4SProducts
Copper Cable Assemblies

Technical
Data Sheet

ALFOUR®-8FS

Aluminum Shield | Single Jacket | Filled - Foam Skin | Fig-8

Pair Count 6 - 200P

Outside Plant Copper Cable - Exchange Cable

Description

Conductors: Solid annealed bare copper in 22 and 24 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 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 and 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 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.

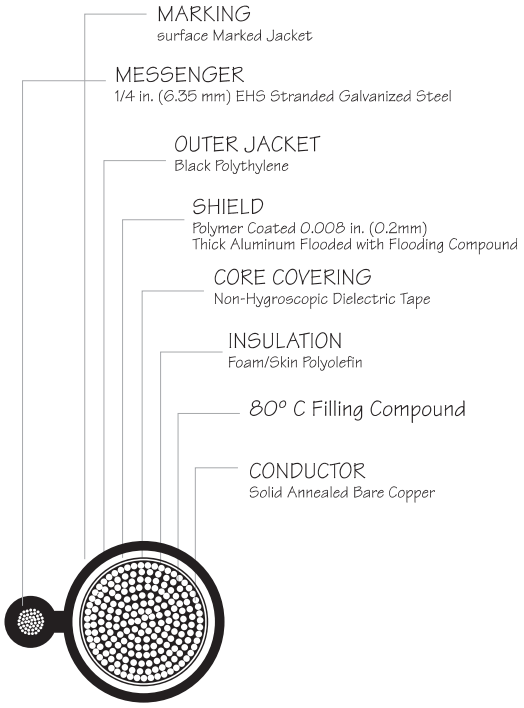
Shielding: A corrugated, copolymer coated, 8-mil aluminum tape is applied longitudinally with an overlap. The shield interfaces are flooded with an adhesive compound to provide a moisture barrier and inhibit corrosion.

Support Member: A ¼ inch, 7-strand Extra High Strength (EHS) galvanized steel messenger serves as the support member and is an integral part of the sheath. The messenger is flooded to 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 including the manufacturer's identification, pair count, AWG and product identification appears at 2-foot intervals. Sequential length markings appear at alternate 2-foot

Cable cut-away



Applications

4SProducts ALFOUR®-8FS cables are designed for aerial applications where a filled cable design is preferred and/or protection from moister is required. The core and support member (messenger) lay parallel to each other forming a cross-sectional "figure 8". The messenger is an integral part of the cable sheath, yet readily available for gripping, pulling and tensioning. Installation is fast and easy using standard methods and hardware.

Qualifications & Approvals

ALFOUR-8FS cables meet the physical and electrical requirements of RUS specification 7 CFR 1755.890 (PE-89) latest issue, except that the figure-8 sheath shall meet the requirements of ANSI/ICEA S-85-625-2002, Option A.

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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
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

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)	22	24	-	-
P.S. ELFEXT mean (dB)	63	63	-	-
P.S. ELFEXT worst pair (dB)	57	57	-	-

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