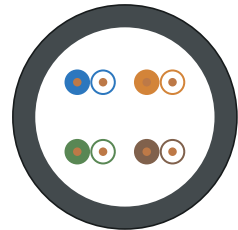


Cat5e U/UTP

4 pairs / 24 AWG / PVC / 100 MHz



Ø 5 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

5.00 mm

APPROX. OUTER DIAMETER

31 kg/km

APPROX. CABLE WEIGHT

15.5 kg/km

COPPER WEIGHT

Four unshielded copper pairs provide a 100 MHz cable for fixed voice and data links. The compact construction suits structured cabling routes where an overall screen is not specified.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	None
Outer jacket	Polyvinyl chloride (PVC); EN 50290-2-22
Jacket colour	RAL 7035 Grey; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat5e U/UTP

4 pairs / 24 AWG / PVC

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 95 Ω/km	Velocity of propagation	66%
Resistance unbalance	< 1%	Delay skew	< 45 ns/100 m
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Operating voltage	72 V
Mutual capacitance	50 pF/m	Dielectric test, 1 min	1000 V
Capacitance unbalance	1600 pF/km	Transverse conversion loss (TCL)	Minimum level 2
Characteristic impedance at 100 MHz	100 ± 5 Ω	Segregation class	b

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.8	75	72	23
10	6	75	72	23
16	7.8	65	62	23
31.25	10.5	55	52	22
62.5	15.5	45	42	21
100	19	40	37	21

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PVC-jacketed version for routes specified with a conventional thermoplastic outer sheath. Check the project fire requirement before selecting a jacket.
Minimum bend radius	8 × D / approx. 40 mm	
D	Actual cable outer diameter	

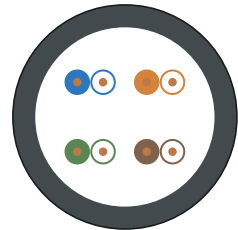
Flame propagation reference: IEC/EN 60332-1-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-3-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat5e U/UTP

4 pairs / 24 AWG / LSZH / 100 MHz



Ø 5 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

5.00 mm

APPROX. OUTER DIAMETER

31 kg/km

APPROX. CABLE WEIGHT

15.5 kg/km

COPPER WEIGHT

Four unshielded copper pairs provide a 100 MHz cable for fixed voice and data links. The compact construction suits structured cabling routes where an overall screen is not specified.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	None
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 7035 Grey; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat5e U/UTP

4 pairs / 24 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 95 Ω/km	Velocity of propagation	66%
Resistance unbalance	< 1%	Delay skew	< 45 ns/100 m
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Operating voltage	72 V
Mutual capacitance	50 pF/m	Dielectric test, 1 min	1000 V
Capacitance unbalance	1600 pF/km	Transverse conversion loss (TCL)	Minimum level 2
Characteristic impedance at 100 MHz	100 ± 5 Ω	Segregation class	b

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.8	75	72	23
10	6	75	72	23
16	7.8	65	62	23
31.25	10.5	55	52	22
62.5	15.5	45	42	21
100	19	40	37	21

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 40 mm	
D	Actual cable outer diameter	

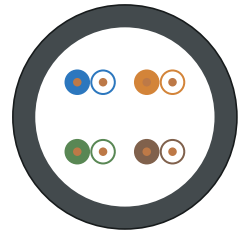
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-3-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat5e U/UTP

4 pairs / 24 AWG / PE / 100 MHz



Ø 5 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

5.00 mm

APPROX. OUTER DIAMETER

27 kg/km

APPROX. CABLE WEIGHT

15.5 kg/km

COPPER WEIGHT

Four unshielded copper pairs provide a 100 MHz cable for fixed voice and data links. The compact construction suits structured cabling routes where an overall screen is not specified.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	None
Outer jacket	Polyethylene (PE); EN 50290-2-24
Jacket colour	RAL 9005 Black; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat5e U/UTP

4 pairs / 24 AWG / PE

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 95 Ω/km	Velocity of propagation	66%
Resistance unbalance	< 1%	Delay skew	< 45 ns/100 m
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Operating voltage	72 V
Mutual capacitance	50 pF/m	Dielectric test, 1 min	1000 V
Capacitance unbalance	1600 pF/km	Transverse conversion loss (TCL)	Minimum level 2
Characteristic impedance at 100 MHz	100 ± 5 Ω	Segregation class	b

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.8	75	72	23
10	6	75	72	23
16	7.8	65	62	23
31.25	10.5	55	52	22
62.5	15.5	45	42	21
100	19	40	37	21

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PE-jacketed version for routes specifying a polyethylene outer sheath. UV exposure, water blocking and direct burial requirements must be specified separately.
Minimum bend radius	8 × D / approx. 40 mm	
D	Actual cable outer diameter	

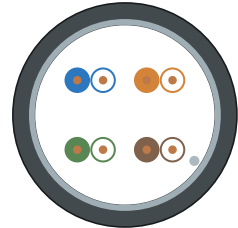
PE jacket fire performance and installation exposure are confirmed for the specified order.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-3-1, ANSI/TIA-568.2-D.

