

RAMCRO - DATA Cable

For standard applications, low smoke, Halogen Free, flame retardant, Hydrocarbon & UV Res.

Single-Pair, FPE-Insulation, Individual, Double Collective Screen (SF/FTP), LSZH-Sheath

MRT0422HIE4X-PRO

FPE/IAM/bedding/Al-TCWB/LSZH

Application

These cables are designed for harsh industrial fixed installations and rapid cyclic data transmission. Suitable for PROFINET, EtherCAT, Ethernet/IP and others system data optimised for automation technology. Not suitable for direct buried application

Construction

Formation	4 Pair	Unit	Nominal Value
Section	22AWG		
Conductor	Plain annealed copper wire, solid	mm	0,6
Insulation	Foam Polyethylene - FPE	mm	1,6
Colour Code	white/blue, white/orange, white/green, white/brown		
Individual Screen	0,025 mm Aluminium / PETP tape + central tcdw 1x0.4 mm	mm	3,4
Bedding	Thermoplastic Low Smoke, Halogen Free - LSZH	mm	7,8
Collective Screen	Aluminium / PETP + Tinned Copper Braid (85%) + tcdw 7x0.25 mm	mm	8,4
Inner Sheath	N.A.		
Armour	N.A.		
Outer Sheath	Thermoplastic Low Smoke, Halogen Free - LSZH - Green RAL 6018	mm	9,8
Cable Printing	RAMCRO - INDUSTRIAL ETHERNET 100 Ω - O2Y(St+Ce) H - LSZH - 4x2x22AWG - 300V - IEC 60332-3 - IEC 60332-1 UL 1681 + BATCH + METER MARKING		

Technical Data & Standard References

Fire Propagation:		Construction Reference Standard:	INDUSTRIAL ETHERNET 100 Ω
- Test on single cable	IEC 60332-1	Type of Cable:	Data Cable
- Test on bunched cables	IEC 60332-3	Low Voltage Directive	2014/35/UE
Limiting Oxygen Index (LOI)	(min 37%)	Other References:	
Smoke Density	IEC 61034	- BS EN 60228	
Amount of halogen acid gas	IEC 60754-1 (max 0,5%)	- IEC 61158-2, Type A	
Acidity (ph value) and conductivity	IEC 60754-2	- EN 50288-7	
Vertical Tray Flame Test	UL 1685	- BS 6234	
Sunlight Resistance	UL 1581 section 1200	- BS50363	
		- IEC 60332-1	
		- IEC 60332-3-24	
		- ISO/IEC 11801	
		- EIA/TIA 568-A	
		- IEC 61156-5,	
		Category 6A	

Electrical & Mechanical Data

Conductor Cross-section	Nom.	22AWG	Temperature Range:	
DC Resistance per core at 20° C	max Ω /km	56	During Installation	$^{\circ}$ C -5° C up to +50°C
Insulation Resistance at 20° C	min $M\Omega$ *km	1000	Fixed Installation	$^{\circ}$ C -40° C up to +75°C
Mutual Capacitance (Nominal)	max nF/km	9,6	Insulation Operation	$^{\circ}$ C -40° C up to +90°C
Inductance	max mH/km	1	Min. Bending Radius	mm 10 x cable diameter
Test Voltage - Core/Core	V	2000	Max Pulling Tension	N 32
Test Voltage - Core/Screen	V	2000	Weight Approx	kg/km 127
Impedance (f = 100 MHz)	Ω	100 +/- 20		
Operating Voltage	V	300		
Attenuation at f = 16 kHz	Db/Km	< 80		
Attenuation at f = 100 kHz	Db/Km	< 195		
Attenuation at f = 250 MHz	Db/Km	< 315		
Attenuation at f = 500 MHz	Db/Km	< 45		

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