	1.236	589
274381	Syracuse	2/0	11	0.395	80	0.555	1	9	80	0.473	1.34	657
274399	Lafayette	2/0	11	0.395	80	0.555	2/0	11	80	0.555	1.34	713
274407	Swarthmore	3/0	17	0.443	80	0.603	1/0	9	80	0.512	1.456	798
274415	Davidson	3/0	17	0.443	80	0.603	3/0	17	80	0.603	1.456	868
274423	Wake Forest	4/0	18	0.498	80	0.555	2/0	11	80	0.555	1.588	972
274431	Earlham	4/0	18	0.498	80	0.658	4/0	18	80	0.658	1.588	1062
274902	Slippery Rock	350	30	0.641	95	0.658	4/0	18	80	0.658	2.006	1531
303727	Morehouse	500	37	0.789	95	0.831	300	37	95	0.784	2.363	2110
TBA	Westminster	750	61	0.968	110	0.98	350	30	95	0.831	2.868	3014

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

Stock Number	Code Word	Phase Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	GMR	Allowable Ampacity in Duct 90°C	Allowable Ampacity Directly Buried 90°C
		AWG/Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	ft	Amp	Amp
274332	Tulsa	4	0.4183	0.511	0.0373	0.0068	85	120
274340	Dyke	2	0.2631	0.3214	0.0354	0.0086	115	155
274357	Wittenburg	2	0.2631	0.3214	0.0356	0.0086	115	155
274365	Notre Dame	1/0	0.1653	0.202	0.0356	0.0107	150	200
274373	Purdue	1/0	0.1653	0.202	0.0359	0.0107	150	200
274381	Syracuse	2/0	0.1312	0.1603	0.0347	0.0121	170	225
274399	Lafayette	2/0	0.1312	0.1603	0.035	0.0121	170	225
274407	Swarthmore	3/0	0.104	0.1272	0.0335	0.0139	195	250
274415	Davidson	3/0	0.104	0.1272	0.0337	0.0139	195	250
274423	Wake Forest	4/0	0.0825	0.1009	0.0328	0.0157	225	290
274431	Earlham	4/0	0.0825	0.1009	0.033	0.0157	225	290
274902	Slippery Rock	350	0.0499	0.0611	0.032	0.0204	305	385
303727	Morehouse	500	0.0349	0.0429	0.0309	0.0252	370	465
TBA	Westminster	750	0.0233	0.0288	0.0303	0.0311	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.



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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.

