

RELIABLE CONNECTIONS

COPPER TELECOM CABLES

TF
Kable



TELE-FONIKA Kable is one of the largest cable manufacturers, and is recognized by the industry as a world-class producer of quality wire and cable products. The product portfolio includes high voltage, medium voltage and low voltage power cables, wind farm, automotive, home appliances cables, copper and fibre optic telecommunication cables.

Key statistics:

- 1 billion EURO in annual turnover
- 3rd largest wire and cable supplier in Europe and one of the top global producers
- 3,500+ Group employees
- Highest quality products confirmed by 382 certificates
- 25,000 different types of wire and cables constructions
- Sales and distribution network stretching all over the world

The Myslenice Plant specialises in a whole range of telecommunication cables, from copper telecom, computer data to fibre optic cables.

The plant is equipped with fully automatic state of the art production lines and sophisticated quality control equipment. This ensures that all products are of world class quality and comply with both Polish and internationally accepted quality standards.

The Myslenice Plant is the most recent telecommunication cable facility in Poland. The production and organization processes are based on the ISO 9001 standard.

TELE-FONIKA Kable acknowledges the importance of environmental protection and as such, implemented the Environmental Management System ISO 14001, receiving certification in 1998. The plant was also granted the DELTA certificate, which confirms our cables meet the requirements of ISO/IEC 11801 and ANSI/TIA/EIA568A standards. Additionally, cables manufactured in the Myslenice plant have been granted with VDE and UL certification.



Copper Telecom Outdoor cables

These are cables in which copper conductors are stranded into pairs or quads. They are used to connect the subscriber station to control panels, connections between control panels, railway telecommunication networks, communications networks in industrial plants, etc. Depending on the design, the cables can be installed in cable ducts or directly in the ground. In case of high risk of mechanical damage, an additional armoring of steel wires or tapes is used. Construction with a messenger wire allows for suspension on wooden or prefabricated supports. Corrugated steel tape can be used as antirodent protection.

TELE-FONIKA Kable manufactures outdoor cables according to a number of international standards and certificates. These cables have been installed both in the domestic and international marketplace. Cables manufactured according to Polish standards are also used in Russia, Ukraine, Serbia, Croatia and Slovenia. For cables manufactured to foreign standards, the cables are given the naming convention in accordance with the intended market.

	<p>Telecommunication cable with wires stranded in quads, insulation and outer sheath made of polyethylene or LSOH, with water barrier, jelly-filled, IEC 60708 compliant XzTKMXw (quads, pairs): PN92/T90335; PN92/T90336; ZN96/TP S.A029 A-2Y(L)2Y, A-2YF(L)2Y: VDE-0816; Germany TCEKPFLE, TCEKFLE, TCEKE, TCEKEY with PE+PVC layers, TCEKFLEY with PE+PVC layers: CSN IEC 7081; Czech Republic TPP, TP2P, TPpEp, TPpEpZ: GOST 2249888; Russia, Ukraine, Bulgaria TU2YfsFL2Y; Romania ELLX; Scandinavian countries</p>
	<p>Telecommunication cable with wires stranded in quads, insulation made of foam-skin polyethylene, outer sheath made of polyethylene, with water barrier, jelly-filled, IEC 60708 compliant XzTKMXpw (quads, pairs): PN-92/T-90335, PN-92/T-90336, ZN-96/TPSA-029 A-02Y(L)2Y; VDE-0816; Germany TCEPKPFLE, TCEPKFLEY with 2 layers PE+PVC: CSN IEC 7081; Czech Republic TK 59 UM 38pF, 45pF, 50pF; Serbia, Croatia, Slovenia QV: MMD 59-v4; Hungary CW 1128: BS CW 1128; Great Britain</p>
	<p>Self-supporting telecommunication cable with wires stranded in quads, insulation made of foam-skin polyethylene, outer sheath made of polyethylene, with water barrier, jelly-filled, suspension strand, IEC 60708 compliant XzTKMXpwn (quads, pairs): PN-92/T-90335, PN-92/T-90337, ZN-96/TPSA-029 TCEKFLES: IEC 7081; Czech Republic TK 53 UM 38pF, 50pF, TK 33 UM 38pF, 50pF; Serbia, Croatia, Slovenia TPPept, TPpEpZt: GOST 2249888; Russia, Ukraine, Bulgaria TU2YfsFL2YA; Romania QL: MMD 59-v4; Hungary</p>

