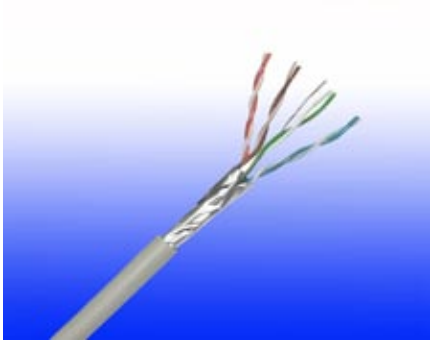
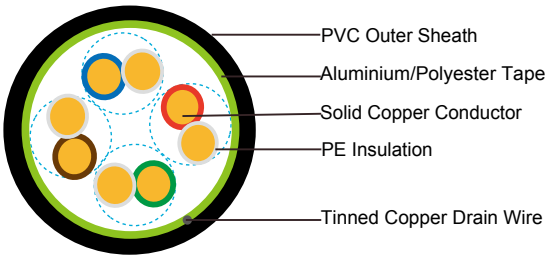
Flame Retardant CAT5E Data Cables

FGD-CAT5E U/UTP4P24
FGD-CAT5E F/UTP4P24
FGD-CAT5E SF/UTP4P24





APPLICATION

Cat5E is a cable standard for Gigabit Ethernet and other network protocol, suitable for basic voice and data installations up to 100 MHz. In addition, these cables can be offered with copper wire braid armoured & flame retardant outer sheath, providing additional mechanically protection still maintaining the flexibility of the cable.

STANDARDS

Basic design adapted to EN50173

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)**	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)**	EN 60332-3-22 (cat. A); IEC 60332-3-22; BS EN 60332-3-22; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4

Note: Asterisk ** denotes that the standard compliance is optional, depending on the oxygen index of the PVC compound and the cable design.

VOLTAGE RATING

60V

CABLE CONSTRUCTION

Conductors: 24AWG solid bare copper.
Insulation: HDPE.

Twinning: Two coloured insulated conductors twisted together to form a pair.
Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.
Cat5E F/UTP: These cables have collective shielding of aluminium/Polyester tape with drain wire.
Cat5E SF/UTP: These cables have double collective shieldings of aluminium/Polyester tape & copper wire braid.

PHYSICAL AND THERMAL PROPERTIES

Temperature range: -30°C ~ +75°C
Minimum bending radius during installation (mobile state): 8 x Overall Diameter
Minimum bending radius during operation (fixed state): 4 x Overall Diameter

ELECTRICAL PROPERTIES

AWG		24
Nominal Conductor Diameter	mm	0.5/0.51/0.53
Maximum DC Resistant@20°C	Ω/100m	9.38
Maximum DCR Unbalance	%	5
Maximum Mutual Capacitance	pF/m	55.8
Maximum Capacitance Unbalance	pF/100m	330
Characteristic Impedance@1-100MHz	Ω	100+/-15
Maximum Propagation Delay Skew	ns/100m	45

TRANSMISSION PROPERTIES

FREQ MHz	Maximum Attenuation dB/100m	Minimum NEXT dB	Minimum PSNEXT dB	Minimum ELFEXT dB/100m	Minimum PSELFEXT dB/100m	Minimum RL dB
0.772	1.8	67.0	64.0	66.0	63.0	—
1	2.0	65.3	62.3	63.8	60.8	20.0
4	4.1	56.3	53.3	51.7	48.7	23.0
8	5.8	51.8	48.8	45.7	42.7	24.5
10	6.5	50.3	47.3	43.8	40.8	25.0
16	8.2	47.3	44.3	39.7	36.7	25.0
20	9.3	45.8	42.8	37.7	34.7	25.0
25	10.4	44.3	41.3	35.8	32.8	24.3
31.25	11.7	42.9	39.9	33.9	30.9	23.6
62.5	17.0	38.4	35.4	27.8	24.8	21.5
100	22.0	35.3	32.3	23.8	20.8	20.1

CONSTRUCTION PARAMETERS

Cable Code	Conductor Diameter	Diameter Over Insulation	Pairs	Screen	Nominal Overall Diameter
	mm	mm			mm
FGD-Cat5E U/UTP	0.5/0.51	0.91	4	Nil	5.1
FGD-Cat5E F/UTP	0.53	1.00	4	Overall Aluminum Tape Screen	6.3
FGD-Cat5E SF/UTP	0.53	1.00	4	Overall Aluminum Tape Screen & Copper Wire Braid	6.6