State any required fire class explicitly when requesting a PE-jacketed construction.

Cat5e F/UTP

4 pairs / 24 AWG / PVC / 100 MHz



Ø 5.3 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

5.30 mm

APPROX. OUTER DIAMETER

40 kg/km

APPROX. CABLE WEIGHT

17.5 kg/km

COPPER WEIGHT

A foil screen surrounds four unshielded twisted pairs in this 100 MHz fixed installation cable. The screen and drain wire provide a connection path for a screened structured cabling system.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Core wrapping	Polyester tape
Individual pair screen	None
Overall screen	Aluminium/polyester foil
Drain wire	Tinned copper
Outer jacket	Polyvinyl chloride (PVC); EN 50290-2-22
Jacket colour	RAL 7035 Grey; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat5e F/UTP

4 pairs / 24 AWG / PVC

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 95 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.8	75	72	23
10	6	75	72	23
16	7.8	65	62	23
31.25	10.5	55	52	22
62.5	15.5	45	42	21
100	19	40	37	21

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PVC-jacketed version for routes specified with a conventional thermoplastic outer sheath. Check the project fire requirement before selecting a jacket.
Minimum bend radius	8 × D / approx. 42.4 mm	
D	Actual cable outer diameter	

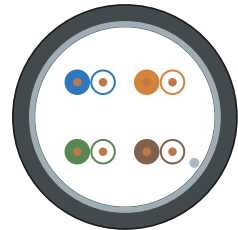
Flame propagation reference: IEC/EN 60332-1-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-2-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat5e F/UTP

4 pairs / 24 AWG / LSZH / 100 MHz



Ø 5.3 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

5.30 mm

APPROX. OUTER DIAMETER

40 kg/km

APPROX. CABLE WEIGHT

17.5 kg/km

COPPER WEIGHT

A foil screen surrounds four unshielded twisted pairs in this 100 MHz fixed installation cable. The screen and drain wire provide a connection path for a screened structured cabling system.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Core wrapping	Polyester tape
Individual pair screen	None
Overall screen	Aluminium/polyester foil
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 7035 Grey; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat5e F/UTP

4 pairs / 24 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 95 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.8	75	72	23
10	6	75	72	23
16	7.8	65	62	23
31.25	10.5	55	52	22
62.5	15.5	45	42	21
100	19	40	37	21

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 42.4 mm	
D	Actual cable outer diameter	

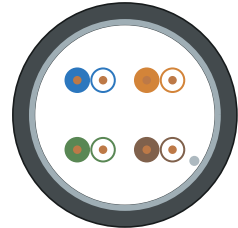
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-2-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat5e F/UTP

4 pairs / 24 AWG / PE / 100 MHz



Ø 5.3 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

5.30 mm

APPROX. OUTER DIAMETER

34 kg/km

APPROX. CABLE WEIGHT

17.5 kg/km

COPPER WEIGHT

A foil screen surrounds four unshielded twisted pairs in this 100 MHz fixed installation cable. The screen and drain wire provide a connection path for a screened structured cabling system.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Core wrapping	Polyester tape
Individual pair screen	None
Overall screen	Aluminium/polyester foil
Drain wire	Tinned copper
Outer jacket	Polyethylene (PE); EN 50290-2-24
Jacket colour	RAL 9005 Black; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat5e F/UTP

4 pairs / 24 AWG / PE

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 95 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.8	75	72	23
10	6	75	72	23
16	7.8	65	62	23
31.25	10.5	55	52	22
62.5	15.5	45	42	21
100	19	40	37	21

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PE-jacketed version for routes specifying a polyethylene outer sheath. UV exposure, water blocking and direct burial requirements must be specified separately.
Minimum bend radius	8 × D / approx. 42.4 mm	
D	Actual cable outer diameter	

PE jacket fire performance and installation exposure are confirmed for the specified order.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-2-1, ANSI/TIA-568.2-D.

State any required fire class explicitly when requesting a PE-jacketed construction.

Cat5e SF/UTP

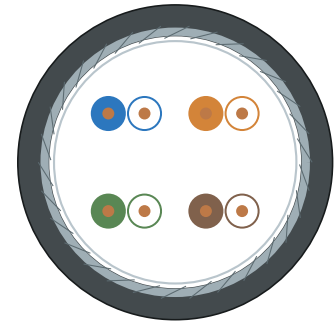
4 pairs / 24 AWG / PVC / 100 MHz

CONSTRUCTION DETAIL

Overall foil and braid screens

Solid copper transmission core
Solid polyethylene (PE) insulation
PVC outer jacket

Construction schematic. Not to scale; colours identify cable layers.



Ø 5.9 mm approx.

