ESKA
CABLE

CONTENTS

01

ALUMINIUM WIRE ROD & WIRES

Aluminium Wire Rod & Drawn Wires

Aluminium Wire Rod EN AW 1370 (EAl 99.7) · 6101-T4 / T81

Aluminium wire rods produced by continuous casting and hot rolling, offering high purity, homogeneous structure and a smooth surface, making them suitable for wire drawing and conductor manufacture. Supplied at diameters of 9.5 mm and 12.0 mm in 1- or 2-tonne coils. Tested to ASTM B-233 / TS EN 1715-3.

Technical Properties

Property	EN AW 1370	6101-T4 (AlMgSi)	6101-T81
Density (g/cm^3)	2.703	2.70	2.70
Conductivity (% IACS)	≥ 61.0	≥ 51.29	≥ 49.74
Tensile Strength (MPa)	80–140	≥ 150	≥ 160
Elongation (%)	10–25	≥ 20	≥ 21
Diameter (mm)	9.5 / 12.0	9.5 / 12.0	9.5 / 12.0
Standard	ASTM B-233	EN 1715-3	EN 1715-3

Aluminium Drawn Wires

Aluminium wires produced from wire rod by multi-stage drawing, available in diameters from 1.25 to 4.50 mm and temper grades H11 to H16.

Temper	Tensile (MPa)	Elongation % (A100)	Conductivity (IACS)
H 16	120–140	10	61.55
H 14	115–130	14	61.55
H 13	105–120	16	61.55
H 12	95–110	20	61.55
H 11	80–95	25	61.90

02

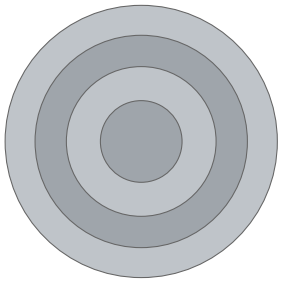
BARE OVERHEAD LINE CONDUCTORS

Bare Overhead Line Conductors

Bare conductors form the backbone of energy transmission and distribution lines, manufactured in a variety of cross-sections and compositions for use on low-, medium- and high-voltage overhead lines.

TS EN 50182	IEC 61089	ASTM B-231	ASTM B-232	DIN 48204

AAC — All Aluminium Conductor



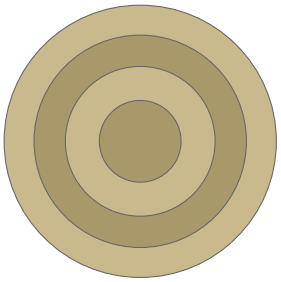
AAC — 19 wires

AAC conductors are produced by stranding aluminium wires of equal diameter (7/19/37/61). They are preferred for short-span overhead lines and urban distribution networks where high conductivity and light weight are required.

Selected AAC Cross-sections (EN 50182)

New Code	Section mm^2	Wires × Ø	Diam. mm	Weight kg/km	Breaking kN	Current A
24-AL1	24.2	7 × 2.10	6.3	66.3	4.36	144
49-AL1	49.5	7 × 3.00	9.0	135.2	8.41	225
93-AL1	93.3	19 × 2.50	12.5	256.3	16.32	340
147-AL1	147.1	19 × 2.25	15.8	405.7	26.48	455
243-AL1	242.5	61 × 2.25	20.3	671.1	43.66	625
400-AL1	400.1	61 × 2.89	26.0	1107.1	68.02	855
500-AL1	499.8	61 × 3.23	29.1	1382.9	82.47	990

AAAC — All Aluminium Alloy Conductor *(Al-Mg-Si)*

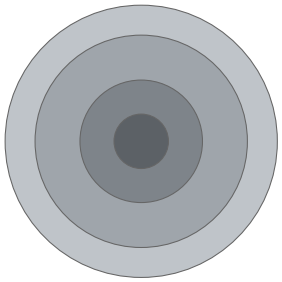


AAAC — Al-Mg-Si

AAAC conductors are produced by stranding wires of Al-Mg-Si alloy. They offer higher mechanical strength and good corrosion resistance compared with AAC, and are used for long-span overhead lines, in coastal and chemically aggressive atmospheres, and as the messenger (support) wire of 0.6/1 kV aerial bundled cables.