Rated Voltage

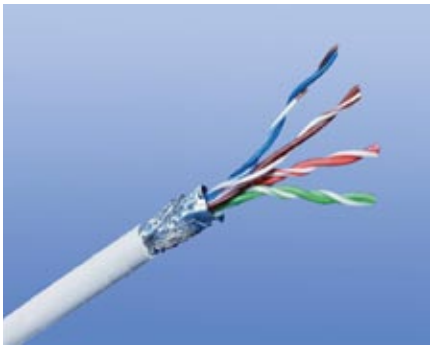
Standard

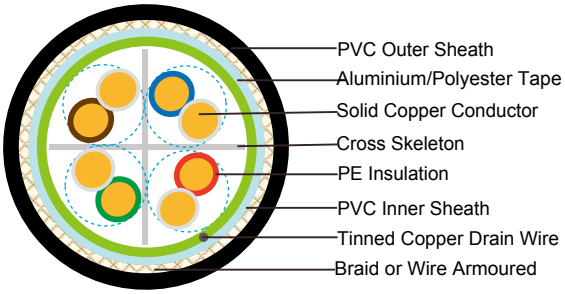

Flame Retardancy**
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1


Reduced Fire Propagation**
NF C32-070-2.2(C1)
IEC60332-3-22/EN50266-2-4

Flame Retardant CAT5E CWB/SWB/SWA Armoured Data Cables

FGD-CAT5E U/UTP4P24 CWB/SWB/SWA
FGD-CAT5E F/UTP4P24 CWB/SWB/SWA
FGD-CAT5E SF/FTP4P24 CWB/SWB/SWA





APPLICATION

Cat5E is a cable standard for Gigabit Ethernet and other network protocol, suitable for basic voice and data installations up to 100 MHz. In addition, these cables can be offered with copper wire braid armoured & flame retardant outer sheath, providing additional mechanically protection still maintaining the flexibility of the cable.

STANDARDS

Basic design adapted to EN50173

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)**	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)**	EN 60332-3-22 (cat. A); IEC 60332-3-22; BS EN 60332-3-22; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4

Note: Asterisk ** denotes that the standard compliance is optional, depending on the oxygen index of the PVC compound and the cable design.

VOLTAGE RATING

60V

CABLE CONSTRUCTION

Conductors: 24AWG solid bare copper.
Insulation: HDPE.
Twinning: Two coloured insulated conductors twisted together to form a pair.
Inner Sheath: Flame retardant, low smoke and halogen-free polyolefin, coloured black.

Armouring:
CWB: Copper Wire Braid
SWB: Steel Wire Braid
SWA: Steel Wire Armour
Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.
Cat5E F/UTP: These cables have collective shielding of aluminium/Polyester tape with drain wire.
Cat5E SF/UTP: These cables have double collective shieldings of aluminium/Polyester tape & copper wire braid.

PHYSICAL AND THERMAL PROPERTIES

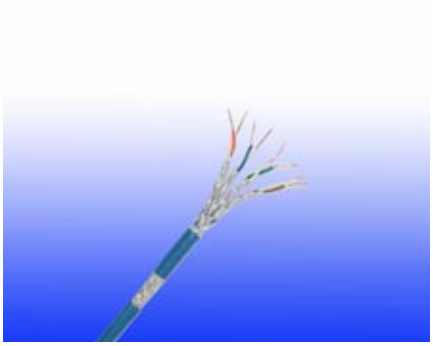
Temperature range: -30°C ~ +75°C
Minimum bending radius during installation (mobile state): 8 x Overall Diameter
Minimum bending radius during operation (fixed state): 4 x Overall Diameter

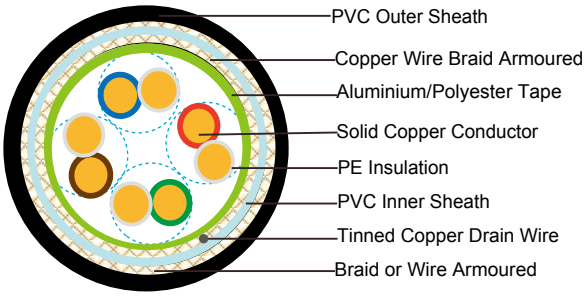
ELECTRICAL PROPERTIES

AWG		24
Nominal Conductor Diameter	mm	0.5/0.53
Maximum DC Resistant@20°C	Ω/100m	9.38
Maximum DCR Unbalance	%	5
Maximum Mutual Capacitance	pF/m	55.8
Maximum Capacitance Unbalance	pF/100m	330
Characteristic Impedance@1-100MHz	Ω	100+/-15
Maximum Propagation Delay Skew	ns/100m	45

