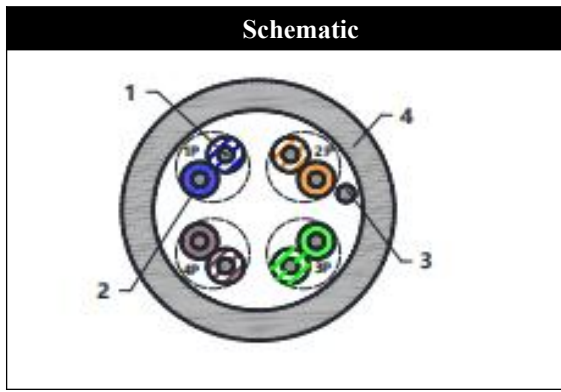


Cable Specification

Product Name: CAT6-*-RNS



Product Description	
① Inner Conductor	Composition: Oxygen-Free Bare Solid Copper (OFC)
	Diameter: See table below
② Insulation	Composition: High density Polyethylene (HDPE)
	Diameter: See table below
③ Ripcord	Type of filler: Ripcord
	Composition: Polyester
④ Jacket	Composition: PVC, Rated 75°C
	Dimensions: See table below

Dimensional Table

Nb pairs	Section (AWG)	Diameter of inner conductor (mm)	Diameter of insulated conductor (mm)	Minimal thickness of jacket (mm)	Diameter of outer jacket (mm)
4	23	0.55±0.015	0.98±0.02	0.52	5.2±0.2

Diameters of inner conductor and insulated conductor must be designed in order to reach the electrical and transmission properties of CAT6.

Color Table

Pair No.	Conductor 1	Conductor 2
1	blue stripe+white+blue stripe	Blue
2	orange stripe+white+orange stripe	Orange
3	green stripe+white+green stripe	Green
4	brown stripe+white+brown stripe	Brown

Reference Standard

Materials		Fire performance	Electrical performance	Low Smoke(LS)	Zero Halogen(ZH)		Reach regulation	RoHs Directive
Insulation	Jacket			Smoke Density during combustion	Amount of Halogen acid gas during combustion	Degree of acidity (corrosivity) of gases for materials during combustion		
UL444 CSA C22.2 No. 214	UL444 CSA C22.2 No. 214	UL 1666 (RISER CABLE FLAME TEST)	ANSI/TIA-568.2-D ISO/IEC 11801 EN 50173 IEC 61156-5	NA	NA	NA	NA	NA

Mechanical Properties

Test Method	According to		
	In Standard	UL444 & CSA C22.2 No.214	
	L0=200mm, speed=100mm/min	L0=20mm, speed=250mm/min (or 25mm/min for PE&PP insulation)	
	INNER CONDUCTOR	INSULATION	JACKET
Tensile Strength (MPa)	-	≥16	≥13.5
Elongation (%)	≥15	≥300	≥150

Thermal Properties

Operating Temperature Range (°C)	-20 ~ +75
Installation Minimum Bend Radii(mm)	8*OD
Rated Voltage(V)	300

Cable Specification

Product Name: CAT6-*-RNS

Electrical Properties

Single Conductor DC Resistance,Max,20°C(Ω/100m)	UL 444 & CSA C22.2 No.214	7.5
Conductor DC Resistance Imbalance,Max,20°C(%)		≤2
Pairs DC Resistance Imbalance,Max,20°C(%)		≤4
Dielectric Strength Conductor/Conductor:2.5KV DC for 2 seconds or 1KV DC for 1 minute		No Breakdown
Insulation Resistance Insulation Resistance(Conductor/Conductor),DC100-500V,Min(MΩ.km)		5000
Pair To Ground Capacitance Unbalance,Max,0.8KHz/1KHz(pF/100m)		160
Delay Skew,1-250MHz,Max(ns/100m)		45
Characteristic impedance at 100MHz		100±15
Velocity of Propagation(%)		69

Transmission Properties

Freq	RL	ATT	NEXT	PS NEXT	ACR	PS ACR	EL FEXT	PS ELFEXT
MHz	≥dB	≤dB/100m	≥dB/100m	≥dB/100m	≥dB/100m	dB/100m	≥dB/100m	≥dB/100m
1	20.0	2	74.3	72.3	72.2	70.2	67.8	64.8
4	23.0	3.8	65.3	63.3	61.4	59.5	55.8	52.8
8	24.5	5.3	60.8	58.8	55.4	53.5	49.7	46.7
10	25.0	6	59.3	57.3	53.3	51.3	47.8	44.8
16	25.0	7.6	56.2	54.2	48.6	46.6	43.7	40.7
20	25.0	8.5	54.8	52.8	46.3	44.3	41.8	38.8
25	24.3	9.5	53.3	51.3	43.8	41.8	39.8	36.8
31.25	23.6	10.7	51.9	49.9	41.1	39.1	37.9	34.9
62.5	21.5	15.4	47.4	45.4	31.9	29.9	31.9	28.9
100	20.1	19.8	44.3	42.3	24.4	22.4	27.8	24.8
200	18.0	29	39.8	37.8	10.6	8.6	21.8	18.8
250	17.3	32.8	38.3	36.3	5.3	3.3	19.8	16.8
300*	16.8	36.4	37.1	35.1	0.5	-1.5	18.3	15.3
350*	16.3	39.8	36.1	34.1	-3.8	-5.8	16.9	13.9
400*	15.9	43	35.3	33.3	-7.9	-9.9	15.8	12.8
450*	15.5	46.3	34.5	32.5	-10.5	-12.5	14.7	11.7
500*	15.2	48.9	33.8	31.8	-15.3	-17.3	13.8	10.8
550*	14.9	51.8	33.2	31.2	-18.6	-20.6	12.9	9.9