5.90 mm

APPROX. OUTER DIAMETER

41 kg/km

APPROX. CABLE WEIGHT

18 kg/km

COPPER WEIGHT

Four twisted pairs sit inside a combined foil and tinned copper braid screen. This Cat5e construction adds two overall screening layers while retaining unshielded individual pairs.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Core wrapping	Polyester tape
Individual pair screen	None
Overall screen	Aluminium/polyester foil + tinned copper braid
Outer jacket	Polyvinyl chloride (PVC); EN 50290-2-22
Jacket colour	RAL 7035 Grey; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat5e SF/UTP

4 pairs / 24 AWG / PVC

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 95 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.8	75	72	23
10	6	75	72	23
16	7.8	65	62	23
31.25	10.5	55	52	22
62.5	15.5	45	42	21
100	19	40	37	21

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PVC-jacketed version for routes specified with a conventional thermoplastic outer sheath. Check the project fire requirement before selecting a jacket.
Minimum bend radius	8 × D / approx. 47.2 mm	
D	Actual cable outer diameter	

Flame propagation reference: IEC/EN 60332-1-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-2-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat5e SF/UTP

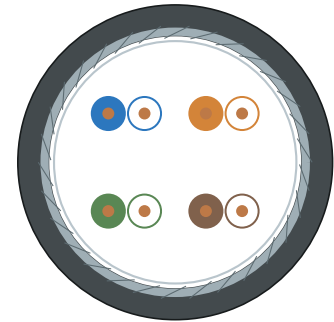
4 pairs / 24 AWG / PE / 100 MHz

CONSTRUCTION DETAIL

Overall foil and braid screens

Solid copper transmission core
Solid polyethylene (PE) insulation
PE outer jacket

Construction schematic. Not to scale; colours identify cable layers.



Ø 5.9 mm approx.

5.90 mm

APPROX. OUTER DIAMETER

35 kg/km

APPROX. CABLE WEIGHT

18 kg/km

COPPER WEIGHT

Four twisted pairs sit inside a combined foil and tinned copper braid screen. This Cat5e construction adds two overall screening layers while retaining unshielded individual pairs.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Core wrapping	Polyester tape
Individual pair screen	None
Overall screen	Aluminium/polyester foil + tinned copper braid
Outer jacket	Polyethylene (PE); EN 50290-2-24
Jacket colour	RAL 9005 Black; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat5e SF/UTP

4 pairs / 24 AWG / PE

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 95 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.8	75	72	23
10	6	75	72	23
16	7.8	65	62	23
31.25	10.5	55	52	22
62.5	15.5	45	42	21
100	19	40	37	21

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PE-jacketed version for routes specifying a polyethylene outer sheath. UV exposure, water blocking and direct burial requirements must be specified separately.
Minimum bend radius	8 × D / approx. 47.2 mm	
D	Actual cable outer diameter	

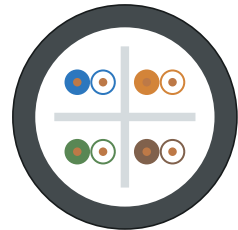
PE jacket fire performance and installation exposure are confirmed for the specified order.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-2-1, ANSI/TIA-568.2-D.

State any required fire class explicitly when requesting a PE-jacketed construction.

Cat6 U/UTP

4 pairs / 23 AWG / PVC / 250 MHz



Ø 6 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

6.00 mm

APPROX. OUTER DIAMETER

41 kg/km

APPROX. CABLE WEIGHT

18 kg/km

COPPER WEIGHT

This 250 MHz Cat6 cable uses solid copper conductors and a cross separator to organise the four twisted pairs. It is intended for fixed structured cabling with an unshielded channel design.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	None
Outer jacket	Polyvinyl chloride (PVC); EN 50290-2-22
Jacket colour	RAL 2003 Orange / RAL 7035 Grey; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 U/UTP

4 pairs / 23 AWG / PVC

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Velocity of propagation	67%
Resistance unbalance	< 1%	Delay skew	< 45 ns/100 m
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Operating voltage	72 V
Mutual capacitance	50 pF/m	Dielectric test, 1 min	1000 V
Capacitance unbalance	1600 pF/km	Transverse conversion loss (TCL)	Minimum level 2
Characteristic impedance at 100 MHz	100 ± 5 Ω	Segregation class	b

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PVC-jacketed version for routes specified with a conventional thermoplastic outer sheath. Check the project fire requirement before selecting a jacket.
Minimum bend radius	8 × D / approx. 48 mm	
D	Actual cable outer diameter	

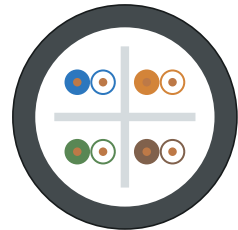
Flame propagation reference: IEC/EN 60332-1-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-6-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6 U/UTP

