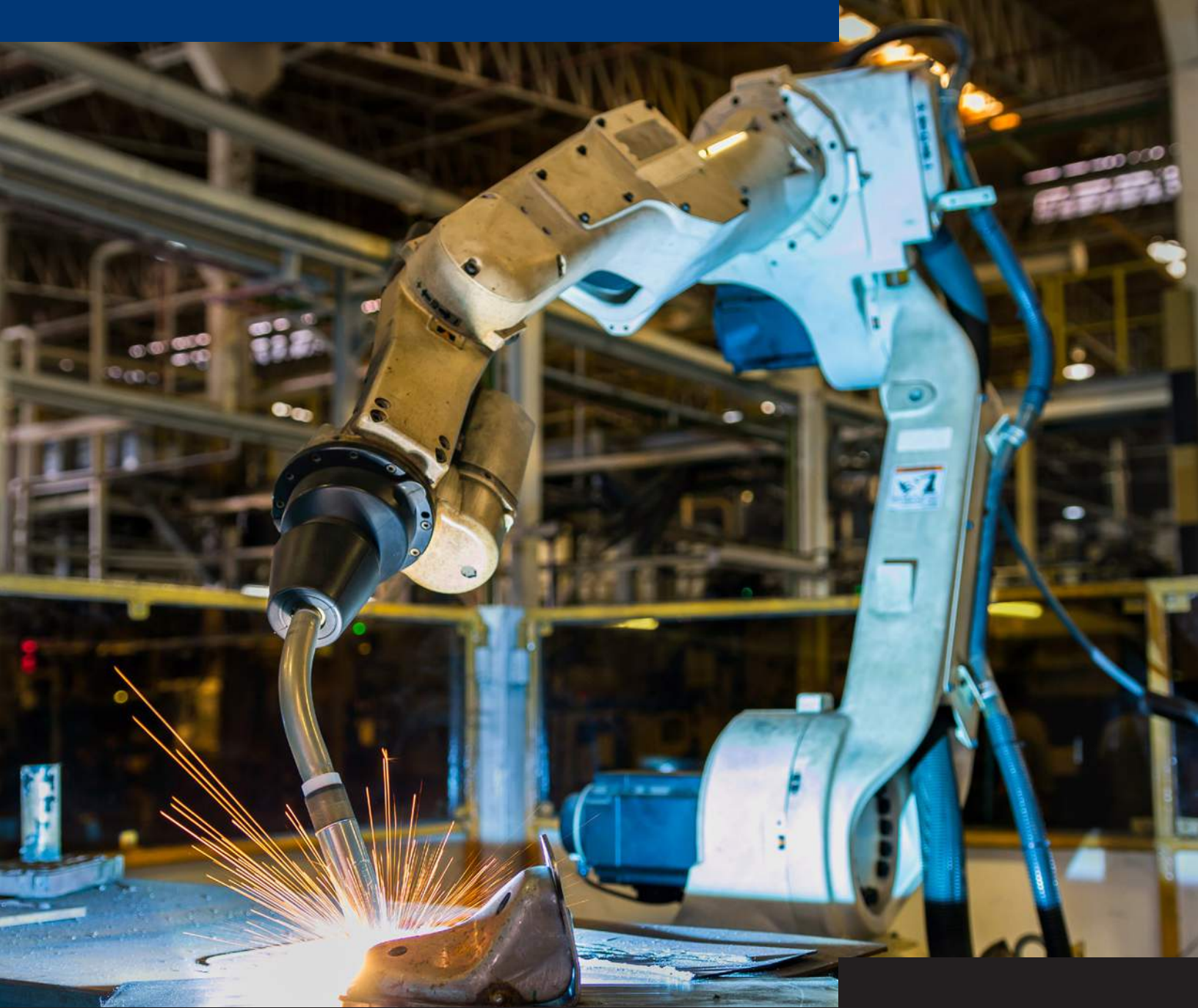


Nexans Industrial Solutions
PRODUCT CATALOG



NEXANS BRINGS ENERGY TO LIFE

Nexans brings energy to life through an extensive range of cables and cabling solutions that deliver increased performance for our customers worldwide. Nexans' teams are committed to a partnership approach that supports customers in four main business areas: Power Transmission and Distribution (Submarine and Land), Energy Resources (Oil & Gas, Mining and Renewables), Transportation (Road, Rail, Air, Sea) and Building (Commercial, Residential and Data Centers).

Nexans' strategy is founded on continuous innovation in products, solutions and services, employee development, customer training and the introduction of safe, low environmental impact industrial processes. In 2013, Nexans became the first cable player to create a Foundation to introduce sustained initiatives for access to energy for disadvantaged communities worldwide.

We have an industrial presence in 40 countries and commercial activities worldwide, employing close to 26,000 people and generating annual sales of more than 6.4 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A.

In the field of industrial cabling solutions, Nexans offers a complete range of products and value-added services providing improved reliability and reduced cost of ownership for network managers, together with faster installation times for installers.

Nexans offers an unrivaled choice of LAN infrastructure solutions to a global customer base through an extensive network of regional offices and a key account management team.



Nexans Industrial Solutions

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CONNECT & CONVERGE

Industrial Ethernet (IE) is the technology of the future for the factory floor because it enables convergence to the office and to the internet, which is impossible over traditional, often piecemealed bus technologies. Nexans industrial Ethernet solutions give you the confidence to make the connection to IE by avoiding, eliminating, and minimizing risk, and ultimately achieving 100% uptime.

The Fourth Industrial Revolution

We are in the midst of the fourth industrial revolution, characterized by the introduction of Cyber-Physical systems. A Cyber-Physical System is a mechanism controlled or monitored by computer-based algorithms tightly integrated with the internet and its users. Reliable connections between the machines, the people, and the internet are, in a word, everything. One bad connection can mean the flow of information is disrupted, which could have devastating results on your operation and your bottom line.

Game-Changing Industrial Ethernet

Depending on the source you look at, it's expected there will be between 20-75 billion devices connected to the internet by 2020. And a significant number of these devices are on the factory floor. What does that mean to the industrial network? It means that Industrial Ethernet solutions will become even more critical to maximizing the profitability of an industrial operation.

Common Ecosystem (vs. Piecemeal Solutions)

The office environment has moved away from piecemeal solutions that were prevalent in the 1970's and 1980's, and settled on Ethernet as a common ecosystem that connects everything. The same thing is happening in the industrial space. Piecemeal Fieldbus solutions like PROFIBUS, Modbus and DeviceNet are being replaced by Industrial Ethernet solutions at a rate of 20% per year.

Converging Networks

Since the same network connecting machines, devices, and sensors on the factory floor, is synchronized with the office network, the technicians on the shop floor can make real-time adjustments to ensure targeted numbers are hit. At the same time, the office side can see the results in real-time. This eliminates the Tuesday meeting to talk about Monday's results.

Virtual Networking

Floor technicians can now create what is known as a Virtual Twin of their factory environment. They can run virtual experiments and analysis to determine how to maximize output and quickly forecast potential bottlenecks along the critical path.



