ICEA S-105-692 AL 600V-UD TRIPLEX

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600 V Aluminum Triplex XLPE Underground Secondary Distribution Cable

ICEA S-105-692 / UL 854 · 600 V · −40…+90 °C industrial AL 600V-UD TRIPLEX construction



ICEA S-105-692 / UL 854 | 600 V | −40…+90 °C

Application

600 V Aluminum Triplex XLPE Underground Secondary Distribution Cable engineered to ICEA S-105-692 / UL 854 for 600 V service across −40…+90 °C, featuring stranded aluminum conductor and xlpe core insulation with minimum bending radius 8 × OD.

Typical uses: Commercial & Residential Building Distribution, Data Centers & Public Infrastructure, Fire-Safe Evacuation & Riser Shafts, Industrial Plant Balance-of-Plant Wiring, High-Voltage Grid & Substation Interconnects

Construction





Cross-section, not to scale

1	Stranded aluminum conductor	ICEA S-105-692 / UL 854
2	XLPE core insulation	ICEA S-105-692 / UL 854

Technical data

Typical values

Rated voltage / duty	600 V (ICEA S-105-692 / UL 854)	Conductor construction	Stranded aluminum conductor — High-conductivity aluminum conductor per ICEA S-105-692 / UL 854
Primary insulation / dielectric	XLPE core insulation — Extruded XLPE dielectric (individual core / group layer)	Continuous operating temperature	−40…+90 °C per ICEA S-105-692 / UL 854
Short-circuit / peak thermal limit	+160 °C to +250 °C (5 s adiabatic limit depending on dielectric class)	Minimum installation temperature	−5 °C (thermoplastic) / −25 °C (cross-linked or elastomer) / −40 °C (metallic)
Outer protection / covering	XLPE core insulation — Extruded XLPE dielectric (individual core / group layer)	Minimum bending radius	8 × OD (installed / static routing)
Layer count & geometry	2 concentric/structural layers verified by cross-section inspection	Environmental & chemical durability	Engineered for industrial service in accordance with ICEA S-105-692 / UL 854
RoHS & REACH compliance	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant	Standards	ICEA S-105-692 / UL 854

Sizes

12 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Configuration	Outer Ø ≈ mm	Weight ≈ kg/km	Min. bend R fixed mm
AL 600V-UD TRIPLEX Standard Production Schedule (600 V · −40…+90 °C) 12 sizes				
☐ AL 600V-UD TRIPLEX 3G1.5	3 × 1.5 mm²	8.4	105	68
☐ AL 600V-UD TRIPLEX 4G1.5	4 × 1.5 mm²	9.2	128	74
☐ AL 600V-UD TRIPLEX 5G1.5	5 × 1.5 mm²	10.1	156	81
☐ AL 600V-UD TRIPLEX 3G2.5	3 × 2.5 mm²	9.8	148	78
☐ AL 600V-UD TRIPLEX 4G2.5	4 × 2.5 mm²	10.8	186	86
☐ AL 600V-UD TRIPLEX 5G2.5	5 × 2.5 mm²	11.9	228	95
☐ AL 600V-UD TRIPLEX 4G4	4 × 4.0 mm²	12.6	268	101
☐ AL 600V-UD TRIPLEX 4G6	4 × 6.0 mm²	14.2	365	114
☐ AL 600V-UD TRIPLEX 4G10	4 × 10 mm²	17.5	580	140
☐ AL 600V-UD TRIPLEX 4G16	4 × 16 mm²	20.4	845	163
☐ AL 600V-UD TRIPLEX 4G25	4 × 25 mm²	24.8	1,290	198
☐ AL 600V-UD TRIPLEX 4G35	4 × 35 mm²	27.9	1,710	223

– Single-core and multi-core sizes from 0.5 mm² up to 630 mm² (or AWG/kcmil) available per ICEA S-105-692 / UL 854.

Conductor resistance & current-carrying capacity

8 sizes

Cross-section	Max. DC R_{20} Ω/km	Current in air A (30 °C) ≈	Voltage drop mV/A·m
1.5 mm² (AWG 16)	13.30	18	29.0
2.5 mm² (AWG 14)	7.98	26	17.5
4.0 mm² (AWG 12)	4.95	34	10.9
6.0 mm² (AWG 10)	3.30	44	7.3
10 mm² (AWG 8)	1.91	61	4.2
16 mm² (AWG 6)	1.21	82	2.7
25 mm² (AWG 4)	0.78	108	1.7
35 mm² (AWG 2)	0.55	135	1.2

– Current ratings are for 3 loaded conductors at 30 °C ambient in free air/tray per IEC 60364-5-52 / NEC.

Standards and approvals

- ICEA S-105-692 Compliant
- EN 10204 3.1 Routine Test Certificate
- CE, RoHS 2 (2011/65/EU) & REACH

Certifications

Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone
+86 185 9591 3361

Email
info@tebaoflex.com

Web
tebaoflex.com/cables/al-600v-ud-triplex-xlpe-underground-distribution-cable

Typical values for this cable type, based on ICEA S-105-692 / UL 854. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.