

CABLING Solutions

Developing tomorrow's networks, today

DISCOVER YOUR CABLE CATALOGUE

Telenco' cables are, in general, dedicated to the direct or indirect connection of subscribers to high-speed broadband networks, fixed or mobile, public or private.

Technically, these cable ranges cover all cables with a diameter less than 6.0mm and containing a maximum of 24 fibres (with some exceptions).

Telenco' drop cables offer consists of three product families:







TABLE OF CONTENTS

REMINDER OF STRUCTURES, FIBRES, TESTS	.6 .7 .9 .11 .12 .14
ELINE® RISER CABLES	. 15
Facade cables	.17
Riser cables	.18
DROPTIC® CABLES	19
LM cables with micro-module structure	.21
LX cables with tight or semi-tight buffer structure	.30
LC cables with central loose tube structure	.32
LS cables with central microloose tube structure	.33
Anchor clamps compatible with the DROPTIC® family	.34
	25
Aprial & Duct Micro shoath cable	36
	. 50
ΕΤΤΔ CΔΒΙ ES	37
Breakout cables	39
Breakout cubics	
PACKAGING AND RELATED SERVICES	. 41
The different types of packaging	.42
Related services	.44
Cable preparation	.46
INDEX	50

Robust fibre optic cables and designed for future-proof FTTH and FTTA networks

Thanks to its historical position in the FTTH market, the Telenco Group has developed extensive knowledge of cables, on the one hand through the development of a wide range of wedge clamps or spiral devices for overhead cables, and on the other hand, through the design and manufacture of drop cables for FTTH connections to all premises. This gives Telenco strong skills and expertise in the design, production, packaging and delivery of cables in drums, reels or integrated in pre-connected solutions. Flexible and proficient in all cable technologies, Telenco can also adapt the design of its cables to your specific needs.

The purpose of this catalogue is to present the Telenco Group's cable portfolio. Whatever your needs, you will find in Telenco's cable offer solutions for all types of FTTx connections and installation techniques:

- Inside buildings: pulling, pushing, gluing, stapling
- Outside: duct, facade, overhead

Aware that infrastructures are being built today for decades to come, the Telenco Group:

- Is committed to providing the highest quality products
- Always refers to international cable standards
- Chooses the best raw materials and as much as possible locally
- Takes into account all environmental aspects through product life cycle analysis in order to reduce the overall ecological footprint of its products and packaging

Let's develop tomorrow's sustainable and reliable networks, today!



Reminder of Structures, Fibres, Tests

The different cable structures	E
The specific characteristics of single-mode	
optical fibres	7
The particularities of overhead cables	ç
Cable characterisation tests	
The CPR standards	
Captions and pictograms	





REMINDER OF STRUCTURES, FIBRES, TESTS

The different cable structures

Riser, drop and distribution cables

For Telenco Group, the notion of drop cable is broader than just the family of drop cables for FTTH applications. Indeed, a drop cable meets very specific criteria in terms of size and fibre count. Its primary function is to connect subscribers to an optical distribution network at very high speed, whatever the conditions.

Thus, the DROPTIC[®] cable family now includes a large number of different technical solutions for making these connections of any kind:

- Overhead, underground, facade
- Indoor, outdoor or both
- Pullable, pushable, stapleable, glueable, blowable

And meeting the technical criteria:

- Ø ≤ 6mm [¯]
- Number of optical fibres \leq 24

The Eline[®] cable family consists mainly of multi-fibre distribution cables, and is associated with the distribution of the optical network in buildings or on building facades. It includes indoor or indoor/outdoor cables enabling the fibre extraction directly from the cable in order to connect a dwelling.

This cable family is an integral part of Telenco's Eline[®] range, which includes building entry points, floor boxes and splice boxes.

The different cable technologies

Several cable technologies form the technical basis of the DROPTIC[®] range. They are highlighted in the designation of the cables and meet the challenges of cable uses depending on the application, the network architecture and the installation method. There are 4 cable technologies, all of which are mastered by Telenco.

LM

Micro-module structure

DROPTIC[®] LM families are built on the basis of micromodules made of LSZH-FR material, with diameters ranging from 0.9 to 1.6mm, which can contain up to 24 optical fibres. These micro-modules are finger tearable and do not contain any sealing jelly to facilitate access to the fibres and their preparation for fusion.

As soon as they are manufactured, 100% of the modules are tested for strippability, i.e. stripping 1 meter in maximum 1 minute depending on the fibre count.

LC

Central loose tube structure

The LC families are central-tube cable families with a diameter of up to 2.5mm. The central tube can contain up to 24 fibres depending on its size. Around this tube are deployed the reinforcement elements and the cable protection sheaths. Either sealing jelly or swelling ropes are used for waterproofing the structure.

In terms of construction, LC cables are slightly stiffer than LM drop cables.

The module technology used for each cable is known immediatly as it is identified in the cable designation.



DROPTIC[®] LX cables are cables made up of tight or semi-tight modules with 1 fibre of 900 μ m diameter. These solutions allow the storage of fibres or buffers in the interconnection boxes directly in junction boxes. In addition, this technology is also used in combination with field-mountable connectors (FMC), directly on the 900 μ m.

These modules with tight or semi-tight fibres are 100% tested for strippability at the time of manufacture, based on stripped length criteria in a single clamp operation.

LS

Central microloose tube structure



Similar to the LC family, the LS family is distinguished by tubes with a maximum diameter of 1.6 mm. LS structures are therefore small cables suitable for blowing into microtubes with internal diameters of 3.5mm to 6 mm.



The specific characteristics of single-mode optical fibres

DROPTIC® cables are mainly cables with single-mode optical fibres.

These fibres are composed of:

- A glass optical guide of 125µm diameter at the centre of which we find the optical core of approximately 9µm diameter. This constitues the part in which the light propagates.
- A primary and secondary protective coating for preserving the fibre mechanically, enabling it to be handled and allowing the identification it thanks to a thin coloured layer or a colouring in the mass of the secondary coating.

The propagation of light within the core takes place by successive reflection at the core/sheath interface. Several light rays propagate through the core.

With a step-index profile and a small core diameter, only one light ray propagates: the fibre is said to be single mode.

Bandwidth

For long-distance telecommunications and data transport applications, the optical spectrum or wavelength band that can be used (see graph opposite) is in the near infrared (light that cannot be seen with the naked eye) and extends over the range 1260 - 1675nm. The bandwidth is then almost infinite (> 60THz).

In order to facilitate its exploitation, the bandwidth is subdivided into optical bands. Initially used in the O-band (Original) due to the availability of optical sources, optical fibre was soon used in the L-band due to its low line attenuation. Today, for data rate purposes, all bands are used by PON technologies.

Therefore, all cables defined by Telenco are controlled as standard at 1310nm, 1550nm and 1625nm, to guarantee the use in all wavelength bands.



The International Telecommunication Union (ITU) has issued a series of ITU-T recommendations G.652D, G.657A1, G.657A2, G.657B3 on the specifications of the different categories of single-mode fibres in cables and the associated characterisation methods.

The International Electrotechnical Commission (IEC) has published a series of standards IEC 60793-1-50 describing the technical specifications for measurement and testing of Category B optical fibres. These standards supplement the ITU recommendations by adding performance in terms of the mechanical and environmental resistance of the fibre.