4 pairs / 23 AWG / LSZH / 250 MHz



Ø 6 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

6.00 mm

APPROX. OUTER DIAMETER

41 kg/km

APPROX. CABLE WEIGHT

18 kg/km

COPPER WEIGHT

This 250 MHz Cat6 cable uses solid copper conductors and a cross separator to organise the four twisted pairs. It is intended for fixed structured cabling with an unshielded channel design.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	None
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 2003 Orange; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 U/UTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Velocity of propagation	67%
Resistance unbalance	< 1%	Delay skew	< 45 ns/100 m
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Operating voltage	72 V
Mutual capacitance	50 pF/m	Dielectric test, 1 min	1000 V
Capacitance unbalance	1600 pF/km	Transverse conversion loss (TCL)	Minimum level 2
Characteristic impedance at 100 MHz	100 ± 5 Ω	Segregation class	b

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	775	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 48 mm	
D	Actual cable outer diameter	

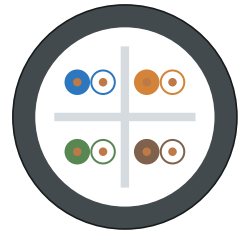
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-6-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6 U/UTP

4 pairs / 23 AWG / PE / 250 MHz



Ø 6 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

6.00 mm

APPROX. OUTER DIAMETER

36 kg/km

APPROX. CABLE WEIGHT

18 kg/km

COPPER WEIGHT

This 250 MHz Cat6 cable uses solid copper conductors and a cross separator to organise the four twisted pairs. It is intended for fixed structured cabling with an unshielded channel design.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	None
Outer jacket	Polyethylene (PE); EN 50290-2-24
Jacket colour	RAL 9005 Black; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 U/UTP

4 pairs / 23 AWG / PE

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Velocity of propagation	67%
Resistance unbalance	< 1%	Delay skew	< 45 ns/100 m
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Operating voltage	72 V
Mutual capacitance	50 pF/m	Dielectric test, 1 min	1000 V
Capacitance unbalance	1600 pF/km	Transverse conversion loss (TCL)	Minimum level 2
Characteristic impedance at 100 MHz	100 ± 5 Ω	Segregation class	b

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PE-jacketed version for routes specifying a polyethylene outer sheath. UV exposure, water blocking and direct burial requirements must be specified separately.
Minimum bend radius	8 × D / approx. 48 mm	
D	Actual cable outer diameter	

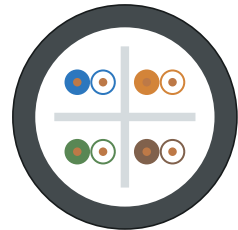
PE jacket fire performance and installation exposure are confirmed for the specified order.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-6-1, ANSI/TIA-568.2-D.

State any required fire class explicitly when requesting a PE-jacketed construction.

Cat6 U/UTP

4 pairs / 24 AWG / LSZH / 250 MHz



Ø 5.5 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

5.50 mm

APPROX. OUTER DIAMETER

35 kg/km

APPROX. CABLE WEIGHT

16 kg/km

COPPER WEIGHT

The compact 24 AWG version uses a mini cross separator and a nominal 5.5 mm outer diameter. Four unshielded copper pairs provide a 250 MHz Cat6 cable in an LSZH outer jacket.

CONSTRUCTION

Conductor	Solid annealed copper, 24 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a mini cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	None
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 2003 Orange; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 U/UTP

4 pairs / 24 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Velocity of propagation	67%
Resistance unbalance	< 1%	Delay skew	< 45 ns/100 m
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Operating voltage	72 V
Mutual capacitance	50 pF/m	Dielectric test, 1 min	1000 V
Capacitance unbalance	1600 pF/km	Transverse conversion loss (TCL)	Minimum level 2
Characteristic impedance at 100 MHz	100 ± 5 Ω	Segregation class	b

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 44 mm	
D	Actual cable outer diameter	

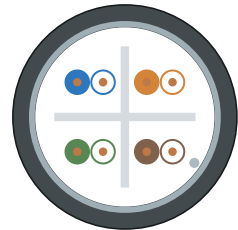
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-6-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6 F/UTP

4 pairs / 23 AWG / PVC / 250 MHz



Ø 7.1 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

7.10 mm

APPROX. OUTER DIAMETER

56 kg/km

APPROX. CABLE WEIGHT

19 kg/km

COPPER WEIGHT

An overall foil screen encloses four twisted pairs arranged around a cross separator. The 250 MHz cable is intended for fixed Cat6 networks using screened connecting hardware.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	Aluminium/polyester foil
Drain wire	Tinned copper
Outer jacket	Polyvinyl chloride (PVC); EN 50290-2-22
Jacket colour	RAL 2003 Orange / RAL 7035 Grey; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 F/UTP

4 pairs / 23 AWG / PVC

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PVC-jacketed version for routes specified with a conventional thermoplastic outer sheath. Check the project fire requirement before selecting a jacket.
Minimum bend radius	8 × D / approx. 56.8 mm	
D	Actual cable outer diameter	

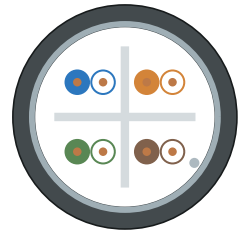
Flame propagation reference: IEC/EN 60332-1-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-5-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6 F/UTP