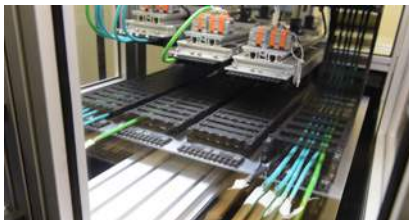
Nexans gives you the confidence to make the connection!

Nexans understands that downtime is lost time. And lost time means lost profitability. Nexans' Industrial Ethernet Solutions are tested vigorously to ensure you're getting a solution you can trust; one that supports your requirement for 100% uptime.

Protect Your IP Traffic in the Harshest Industrial Environments

Nexans runs our products through vigorous mechanical testing. After this testing is complete, cables are retested to ensure they are suitable for data transmission.

- Drag Chain: Cable placed in a drag chain and is tested up to 10 million cycles
- Tic Toc: Cable is mechanically moved like a pendulum replicating a robotic application
- Torsion: Cable is rotated by 270° three million times to replicate a robotic application
- Abrasion Cycles: Cable is cycled 75 times against sandpaper under 1.5 lbs.



Drag Chain Test

The drag chain test certifies a cable's capability for bending along the chain path. Nexans performs this test on all of our cables designated as High Flex. The cable is placed in a one-meter drag chain and tested to 10 million cycles at a bend radius of $\leq 20x$ the cable diameter, and 1 million cycles at a bend radius of $\leq 10x$ the cable diameter.



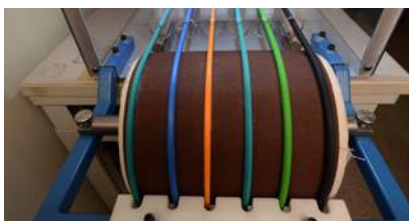
Tick Tock Test

In this test, the cable is mechanically moved back and forth through a 180° arc, similar to a pendulum. It is designed to replicate movement of the cable in a robotic application.



Torsion Test

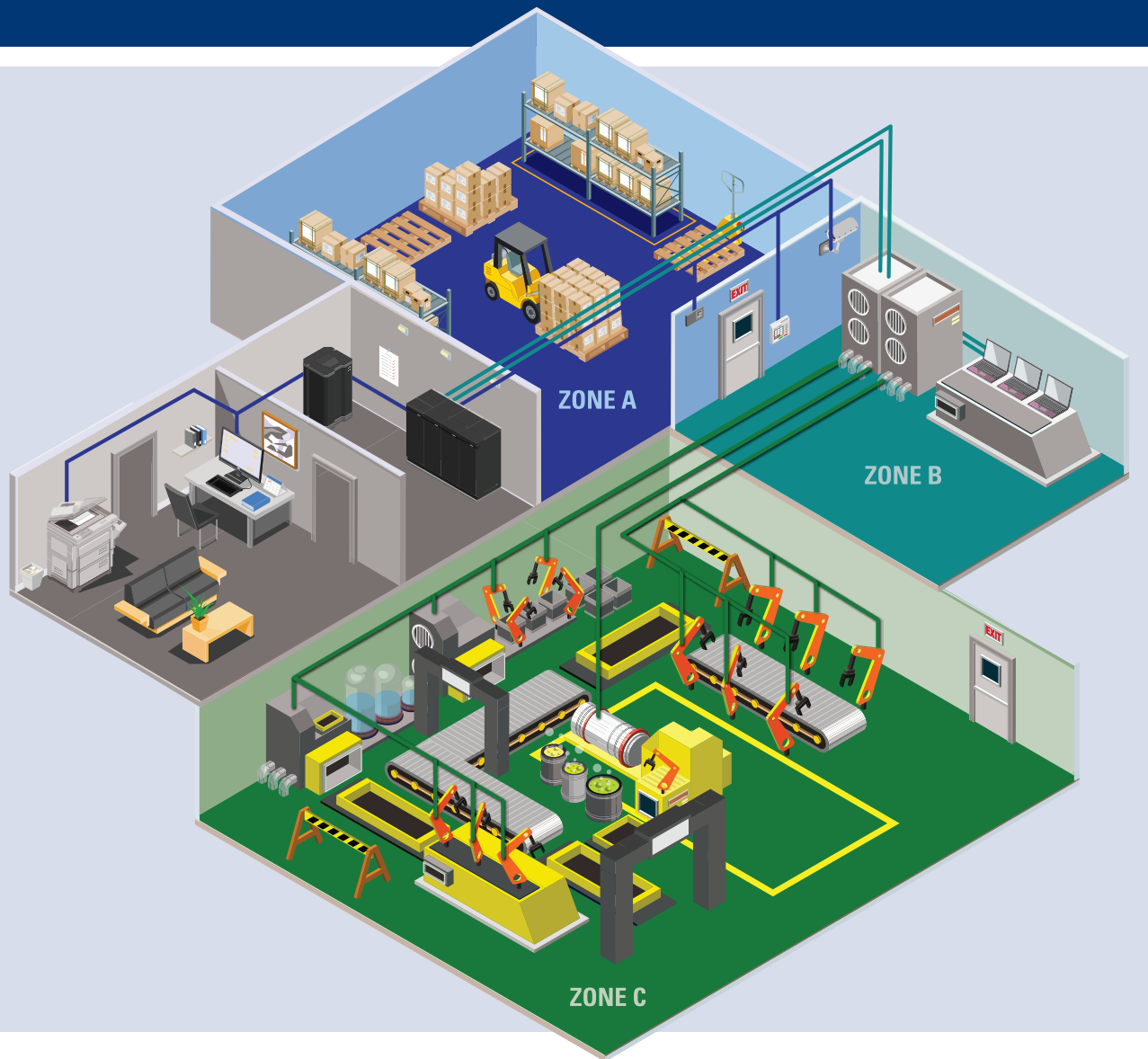
This test is performed on all Nexans Industrial cables designated as High Flex, to test the cable's ability to be continually twisted and un-twisted in repetitive cycle applications. With a vertical load of 2.75 pounds, the cable is rotated $\pm 270^\circ$ for three million cycles to replicate a robotic application.



Abrasion Test

In this test, which is conducted on all of our cables designated Abrasion Resistant, the cable is cycled up to 75 times over an abrasive drum with a vertical load of 1.5 pounds applied to the cable. Abrasion resistant cables will exhibit no exposure of the core at the conclusion of the test.

SOLUTIONS FOR EVERY ENVIRONMENT



Anatomy of an Industrial Ethernet Environment

Zone A: Infrastructure IT cabling

This area is the link between the office and the industrial environment. Cables are installed in a ceiling tray and do not come into contact with machinery or harsh conditions. Zone A typically includes access controls, IP cameras and wireless access points.

Zone B: Control panel interconnection

This area is within your industrial environment, so cables are exposed to variable temperatures, electrical noise, dust, and other conditions. Zone B cabling connects your PLCs, HMIs, PC-based controllers, and other monitoring devices.

