

# Quadruplex 600 Volt USE-2 HI-SCORE Underground Service Entrance or Street Lighting

Aluminum Conductor. HI-SCORE Cross-linked Polyethylene (XLP) Insulation



Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

- Conductor:** Conductors are stranded, compressed 1350-H16/H26 (3/4 Hard) aluminum
- Insulation:** Rugged Cross Linked Polyethylene (XLPE) meeting the requirements of ANSI/ICEA S-81-570. LLDPE and HDPE or MDPE
- 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. Especially suited for applications requiring superior resistance to mechanical damage. 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. These wet-rated cables can be direct buried underground or installed in a duct to power high-intensity street lighting circuits.

## 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-81-570 Standard for 600 Volt Rated Cables of Ruggedized Design for Direct Burial Installations as Single Conductors or Assemblies of Single Conductors



**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	Approx. OD	Approx. Weight
		AWG/ Kcmil	No.	inch	mil	inch	AWG/ Kcmil	No.	mil	inch	lb/1000ft
TBA	Tulsa	4	7	0.225	60	0.345	4	6	60	0.837	304
TBA	Dyke	2	7	0.282	60	0.402	4	6	60	0.975	418
TBA	Wittenberg	2	7	0.282	60	0.402	2	6	60	0.975	441
308593	Notre Dame	1/0	9	0.361	80	0.521	2	6	60	1.235	536
TBA	Purdue	1/0	19	0.361	80	0.521	1/0	7	80	1.263	719
308619	Syracuse	2/0	11	0.405	80	0.565	1	7	80	1.339	661
TBA	Lafayette	2/0	19	0.405	80	0.565	2/0	11	80	1.369	869
308635	Swarthmore	3/0	17	0.456	80	0.616	1/0	7	80	1.455	797
TBA	Davidson	3/0	19	0.456	80	0.616	3/0	15	80	1.493	1061
308650	Wake Forest	4/0	18	0.512	80	0.672	2/0	11	80	1.588	973
TBA	Earlham	4/0	19	0.512	80	0.672	4/0	17	80	1.628	1288
308676	Slippery Rock	350	30	0.661	95	0.851	4/0	17	80	2.006	1547
663538		350	30	0.661	95	0.851	3/0	17	80	2.006	1498
310797	Wofford	500	34	0.789	95	0.95	350	33	95	2.293	2180
TBA	Morehouse	500	37	0.789	95	0.979	300	18	95	2.371	2680
662890	Wabash	750	61	0.968	110	1.159	4/0	17	80	2.798	2852
TBA	Westminster	750	61	0.968	110	1.188	350	24	95	2.877	3954

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

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	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity in Duct or Buried 75/90°C
	AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp
Tulsa	4	3.3	801	0.424	0.511	0.048	52 / 60
Dyke	2	3.9	1274	0.266	0.320	0.045	72 / 80
Wittenberg	2	3.9	1274	0.266	0.320	0.045	72 / 80
Notre Dame	1/0	6.2	2027	0.167	0.201	0.044	96 / 108
Purdue	1/0	6.3	2027	0.167	0.201	0.044	96 / 108
Syracuse	2/0	6.7	2555	0.133	0.159	0.043	108 / 120
Lafayette	2/0	6.8	2555	0.133	0.159	0.043	108 / 120
Swarthmore	3/0	7.3	3221	0.105	0.126	0.042	124 / 140
Davidson	3/0	7.5	3221	0.105	0.126	0.042	124 / 140
Wake Forest	4/0	7.9	4062	0.084	0.100	0.041	144 / 164
Earlham	4/0	8.1	4062	0.084	0.100	0.041	144 / 164
Slippery Rock	350	12.0	6720	0.050	0.062	0.040	200 / 224
	350	12.0	6720	0.050	0.062	0.040	200 / 224
Wofford	500	13.8	9600	0.035	0.044	0.039	248 / 280
Morehouse	500	14.2	9600	0.035	0.044	0.039	248 / 280
Wabash	750	16.8	14400	0.024	0.031	0.038	470
Westminster	750	17.3	14400	0.024	0.031	0.038	308 / 348

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.

