FEICHUN CABLE | N2XSEYBY 6/10 kV | 6.35/11 kV Uo/U | 3 CORE | Cu / XLPE / PVC | DOUBLE STEEL TAPE ARMOUR | IEC 60502-2

Feichun N2XSEYBY 6/10 kV — Three-Core XLPE Copper Cable with Double Steel Tape Armour

A full-English engineering guide to the N2XSEYBY three-core medium-voltage cable construction: copper conductors, semiconducting screens, XLPE insulation, copper wires or tapes, PVC filler, PVC separation sheath, double steel tape armour and PVC outer sheath. The article also identifies every field that the supplied record leaves blank.

Uo/U: 6.35 / 11 kV | 3 cores | Impact resistance: Good | -20 ... 90 °C usage range | 250 °C short-circuit conductor limit | Bending factor: - (xD) | IEC 60332-1-2

Voltage class
6.35/11 kV
Uo/U notation supplied by the source.

Core construction
3 CORE
Three-core copper-conductor XLPE cable.

Armour
2 × STEEL TAPE
Double steel tape armour under PVC outer sheath.

Published data gap
3 fields
Cross-section, laying factor and service temperature are not published.

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1. Engineering position: a three-core armoured MV cable with controlled data boundaries

N2XSEYBY is a three-core, XLPE-insulated, copper-conductor medium-voltage cable with copper wires or tapes as the metallic screen, PVC filler, PVC separation sheath, double steel tape armour and PVC outer sheath. The supplied application is fixed energy-network service in residential or industrial areas, underground routes and ducts, including routes where mechanical stresses are expected.

Electrical platform
Each phase core has a copper conductor, semiconducting conductor screen, XLPE insulation and semiconducting insulation screen. Copper wires or tapes are listed as the metallic screen.

Mechanical platform
Double steel tapes provide an armoured mechanical barrier around the PVC-separated core assembly. Armour overlap, tape dimensions, bonding and installation loads need the controlled drawing.

Three-core platform
Three cores are grouped inside a PVC filler and separation sheath. This differs from a single-core system in phase geometry, magnetic coupling, termination arrangement and fault-current paths.

Evidence platform
The record supplies voltage, operating range, impact rating and flame test reference, but it does not supply conductor area, ampacity, screen section, laying factor or continuous maximum conductor temperature.

Data boundary: this article does not invent a conductor cross-section, conductor flexibility class, current rating, conductor resistance, screen fault current, bending radius, service conductor temperature or fire class. Never fill a blank field from another size, supplier or cable family.

2. Designation and construction logic

Designation / field	Engineering reading	Design consequence	Evidence status
N2X	XLPE-insulated medium-voltage cable family context.	Coordinate insulation, semiconducting screens, terminations and tests with the stated 6.35/11 kV voltage.	Source construction
S	Metallic screen construction; source lists copper wires or tapes.	Screen continuity, earthing and fault duty require a controlled screen section and bonding design.	Source construction
EYBY	Do not rely on a letter-by-letter interpretation when the source already provides the actual build: PVC filler, PVC separation sheath, double steel tapes and PVC outer sheath.	Purchase and accessory documents should reproduce the construction sequence, not only the designation.	Construction-based interpretation
6/10 kV	Product family title.	The characteristic table states Uo/U as 6.35/11 kV; use the exact source notation in the project schedule.	Family title + characteristic field

Designation / field	Engineering reading	Design consequence	Evidence status
3 cores	Three-core cable.	Use a three-core termination and formation design; do not apply single-core cleat or screen-bond assumptions.	Official family page / PDF

Core-by-core screen interpretation
The source lists conductor screen, XLPE, insulation screen and metallic screen before the filler. The diagram shows a screened-core concept for explanation, while the exact screen placement and dimensions remain controlled-drawing items.

PVC, not LSZH
The source explicitly lists PVC filler, PVC separation sheath and PVC outer sheath. No halogen-free, LSZH or low-smoke claim is added.

Steel tape armour
Steel tape armour provides mechanical protection, but it is not automatically a substitute for a metallic fault-return conductor or an earthing system.

Fixed-installation boundary
The source application covers underground and duct routes. A dash for the laying factor means that dynamic or even ordinary laying controls must be obtained before installation.

3. Standard and evidence review

Reference	Role in this article	Engineering interpretation	Boundary
IEC 60502-2	Product standard listed by the source.	Use for the construction, dimensions and test-basis review of the applicable extruded-insulation MV cable.	Confirm the project-adopted edition and exact Feichun conformity file.
IEC 60332-1-2	Flame retardant reference listed by the source.	The official IEC scope describes a vertical flame-propagation test for a single insulated wire or cable using a 1 kW pre-mixed flame. It is not a CPR class.	Source gives the standard number without an edition.
PVC system	PVC filler, separation sheath and outer sheath.	Review smoke, corrosive gas, halogen, fire stopping and local building requirements from the actual product documentation.	No LSZH or halogen-free claim is supplied.
Impact resistance	Good.	Useful as a product characteristic, but route-specific impact, compression and installation loads still require design.	No detailed impact test value is supplied.
CPR fire class	Not stated in the supplied N2XSEYBY record.	Do not insert Dca, Cca, Eca or any s/d/a sub-class from another Nexans or Feichun cable.	Not published.

