



Connecting globally



Medium voltage cables _____

Leading producer of cables and cable systems

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The TELE-FONIKA Kable Group has been present on the domestic and international cable industry market for more than 25 years. A stable development strategy based on full diversification of outlets enabled the strengthening of the position of our company among world's leading cable companies with significant development potential.

Services and products provided by TF Kable have numerous applications in the most important industry sectors – they include more than 25,000 proven standard constructions. Furthermore, they include specialist assortment tailored to the individual needs of business partners.

Additionally, our production facilities (in Poland, Serbia and Ukraine), the Bukowno-Poland recycling plant and commercial companies (responsible for the geo-regional distribution of products) demonstrate a significant development potential. This is also true in the case of our modern fire test laboratory in Krakow-Wielicka

plant, which performs several hundred flammability pre-tests annually, and a laboratory of high and extra high voltages in Bydgoszcz.

As a result of implementation of our growth strategy, in August 2017 TFKable Group acquired JDR Cable Systems Ltd, the leading manufacturer of submarine umbilicals and power cables to the global offshore energy industry.

In the world's harshest environments and ever-increasing water depths, JDR's world-leading products and services bring power and control to offshore oil, gas and renewable energy systems.

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Experience and competence of the TELE-FONIKA Kable Group

Global relations

Krakow-Wielicka plant – production of PVC or XLPE insulated 1 kV cables with copper or aluminium conductor, screened or armoured types, fire resistant and halogen free cables, overhead conductors as well as rubber insulated and/or rubber sheathed cables with voltage up to 30 kV for heavy industry, signaling and control cables for special applications.

Krakow-Biezanow plant – production of PVC or XLPE insulated copper wires and cables up to 1 kV, halogen free and fire resistant types and copper or silver-copper (Cu-Ag) overhead conductors for railway traction.

Bydgoszcz plant – the largest in Europe production center of medium, high and extra high voltage cables with voltage up to 500 kV.

Myślenice plant – production copper and fiber optic telecommunication cables, data telecommunication cables and automotive wires.

Zajecar plant (Serbia) – production of low and medium voltage cables, signaling and control cables, telecommunication cables, as well as halogen-free cables and wires.

Czernihov plant (Ukraine) – production of copper wires and cables up to 1 kV, fire resistant and flame retardant cables as well as insulated overhead aluminium conductors.

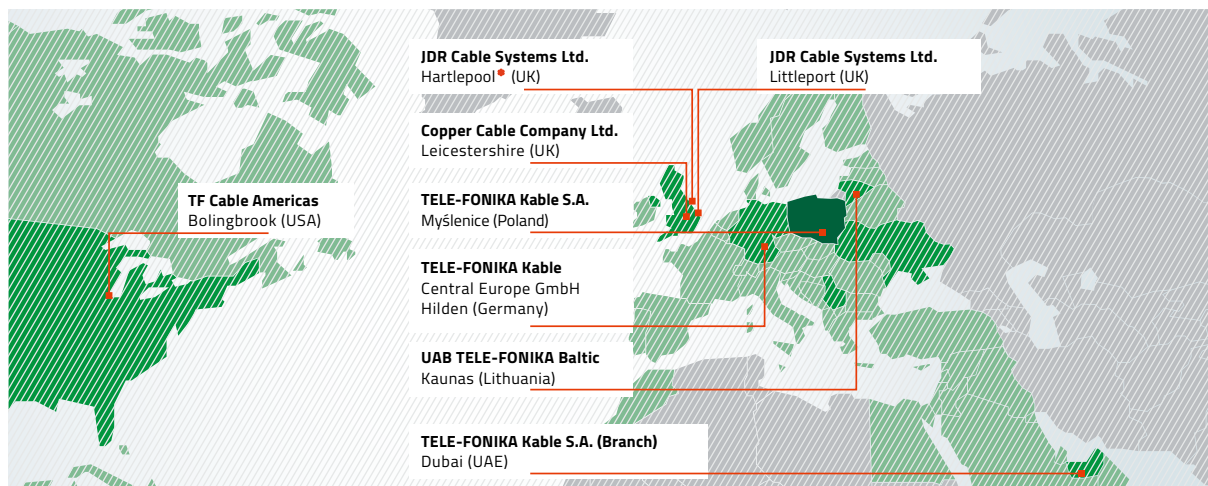
Bukowno-Poland plant (recycling of cable waste) – with the recycling capacity of approx. 10 thousand tons of cable waste per year. This allows for the recovery of fractions from individual materials with purity of over 99.5%.

Fire Test Laboratory in the Krakow-Wielicka production plant – equipped with special apparatus that enables to provide flame propagation test on bundled cables, smoke density test as well as circuit integrity test with water or mechanical shock, test for corrosive gases emission.

Laboratory of High and Extra Voltages in the production plant in Bydgoszcz – equipped with 4 Faraday cages and research filed for qualification tests for cables and systems up to 500 kV.

JDR Cable Systems – as a result of acquiring JDR Cable Systems Limited, TFKable has expanded its assets with two UK production facilities. JDR manufactures submarine power cables as well as subsea umbilical cables consisting of components for power distribution, data transfer, monitoring and remote control, of offshore facilities.

Additionally, our sales portfolio has been extended by offshore installation and maintenance services, located in JDR's service centres in the United States, UK, ensuring constant support for our business partners.



