FEICHUN CABLE | CU / XLPE / CTS | PVC / AWA / PVC | 12.7/22 kV | SINGLE CORE | COPPER TAPE SCREEN | ALUMINIUM WIRE ARMOUR | BS 6622 | IEC 60332-1-2

Feichun CU/XLPE/CTS/PVC/AWA/PVC 12.7/22 kV — Single-Core XLPE Copper Cable with Aluminium Wire Armour

A full-English engineering guide to the fixed-installation medium-voltage construction: copper conductor, semiconducting conductor screen, XLPE insulation, semiconducting insulation screen, crape-paper semiconducting tape, copper tape metallic screen, PVC separation sheath, single-layer aluminium wire armour and PVC outer sheath. The article separates the supplied 8/4/26 source record, official current product pages and an older family PDF revision.

Uo/U (Um): 12.7 / 22 (24) kV | 1 core | -20 ... 90 °C | 250 °C short-circuit limit | Bending factor: 15 (xD) | Mechanical impact: Good | IEC 60332-1-2 | BS 6622

Voltage class
12.7/22 kV
Uo/U (Um) designation supplied by the source.

Core construction
1 CORE
Single-core copper-conductor XLPE cable.

Published sizes
70–630
Ten complete matrix rows with separate product references.

Installation control
15 × D
Derived radius screening from each published outer diameter.

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1. Engineering position: a screened and aluminium-wire-armoured single-core MV cable

CU/XLPE/CTS/PVC/AWA/PVC 12.7/22 kV is a single-core, XLPE-insulated, copper-conductor medium-voltage cable with a copper tape metallic screen, PVC separation sheath, single-layer aluminium wire armour and PVC outer sheath. The source application is fixed energy-network service in residential or industrial areas, underground routes and ducts, including networks with sudden load changes and expected mechanical stresses.

Electric-field platform
The conductor screen, XLPE insulation and insulation screen form the radial dielectric system. The copper tape is the metallic electric-field boundary and an earth-fault path that requires continuity and bonding design.

AWA mechanical envelope
The single aluminium-wire armour layer is mechanically distinct from the copper tape screen. Armour continuity, bonding, corrosion environment, cleats and entry protection must be designed for the installation.

Single-core platform
Single-core geometry changes induced-current behaviour, screen bonding, armour bonding, cleat selection, magnetic effects and formation calculations. Three-core assumptions must not be copied into this design.

Current versus older data
The supplied/current record gives -20 ... 90 °C. The older official family PDF reports -20 ... 60 °C. This article preserves the revision boundary and does not merge them silently.

Data boundary: every supplied matrix value, dash field, construction layer, generated date, page label and source disclaimer is reproduced. Missing fields and route-specific assumptions are not filled from another cable family. The final Feichun release must govern the exact construction, tests, accessories and project ratings.

2. Designation and construction logic

Designation / field	Engineering reading	Design consequence	Evidence status
CU	Copper phase conductor.	Use the exact cross-section row for DCR, ampacity, voltage drop and short-circuit screening.	Supplied construction
XLPE	Cross-linked polyethylene insulation around the screened conductor.	Coordinate insulation, semiconducting screens, terminations, joints and test levels with the 12.7/22 kV system.	Supplied construction
CTS	Copper tape metallic screen.	Control screen continuity, bonding, touch voltage, induced effects and earth-fault I²t.	Supplied construction / official product records

Designation / field	Engineering reading	Design consequence	Evidence status
PVC / AWA / PVC	PVC separation sheath, single-layer aluminium wire armour and PVC outer sheath.	Keep electrical screen duties separate from mechanical armour duties; verify PVC fire and environmental evidence for the project.	Supplied construction / official product records
12.7/22 (24) kV	Rated voltage Uo/U (Um).	Confirm system earthing, switching, withstand, accessory class and protection coordination.	Supplied characteristic field

Layer sequence
Copper conductor → semiconducting conductor screen → XLPE insulation → semiconducting insulation screen → crape-paper semiconducting tape → copper tape metallic screen → PVC separation sheath → single-layer aluminium wire armour → PVC outer sheath.

Screen and armour are not interchangeable
The copper tape is an electrical screen. The AWA layer is a mechanical armour. Their continuity, bonding, thermal duty and accessory interfaces must be verified independently.

PVC boundary
PVC is explicitly supplied for the separation and outer sheath. Do not market this construction as LSZH or halogen-free without a matching declaration and test report.

Fixed-route boundary
The source publishes a 15 (xD) laying factor and fixed-installation applications, but no continuous-flex rating. This does not qualify the cable for reeling, festoon or energy-chain service.

3. Standards and evidence review

Reference	Role	Engineering interpretation	Boundary
BS 6622	Product standard listed by the supplied source.	BSI describes the standard as covering armoured thermosetting-insulated cables for fixed network or industrial installations across the relevant voltage range, including copper or aluminium conductors, metallic screens and aluminium or galvanised-steel armour options.	Confirm adopted edition and exact Feichun conformity file.
IEC 60332-1-2	Flame-retardant reference listed by the source.	The official IEC procedure concerns vertical flame propagation for a single insulated wire or cable using a 1 kW pre-mixed flame.	Test-method reference; not a grouped-cable fire declaration or CPR class by itself.
IEC 60502-2	Related international MV cable reference.	It is included for engineering cross-reference to extruded-insulation MV fixed-installation cable practice.	Not listed as the product standard in the supplied record; verify project adoption separately.
PVC sheath system	Separation and outer sheath material.	Evaluate fire, smoke, corrosive gas, chemical, UV, water, impact, enclosure and penetration requirements for the actual route.	No CPR class, LSZH declaration or halogen-free claim is supplied.
Source hierarchy	User record versus official additions.	Supplied values are primary; official pages add independently labelled construction and product-list context; derived radii are arithmetic checks.	Feichun project dossier controls procurement release.