IEC scope check: the official IEC 60502-2 record describes extruded-insulation cables from 6 kV up to 30 kV for fixed installations such as distribution networks and industrial installations. N2XSEYBY is listed by the product source under IEC 60502-2; the exact edition and project conformity evidence still need to be controlled.

4. Complete source specification

Every user-provided field is preserved below. The article uses “Not published” or the source dash where the record does not provide a value. The official PDF adds the 250 °C short-circuit conductor temperature, while preserving the dash fields.

Specification field	Reference value	Engineering interpretation	Evidence status
Product designation	N2XSEYBY 6/10 kV	Three-core XLPE-insulated copper-conductor cable with copper metallic screen, PVC filler, PVC separation sheath, double steel tape armour and PVC outer sheath.	Supplied / Nexans family reference
Product description	6/10 kV XLPE insulated steel tape armoured, three core cables with copper conductor	A fixed-installation MV cable architecture for energy networks and routes where mechanical stresses are expected.	Supplied source
Product standard	IEC 60502-2	The source lists IEC 60502-2. Confirm the project-adopted edition, accessories and exact Feichun conformity route before release.	Supplied source — current edition to be confirmed
Conductor material	Copper	Phase conductors are identified as copper; no conductor cross-section is published in the supplied record.	Supplied source
Number of cores	3	Three-core construction; phase arrangement is internal to the cable, but termination, earthing and system protection remain project-level decisions.	Official family page / PDF
Conductor cross-section	- mm²	The source explicitly leaves the conductor cross-section unpublished. No size, resistance, current rating or mass is invented.	Official family page / PDF — not published
Conductor flexibility	Not stated	The supplied record does not state a conductor flexibility class. Do not copy Class 2 from another N2X family.	Not published in supplied record
Rated Voltage Uo/U (Um)	6.35 / 11 kV	The source gives Uo/U as 6.35/11 kV. No additional Um value is added.	Supplied source
Mechanical resistance to impacts	Good	Impact resistance is listed as Good; exact impact test basis and construction release must be confirmed for Feichun.	Supplied source / official PDF
Operating temperature, range	-20 ... 90 °C	The source usage range; this does not by itself establish a continuous conductor temperature rating.	Supplied source
Short-circuit max. conductor temperature	250 °C	Shown in the official family PDF; use with conductor size, I²t, protection clearing time and accessory capability.	Official family PDF — page 2
Bending factor when laying	- (xD)	The source leaves the laying factor blank. No minimum radius can be calculated from this record.	Supplied source — not published

Specification field	Reference value	Engineering interpretation	Evidence status
Max. conductor temperature in service	- °C	The source leaves the continuous maximum conductor temperature blank. Do not assume 90 °C from another XLPE family.	Supplied source — not published
Flame retardant	IEC 60332-1-2	Single vertical insulated wire or cable flame-propagation test reference; it is not a CPR class and not a bunched-cable Category C claim.	Supplied source
Conductor screen	Semi-conducting compound (XLPE)	Radial electric-field transition at the conductor-to-XLPE interface.	Supplied source
Insulation	XLPE	Primary solid dielectric layer for the stated MV voltage class.	Supplied source
Insulation screen	Semi-conducting compound (XLPE)	Controls the outer electric-field interface around each insulated core.	Supplied source
Metallic screen	Copper wires or tapes	Copper screening is listed, but screen geometry, section and short-circuit duty are not published in the supplied record.	Supplied source — numerical screen data absent
Filler	PVC	Fills the interstices of the three-core assembly and supports the circular cable build.	Supplied source
Separation sheath	PVC	Separates the core assembly from the double steel tape armour.	Supplied source
Armour	Double steel tapes	Provides mechanical protection; armour overlap, tape dimensions, bonding and fault-current behaviour require the released drawing.	Supplied source
Outer sheath	PVC	External PVC protection. The supplied record makes no LSZH, halogen-free or low-smoke claim for this cable.	Supplied source
Application	Energy networks with sudden load changes where mechanical stresses are expected; residential or industrial areas; underground or in ducts	Use for fixed routes after voltage, thermal, mechanical, fire, water, earthing and accessory conditions are closed by design.	Supplied source
Source record supplied by user	Generated 8/4/26 — www.nexans.com.tr — Page 1 / 2	Preserved exactly as supplied; revision identity must be checked against the controlled release.	Supplied source metadata
Live family PDF record checked online	Generated 7/8/26 — www.nexans.com.tr — Page 1 / 2	A separate online PDF record showed a different generated date. The two dates are kept separate and are not merged into one revision.	Official PDF metadata — separate record
Live PDF page 2 construction record	N2XSEYBY 6/10 kV — Page 2 / 2	The checked PDF confirms three cores, 250 °C short-circuit conductor temperature and the same dash fields for bend factor and service temperature.	Official family PDF — page 2