4 pairs / 23 AWG / LSZH / 250 MHz



Ø 7.1 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

7.10 mm

APPROX. OUTER DIAMETER

56 kg/km

APPROX. CABLE WEIGHT

19 kg/km

COPPER WEIGHT

An overall foil screen encloses four twisted pairs arranged around a cross separator. The 250 MHz cable is intended for fixed Cat6 networks using screened connecting hardware.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	Aluminium/polyester foil
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 2003 Orange; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 F/UTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 56.8 mm	
D	Actual cable outer diameter	

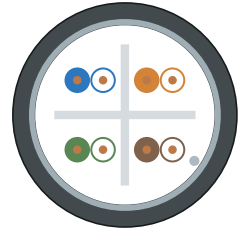
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-5-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6 F/UTP

4 pairs / 23 AWG / PE / 250 MHz



Ø 7.1 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

7.10 mm

APPROX. OUTER DIAMETER

45 kg/km

APPROX. CABLE WEIGHT

19 kg/km

COPPER WEIGHT

An overall foil screen encloses four twisted pairs arranged around a cross separator. The 250 MHz cable is intended for fixed Cat6 networks using screened connecting hardware.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	Aluminium/polyester foil
Drain wire	Tinned copper
Outer jacket	Polyethylene (PE); EN 50290-2-24
Jacket colour	RAL 9005 Black; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 F/UTP

4 pairs / 23 AWG / PE

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PE-jacketed version for routes specifying a polyethylene outer sheath. UV exposure, water blocking and direct burial requirements must be specified separately.
Minimum bend radius	8 × D / approx. 56.8 mm	
D	Actual cable outer diameter	

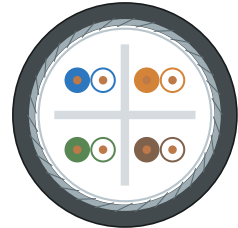
PE jacket fire performance and installation exposure are confirmed for the specified order.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-5-1, ANSI/TIA-568.2-D.

State any required fire class explicitly when requesting a PE-jacketed construction.

Cat6 SF/UTP

4 pairs / 23 AWG / PVC / 250 MHz



Ø 7.6 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

7.60 mm

APPROX. OUTER DIAMETER

62 kg/km

APPROX. CABLE WEIGHT

23 kg/km

COPPER WEIGHT

The four-pair Cat6 core is separated by a cross-shaped spacer and enclosed by foil and tinned copper braid. This 250 MHz construction combines pair separation with two overall screening layers.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	Aluminium/polyester foil + tinned copper braid
Outer jacket	Polyvinyl chloride (PVC); EN 50290-2-22
Jacket colour	RAL 2003 Orange / RAL 7035 Grey; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 SF/UTP

4 pairs / 23 AWG / PVC

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PVC-jacketed version for routes specified with a conventional thermoplastic outer sheath. Check the project fire requirement before selecting a jacket.
Minimum bend radius	8 × D / approx. 60.8 mm	
D	Actual cable outer diameter	

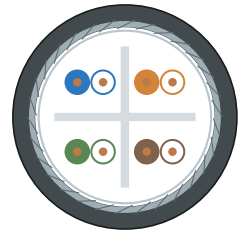
Flame propagation reference: IEC/EN 60332-1-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-5-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6 SF/UTP

4 pairs / 23 AWG / LSZH / 250 MHz



Ø 7.6 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

7.60 mm

APPROX. OUTER DIAMETER

62 kg/km

APPROX. CABLE WEIGHT

23 kg/km

COPPER WEIGHT

The four-pair Cat6 core is separated by a cross-shaped spacer and enclosed by foil and tinned copper braid. This 250 MHz construction combines pair separation with two overall screening layers.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	Aluminium/polyester foil + tinned copper braid
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 2003 Orange; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 SF/UTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 60.8 mm	
D	Actual cable outer diameter	

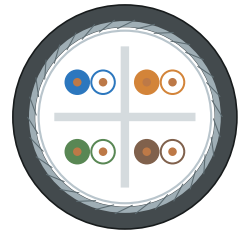
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-5-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6 SF/UTP

4 pairs / 23 AWG / PE / 250 MHz



Ø 7.6 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

7.60 mm

APPROX. OUTER DIAMETER

53 kg/km

APPROX. CABLE WEIGHT

23 kg/km

COPPER WEIGHT

The four-pair Cat6 core is separated by a cross-shaped spacer and enclosed by foil and tinned copper braid. This 250 MHz construction combines pair separation with two overall screening layers.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	Aluminium/polyester foil + tinned copper braid
Outer jacket	Polyethylene (PE); EN 50290-2-24
Jacket colour	RAL 9005 Black; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6 SF/UTP

4 pairs / 23 AWG / PE

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	78	75	32
10	5.7	75	72	25
16	7.2	70	66	25
31.25	10.5	70	64	30
62.5	14.6	60	60	30
100	18.5	60	58	30
250	30	55	52	24

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	PE-jacketed version for routes specifying a polyethylene outer sheath. UV exposure, water blocking and direct burial requirements must be specified separately.
Minimum bend radius	8 × D / approx. 60.8 mm	
D	Actual cable outer diameter	

PE jacket fire performance and installation exposure are confirmed for the specified order.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-5-1, ANSI/TIA-568.2-D.