Scope distinction: a product standard and a single-cable flame test do not automatically qualify a cable for mining, shipboard, reeling, festoon, drag-chain or other dynamic special service. Those applications need their own construction and test evidence.

4. Complete source specification

Every user-provided field is preserved below. The 8/4/26 source record is primary. Official product-page additions and the older official PDF revision are explicitly labelled rather than merged.

Specification field	Reference value	Engineering interpretation	Evidence status
Product designation	CU/XLPE/CTS/PVC/AWA/PVC 12.7/22 kV	Single-core XLPE-insulated copper-conductor medium-voltage cable with copper-tape metallic screen, PVC separation sheath, single-layer aluminium wire armour and PVC outer sheath.	Supplied source / official family reference
Product description	12.7/22 kV XLPE insulated aluminium wire armoured, single core cables with copper conductor	Fixed-installation MV cable for energy networks with sudden load changes, residential or industrial areas, underground routes and ducts where mechanical stresses are expected.	Supplied source / official family page
Source application wording	These are cables with low dielectric losses used in energy networks with sudden load changes where mechanical stresses expected. Laid in residential or industrial areas, underground or in ducts.	The exact supplied application wording is preserved. Final suitability still depends on the project voltage, thermal, mechanical, fire, water, screen-bonding, armour-bonding and accessory review.	Supplied source / official family page
Product standard	BS 6622	BSI describes BS 6622 as covering armoured thermosetting-insulated cables from 3.8/6.6 kV to 19/33 kV for fixed network or industrial installations, with 90 °C continuous and 250 °C short-circuit conductor limits. Confirm the adopted edition and Feichun conformity route.	Supplied source / official family page / BSI scope
Conductor material	Copper	The phase conductor is copper; resistance, ampacity and fault duty remain size- and installation-specific.	Supplied construction / official product records
Conductor shape	Circular stranded (RM)	Official size-specific records identify a circular stranded RM conductor; the released Feichun drawing controls the ordered construction.	Official 70 / 630 mm² product records
Conductor flexibility	Not stated in the supplied record	Do not convert the 15 (xD) laying factor into continuous-flex, reeling, festoon or drag-chain qualification.	Not supplied; Feichun order confirmation required

Specification field	Reference value	Engineering interpretation	Evidence status
Number of cores	1	Single-core geometry affects screen bonding, induced-current behaviour, cleat selection and installation formation.	Supplied product description / official product records
Published conductor cross-sections	70, 95, 120, 150, 185, 240, 300, 400, 500 and 630 mm²	The complete supplied matrix is reproduced below. Do not transfer diameter, mass, ampacity or short-circuit values between sizes.	Supplied source matrix / official family product list
Rated Voltage Uo/U (Um)	12.7 / 22 (24) kV	System earthing, switching, withstand, screen-bonding and accessory ratings remain project inputs.	Supplied source / official family page
Mechanical resistance to impacts	Good	The source gives a qualitative impact classification; route protection, handling controls and installation supports remain mandatory.	Supplied source / official family page
Operating temperature, range	-20 ... 90 °C	Apply actual route ambient, grouping, soil, duct and accessory limits; this is not an ampacity value by itself.	Supplied current record / official 70 mm² page
Short-circuit max. conductor temperature	250 °C	Use with conductor area, permissible I²t, screen duty, clearing time, joints and terminations.	Supplied source / official product records
Bending factor when laying	15 (xD)	Derived radius screening uses the ordered nominal outer diameter; the controlled installation method and accessory instructions remain decisive.	Supplied source / official family page
Max. conductor temperature in service	90 °C	Use with actual installation formation, ambient temperature, grouping, soil and accessory limits.	Supplied source / official family page
Flame retardant	IEC 60332-1-2	IEC describes a single vertical insulated wire or cable flame-propagation test using a 1 kW pre-mixed flame. It is not a grouped-cable fire strategy or CPR class by itself.	Supplied source / official family page / IEC
CPR / reaction-to-fire class	Not stated in the supplied record	Do not infer Eca, Cca, B2ca, s/d/a subclasses or LSZH performance from IEC 60332-1-2 alone. Match the ordered product to its current declaration and project fire strategy.	Not supplied; product-specific fire dossier required
Conductor screen	Semi-conducting compound (XLPE)	Controls the electric-field transition from the copper conductor to XLPE insulation.	Supplied construction
Insulation	XLPE	Primary extruded solid dielectric for the stated medium-voltage class.	Supplied construction
Insulation screen	Semi-conducting compound (XLPE)	Controls the outer electric-field interface around the XLPE insulation before the metallic screen.	Supplied construction
Semi-conducting tape	Crape paper	Source wording is preserved exactly; confirm the controlled material specification and stripping method.	Supplied construction
Metallic screen	Copper tape	Part of the electric-field boundary and earth-fault path; dimensions, bonding and fault duty must match the ordered construction.	Supplied construction / official product records
Separation sheath	PVC	Separates the copper screen from the aluminium wire armour and forms part of the controlled layer sequence.	Supplied construction / official product records
Wire armour	Single layer aluminium wire	AWA supplies mechanical protection and must not be confused with the copper metallic screen. Armour continuity, bonding and corrosion environment require project design.	Supplied construction / official product records
Outer sheath	PVC	PVC provides the external environmental and mechanical interface. Do not relabel this construction as LSZH or halogen-free without matching evidence.	Supplied construction / official product records
Application	Energy networks with sudden load changes; residential or industrial areas; underground or in ducts	Use for fixed routes after voltage, thermal, mechanical, fire, water, screen-bonding, armour-bonding and accessory conditions are closed by design.	Supplied source / official family page
Current source record	Generated 8/4/26 — www.nexans.com.tr — Page 1 / 2	Preserved exactly as supplied; revision identity must be checked against the controlled procurement release.	Supplied source metadata
Current source continuation	CU/XLPE/CTS/PVC/AWA/PVC 12.7/22 kV — Page 2 / 2	The supplied characteristics and ten-row matrix are treated as the primary record for this article.	Supplied source metadata
Source disclaimer	All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.	Retained as the source limitation. Use controlled Feichun release and project-approved documents for procurement and installation decisions.	Supplied source metadata
Older family PDF record	Generated 7/4/25 — Page 1 / 2 and Page 2 / 2	The older official family PDF reports -20 ... 60 °C. It is a separate revision and does not replace the current 8/4/26 source record.	Official older family PDF

