

APPLICATION

-For Transmission of analogue and digital signals in instrument and control systems; where it is required to maintain a very low levels of smoke and toxic fumes and no acid gas when exposed to fire, they are often specified for indoor use, especially in public areas, across tunnels, underground rail networks and in other hazardous environments and poorly ventilated areas.
- Fire Resistant type with Circuit Integrity during Fire Conditions and LSZH sheathed to reduce toxic smoke and fume emission.

STANDARDS

PLTC TO UL 13	Power-limited tray cable, per NFPA 70, NEC Article 725
ITC TO UL2250	Instrumentation tray cable, per NFPA 70, NEC Article 727.
IEC 60331	Tests for electric cables under fire conditions
BS 6387 CWZ	Test method for resistance to fire of cables required to maintain circuit integrity under fire conditions

CONSTRUCTION DETAILS

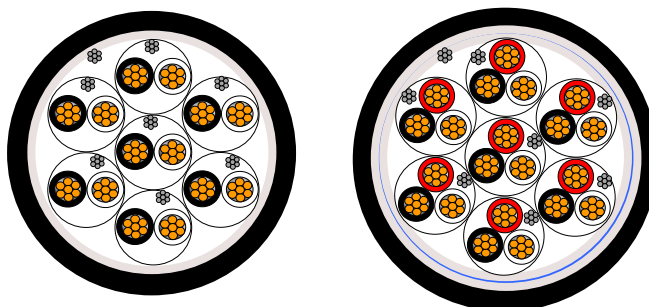
CONDUCTOR	Stranded, circular copper, per ASTM B3, 7 strands minimum; tinned, per ASTM B33
FIRE WRAP MATERIAL	Each conductor is wrap with MICA FIRE RESISTANT TAPE.
INSULATION	Crosslinked Polyethylene (XLPE) rated 90°C
COLOR CODES	-Pairs : Black/White with successive numbers on each core. -Triads: Black/White/Red with successive numbers on each core.
PAIRS/TRIADS	Two or Three cores are twisted into Pairs/Triads, in nominal lay length of 50 to 60 mm.
INDIVIDUAL SHIELDING	Aluminum-Polyester (AL-PET foil) laminated tape with 100% coverage and suitable overlap, in contact with stranded tinned copper drain wire.
ASSEMBLY	The required number of pairs/triads are assembled with non-hygroscopic fillers (if required) and wrapped with a polyester binder tape
OVERALL SHIELDING	Aluminum-Polyester (AL-PET foil) laminated tape with 100% coverage and suitable overlap, in contact with stranded tinned copper drain wire.
OUTER JACKET	Extruded Low Smoke Zero Halogen (LSZH).

ELECTRICAL PROPERTIES

			CONDUCTOR SIZE (AWG)			
	MATERIAL TYPE	UNIT	18	16	14	12
CONDUCTOR (DC) RESISTANCE @ 20°C(Ω/Km)	PLAIN Cu	Ω/Km	≤21.80	≤13.70	≤8.620	5.41
	TINNED Cu	Ω/Km	≤22.70	≤14.30	≤8.96	5.61
Insulation Resistance (min.)		MΩ/Km	10	10	10	10
Mutual Capacitance	XLPE	nF/Km	150	150	150	150
	PVC	nF/Km	250	250	250	250
Inductance to Resistance Ratio	L/R	μH/Ω	25	40	60	100
Voltage Test	1.5 Kv AC (2 sec)					
Voltage Rating	300V					

PHYSICAL & ENVIRONMENTAL PROPERTIES

Fire Resistant	IEC 60331, BS 6387 CWZ
Smoke density	IEC 61034
Gases toxicity	No toxicity to IEC 60754-1
Gases corrosivity	Low IEC 60754-2
Minimum Bending Radius	10xCable Outside Diameter
Temperature Range	-30°C to 90°C



