ASI

Your Source for Automation Components

Nexans LANmark Industrial Medium-Duty Ethernet Cables enable the expansion and integration of Ethernet into the Industrial environment. With over 50 years of manufacturing expertise, you can be sure these Industrial Cables will perform both mechanically and electrically. With its 600V AWM design, durable TPE jacket, cold-bend performance, and resistance to oil, weld spatter, and sunlight, this cable is suitable for demanding , static, industrial applications. Additionally, this product has both a foil shield and a braid to protect against low- and high-frequency noise on the factory floor. It is rated CMR and CMX Outdoor, so it easily transitions from indoor to outdoor environments and is also suitable for cable tray installations.

DESCRIPTION

Construction

24 AWG solid tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and four such pairs to form the basic unit, enclosed by polyester tape, and shielded with aluminum/polyester tape (aluminum facing out). Drain wire and 80% optical coverage braid contained within TPE jacket.

Related Standards

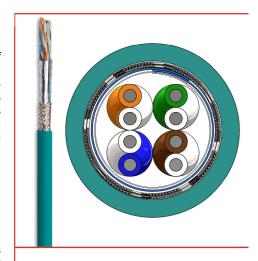Low Voltage - EU Directive 2014/35/EU, CE Approved

RoHS - EU Directive 2011/65/EU

PoE+ - Type 2 (802.3at)

STANDARDS

International ISO/IEC 11801

National ANSI/TIA-568-C.2; UL 444

Nexans

Ratings		
Description	**Method**	
Listed Type	UL1666	CMR
Listed Type	UL444	CMX Outdoor
Oil Resistance	UL1277 11.2	II (75°C)
Sunlight Resistance	UL444 7.22	Yes (720 hrs)

Attributes		
Description	**Method**	
AWM Style	UL758	2463 (600V, 80°C)
Cold Bend	UL444 7.10	-40°C
Weld Spatter Resistance	Internal (SOP 58.8.12)	Yes
Installation Pull Tension (Max):		
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/1.5 lb. load

CHARACTERISTICS

Construction characteristics	
Conductor material	24 AWG Tinned Copper
Insulation	HDPE
Jacket Material	TPE
Braid	Tinned copper - 80% optical coverage
Shielding	Aluminum/Polyester
Core Tape	Polyester
Drain wire	Stranded Tinned Copper 7/32
Dimensional characteristics	
Insulated conductor diameter (Nominal)	0.046 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.29 in
Nominal cable weight	44 lb/kft
Length per reel	1000.0 ft
Electrical characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity of propagation	66 %
Maximum pair to ground unbalance	330 pF/100m
Transfer impedance	Grade 2
Transmission characteristics	
Skew (max.)	45 ns/100m
Usage characteristics	
Minimum Bending Radius - Install	2.32 in
Recommended installation temperature range	-20 .. 80 °C
Recommended operating temperature range	-40 .. 80 °C
Recommended storage temperature range	-40 .. 80 °C

PRODUCT LIST

Part Number	Description	Colour	Packaging
11099201	LANmark-B537 Cat 5e Solid Shielded TPE	Teal	Reel

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LANMARK-B537 - TECHNICAL INFORMATION

Electrical Characteristics		
Parameter	**Frequency**	**Equation**
RL (dB)	1-10 MHz	$20+5*Log(F)$
	10-20 MHz	25
	20-100 MHz	$25-7*Log(F/20)$
Insertion Loss (dB/100m)	1-100 MHz	$1.967*\sqrt{F}+0.023*F+0.050/\sqrt{F}$
NEXT (dB)	1-100 MHz	$35.3-15*Log(F/100)$
PS-NEXT (dB)	1-100 MHz	$32.3-15*Log(F/100)$
ACR (dB/100m)	1-100 MHz	NEXT - Insertion Loss
PS-ACR	1-100 MHz	PS-NEXT - Insertion Loss
ACRF (dB)	1-100 MHz	$23.8-20*Log(F/100)$
PSACRF (dB)	1-100 MHz	$20.8-20*Log(F/100)$
Propagation Delay	1-100 MHz	$537+(36/\sqrt{F})$
Max Transfer Impedance (mΩm)	1; 10; 30; 100 MHz	50; 100; 200; 1000
Min Coupling Attenuation (dB/100m)	30-100 MHz	55

Transmission Characteristics		
Description		
ISO/IEC 11801		Category 5
ANSI/TIA-568-C.2		Category 5e
Coupling Attenuation	IEC 61156-5	Type II
Transfer Impedance	IEC 61156-5	Grade 2

Color Code		
Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown