

#### APPLICATION

- For indoor and outdoor installation, on racks and tray, in dry and wet locations, and suitable for direct burial.
- For Transmission of analogue and digital signals in instrument and control systems; allowed for use in hazardous classified locations class I and class II division 2 acc. to NEC 501-4(b) and NEC 502-4(b)
- Foundation fieldbus application.

#### 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.
FF-844 TYPE A, H1	FF-844 H1 Cable Test Specification
IEC 61158-2 Section 12.8.2	Industrial communication networks - Fieldbus specifications

#### CONSTRUCTION DETAILS

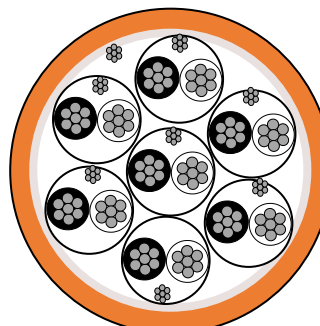
<b>CONDUCTOR</b>	Stranded, circular copper, per ASTM B3, 7 strands minimum: tinned, per ASTM B33
<b>INSULATION</b>	Thermoset crosslinked Polyethylene (XLPE) rated 90°C
<b>COLOR CODES</b>	-Pairs : Black/White with successive numbers on each core.
<b>PAIRS</b>	Two cores are twisted into Pairs, in nominal lay length of 50 to 60 mm.
<b>INDIVIDUAL SHIELDING</b>	Aluminum-Polyester (AL-PET foil) laminated tape with 100% coverage and suitable overlap, in contact with stranded tinned copper drain wire.
<b>ASSEMBLY</b>	The required number of pairs/triads are assembled with non-hygroscopic fillers (if required) and wrapped with a polyester binder tape
<b>OVERALL SHIELDING</b>	Aluminum-Polyester (AL-PET foil) laminated tape with 100% coverage and suitable overlap, in contact with stranded tinned copper drain wire.
<b>OUTER JACKET</b>	Poly Vinyl Chloride Flame Retardant Sunlight and Oil Resistant., Orange color

#### ELECTRICAL PROPERTIES

	UNIT	
<b>CONDUCTOR (DC) RESISTANCE @ 20°C(Ω/Km)</b>	Ω/Km	≤18
<b>Drain Wire DC resistance</b>	Ω/Km	≤51
<b>Mutual Capacitance (conductor to Conductor) @ 1 KHz</b>	nF/Km	≤78
<b>Capacitance Unbalance to Shield (1Khz)</b>	nF/Km	4
<b>Inductance to Resistance Ratio</b>	μH/Ω	25
<b>Attenuation at 1.25 fr (39Khz)</b>	dB/Km	≤3.0
<b>Characteristic Impedance (Zo)@ fr (31.25 KHz)</b>	Ω	100±20
<b>Propagation delay change 0.25 fr to 1.25 fr</b>	μs/Km	1.7

#### PHYSICAL & ENVIRONMENTAL PROPERTIES

<b>Flame Retardant</b>	Flame Retardance Vertical Tray Test of UL
<b>Oil Resistance</b>	Passes Oil test of UL.
<b>Direct Burial</b>	Passes Crush test of UL.
<b>Sunlight Resistance</b>	Passes UL-1581 test (720 hours)
<b>Minimum Bending Radius</b>	10xCable Outside Diameter
<b>Temperature Range</b>	-30°C to 90°C



**ASH INSTRUMENTATION**  
**MULTI PAIR TCU/XLPE/INDIVIDUAL + OVERALL SHIELDED, UNARMORED**  
**FOUNDATION FIELDBUS**  
**UL 13 / UL 2250, PLTC / ITC, 90°C / 300V, IEC 61158-2 TYPE A**  
**Sunlight & Oil Resistant, Flame Retardant**

**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)
IFFX-01P18AWG-UOR6D	<b>18(7X0.386)</b>	1P	0.9	7.00	53
IFFX-02P18AWG-UOR6D		2P	1.27	11.20	126
IFFX-03P18AWG-UOR6D		3P	1.27	11.80	160
IFFX-04P18AWG-UOR6D		4P	1.27	13.00	195
IFFX-05P18AWG-UOR6D		5P	1.27	14.00	230
IFFX-06P18AWG-UOR6D		6P	1.27	15.30	270
IFFX-07P18AWG-UOR6D		7P	1.27	15.50	300
IFFX-08P18AWG-UOR6D		8P	1.52	17.50	360
IFFX-09P18AWG-UOR6D		9P	1.52	19.00	400
IFFX-10P18AWG-UOR6D		10P	1.52	19.90	435
IFFX-11P18AWG-UOR6D		11P	1.52	20.30	465
IFFX-12P18AWG-UOR6D		12P	1.52	20.80	500
IFFX-14P18AWG-UOR6D		14P	1.52	21.80	565
IFFX-16P18AWG-UOR6D		16P	1.78	23.80	665
IFFX-17P18AWG-UOR6D		17P	1.78	24.50	700
IFFX-18P18AWG-UOR6D		18P	1.78	24.80	735
IFFX-20P18AWG-UOR6D		20P	1.78	25.90	800
IFFX-22P18AWG-UOR6D		22P	1.78	27.50	875
IFFX-24P18AWG-UOR6D		24P	1.78	28.50	945

Dimensions and Weights are subject for manufacturing Tolerance.