5. Published-data limitations and what cannot yet be calculated

Required design input	Source state	Why it matters	Required Feichun release action
Conductor cross-section	- mm²	Without conductor area, conductor resistance, current rating, mass, diameter and accessory size cannot be selected.	Publish a size-specific data sheet and product code.
Continuous maximum conductor temperature	- °C	Operating range -20 ... 90 °C is not a continuous conductor-temperature declaration.	Confirm continuous service limit with XLPE, screen, sheath and accessories.
Bending factor when laying	- (xD)	No minimum laying radius can be calculated; pulling and entry geometry cannot be released safely.	Publish installation factor and accessory-specific limits.
Current ratings	Not supplied	Thermal selection cannot be performed for air, buried, duct, flat or trefoil conditions.	Publish or calculate ratings with the stated installation basis.
Screen / armour fault duty	Not supplied	Earth-fault path, screen bonding, steel tape behaviour and protection coordination remain unresolved.	Release screen section, armour details and I^2t capability.
Fire classification	Not stated	PVC construction and IEC 60332-1-2 cannot be converted into a CPR classification.	Provide product-specific declaration if required by the project.

Engineering stop condition: the cable can be described and structurally reviewed from the source, but it cannot be fully sized, thermally rated or radius-released until the missing fields are closed for the exact Feichun construction.

6. Layer-by-layer cross-section

N2XSEYBY 6/10 kV — three-core source construction

Copper conductors · XLPE insulation · copper wires or tapes · PVC filler · PVC separation sheath · double steel tape armour · PVC outer sheath.

Conceptual engineering reconstruction, not a manufacturing drawing. The source does not publish conductor area, screen section or layer dimensions.

1. PVC outer sheath

External PVC environmental and mechanical interface.

2. Double steel tape armour

Armour system for mechanical protection; exact tape geomet

3. PVC separation sheath

Separates the three-core assembly from the steel tapes.

4. Copper wires or tapes

Metallic screen around the insulated core construction; exact

5. PVC filler

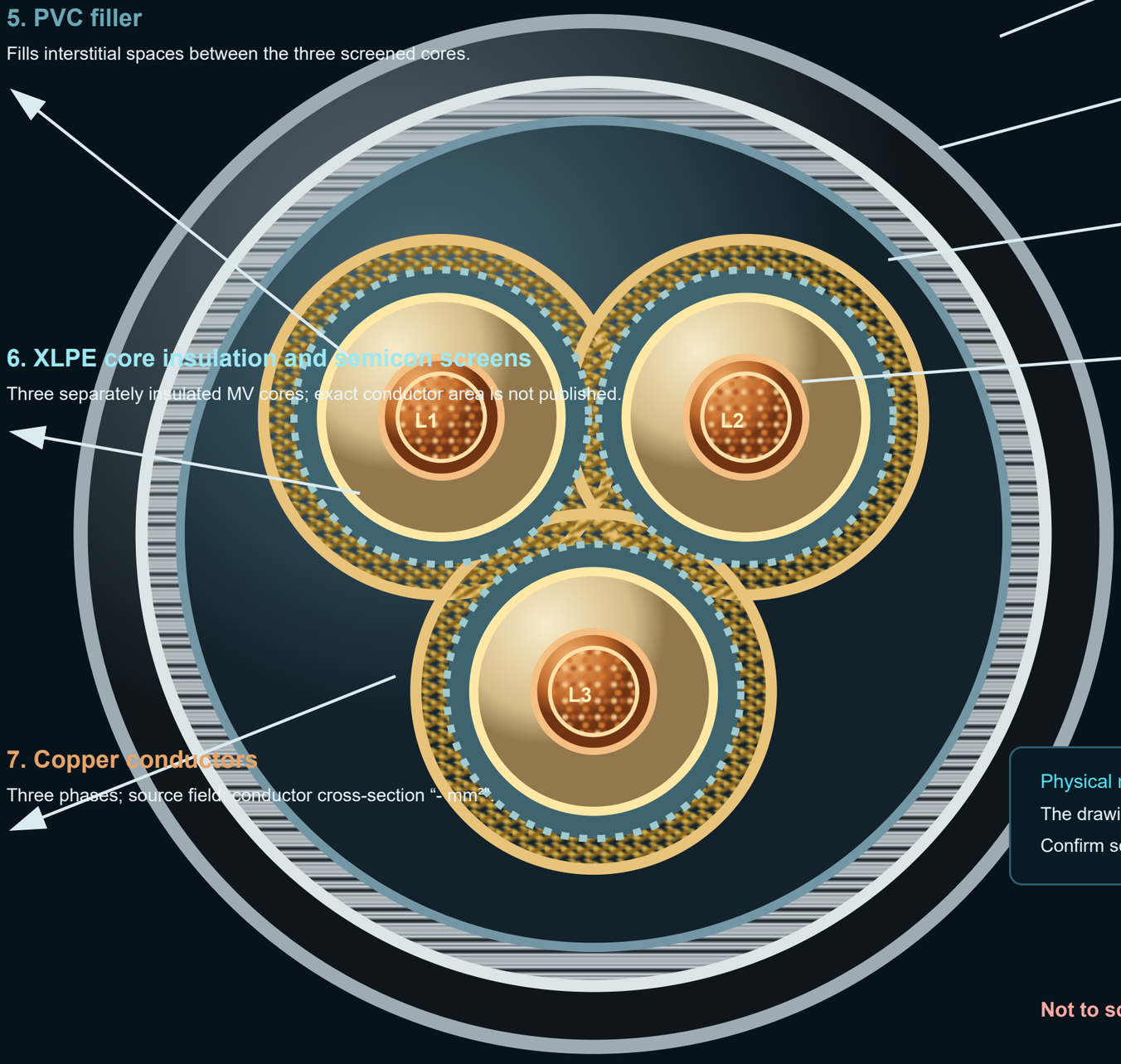
Fills interstitial spaces between the three screened cores.