Equivalent in terms of optical properties, the different categories of fibre differ in their:

- Bending performance
- Splicing compatibility with G.652D fibres





Splicing compatibility

Splicing compatibility is ensured when the mode fields' diameters of the fibres to be spliced are close. In this case, there is full compatibility between G.652D, G.657A1 and G.657A2 fibres. The mode field diameter is the diameter in which at least 99% of the transmitted light power is contained.

The adjacent table shows the different normative ranges of mode field diameter depending on the type of fibre.

As a result, Telenco has chosen to deploy ITU-T G.657A2 and G.657B3 compliant fibres whose mode field diameter remains compatible with that of the G.652D fibre, i.e. in the 8.6 - 9.5 μm range.

ITU	Designation	MDF ₁₃₁₀ In µm
G.652D	Non-dispersion shifted fibre, optimised at 1383nm without OH peak with low PMD	8.6-9.5 (+/-0.6)
G.657A1		8 6-9 5 (+/-0 1)
G.657A2	Single-mode optical fibres	0.0-7.3 (17-0.4)
G.657B2	for access networks	420E(1/04)
G.657B3		0.3-7.3 (+/-0.4)



Bending performance

The macro-bending performance of the fibre subcategories of recommendation G.657 compared to the fibre G.652D



Fibre identification

To differentiate fibres and modules in cables, there is a colour code based on 12 different colours.

This distinction must still be effective after a few years of use of the fibres and cables.

When designing the products, Telenco systematically performs ageing tests on the cables to ensure that there is no degradation of the colours and that the fibres are still identifiable.

The order of the colours differs according to the standards.

EIA598-	A colour code	DIN VDE 0	888 colour code	IEC 60794	-2 colour code	AFNOR XPC	93-850 colour code
Position of the fibre	Colour	Position of the fibre	Colour	Position of the fibre	Colour	Position of the fibre	Colour
1	Blue	1	Red	1	Blue	1	Red
2	Orange	2	Green	2	Yellow	2	Blue
3	Green	3	Blue	3	Red	3	Green
4	Brown	4	Yellow	4	White	4	Yel-low
5		5	White	5	Green	5	Pur-ple
6	White	6	Grey	6	Purple	6	White
7	Red	7	Brown	7	Orange	7	Orange
8	Black	8	Purple	8		8	Grey
9	Yellow	9	Turquoise	9	Turquoise	9	Brown
10	Purple	10	Black	10	Black	10	Black
11		11	Orange	11	Brown	11	Turquoise
12	Turquoise	12		12		12	Pink

As standard, Telenco uses the AFNOR XPC 93-850 or DIN VDE 0888 colour code. However, we can work with you on all your fibre and cable identification needs.

The particularities of overhead cables

The dimensioning of overhead drop cables and their anchoring compatibility

Sizing an overhead cable is a complex operation. This consists into establishing the tensile performance of the cable tby taking into account the installation parameters between two poles and environmental factors such as temperature, wind, ice.

The maximum permissible tightness, which must be higher than the tension induced on the cable under extreme conditions, is determined depending on the amount of reinforcement in the cable. Without taking into account the climatic conditions, the calculated tension is the installation tightness.

The tension on the cable is calculated as follows:



Weight (kg/m): apparent weight of 1 metre of cable Tension (N): calculated tension on the cable

Span (m): distance between two poles
Sag (m): vertical distance to the centre of the span, usually 1% of the span

Taking into account additional reference load due to climatic conditions



Bad weather conditions cause additional load on the overhead infrastructure. The load caused by ice increases the weight of the cable as well as the total surface area exposed to the wind. To account for weather conditions in the formula below, wind load and ice load are included in the calculation of the apparent cable weight:

Apparent weight = $\sqrt{(\text{Ice weight + cable weight)}^2 + (\text{Wind presure})^2}$



Data relating to the cables is provided by cable manufacturers, and climatic data can usually be found in national standards for buildings/infrastructures.

For example, in the United States, the National Electric Safety Code (NESC) Rule 250B defines 3 regions with typical values for ice thickness, temperature and wind pressure.

	Temperature	Ice thickness	Wind pressure
High	-18°C	12.70mm	192 Pa
Medium	-10°C	6.35mm	192 Pa
Low	-1°C	0.0mm	431 Pa

In France, it is commonly accepted that the additional reference loads due to climatic conditions are 3 times higher than the installation tensions. The table below lists the installation tensions calculated for different overhead drop cables for different spans and the maximum permissible tension for each cable.

			Span between two poles with 1% deflection					
DROPTIC [®] family	Cable weight (kg/km)	Maximum allowable tension	30m	40m	50m	70m		
	(K9) Kiny		Installation	Installation tension/Tension under reference conditions				
LM4	20	800N	75N/225N	100N/300N	125N/375N	175N/525N		
LM2BK	13	400N	49N/146N	65N/195N	81N/244N	114N/341N		
LX030PU	9	300N	34N/101N	45N/135N	56N/169N	79N/236N		
LM033PER	8	250N	30N/90N	40N/120N	50N/150N	70N/210N		

DROPTIC® drop cables therefore offer performances that fully meet the conditions for deployment in France.

A good knowledge of the topographical parameters (span, terrain gradient) and climatic parameters makes it possible to anticipate loads and overloads on the overhead infrastructure, and helps to choose the right equipment, cables and clamps, adapted to the area under consideration for a sustainable network.

Cable characterisation tests

All cables are tested according to the international standards EN 60794-1-21 and EN 60794-1-22. These standards define the test conditions for which the performance of cables is stated. The essential characteristics for a cable are as follows:

Test	Test family	Standard	Standard method
Maximum allowable tension	Mechanical	NF EN 60794-1-21	E1
Tensile strength	Mechanical	NF EN 60794-1-21	E1
Crush	Mechanical	NF EN 60794-1-21	E3
Kink	Mechanical	NF EN 60794-1-21	E10
Static bending	Mechanical	NF EN 60794-1-21	E11
Temperature cycling	Environmental	NF EN 60794-1-22	F1
UV resistance	Environmental	NF EN 60794-1-22	F14
Fire reaction	Environmental	EN50575	
Resistance to wind vibrations	Mechanical	NF EN 60794-1-21	E19

For overhead drop cables, in addition to the characterisation of the cable itself, the mechanical link between the anchor and the cable is an important issue in the quality of the overhead network. The compatibility of anchors and cables is therefore systematically checked by carrying out the following qualification tests:

- **Tensile tests** at the short-term tensile load of the cable (Maximum Allowable Tension) according to the modified E1 method of EN 60794-1-2, involving a couple of anchoring devices over a cable length of more than 1 meter. There shall be no slippage of the cable within the anchor clamps, no deterioration of the cable and no deterioration of the signal (attenuation less than 0.1dB).
- Galloping test of anchor clamps according to method E19 of EN 60794-1-2, and applying 10 undulations for cables up to 6mm diameter, 3 undulations for cables over 6mm diameter (distribution and feeder cables) and an optical loss measurement for 300 hours.

The optical losses must then be less than 0.1dB during the test.

The CPR standards

The CPR (Construction Products Regulation) standards harmonise test methods to define the reaction-to-fire performance of cables permanently installed in buildings. These are the essential fire requirements for cables. Cables must therefore be tested according to these standards.

The fire reaction is the way a material behaves as a combustible. It is defined by organisations that have carried out various tests. In Europe, CE marked products are identified by Euroclasses for fire reaction. This identification code appears on the cable labels.



Euroclasses



DROPTIC[®] and SYCABEL classification

All Telenco indoor cables are qualified according to the test standards described in EN50575. For this reason, cable families for indoor use are classified according to their fire reaction performance level.

The table below from SYCABEL (Professional trade union of electrical, communication wire and cable manufacturers) defines three levels of classification:

- Optimal
- Improved
- Basic

By default, all indoor cables of the DROPTIC® family comply with the SYCABEL Basic classification.

DROPTIC® FLAME RETARDANCY cables have a performance equivalent to the Improved classification. Finally, the DROPTIC® FLAME RETARDANCY+ cable families have a fire performance equivalent to the Optimal classification. Telenco Group offers different possibilities, to date, represented in the table.

SYCABEL classification	Euroclasses	DROPTIC [®] Classification	LM2	LM1L	LM1	LM7	LM8
Optimal	B2 _{ca} -s1, d1, a1	DROPTIC [®] Flame Retardancy +	Х				
Improved	C _{ca} - s1, d1, a1	DROPTIC [®] Flame Retardancy	Х	Х			
Basic	D _{ca} - s2, d2, a2 E _{ca}	DROPTIC [®] Standard	Х	Х	Х	Х	Х

Captions and pictograms





Eline[®] riser cables

Facade cables Riser cables



Eline[®] cables are specially designed for the vertical and/or horizontal distribution of optical fibre outside buildings. They can be deployed on facade, laid in cable trays or pulled into ducts. Thanks to their black LSZH-FR outer sheath, these cables are UV-resistant. In addition, they are equipped with FRP reinforcements, for an optimal mechanical performance.

Thanks to their large internal diameter and unassembled micro-modules, Eline[®] cables' fibres are easy to access by making two slits in the outer sheath.

Below are the steps to be taken:



B Extract the micro-module from the first slit

The fibre extracted from this micro-module is used to make a connection, either by splicing or by installing 900µm field-mountable connectors, with a patch cable inside a transition box.

Fibre optic connection in a single dwelling unit using an Eline® facade cable





Fibre optic connection in a multi-dwelling unit using an Eline® riser cable

- - 1 Eline[®] riser cable
 - 2 Eline[®] Building Entry Point
 - 3 Eline[®] Floor Distribution Box
 - 4 Eline[®] drop cable DROPTIC[®] LM1

ELINE[®] RISER CABLES

Facade cables

Eline[®] facade cable

Eline[®] facade cables are manufactured with a black LSZH FR outer sheath that provides UV protection. In addition, they are equipped with two swelling cords ensuring a watertight seal inside the cable cavity.

These cables enable an easy, quick and secure access to the fibre thanks to the longitudinal marking indicating the position of the FRP reinforcements, their large internal diameter and their construction in unassembled micro-modules.

Product advantages:

- + Fast, easy and secure access to fibre
- + Longitudinal sealing
- + Good mechanical performance





PN	Fibre count per micro-module	Diameter	Packaging	Weight
	6/12 FO Ø 8.0mm		1000m	55.0kg/km
On request	16/24 FO	Ø 11.5mm	cable drum	94.0kg/km

Categories	Characteristics
Tensile strength	200N
Crush resistance	50N/cm
Bending radius	R mini. = 25.0mm

Telenco reserves the right to change specifications without notice

Riser cables

Eline[®] riser cable

The Eline[®] riser cable is specially designed for the vertical distribution of optical fibre inside buildings. It can also be laid in cable trays or pulled into ducts. The cable is manufactured with a white, halogen-free, low-smoke, flame retardant outer sheath. It has a longitudinal mark indicating the position of the FRP reinforcements.

With a large inner diameter and a non-stranded micromodule construction, the Eline® riser cable enables easy access to the optical fibre by making a slit in the outer sheath. The fibre extracted from a micro-module is then used to make a spliced connection to a drop cable within a Building Entry Point.



Product advantages:

- + Simple, fast and secure access to fibre
- + Waterproof micro-module containing up to 12 optical fibres
- + Halogen-free, low-smoke, flame-retardant white sheath
- + Good mechanical performance



PN	Fibre count per micro-module	Fibre count	Diameter	Packaging	Weight
91890		12	Ø 7.5mm	4000m cable drum	54.0kg/km
91240		24	Ø 8.5mm		64.0kg/km
91891		36	Ø 9.5mm	2000m cable drum	70.0kg/km
91243	4 FO	48	Ø 9.5mm		77.0kg/km
91239		72	Ø 10.5mm		89.0kg/km
91324		96	Ø 11.5mm	1000m cable drum	102.0kg/km
91236		144	Ø 12.0mm		115.0kg/km
91238		12	Ø 7.5mm	4000m cable drum	54.0kg/km
91231		24	Ø 7.5mm		55.0kg/km
91892		36	Ø 8.5mm	2000m cable drum	64.0kg/km
91233	6 FO	48	Ø 9.0mm		70.0kg/km
92893		72	Ø 9.5mm		77.0kg/km
91235		96	Ø 10.5mm	1000m cable drum	88.0kg/km
91237		144	Ø 11.5mm		102.0kg/km

Categories	Characteristics
Tensile strength	480N
Crush resistance	30N/cm
Bending radius	R mini. = 12.5mm
Fire reaction	D _{ca} - s1, d0, a1

Telenco reserves the right to change specifications without notice



DROPTIC[®] cables

000

LM cables with micro-module structure21LX cables with tight or semi-tight buffer structure30LC cables with central loose tube structure32LS cables with central microloose tube structure33Anchoring clamps compatible with the DROPTIC® family34





The DROPTIC[®] range includes a range of cables with a diameter of less than 6 mm and a fibre count 24. This range is available in 4 different structures:



The DROPTIC® range has been developed to meet all network configurations for FTTH fibre deployments:



Made from high quality fibre and materials, DROPTIC[®] cables are sustainable solutions for building high speed broadband networks.



Indoors, DROPTIC[®] patch cables are designed as solutions to improve the daily life of field engineers. They offer easy access to the fibre and mechanical performance that makes installation easy and comfortable.

These cables ensure an optimised deployment of the optical fibre from the connection point to the subscriber's terminal outlet. Depending on the chosen model, they can be laid in cable trays, pulled, pushed, routed inside occupied ducts or simply stapled or glued along skirting boards.

These indoor drop cables are fully compliant with the European Construction Products Regulation (CPR). They are manufactured with LSZH sheaths: halogen-free, low-smoke, and flame retardant.

DROPTIC[®] **outdoor** drop cables great versatility. They can be installed both overhead and underground, using pulling techniques, over several hundred metres. These cables enable flexibility in network deployments, while offering optimal optical performance.

DROPTIC[®] outdoor feeder cables are manufactured with black polyurethane outer sheaths that are UV, wear and tear resistant. This results in a high mechanical performance.

For indoor/outdoor use, DROPTIC[®] cables are made either with a double sheath or an UV-resistant LSZH sheath. They are designed to be multi-application, allowing for convenient and quick installations during FTTH deployments.

The HDPE outer sheath is easily and quickly stripped to provide access to a Construction Products Regulations compliant inner cable. No intermediate splice is required.