	<p>Telecommunication cable with wires stranded in quads, insulation made of foam-skin polyethylene, outer sheath made of polyethylene, with water barrier, jelly-filled, armoured with laminated steel tape, inner sheath made of polyethylene or PVC, IEC 60708 compliant XzTKMXpwnFtl(x)/(y) (quads, pairs): PN-92/T-90335, PN-92/T-90337, ZN-96/TPSA-029 A-2Y(L)2YB2Y, A-2YF(L)2YB2Y: VDE-0816; Germany TCEKFLEDY, TCEKFLEDY: IEC 7081; Czech Republic TPPepB, TPPepZB: GOST 2249888; Russia, Ukraine, Bulgaria GOST TU2YfsFL2YAb2Y: Romania CW 1128/1198, CW 1128/1171: BS CW 1128/1198; Great Britain</p>
	<p>Telecommunication cable with wires stranded in quads, insulation made of foam-skin polyethylene, outer sheath made of polyethylene, with water barrier, jelly-filled, armoured with laminated steel tape, inner sheath made of polyethylene or PVC XzTKMX(p)wFo(x)/(y) (quads): PN-92/T-90335, PN-92/T-90337, ZN-96/TPSA-029</p>
	<p>Telecommunication cable with wires stranded into bundles, insulation made of polyethylene, with water barrier, armoured with laminated steel tapes, inner and outer sheaths made of LSOH NTKMXFtlN: ZNFKO221</p>
	<p>Telecommunication cable with wires stranded into bundles, insulation made of polyethylene, with water barrier, jellyfilled, armoured with corrugated steel tapes, inner and outer sheaths made of polyethylene XzTKMXwFfx: ZNEK018, ZNEK019</p>
	<p>Telecommunication cable with wires stranded into pairs, insulation made of foam-skin polyethylene, jelly-filled, outer sheath made of polyethylene XTKMXpw: WT95/K458/00, WT95/K-458/01</p>
	<p>Telecommunication cable with wires stranded into pairs, insulation made of foam-skin polyethylene, jelly-filled, outer sheath made of polyethylene, suspension strand XTKMXpwn: WT95/K458/00, WT95/K-458/03</p>
	<p>Self-supporting telecommunication cable with polyethylene insulation TKMXn: WT93/K423</p>



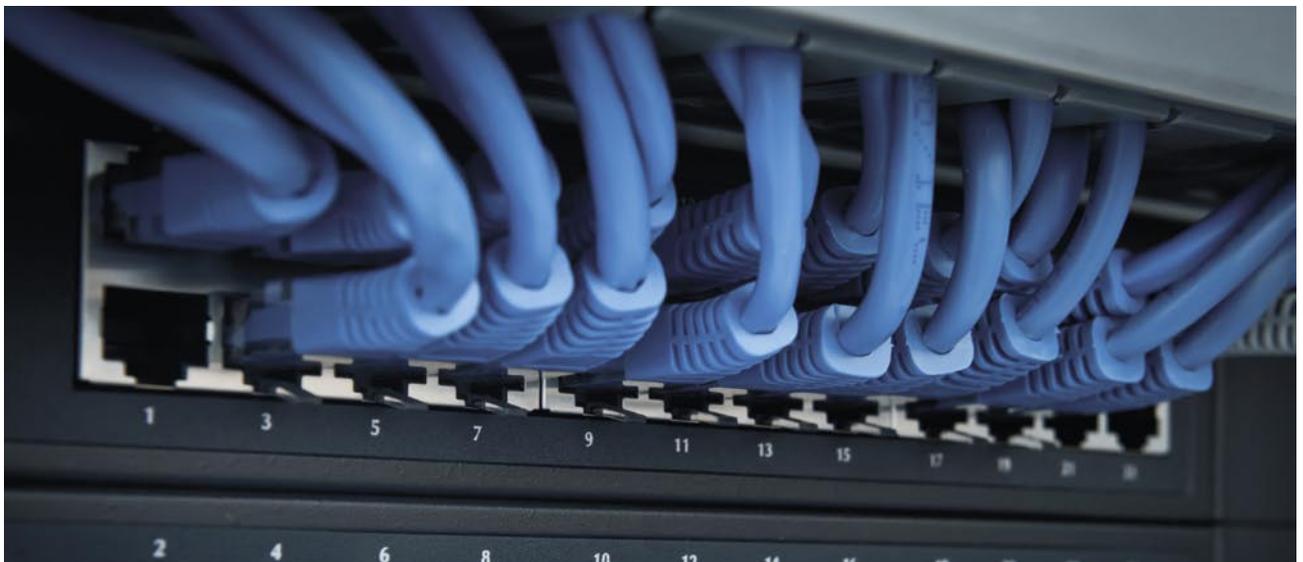
Copper Telecom Indoor cables

These are cables with conductors stranded into pairs and a copper conductor, the diameter is dependent on the cable application, used for telephone, telegraph and data transmission connections. Individual shielded pairs in the YTKSXekp cable allows for transmission in the frequency band up to 1 MHz. Flame retardant outer sheath (NTKSXekw) cables enables operation in fire risk environments.

