

LANmark-C539 Cat 5e High Flex TPE

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Contact

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Part Number: 11099204

Nexans LANmark Industrial Heavy-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, continuous-motion, industrial applications. Additionally, the stranded conductors also help maintain performance in a high-vibration environment. It is also suitable for cable tray installations.

DESCRIPTION

Construction

24 AWG stranded tinned copper wire insulated with FRPE. Two insulated conductors twisted together to form a pair and four such pairs to form the basic unit, enclosed by polyester tape, with TPE jacket.

Related Standards

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

RoHS - EU Directive 2011/65/EU

PoE+ - Type 2 (802.3at)

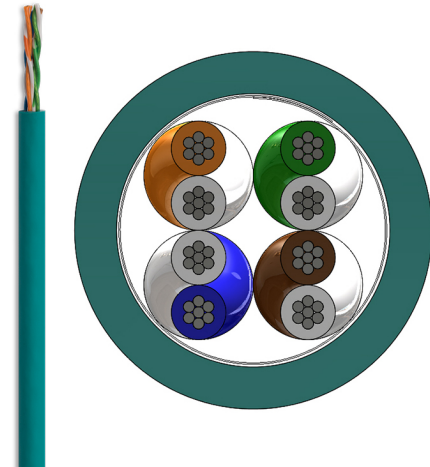
ODVA EtherNet/IP™ Compliant

Agency Ratings

Description	Method	
Listed Type	UL1685	CM
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)
Flex Life	Trailing Chain 10x OD	1 million cycles
Flex Life	Trailing Chain 20x OD	10 million cycles
Flex Life	Torsion (+/- 270°)	3 million cycles
Installation Pull Tension (Max):		
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.00 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/1.5 lb. load



EtherNet/IP™
ODVA Compliant

STANDARDS

International ISO/IEC 11801;
ODVA EtherNet/IP Compliant

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

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

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The Nexans logo features a stylized red 'N' followed by the word 'Nexans' in a black, sans-serif font.

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CHARACTERISTICS

Construction characteristics

Conductor material	24 AWG Stranded Tinned Copper (7/32)
Insulation	FRPE
Jacket Material	TPE
Core Tape	Polyester
Colour	Teal

Dimensional characteristics

Insulated conductor diameter (Nominal)	0.041 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.25 in
Nominal cable weight	32 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	67 %
Maximum pair to ground unbalance	330 pF/100m

Transmission characteristics

Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2

Mechanical characteristics

Maximum installation tension	25 lb
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Usage characteristics

Minimum Bending Radius - Install	1 in
Packaging	Reel
Recommended installation temperature range	-20 .. 80 °C
Recommended operating temperature range	-40 .. 80 °C
Recommended storage temperature range	-40 .. 80 °C
Maximum cable length	83 m
Cold Bend	-40 °C
Weld spatter resistance	Yes

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LANMARK-C639 - TECHNICAL INFORMATION

ANSI/TIA-568-C.2

Electrical Characteristics		
Parameter	Frequency	Equation
RL (dB)	1-10 MHz	$20+5*\text{Log}(F)$
	10-20 MHz	25
	20-100 MHz	$25-7*\text{Log}(F/20)$
Insertion Loss (dB/100m)	1-100 MHz	$(1.967*\sqrt{F}+0.023*F+0.050/\sqrt{F})*1.2$
NEXT (dB)	1-100 MHz	$35.3-15*\text{Log}(F/100)$
PS-NEXT (dB)	1-100 MHz	$32.3-15*\text{Log}(F/100)$
ACR (dB/100m)	1-100 MHz	NEXT - Insertion Loss
PS-ACR	1-100 MHz	PS-NEXT - Insertion Loss
ACRF (dB)	1-100 MHz	$23.8-20*\text{Log}(F/100)$
PSACRF (dB)	1-100 MHz	$20.8-20*\text{Log}(F/100)$
Propagation Delay	1-100 MHz	$537+(36/\sqrt{F})$

Transmission Characteristics	
Description	
ISO/IEC 11801	Category 5
ANSI/TIA-568-C.2	Category 5e
ODVA EtherNet/IP™ Compliant	Category 5e

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