DROPTIC® CABLES

LM cables with micro-module structure

DROPTIC[®] LM1L drop cable

The DROPTIC[®] LM1L drop cable is used to carry optical fibre almost invisibly to the Optical Telecommunication Outlet. This cable has been developed to allow connections inside individual or collective housing. Usually white, it can also be supplied in black: LM1LBK. Thanks to its flexibility, the LM1L cable can be installed by pulling, laying or gluing, along baseboards, door or window surrounds.

1

2

3

4

1

2

4

Fibre

Module

Product advantages:

- + Small diameter for quick and discreet connections
- + Flexible for easy installation
- + Good bending performance

Categories	Characteristics
Tensile strength	100N
Crush resistance	100N/cm ($\Delta \alpha \le 0.1 dB$) Optical reversibility verified at 200N/cm
Bending radius	R mini. = 12.5mm
Fire reaction	D _{ca} - s2, d1, a1
T 1 1 1 1 1	10 11 11 11

Telenco reserves the right to change specifications without notice

Rzf	Fibre count per micro-module	Diameter	Packaging	Weight
90923	1 FO			13.0kg/km
90925	2 FO	Ø 2.8mm	250m reel or 2000m cable drum	13.7kg/km
90927	4 FO			15.1kg/km

DROPTIC[®] LM023WHP drop cable

The DROPTIC $^{\otimes}$ LM023WHP is a drop cable family engineered for effective indoor FTTH roll-outs.

Optimized diameter and high tensile strength construction, the LM023WHP can be installed, by air blowing or gluing techniques, alongside baseboards, door or window frames. This almost invisible cable brings optical signal to the OTO (Optical Telecommunications Outlet).

Product advantages:

- + High blowing performance
- + Small diameter
- + Flexible construction enabling easy deployments

Categories	Characteristics		
Tensile strength	400N		
Crush resistance	100N/cm (Δα ≤ 0,1dB) Optical reversibility verified at 200N/cm		
Bending radius	R mini. = 12.5mm		
Fire reaction	B2 _{ca} - s1, d1, a1		

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
On request	1 FO		1000m	6.0kg/km
On request	2 FO	Ø 2.3mm	or 2000m	6.0kg/km
On request	4 FO		cable drum	7.0kg/km

DROPTIC® LM028WHP drop cable

The $\mathsf{DROPTIC}^{\circledast}$ LM028WHP is designed for time saving installation for indoor FTTH roll-outs.

Thanks to its optimized diameter and high tensile strength, the LM028WHP can be installed by blowing and pulling. This almost invisible cable brings optical signal to the floor distribution box.

Product advantages:

- + Reduced diameter for time-saving
- + Unobtrusive indoor installations in SDUs and MDUs
- + High blowing performance
- + Flexible construction enabling easy deployments

Categories	Characteristics		
Tensile strength	400N		
Crush resistance	150N/cm (Δα ≤ 0.1dB) Optical reversibility verified at 200N/cm		
Bending radius	R mini. = 15mm		
Fire reaction	B2 - s1, d1, a1		

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
On request	8 FO	– Ø 2.8mm	250m reel or	8.0kg/km
On request	12 FO		1500/2000m cable drum	9.0kg/km

DROPTIC® LM1 drop cable

The DROPTIC[®] LM1 drop cable is specially designed for FTTH deployments inside buildings. It can be installed by pulling or gluing. Thanks to its small diameter, this cable is suitable for installations in already occupied or congested ducts. It has optimal mechanical performance thanks to the presence of two FRP reinforcements.

Product advantages:

- + Small diameter
- + Easy installation
- + Good crush and tensile strength due to the two FRP
- reinforcements placed in the sheath

Categories	Characteristics		
Tensile strength	150N		
Crush resistance	100N/cm (Δα ≤ 0,1dB) Optical reversibility verified at 200N/cm		
Bending radius	R mini. = 15mm		
Fire reaction	D _{ca} - s2, d1, a1		

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
90364	1 FO	Ø 3.3mm	250m reel or	13.0kg/km
90365	2 FO		1500/2000m cable drum	13.7kg/km
90366	4 FO			15.1kg/km

DROPTIC® LM2 drop cable

The DROPTIC[®] LM2 drop cable is designed to meet a wide range of requirements encountered during FTTH deployments, whether indoors or outdoors, on facades, overhead or in ducts. Indoors, this cable is compatible with all types of installation: pulling, gluing or stapling and is fully compliant with the Construction Products Regulations.

Outdoors, the LM2 cable can be installed in ducts over short distances (less than 50 metres). UV-resistant and equipped with two FRP reinforcements and two swelling cords wicks, it offers very good temperature resistance and watertightness.

Product advantages:

- + UV-resistant
- + Extended operating temperature range
- + Good crush and tensile strength due to the two FRP reinforcements in the sheath

Categories	Characteristics		
Tensile strength	400N		
Crush resistance	150N/cm (Δα ≤ 0.1dB) Optical reversibility verified at 200N/cm		
Bending radius	R mini. = 15mm		
Fire reaction	D _{ca} - s2, d1, a1		

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
90338	1 FO	Ø 4.0mm	250m reel or	13.0kg/km
90340	4 FO		drum	15.1kg/km

DROPTIC[®] LM2BK drop cable

The DROPTIC[®] LM2BK drop cable is a solution for FTTH deployment in overhead configurations over short distances (up to 50 metres), on facades or in ducts. Its black, UV-resistant outer sheath with two FRP reinforcements allows for use over a wide range of temperatures.

In addition, the LM2BK is fully compliant with the Construction Products Regulations and can also be deployed indoors.

- Product advantages:
- + UV-resistant
- + Extended operating temperature range
- + Optimal mechanical performance due to two FRP
- reinforcements inside the sheath

Categories	Characteristics		
Tensile strength	400N		
Crush resistance	100N/cm (Δα ≤ 0.1dB) Optical reversibility verified at 200N/cm		
Bending radius	R mini. = 20mm		
Fire reaction	D _{ca} - s2, d1, a1		

Telenco reserves the right to change specifications without notice

DROPTIC[®] LM3 drop cable

The DROPTIC[®] LM3 drop cable is a multi-purpose cable for simple, fast and reliable outdoor/indoor transitions. The cable is robust and waterproof and offers high mechanical performance. It is designed for overhead deployments (spans up to 70 metres) but can also be pulled into ducts over several hundred metres.

With a double sheath construction, LM3 drop cable has two ripcords that allow the outer HDPE sheath to be stripped in seconds. This allows a halogen-free, low-smoke, flame-retardant LM1 sheathed cable to be installed indoors. No splicing is required between the outer and inner cable.

The DROPTIC[®] LM3 cable allows the transmission of the optical signal from a distribution point to the Optical Terminal Outlet without straining the optical budget.

- Product advantages:
- + Enables quick, simple and reliable outdoor/indoor transitions
- + Extended operating temperature range
- + High mechanical performance

Categories	Characteristics
Tensile strength	800N
Crush resistance	200N/cm (Δα ≤0.1 dB) Optical reversibility verified at 300N/cm
Bending radius	R mini. = 60mm
Fire reaction	D _{ca} - s2, d1, a1

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
90521	1 FO	Ø 4.0mm	1000/1500m cable drum	17.0kg/km
90929	2 FO		2000m cable drum	
91579	4 FO			19.0kg/km



PN	Fibre count per micro-module	Diameter	Packaging	Weight
90367	1 FO	Ø 6.0mm	500/1000m cable drum	29.0kg/km
90368	2 FO			
90369	4 FO			30.0kg/km



DROPTIC® LM4 drop cable

The DROPTIC[®] LM4 drop cable is a multi-purpose solution for simple, fast and reliable outdoor/indoor transitions. The cable is robust and waterproof and is suitable for overhead installations (spans up to 70 metres). The dimensions of this drop cable and the weight have been reduced to ensure low wind resistance. The cable has two reinforced ripcords that enable the HDPE outer sheath to be stripped in seconds to install an LM1L cable indoors.

Product advantages:

- + Enables quick, simple and reliable outdoor/indoor transitions
- + Optimised dimensions for low wind load
- + High mechanical performance

Categories	Characteristics	
Tensile strength	800N	
Crush resistance	200N/cm ($\Delta \alpha \le 0.1dB$) Optical reversibility verified at 300N/cm	
Bending radius	R mini. = 50mm	
Fire reaction	D _c - s2, d1, a1	

Telenco reserves the right to change specifications without notice

PN	Fibre count per micro-module	Diameter	Packaging	Weight
90531	1 FO			21.0kg/km
90533	2 FO	Ø 5.0mm	500/1000m cable drum	21.0kg/km
90535	4 FO			22.0kg/km

DROPTIC® CABLES

DROPTIC[®] LM7 drop cable

The DROPTIC[®] LM7 drop cable allows a quick and easy connection between an Optical Terminal Outlet and a distribution point, placed at the floor's level or on the ground floor of the building. Its compact and rectangular design has been specifically designed to be pushed into an already occupied ICTA corrugated duct and thus facilitate the installation inside the ducts. This cable is equipped with two FRP reinforcements for high mechanical performance.

Poduct advantages:

- + Rectangular and compact design for easy installation in occupied ducts and sheath
- + Flexible and rigid at the same time
- + Optimal mechanical performance

Categories	Characteristics
Tensile strength	150N
Crush resistance	100N/cm (Δα ≤ 0.1dB) Optical reversibility verified at 200N/cm
Bending radius	R mini. = 15mm
Fire reaction	Eca

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
90541	1 FO		250m coil or	
90543	2 FO	2.6mm x 1.8mm	2000m cable	6.0kg/km
90545	4 FO		drum	

DROPTIC[®] LM8 drop cable

The DROPTIC[®] LM8 drop cable is a modular solution. Its robust design meets the different requirements of FTTH deployments between distribution points and subscribers. The cable is dielectric and can be installed indoors or outdoors for the connection of SDUs or MDUs. Thanks to its watertight construction, DROPTIC[®] LM8 drop cable can also be installed in ducts over short distances (less than 50 metres). Its two FRP reinforcements ensure good temperature resistance.

Indoors, this cable is compatible with all types of installation: pulling, gluing or stapling and is fully compliant with the Construction Products Regulations.

The DROPTIC $^{\otimes}$ LM8 patch cable features two optical fibres in two separate modules for differentiated management of the two modules.

Poduct advantages:

- + A single drop cable for indoor FTTH configurations,
- facade deployment or short distance ducting
- + Extended operating temperature range
- + Compatible with all types of cable laying

Categories	Characteristics
Tensile strength	400N
Crush resistance	150N/cm (Δα ≤ 0,1dB) Optical reversibility verified at 200 N/cm
Bending radius	R mini. = 20mm
Fire reaction	D _{ca} - s2, d1, a1

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
90341	2 FO	4.0mm	250m reel or 1500m cable drum	13.7kg/km

DROPTIC[®] LM8BK drop cable

The DROPTIC[®] LM8BK drop cable is a solution for FTTH deployments on facades or underground over short distances (up to 50 meters). Consisting of a black, UV-resistant LSZH-FR sheath with two FRP reinforcements, the LM8BK cable can be used over a wide temperature range. In addition, it is fully compliant with the Construction Products Regulations and can also be deployed indoors. The DROPTIC[®] LM8BK patch cable features two optical fibres in two separate modules. This enable differentiated management of the two modules.

- Product advantages:
- + A single drop cable for indoor FTTH configurations,
- facade deployment or short distance ducting
- + UV-resistant
- + Compatible with all types of cable laying

Categories	Characteristics
Tensile strength	400N
Crush resistance	100N/cm (Δα ≤ 0,1dB) Optical reversibility verified at 200N/cm
Bending radius	R mini. = 20mm
Fire reaction	D _{ca} - s2, d1, a1

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
90523	2 FO	Ø 4.0mm	1000/1500/ 2000m cable drum	19.0kg/km

DROPTIC® LM050PER drop cable

The DROPTIC $^{\otimes}$ LM050PER drop cable is a specially designed solution for overhead or in-duct, in conduit or on facade applications.

Robust and watertight $\mathsf{DROPTIC}^{\circledast}$ LM050PER is suitable for overhead installations spans up to 70m.

The dimensions of the cable drop have been reduced for a better wind behaviour and suitability for installation by pulling into the duct.

With its single sheath construction, the family of LM050PER drop cable features two FRP reinforcements that provide high temperature resistance and good tensile strength.

Product advantages:

- + Reduced dimensions for improved FTTH roll-outs
- + Lightweight
- + Wide operating temperature range
- + High mechanical performances
- + Easy opening

Categories	Characteristics
Tensile strength	800N
Crush resistance	200N/cm (Δα ≤ 0,1dB) Optical reversibility verified at 300N/cm
Bending radius	R mini. = 50mm
Anchoring	No sliding at 1250 N

Telenco reserves the right to change specifications without notice



$\begin{array}{c} \mathbf{P} \leftarrow \mathbf{P} \leftarrow \mathbf{Q} \\ \mathbf{P} \leftarrow \mathbf{Q} \\ \mathbf{$

PN	Fibre count per micro-module	Diameter	Packaging	Weight
1001696	1 FO			18.0kg/km
1001697	2 FO	Ø 5.0mm	250, 500, 750 or 1000 meters drum	18.0kg/km
1001698	4 FO			19.0kg/km



2

5

3



Outer sheath

Fibre

5 Aramic

6 Swelling yarns

DROPTIC® LM033PER drop cable

The DROPTIC[®] LM033PER drop cable is an outdoor cable for short distance FTTH deployments on facades, in ducts or overhead. Dielectric and UV resistant, this cable is suitable for all FTTH connection configurations in individual dwellings or buildings. Thanks to the two FRP reinforcements and the swelling yarns, DROPTIC[®] LM033PER cable can be subjected to significant temperature and humidity variations. Its small size and low weight enhance the overhead performance of this cable. It can be exposed to continuous wind of up to 115km/h over spans inferior or equal to 50 metres.

- Product advantages:
- + Dielectric and UV-resistant
- + Small size and light weight
- + Very good overhead performance

Categories	Characteristics		
Tensile strength	250N, cable elongation < 0.5 %, fibre elongation < 0.3 %		
Crush resistance	200N/cm (Δα < 0.05dB) Optical reversibility verified at 250N		
Bending radius	R mini. = 15mm		

Telenco reserves the right to change specifications without notice

PN	Fibre count per micro-module	Diameter	Packaging	Weight
93461	1 FO	Ø 3.3mm	2000m cable drum	8.0kg/km
93462	2 FO			
93463	4 FO			

DROPTIC® LM040BK adducting cable

The DROPTIC[®] LM040BK adducting cable is an indoor/ outdoor building drop cable for FTTH deployments on facades or in ducts. It can also be used overhead for short distances (spans of up to 50 meters).

Dielectric and UV-resistant, this cable is suitable for outdoor installations for all FTTH connectivity configurations in SDUs or MDUs. Available in black or ivory, its LSZH sheath allows it to be deployed inside the building via riser ducts or horizontal cable trays.

Thanks to the two FRP reinforcements and the swelling yarns, the DROPTIC[®] LM040BK cable can be subjected to significant temperature variations.

Its small size, light weight and structure make it easy to install and access the fibre.

Product advantages:

- + Dielectric and UV-resistant
- + Easy installation
- + Easy and quick access to the fibre

Categories	Characteristics		
Tensile strength	400N, cable elongation < 0.5 %, fibre elongation < 0.3 %		
Crush resistance	100N/cm, Δα < 0.05dB to 1550nm Optical reversibility verified at 150N		
Bending radius	R mini. = 20mm, Δα < 0.1dB at 1550nm		
Fire reaction D _{ca} - s2, d1, a1			

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
93467	6 FO	Ø 4.1mm		19.0kg/km
93468	8 FO		1500m cable drum	
93469	12 FO			

LX cables with tight or semi-tight buffer structure



Thanks to their small diameter, these cables have good wind resistance. The black polyurethane outer sheath provides high UV protection and improved mechanical performance in terms of flexibility, traction, crushing and abrasion.

- Product advantages:
- + UV-resistant
- + Light weight
- + Small diameter for low wind load
- + High mechanical performance

Categories	Characteristics		
Cable	LX030PU	LX030PUK	
Tensile strength	300N	400N	
Crush resistance	100N/cm ($\Delta \alpha \le 0.1 dB$) Optical reversibility verified at 200N/cm		
Bending radius	R mini. = 12.5mm		

Telenco reserves the right to change specifications without notice

Designation	PN	Fibre count per micro-module	Diameter	Packaging	Weight
LX030PU	09289	1 50	Ø 2 0	3.0mm 2000m cable drum	8.0kg/km
LX030PUK	93302	TFO	Ø 3.0mm		9.0kg/km

DROPTIC® LX048DS drop cable

The DROPTIC[®] LX048DS drop cable is specifically designed to be deployed in overhead configurations with spans of up to 70 metres, either on facade or in conduit. Thanks to its small diameter, this cable is a real discreet solution for the FTTH deployment.

Thanks to its double sheath and the presence of a ripcord, DROPTIC[®] LX048DS cable allows convenient and fast installations for indoor and outdoor applications.

- Product advantages:
- + Discreet connection
- + Highly versatile
- + Light weight

Categories	Characteristics		
Tensile strength	500N		
Crush resistance	100N/cm ($\Delta \alpha \le 0.1$ dB) Optical reversibility verified at 200N/cm		
Bending radius	R mini. = 15mm		
Fire reaction	D _{ca} - s1, d0, a1		

Telenco reserves the right to change specifications without notice

DROPTIC[®] LX050HDPE drop cable

The DROPTIC[®] LX050HDPE drop cable is an outdoor drop cable enabling FTTH facade, duct or overhead deployments. This all-dielectric and UV resistant optical cable is suitable for the outside plant roll-outs for SDUs or MDUs access network configurations.

Built with longitudinal sealing and 2 parallel FRP rods, DROPTIC[®] LX050HDPE can be used for applications within a wide temperature range.

Its small dimension and lightweight confer to this DROPTIC[®] LX050HDPE drop cable very good aerial performances.

It can expose at least to permanent wind up to 95km/h on 70m spans.

The DROPTIC® LX050HDPE is fully compatible with the Telenco® GSDE0450 and integrated in a comprehensive FTTH solution, including Telenco® aerial and facade hardware and Eline® distribution and transition boxes.

Product advantages:

- + Breakable for safety
- + Lightweight
- + Wide operating temperature range
- + High mechanical performances

Categories	Characteristics		
Tensile strength	400N		
Breaking load	1350N < F < 2000N, with Telenco® Spiral Dead-End GSDE0450, continuous load speed V=150mm/mn		
Crush resistance	2000N/100mm, Da<0.05dB		
Bending radius	R min. = 60mm		

Telenco reserves the right to change specifications without notice



DROPTIC® cables

PN	Fibre count per micro-module	Diameter	Packaging	Weight
92440	1 FO	(A 4 9mm	500m	22 01.00/1000
91835	2 FO	Ø 4.0mm	cable drum	23.0kg/km



PN	Fibre count per micro-module	Diameter	Packaging	Weight
93965	1 FO		500m	19.0kg/km
On request	4 FO	Ø 5.0mm or 1000 meters drum	or 1000 meters	19.0kg/km
On request	12 FO		drum	20.0kg/km

LC cables with central loose tube structure

DROPTIC[®] LC050HDPE drop cable

The DROPTIC[®] LC050HDPE drop cable is used to interconnect buildings. Its HDPE sheath facilitates pulling in different types of conduits, especially in concrete.

This cable has a light and robust structure with central loose tube. Thanks to its ripcords, the LC050HDPE cable provides for an easy access to the fibre.

Fully dielectric and equipped with glass yarns around the central tube, this cable ensures good mechanical performance and improved protection against rodents.

Product advantages:

- + Easy installation
- + Fully dielectric
- + High mechanical performance
- + Protection against rodents





Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
On request	12 FO	Ø 5.2mm	4000m cable drum	23.0kg/km



LS cables with central microloose tube structure

DROPTIC® Nano blowable cables

The DROPTIC[®] Nano blowable cables are used for outdoor applications. Their black HDPE outer sheath provides good sealing and UV resistance, ensuring optimum mechanical performance. These cables are specially designed to be blown in microducts with a diameter from 2.5mm up to 6mm.

- Product advantages:
- + UV-resistant
- + Waterproof
- + Blowable over long distances, up to 2000m

Categories	Characteristics		
Cable	LS025HDPE 6FO LS025HDPE 12FO		
Out-diameter	2.5mm/3.5mm		
Tensile strength	150N/250N		
Crush resistance	200N/cm		
Bending radius	R mini. = 15mm		



LS025HDPE 6F0 G.657A1



LS025HDPE 12F0 G.657A1

DROPTIC® cables

Telenco reserves the right to change specifications without notice

Designation	PN	Diameter	Packaging	Weight
LS025HDPE 6FO G.657A1 150N	93880	Ø 2.5mm	4000m cable drum	5.0kg/km
LS025HDPE 6FO G.657A1 250N	93881	Ø 3.5mm		9.0kg/km
LS025HDPE 12FO G.657A1 150N	93882	Ø 2.5mm		5.0kg/km
LS025HDPE 12FO G.657A1 250N	93883	Ø 3.5mm		9.0kg/km

Anchoring clamps compatible with the DROPTIC[®] family



DROPTIC[®] overhead drop cables are combined with anchoring devices designed and developed by Telenco. The compatibility of the cables with these anchoring devices is verified in Telenco' laboratories by applying international test methods IEC 60794-1-21.



Distribution cable

Aerial & Duct Micro sheath cable





Aerial & Duct Micro sheath cable

Aerial & Duct Micro sheath cable

This micro sheath distribution cable is especially designed for aerial deployment with spans up to 70 meters or for installation into ducts.

Available in a full range of fibre count up to 288 per cable, with a modularity of 6 or 12 fibers.

Thanks to a lightweight and FRP reinforced HDPE sheath, this range of distribution cables provides for good mechanical performances and easy installation operations.

Fully dry, this cable is built with swellable yarns and tape ensuring its water tightness.

Access to the fibre is simple, fast and completed by the finger strippable micro sheath.

As micro sheath remains dry, fibre cleaning operations are reduce, avoiding thus the use of toxic degreaser products.



๊ 🖌) 🛋) 👘 (กิ)

Product advantages:

- + Dry core micro modules
- + High mechanical performances
- + Lightweight

+ Easy installation

Modularity	Fibre count	Outer Ø (mm)	Weight (kg/km)	Tensile load (daN)	Crush resistance (N/cm)	Bensing performances
	6	6	31			
	12 43			Operation/Static		
6 fibres per microsheath,	24	1.1	46	220	Benc 220 Radius > >220 Install Rad > 20	Bending Radius > 10 x Ø
	36	8.7	56	220		Installation Radius
Ø = 1.3mm	48	9.8	65			
	72	11	79			
	96 12.8 111	111	070			
	144	13.5	131	270		

According to IEC 794-1-2 standards, loss change \leq 0.1dB

Modularity	Fibre count	Outer Ø (mm)	Weight (kg/km)	Tensile load (daN)	Crush resistance (N/cm)	Bensing performances
	12	7.1	38			
12 fibres per microsheath, Ø = 1.66mm	24		46	220		Operation/Static
	36	8	49		Bendin Radius > 1	Bending
	48		52			Radius > 10 x Ø
	72	10.2	70		>220	Installation Radius
	96	10.1	100			> 20 x Ø
	144	12.1	113 270			
	288	14	162	270		

According to IEC 794-1-2 standards, loss change \leq 0.1dB



FTTA cables

Breakout cables





The 3rd generation mobile technology, 3G, was able to offer speeds of around 1.9 Mbit/s. The 4G technology, based on the LTE standard, offers speeds of up to 150 Mbit/s. With theoretical speeds of 6 to 60 times higher and virtually no latency, the fifth generation, 5G, is once again opening up the field of possibilities.

The challenge of today's mobile networks, well beyond the simple exchange of voice or data, opens up opportunities for use in all areas: industry, health, mobility, the economy, Smart Cities, machine learning, services, etc. But it is also a real bridge towards access to new technologies for many territories that are poorly served or not served at all by cabled networks.

It is in this context of digital revolution and based on its expertise in outdoor optical telecom networks that Telenco has taken up the challenge of 4G/5G FTTA. By applying the principles of eco-design and taking into account the climatic conditions and harsh mechanical environments, Telenco designs, manufactures and markets reliable and quality 4G/5G FTTA optical products. Considering all technical, economical and environmental aspects, Telenco offers real solutions for all 4G/5G cabling configurations whatever the given architecture.

Glossary

- BTS = Base Transceiver Stations
- **BBU = B**ase **B**and **U**nit
- **RRU = RRH =** Remote Radio Unit = Remote Radio Head
- FTTA = Fiber To The Antenna
- HTTA = Hybrid To The Antenna
- **PTTA = Power To The Antenna**
- Breakout = Trunk
 or pre-connected or semi-preconnected
 optical cable



FTTA CABLES

Breakout cables

Outdoor pre-connected breakout cable 2 FO

The outdoor pre-connected breakout cable 2 FO is specifically designed to connect the BTS/BBU to the RRU/ RRH in the 4G/5G direct cabling structure, or the junction box (FTTA or HTTA) to the RRU in the 4G/5G indirect cabling structure.

Using its expertise in overhead cable deployment, Telenco has developed a solution that withstands harsh environments while maintaining a light weight but highly durable cable structure. The outdoor pre-connected breakout cable 2 FO has a diameter of 5.0mm, which ensures flexibility and ease of installation.



Diameter

Ø 5.0mm

Packaging

2000m

cable drum

Weight

22.0kg/km

Product advantages:

- + Premium optical quality
- + Excellent mechanical performance
- + Easy to install and set up
- + Flexible and light weight cable



ΡN

On request

Fibre count per

micro-module

2 FO

Categories	Characteristics
Tensile strength	450N
Crush resistance	100N/cm
Twist	± 180°/m, L = 120N ≤ 0.1dB/km

\geq 0.10D/Km

Telenco reserves the right to change specifications without notice

FTTA CABLES -

Outdoor pre-connected breakout cable 12-24 FO

The outdoor pre-connected breakout cable 12-24 FO is specially designed to connect the BTS/BBU to the junction box (FTTA or HTTA) in the 4G/5G indirect cabling structure. It is subject to harsh climatic conditions and can withstand temperature changes and high mechanical stress.

Thanks to its expertise in the deployment of overhead cables, Telenco has developed a solution that withstands harsh environments by keeping a light but very resistant cable structure to adapt to different installations. This cable is available in 2 capacities, 12 FO and 24 FO, in pre-connected 1 side or 2 sides versions.

Product advantages:

- + Premium optical quality
- + FTTA specific design
- + Excellent mechanical performance
- + Easy to install and set up
- + Small diameter cable

Categories	Characteristics
Tensile strength	Installation: 660N Operating : 330N
Crush resistance	Long: 30N/cm Short: 100N/cm
Twist	± 180°/m, L = 120N ≤ 0.1dB/km

Telenco reserves the right to change specifications without notice



PN	Fibre count per micro-module	Diameter	Packaging	Weight
On request	12 FO	Ø 6.4mm	1000m	41.0kg/km
	24 FO	Ø 8.0mm	cable drum	69.0kg/km

Xtrem Fire drop cables

Xtrem Fire drop cables are designed for indoor/outdoor installations. These cables are very robust for outdoor applications due to their dielectric, waterproof and rodent resistant properties.

They also provide high protection for indoor applications thanks to their high fire resistant LSZH thermoplastic outer sheath. In addition, these cables are light weight and flexible, which makes them easy to install.

Product advantages:

NEXO Xtrem Fire 2-24 FO

- + High resistance to fire
- + Anti-rodent protection
- + Flexible and easy to install cable



Ø 8.2mm

72.0kg/km

) 🖓 🖤 🖵 🖙 😗 🖉 🖉	
-----------------	--

cable drum

Categories		Characteristics			
Cable		CDG Xtrem Fire 2 F	0	NEXO Xtrem F	ire 2-24 FO
Tensile strength		Installation: 1100N Operating: 650N		2200	N
Crush resistance		130N/cm		150N/	′cm
Bending radius		20 x Ø 6.2mm		Installation: 15 Operating: 10	x Ø 8,2mm x Ø 8,2mm
Fire reaction		C _{ca} - s1a, d0, a1		C _{ca} - s1a,	d0, a1
Telenco reserves the right to change	specifications with	hout notice			
Designation	PN	Fibre count per micro-module	Diameter	Packaging	Weight
CDG Xtrem Fire 2 FO	On request	2 FO	Ø 6.2mm	2000m	38.0kg/km

2 to 24 FO



Packaging and related services

The different types of packaging	42
Related services	44
Cable preparation	46





PACKAGING AND RELATED SERVICES

The different types of packaging

Eline[®] cables are supplied in cable drums or coils when pre-connected. DROPTIC[®] drop cables are offered in three types of packaging:

- Cable drum
- Coil
- Cardboard dispenser

On request, the packaging can be customised and the cardboard can be printed with the visual of your choice.