6. XLPE core insulation and semicon screens

Three separately insulated MV cores; exact conductor area is not published.

7. Copper conductors

Three phases; source field: conductor cross-section “- mm²”.



Physical note:

The drawing shows an individual screened-core concept for explanation.

Confirm screen placement and dimensions from the released manufacturing drawing.

Not to scale · no numerical layer thickness or conductor area is inferred.

The source sequence is: copper conductor; semiconducting conductor screen; XLPE insulation; semiconducting insulation screen; copper wires or tapes metallic screen; PVC filler; PVC separation sheath; double steel tapes; PVC outer sheath. The cross-section is intentionally labelled as a conceptual screened-core arrangement because the source does not publish exact screen placement, core dimensions or armour geometry.

Three insulated cores
Each phase is shown with the listed conductor screen, XLPE insulation and insulation screen. The source does not publish the conductor area.

Copper metallic screen
Screen continuity and bonding are part of MV electric-field and earth-fault design. The source does not publish a screen section or short-circuit current.

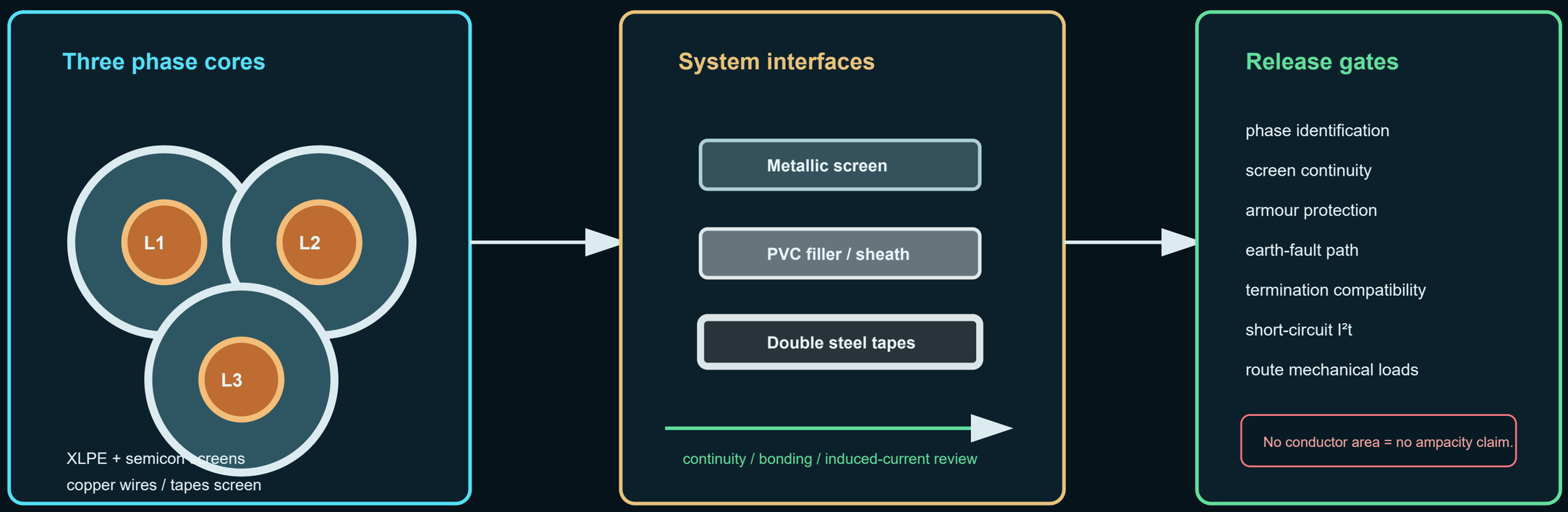
PVC filler
Filler maintains assembly geometry and supports the separation sheath. Filler selection influences circularity, sheath interface and termination preparation.

Double steel tape armour
Armour provides mechanical protection but exact overlap, tape width, thickness, lay and bonding must come from the controlled construction drawing.

7. Three-core electrical and mechanical system

N2XSEYBY three-core system — electric field, screen and armour review

Three-core construction simplifies phase grouping, but the metallic screen, steel tape armour, terminations and earth-fault path still require a controlled system design.



Do not fill the unpublished conductor cross-section, screen section, service temperature or short-circuit current from another three-core or single-core cable.

Phase geometry
Three-core construction fixes the relative phase geometry inside one cable. Do not reuse single-core flat or trefoil assumptions for cleats, screen currents or induced effects.

Screen path
Copper wires or tapes are listed as metallic screen. The system requires continuity through joints and terminations, plus a defined earthing and fault-return arrangement.

Steel tape behaviour
Steel tape armour is a mechanical barrier. Its electrical treatment, bonding and possible circulating-current behaviour need the actual design and standard basis.

Impact versus movement
Good impact resistance does not establish a repeated-motion rating. The blank bending field prevents a dynamic or minimum-radius claim.

8. Thermal, voltage-drop and short-circuit design

Thermal rating cannot be copied
No conductor area, current rating or continuous maximum conductor temperature is published. Do not borrow 90 °C continuous service from another XLPE cable.

Voltage drop needs conductor data
A 6.35/11 kV label does not provide conductor resistance, inductance or load capacity. The project needs conductor area, route length, power factor, load profile and installation formation.

Short-circuit boundary
The official PDF states a 250 °C maximum short-circuit conductor temperature, but no conductor area or permissible 1 s current is supplied. I²t cannot be calculated.

Installation method
Underground, ducts and residential / industrial areas have different thermal, mechanical, fire and water conditions. The actual route must be the design basis.

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Three-phase voltage-drop screening relation:
ΔU ≈ √3 × I × (R_ac × cos ϕ + X × sin ϕ) × L

Thermal acceptance:
I_load ≤ I_z(actual conductor area, formation, ambient, soil, grouping, duct, screen and accessory limits)

Short-circuit coordination:
I²t_protection ≤ I²t_conductor / screen / armour / joint / termination system

For this supplied N2XSEYBY record, the conductor area, current ratings, impedance and screen / armour fault values are not published. The formulas identify the required engineering work; they do not create missing data.
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9. Fire and PVC performance boundary

IEC 60332-1-2
The source lists a single insulated wire or cable vertical flame-propagation reference. The official IEC publication describes the 1 kW pre-mixed flame procedure. It is not a CPR Dca / Cca / Eca class.

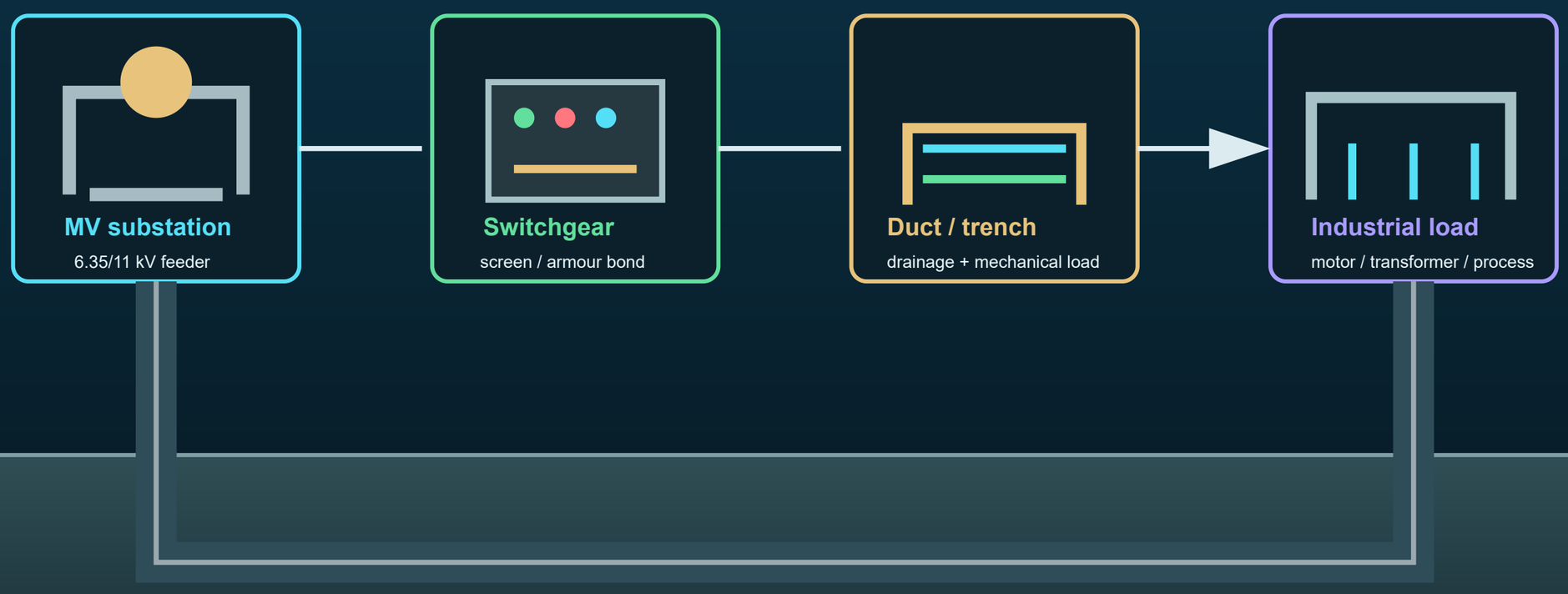
PVC outer system
The source lists PVC filler, PVC separation sheath and PVC outer sheath. No low-smoke, halogen-free or corrosive-gas claim is added.

