4SProducts
Copper Cable Assemblies

Technical
Data Sheet

AsFOUR®-fS

Aluminum Steel Shield | Single Jacket | Filled - Foam Skin

Pair Count 6 - 3000P

Outside Plant Copper Cable - Exchange Cable

Description

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

Insulation: Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin. The conductor insulation is color coded in accordance with industry standard.

Twisted Pair: 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.

Filling Compound: The core assembly is filled with an 80° C ETPR or PIB base jelly compound, completely filling the interstices between the pairs and under the core wrap.

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

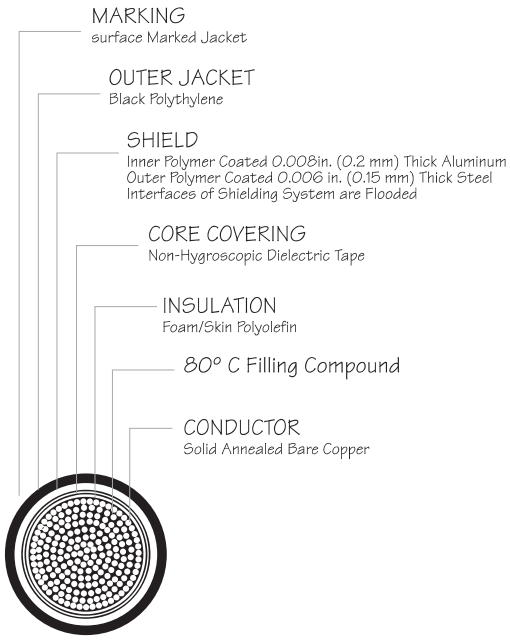
Shielding: The dual shielding system consists of two metal tapes. Inner: A corrugated, copolymer coated, 8-mil aluminum tape is applied directly over the core wrap. The aluminum tape does not butt or overlap at any point along the length of the cable. Outer: A corrugated, copolymer coated, 6-mil steel tape is applied directly over the aluminum and overlaps. The shield interfaces are flooded with an adhesive compound to provide a moisture barrier and inhibit corrosion.

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: AsFOUR®-FS is available with an internal screen for use with T-Carrier systems. AsFOUR®-FS is also available with mechanical protection.

Cable cut-away



Applications

4SProducts AsFOUR®-FS cables are designed for direct burial or duct applications where protection from moisture is required. AsFOUR®-FS cables are recommended for use in high-risk areas where additional mechanical or rodent protection is required. AsFOUR®-FS may be used aerially, but must be attached to a support strand.

Qualifications & Approvals

Manufactured to meet requirements of ANSI/ICEA S-84-608-2002, RUS 7 CFR 1755.890 (PE-89).

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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	3.2	10.5	45.0	28.0	1.5	5.0	4,500	10,000
22	0.64	1.0	1.6	4.5	14.8	91.0	56.5	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	5.6	18.4	144.0	89.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	7.0	23.3	232.0	144.0	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

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