Installation cables are designed for network communication systems, data processing, and industrial electronics. They can be laid over and behind plasterboard walls and used in the open air. Installation outdoors in the ground is not permitted with these cable types. Indoor cables manufactured according to Polish standards are also successfully used in foreign markets including Russia, Ukraine, Bulgaria, Croatia and Serbia.

	<p>Indoor installation cable, single or multiwire, PVC insulated Y</p>
	<p>Indoor installation cable, two or three parallel conductors in PVC insulation, can be laid under a plaster JFY: DIN/VDE-0815; Germany</p>
	<p>Indoor installation cable, PVC insulated copper conductors, twisted into quads, outer sheath made of PVC J-YY... Bd: DIN/VDE-0815; Germany U72, Switzerland SYKFY: CSN IEC 1892; Czech republic KLM: SFS 2751; Scandinavian countries</p>
	<p>Indoor installation cable, PVC insulated copper conductors, twisted into bundles, screened, outer sheath made of PVC J-Y(St)Y... Bd: DIN/VDE-0815; Germany</p>
	<p>Indoor installation cable, PE insulated copper conductors, twisted into bundles, screened, outer sheath made of PVC J-2Y(St)Y... Bd: DIN/VDE-0815; Germany</p>
	<p>Indoor installation cable, copper conductors insulated with nonhalogen material; twisted into bundles, screened, outer sheath made of nonhalogen material J-H(St)H... Bd: DIN/VDE-0815; Germany KLMA LSOH: SFS 2751; Scandinavian countries MHS LSOH: SFS 5739; Scandinavian countries</p>

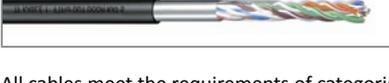
	<p>Indoor installation cable, PVC insulated copper conductors; twisted into layers, screened, outer sheath made of PVC J-Y(St)Y... Lg: DIN/VDE-0815; Germany TRR, TCB(A)B: BDS; Bulgaria S-Y(St)Y: DIN/VDE-0815; Germany TZ44EG, MHS: SFS 5739; Scandinavian countries</p>
	<p>Indoor installation cable, PE insulated copper conductors; twisted into layers, screened, outer sheath made of PVC J-2Y(St)Y... Lg: DIN/VDE-0815; Germany S-2Y(St)Y: DIN/VDE-0815; Germany</p>
	<p>Indoor installation cable for industrial electronics, PVC insulated copper conductors; twisted into bundles, screened, outer sheath made of PVC JE-Y(St)Y... Bd: DIN/VDE-0815; Germany</p>
	<p>Telecommunication cable with copper conductors in common PVC insulation TKSY, YTKSY, HTKSH FE 180 PE90: PN-92/T-90320 and PN-92/T-9032</p>
	<p>Telecommunication cable, PCV insulated, outer sheath made of PVC or flame retardant PVC, screened YTKSYekw: PN92/T-90320, PN92/T-90321</p>
	<p>Telecommunication cable, PCV insulated, outer sheath made of PVC or flame retardant PVC, screened pairs, screened cable core YTKSYekp: PN92/T-90320, PN92/T-903323</p>
	<p>Telecommunication cable, pairs insulated with polyethylene or foam-skin polyethylene, individually screened, outer sheath made of PVC or flame retardant PVC YYTKSXekp: ZNEK015</p>
	<p>Telecommunication cable with polyethylene insulation, screened cable core, outer sheath made of LSOH material NTKSXekw: WT98/K399</p>



Computer Data Cables Cat. 5, 5e, 6

Data cables are a special type of telecommunications cable, suitable for transmission of digital and analog data at high bitrates. They consist of pairs of twisted copper wires. In order to reduce crosstalk (signal interference between pairs), each pair is twisted with a different lay length. They are used in telecommunication, computer networks, CCTV, and industrial automation. Currently, they are most commonly used in Ethernet networks. Data cables are screened

depending on the operating environment with particular reference to electromagnetic interferences. These range from no screening, a screen only on the cable core, individual pairs screening to an extra cable core screening with aluminium foil and copper wire braid. Cables can be jacketed with PVC or LSOH materials. Cables with a messenger wire, or jelly-filled are suitable for outdoor installation.

	UTP (U/UTP) – unshielded twisted pairs
	FTP (F/UTP) – unshielded twisted pairs with an Al foil as a cable screening
	STP (SF/STP) – twisted pairs shielded with an Al foil
	S-FTP (S/FUTP) – unshielded twisted pairs with a copper braid and an Al foil as a cable screening
	S-STP (SF/FTP) – Al foil shielded twisted pairs with a copper braid as a cable screening
	UTP flex
	FTP flex
	UTP_f – a jelly-filled UTP
	FTP_f – a jelly-filled FTP
	FTP_n – an FTP with a messenger wire
	FTP_{nf} – a jelly-filled FTP with a messenger wire

All cables meet the requirements of categories 5, 5e or 6.