Project fire dossier
Confirm the current product declaration, fire barriers, penetrations, supports, cable grouping, enclosure and local construction requirements.

Mechanical and fire trade-off
Steel tape armour and PVC provide a different design profile from LSZH aluminium-armoured cables. Selection should be made against the actual mechanical, fire and environmental priority.

Procurement rule: do not market this source record as LSZH, halogen-free, Dca, Cca, Eca or fire-resistant unless the exact Feichun construction has a matching current declaration and test report.

10. Fixed-route application architecture



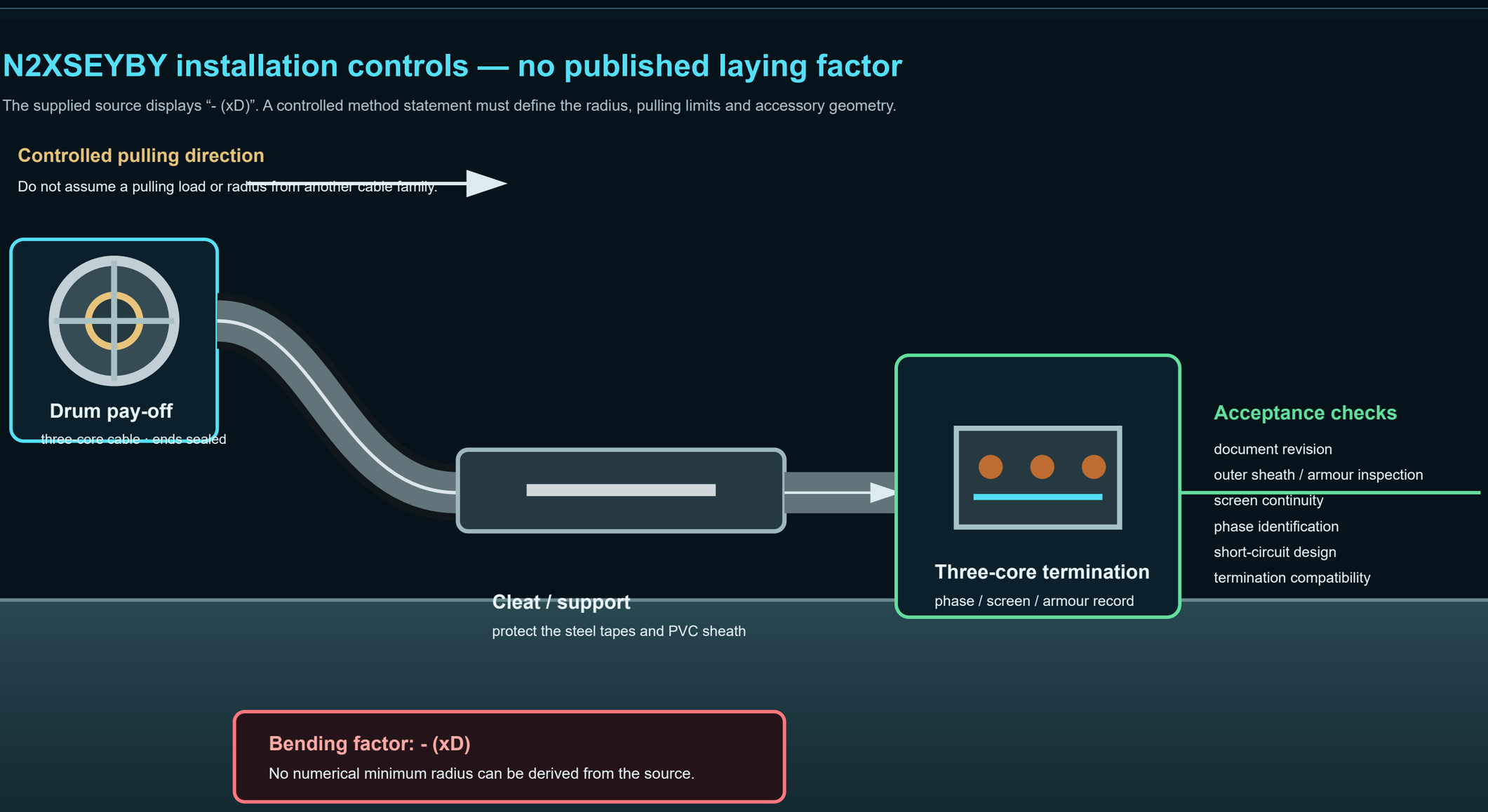
Energy-network feeder
The source identifies low dielectric losses and networks with sudden load changes. Final selection still needs conductor area, load profile and protection study.

Underground and ducts
Review pulling route, water exposure, drainage, impact, backfill, duct fill, cable spacing, fire stopping and joint access.

