FC® FEICHUN SPECIAL CABLES

2XSEYRY 6/10 (12) kV
Medium Voltage XLPE Power Cable

中压交联聚乙烯（XLPE）绝缘铜带屏蔽铝丝铠装电力电缆 · Copper Tape Screened, Aluminium Round-Wire Armoured

TECHNICAL DATA SHEET · 技术规格书

XLPE INSULATED | Cu TAPE SCREEN | AWA ARMOURED | 6/10(12) kV | 3×185 mm² Cu | IEC 60502-2

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1 Product Description 产品说明

2XSEYRY is a 6/10(12) kV rated, stranded copper conductor, XLPE-insulated power cable with a copper tape screen applied over each core, aluminium round-wire armour, and a PVC outer sheath. It follows the IEC 60502-2 designation system (equivalent series: N2XSEYRY / NA2XSEYRY, and functionally comparable to GB/T 12706 type YJV22/YJV32 constructions with copper-tape screening), and is intended for fixed installation in underground ducts, direct burial, cable trenches, and above-ground racks in industrial, utility, and mining power distribution networks where earth-fault current return via the screen and mechanical protection from the armour are both required.

2XSEYRY 电缆为额定电压 6/10(12) kV 的紧压绞合铜导体交联聚乙烯（XLPE）绝缘电力电缆，每芯外覆铜带屏蔽层，整体铝丝圆钢丝铠装，外覆聚氯乙烯（PVC）护套。其型号编码体系遵循 IEC 60502-2（对应系列 N2XSEYRY / NA2XSEYRY，功能上可与 GB/T 12706 铜带屏蔽 YJV22/YJV32 结构对应），适用于工业、公用事业及矿山配电系统中的地下管道敷设、直埋敷设、电缆沟敷设及桥架明敷，兼顾接地故障电流经屏蔽层回流与铠装层的机械防护需求。

IEC 60502-2 / DIN VDE 0276-620 | Uo/U = 6/10 kV, Um = 12 kV | Cu / Al Conductor Options | Flame Retardant (FR) & LSZH Options

2 Cable Construction 电缆结构

01 · CONDUCTOR
Stranded compacted copper, Class 2 (IEC 60228)
紧压绞合圆铜导体，IEC 60228 第2种

02 · CONDUCTOR SCREEN
Extruded semi-conducting compound
挤包半导电屏蔽层

03 · INSULATION
XLPE, dry-cured
交联聚乙烯（XLPE）绝缘

04 · INSULATION SCREEN
Semi-conducting compound + strippable tape
半导电屏蔽层 + 可剥离半导电带

05 · METALLIC SCREEN
Copper tape, per-core
铜带屏蔽（逐芯）

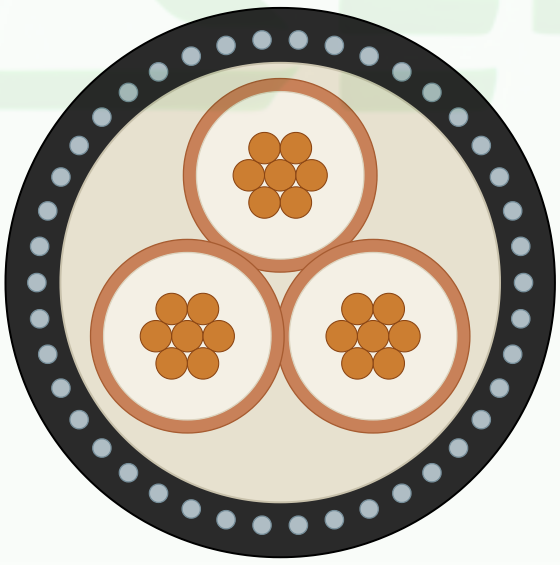
06 · CORE ASSEMBLY
3 cores laid up, fillers + binder tape
三芯绞合，填充绳与包带

07 · INNER SHEATH
Extruded PVC/PE bedding
挤包 PVC/PE 内护套

08 · ARMOUR
Aluminium round wire armour (AWA)
铝丝圆线铠装

09 · OUTER SHEATH
PVC (ST2), black; PE/LSZH on request
聚氯乙烯外护套（ST2型，黑色），可选 PE/低烟无卤

3 Cross-Sectional Construction 电缆结构截面图



1. Conductor / 导体
Stranded compacted copper, 185 mm² 紧压绞合圆铜导体

2–4. Insulation system / 绝缘系统
Conductor screen + XLPE insulation + insulation screen 导体屏蔽+XLPE绝缘+绝缘屏蔽

5. Copper tape screen / 铜带屏蔽
Applied helically over each core 逐芯螺旋绕包

6–7. Core lay-up & inner sheath / 三芯绞合与内护套
Fillers, binder tape, extruded bedding 填充、包带、挤包内衬

8. Aluminium wire armour / 铝丝铠装
Round aluminium wires, helically applied 圆铝线，螺旋铠装

9. Outer sheath / 外护套
Black PVC (ST2), weather & abrasion resistant 黑色PVC（ST2型），耐候耐磨

Fig. 1 — Cross-sectional construction, 3 × 185 mm² Cu, 2XSEYRY 6/10(12) kV (schematic, not to exact scale) · 图1 电缆结构截面示意图（示意图，非精确比例）