Specification field	Reference value	Engineering interpretation	Evidence status
Feichun release boundary	Feichun product-specific data not supplied in this source record	Confirm final conductor construction, armour wire geometry, screen dimensions, sheath compound, type/routine tests, accessories, installation ratings and destination-market documentation before procurement.	Feichun project confirmation required

5. Complete technical matrix — CU/XLPE/CTS/PVC/AWA/PVC 12.7/22 kV

The following fourteen-column matrix preserves all ten supplied product rows exactly. Air ratings are stated for 30 °C; buried ratings are stated for 20 °C. Formation, soil, spacing, grouping, screen losses and accessories control the actual design rating.

Cross section [mm²]	Nominal outer diameter [mm]	Approx. weight [kg/km]	Max. DC resistance conductor at 20 °C [Ohm/km]	Approx. inductance — flat [mH/km]	Approx. inductance — trefoil [mH/km]	Nominal phase capacitance [µF/km]	Perm. current buried 20 °C — flat [A]	Perm. current buried 20 °C — trefoil [A]	Perm. current in air 30 °C — flat [A]	Perm. current in air 30 °C — trefoil [A]	Short-circuit screen 1 s [kA]	Short-circuit conductor 1 s [kA]	Nexans Ref.
70	33.0	1800	0.268	0.62	0.43	0.19	246	239	356	296	1.03	10	10536096
95	35.0	2250	0.193	0.6	0.41	0.21	293	285	434	361	1.03	13.6	10536179
120	37.0	2500	0.153	0.58	0.4	0.23	332	323	500	417	1.03	17.2	10535899
150	38.0	2750	0.124	0.57	0.39	0.24	366	361	559	473	1.03	21.4	10535917
185	40.0	3250	0.099	0.56	0.37	0.27	410	406	637	543	.96	26.5	10535974
240	43.0	3750	0.075	0.54	0.36	0.3	470	469	745	641	1.28	34.3	10535994
300	46.0	4750	0.06	0.54	0.35	0.32	524	526	846	735	1.28	42.9	10536014
400	49.0	5500	0.047	0.52	0.34	0.36	572	590	938	845	1.54	57.2	10536032
500	53.0	6750	0.037	0.51	0.33	0.4	-	688	975	1000	1.54	71.5	10536054
630	57.0	8250	0.028	0.5	0.32	0.45	-	774	1150	1150	1.54	90.1	10536078

The dash values in the source matrix remain dashes. Final Feichun dimensions, armour geometry, screen construction, thermal ratings, installation formation and accessory compatibility must be released for the ordered construction.

6. Derived installation checks

Cross section	Published outer diameter	Source laying factor	Derived minimum laying radius	Mass conversion
70 mm²	33.0 mm	15 × D	**495.0 mm**	**180.0 kg/100 m**
95 mm²	35.0 mm	15 × D	**525.0 mm**	**225.0 kg/100 m**
120 mm²	37.0 mm	15 × D	**555.0 mm**	**250.0 kg/100 m**
150 mm²	38.0 mm	15 × D	**570.0 mm**	**275.0 kg/100 m**
185 mm²	40.0 mm	15 × D	**600.0 mm**	**325.0 kg/100 m**
240 mm²	43.0 mm	15 × D	**645.0 mm**	**375.0 kg/100 m**
300 mm²	46.0 mm	15 × D	**690.0 mm**	**475.0 kg/100 m**
400 mm²	49.0 mm	15 × D	**735.0 mm**	**550.0 kg/100 m**
500 mm²	53.0 mm	15 × D	**795.0 mm**	**675.0 kg/100 m**
630 mm²	57.0 mm	15 × D	**855.0 mm**	**825.0 kg/100 m**

Derived values: minimum laying-radius screening = 15 × nominal outer diameter; mass per 100 m = approximate kg/km divided by 10. These arithmetic checks do not replace the controlled installation instruction, pulling calculation, sidewall-pressure check or accessory manufacturer's radius.