JDR Cable Systems Ltd. (Sales Representative) United States and UK

AXLJ-F LT

6/10 kV ■ 12/20 kV ■ 18/30 kV

HD 620 S2:2010 Part 10 Section M

Longitudinally sealed (LT) single core medium voltage cables with aluminium conductor (A), cross-linked polyethylene insulation (X), copper screen and PE outer sheath (L)



AXLJ-F TT

6/10 kV ■ 12/20 kV ■ 18/30 kV

HD 620 S2:2010 Part 10 Section M

Longitudinally and radially sealed (TT) single core medium voltage cables with aluminium conductor (A), cross-linked polyethylene insulation (X), copper screen and PE outer sheath (L)



CONSTRUCTION

Conductors:	circular stranded aluminium class 2 (RM) 50 to 630 mm ² (single core) and 50 to 240 mm ² (three core), acc. to EN 60228
Conductor screen:	Semiconductive PE
Insulation:	cross-linked polyethylene XLPE acc. to HD 620 S2:2010 Part 10 Section M
Insulation screen:	Semiconductive PE, fully bonded (F)
Metallic screen:	copper wires with copper equalizing tape
Metallic foil:	aluminium tape with PE copolymer
(only AXLJ-F TT)	
Outer sheath:	PE
Colour of sheath:	Black

CHARACTERISTICS

Rated voltage $U_0/U(U_m)$:	AC 6/10(12) kV
Test voltage:	
6/10 kV	30 kV
12/20 kV	50 kV
18/30 kV	60 kV
Maximum conductor operating temperature:	+90°C
Lowest cable temperature during installation:	-20°C
Maximum short-circuit conductor temperature:	+250°C
Minimum bending radius for cable with overall diameter (D):	16D – minimum barrel and minimum coil diameter 12D – during installation 8D – single term bending at termination

Applications For fixed installations.

Technical Characteristics

Number and cross-sectional area of conductor			
	n x mm²		n x mm²
Single core	1x50RM	Three core	3x50RM
	1x70RM		3x70RM
	1x95RM		3x95RM
	1x120RM		3x120RM
	1x150RM		3x150RM
	1x185RM		3x185RM
	1x240RM		3x240RM
	1x300RM		
	1x400RM		
	1x500RM		
	1x630RM		

For 6/10(12) kV ■ 12/20(24) kV ■ 18/30(36) kV cable and maximum normal operating temperature +90°C, short circuit temperature up to 250°C.

TSLF

14.4/24 kV ■ 22.2/36 kV

HD 620 S2:2010 Part 10 Section K

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Longitudinally and radially sealed single core medium voltage cables with cross-linked polyethylene insulation (T), copper screen (S), aluminium sheath (L) and laminated PE sheath with outer conducting layer (F)



CONSTRUCTION

Conductors:	circular stranded aluminium class 2 (RM) 95 to 630 mm ² acc. to EN 60228
Conductor screen:	Semiconductive PE
Insulation:	cross-linked polyethylene XLPE acc. to HD 620 S2:2010 Part 10 Section K
Insulation screen:	Semiconductive PE, fully bonded
Metallic screen:	copper wires with copper equalizing tape
Metallic foil:	aluminium tape applied longitudinally
Outer sheath:	PE laminated to metallic foil covered by an extruded conductive layer
Colour of sheath:	Black or red

CHARACTERISTICS

Rated voltage $U_0/U/U_m$:	AC 14.4/24 kV
Test voltage:	
14.4/24 kV	50 kV
22.2/36 kV	60 kV
Maximum conductor operating temperature:	+90°C
Lowest cable temperature during installation:	-20°C
Maximum short-circuit conductor temperature:	+250°C
Minimum bending radius for cable with overall diameter (D):	30D, 15D in case of single time bending (conditions acc. to cable standard)

Applications For fixed installations.

Technical Characteristics TSLF 14.4/24 kV

Number and cross-sectional area of conductor	Approximate diameter over insulation	Approximate overall diameter	Approximate net weight of cables
n x mm²	mm	mm	kg/km
1x50RM	19.6	28.8	800
1x95RM	22.7	32.1	1 110
1x150RM	25.6	35.2	1 340
1x240RM	29.3	39.3	1 810
1x400RM	34.3	44.5	2 350
1x630RM	41.1	51.7	3 410
3x1x50RM	19.6	62.0	2 430
3x1x95RM	22.7	69.3	3 340
3x1x150RM	25.6	75.9	4 020
3x1x240RM	29.3	84.8	5 440

For 14.4/24 kV cable and maximum normal operating temperature +90°C, short circuit temperature up to 250°C.

Technical Characteristics TSLF 22.2/36 kV

Number and cross-sectional area of conductor	Approximate diameter over insulation	Approximate overall diameter	Approximate net weight of cables
n x mm²	mm	mm	kg/km
1x50RM	24.4	34.0	1 110
1x95RM	27.5	37.3	1 360
1x150RM	30.4	40.4	1 700
1x240RM	34.1	44.3	2 100
1x400RM	39.1	49.7	2 690
1x630RM	45.9	56.9	3 810
3x1x50RM	24.4	73.2	3 340
3x1x95RM	27.5	80.5	4 090
3x1x150RM	30.4	87.1	5 140
3x1x240RM	34.1	95.5	6 320

For 22.2/36 kV cable and maximum normal operating temperature +90°C, short circuit temperature up to 250°C.



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