



LIACC FO Access cable ADSS 2-72 cores, Mid Span.



*All images are indicative

Features

Aerial installation on HT power lines
All Dielectric Non-Metallic design
Waterproof
HDPE and UV-Resistant outer jacket

Standards of reference and applications

IEC 60793, IEC 60794-1, IEC60794-3-20, ANSI/ICEA S-104-696, EN 187105, Telcordia
GR-20 | Telcordia GR-409
Intrabuilding Voice and Data/LAN Communication Networks
Telecommunication
Building access in FTTx networks

Installation Features

Store at -40 to +70 °C

Install at -10 to +60 °C, **Bend minimum** 20 times O.D.

Operate at -40 to +70 °C, **Bend minimum** 15 times O.D.

Design

Optical fiber : 125/250µm Single Mode or Multi Mode

Buffer : PBTP loose tube filled with jelly (nominal dial. 2.5 ± 0.1 mm)

Central member : FRP (nominal diameter 2.0mm).

Assembling : tubes and fillers assembled together according to "Colour Code" table

Wrapping : water blocking tape.

inner jacket : Black MDPE material

Peripheral element : aramide yarns with ripcord.

Outer jacket : Black HDPE material, UV resistant

Marking : APS Finland - ww/yy - Fiber Optic Cable ADSS MT80 fiber count x fiber type - P/N - lot + meter

Environmental properties

UV resistant : UL1581, IEC11801

Mechanical properties

Pulling tension : 8000 N ($\Delta\alpha$ reversible, IEC 60794-1-2-E1)

Nominal span : 160m

Maximumspan : 280m

Crush : 3000N/100mm ($\Delta\alpha$ reversible, IEC 60794-1-2-E3)

Impact : 15J ($\Delta\alpha$ reversible, IEC 60794-1-2-E4)

Water penetration : 3m cable, 1m water, 24 hours (IEC 60794-1-2-F5)

Colour code of tubes and fibers

	1	2	3	4	5	6	7	8	9	10	11	12
Tube Colours	Blue	Orange	Green	Brown	Grey	White (natural)						
Fiber Colours	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
Fillers	Black											

Fiber Optic characteristics

See detailed specification of optical fibers.

Ordering and delivery information

Fiber Count	Part Number	No. of tubes	Fibers per tube	Fillers	Nominal O.D. (mm)	Weight (kg/km)	Packaging
2	MT8002xxMSPoo	1	2	5	14.0	145	Drum (2 or 4km)
4	MT8004xxMSPoo	1	4	5	14.0	145	Drum (2 or 4km)
8	MT8008xxMSPoo	1	8	5	14.0	145	Drum (2 or 4km)
12	MT80121xxMSPoo	1	12	5	14.0	145	Drum (2 or 4km)
12	MT80122xxMSPoo	2	6	4	14.0	145	Drum (2 or 4km)
24	MT8024xxMSPoo	2	12	4	14.0	145	Drum (2 or 4km)
48	MT8048xxMSPoo	4	12	2	14.0	145	Drum (2 or 4km)
72	MT8072xxMSPoo	6	12	0	14.0	145	Drum (2 or 4km)

xx = fiber type

ex. OS2=S2, OM1=M1, OM2=M2, OM3=M3, OM4=M4

oo = delivery length

ex. 2000m=D2, 4000m=D4

Recommended connectivity

Pigtails : APS LIIN-25 series

Patch cords : APS LIIN-25 series

Adapters : APS LIIN-25 series

Patch Panels : APS LIIN-25 series

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LIACC FO Access cable ADSS 2-72 cores, Short Span



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Features

Aerial installation on HT power lines
All Dielectric Non-Metallic design
Waterproof
HDPE and UV-Resistant outer jacket

Standards of reference and applications

IEC 60793, IEC 60794-1, IEC60794-3-20, ANSI/ICEA S-104-696, EN 187105, Telcordia GR-20 | Telcordia GR-409
Intrabuilding Voice and Data/LAN Communication Networks
Telecommunication
Building access in FTTx networks

Installation Features

Store at -40 to +70 °C
Install at -10 to +60 °C, **Bend minimum** 20 times O.D.
Operate at -40 to +70 °C, **Bend minimum** 15 times O.D.

Design

Optical fiber : 125/250µm Single Mode or Multi Mode

Buffer : PBTP loose tube filled with jelly (nominal dial. $2.5 \pm 0.1\text{mm}$)

Central member : FRP (nominal diameter 2.0mm).

Assembling : tubes and fillers assembled together according to "Colour Code" table

Wrapping : water blocking tape.

Peripheral element : aramide yarns with ripcord.