7. Electrical, thermal and short-circuit design

Conductor sizing
Every published size has its own diameter, mass, DCR, inductance, capacitance, ampacity and conductor short-circuit value. Select the exact Nexans reference and cross-section before calculating voltage drop or thermal margin.

Formation and thermal correction
Air values are stated at 30 °C and buried values at 20 °C. Correct for ambient, soil thermal resistivity, duct, spacing, grouping, formation, screen losses, armour effects and accessories.

Screen and armour design
The copper tape is the metallic screen; the AWA is a separate armour layer. Verify bonding, parallel paths, induced current, touch voltage, armour continuity and earth-fault duty together.

Short-circuit boundary
The source states a 250 °C maximum conductor temperature and publishes one-second conductor and screen values by size. Verify protection I²t, screen and armour paths, joints and terminations together.

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Voltage-drop screening:
ΔU ≈ I × (R_ac × cos ϕ + X × sin ϕ) × L

Thermal acceptance:
I_load ≤ I_z(actual size, formation, ambient, grouping, soil, duct, screen losses and accessories)
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Fault coordination:
I²t_protection ≤ I²t_conductor / screen / armour / joint / termination system

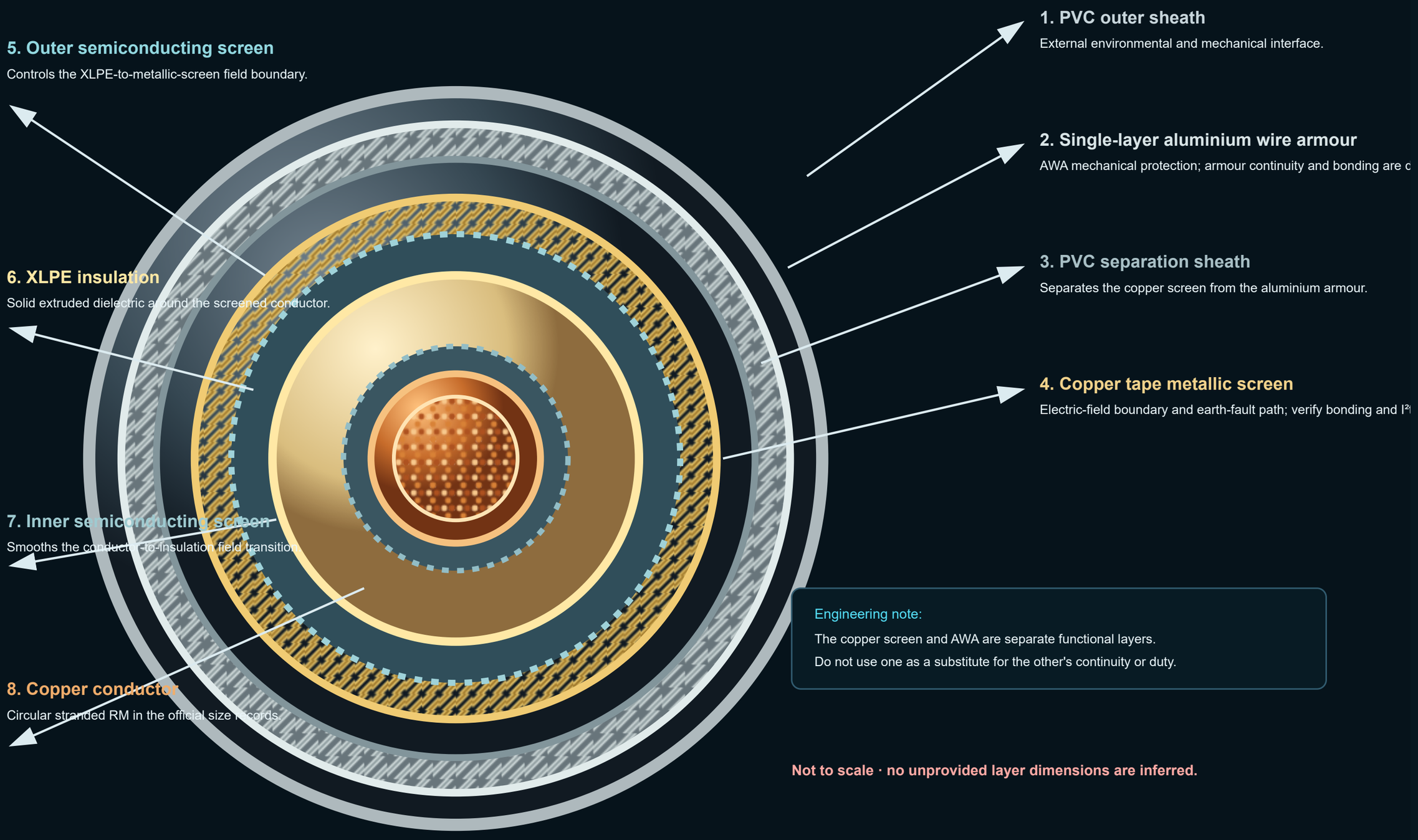
The matrix values establish a source reference only. They do not create a universal rating for an unverified Feichun route.
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8. Layer-by-layer cross-section

CU/XLPE/CTS/PVC/AWA/PVC 12.7/22 kV — single-core AWA construction

Copper conductor · XLPE dielectric · semiconducting screens · copper tape screen · PVC separation · aluminium wire armour · PVC outer sheath.