State any required fire class explicitly when requesting a PE-jacketed construction.

Cat6A U/UTP

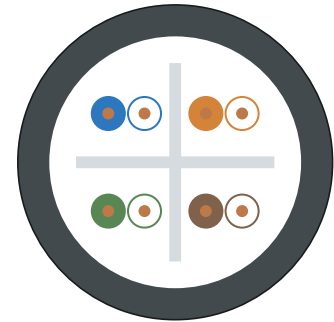
4 pairs / 23 AWG / LSZH / 500 MHz

CONSTRUCTION DETAIL

Four unshielded pairs

Solid copper transmission core
Solid polyethylene (PE) insulation
LSZH outer jacket

Construction schematic. Not to scale; colours identify cable layers.



Ø 6 mm approx.

6.00 mm

APPROX. OUTER DIAMETER

43 kg/km

APPROX. CABLE WEIGHT

19 kg/km

COPPER WEIGHT

A 500 MHz Cat6A cable with four unshielded copper pairs and a cross separator. The construction is intended for fixed high-bandwidth copper networks where the channel is designed around unshielded components.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	None
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 5024 Blue; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T, plus 10GBASE-T. IEEE 802.3af / 802.3at / 802.3bt (Types 1-4).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6A U/UTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Velocity of propagation	67%
Resistance unbalance	< 1%	Delay skew	< 45 ns/100 m
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Operating voltage	72 V
Mutual capacitance	50 pF/m	Dielectric test, 1 min	1000 V
Capacitance unbalance	1500 pF/km	Transverse conversion loss (TCL)	Minimum level 2
Characteristic impedance at 100 MHz	100 ± 5 Ω	Segregation class	b

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	95	90	23
10	5.6	95	90	26
16	7.2	95	90	28
31.25	10.5	90	85	25
62.5	14.6	90	85	25
100	18.5	90	85	23
250	30	90	85	20
400	36	75	75	23
500	41	75	75	23

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 48 mm	
D	Actual cable outer diameter	

Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-11-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6A F/UTP

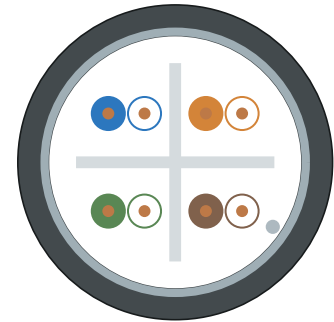
4 pairs / 23 AWG / LSZH / 500 MHz

CONSTRUCTION DETAIL

Overall foil screen

Solid copper transmission core
Solid polyethylene (PE) insulation
LSZH outer jacket

Construction schematic. Not to scale; colours identify cable layers.



Ø 6.95 mm approx.

6.95 mm

APPROX. OUTER DIAMETER

48 kg/km

APPROX. CABLE WEIGHT

20 kg/km

COPPER WEIGHT

Four twisted pairs are arranged around a cross separator and enclosed by a common foil screen. The 500 MHz Cat6A construction uses a drain wire for screen continuity.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Solid polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs around a cross separator
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	None
Overall screen	Aluminium/polyester foil
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 4001 Violet; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T, plus 10GBASE-T. IEEE 802.3af / 802.3at / 802.3bt (Types 1-4).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6A F/UTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 85 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	50 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1500 pF/km	Coupling attenuation	Type II
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 2
Velocity of propagation	67%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	95	90	23
10	5.6	95	90	26
16	7.2	95	90	28
31.25	10.5	90	85	25
62.5	14.6	90	85	25
100	18.5	90	85	23
250	30	90	85	20
400	36	75	75	23
500	41	75	75	23

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 55.6 mm	
D	Actual cable outer diameter	

Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-10-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6A U/FTP

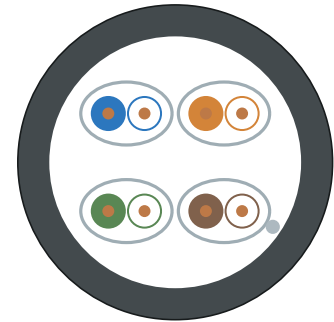
4 pairs / 23 AWG / LSZH / 500 MHz

CONSTRUCTION DETAIL

Individual pair foils

Solid copper transmission core
Foam polyethylene (PE) insulation
LSZH outer jacket

Construction schematic. Not to scale; colours identify cable layers.



Ø 6.95 mm approx.