Outer jacket : Black HDPE material, UV resistant

Marking : APS Finland - ww/yy - Fiber Optic Cable ADSS MT30 fiber count x fiber type - P/N - lot + meter

Environmental properties

UV resistant : UL1581, IEC11801

Mechanical properties

Pulling tension : 3000 N ($\Delta\alpha$ reversible, IEC 60794-1-2-E1)

Nominal span : 80m

Maximumspan : 120m

Crush : 2000N/100mm ($\Delta\alpha$ reversible, IEC 60794-1-2-E3)

Impact : 10J ($\Delta\alpha$ reversible, IEC 60794-1-2-E4)

Water penetration : 3m cable, 1m water, 24 hours (IEC 60794-1-2-F5)

Colour code of tubes and fibers

	1	2	3	4	5	6	7	8	9	10	11	12
Tube Colours	Blue	Orange	Green	Brown	Grey	White (natural)						
Fiber Colours	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
Fillers	Black											

Fiber Optic characteristics

See detailed specification of optical fibers.

Ordering and delivery information

Fiber Count	Part Number	No. of tubes	Fibers per tube	Fillers	Nominal O.D. (mm)	Weight (kg/km)	Packaging
2	MT3002xxASPoo	1	2	5	11.0	110	Drum
4	MT3004xxASPoo	1	4	5	11.0	110	Drum
8	MT3008xxASPoo	1	8	5	11.0	110	Drum
12	MT30121xxASPoo	1	12	5	11.0	110	Drum

Fiber Count	Part Number	No. of tubes	Fibers per tube	Fillers	Nominal O.D. (mm)	Weight (kg/km)	Packaging
12	MT30122xxASPool	2	6	4	11.0	110	Drum
24	MT3024xxASPool	2	12	4	11.0	110	Drum
48	MT3048xxASPool	4	12	2	11.0	110	Drum
72	MT3072xxASPool	6	12	0	11.0	110	Drum

xx = fiber type

ex. OS2=S2, OM1=M1, OM2=M2, OM3=M3, OM4=M4

oo = delivery length

ex. 2000m=D2, 4000m=D4

Recommended connectivity

Pigtails : APS LIIN-25 series

Patch cords : APS LIIN-25 series

Adapters : APS LIIN-25 series

Patch Panels : APS LIIN-25 series

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LIACC FO Access cable MTE 2-48 cores, Outdoor, 1500N



*All images are indicative

Features

Outdoor and duct installation
All Dielectric Non-Metallic design
Light weight

Standards of reference and applications

IEC 60793, IEC 60794
Intrabuilding Voice and Data/LAN Communication Networks
Installation in Ducts & Conduits
Building access in FTTx networks

Installation Features

Store at -40 to +70 °C

Install at -5 to +50 °C

Operate at -40 to +60 °C

Bend minimum 20 times O.D. (installation)

Bend minimum 15 times O.D. (static)

Design

Optical fiber : 125/250µm Single Mode or Multi Mode

Buffer : PBTP loose tube filled with jelly (nominal diameter 2.3mm).

Central member : FRP (nominal diameter 2.0mm).

Assembling : tubes and fillers assembled together according to “Colour Code” table

Wrapping : water blocking tape.

Protection : anti-rodent glass yarns.

Outer jacket : Black HDPE material, UV resistant (nominal thickness 1.5mm)

Marking : APS Finland - ww/yy - Fiber Optic Cable MTE fiber count x fiber type - P/N
- lot + meter

Environmental properties

UV resistant : UL1581, IEC11801

Mechanical properties

Pulling tension : 1500 N ($\Delta\alpha$ reversible, IEC 60794-1-2-E1)

Crush : 2000N/100mm ($\Delta\alpha$ reversible, IEC 60794-1-2-E3)

Impact : 10J ($\Delta\alpha$ reversible, IEC 60794-1-2-E4)

Water penetration : 3m cable, 1m water, 24 hours (IEC 60794-1-2-F5)

Colour code of tubes and fibers

	1	2	3	4	5	6	7	8	9	10	11	12
Tube Colours	Blue	Orange	Green	Brown	Grey	White (natural)						
Fiber Colours	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
Fillers	Black											

Fiber Optic characteristics

See detailed specification of optical fibers.

