



Technical Specifications

Product Line: LLINX-Q

Description

Composite cable consisting of (1) LLINX-U universal control cable and (4) UTP Category 5e cable individually jacketed and then overall jacketed.

NEC type CMG and CEC type CMG FT4. Product manufactured compliant to the requirements of UL444 for installations and applications in accordance with NEC articles 725 and 800.

Component 1:

U/UTP category 5e cable
24 AWG solid annealed bare copper conductor
High density polyethylene
Wall thickness: 0.0085" | 0.216mm
Diameter: 0.037" | 0.94mm
Polyvinyl chloride jacket
Wall thickness: 0.020" | 0.51mm
Diameter: 0.200" | 5.10mm

Electrical

Cat 5e DC resistance: $\leq 28.59 \Omega / 1000'$ | $93.78 \Omega/\text{KM}$
Capacitance: 14.0 pF/FT | 45.9 pF/M
Impedance: $100 \pm 15 \Omega$
Propagation Delay (Skew): 45ns/100m MAX
Voltage rating: 300V
22 AWG DC resistance: $15.7 \Omega / 1000'$ | $51.50 \Omega/\text{KM}$
Shield DCR: $22.5 \Omega / 1000'$ | $73.8 \Omega/\text{KM}$
Capacitance: 12.5 pF/FT | 41.0 pF/M
Impedance: 105Ω
Velocity of Propagation: 78%
Voltage rating: 300V
18 AWG DC resistance: $6.74 \Omega / 1000'$ | $22.11 \Omega/\text{KM}$
Maximum current: (18 AWG) 2.63A@25 °C

Component 2:

LibertyLinx universal control cable
22 AWG 7-strand annealed bare copper conductors
Foam polyethylene insulation
Diameter: 0.074" | 1.88mm
100% aluminum/poly with foil in
24 AWG 7-strand tinned copper drain
18 AWG 7-strand annealed bare copper conductors
Semi-rigid polyvinyl chloride insulation
Diameter: 0.072" | 1.83mm
Polyvinyl chloride jacket
Wall thickness: 0.032" | 0.81mm
Diameter: 0.246" | 6.25mm

Regulatory

ANSI/TIA-568C Category 5e
NEC: CMG 75 °C
CEC: CMG FT4 60 °C
EU RoHS 2002/95/EC Compliant

Color Code

Category 5e jacket: Blue, White, Gray, Green
Pair 1: Orange, White/orange stripe
Pair 2: Blue, White/blue stripe
Pair 3: Green, White/green stripe
Pair 4: Brown, White/brown stripe
LLINX jacket: Gray with a yellow stripe
22 AWG: Blue, White
18 AWG: Black, Red

Packages

Reel: 500' | 152M
Weight: 190 Lbs/1000' | 284 Kg/KM





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Assembly

A jacketed LLINX-U cable and four category 5e U/UTP cables cabled together and overall jacketed

Installation

Pull Tension: 144 Lbs | 641 N
Bend radius: 6.42" | 163mm unloaded
Bend radius: 12.84" | 326mm loaded

Construct

100% Polyester tape binder
Ripcord under jacket

Applications

LibertyLinx® universal system control cable
IP Video and control
General purpose RS-232C, RS-485 simplex data and control
General purpose control and communication cable

Shield

See individual component descriptions

Performance

LAN: 300 feet
18 AWG power: 500 feet maximum

Jacket

Flame retardant polyvinyl chloride
Colors: Gray/white stripe
Wall thickness: 0.044" | 1.12mm
Diameter: 0.642" | 16.30mm

Final Outside Diameter (inches)

0.642

Specification Revision Date:

February 17, 2006

Category 5e Performance Chart

FREQ (MHz)	Insertion Loss (dB/100m)	NEXT (dB)	PSNEXT (dB)	ACR (dB/100m)	PSACR (dB/100m)	ELFEXT (dB/100m)	PSELFEXT (dB/100m)	RL (dB)
	Max.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
0.772	1.8	67.0	64.0	65.2	62.2	66.0	63.0	19.4
1.0	2.0	65.3	62.3	63.3	60.3	63.8	60.8	20.0
4.0	4.1	56.3	53.3	52.2	49.2	51.7	48.7	23.0
8.0	5.8	51.8	48.8	46.0	43.0	45.7	42.7	24.5
10.0	6.5	50.3	47.3	43.8	40.8	43.8	40.8	25.0
16.0	8.2	47.3	44.4	39.1	36.2	39.7	36.7	25.0
20.0	9.3	45.8	42.8	36.5	33.5	37.7	34.7	25.0
25.0	10.4	44.3	41.3	33.9	30.9	35.8	32.8	24.3
31.25	11.7	42.9	39.9	31.2	28.2	33.9	30.9	23.6
62.5	17.0	36.4	35.4	19.4	18.4	27.8	24.6	21.5
100.0	22.0	35.3	32.3	13.3	10.3	23.8	20.8	20.1
200.0	32.4	30.8	27.8	-1.6	-4.6	17.8	14.8	18.0
300.0	41.0	28.2	25.2	-12.8	-15.8	14.3	11.3	16.8
350.0	44.9	27.2	24.2	-17.7	-20.7	12.9	9.9	16.3