Conceptual engineering reconstruction, not a manufacturing drawing. Layer thicknesses and armour geometry are not shown to scale.



Engineering note:

The copper screen and AWA are separate functional layers.

Do not use one as a substitute for the other's continuity or duty.

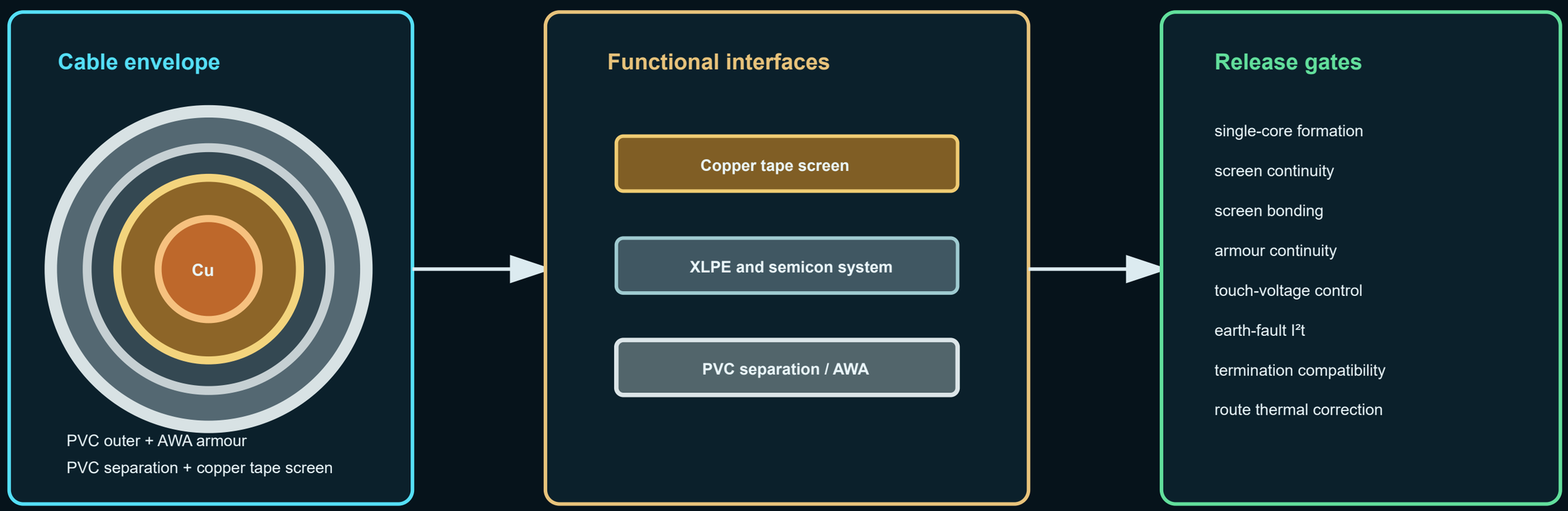
Not to scale · no unprovided layer dimensions are inferred.

The diagram follows the supplied nine-layer construction and makes the electrical copper-tape screen visually distinct from the mechanical aluminium-wire armour. It intentionally does not invent layer thicknesses, screen section, armour wire diameter or manufacturing tolerances.

9. Single-core electrical and screen-armour system

Single-core MV system — screen, armour and fault-path review

The copper tape screen controls the electric-field boundary; the PVC separation and AWA layers provide the specified mechanical envelope.



A published copper-screen value or AWA layer is not a complete fault-current or earthing guarantee. Verify bonding, clearing time, parallel paths, joints, terminations and local earthing design.

Electric-field continuity
Semiconducting screens and the copper tape must be continuous through joints and terminations to prevent local field concentration and uncontrolled screen potential.

Screen bonding
Choose bonding from system voltage, route length, induced voltage, circulating-current limits, earth-fault duty and local earthing rules.

AWA continuity
Armour bonding and continuity must be coordinated with gland, cleat, entry, earthing and corrosion-control details. Armour is not a replacement for the copper screen.

Accessory interface
Screen preparation, XLPE diameter, PVC layers, AWA termination detail, stripping lengths and conductor size must match the ordered accessory system.

10. Fire and PVC performance boundary

Source-listed flame test
The supplied record lists IEC 60332-1-2. The IEC publication describes a single-cable vertical flame-propagation procedure using a 1 kW pre-mixed flame.

CPR class not supplied
No Eca, Cca, B2ca or s/d/a classification is stated in the current user record. Do not infer one from IEC 60332-1-2.

PVC route implications
Confirm smoke, corrosive gas, halogen, fire stopping, penetrations, ventilation, water and local construction requirements from the actual project.