Zone C: The most demanding conditions

This is the most extreme area of your industrial environment, where cables are exposed to repetitive motion, extreme temperatures, oil, dust, and humidity. Zone C cabling connects your motors, robotics, tanks, valves, and process automation equipment.

The tables in this brochure provide product recommendation guidelines for each zone, but many cables are suitable for more than one zone. Please contact your Nexans representative to discuss specific solutions.

BULK CABLE SELECTOR GUIDE

Zone A | Product Recommendations | Copper

Zone A: Infrastructure IT cabling from the Enterprise Network to the Plant														
LANmark Industrial Light Duty Series														
	Physical Characteristics						Performance Rating							
	Construction	Wire Gauge	Shielding	Jacket Material	Nominal Diameter									
Cat 5e	LANmark-A753	4 Pair U/UTP	24 AWG	None	PVC	0.23"	Solid	Riser CMX Outdoor	OR 1	SR II	600V Rating AWM	Yes	-40°C to 80°C	40 lbs.
Cat 6	LANmark-A689	4 Pair U/UTP	23 AWG	None	PVC	0.26"	Solid	Riser CMX Outdoor	OR I	SR II	600V Rating AWM	Yes	-40°C to 80°C	40 lbs.
Cat 6A	LANmark-A750	4 Pair U/UTP	23 AWG	Discontinuous Foil	PVC	0.31"	Solid	Riser CMX Outdoor	OR 1	SR II	600V Rating AWM	Yes	-40°C to 80°C	40 lbs.

Zone A | Product Recommendations | Fiber

Zone A: Infrastructure IT cabling from the Enterprise Network to the Plant											
	Physical Characteristics			Performance Rating							
	Construction	Jacket Material	Max Fibers								
GIGalite OM1 - OM4 or SMF	Premises Distribution I/O	Tight Buffer	PVC	144	Riser, Plenum	Indoor/Outdoor optional	No	No	optional	Yes	-40°C to 75°C
	Heavy Duty Breakout	Tight Buffer (Breakout Style)	PVC / PVDF	48(R) 36(P)	Riser, Plenum	Indoor/Outdoor optional	No	No	optional	Yes	-40°C to 75°C
	Adventum I/O	Loose Tube (Dry-Gel)	PVC/ PVDF/ LSZH	432	Riser	Indoor/Outdoor	No	No	Yes	Yes	-40°C to 75°C
	Outside Plant All Dielectric	Loose Tube (Gel Filled)	MDPE	216	No	Outdoor	No	No	Yes	Yes	-40°C to 75°C
	Outside Plant	Loose Tube (Gel Filled)	PVC/ LSZH	144	Riser	Indoor/Outdoor	No	No	Yes	Yes	-40°C to 75°C

All Nexans cables are suitable for tray installation. Nexans fiber cables are available with Armor-Tek Aluminum or Steel Interlock Armor for superior crush and rodent resistance. Direct Bury with corrugated steel available on Adventum I/O and Outside Plant All Dielectric. Dielectric Armor is optional on Adventum I/O and Outside Plant All Dielectric (12 fibers max), and Outside Plant All Dielectric.

BULK CABLE SELECTOR GUIDE











Zone B | Product Recommendations | Copper

Zone B: Control Panel Interconnection														
LANmark Industrial Medium Duty Series														
	Physical Characteristics					Performance Rating								
	Construction	Wire Gauge	Shielding	Jacket Material	Nominal Diameter									
Cat 5e	LANmark-B535	2 Pair U/UTP	24 AWG	No	TPE	0.24"	Solid	CM CMX Outdoor	OR II	600V Rating AWM	-40°C to 80°C	SR II	Yes	40 lbs.
	LANmark-B537	4 Pair SF/UTP	24 AWG	Braid and Foil	TPE	0.28"	Solid	Riser CMX Outdoor	OR II	600V Rating AWM	-40°C to 80°C	SR II	Yes	40 lbs.
	LANmark-B587	2 Pair SF/UTP	24 AWG	Braid and Foil	PVC	0.26"	Stranded	Riser CMX Outdoor	OR I	600V Rating AWM	-40°C to 80°C	SR I	No	40 lbs.
	LANmark-B585	2 Pair U/UTP	24 AWG	No	PVC	0.24"	Stranded	Riser CMX Outdoor	OR I	600V Rating AWM	-40°C to 80°C	SR I	No	40 lbs.
	LANmark-B540	4 Pair U/UTP	24 AWG	No	PVC	0.25"	Stranded	Riser CMX Outdoor	OR I	600V Rating AWM	-40°C to 80°C	SR I	No	40 lbs.
Cat 6	LANmark-B752	4 Pair F/UTP	23 AWG	Foil	PVC	0.31"	Solid	Riser CMX Outdoor	OR I	600V Rating AWM	-40°C to 80°C	SR II	Yes	40 lbs.
Cat 6A	LANmark-B751	4 Pair F/UTP	23 AWG	Foil	PVC	0.31"	Solid	Riser CMX Outdoor	OR I	600V Rating AWM	-40°C to 80°C	SR II	Yes	40 lbs.

Performance Rating Key: Zone A | Zone B | Zone C

	Conductor		Continuous High Flex Life
	Flame Rating		Indoor/Outdoor Use
	Fungus Resistant		Water block/resistance
	Abrasion Resistance		Oil Resistance I (60 °C) and II (75 °C)
	Weld Spatter Resistant		UV/Sunlight Resistance I (300hrs) and II (720hrs)
	Voltage Rating		Pull Tension
	Operating Temperature		








Zone C | Product Recommendations | Copper

Zone C: Near Machines and Equipment															
LANmark Industrial Heavy Duty Series															
	Physical Characteristics				Performance Rating										
	Con- struction	Wire Gauge	Shielding	Nominal Diameter											
Cat 5e	LANmark-C541	2 Pair SF/UTP	24 AWG	Braid and Foil	0.26"	Stranded	CM CMX Outdoor	OR II	SR II	600V Rating AWM	-40°C to 80°C	Yes	10 million	75 cycles/1.5 lb	40 lbs.
	LANmark-C542	4 Pair SF/UTP	24 AWG	Braid and Foil	0.30"	Stranded	Riser CMX Outdoor	OR II	SR II	600V Rating AWM	-40°C to 80°C	Yes	10 million	75 cycles/1.5 lb	40 lbs.
	LANmark-C538	2 Pair U/UTP	24 AWG	No	0.24"	Stranded	CM CMX Outdoor	OR II	SR II	600V Rating AWM	-40°C to 80°C	Yes	10 million	75 cycles/1.5 lb	40 lbs.
	LANmark-C539	4 Pair U/UTP	24 AWG	No	0.24"	Stranded	CM CMX Outdoor	OR II	SR II	600V Rating AWM	-40°C to 80°C	Yes	10 million	75 cycles/1.5 lb	40 lbs.
	LANmark-C547*	2 Pair SF/UTP	22 AWG	Braid and Foil	0.31"	Stranded	CM CMX Outdoor	OR II	SR II	600V Rating AWM	-40°C to 80°C	Yes	10 million	75 cycles/1.5 lb	40 lbs.
Cat 6A	LANmark-C545	4 Pair SF/UTP	24 AWG	Braid and Foil	0.32"	Stranded	Riser CMX Outdoor	OR II	SR II	600V Rating AWM	-40°C to 80°C	Yes	10 million	75 cycles/1.5 lb	40 lbs.
	LANmark-C637	4 Pair SF/UTP	26 AWG	Braid and Foil	0.29"	Stranded	Riser CMX Outdoor	OR II	SR II	600V Rating AWM	-40°C to 80°C	Yes	10 million	75 cycles/1.5 lb	40 lbs.