6.95 mm

APPROX. OUTER DIAMETER

48 kg/km

APPROX. CABLE WEIGHT

20 kg/km

COPPER WEIGHT

Each of the four copper pairs has its own aluminium/polyester foil screen. The 500 MHz Cat6A cable uses foam polyethylene insulation and has no additional overall screen.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Foam polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	Aluminium/polyester foil on each pair
Overall screen	None
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 5024 Blue; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T, plus 10GBASE-T. IEEE 802.3af / 802.3at / 802.3bt (Types 1-4).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6A U/FTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 75 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	43 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type 1b
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 1
Velocity of propagation	78%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	90	80	23
10	5.6	95	90	26
16	7.1	95	90	28
31.25	10.5	90	85	25
62.5	14.6	90	90	25
100	18.3	90	90	23
250	29.5	90	75	20
400	36	75	75	23
500	42	75	75	23

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 55.6 mm	
D	Actual cable outer diameter	

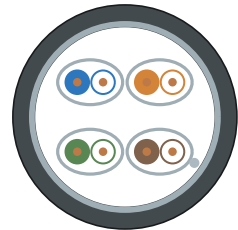
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-10-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6A F/FTP

4 pairs / 23 AWG / LSZH / 500 MHz



Ø 6.9 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

6.90 mm

APPROX. OUTER DIAMETER

49 kg/km

APPROX. CABLE WEIGHT

20 kg/km

COPPER WEIGHT

Individual pair foils and an overall foil screen form the shielding arrangement of this 500 MHz Cat6A cable. Foam polyethylene insulation surrounds the solid copper conductors.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Foam polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	Aluminium/polyester foil on each pair
Overall screen	Aluminium/polyester foil
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 5024 Blue; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T, plus 10GBASE-T. IEEE 802.3af / 802.3at / 802.3bt (Types 1-4).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6A F/FTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 75 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	43 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type 1b
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 1
Velocity of propagation	78%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	90	80	23
10	5.6	95	90	26
16	7.1	95	90	28
31.25	10.5	90	85	25
62.5	14.6	90	90	25
100	18.3	90	90	23
250	29.5	90	75	20
400	36	75	75	23
500	42	75	75	23

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 55.2 mm	
D	Actual cable outer diameter	

Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-10-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat6A S/FTP

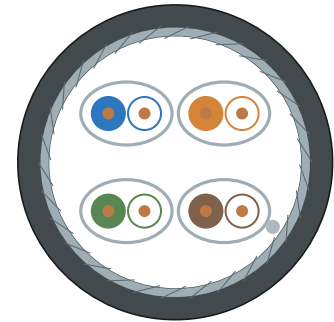
4 pairs / 23 AWG / LSZH / 500 MHz

CONSTRUCTION DETAIL

Pair foils and overall braid

Solid copper transmission core
Foam polyethylene (PE) insulation
LSZH outer jacket

Construction schematic. Not to scale; colours identify cable layers.



Ø 6.9 mm approx.

6.90 mm

APPROX. OUTER DIAMETER

50 kg/km

APPROX. CABLE WEIGHT

23 kg/km

COPPER WEIGHT

Four individually foil-screened pairs are enclosed by a tinned copper braid. The 500 MHz Cat6A cable combines pair screening, foam polyethylene insulation and an LSZH outer jacket.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Foam polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	Aluminium/polyester foil on each pair
Overall screen	Tinned copper braid
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 4001 Violet; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T, plus 10GBASE-T. IEEE 802.3af / 802.3at / 802.3bt (Types 1-4).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat6A S/FTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 75 Ω/km	Delay skew	< 45 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	43 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type 1b
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 1
Velocity of propagation	78%	Segregation class	c

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.6	90	80	23
10	5.6	95	90	26
16	7.1	95	90	28
31.25	10.5	90	85	25
62.5	14.6	90	90	25
100	18.3	90	90	23
250	29.5	90	75	20
400	36	75	75	23
500	42	75	75	23

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 55.2 mm	
D	Actual cable outer diameter	

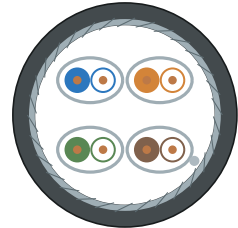
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-10-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat7 S/FTP

4 pairs / 23 AWG / LSZH / 600 MHz



Ø 6.9 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

6.90 mm

APPROX. OUTER DIAMETER

50 kg/km

APPROX. CABLE WEIGHT

23 kg/km

COPPER WEIGHT

This 600 MHz cable places an aluminium/polyester foil around each pair and a tinned copper braid around the core. Solid 23 AWG copper conductors and foam polyethylene insulation form the transmission core.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Foam polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	Aluminium/polyester foil on each pair
Overall screen	Tinned copper braid
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 4001 Violet; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T, plus 10GBASE-T. IEEE 802.3af / 802.3at / 802.3bt (Types 1-4).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat7 S/FTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 75 Ω/km	Delay skew	< 25 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	43 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type 1
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 1
Velocity of propagation	78%	Segregation class	d

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.7	90	85	23
10	5.8	95	90	29
16	7.1	95	90	29
31.25	11	90	85	25
62.5	16	90	85	25
100	18.6	90	85	25
250	29.5	70	65	25
400	37	75	70	23
500	43	80	75	20
600	47	75	70	18

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 55.2 mm	
D	Actual cable outer diameter	

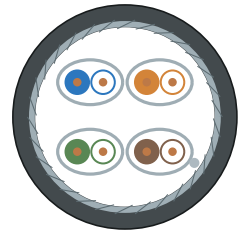
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-4-1.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat7A S/FTP

4 pairs / 23 AWG / LSZH / 1000 MHz



UPCOM series illustration. Jacket colour and conductor size follow the specification below.

Ø 7.2 mm approx.

SCHEMATIC / NOT TO SCALE

7.20 mm

APPROX. OUTER DIAMETER

62 kg/km

APPROX. CABLE WEIGHT

28 kg/km

COPPER WEIGHT

The 1000 MHz Cat7A cable combines 23 AWG solid copper, foam polyethylene insulation, individual pair foils and an overall tinned copper braid. The construction is intended for screened high-bandwidth cabling systems.

CONSTRUCTION

Conductor	Solid annealed copper, 23 AWG
Insulation	Foam polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	Aluminium/polyester foil on each pair
Overall screen	Tinned copper braid
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 1016 Yellow; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T, plus 10GBASE-T. IEEE 802.3af / 802.3at / 802.3bt (Types 1-4).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat7A S/FTP

4 pairs / 23 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 75 Ω/km	Delay skew	< 25 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	43 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type 1
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 1
Velocity of propagation	78%	Segregation class	d

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.5	101	97	30
10	5.7	101	97	33
16	7.1	101	97	33
31.25	10.2	100	97	33
62.5	14.2	100	97	32
100	17.6	100	97	30
250	29.8	100	92	30
300	31.6	93	62.6	27
600	45.2	91	57.9	25
1000	63	84	82	20

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 57.6 mm	
D	Actual cable outer diameter	

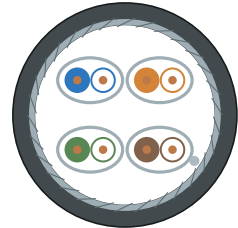
Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-9-1.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat7A+ S/FTP

4 pairs / 22 AWG / LSZH / 1200 MHz



Ø 8 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

8.00 mm

APPROX. OUTER DIAMETER

67 kg/km

APPROX. CABLE WEIGHT

33 kg/km

COPPER WEIGHT

The Cat7A+ series uses 22 AWG solid copper with individually foil-screened pairs and an overall tinned copper braid. Its specified operating band extends to 1200 MHz; the plus suffix identifies the extended-bandwidth series.

CONSTRUCTION

Conductor	Solid annealed copper, 22 AWG
Insulation	Foam polyethylene (PE); EN 50290-2-23
Core assembly	4 twisted pairs
Pair identification	Colour coded to ANSI/TIA-568
Individual pair screen	Aluminium/polyester foil on each pair
Overall screen	Tinned copper braid
Drain wire	Tinned copper
Outer jacket	Low smoke zero halogen (LSZH); EN 50290-2-27
Jacket colour	RAL 9003 White; other colours on request

APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T, plus 10GBASE-T. IEEE 802.3af / 802.3at / 802.3bt (Types 1-4).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

Cat7A+ S/FTP

4 pairs / 22 AWG / LSZH

ELECTRICAL CHARACTERISTICS / 20°C

Conductor resistance at 20°C	< 60 Ω/km	Delay skew	< 25 ns/100 m
Resistance unbalance	< 1%	Operating voltage	72 V
Insulation resistance, 500 V DC / 1 min	> 5000 MΩ·km	Dielectric test, 1 min	1000 V
Mutual capacitance	43 pF/m	Transverse conversion loss (TCL)	Minimum level 2
Capacitance unbalance	1600 pF/km	Coupling attenuation	Type 1
Characteristic impedance at 100 MHz	100 ± 5 Ω	Transfer impedance	Grade 1
Velocity of propagation	78%	Segregation class	d

SELECTED TRANSMISSION CHARACTERISTICS

Frequency MHz	Insertion loss dB / 100 m	NEXT dB	PS NEXT dB	Return loss dB
4	3.5	101	98	30
10	5.4	101	98	33
100	17.5	101	98	33
250	28.5	101	98	28
500	41.8	99	96	26
600	46.3	96	93	25
800	56.9	93	90	24
1000	62	88	85	23
1200	69	85	82	21

Cable reference values over the stated operating band. Channel performance depends on the installed link.

INSTALLATION AND JACKET

Operating temperature	-20°C to +60°C	LSZH-jacketed version for projects specifying low smoke and halogen-free materials. A jacket designation alone does not establish a CPR Euroclass.
Minimum bend radius	8 × D / approx. 64 mm	
D	Actual cable outer diameter	

Flame propagation: IEC/EN 60332-1-2. Smoke: IEC/EN 61034-2. Halogen acid gas and corrosivity: IEC/EN 60754-1 and IEC/EN 60754-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-9-1.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.

Cat7A+ is the UPCOM extended-bandwidth series designation.