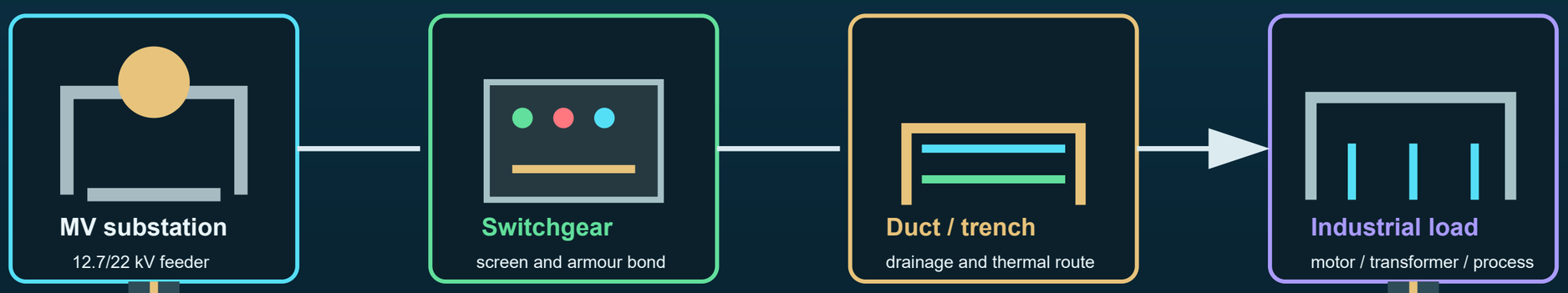
Revision control
The current supplied record and current 70 mm² official page show -20 ... 90 °C; the older family PDF shows -20 ... 60 °C. Procurement must identify the governing revision.

Procurement rule: do not relabel this PVC/AWA construction as LSZH, halogen-free, Cca, B2ca, Eca or fire-resistant without a matching current product declaration and test report.

11. Fixed-route applications

CU/XLPE/CTS/PVC/AWA/PVC 12.7/22 kV — fixed-route architecture

Single-core copper / XLPE / copper-tape screen / PVC separation / AWA / PVC for fixed underground, duct or industrial routes.



Fixed single-core AWA route

Apply screen bonding, armour bonding, thermal, fire, pulling and impact controls to the actual route.

The source establishes fixed-route service and a 15 (xD) laying factor, not reeling, festoon, drag-chain or continuous-flex service.

MV distribution feeders
Use in energy-network feeders with sudden load changes after conductor, screen, armour, voltage-drop and protection studies are complete.

Underground routes
Check soil thermal resistivity, water exposure, drainage, route spacing, screen bonding, armour bonding, joint access and impact protection.

Duct installations
Check duct fill, pulling tension, sidewall pressure, entry radius, cable arrangement, heat dissipation, water management and armour scraping.

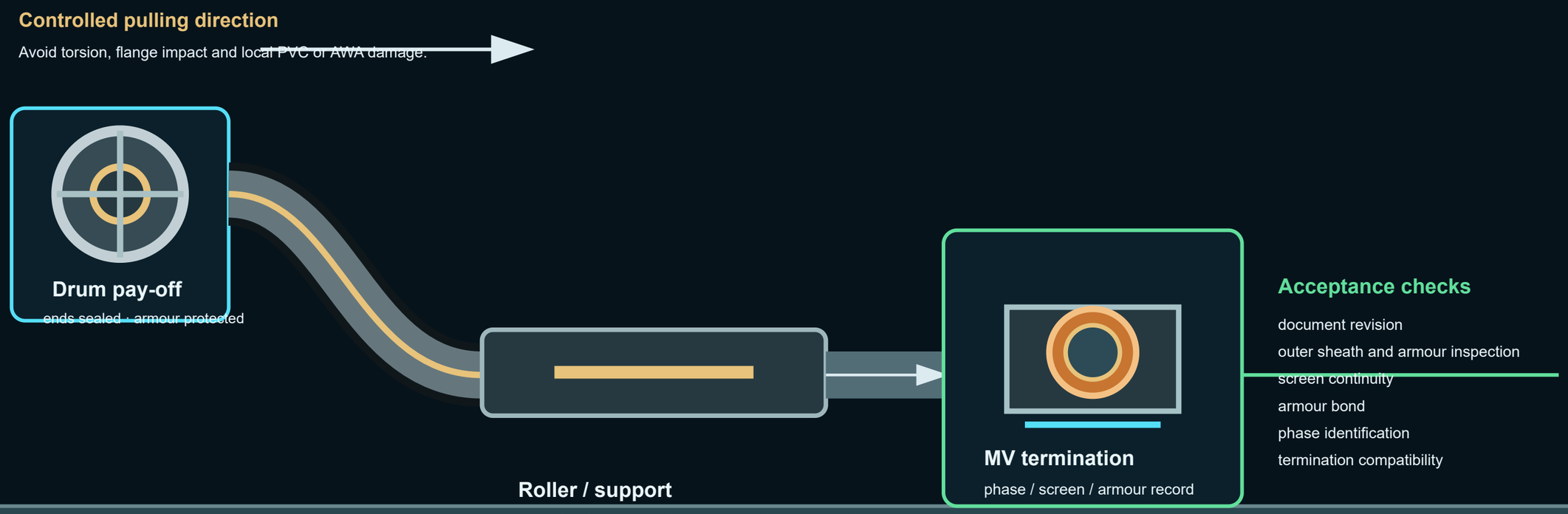
Industrial and port shore-side infrastructure
Evaluate fixed substations, plant feeders and shore-side MV routes for corrosion, flooding, impact, fire, maintenance and earthing.

Moving equipment
The source establishes fixed-route service and a laying factor, not continuous flexing. Use a qualified dynamic cable family for reeling, festoon or drag-chain motion.

12. Handling and termination

Installation controls — 15 × D laying factor

Apply the ordered nominal outer diameter. Across the supplied matrix, the derived laying-radius screen is 495.0 to 855.0 mm.



Derived radius screen
r = 15 × D; 495.0 mm at 33.0 mm OD
to 855.0 mm at 57.0 mm OD.