Code	Section mm^2	Wires × Ø	Diam. mm	Weight kg/km	Breaking kN	Resistance Ω/km
BOX	18.8	7 × 1.85	5.55	51.4	5.50	1.7480
HAZEL	59.9	7 × 3.30	9.90	163.4	17.66	0.5494
OAK	118.9	7 × 4.65	14.0	324.5	35.07	0.2767
POPLAR	239.4	37 × 2.87	20.1	559.4	70.61	0.1387
UPAS	362.1	37 × 3.53	24.7	998.2	106.85	0.0917
RUBUS	586.9	61 × 3.50	31.5	1622.0	173.13	0.0567
REDWOOD	996.2	61 × 4.56	41.0	1753.2	293.88	0.0334

ACSR — Aluminium Conductor Steel Reinforced



ACSR — Al + Steel

ACSR conductors consist of aluminium wires stranded around a galvanised steel core. The steel core provides mechanical strength while the aluminium carries the current. They are the standard choice for long-span high-voltage transmission lines.

ACSR Cross-sections (ASTM B-232)

Name	Section (Al) mm^2	Composition	Diam. mm	Weight kg/km	Breaking kg	Current A
SPARROW	33.59	6+1 × 2.67	8.01	135.7	1264	195
ROBIN	42.41	6+1 × 3.00	9.00	171.4	1379	200
RAVEN	53.52	6+1 × 3.37	10.11	216.1	1945	255
PIGEON	85.02	6+1 × 4.25	12.75	343.5	3035	340
PARTRIDGE	134.87	26+7 × 2.57/2.00	16.28	543.8	5099	490
HAWK	241.65	26+7 × 3.44/2.67	21.77	972.8	8798	715
DRAKE	402.56	26+7 × 4.44/3.45	28.11	1621.9	14165	995
CARDINAL	484.53	54+7 × 3.38/3.00	30.42	1829.8	15589	1095
FALCON	806.2	54+19 × 4.36/2.62	39.26	3041.9	30417	1510

Applications

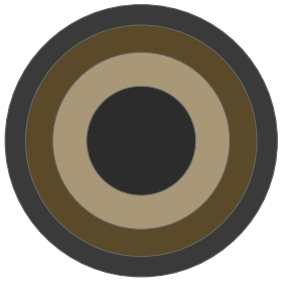
- Power transmission lines (36–400 kV)
- Long-span river / valley crossings
- Distribution networks (LV / MV)
- Industrial overhead lines

03

LV AERIAL BUNDLED CABLES

LV Aerial Bundled Cables · 0.6/1 kV

AER / ABC / NFA2X — Aerial Bundled Cables



AER — with messenger wire

Twisted, XLPE-insulated aluminium-conductor cables installed overhead between poles on low-voltage distribution networks. AER: AAAC messenger wire (mechanical support); ABC: to HD 626 S1; NFA2X: to French standard NFC 33-209. Provide safety, fewer outages and lower maintenance cost.

TS 11654	HD 626 S1	NFC 33-209	IEC 60502-1

Selected AER Cross-sections

Code	Conductor	Outer Ø mm	Resistance Ω/km	Current A	Messenger kN	Weight kg/km
3×16+25	3×16	5.9	1.910	75	7.4	275
3×50+70	3×50	8.1	0.641	140	20.6	750
3×70+95	3×70	9.6	0.443	180	27.9	1050
3×95+95	3×95	11.4	0.320	258	27.9	1200
3×120+95	3×120	12.8	0.253	250	27.9	1500
3×150+95	3×150	14.1	0.206	344	27.9	1700
4×70+95	4×70	9.6	0.443	180	27.9	1350
3×95+1×16+95	3×95	11.4	0.320	258	27.9	1260

04

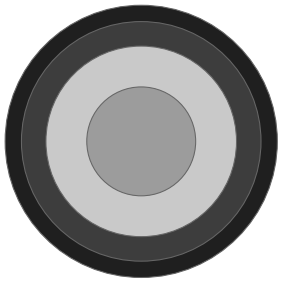
LV UNDERGROUND POWER CABLES

LV Underground Power Cables · 0.6/1 kV

Power cables for 0.6/1 kV low-voltage distribution that may be installed directly underground or in protective conduit. Available with either PVC insulation (NAYY/NYY) or XLPE insulation (NA2XY/N2XY), and with either PVC or HFFR (halogen-free, NA2XH/N2XH) outer sheath.

TS IEC 60502-1	VDE 0276	HD 603 S1

NAYY / NYY — PVC Insulated Power Cables *(PVC Insulated, PVC Sheathed)*

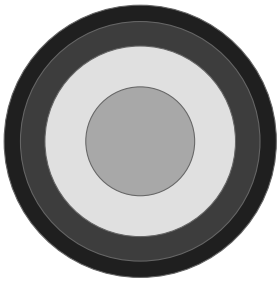


NAYY 4×…

PVC-insulated, PVC-sheathed low-voltage power cables. Suitable for installation in building basements, cable ducts, cable trays and underground. NAYY (aluminium conductor) is the economical version; NYY (copper conductor) is more compact.

NAYY Section mm^2	Outer Ø mm	Weight kg/km	Resistance Ω/km	In ground A	In air A
4×16	21	630	1.910	—	—
4×25	26	850	1.200	82	102
4×35	29	1050	0.868	100	123
4×50	34	1450	0.641	119	144
4×95	43	2550	0.320	186	215
4×150	52	3700	0.206	246	275
4×240	65	5800	0.125	338	364
3×240+120	61.5	5350	0.125	363	339
3×300+150	67	6400	0.100	400	419

NA2XY / N2XY — XLPE Insulated Power Cables *(XLPE Insulated, PVC Sheathed)*

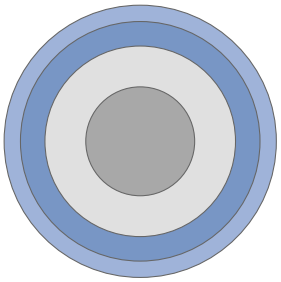


NA2XY

XLPE-insulated, PVC-sheathed power cables. The cross-linked polyethylene insulation permits a higher operating temperature (90 °C) and higher short-circuit withstand. Higher load-carrying capacity than PVC-insulated cables — the same power can be transmitted with a smaller conductor cross-section.

NA2XY Section mm^2	Outer Ø mm	Weight kg/km	Resistance Ω/km	In ground A	In air A
3×25	22.5	650	1.200	102	112
3×50	28.5	1100	0.641	149	158
3×95	37	1850	0.320	234	234
3×150	46	2900	0.206	311	300
3×240	57	4450	0.125	427	398
4×120	45.5	2900	0.253	273	268
4×185	55	4350	0.164	360	342
3×150+70	46.2	2811	0.206	311	300
3×240+120	57.5	4489	0.125	427	398

NA2XH / N2XH — Halogen-free Power Cables *(XLPE Insulated, HFFR Sheathed)*



NA2XH

XLPE-insulated power cables with a halogen-free (HFFR) sheath. They emit no dense smoke, toxic gases or corrosive halogens during burning, and are mandatory for densely occupied buildings such as hospitals, schools, metro stations, airports and data centres. Compliant with IEC 60754 and IEC 61034.