4 Dimensional Data 结构尺寸参数

Table 1 — Construction & Dimensions (3-core Cu conductor) · 表1 结构与尺寸参数（三芯，铜导体）

Conductor 导体	Nominal Cross-Section 标称截面积 mm²	Insulation Nom. Thickness 绝缘标称厚度 mm	Cu Tape Screen Cross-Section 铜带屏蔽截面积 mm²	Inner Sheath Nom. Thickness 内护套标称厚度 mm	Al Wire Armour Approx. Diameter 铝丝铠装近似外径 mm	Outer Sheath Nom. Thickness 外护套标称厚度 mm	Cable Max. Approx. O.D. 线缆最大近似外径 mm	Approx. Weight 近似重量 kg/km
CU	3 × 185	3.4	6.2	1.7	2.5	3.2	73.9	12,290

5 Electrical Characteristics 电气性能参数

Table 2 — Electrical Parameters (conductor DC @20°C, AC @90°C operating temperature) · 表2 电气性能参数（导体直流电阻基准20°C，交流电阻基准90°C运行温度）

Nominal Cross-Section 标称截面积 mm²	DC Resistance @20°C 直流电阻 μΩ/m		AC Resistance @90°C 交流电阻 μΩ/m		Conductor S.C. Rating, 1 sec 导体短路额定值 1秒 kA		Capacitance 电容 nF/km	Charging Current 充电电流 A/km	Armour S.C. Rating, 1 sec 铠装短路额定值 1秒 kA	Reactance 电抗 mΩ/km	Inductance 电感 μH/m	Rated Current – Underground 额定电流·地下直埋 A		Rated Current – Duct 额定电流·管道 A		Rated Current – In Air 额定电流·空中 A	
	CU	AL	CU	AL	CU	AL						CU	AL	CU	AL	CU	AL
185	99.1	164	128	211	26.6	17.0	430	0.86	14.0	90	0.29	430	335	370	290	490	385

DC resistance is consistent with the IEC 60228 Class 2 reference value for 185 mm² compacted stranded copper (0.0991 Ω/km = 99.1 μΩ/m). Current-carrying capacities are indicative reference values for single circuit, 20°C ambient soil/air per IEC 60287; de-rate for grouping, higher ambient temperature, or thermal resistivity above 1.0 K·m/W.
直流电阻值与 IEC 60228 第2种185mm²紧压绞合铜导体基准值一致（0.0991 Ω/km = 99.1 μΩ/m）。载流量为单回路、20°C环境（土壤/空气）参考值，依据 IEC 60287；多回路并列敷设、环境温度升高或土壤热阻系数高于1.0 K·m/W时应降容使用。

6 Thermal & Test Parameters 热性能与试验参数

Table 3 — Thermal Ratings · 表3 热性能指标

Max. continuous conductor temperature 导体最高长期工作温度	90 °C
Max. short-overload temperature (≤100 h/year) 短期过负荷最高温度（每年≤100小时）	130 °C
Max. short-circuit temperature (≤5 s) 短路最高温度（≤5秒）	250 °C
Min. installation temperature 最低敷设温度	0 °C
Storage / transport temperature range 储存运输温度范围	−40 °C to +50 °C
Min. bending radius, fixed installation (armoured multicore) 固定敷设最小弯曲半径（铠装多芯）	15 × O.D.

Table 4 — Routine / Type Test Voltages (6/10(12) kV) · 表4 常规/型式试验电压

Nominal voltage Uo/U 额定电压	6/10 kV
Highest voltage for equipment Um 设备最高电压	12 kV
AC withstand test, 5 min 工频耐压试验，5分钟	≈ 15 kV
DC withstand test, 15 min 直流耐压试验，15分钟	≈ 48 kV
Partial discharge level at 1.73 Uo 1.73倍额定电压下局部放电量	≤ 5 pC
Insulation resistance constant (min., 90°C) 绝缘电阻常数（最小值，90°C）	per IEC 60502-2 Table 9

Application Notes / 应用说明： Suitable for fixed installation, 6/10(12) kV distribution networks, industrial plants, mining sites, and utility feeders — indoor, in ducts/conduits, direct buried, on cable racks and trays. Reference standards: IEC 60502-2, DIN VDE 0276-620, GB/T 12706 (comparable construction). Flame-retardant (FR), low-smoke halogen-free (LSZH/LSOH) sheath, aluminium conductor, and non-armoured (2XSEY) variants available on request.
适用于 6/10(12) kV 固定敷设配电网络、工业厂区、矿山及公用电力馈线——室内敷设、管道/导管敷设、直埋敷设及桥架/托盘敷设。参考标准：IEC 60502-2、DIN VDE 0276-620、GB/T 12706（结构可比）。阻燃（FR）、低烟无卤（LSZH/LSOH）护套、铝导体及无铠装型号（2XSEY）可根据客户要求另行提供。

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