



10–100 kV DC PE/XLPE HV equipment wire

HXW / HTV

XLPE High-Voltage DC Equipment Wire

10 kV to 100 kV DC compact high-OEM PE / XLPE HV equipment wire (HXW & HTV)



10 kV – 100 kV DC

≥ 60 kV/mm PE/XLPE

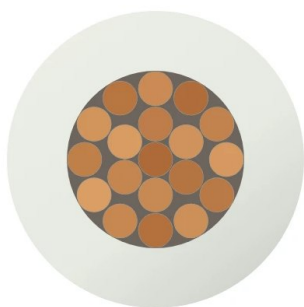
HXW / HTV

Application

Compact, ultra-high-OEM-strength polyethylene (PE) and cross-linked polyethylene (XLPE) high-voltage DC equipment wire (HXW unjacketed & HTV flame-retardant PVC-jacketed) rated 10 kV to 100 kV DC with co-extruded semiconductive conductor stress.

Typical uses: Oil-Immersed X-Ray & Cockcroft-Walton Multipliers, Pulsed-Power & Marx Generator Interconnects, CRT / Photomultiplier Tube (PMT) Anode Leads, High-Voltage Capacitor Bank & Ignition Wiring, Airborne & Industrial Electrostatic Power Packs

Construction



Cross-section, not to scale

- 1 Stranded tinned copper conductor
- 2 Co-extruded semiconductive stress-control layer
- 3 High-purity HV PE / XLPE OEM
- 4 Flame-retardant PVC outer jacket (HTV series)

Technical data

Typical values

Rated DC working voltage	10, 15, 20, 30, 40, 50, 60, 75 & 100 kV DC	Rated AC voltage (50/60 Hz)	4 kV to 35 kV AC rms
Factory DC routine test	2.0 × rated U _{DC} for 5 min	OEM breakdown strength	≥ 60 kV/mm (IEC 60243-1)
Volume resistivity	≥ 10 ¹⁶ Ω·cm at 20 °C	OEM constant / loss	ε _r = 2.25 · tan δ ≤ 3 × 10 ⁻⁴ at 1 kHz
Operating temperature (PE / XLPE)	-40 °C to +80 °C (LDPE) · -40 °C to +90/+105 °C (XLPE)	Short-circuit conductor temp	+250 °C (XLPE grades)
Conductor cross-sections	0.50 mm ² , 0.75 mm ² , 1.0 mm ² , 1.5 mm ² , 2.5 mm ² , 4.0 mm ² , 6.0 mm ²	Min. bend radius	8 × OD (fixed installation)
Transformer oil compatibility	HXW natural PE/XLPE is non-leaching in mineral & silicone oil	Flame retardancy (HTV)	UL VW-1 / IEC 60332-1-2 (HTV PVC-jacketed series)
Moisture absorption	< 0.01 % water absorption	Standards	UL 3239 (HTV flame-retardant) · IEC 60502-2 · MIL-DTL-16878

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	Construction	Conductor mm ² (AWG)	Rated U _{DC} kV DC	Rated U _{AC} kV rms	Test U _{DC} kV DC	Nominal OD mm	Weight kg/km
HXW Series — Unjacketed Natural PE / XLPE HV DC Wire (10 kV to 100 kV DC) 6 sizes							
☐ HXW-10KV-0.75-XLPE	HXW Natural XLPE	0.75 (19 AWG)	10	4	20	2.6	11
☐ HXW-20KV-1.0-XLPE	HXW Semicon + XLPE	1.0 (18 AWG)	20	8	40	3.5	18
☐ HXW-30KV-1.5-XLPE	HXW Semicon + XLPE	1.5 (16 AWG)	30	12	60	4.6	28
☐ HXW-50KV-1.5-XLPE	HXW Semicon + XLPE	1.5 (16 AWG)	50	20	90	6.5	46
☐ HXW-75KV-2.5-XLPE	HXW Semicon + XLPE	2.5 (14 AWG)	75	28	130	9.2	86
☐ HXW-100KV-2.5-XLPE	HXW Semicon + XLPE	2.5 (14 AWG)	100	35	165	12.0	135
HTV Series — Flame-Retardant PVC-Jacketed PE / XLPE HV DC Wire (15 kV to 100 kV DC) 6 sizes							
☐ HTV-15KV-1.0-PVC	HTV XLPE + PVC Jacket	1.0 (18 AWG)	15	6	30	4.0	24
☐ HTV-30KV-1.5-PVC	HTV Semicon + XLPE + PVC	1.5 (16 AWG)	30	12	60	5.8	44
☐ HTV-40KV-1.5-PVC	HTV Semicon + XLPE + PVC	1.5 (16 AWG)	40	16	75	6.8	58
☐ HTV-50KV-2.5-PVC	HTV Semicon + XLPE + PVC	2.5 (14 AWG)	50	20	90	8.0	78
☐ HTV-75KV-2.5-PVC	HTV Semicon + XLPE + PVC	2.5 (14 AWG)	75	28	130	10.8	126
☐ HTV-100KV-4.0-PVC	HTV Semicon + XLPE + PVC	4.0 (12 AWG)	100	35	165	14.2	210

– For potting in epoxy or polyurethane HV modules, HXW surface can be factory corona-etched or flame-treated to promote resin adhesion.

Standards and approvals

✓ UL 3239 Flame-Retardant HV Style (HTV Series)

✓ IEC 60243-1 ≥ 60 kV/mm OEM Verified

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/xlpe-high-voltage-dc-equipment-wire



Typical values for this cable type, based on UL 3239 / IEC 60502-2 / MIL-DTL-16878 Type J. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.