Broadband cables

The continual development of Internet and e-commerce services requires the transfer of more and more data with ever greater speed. This raises the need for a new type of cable that can cope with high bitrates of transmission. To meet these customer demands, internet providers and telecom operators developed a service based on DSL technology. Initially the data transmission was carried over existing telephone lines.

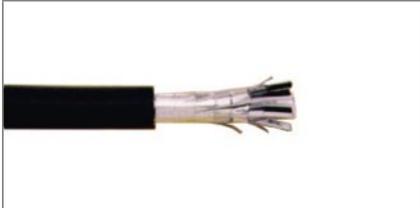
However, when the demand for faster transmission speed increased, a dedicated cable type was needed to provide the adequate capacity for broadband transmission. Broadband cables manufactured by TELE-FONIKA Kable stand out for their low attenuation, NEXT and FEXT crosstalk, and working capacity. They can be installed both in cable ducts and in areas of low risk of mechanical damage.

	Telecommunication cable with foam-skin insulated conductors, water barrier, outer sheath made of polyethylene, jelly-filled, for data transmission TK 59 xDSL 100, 120 Ω
	Telecommunication cable with foam-skin insulated conductors, water barrier, outer sheath made of polyethylene, jelly-filled, for data transmission XzTKMDXpw: TT155617 based on PN92/T90335
	Telecommunication cable with solid or foam-skin insulated conductors, Al/PET tape, outer sheath made of LSOH or PVC, indoor for data transmission xDSL 100, 120 Ω

Control cables

They are intended for the transmission of analog and digital signals in and around processing plants. They are especially suitable for use in the chemical and petrochemical industry in dry and damp industrial areas.

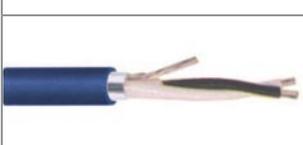
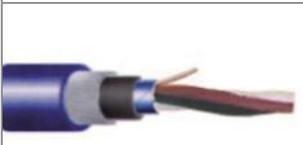
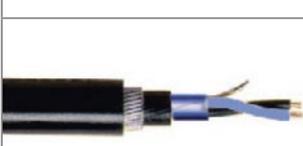
Not recommended for underground burial. Instrumentation (control) cables are not intended for direct connection to a low impedance source, e.g. the public mains electricity supply.

	Stranded annealed plain copper wires insulated with PE, PVC or XLPE, multiwire or stranded into pairs, triples or quads, screened or not, reinforced with round steel wires, outer sheath made of PVC, PE or LSOH YKSLY, YKSLYekw, YKSLYekwf, YKSLYekf/ekwf: PN-EN 60228; Poland BS5308 1, type 1 and 2; BS5308 2, type 1 and 2: BS5308; Great Britain
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Special application cables

This type of cable must meet specific requirements for fire resistance, smoke emission, resistance to external chemical agents and mechanical wearing. The relevant standards precisely describe their parameters and very often - as is the case of mining cables – they require an approval or certification from the relevant institutions. TELE-FONIKA Kable’s special application cables include

shipboard and mining products. The former are dedicated for connection between various communication devices and instruments onboard and the latter are specially designed for telecom networks underground and on the surface in mining facilities. All TELE-FONIKA Kable’s shipboard and mining cables have the certificates of the relevant authorities.

	Shipboard instrumentation, control and telecommunications cable with XLPE insulated copper conductors, screened with a tape and copper braid, outer sheath made of PVC YTKOXSekw
	Shipboard instrumentation, control and telecommunications cable with XLPE insulated copper conductors, screened with a tape and copper braid, outer sheath made of LSOH material NTKOXSekw 250 V: IEC 60092-375
	Shipboard instrumentation, control and telecommunications cable with copper conductors insulated with specially designed crosslinked compound, screened with a tape and copper braid, outer sheath made of LSOH material NTKOGSekw (FLAME-X 950) 250 V: IEC 60092-375
	Telecommunication cable for mines with polyethylene insulated copper conductors, outer sheath made of flame retardant PVC YnTKGX
	Telecommunication cable for mines with copper conductors insulated with polyethylene, twisted into pairs, armoured with steel tape, laminated steel tape or round steel wires, inner sheath made of flame retardant PVC, outer sheath made of PVC YTKGXFoyn, YTKGXFtyn, YTKGXFtlyn
	Instrumental cable with copper conductors insulated with polyethylene, twisted into pairs, armoured with round aluminium wires, jelly-filled, inner and outer sheath made of polyethylene Pilot Cables: EPBK867.1001-03, BS3573; Great Britain
	Instrumental cable with copper conductors insulated with polyethylene, twisted into pairs, armoured with round steel wires, jelly-filled or not, inner and outer sheath made of polyethylene Multit: EATS 096:1981; Great Britain



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