Remarks: "*" are the reference values

Application

The cable must support class E applications and must be compatible POE, POE+ and UPOE.

Marking

Type	ink
Color	
Text	E502490(UL)C(UL)CMRFT423AWG4PR■■■■VERIFIEDCAT6UTPU9369CABLETOANSI/TIA/EIA-568-C.2350MHZROHSCOMPLIANT03/22■■■■ETHEREAL386-255-0234▲▲0002ft,0004ft.....1000ft

Packing

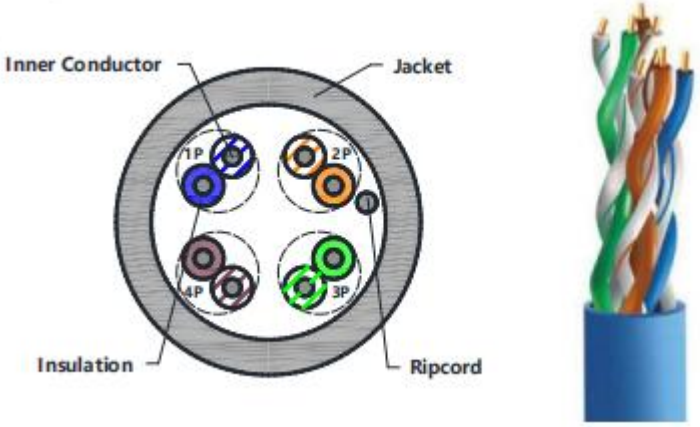
Type of Packing	Dimension(mm)	Qt of per Packing(feet)	Label Type	Cut Allowed	Tolerance Length(%)
Inner Box	360x360x210	1000	UL 0444 Standard Label	No	0

Cable Specification

Product Name: CAT6-*-RNS

Product Design Card

Product Description: CAT6 U/UTP NS 4x2x23AWG(CMR)

Construction Item Description			Electrical Properties			
Conductor	Material	Oxygen-Free Bare Solid Copper	Single Conductor DC Resistance,Max,20°C		7.5Ω/100m	
	Elongation	≥15%	Conductor DC Resistance Imbalance,Max,20°C		≤2%	
	OD	0.55 ± 0.015mm	Pairs DC Resistance Imbalance,Max,20°C		≤4%	
Insulation	Material	HDPE(8380 or 3364)	Delay Skew,1-250MHz,Max		45ns/100m	
	OD	0.97±0.02	Velocity of Propagation		69%	
	Average THK	0.22mm	Characteristic impedance at 100MHz		100±5Ω	
	Color	1p: white + 2 blue stripes & blue	Dielectric Strength(CD/CD):2.5KV DC for 2 seconds or 1KV DC for 1 minute	Insulation Resistance(CD/CD),DC100-500V,Min		5000MΩ.km
		2p: white + 2 orange stripes & orange		Pair To Ground Capacitance Unbalance,Max,0.8KHz/1KHz		160pF/100m
		3p: white + 2 green stripes & green		Mechanical Property		
4p: white + 2 brown stripes & brown						
Pair Twist	Lay&Direction	1p: S=17.5mm(26%)	insulation	elongation before aging	≥ 300%	
		2p: S=13.0mm(22%)		tensile strength before aging	≥16MPa	
		3p: S=16.0mm(28%)	jacket	elongation before aging	≥ 150 %	
		4p: S=14.5mm(20%)		tensile strength before aging	≥ 13.5 MPa	
Inner Assemble	Lay	S=110±5mm	Packing	elongation after aging	≥ 125 %	
	Direction	according to the drawing		tensile strength after aging	≥ 12.5 MPa	
	Filler	/		Inner Box + UL 0444 Standard Label		420mm x 420mm x 220mm
	OD	/		Master Carton		460mm x 435mm x 435mm
Filler	Material	/				
	Construction	300D				
Outside Shield	Shield	/				
	Construction	/				
	Material	/				
	Coverage	/				
Jacket	Material	PVC,Rated 75°C				
	Hardness	81A±3A				
	OD	5.2mm±0.2mm				
	Average THK	0.55mm±0.03mm				
	Color	according to the customer's requirements				
Marking Color		according to the customer's requirements				
Marking		E502490 UL C(UL) CMR 4PR...				