Mandatory Applications

- Hospitals and healthcare facilities
- Schools and public buildings
- Metro, rail and airport terminals
- Data centres and high-security facilities
- Enclosed car parks, tunnels and shopping centres

05

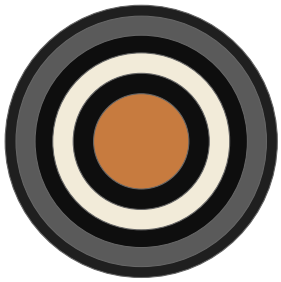
MEDIUM VOLTAGE CABLES

Medium Voltage Cables · 3.6/6 – 20.3/35 kV

Power cables for medium-voltage levels (from 3.6/6 kV up to 20.3/35 kV), with cross-linked polyethylene (XLPE) insulation and copper-wire screen, used from energy transmission down to distribution. They are an essential component of substations, wind and solar power plants, and industrial distribution.

TS HD 620	IEC 60502-2	VDE 0276-620

N2XSY / NA2XSY — Single-core MV Cable *(XLPE · Copper Screen · PVC Sheath)*



N2XSY

Single-core medium-voltage cable, XLPE-insulated, with copper-wire screen and PVC outer sheath. The inner and outer semi-conductive layers homogenise the electric field and minimise dielectric stress. N2XSY has a copper conductor; NA2XSY has aluminium. N2XSEY is the three-core variant with each core individually screened.

MV Cable Construction

Layer	Material	Function
Conductor	Copper (Cu) or Aluminium (Al)	Current carrying
Inner Semicon	Semi-conductive XLPE	Field homogenisation
Insulation	XLPE (cross-linked PE)	Dielectric
Outer Semicon	Semi-conductive XLPE	Field homogenisation
Screen	Copper wires + counter helix tape	Earth and short-circuit path
Inner sheath	PVC or barrier	Insulation
Outer sheath	PVC / HDPE	Mechanical / chemical protection

Voltage Classes

Voltage U_0/U (Um)	Insulation mm	Typical section mm^2	Application
3.6/6 (7.2) kV	2.5	25 – 630	Industrial distribution
6/10 (12) kV	3.4	25 – 1000	Urban distribution
8.7/15 (17.5) kV	4.5	35 – 1000	Medium-voltage distribution
12/20 (24) kV	5.5	35 – 1000	Urban & industrial
18/30 (36) kV	8.0	50 – 1000	Wind / solar plant connections
20.3/35 (42) kV	9.0	70 – 1000	Wind / solar power plants

Applications

- Substation MV/MV connections
- Urban distribution networks
- Internal wiring of wind power plants (WPP)
- MV outlets of solar power plants (SPP)
- Industrial distribution lines
- Water-tight versions (longitudinal / radial)

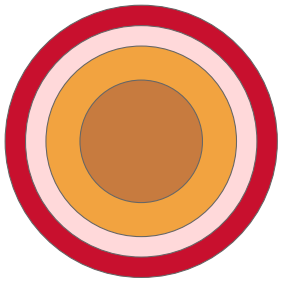
06

FIRE RESISTANT CABLES

Fire Resistant Cables · FE180 · E90

Special cables that maintain electrical integrity for a defined period during a fire. Designed to keep critical systems energised — emergency lighting, fire pumps, smoke exhaust fans, lift rescue circuits — and, thanks to halogen-free, low-smoke construction, they keep escape routes safe.

IEC 60331	IEC 60332	IEC 60754	IEC 61034	DIN 4102



NHXH FE 180 / E 90

Copper conductors wrapped in mica tape (the orange layer), inside a red halogen-free outer sheath. Maintains circuit integrity for up to 180 minutes under fire, supplying critical systems without interruption.

180
MINUTES
Functionality under fire

750°
CELSIUS
IEC 60331-21 test temperature

Product Range

Type	Construction	Resistance	Application
NHXMH	Halogen-free insulation/sheath, wiring	IEC 60332-1	Indoor wiring, hospitals, schools
N2XH	XLPE-insulated, HFFR-sheathed power	IEC 60332-3-24	Underground & indoor power distribution
N2XH FE 180	Mica-taped, 180-min resistance	IEC 60331-21 · FE 180	Critical power circuits
NHXH FE 180 / E90	Mica-taped, E90 certified	DIN 4102-12 · E90	Emergency lighting, fire pumps
N2XCH	Halogen-free with concentric neutral	IEC 60331	TT/TN system installations
N2XBH	Halogen-free power cable, tape armoured	IEC 60331	Lines requiring mechanical protection
NHMH	Halogen-free, low-smoke wiring	IEC 60332-1	General wiring (HFFR)