Ordering and delivery information

Fiber Count	Part Number	No. of tubes	Fibers per tube	Fillers	O.D. (mm)	Weight (kg/km)	Packaging						
2	MTE1502xxoo	1	2	5	11.5	60	Drum						
4	MTE1504xxoo	1	4	5	11.5	60	Drum						
8	MTE1508xxoo	1	8	5	11.5	60	Drum						
12	MTE1512xxoo	1	12	5	11.5	60	Drum						
24	MTE15243xxoo	3	8	3	11.5	60	Drum						
24	MTE15242xxoo	2	12	4	11.5	60	Drum						
48	MTE1548xxoo	4	12	2	11.5	60	Drum						

xx = fiber type

ex. OS2=S2, OM1=M1, OM2=M2, OM3=M3, OM4=M4

oo = delivery length

ex. 2000m=D2, 4000m=D4

Recommended connectivity

Pigtails : APS LIIN-25 series

Patch cords : APS LIIN-25 series

Adapters : APS LIIN-25 series

Patch Panels : APS LIIN-25 series

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LIACC FO Access cable UT9H 2-24 cores, Outdoor, 1500N



*All images are indicative

Features

- Outdoor and duct installation
- Metallic armour and moisture barrier
- Compact and light weight

Standards of reference and applications

- IEC 60793, IEC 60794
- Intrabuilding Voice and Data/LAN Communication Networks
- Installation in Ducts & Conduits
- Building access in FTTx networks

Installation Features

Store at -30 to +70 °C

Install at -5 to +50 °C, **Bend minimum** 20 times O.D. (installation)

Operate at -45 to +60 °C, **Bend minimum** 15 times O.D. (static)

Design

Optical fiber : 125/250µm Single Mode or Multi Mode

Buffer : PBTP loose tube filled with jelly (nominal diameter 2.3mm).

Protection : anti-rodent glass yarns.

Armour: corrugated steel tape.

Outer jacket : Black LSZH material, UV resistant

Marking : APS Finland - ww/yy - Armoured Fiber Optic Cable UT9H fiber count x fiber type - P/N - lot + meter

Environmental properties

Degree of acidity of gases : IEC 60754-1, IEC 60754-2

Halogen acid gas : IEC 60754-1, IEC 60754-2

Smoke Emission : IEC 61034-2, EN 50268-2

Toxicity of evolved gas : EN 50305 9.2

Flame retardant : IEC 60332-1-2

Fire retardant : IEC 60332-3-24 Cat.C

UV resistant : UL1581, IEC11801

Mechanical properties

Pulling tension : 1500 N ($\Delta\alpha$ reversible, IEC 60794-1-2-E1)

Crush : 1000N/100mm ($\Delta\alpha$ reversible, IEC 60794-1-2-E3)

Impact : 10J ($\Delta\alpha$ reversible, IEC 60794-1-2-E4)

Water penetration : 3m cable, 1m water, 24 hours (IEC 60794-1-2-F5)

Colour code of fibers

	1	2	3	4	5	6	7	8	9	10	11	12
Bundle A	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
	13	14	15	16	17	18	19	20	21	22	23	24
Bundle B	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Fiber Optic characteristics

See detailed specification of optical fibers.

Ordering and delivery information

Fiber Count	Part Number	No. of tubes	Fibers per tube	Nominal O.D. (mm)	Weight (kg/km)	Packaging
2	UT9H02xxoo	1	2	8.5	85	Drum
4	UT9H04xxoo	1	4	8.5	85	Drum
8	UT9H08xxoo	1	8	8.5	85	Drum
12	UT9H12xxoo	1	12	8.5	85	Drum
24	UT9H24xxoo	1	24	8.5	85	Drum

xx = fiber type

OS2=S2, OM1=M1, OM2=M2, OM3=M3, OM4=M4

oo = delivery length

2000m=D2

Recommended connectivity

Pigtails : APS LIIN-25 series

Patch cords : APS LIIN-25 series

Adapters : APS LIIN-25 series

Patch Panels : APS LIIN-25 series

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LIACC FO Access cable UTAE 2-24 cores, Direct Burial, SWA Armoured



*All images are indicative

Features

Outdoor, duct and direct burial installation

Metallic armour and moisture barrier

Compact and light weight

Standards of reference and applications

IEC 60793, IEC 60794

Telecommunication backbones

Intrabuilding Voice and Data/LAN Communication Networks

Installation in Ducts & Conduits or Directly Buried

Building access in FTTx networks

Installation Features

Store at -40 to +70 °C

Install at -10 to +60 °C, **Bend minimum** 20 times O.D. (installation)

Operate at -40 to +70 °C, **Bend minimum** 10 times O.D. (static)

Design

Optical fiber : 125/250µm Single Mode or Multi Mode

Buffer : PBTP loose tube filled with jelly (nominal diameter 3.0mm).

Inner strength member : aramide yarns.

Inner jacket : PE black, nominal thickness 1.0mm.

Armour: steel wire, one layer, coverage ≥80%.

Outer jacket : PE black, UV resistant, nominal thickness 1.5mm.

