



RAMCROil - INSTRUMENTATION Cable

For standard applications, low smoke, Halogen Free

Multi-Pair, XLPE-Insulation, Individual & Collective Screen, LSZH-Sheath

Code: MAC0403HEEXN-UL13CC

XLPE/IAM/CAM/LSZH

Application

These cables are designed to connect electronic instrumentation, analog and digital signal circuits. This cable does not spread flame to the top of the tray in the Vertical-Tray Flame Test in UL 1685.

Construction		4x2x16AWG	
Formation	4 Pairs	Unit	Nominal Value
Section	16AWG		
Conductor	Plain annealed copper wire, 7 strand	mm	1,4
Insulation	Cross Linked Polyethylene - XLPE	mm	2,2
Colour Code	White, Black + Numbered Tapes		
Construction COMM.CORE		1C22AWG	
Formation	1 Core	Unit	Nominal Value
Section	22AWG		
Conductor	Plain annealed copper wire, 7 strand	mm	0,7
Insulation	Polyvinyl chloride - PE	mm	1,2
Colour Code	Orange		
Individual Screen	0,026 mm Aluminium / PETP tape over tinned copper drain wire		
Wrapping	at least 1 layer of plastic tape 0,023 mm		
Collective Screen	0,026 mm Aluminium / PETP tape over tinned copper drain wire		
Inner Sheath	N.A.		
Armour	N.A.		
Outer Sheath	Thermoplastic Low Smoke, Halogen Free - LSZH - Black	mm	15,2
Cable Printing	RAMCRO S.p.A. - (UL) Listed E345186 Type PLTC - 4 pr 16 - Shielded - 75°C + BATCH + METER MARKING		

Technical Data & Standard References

Fire Propagation:		Construction Reference Standard:	UL 13
- Test on single cable	IEC 60332-1	Type of Cable:	PLTC Cable
- Test on bunched cables	IEC 60332-3	Low Voltage Directive	2014/35/UE
- Vertical Tray Flame Test	UL1685	Other References:	
Limiting Oxygen Index (LOI)	(min 37%)	- NEC code, sec. 725 PLTC,	
Smoke Density	IEC 61034	- NEC code, sec. 727 ITC,	
Amount of halogen acid gas	IEC 60754-1 (max 0,5%)	- UL 1685	
Acidity (ph value) and conductivity	IEC 60754-2	- ASTM D 1239	
Notes		- NF C 32-020	
		- IRAM IAP	

Electrical & Mechanical Data

Conductor Cross-section	Nom.	16AWG	Temperature Range:	
DC Resistance per core at 20° C	max Ω/km	13,7	During Operation	° C -30° C up to +90° C
Insulation Resistance at 20° C	min MΩ*km	1000	During Installation	° C -5° C up to +50° C
Mutual Capacitance	max nF/km	150		
Inductance	max mH/km	1	Min. Bending Radius	mm 8 x cable diameter
Test Voltage - Core/Core	V	2000	Max Pulling Tension	N/mm2 519
Test Voltage - Core/Screen	V	2000	Weight Approx	kg/km 364
L/R Ratio	max μH/Ω	40		
Operating Voltage	V	300		