All cables have a TPE Jacket Material.

* PROFINET Power Limited Tray Cable (PLTC)

Zone C | Product Recommendations | Fiber

Zone C: Near Machines and Equipment											
GIGalite OM1 - OM4 or SMF	Physical Characteristics			Performance Rating							
	Construction	Jacket Material	Max Fibers								
Premises Distribution Harsh Environment	Tight Buffer	PVDF	144	Plenum	Indoor/Outdoor	Yes	Yes	Yes	Yes	-40°C to 75°C	
Adventum Harsh Environment	Loose Tube (DryGel)	PVDF	432	Plenum	Indoor/Outdoor	Yes	Yes	Yes	Yes	-40°C to 75°C	
Tactical Fiber Cable	Tight Buffer	PUR	4	No	Outdoor	Yes	Yes	Yes	No	-46°C to 71°C	



COPPER CABLES

Zone A: Light Duty

LANmark-A753: Cat 5e, UTP, PVC 4-Pair, Solid, 24 AWG	10
LANmark-A689: Cat 6, UTP, PVC, 4-Pair, Solid 23 AWG	12
LANmark-A750: Cat 6A, X/UTP, PVC, 4-Pair, Solid 23 AWG	14

Zone B: Medium Duty

LANmark-B535: Cat 5e, 2-Pair, Solid, U/UTP, 600V, Oil-Sun Res, TPE	16
LANmark-B537: Cat 5e, 4-Pair, Solid, U/UTP, 600V, Oil-Sun Res, CMR-CMX Outdoor, TPE	18
LANmark-B587: Cat 5e, 2-Pair, Stranded, SF/UTP, 600V, CMR-CMX Outdoor, PVC	20
LANmark-B585: Cat 5e, 2-Pair, Stranded, U/UTP, 600V, CMR-CMX Outdoor, PVC	22
LANmark-B540: Cat 5e, 4-Pair, Stranded, U/UTP, 600V, CMR-CMX Outdoor, PVC	24
LANmark-B752: Cat 6, F/UTP, PVC, 4-Pair, Solid, 23 AWG	26
LANmark-B751: Cat 6A, F/UTP, PVC, 4-Pair, Solid, 23 AWG	28



Zone C: Heavy Duty

LANmark-C541: Cat 5e, 2-Pair, High Flex, SF/UTP, 600V, Oil-Sun Res, TPE	30
LANmark-C542: Cat 5e, 4-Pair, High Flex, SF/UTP, 600V, Oil-Sun Res, CMR-CMX Outdoor, TPE	32
LANmark-C538: Cat 5e, 2-Pair, High Flex, U/UTP, 600V, Oil-Sun Res, TPE.	34
LANmark-C539: Cat 5e, 4-Pair, High Flex, U/UTP, 600V, Oil-Sun Res, TPE.	36
LANmark-C547: Cat 5e, Profinet, 2-Pair, High Flex, SF/UTP, 600V, Oil-Sun Res, TPE	38
LANmark-C545: Cat 6A, 4-Pair, 24 AWG, High Flex, SF/UTP, 600V, Oil-Sun Res, CMR-CMX Outdoor, PVC	40
LANmark-C637: Cat 6A, 4-Pair, 26 AWG, High Flex, SF/UTP, 600V, Oil-Sun Res, CMR-CMX Outdoor, PVC	42

Outside Plant

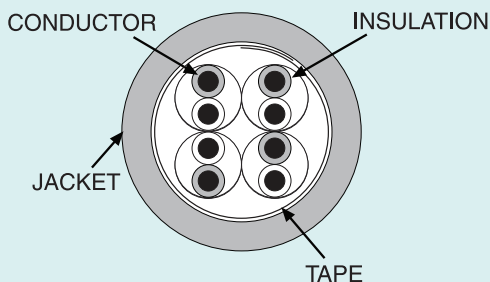
LANmark-6A OSP: Cat 6A, 4-Pair, UTP	44
LANmark-1000 OSP: Cat 6, 4-Pair, UTP.	46
LANmark-6 OSP: Cat 6, 4-Pair, UTP.	48
Essential-5e OSP: Cat 5e, 4-Pair, UTP.	50

LANMARK-A753

Cat 5e, UTP, PVC 4-Pair, Solid, 24 AWG

ZONE

A



TEMPERATURE RATING

Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C

RATING

Listed Type	UL1666, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1581 50.182 (60°C)
Sunlight Resistance	UL444 7.22, Yes (720 hrs)

Light- to medium-duty cable suitable for industrial applications including indoor/outdoor environments, sunlight resistance and light chemical exposure.

600V AWM design | CMR-CMX Outdoor | Cat 5e performance

- Superior Cat 5e performance
- 600V AWM design for best electrical performance near machines and panels
- Sunlight Resistance II (720 hours) and Oil Resistance I (60°C)
- Weld Spatter resistance, Abrasion resistance up to 75 cycles and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099216	LANmark-A753 Cat 5e Solid CMR-CMX Outdoor PVC	1000 ft. Reel	Teal





TECHNICAL DATA	
Construction Characteristics	
Conductor material	23 AWG Solid Bare Copper
Jacket Material	PVC
Core Tape	Foamed polypropylene
Insulation	HDPE
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.036 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.238 in
Nominal cable weight	26 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 propagation	70%
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	2.58 in

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

23 AWG solid bare copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair, Four such pairs and a cross filler form the basic unit, enclosed by polypropylene tape contained within an industrial PVC jacket.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 5e
ANSI/TIA-568-C.2	Category 5e

ATTRIBUTES

Description	Method	
AWM Style	UL758 21695	(600V, 80°C)
Cold Bend	UL444 7.10	-40°C
Weld Spatter Resistance	Internal	Yes

Installation Pull Tension (Max):

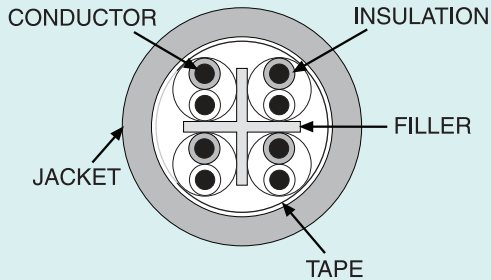
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 0.952 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-A689

Cat 6, UTP, PVC, 4-Pair, Solid, 23 AWG



COPPER CABLES



TEMPERATURE RATING

Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C

RATING

Listed Type	UL1666, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1277 11.2, I (60°C)
Sunlight Resistance	UL444 7.22, Yes (720 hrs)

Light to medium-duty cable suitable for industrial applications including indoor/outdoor environments, sunlight resistance and light chemical exposure.

