



BULK SOLID CATEGORY CABLE

CAT 6 F/UTP LSZH OVERVIEW

This category cable contains 4 twisted pairs of stranded 23 AWG conductors allowing for longer maximum cable runs and increased signal integrity. The twisted pairs are separated by a 4-way divider to maintain proper spacing and reduce crosstalk between pairs. Crosstalk between cables and electromagnetic interference is also reduced due to the heavy duty aluminum foil shield and the dedicated tinned copper drain wire for proper shield termination.

The Cat 6 wire comes complete with a matte black, flame retardant low smoke, zero halogen (LSZH) jacket that protects the interior workings of the cable from harsh environments and installation stress. Distance markers are printed on the jacket every 2 ft so you never lose sight of how much wire you've installed.

Low smoke, zero halogen cable is the new standard in safety. In a fire situation, a LSZH cable produces very little smoke and due to the extremely low levels of Halogens in the material, produces no toxic fumes.

This solid Cat 6 wire provides an excellent foundation for any commercial or home network. It is perfect for structured cabling and transmission of digital and analog signals for data, video, and audio applications. It meets IEEE 802.3ab for 1000Base-T and also meets both IEEE 802.3af and IEEE 802.3at for PoE and PoE+ applications. It is also suitable for HDBaseT, AES 50, AES 67, AES/EBU, Digital Video, RS-422, and tested up to 550 MHz.



Product specifications may change without prior notification

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SPECIFICATIONS



Product

Part Number: **IO-E4231S-6LZH-1000B**

Number of Conductors: **8 (4 Twisted Pairs)
plus drain wire**

Insulation

Material: **Polyolefin**

O.D.: **1.03-1.10mm**

Colors: **White/Orange, Orange, White/Green, Blue,
White/Blue, Green, White/Brown, Brown**

Electrical and Mechanical Characteristics

Temperature Rating: **60°C**

Spark Test: **2.5 KV DC**

AC Leakage Thru Overall Jacket: **≤ 10mA (1.5KV AC)**

Cable Cold Bend: **-20°C for 4 hr**

Conductor DC Resistance: **≤ 9.38 Ω/100m**

Characteristic Impedance: **100ω±15**

Resistance Unbalance: **≤ 5%**

Dielectric Strength: **1.5 Kv Ac For 2 S**

Insulation Resistance: **≥ 5000 Mω/Km**

Mutual Capacitance: **≤ 5.6 Nf/100m**

Capacitance Unbalance Pair-to-ground: **≤ 330 Pf/100m**

Operating Temperature: **-20°C ~ +60°C (-4°F ~ +140°F)**

Conductors

Details: **Bare Copper (Solid)**

Size: **23 AWG**

Shield

Details: **Aluminum Mylar**

Jacket

O.D.: **7.2 ± 0.2mm**

Material: **LSZH**

Thickness: **0.45 ± 0.05mm**

Flammability Grade

Details:

IEC 60332-1 / -2

IEC 61034-1 / -2

IEC 60754-2

Drain Wire

Details: **24 AWG Solid Tinned
Copper**

CONFIGURATION

STANDARDS & CLASSIFICATIONS



ANSI/TIA-568.2-D (2018)
ISO/IEC 11801 (Edition 2.2)
IEC 61156-6 (Edition 3.1)

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TRANSMISSION PERFORMANCE at 20°C

Freq	Insertion Loss	NEXT	PS.NEXT	ACR	PS.ACR	ACRF	PS.ACRF	Return Loss	Propagation Delay	Skew Delay
MHz	Max dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Min dB/100m	Max ns/100m	Max ns/100m
1	2.03	77.3	75.30	75.28	73.28	70.80	67.80	20.00	570.00	45.00
4	3.78	68.27	66.27	64.49	62.49	58.76	55.76	23.01	552.00	
8	5.32	63.75	61.75	58.43	56.43	52.74	49.74	24.52	546.73	
10	5.95	62.30	60.30	56.35	54.35	50.80	47.80	25.00	545.38	
16	7.55	56.24	57.24	51.68	49.68	46.72	43.72	25.00	543.00	
20	8.47	57.78	55.78	49.31	47.31	44.78	41.78	25.00	542.05	
25	9.51	56.33	54.33	46.83	44.83	42.84	39.84	24.32	541.20	
31.25	10.67	54.88	52.88	44.20	42.20	40.90	37.90	23.64	540.44	
62.5	15.38	50.36	48.36	34.98	32.98	34.88	31.88	21.54	538.55	
100	19.80	47.30	45.30	27.50	25.50	30.80	27.80	20.11	537.60	
150	24.71	44.66	42.66	19.95	17.95	27.28	24.28	18.87	536.94	
200	28.998	42.78	40.78	13.80	11.80	24.78	21.78	18.00	536.55	
250	32.85	41.33	39.33	8.48	6.48	22.84	19.84	17.32	536.28	
300	36.43	40.14	35.14	3.72	1.72	21.26	18.26	16.77	536.08	
350	39.79	39.79	37.14	N.A.	N.A.	19.92	16.92	16.30	535.92	
400	42.97	38.27	36.27	N.A.	N.A.	18.76	15.76	15.89	535.80	
450	46.01	37.5	35.50	N.A.	N.A.	17.74	14.74	15.53	535.70	
500	48.94	36.82	34.82	N.A.	N.A.	16.82	13.82	15.21	535.61	
550	51.76	36.19	34.19	N.A.	N.A.	15.99	12.99	14.92	535.54	

Values above 250 MHz are informational only.

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