TRANSMISSION PROPERTIES

FREQ MHz	Maximum Attenuation dB/100m	Minimum NEXT dB	Minimum PSNEXT dB	Minimum ELFEXT dB/100m	Minimum PSELFEXT dB/100m	Minimum RL dB
0.772	1.8	67.0	64.0	66.0	63.0	—
1	2.0	65.3	62.3	63.8	60.8	20.0
4	4.1	56.3	53.3	51.7	48.7	23.0
8	5.8	51.8	48.8	45.7	42.7	24.5
10	6.5	50.3	47.3	43.8	40.8	25.0
16	8.2	47.3	44.3	39.7	36.7	25.0
20	9.3	45.8	42.8	37.7	34.7	25.0
25	10.4	44.3	41.3	35.8	32.8	24.3
31.25	11.7	42.9	39.9	33.9	30.9	23.6
62.5	17.0	38.4	35.4	27.8	24.8	21.5
100	22.0	35.3	32.3	23.8	20.8	20.1





FGD CAT5E SF/UTP

CONSTRUCTION PARAMETERS

Cable Code	Construction No. of elements×No. of cores in element×Conductor diameter	Nominal Insulation Thickness	Nominal Inner Sheath Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Nominal Weight
	mm	mm	mm	mm	mm	kg/km
FGD-CAT5E U/UTP CWB	4×2×0.5	0.2	0.6	1.0	7.68	97
FGD-CAT5E U/UTP SWB	4×2×0.5	0.2	0.6	1.0	7.68	93
FGD-CAT5E U/UTP SWA	4×2×0.5	0.2	0.6	1.0	8.68	165
FGD-CAT5E F/UTP CWB	4×2×0.53	0.2	0.6	1.0	8.28	116
FGD-CAT5E F/UTP SWB	4×2×0.53	0.2	0.6	1.0	8.28	112
FGD-CAT5E F/UTP SWA	4×2×0.53	0.2	0.6	1.0	9.28	192
FGD-CAT5E SF/UTP CWB	4×2×0.53	0.2	0.6	1.0	8.76	123
FGD-CAT5E SF/UTP SWB	4×2×0.53	0.2	0.6	1.0	8.76	119
FGD-CAT5E SF/UTP SWA	4×2×0.53	0.2	0.6	1.0	9.76	216

Rated Voltage

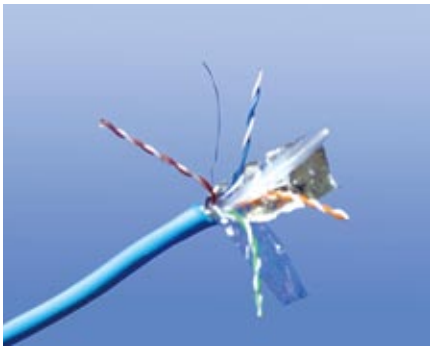
Standard

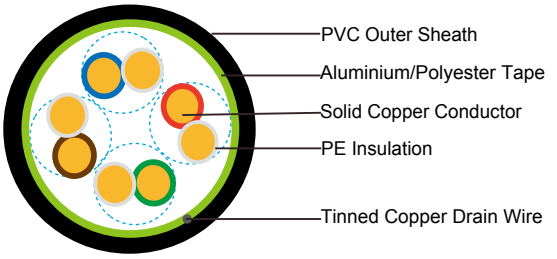
Flame Retardancy**
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1

Reduced Fire Propagation**
NF C32-070-2.2(C1)
IEC60332-3-22/EN50266-2-4

Flame Retardant CAT6 Data Cables

FGD-CAT6 U/UTP4P23
FGD-CAT6 F/UTP4P23
FGD-CAT6 SF/FTP4P23





APPLICATION

Cat6 Cable is a cable standard for Gigabit Ethernet and other network protocol, suitable for 10BaseT, 100BaseTx & 1000BaseT (Gigabit Ethernet) application. In addition, these cables can be offered with copper wire braid armoured & flame retardant outer sheath, providing additional mechanically protection still maintaining the flexibility of the cable.

STANDARDS

Basic design adapted to EN50173

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)**	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)**	EN 60332-3-22 (cat. A); IEC 60332-3-22; BS EN 60332-3-22; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4

Note: Asterisk ** denotes that the standard compliance is optional, depending on the oxygen index of the PVC compound and the cable design.

VOLTAGE RATING

60V

CABLE CONSTRUCTION

Conductors: 23AWG solid bare copper.
Insulation: HDPE.

Twinning: Two coloured insulated conductors twisted together to form a pair.
Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.
Cat6 F/UTP: These cables have collective shielding of aluminium/Polyester tape with drain wire.
Cat6 SF/UTP: These cables have double collective shieldings of aluminium/Polyester tape & copper wire braid with drain wire.