600V AWM design | CMR-CMX Outdoor | PSACR nearly 3 times better than the TIA specifications

- Superior electrical performance exceeding Category 6 requirements with characterization up to 550MHz, 300 MHz greater than the standard and PSACR nearly 3 times better than TIA specifications
- 600V AWM design for best electrical performance near machines and panels
- Sunlight Resistance II (720 hours) and Oil Resistance I (60°C)
- Weld Spatter resistance, Abrasion resistance up to 75 cycles and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Orange	Orange
Pair-2	White/Green	Green

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099212	LANmark-A689 Cat 6 Solid CMR-CMX Outdoor PVC	1000 ft. Reel	Teal





TECHNICAL DATA	
Construction Characteristics	
Conductor material	23 AWG Bare Copper
Filler	HDPE Cross Filler
Jacket Material	PVC
Core Tape	Foamed polypropylene
Insulation	HDPE
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.039 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.265 in
Nominal cable weight	30 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 propagation	67%
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Mechanical Characteristics	
Maximum installation tension	15 lb
Usage Characteristics	
Minimum Bending Radius - Install	2.58 in

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

23 AWG solid bare copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair, Four such pairs and a cross filler form the basic unit, enclosed by polypropylene tape contained within an industrial PVC jacket.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 6
ANSI/TIA-568-C.2	Category 6

ATTRIBUTES

Description	Method	
AWM Style	UL758 2463	(600V, 80°C)
Cold Bend	UL444 7.10	-40°C
Weld Spatter Resistance	Internal	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	50 cycles/ 1.5 lb. load

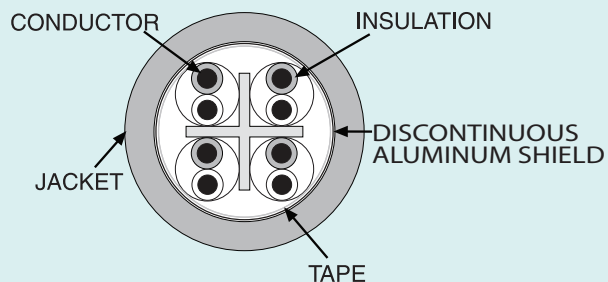
LANMARK-A750

Cat 6A, U/UTP, PVC, 4-Pair, Solid, 23 AWG

ZONE

A

COPPER CABLES



TEMPERATURE RATING

Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C

RATING

Listed Type	UL1666, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1581 50.182 (60°C)
Sunlight Resistance	UL444 7.22, Yes (720 hrs)z

Light to medium-duty cable suitable for industrial applications including high bandwidth indoor/outdoor environments, sunlight resistance and light chemical exposure.

600V AWM design | CMR-CMX Outdoor | Cat6A XTP performance

- Superior Cat6A performance
- Discontinuous shielding for UTP termination along with best shielding
- 600V AWM design for best electrical performance near machines and panels
- Sunlight Resistance II (720 hours) and Oil Resistance I (60°C)
- Weld Spatter resistance, Abrasion resistance up to 75 cycles and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099213	LANmark-A750 Cat 6A XTP Solid CMR-CMX Outdoor PVC	1000 ft. Reel	Teal



Nexans reserves the right to change product numbers and/or product specifications at any time.



TECHNICAL DATA	
Construction Characteristics	
Conductor material	23 AWG Solid Bare Copper
Filler	HDPE Cross Filler
Jacket Material	PVC
Shielding	Aluminum/Polyester Discontinuous
Core Tape	Polyester
Insulation	HDPE
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.047 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.313 in
Nominal cable weight	43 lb/kft
Length per reel	1000.0 ft
Electrical Characteristics	
Mutual capacitance	5.1 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	66%
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	2.58 in

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

Bare copper wire insulated with HDPE. Two primaries are twisted together to form a pair and four such pairs are cabled together with a central filler to form the basic unit. The cable core is surrounded by an aluminum/polyester discontinuous shield and contained with an industrial PVC jacket.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	66 m	Category 6A
ANSI/TIA-568-C.2	66 m	Category 6A
Coupling Attenuation	IEC 61156-5	Type I
Transfer Impedance	IEC 61156-5	Grade 2

ATTRIBUTES

Description	Method	
AWM Style	UL758 21695	(600V, 80°C)
Cold Bend	UL444 7.10	-40°C
Weld Spatter Resistance	Internal	Yes

Installation Pull Tension (Max):

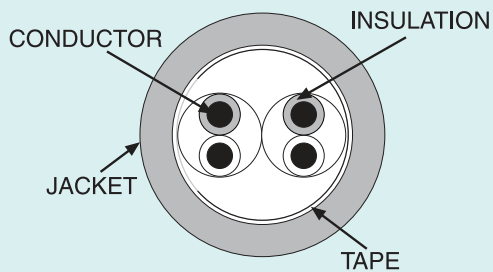
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.25 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-B535

Cat 5e, 2-Pair, Solid, U/UTP, 600V, Oil-Sun Res, TPE

ZONE

B



TEMPERATURE RATING

Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C

RATING

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)

Medium-Duty cable suitable for industrial environments including chemical exposure and sunlight resistance.

600V AWM design | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with Weld Spatter resistance and pull tension up to 40 lbs
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Green	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099207	LANmark-B535 Cat 5e Solid 2-Pr TPE	1000 ft. Reel	Teal





TECHNICAL DATA	
Construction Characteristics	
Conductor material	24 AWG Tinned Copper
Jacket Material	TPE
Core Tape	Foamed polypropylene
Insulation	FRPE
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.042 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.24 in
Nominal cable weight	25 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 propagation	68 %
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	2.58 in

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

24 AWG solid tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair, Four such pairs and a cross filler form the basic unit, enclosed by polypropylene tape contained within an industrial PVC jacket.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 5e
ANSI/TIA-568-C.2	Category 5e

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):

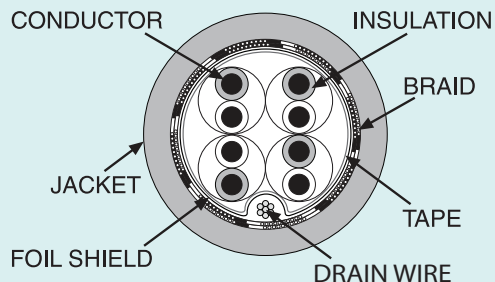
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.

LANMARK-B537

ZONE

B

Cat 5e, 4-Pair, Solid, U/UTP, 600V, Oil-Sun Res, CMR-CMX Outdoor, TPE



TEMPERATURE RATING

Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C

RATING

Listed Type	UL1685, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1277 11.2, II (75°C)
Sunlight Resistance	UL444 7.22, Yes (720 hrs)

Medium-Duty cable suitable for industrial environments including electromagnetic noise, chemical exposure and sunlight resistance.