Industrial and port shore-side route
Evaluate fixed substation and plant feeders for mechanical stress, impact, PVC fire behaviour, corrosion, flooding and maintenance access.

Moving crane equipment
This record has no bending factor and is not established as a reeling, festoon, drag-chain or continuous-torsion cable.

11. Handling and termination



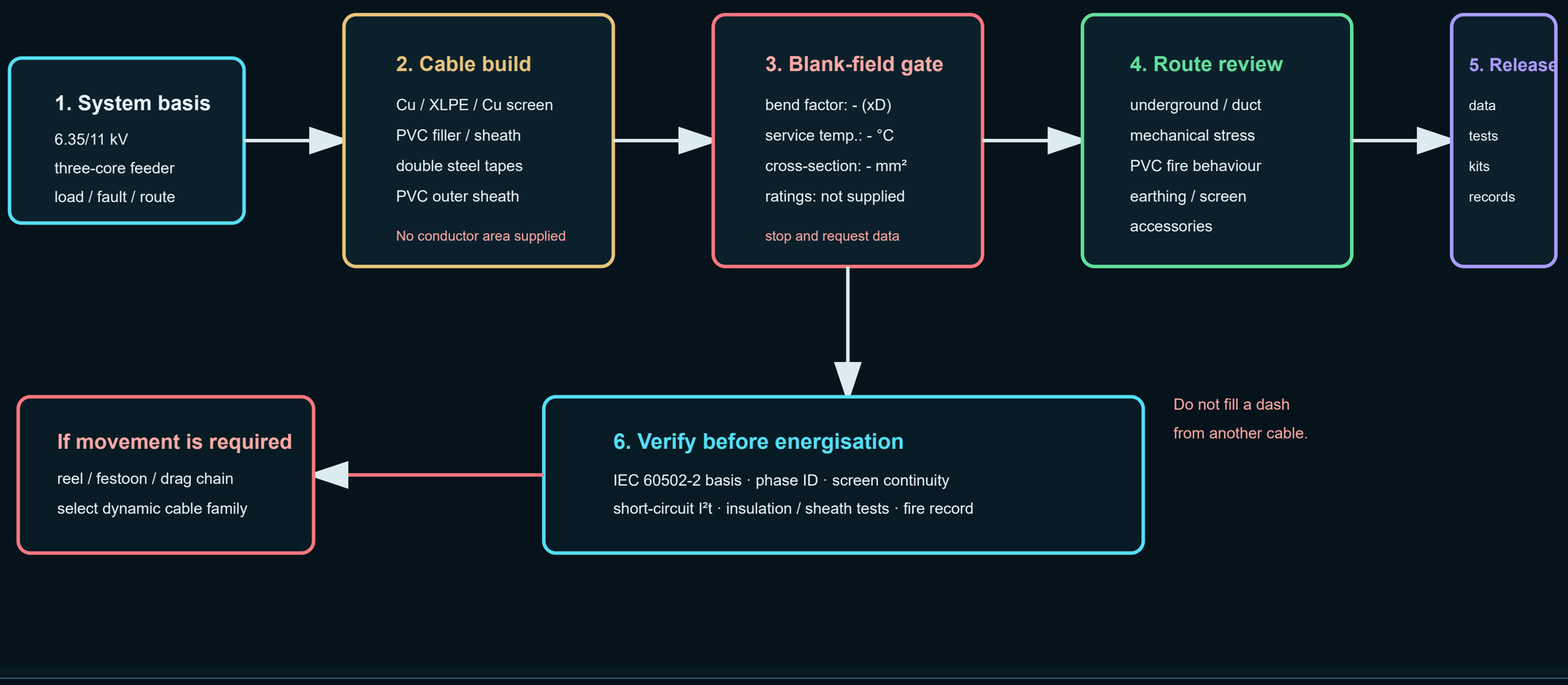
1. Confirm the exact product code, current source revision, cable length, conductor area, outside diameter, mass and end seals before unloading.
2. Do not use a calculated bend radius: the source states `- (xD)`. Obtain the controlled installation factor and accessory method statement before laying.
3. Align the drum and pay off in the marked direction. Prevent reverse winding, flange impact, uncontrolled twist and local PVC sheath damage.
4. Use controlled rollers and pulling equipment. Verify pulling load, sidewall pressure, support spacing, trench entry, duct entry and armour loading.
5. Prepare the three-core termination with the correct phase identification, screen continuity, PVC separation, steel tape armour treatment and gland / accessory dimensions.
6. Bond the metallic screen and armour according to the approved earthing design. Record continuity, torque, phase identity and test results.
7. Before energisation, complete conductor resistance, screen continuity, insulation / sheath tests, MV withstand or partial-discharge tests where specified, phase identification, accessory inspection and as-built records.

Installation release: no minimum radius, conductor service temperature or conductor size should appear in a Feichun installation method statement until the current controlled data sheet closes the dash fields.