Fire Test Symbols

Symbol	Meaning	Test Duration
FE 180	Functionality under fire (IEC 60331-21)	180 minutes / 750 °C
E30 / E60 / E90	System circuit integrity (DIN 4102-12)	30 / 60 / 90 minutes
LSZH / HFFR	Low smoke · zero halogen (IEC 60754 · 61034)	—
FR / FRT	Flame non-propagation (IEC 60332-1 · 3-24)	—

Mandatory Applications

- Fire-pump and lift-motor circuits
- Emergency lighting systems
- Smoke exhaust fans
- Fire alarm and extinguishing panel supplies
- Tunnels, metro and airport terminals
- Hospitals and high-rise buildings

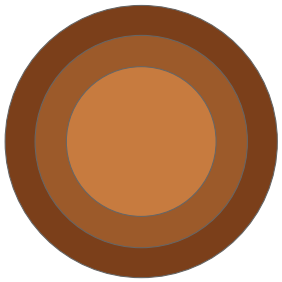
07

INSTALLATION & FLEXIBLE CABLES

Installation & Flexible Cables · 450/750 V

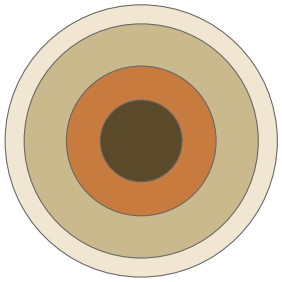
PVC-insulated wires and flexible cables for indoor electrical installation, lighting circuits, socket outlet runs and connection of portable appliances.

TS HD 21.3	IEC 60227	VDE 0281



H07V-U (NYA)

Solid single-core conductor, PVC insulated — the classic choice for fixed installation inside conduit. H07V-R is the stranded rigid version, used for switchboards where wide bend radii are needed. H07V-K (NYAF) is finely stranded and flexible, used for panel wiring and routes that require flexing.



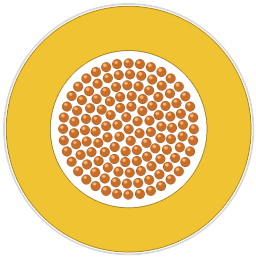
H05VV-F (TTR)

Multi-core flexible PVC cable for white goods, household appliances and extension leads. NYM (NVV) is the surface or under-plaster installation cable for dry and damp locations. NYY-J / YVV is a PVC-insulated low-voltage cable for indoor and underground use (copper conductor).

Typical Cross-sections and Current Capacities

Code	Section mm^2	Avg. Ø mm	Resistance Ω/km	Current A	Application
H07V-U	1.5	2.8	12.10	17.5	Fixed wiring
H07V-U	2.5	3.4	7.41	24	Socket outlet runs
H07V-U	4.0	3.9	4.61	32	Lighting risers
H07V-K	1.5	3.0	12.10	17.5	Flexible panel wiring
H07V-K	2.5	3.6	7.41	24	Inside switchboards
H05VV-F	3×1.5	8.0	12.10	17	Plug & socket, small appliances
H05VV-F	3×2.5	9.5	7.41	21	Household appliances
H05VV-F	4×2.5	10.3	7.41	21	Three-phase small loads

NYAF (H07V-K) — Fine-stranded Flexible Wire *(Class 5 Cu · PVC Insulated)*



NYAF — fine-stranded copper, flexible

NYAF (H07V-K) is a single-core, fine-stranded copper wire with PVC insulation, rated 450/750 V. The Class 5 flexible conductor is made up of many thin copper strands twisted together, giving the wire excellent bendability and a tight bending radius. It is the standard choice for panel wiring, control cabinets, motor connections and every route where the wire must be drawn through narrow conduit or pulled around tight corners — situations where rigid solid-core NYA cannot be used.