600V AWM design | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with Weld Spatter resistance and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

COLOR CODE

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

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099201	LANmark-B537 Cat 5e Solid Shielded TPE	1000 ft. Reel	Teal





TECHNICAL DATA	
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
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity 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

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

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.

TRANSMISSION CHARACTERISTICS

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

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):

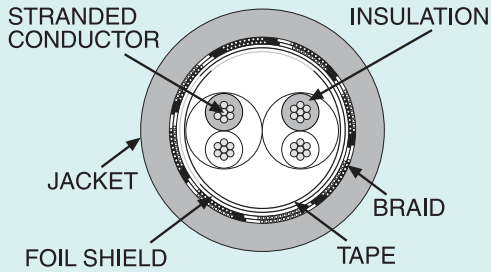
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.

LANMARK-B587

Cat 5e, 2-Pair, Stranded, SF/UTP, 600V, CMR-CMX Outdoor, PVC



COPPER CABLES



TEMPERATURE RATING	
Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C
RATING	
Listed Type	UL1666, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1277 11.2, I (60°C)
Sunlight Resistance	UL444 7.12, Yes (300 hrs)

Medium-Duty shielded cable suitable industrial environments including electromagnetic noise, vibration, light chemical exposure and weather resistance.

600V AWM design | Cold-bend Performance | Medium-duty Industrial Applications

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- Oil Resistance I (60°C) and Sunlight Resistance I (300 hours)
- Installation pull tension up to 40 lbs.
- Transitions wells from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Orange	Orange
Pair-2	White/Green	Green

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099203	LANmark-B587 Cat 5e 2-Pr Shielded PVC	1000 ft. Reel	Teal





TECHNICAL DATA	
Construction Characteristics	
Conductor material	24 AWG Stranded Tinned Copper (7/32)
Insulation	DPE
Jacket Material	PVC
Braid	Tinned copper 75% optical coverage
Shielding	Aluminum/Polyester
Core Tape	Foamed polypropylene
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.048 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.26 in
Nominal cable weight	34 lb/kft
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	68 %
Maximum pair to ground unbalance	330 pF/100m
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	2.08 in
Cable length rating	83 m
Cold Bend	-40°C
Weld spatter resistance	Yes

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

24 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and two such pairs to form the basic unit, enclosed by polypropylene tape, an aluminum/polyester tape shield and 38 AWG braid with 75% optical coverage and PVC jacket.

TRANSMISSION CHARACTERISTICS

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

ATTRIBUTES

Description	Method	
AWM Style	UL758 2463	(600V, 80°C)
Cold Bend	UL444 7.10	-40°C

Installation Pull Tension (Max):

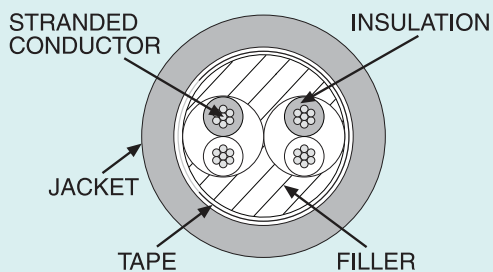
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.04 inch	TIA 568-C.0	25 lbs.

LANMARK-B585

Cat 5e, 2-Pair, Stranded, U/UTP, 600V, CMR-CMX Outdoor, PVC

ZONE

B



TEMPERATURE RATING	
Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C
RATING	
Listed Type	UL1666, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1277 11.2, I (60°C)
Sunlight Resistance	UL444 7.12, Yes (300 hrs)

Medium-Duty cable suitable for industrial environments including vibration, light chemical exposure and extreme weather.

600V AWM design | Cold-bend Performance | Medium-duty Industrial Applications

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- Oil Resistance I (60°C) and Sunlight Resistance I (300 hours)
- Installation pull tension up to 40 lbs.
- Transitions wells from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Orange	Orange
Pair-2	White/Green	Green

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099209	LANmark-B585 Cat 5e 2-Pr PVC	1000 ft. Reel	Teal





TECHNICAL DATA	
Construction Characteristics	
Conductor material	24 AWG Stranded Tinned Copper (7/32)
Insulation	HDPE
Jacket Material	PVC
Core Tape	Polyester
Filler	Polypropylene
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.04 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.24 in
Nominal cable weight	26 lb/kft
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	66 %
Maximum pair to ground unbalance	330 pF/100m
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	0.96 in
Cable length rating	83 m

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

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

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 5
ANSI/TIA-568-C.2	Category 5e

ATTRIBUTES

Description	Method	
AWM Style	UL758 2463	(600V, 80°C)
Cold Bend	UL444 7.10	-40°C

Installation Pull Tension (Max):

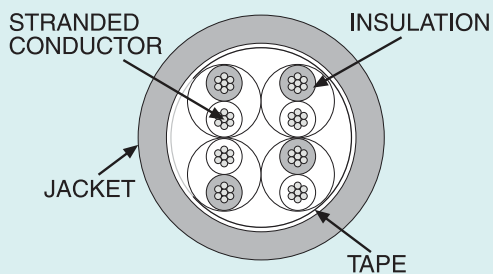
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.04 inch	TIA 568-C.0	25 lbs.

LANMARK-B540

Cat 5e, 4-Pair, Stranded, U/UTP, 600V, CMR-CMX Outdoor, PVC

ZONE

B



TEMPERATURE RATING	
Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C
RATING	
Listed Type	UL1666, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1277 11.2, I (60°C)
Sunlight Resistance	UL444 7.12, Yes (300 hrs)

Medium-Duty cable suitable for industrial environments including vibration, light chemical exposure and extreme weather.

600V AWM design | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- Oil Resistance I (60°C) and Sunlight Resistance I (300 hours)
- Installation pull tension up to 40 lbs.
- Transitions wells from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099205	LANmark-B540 Cat 5e PVC	1000 ft. Reel	Teal





TECHNICAL DATA	
Construction Characteristics	
Conductor material	24 AWG Stranded Tinned Copper (7/32)
Insulation	HDPE
Jacket Material	PVC
Core Tape	Polyester
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.04 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	34 lb/kft
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	67 %
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	1 in
Cable length rating	83 m

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

24 AWG stranded 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, with PVC jacket.

TRANSMISSION CHARACTERISTICS

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

ATTRIBUTES

Description	Method	
AWM Style	UL758 2463	(600V, 80°C)
Cold Bend	UL444 7.10	-40°C

Installation Pull Tension (Max):

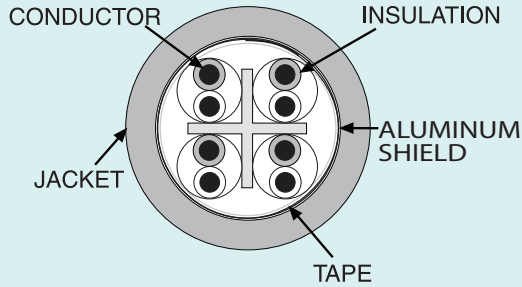
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.04 inch	TIA 568-C.0	25 lbs.