15 × D is a laying factor, not a continuous-flex qualification. Use a dedicated dynamic cable when repeated movement is required.

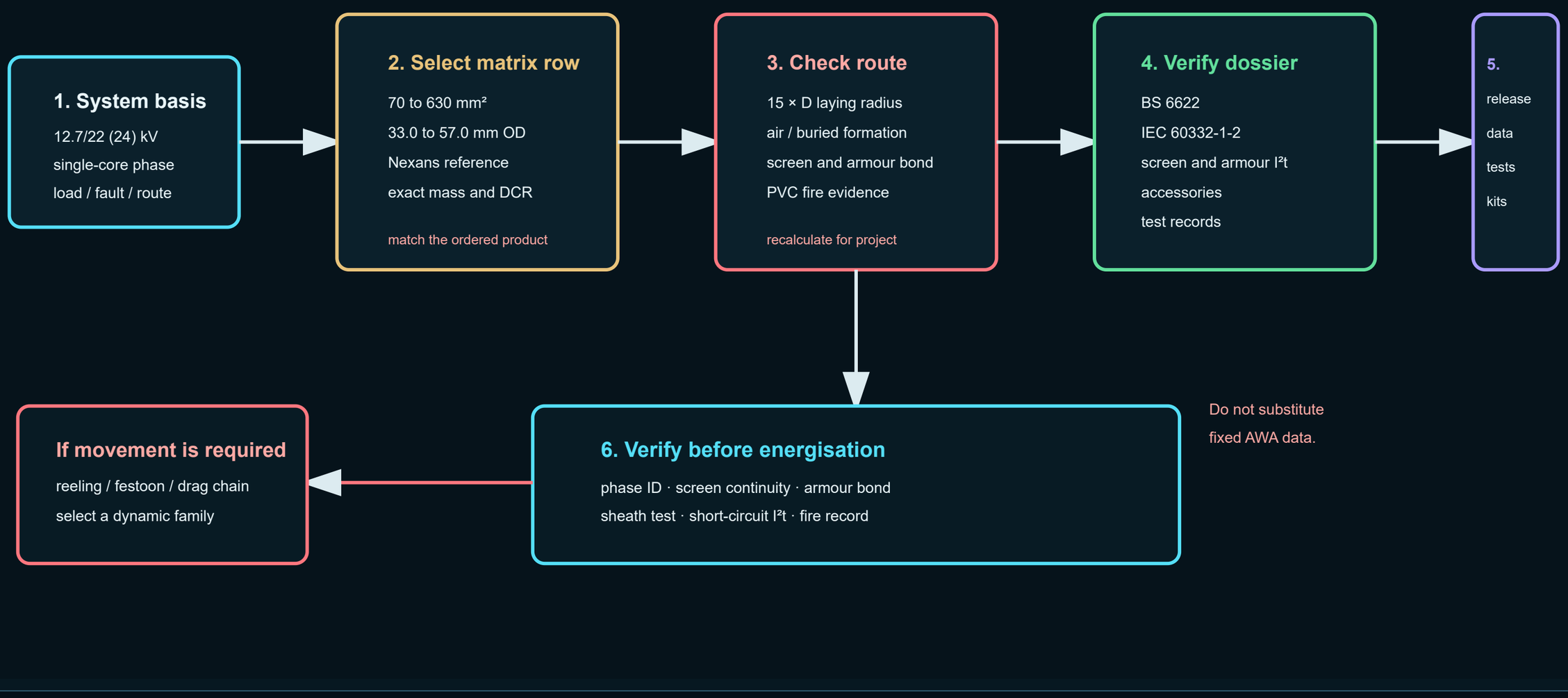
1. Confirm the exact controlled product reference from 10536096 through 10536078, including cross-section, outer diameter, mass, DCR, screen and armour details.
2. Apply the 15×D laying factor to the ordered diameter. The supplied matrix gives a derived screening range of 495.0 mm at 33.0 mm OD to 855.0 mm at 57.0 mm OD.
3. Keep the drum aligned with the pay-off direction. Prevent reverse winding, uncontrolled twist, flange impact and local PVC sheath or AWA damage.
4. Use rollers and supports that control bending, sidewall pressure and armour loading. Do not pull against a sharp duct entry or force the copper screen around a local obstruction.
5. Prepare the conductor screen, XLPE insulation, semiconducting screen, copper tape, PVC separation sheath, AWA and PVC outer sheath using the approved termination or joint kit method.
6. Record screen continuity, armour continuity and bonding, phase identification, conductor resistance, insulation and sheath tests, torque and accessory inspection before energisation.

7. Complete MV withstand or partial-discharge tests where specified by the project, and retain product reference, batch, test results and as-built route records.

Installation release: the 15×D value is a laying-factor reference. It does not authorize repeated bending, torsion, reel operation or energy-chain installation.