DIMENSIONS AND WEIGHTS

ASH CABLES ITEM CODE	Cross Sectional Area (AWG) (No. of wire X SIZE mm)	NO. OF PAIRS/ TRIAD	Jacket Thickness (nom.) (mm)	Overall diameter Approx. (mm)	Net Weight Approx. (Kg/km)
IAFM-02P18AWG-UXXXX	18 (7X0.388)	2P	1.27	12.30	140
IAFM-04P18AWG-UXXXX		4P	1.27	14.00	215
IAFM-06P18AWG-UXXXX		6P	1.52	17.20	315
IAFM-08P18AWG-UXXXX		8P	1.52	19.50	395
IAFM-10P18AWG-UXXXX		10P	1.52	22.00	475
IAFM-12P18AWG-UXXXX		12P	1.78	23.20	580
IAFM-16P18AWG-UXXXX		16P	1.78	25.60	700
IAFM-24P18AWG-UXXXX		24P	2.03	32.20	1050
IAFM-02T18AWG-UXXXX	18 (7X0.388)	2T	1.27	14.20	180
IAFM-04T18AWG-UXXXX		4T	1.52	17.00	300
IAFM-06T18AWG-UXXXX		6T	1.52	20.20	410
IAFM-08T18AWG-UXXXX		8T	1.78	23.00	540
IAFM-10T18AWG-UXXXX		10T	1.78	26.20	650
IAFM-12T18AWG-UXXXX		12T	1.78	27.20	750
IAFM-16T18AWG-UXXXX		16T	1.78	30.30	950
IAFM-24T18AWG-UXXXX		24T	2.03	38.00	1400
IAFM-02P16AWG-UXXXX	16 (7X0.488)	2P	1.27	16.50	200
IAFM-04P16AWG-UXXXX		4P	1.52	19.00	350
IAFM-06P16AWG-UXXXX		6P	1.52	23.20	495
IAFM-08P16AWG-UXXXX		8P	1.78	26.50	650
IAFM-10P16AWG-UXXXX		10P	1.78	30.00	800
IAFM-12P16AWG-UXXXX		12P	1.78	31.00	910
IAFM-16P16AWG-UXXXX		16P	2.03	34.50	1200
IAFM-24P16AWG-UXXXX		24P	2.03	42.50	1725
IAFM-02T16AWG-UXXXX	16 (7X0.488)	2T	1.52	19.50	290
IAFM-04T16AWG-UXXXX		4T	1.52	22.50	475
IAFM-06T16AWG-UXXXX		6T	1.78	27.60	690
IAFM-08T16AWG-UXXXX		8T	1.78	30.80	870
IAFM-10T16AWG-UXXXX		10T	2.03	35.20	1110
IAFM-12T16AWG-UXXXX		12T	2.03	36.50	1250
IAFM-16T16AWG-UXXXX		16T	2.03	40.50	1630
IAFM-24T16AWG-UXXXX		24T	2.29	50.20	2420

Dimensions and Weights are subject for manufacturing Tolerance.

DIMENSIONS AND WEIGHTS

ASH CABLES ITEM CODE	Cross Sectional Area (AWG) (No. of wire X SIZE mm)	NO. OF PAIRS/ TRIAD	Jacket Thickness (nom.) (mm)	Overall diameter Approx. (mm)	Net Weight Approx. (Kg/km)
IAFM-02P14AWG-UXXXX	14(7X0.615)	2P	1.52	18.20	275
IAFM-04P14AWG-UXXXX		4P	1.78	21.20	445
IAFM-06P14AWG-UXXXX		6P	1.78	25.70	650
IAFM-08P14AWG-UXXXX		8P	1.78	28.80	820
IAFM-10P14AWG-UXXXX		10P	1.78	32.50	1000
IAFM-12P14AWG-UXXXX		12P	2.03	34.10	1200
IAFM-16P14AWG-UXXXX		16P	2.03	37.50	1530
IAFM-24P14AWG-UXXXX		24P	2.29	47.00	2250
IAFM-02T14AWG-UXXXX	14(7X0.615)	2T	1.52	21.20	365
IAFM-04T14AWG-UXXXX		4T	1.78	25.10	630
IAFM-06T14AWG-UXXXX		6T	1.78	29.80	885
IAFM-08T14AWG-UXXXX		8T	2.03	34.10	1170
IAFM-10T14AWG-UXXXX		10T	2.03	38.40	1430
IAFM-12T14AWG-UXXXX		12T	2.03	45.70	1650
IAFM-16T14AWG-UXXXX		16T	2.29	46.50	2170
IAFM-24T14AWG-UXXXX		24T	2.29	55.00	3200
IAFM-02P12AWG-UXXXX	12 (7X0.775)	2P	1.52	20.00	340
IAFM-04P12AWG-UXXXX		4P	1.52	23.10	550
IAFM-06P12AWG-UXXXX		6P	1.78	28.00	820
IAFM-08P12AWG-UXXXX		8P	1.78	31.50	1050
IAFM-10P12AWG-UXXXX		10P	2.03	35.80	1350
IAFM-12P12AWG-UXXXX		12P	2.03	37.20	1560
IAFM-16P12AWG-UXXXX		16P	2.03	41.20	2000
IAFM-24P12AWG-UXXXX		24P	2.29	51.20	2970
IAFM-02T12AWG-UXXXX	12 (7X0.775)	2T	1.52	23.00	450
IAFM-04T12AWG-UXXXX		4T	1.78	27.50	810
IAFM-06T12AWG-UXXXX		6T	1.78	32.70	1150
IAFM-08T12AWG-UXXXX		8T	2.03	37.30	1520
IAFM-10T12AWG-UXXXX		10T	2.03	42.20	1870
IAFM-12T12AWG-UXXXX		12T	2.29	44.00	2220
IAFM-16T12AWG-UXXXX		16T	2.29	49.30	2880
IAFM-24T12AWG-UXXXX		24T	2.29	61.00	4250

Dimensions and Weights are subject for manufacturing Tolerance.