LANMARK-B752

Cat 6, F/UTP, PVC, 4-Pair, Solid, 23 AWG



COPPER CABLES



TEMPERATURE RATING	
Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C
RATING	
Listed Type	UL1666, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1581 50.182 (60°C)
Sunlight Resistance	UL444 7.22, Yes (720 hrs)

Medium-duty cable suitable for industrial applications including indoor/outdoor environments, sunlight resistance and light chemical exposure.

600V AWM design | CMR-CMX Outdoor | Foil Shielded Cat 6 Performance

- Superior Cat6 performance with foil shielding
- 600V AWM design for best electrical performance near machines and panels
- Sunlight Resistance II (720 hours) and Oil Resistance I (60°C)
- Weld Spatter resistance, Abrasion resistance up to 75 cycles and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations



COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099215	LANmark-B752 Cat 6 FTP Solid CMR-CMX Outdoor PVC	1000 ft. Reel	Teal

Nexans reserves the right to change product numbers and/or product specifications at any time.



TECHNICAL DATA	
Construction Characteristics	
Conductor material	23 AWG Solid Bare Copper
Filler	HDPE Cross Filler
Jacket Material	PVC
Shielding	Aluminum/Polyester
Core Tape	Polyester
Insulation	HDPE
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.047 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.315 in
Nominal cable weight	43 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 propagation	66%
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	2.58 in

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

23 AWG solid bare copper wire insulated with HDPE, Two insulated conductors twisted together to form a pair and four pairs laid up to form the basic unit. The cable is shielded with an overall polyester/aluminum foil with a 26 AWG stranded tinned copper drain wire and jacketed with industrial PVC.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 6
ANSI/TIA-568-C.2	Category 6

ATTRIBUTES

Description	Method	
AWM Style	UL758 21695	(600V, 80°C)
Cold Bend	UL444 7.10	-40°C
Weld Spatter Resistance	Internal	Yes

Installation Pull Tension (Max):

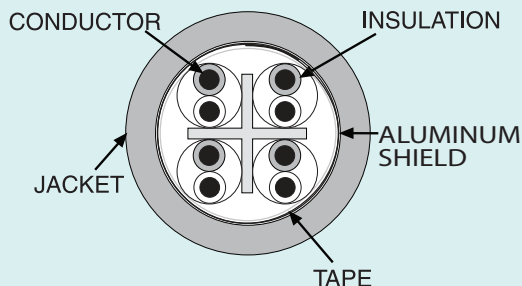
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.26 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-B751

Cat 6A, F/UTP, PVC, 4-Pair, Solid, 23 AWG

ZONE

B



TEMPERATURE RATING	
Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C
RATING	
Listed Type	UL1666, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1581 50.182 (60°C)
Sunlight Resistance	UL444 7.22, Yes (720 hrs)

Medium-duty cable suitable for industrial applications including high-bandwidth indoor/outdoor environments, sunlight resistance and light chemical exposure.

600V AWM design | CMR-CMX Outdoor | Foil Shielded Cat 6A Performance

- Superior Cat6A performance with foil shielding
- 600V AWM design for best electrical performance near machines and panels
- Sunlight Resistance II (720 hours) and Oil Resistance I (60°C)
- Weld Spatter resistance, Abrasion resistance up to 75 cycles and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099214	LANmark-B751 Cat 6A FTP Solid CMR-CMX Outdoor PVC	1000 ft. Reel	Teal





TECHNICAL DATA	
Construction Characteristics	
Conductor material	23 AWG Solid Bare Copper
Filler	HDPE Cross Filler
Jacket Material	PVC
Shielding	Aluminum/Polyester
Core Tape	Polyester
Insulation	HDPE
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.047 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.315 in
Nominal cable weight	43 lb/kft
Length per reel	1000.0 ft
Electrical Characteristics	
Mutual capacitance	5.1 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	66%
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	2.58 in

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

23 AWG, bare copper wire insulated with HDPE. Two insulated conductors twisted together with varying lays to form a pair and four pairs laid up to form the basic unit. The cable is shielded with an overall aluminum/polyester foil with stranded tinned copper drain wire and ripcord and jacketed in industrial PVC compound.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 6A
ANSI/TIA-568-C.2	Category 6A

ATTRIBUTES

Description	Method	
AWM Style	UL758 21695	(600V, 80°C)
Cold Bend	UL444 7.10	-40°C
Weld Spatter Resistance	Internal	Yes

Installation Pull Tension (Max):

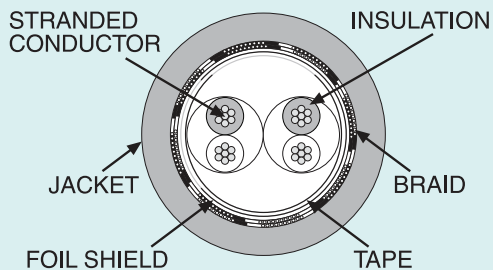
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.26 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-C541

Cat 5e, 2-Pair, High Flex, SF/UTP, 600v, Oil-Sun Res, TPE



COPPER CABLES



TEMPERATURE RATING

Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C

RATING

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)

Heavy-Duty, highly flexible shielded cable suitable for harsh industrial environments including electromagnetic noise, motion equipment and chemical exposure.

600V AWM design | Cold-bend Performance | Suitable for the most demanding, continuous-motion Industrial Applications

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75 °C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Suitable for cable tray installations



COLOR CODE

Pair-1	White/Orange	Orange
Pair-2	White/Green	Green

PART NUMBER

DESCRIPTION

PACKAGING

COLOR

11099202	LANmark-C541 Cat 5e High Flex 2-Pr Shielded TPE	1000 ft. Reel	Teal
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Nexans reserves the right to change product numbers and/or product specifications at any time.



TECHNICAL DATA	
Construction Characteristics	
Conductor material	24 AWG Stranded Tinned Copper (7/32)
Insulation	HDPE
Jacket Material	TPE
Braid	Tinned copper - 75% optical coverage
Shielding	Aluminum/Polyester
Core Tape	Foamed polypropylene
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.048 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.26 in
Nominal cable weight	34 lb/kft
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	68 %
Maximum pair to ground unbalance	330 pF/100m
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	2.08 in
Cable length rating	83 m
Cold Bend	-40 °C
Weld spatter resistance	Yes

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

24 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and two such pairs to form the basic unit, enclosed by polypropylene tape, an aluminum/polyester tape shield and 38 AWG braid with 75% optical coverage and TPE jacket.