PHYSICAL AND THERMAL PROPERTIES

Temperature range: -30°C ~ +75°C
Minimum bending radius during installation (mobile state): 8 x Overall Diameter
Minimum bending radius during operation (fixed state): 4 x Overall Diameter

ELECTRICAL PROPERTIES

AWG		23
Nominal Conductor Diameter	mm	0.56/0.57/0.58
Maximum DC Resistant@20°C	Ω/100m	9.38
Maximum DCR Unbalance	%	3
Maximum Mutual Capacitance	pF/m	5.8
Maximum Capacitance Unbalance	pF/100m	30
Characteristic Impedance@1-100MHz	Ω	100+/-15
Maximum Propagation Delay Skew	ns/100m	18

TRANSMISSION PROPERTIES

FREQ MHz	Maximum Attenuation dB/100m	Minimum NEXT dB	Minimum PSNEXT dB	Minimum ELFEXT dB/100m	Minimum PSELFEXT dB/100m	Minimum RL dB
0.772	1.8	76.0	74.	70.0	67.0	—
1	2.0	74.3	72.3	67.8	64.8	20.0
4	3.8	65.3	63.3	55.7	52.7	23.0
8	5.3	60.8	58.8	49.7	46.7	24.5
10	6.0	59.3	57.3	47.8	44.8	25.0
16	7.6	56.3	54.3	43.7	40.7	25.0
20	8.5	54.8	52.8	41.7	38.7	25.0
25	9.5	53.3	51.3	39.8	36.8	24.3
31.25	10.7	51.9	49.9	37.9	34.9	23.6
62.5	15.4	47.4	45.4	31.8	28.8	21.5
100	19.8	44.3	42.3	27.8	24.8	20.1
155	25.2	41.5	39.5	23.9	20.9	18.8

FREQ MHz	Maximum Attenuation dB/100m	Minimum NEXT dB	Minimum PSNEXT dB	Minimum ELFEXT dB/100m	Minimum PSELFEXT dB/100m	Minimum RL dB
200	29.0	39.8	37.8	21.7	18.7	18.0
250	32.8	38.3	36.3	19.8	16.8	17.3

CONSTRUCTION PARAMETERS

Cable Code	Conductor Diameter	Diameter Over Insulation	Pairs	Screen	Overall Diameter
	mm	mm			mm
FGD-Cat6 U/UTP	0.56/0.57	1.02	4	Nil	6.0
FGD-Cat6 F/UTP	0.57/0.58	1.02	4	Overall Aluminum Tape Screen	6.3
FGD-Cat6 SF/UTP	0.57/0.58	1.02	4	Overall Aluminum Tape Screen & Copper Wire Braid	6.6

Rated Voltage

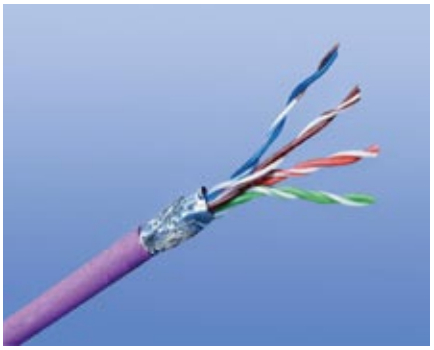
Standard

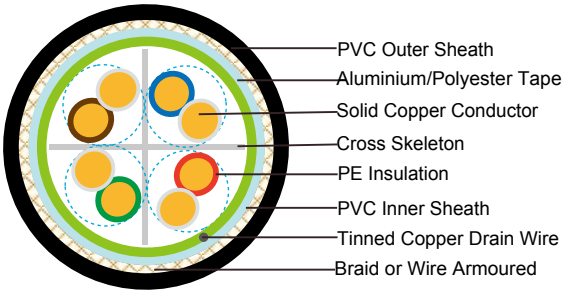

Flame Retardancy**
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1


Reduced Fire Propagation**
NF C32-070-2.2(C1)
IEC60332-3-22/EN50266-2-4

Flame Retardant CAT6 CWB/SWB/SWA Armoured Data Cables

FGD-CAT6 U/UTP4P23 CWB/SWB/SWA
FGD-CAT6 F/UTP4P23 CWB/SWB/SWA
FGD-CAT6 SF/UTP4P23 CWB/SWB/SWA





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Note: Asterisk ** denotes that the standard compliance is optional, depending on the oxygen index of the PVC compound and the cable design.