Marking : APS Finland - ww/yy - Armoured Fiber Optic Cable UTAE fiber count x fiber type - P/N - lot + meter

Environmental properties

UV resistant : UL1581, IEC11801

Mechanical properties

Pulling tension : max 5000 N ($\Delta\alpha$ reversible, IEC 60794-1-2-E1)

Crush : 3000N/100mm ($\Delta\alpha$ reversible, IEC 60794-1-2-E3)

Impact : 15J ($\Delta\alpha$ reversible, IEC 60794-1-2-E4)

Water penetration : 3m cable, 1m water, 24 hours (IEC 60794-1-2-F5)

Colour code of fibers

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
13	14	15	16	17	18	19	20	21	22	23	24
Blue/black	Orange/black	Green/black	Brown/black	Grey/black	White/black	Red/black	Natural	Yellow/black	Violet/black	Pink/black	Aqua/black

Fiber Optic characteristics

See detailed specification of optical fibers.

Ordering and delivery information

Fiber Count	Part Number	No. of tubes	Fibers per tube	Nominal O.D. (mm)	Weight (kg/km)	Packaging (*)
2	UTAE02xxoo	1	2	10.3	178	Drum
4	UTAE04xxoo	1	4	10.3	178	Drum

Fiber Count	Part Number	No. of tubes	Fibers per tube	Nominal O.D. (mm)	Weight (kg/km)	Packaging (*)
8	UTAE08xx00	1	8	10.3	178	Drum
12	UTAE12xx00	1	12	10.3	178	Drum
24	UTAE24xx00	1	24	10.3	178	Drum

xx = fiber type

OS2=S2, OM1=M1, OM2=M2, OM3=M3, OM4=M4,

OM5=M5

oo = delivery length 2000m=D2

(*) a tolerance of ±5% applies to the delivery length.

Recommended connectivity

Pigtails : APS LIIN-25 series

Patch cords : APS LIIN-25 series

Adapters : APS LIIN-25 series

Patch Panels : APS LIIN-25 series

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LIACC FO Access DROP cable BOWA 1-4 cores, self-supporting



*All images are indicative

Features

- Aerial installation (F8 type)**
- All Dielectric Non-Metallic design**
- LSZH Fire Retardant**
- Suitable for both indoor and outdoor**
- UV-Resistant outer jacket**
- Small size**
- 100% dry design**
- Low installation cost**
- Easy to strip**
- Direct Connection to Terminal Equipments**

Standards of reference and applications

EN 50173-1, IEC 60754-2, IEC 60794-1&2, IEC 60793-1&2, IEC 60332-1 & 2

FTTH Applications

Aerial (F8 Type with Steel Messenger Wire)

Drop Cabling

Intrabuilding Voice or Data Communication Networks

Outdoor Interconnect and Patchcord Applications

Interconnection of Distribution Boxes, Distribution Frames and Customer Equipment and between the buildings

WAN

Aerial (Lashed)

Installation Features

Store at -40 to +70 °C

Install at -10 to +60 °C

Operate at -40 to +70 °C

Design

Optical fiber : 1 to 4 cores 125/250µm, Single Mode or Multi Mode

Outer jacket : Black LSZH-HFFR material

Self supporting element : FRP rod 1.0mm

Peripheral pulling elements : FRP rod 0.5mm

Marking : APS Finland - ww/yy - DROP Fiber Optic Cable BOWA fiber count x fiber type - P/N - lot + meter

Environmental properties

Degree of acidity of gases : IEC 60754-1, IEC 60754-2

Halogen acid gas corrosiveness : TS EN 50267-2-3

Smoke Emission : IEC 61034-2

Flame retardant : IEC 60332-1-1, IEC60332-2-1

UV resistant : UL1581, IEC11801

Mechanical properties

Bending radius : 15 x O.D. (OS2 and MM), 10 x O.D. (G657A1/2)

Pulling tension, during installation : 600 N

Pulling tension, permanent : 400 N

Crush : 600N/100mm (IEC 60794-1-2 E3)

Impact : 5J ($\Delta\alpha$ reversible, IEC 60794-1-2-E4)

Colour code of fibers

	1	2	3	4
Fiber Colours	Blue	Orange	Green	Brown

Fiber Optic characteristics

See detailed specification of optical fibers.

Ordering and delivery information

Fiber Count	Part Number	Nominal O.D. (mm)	Weight (kg/km)	Packaging
1	DRBA1xxxoo	5.2 x 2.0	21	Drum (1 or 2km)
2	DRBA2xxxoo	5.2 x 2.0	12	Drum (1 or 2km)
4	DRBA4xxxoo	5.2 x 2.0	12	Drum (1 or 2km)

xx = fiber type ex. OS2=S2, G657a1=7A1, G657a2=7A2, OM1=M1,
OM2=M2, OM3=M3, OM4=M4, OM5=5

oo = delivery length ex. 1000m=D1, 2000m=D2, 4000m=D4

Recommended connectivity

Pigtails : APS LIIN-25 series

Patch cords : APS LIIN-25 series

Adapters : APS LIIN-25 series

Patch Panels : APS LIIN-25 series



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