NYAF Construction

Layer	Material	Function
Conductor	Class 5 fine-stranded copper (Cu-ETP)	Current carrying · flexibility
Insulation	PVC compound, type TI1	Electrical insulation (450/750 V)
Identification	Coloured PVC (red, blue, yellow/green …)	Phase / neutral / earth marking

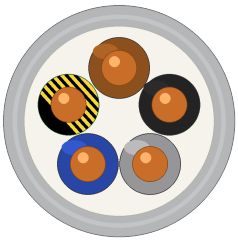
NYAF Technical Data

Section mm^2	No. × Ø wire mm	Outer Ø mm	Resistance Ω/km	Weight kg/km	Current A
0.75	24 × 0.20	2.6	26.00	12	12
1.00	32 × 0.20	2.8	19.50	16	15
1.50	30 × 0.25	3.0	13.30	21	17.5
2.50	50 × 0.25	3.6	7.98	33	24
4.00	56 × 0.30	4.1	4.95	50	32
6.00	84 × 0.30	4.7	3.30	70	41
10.00	80 × 0.40	5.9	1.91	115	57
16.00	126 × 0.40	7.2	1.21	180	76
25.00	196 × 0.40	9.0	0.780	275	101
35.00	276 × 0.40	10.2	0.554	375	125
50.00	396 × 0.40	12.0	0.386	525	151

Applications

- Panel and switchboard internal wiring
- Motor connections and control circuits
- Lighting circuits inside conduit (flexible pulls)
- Industrial machinery and automation cabinets
- Wherever a tight bending radius or repeated routing is required

NYM (NVV) — Sheathed Installation Cable *(Solid Cu · 300/500 V)*



NYM 5×… — five-core variant

NYM is the standard sheathed installation cable for fixed wiring inside buildings — under plaster, on walls, in masonry and concrete (dry, damp or wet rooms, but not for direct burial). Solid copper conductors are individually PVC-insulated and colour-coded, embedded in a white PVC filler and finished with a robust grey PVC outer sheath. Available in 2, 3, 4, 5 and 7-core variants from 1.5 mm^2 up to 16 mm^2.

TS HD 21.4	VDE 0250-204	DIN 57250	IEC 60227

Core Identification

Cores	Configuration	Colour code
2-core	Phase + Neutral	Brown · Blue
3-core	Phase + Neutral + Earth	Brown · Blue · Green/Yellow
4-core	3 phases + Earth	Brown · Black · Grey · Green/Yellow
5-core	3 phases + Neutral + Earth	Brown · Black · Grey · Blue · Green/Yellow

NYM Technical Data — Common Sizes

Code	No. × mm^2	Outer Ø mm	Weight kg/km	Resistance Ω/km	Current A
NYM	3 × 1.5	9.0	105	12.10	19.5
NYM	3 × 2.5	10.2	150	7.41	26
NYM	3 × 4.0	11.5	215	4.61	34
NYM	4 × 1.5	9.8	130	12.10	17.5
NYM	4 × 2.5	11.1	180	7.41	24
NYM	5 × 1.5	10.6	155	12.10	17.5
NYM	5 × 2.5	12.0	215	7.41	24
NYM	5 × 4.0	13.6	330	4.61	32
NYM	5 × 6.0	15.2	445	3.08	41
NYM	5 × 10	17.6	705	1.83	57
NYM	5 × 16	20.6	1075	1.15	76

Applications

- Surface and under-plaster fixed wiring inside buildings
- Wiring in masonry, concrete and brickwork (dry / damp / wet rooms)
- Distribution circuits in residential and commercial buildings
- Not for direct burial in soil and not for outdoor exposed runs

08

FIBER OPTIC CABLES

Fiber Optic Cables · SM · MM

Fibre optic cables offering high bandwidth, long reach and complete immunity to electromagnetic interference. They are a critical infrastructure component for telecom backbones, campus networks, data centres and factory automation systems.