VOLTAGE RATING

60V

CABLE CONSTRUCTION

Conductors: 23AWG solid bare copper.
Insulation: HDPE .
Twinning: Two coloured insulated conductors twisted together to form a pair.
Inner Sheath: Flame retardant, low smoke and halogen-free polyolefin, coloured black.

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ELECTRICAL PROPERTIES

AWG		23
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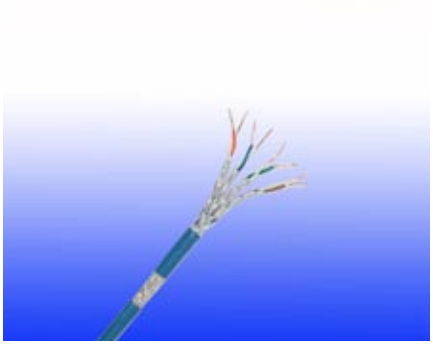
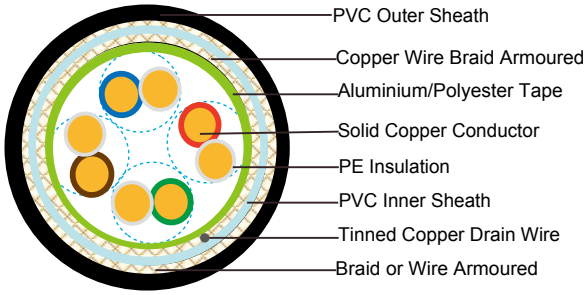
Maximum Capacitance Unbalance	pF/100m	30
Characteristic Impedance@1-100MHz	Ω	100+/-15
Maximum Propagation Delay Skew	ns/100m	18

TRANSMISSION PROPERTIES

FREQ MHz	Maximum Attenuation dB/100m	Minimum NEXT dB	Minimum PSNEXT dB	Minimum ELFEXT dB/100m	Minimum PSELFEXT dB/100m	Minimum RL dB
0.772	1.8	76.0	74.	70.0	67.0	—
1	2.0	74.3	72.3	67.8	64.8	20.0
4	3.8	65.3	63.3	55.7	52.7	23.0
8	5.3	60.8	58.8	49.7	46.7	24.5
10	6.0	59.3	57.3	47.8	44.8	25.0
16	7.6	56.3	54.3	43.7	40.7	25.0
20	8.5	54.8	52.8	41.7	38.7	25.0
25	9.5	53.3	51.3	39.8	36.8	24.3
31.25	10.7	51.9	49.9	37.9	34.9	23.6
62.5	15.4	47.4	45.4	31.8	28.8	21.5
100	19.8	44.3	42.3	27.8	24.8	20.1
155	25.2	41.5	39.5	23.9	20.9	18.8

FREQ MHz	Maximum Attenuation dB/100m	Minimum NEXT dB	Minimum PSNEXT dB	Minimum ELFEXT dB/100m	Minimum PSELFEXT dB/100m	Minimum RL dB
200	29.0	39.8	37.8	21.7	18.7	18.0
250	32.8	38.3	36.3	19.8	16.8	17.3





FGD CAT6 SF/UTP

CONSTRUCTION PARAMETERS

Cable Code	Construction No. of elements×No. of cores in element×Conductor diameter	Nominal Insulation Thickness	Nominal Inner Sheath Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Nominal Weight
	mm	mm	mm	mm	mm	kg/km
FGD-CAT6 U/UTP CWB	4×2×0.56/0.57	0.2	0.6	1.0	7.88	115
FGD-CAT6 U/UTP SWB	4×2×0.56/0.57	0.2	0.6	1.0	7.88	109
FGD-CAT6 U/UTP SWA	4×2×0.56/0.57	0.2	0.6	1.0	8.88	189
FGD-CAT6 F/UTP CWB	4×2×0.57/0.58	0.2	0.6	1.0	8.48	126
FGD-CAT6 F/UTP SWB	4×2×0.57/0.58	0.2	0.6	1.0	8.48	132
FGD-CAT6 F/UTP SWA	4×2×0.57/0.58	0.2	0.6	1.0	9.48	213
FGD-CAT6 SF/UTP CWB	4×2×0.57/0.58	0.2	0.6	1.0	8.96	154
FGD-CAT6 SF/UTP SWB	4×2×0.57/0.58	0.2	0.6	1.0	8.96	148
FGD-CAT6 SF/UTP SWA	4×2×0.57/0.58	0.2	0.6	1.0	9.96	242

Rated Voltage

Standard

Flame Retardancy**
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1

Reduced Fire Propagation**
NF C32-070-2.2(C1)
IEC60332-3-22/EN50266-2-4