Cable drum

Values
Standard delivery length
1000m 2000m 4000m
1000m 2000m
1500m
1500m
500m
2000m

Coil

The coils are available in several versions:

- Bare cable
- Pigtail: pre-ended on one side of the cable
- Cord: pre-connectorised at both cable ends on both sides of the cable

The lengths available are variable from 25m to 250m.





Cardboard dispenser

For an easiest field installation, DROPTIC[®] cables can be packaged in cardboard dispenser on request. Due to their construction and strength, the reels allow the cable to be unwound and rewound without effort. In addition, the reels can be reused.

A reel is constructed as follows (for a maximum weight of 15kg):

- Two rectangular frames
- Two flanges
- A central tube with a defined diameter

The length of cable wound on the reel is adjustable depending on the encountered needs and the type of chosen cable. Three sizes of reels are available: XS, S and XL. The delivery details of these reels are shown in the table below.



Categories		Values	
Reel size	XS	S	XL
Box size	205 x 195 x 65mm	260 x 270 x 60mm	260 x 260 x 160mm



			XS	S	XL
Type of cable		Cable diameter	Maximum delivery length		
\bigcirc	LM1L	Ø 2.8mm	50m	100m	400m
•	LX030PU	Ø 3.0mm	50m	100m	400m
	LM1	Ø 3.3mm	30m	50m	300m
	LM2	Ø 4.0mm	25m	50m	250m
\bigcirc	LM4	Ø 5.0mm	10m	30m	100m
	LM7	2.6mm x 1.8mm	30m	50m	300m

Related services

Telenco provides pre-connectivity services for Eline[®] riser cables and DROPTIC[®] drop cables with several types of connectors, depending on the network configuration and requirements.

Specific connectors

To provide customers with ever more innovative solutions, Telenco offers and assembles specific connectors designed toensure the security and durability of fibre optic networks.



Telenco[®] Secure SC connectors are high-end, self-locking fibre optic cabling systems. They are used to protect sensitive networks from disconnection errors or vandalism.

Telenco[®] field mountable connectors

Telenco



 $\mathsf{DROPTIC}^{\circledast}$ cables are compatible with field mountable connectors.

Field mountable connectors offer similar optical performance to standard connectors. They are quick and easy to install on site, while ensuring high reliability. These connectors can be installed on $250\mu m$, $900\mu m$ or 3mm fibre optic cables.

SC connectors with permanent protection



SC connectors with permanent protection enable connectors to be kept on standby. Multiple connections/disconnections can be made without risk to the optical sides and with time savings for the users, while bringing a real ecological gain to installations requiring intensive patching.

OptiTap[®] Corning hardened connectors

CORNING



Telenco has the licence to install $\operatorname{OptiTap}^{\circledast}\operatorname{Corning}$ hardened connectors.

OptiTap[®] Corning hardened connectors can be fitted to DROPTIC[®] LM4, LX030PU and LX030PUK drop cables when packaged in a coil.



Standard connectors

Single-mode (SM) connectors



Multi-mode (MM) connectors



Cable protection

Telenco also provides expertise in cable protection. This is very important to maintain the cables' properties and ensure efficient optical performance.

Eline® and DROPTIC® cable protective end caps

Telenco offers specific protective end caps with a pull end to preserve the ends of pre-connected cables during installation. The length of the protective end cap can be adjusted on request, from 30cm to 1m.





Cable preparation

To prepare the cables and access the optical fibre, these tools are essential.

Eline[®] riser cable:







TELENCO: INNOVATION AT THE SERVICE OF WORLDWIDE NETWORKS

Telenco is a group of entities specialised in the design, manufacture and global marketing of future-proof solutions for telecom and connectivity infrastructures. Since 1999, the Group has organised its business activity on offering innovative solutions meeting the field challenges of each specific market.

A PROVEN EXPERTISE

DESIGN



Over **25 years** of R&D expertise and an integrated test laboratory

MANUFACTURE



18 000 m² of production units in Europe and Tunisia

LOGISTICS



27 000 m² of storage area in the world

OUR INDUSTRIAL KNOW-HOW AT THE HEART OF EXPERT TELECOM ORGANISATIONS







A RESPONSIBLE & SUSTAINABLE GROUP

Design, produce, and act responsibly



PRODUCT

A

_	_						
A	erial	& Due	ct Micro	sheath	cable	 	 36

D

DROPTIC [®] LC050HDPE drop cable	32
DROPTIC [®] LM1 drop cable	23
DROPTIC [®] LM1L drop cable	21
DROPTIC [®] LM2 drop cable	23
DROPTIC [®] LM2BK drop cable	24
DROPTIC [®] LM3 drop cable	24
DROPTIC [®] LM4 drop cable	25
DROPTIC [®] LM7 drop cable	26
DROPTIC [®] LM8 drop cable	26
DROPTIC [®] LM8BK drop cable	27
DROPTIC [®] LM023WHP drop cable	22
DROPTIC [®] LM028WHP drop cable	22
DROPTIC [®] LM033PER drop cable	28
DROPTIC [®] LM040BK adducting cable	29
DROPTIC [®] LM050PER drop cable	27
DROPTIC [®] LX030PU and LX030PUK drop cables	30
DROPTIC [®] LX048DS drop cable	31
DROPTIC [®] LX050HDPE drop cable	31
DROPTIC [®] Nano blowable cables	33

Ę

Eline [®] and DROPTIC [®] cable protective end caps	45
Eline [®] facade cable	17
Eline® Riser cable	18

Μ

Multi-mode	(MM)	connectors	45
------------	------	------------	----

0

S

SC connectors with permanent protection	44
Single-mode (SM) connectors	45

Т

•	
Telenco [®] field mountable connectors	44
Telenco [®] Secure SC connectors	44

Χ

Xtrem Fire drop cables	. 40

Photo credits: ©2025Telenco(T) ©Utopikphoto ©AdobeStock ©ClémentFacy This document is made of materials from sustainably managed and recycled forests. Do not dispose of on the public highway.



Catalogue Cabling Solutions Telenco Group - ZA Valmorge - Rue Séraphin Martin - 38430 Moirans - France Tel: +33 (0) 476 350 015 - www.telenco.com



A global offer for telecoms networks

FIXED - MOBILE - PRIVATE - DATA CENTRES



Telenco

Contact our teams!

Telenco

ZA Valmorge Rue Séraphin Martin 38430 Moirans

+33 4 76 35 00 15

sales@telenco.com

www.telenco.com

Telenco UK

Unit 3 Westerngate Langley Road Swindon SN5 5WN

+44 1793 848 123

sales.uk@telenco.com

www.telenco.uk

Telenco GmbH

SKM Skyline GmbH Ammerthalstrasse 30 85551 Kirchheim-Heimstetten

+49 89 431982-0

info.germany@telenco.com

www.telenco.de

Telenco LATAM

Avenida Insurgentes Sur 427 Piso 11, Colonia Hipódromo, 06100, CDMX-México

+52 55 5025 3962

ventas@telenco.com

www.telenco-latam.com

Telenco Sénégal

HLM Grand Yoff DAKAR Lot 2

+221 33 827 57 76

sales@telenco.com

www.telenco.com

Telenco Africa

Jonquet - Cotonou (Bénin)

+229 41 31 31 98

sales@telenco.com

www.telenco.com



Developing tomorrow's networks, today