ITU-T G.652D	ITU-T G.657	IEC 60794	EN 187000

Outdoor FO — 12 fibres

G.652D — Standard single-mode (SM), 1310/1550 nm
G.657A1/A2 — Bend-insensitive SM (FTTH)
OM3 / OM4 / OM5 — Laser-optimised MM
OM1 / OM2 — Classic MM (62.5/125 · 50/125 µm)

Product Range

Product Code	Construction	Fibres	Application
A-DQ(ZN)B2Y	Loose tube, non-metallic CST armoured	4 – 288	Duct / aerial
U-DQ(ZN)BH	Universal loose tube, halogen-free	4 – 144	Indoor backbone
A-DQ2Y	Loose tube, PE outer	4 – 288	Direct underground burial
U-DQ(ZN)(SR)H	Glass-yarn armoured universal	4 – 144	Indoor riser
ADSS	All-Dielectric Self-Supporting	24 – 288	Aerial (with ENH bracket)
OPGW	Optical ground wire	12 – 48	HV line earth conductor
Micro-cable	Air-blown	12 – 288	Blown into duct networks
Indoor Breakout	Each fibre individually jacketed	2 – 24	Easy termination
Drop (G.657)	Bend-insensitive FTTH drop	1 – 4	FTTH subscriber connection

Applications

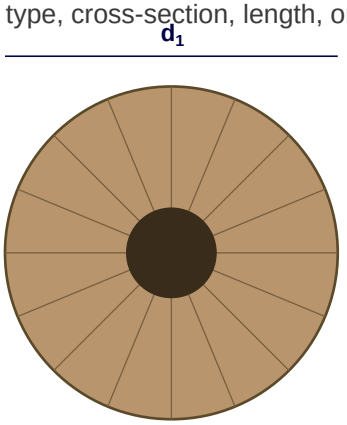
- Telecom backbone and access networks (FTTH/FTTB)
- Campus and indoor data networks (LAN backbone)
- Data-centre interconnects (SM/MM)
- Earth conductor of power transmission lines (OPGW)
- Industrial automation and SCADA systems
- Rail and road intelligent transport (ITS)

09

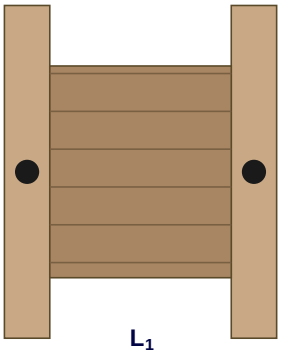
PACKING & DELIVERY

Packing & Delivery

Every cable / conductor order is shipped on standard wooden drums or in metal coils for safe storage and transport. An aluminium plate fixed to the drum carries the manufacturer name, production date, applicable standard, cable type, cross-section, length, order number, and net / gross weight.



FRONT VIEW



SIDE VIEW

Drum Types (AK Series)

Drum Type	Outer Ø d_1 (mm)	Inner Ø d_2 (mm)	Width L_1 (mm)	Weight kg
AK 8	800	360	585	45
AK 10	1000	500	650	73
AK 12	1200	600	810	106
AK 14	1400	680	860	130
AK 16	1600	800	1120	227
AK 18	1800	850	1120	350
AK 20	2000	1250	1120	420
AK 22	2200	1400	1400	450

Information on the Label

- Manufacturer name, date (year / month)
- Cable type, cross-section and length
- Order number · Customer company
- Net and gross weight
- Standard / certification information
- Drum unwinding direction (in indelible paint)

CONTACT

Get in touch

The ESKA KABLO team is ready for your project.

Contact us for technical support, custom production requests and quotations.

Channel	Information
■ **HEAD OFFICE**	Skopje, North Macedonia
■ **E-MAIL**	sales@eskakablo.com.tr
■ **WEB**	www.eskakablo.com

ESKA KABLO

Quality pathway for transferring energy

Product specifications are subject to change without notice.