13. Selection comparison for engineers

Requirement	Source reference	What must be verified	Engineering decision
12.7/22 kV single-core fixed feeder	Cu, XLPE, copper tape screen, PVC separation, AWA, PVC.	System earthing, conductor size, formation, screen bonding, armour bonding, accessories and protection.	Candidate after exact-size release.
70 mm² selection	33.0 mm OD; 1800 kg/km; 0.268 Ohm/km; 356 A air flat; 239 A buried trefoil.	Route correction, screen and armour duty, voltage drop, pulling and termination dimensions.	Use Ref 10536096.
240 mm² selection	43.0 mm OD; 3750 kg/km; 0.075 Ohm/km; 745 A air flat; 469 A buried trefoil.	Route correction, screen and armour duty, voltage drop, pulling and termination dimensions.	Use Ref 10535994.
630 mm² selection	57.0 mm OD; 8250 kg/km; 0.028 Ohm/km; 1150 A air trefoil; 774 A buried trefoil.	Large-cable pulling, duct, cleat, termination, fault and thermal checks.	Use Ref 10536078.
PVC fixed route	PVC separation and outer sheath; IEC 60332-1-2 reference; no CPR class supplied.	Current fire dossier, smoke strategy, penetrations, grouping and local authority requirements.	Do not assume LSZH or CPR class.
Reeling / festoon / drag chain	15×D laying factor only; fixed-route application wording.	Cycles, torsion, speed, acceleration, rollers, tensile load and dynamic bend radius.	Select a dedicated dynamic cable family.



14. Failure-mode controls

Failure mode	Mechanism	Control action	Release evidence
Wrong product row	One size's diameter, ampacity or reference is mixed with another row.	Use the exact Nexans reference and cross-section on every schedule, drum and test record.	Product code, matrix row and released drawing.
Radius violation	15×D is applied to a different diameter or ignored at duct entries.	Calculate the ordered-size radius and control rollers, entry geometry and support spacing.	Method statement and installation inspection.
Screen-armour confusion	Copper tape screen is treated as armour, or AWA is treated as the complete earth-fault path.	Verify screen continuity, armour continuity, bonding, parallel paths, clearing time and joint or termination capability.	Earthing, armour and short-circuit study.
Revision mixing	Current -20 ... 90 °C data is silently merged with older -20 ... 60 °C PDF data.	Identify the governing revision in the purchase specification and technical submittal.	Controlled datasheet and revision register.
Fire-class upgrade	IEC 60332-1-2 is marketed as LSZH, Cca, B2ca, Eca or grouped-cable fire performance.	Use the exact product declaration and project fire strategy; make no unprovided claim.	Product-specific fire dossier.
Dynamic misuse	Fixed-route PVC/AWA cable is installed on a reel, festoon or energy chain.	Select a qualified dynamic cable with mechanical cycle and torsion evidence.	Dedicated dynamic-cable data required.

15. Feichun Cable certification and project assurance

Engineered for maximum safety in demanding environments, our 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.

Configuration-specific release
Certification and market documentation apply to the exact conductor size, screen construction, sheath compound, AWA construction, accessory system, destination market and shipment batch.

Feichun engineering dossier
Confirm conductor resistance, outer diameter, mass, copper-screen and armour details, thermal ratings, short-circuit duty, sheath tests, fire declaration and accessory compatibility for the ordered construction.

Reliable and cost-effective alternative
Feichun can develop a technically controlled alternative to major international or European cable brands when the complete construction, standards, drawings, test reports, accessories and project conditions are compared.

Certification boundary
ATEX, IECEx, VDE, CE, UKCA, EAC and Russian Fire Safety documentation must be matched to the applicable product scope. Certification capability does not make every size or every cable construction automatically certified.

Release condition: this article does not invent a Feichun certificate number, test report number, CPR class, notified-body reference, current rating or conformity declaration. The ordered product dossier must be checked before procurement, installation or energisation.

16. Source and revision audit

Source	Use in this article	Status and limitation
Nexans Türkiye CU/XLPE/CTS/PVC/AWA/PVC family page	Current title, application, BS 6622 standard, construction, ten product rows and current family characteristics.	Official family page; current page reports -20 ... 90 °C, 15 (xD) and IEC 60332-1-2.
Nexans family PDF	Older family construction, page labels and product list.	Generated 7/4/25; it reports -20 ... 60 °C and is kept separate from the current record.
Nexans 70 mm² product page / PDF	Reference 10536096, 33.0 mm OD, 1800 kg/km, current -20 ... 90 °C, construction and matrix values.	Size-specific official current record; use the ordered reference.
Nexans 630 mm² product page / PDF	Reference 10536078, 57.0 mm OD, 8250 kg/km, 1150 A air trefoil, 774 A buried trefoil and 90.1 kA conductor 1 s.	Size-specific official record; use only for the 630 mm² row.
BSI BS 6622:2007 scope	Independent standard-scope context for armoured thermosetting-insulated fixed-installation cables.	Confirm the project-adopted edition and exact conformity route.
IEC 60502-2 official publication	Related international fixed-installation MV engineering context.	Not listed as the product standard in the supplied record; do not imply automatic compliance.
IEC 60332-1-2:2025 official publication	Single-cable vertical flame-propagation test context.	Test-method reference only; not a complete grouped-cable fire declaration or CPR class.
User-supplied source record	All supplied values, construction sequence, complete matrix, generated date, page labels and disclaimer reproduced.	Primary record for this article; missing values are not filled from another cable.

This article is for preliminary engineering, technical search and comparison. The final Feichun CU/XLPE/CTS/PVC/AWA/PVC 12.7/22 kV release must be checked against the current product datasheet, BS 6622 basis, exact conductor and screen construction, AWA design, current ratings, bending instructions, fire documentation, accessories, installation method and local authority requirements.

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This article separates current supplied values, official source additions, older revision records, derived calculations and Feichun project-confirmation values. No external contact details are added.

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