4SProducts
Copper Cable Assemblies

Technical Data Sheet

ALFOUR®

Aluminum Shield | Single Jacket | AirCore

Pair Count 6 - 2400P

Outside Plant Copper Cable - Exchange Cable

Description

Conductors: Solid annealed copper in 19, 22, 24 and 26 AWG.

Insulation: Conductors are insulated with solid polyolefin, color coded in accordance with industry standards.

Twisted Pairs: Individual conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.

Core Assembly: Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.

Core Wrap: A non-hygroscopic, dielectric tape is applied over the core assembly to provide protection for the core.

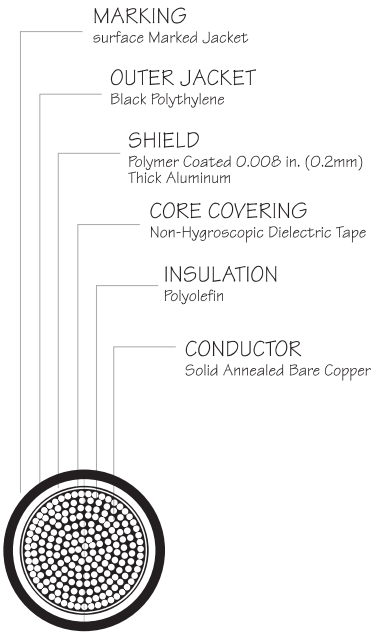
Shielding: A corrugated, copolymer coated, 8-mil aluminum tape is applied longitudinally with an overlap.

Jacket: A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.

Jacket Markings: Information such as manufacturer's identification, pair count AWG, product identification and a telephone handset is printed at 2 ft. intervals on the cable jacket. Sequential footage markings are printed at alternate 2 ft. intervals.

Optional Designs: ALFOUR® cables are also available with an internal screen for use with carrier T1 systems.

Cable cut-away



Applications

4SProducts ALFOUR® cables are designed primarily for aerial use. In addition, they are also commonly used for buried applications. In an aerial application, the cable must be attached to a support strand (messenger). ALFOUR® cables, in 19, 22, 24 and 26 AWG, are capable of meeting the electrical requirements of 100 ohms, Category 3, Backbone UTP cables as specified in TIA/EIA-568-A.

Qualifications & Approvals

Manufactured to meet requirements of ANSI/ICEA S-85-625-2002; formerly manufactured to REA Specification PE-22 (PE-22 was deactivated by RUS and is superseded by ANSI/ICEA specifications).

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Average mutual capacitance @ 1000 Hz		
Total No. of pairs	nF/mile	nF/km
12 or Less	83± 7	52± 4
Over 12	83± 4	52± 2

Conductor Size		Minimum Insulation Resistance		Average Maximum Attenuation		Maximum Conductor Resistance		Resistance Unbalance		Dielectric Strength DC Potential Volts	
		68 °F (20 °C)		68 °F (20 °C) 772 kHz		68 °F (20 °C) (ohms)		Maximum		Minimum	
AWG	mm	Gigohm/ mile	Gigohm/ km	dB/kft	dB/km	mile	km	Avg %	Individual pair %	Cdr to Cdr	Cdr to Ground
19	0.90	1.0	1.6	3.3	10.9	45.0	28.0	1.5	5.0	5,000	10,000
22	0.64	1.0	1.6	4.6	15.3	91.0	56.5	1.5	5.0	4,000	10,000
24	0.50	1.0	1.6	5.7	19.4	144.0	89.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	7.2	23.6	232.0	144.2	1.5	5.0	2,400	10,000

Capacitance unbalance Pair-to-Pair				
Pairs	Maximum individual		Maximum RMS	
	pF/kft	pf/km	pF/kft	pf/km
12 or Less	80	145	-	-
more than 12	80	145	25	45

Capacitance unbalance Pair-to-Ground				
Pairs	Maximum individual		Maximum RMS	
	pF/kft	pf/km	pF/kft	pf/km
12 or Less	800	2625	-	-
more than 12	800	2625	175	574

Near End Crosstalk (NEXT)	150 kHz	772 kHz
P.S. WUNEXT mean (dB)	58	47
P.S. WUNEXT worst pair (dB)	53	42

Far End Crosstalk (FEXT) @ 150 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB)	65	63	63	61
P.S. ELFEXT worst pair (dB)	59	57	57	57

Far End Crosstalk (FEXT) @ 772 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB)	51	49	49	47
P.S. ELFEXT worst pair (dB)	45	43	43	43