12. Selection comparison for engineers

Requirement	N2XSEYBY reference	What must be verified	Engineering decision
Three-phase fixed MV feeder	Three-core copper / XLPE construction; 6.35/11 kV Uo/U.	Conductor area, current rating, voltage drop, fault duty, termination and phase identification.	Potentially suitable after data release.
Mechanically exposed fixed route	Good impact resistance; double steel tape armour.	Impact level, compression, armour overlap, pulling load, support and trench / duct entry.	Candidate subject to mechanical design.
Underground / duct route	Application listed by the source.	Water exposure, drainage, soil thermal resistance, duct fill, fire stopping and joint access.	Confirm route construction.
Fire-sensitive building or tunnel	IEC 60332-1-2 listed; PVC sheath system.	Current fire declaration, smoke / corrosive gas evidence, grouping and local requirements.	Do not assume LSZH or CPR class.
Continuous current sizing	Conductor cross-section and service maximum temperature are “-”.	All thermal and voltage-drop inputs are incomplete.	Stop until data is published.
Reeling / festoon / drag chain	No bending factor; fixed-route application wording.	Cycles, torsion, speed, acceleration, rollers and dynamic bend radius.	Select a dedicated dynamic cable family.

N2XSEYBY release gate — do not select around blank fields



13. Failure mode and effects analysis

Wrong conductor size: the cable is ordered without resolving the “- mm²” field, making ampacity, voltage drop and accessory selection impossible.

Radius assumption: a 15×D or 12×D value from another cable is copied even though this record states “- (xD)”.

Continuous temperature substitution: 90 °C from another XLPE family is treated as the N2XSEYBY service limit.

Screen fault path: copper screen and steel tape armour are assumed to carry a known earth-fault current without a section or bonding study.

Fire-class substitution: IEC 60332-1-2 is treated as proof of Dca, Cca, Eca, LSZH or halogen-free performance.

Armour damage: incorrect rollers, pulling or trench entries deform the double steel tapes or PVC sheath.

Revision confusion: the supplied 8/4/26 source record and the live PDF’s 7/8/26 metadata are merged without verifying which controlled document governs.

Dynamic misuse: the fixed-installation cable is placed in reeling, festoon or energy-chain service without a dynamic qualification.

14. Feichun Cable certification and project assurance

Engineered for maximum safety in demanding environments, Feichun Cable cable systems comply with global standards including **ATEX, IECEx, VDE, CE, UKCA, EAC, and the Russian Fire Safety Certificate**. They are the trusted choice for heavy-duty mining equipment, ship-to-shore cranes, RTG/RMG cranes, and conveyor systems where high reliability is non-negotiable.

For a Feichun N2XSEYBY release
Confirm conductor area, conductor flexibility, outer diameter, mass, DCR, current rating, voltage-drop data, screen section, screen / armour fault duty, bending factor, service conductor temperature, fire classification and accessory compatibility.

Certification is configuration-specific
Certification capability does not make every N2XSEYBY size automatically IEC 60502-2, IECEx, ATEX, EAC or fire-certified. The exact three-core construction and documentation must match.

Three-core armour dossier
The controlled release should identify screen geometry, PVC filler, separation sheath, double steel tape dimensions and overlap, armour treatment, glands, termination preparation and earthing method.

Feichun engineering value
Feichun can develop the three-core XLPE / copper-screen / PVC / double-steel-tape architecture around the actual conductor size, route mechanics, protection system and market documentation instead of copying an incomplete reference label.

Release condition: this article does not invent a Feichun certificate number, conductor cross-section, current rating, radius, service temperature, screen fault current, fire class or product-specific test report.

15. Source and revision audit

Source	Use in this article	Status and limitation
Nexans Türkiye N2XSEYBY 6/10 kV family page	Product title, IEC 60502-2 listing, application, construction, three-core field, voltage, impact, operating range, dash fields and IEC 60332-1-2.	Manufacturer family reference; confirm current revision and exact ordered product.
Nexans N2XSEYBY two-page family PDF	Page-1 construction and page-2 characteristics, including 250 °C short-circuit conductor temperature and dash fields.	Live PDF checked online shows generated date 7/8/26; the user-supplied copy states 8/4/26. Keep the records separate.
IEC 60502-2 official consolidated publication record	Standard scope for extruded-insulation cables from 6 kV up to 30 kV in fixed installations.	Confirm adopted edition and the exact Feichun conformity route.
IEC 60332-1-2:2025 official publication record	Current IEC description of the single insulated wire or cable vertical flame-propagation test using a 1 kW pre-mixed flame.	The source gives the standard number without an edition; product documentation controls the applicable edition.
User-supplied source record	All supplied N2XSEYBY values, construction sequence, source metadata and page labels reproduced in this article.	Preserved; missing or dashed fields are not filled from another cable.

This article is for preliminary engineering, technical search and comparison. The final Feichun N2XSEYBY 6/10 kV release must be checked against the current product data sheet, IEC 60502-2 basis, conductor size, current ratings, bending instructions, screen / armour design, fire documentation, accessories, installation method and local authority requirements.

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This article separates supplied values, official source additions, blank fields and Feichun project-confirmation values. Missing fields are not filled from another supplier or cable size.

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