TRANSMISSION CHARACTERISTICS

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

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):

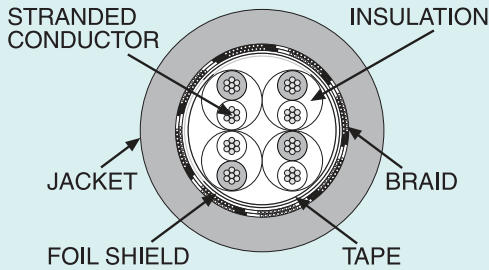
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-C542



Cat 5e, 4-Pair, High-Flex, SF/UTP, 600v, Oil-Sun Res, CMR-CMX Outdoor, TPE

COPPER CABLES



TEMPERATURE RATING

Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C

RATING

Listed Type	UL1685, CMR
Listed Type	UL444, CMX Outdoor
Oil Resistance	UL1277 11.2, II (75°C)
Sunlight Resistance	UL444 7.22, Yes (720 hrs)

Heavy-Duty, highly flexible shielded cable suitable for harsh industrial environments including electromagnetic noise, motion equipment and chemical exposure.

600V AWM design | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75 °C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Green	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099188	LANmark-C542 Cat 5e High Flex Shielded TPE	1000 ft. Reel	Teal





TECHNICAL DATA	
Construction Characteristics	
Conductor material	24 AWG Stranded Tinned Copper (7/32)
Insulation	HDPE
Jacket Material	TPE
Braid	Tinned copper - 75% optical coverage
Shielding	Aluminum/Polyester
Core Tape	Foamed polypropylene
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)	0.3 in
Nominal cable weight	46 lb/kft
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	66 %
Maximum pair to ground unbalance	330 pF/100m
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	1.2 in
Cable length rating	83 m
Cold Bend	-40 °C
Weld spatter resistance	Yes

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

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

TRANSMISSION CHARACTERISTICS

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

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):

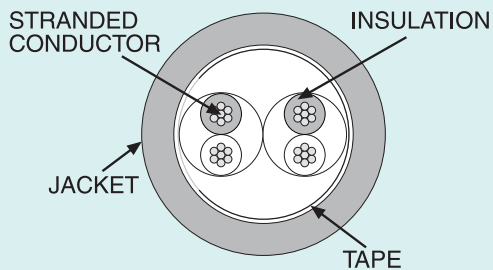
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-C538

Cat 5e, 2-Pair, High Flex, U/UTP, 600v, Oil-Sun Res, TPE



COPPER CABLES



TEMPERATURE RATING	
Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C
RATING	
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)

Heavy-Duty, highly flexible cable suitable for harsh industrial environments including motion equipment and chemical exposure.

600V AWM design | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75 °C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Suitable for cable tray installations



COLOR CODE		
Pair-1	White/Orange	Orange
Pair-2	White/Green	Green

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099206	LANmark-C538 Cat 5e High Flex 2-Pr TPE	1000 ft. Reel	Teal



TECHNICAL DATA	
Construction Characteristics	
Conductor material	24 AWG Stranded Tinned Copper (7/32)
Insulation	FRPE
Jacket Material	TPE
Core Tape	Foamed polypropylene
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)	0.24 in
Nominal cable weight	26 lb/kft
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	67 %
Maximum pair to ground unbalance	330 pF/100m
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	1.0 in
Packaging	Reel
Cable length rating	83 m
Cold Bend	-40 °C
Weld spatter resistance	Yes

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

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.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 5
ANSI/TIA-568-C.2	Category 5e

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):

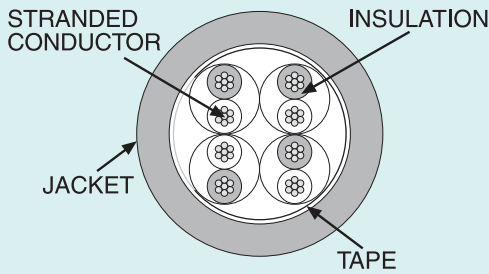
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-C539

Cat 5e, 4-Pair, High Flex, U/UTP, 600v, Oil-Sun Res, TPE



COPPER CABLES



TEMPERATURE RATING	
Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C
RATING	
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)

Heavy-Duty, highly flexible cable suitable for harsh industrial environments including motion equipment and chemical exposure.

600V AWM design | Durable TPE Jacket | Performance in a High-Vibration Environment

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75 °C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Green	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099204	LANmark-C539 Cat 5e High Flex TPE	1000 ft. Reel	Teal





TECHNICAL DATA	
Construction Characteristics	
Conductor material	24 AWG Stranded Tinned
Insulation	FRPE
Jacket Material	TPE
Core Tape	Polyester
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
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	67 %
Maximum pair to ground unbalance	330 pF/100m
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	1.0 in
Packaging	Reel
Cable length rating	83 m
Cold Bend	-40 °C
Weld spatter resistance	Yes

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

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.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 5
ANSI/TIA-568-C.2	Category 5e

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):

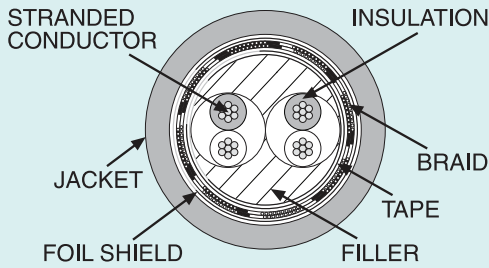
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-C547



Cat 5e, Profinet, 2-Pair, High Flex, SF/UTP, 600v, Oil-Sun Res, TPE

COPPER CABLES



TEMPERATURE RATING

Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C

RATING

Listed Type	UL1685, CM
Listed Type	UL444, CMX Outdoor
Listed Type	UL13/UL2250, PLTC/ITC
Oil Resistance	UL1277 11.2, II (75°C)
Sunlight Resistance	UL444 7.22, Yes (720 hrs)

Heavy-Duty, highly flexible, shielded PROFINET (Type B & C) cable suitable for harsh industrial environments.

Designed to meet the requirements of the Profinet Type B and C standards | Durable TPE Jacket

- Fully compliant to Category 5e and PROFINET B&C requirements
- PROFINET Power Limited Tray Cable (PLTC) Listing
- 600V AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type I
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75 °C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Suitable for cable tray installations

COLOR CODE		
Pair-1	White	Blue
Pair-2	Yellow	Orange

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099189	LANmark-C547 Profinet High Flex 2-Pr Shielded TPE	1000 ft. Reel	Green





TECHNICAL DATA	
Construction Characteristics	
Conductor material	22 AWG Stranded Tinned Copper (19/.0058)
Filler	HDPE Cross Filler
Insulation	HDPE
Jacket Material	TPE
Braid	Tinned copper - 75% optical coverage
Shielding	Aluminum/Polyester/Aluminum
Core Tape	Polyester
Filler	Polypropylene
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.057 in
Average jacket thickness	0.04 in
Minimum jacket thickness at any point	0.032 in
Cable diameter (Nominal)	0.31 in
Nominal cable weight	46 lb/kft
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	5 %
Nominal velocity propagation	66 %
Maximum pair to ground unbalance	330 pF/100m
Transmission Characteristics	
Skew (max.)	45 ns/100m
Usage Characteristics	
Profinet Type	B & C
Minimum Bending Radius - Install	2.48 in
Cold Bend	-40°C
Weld spatter resistance	Yes

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

22 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and two such pairs to form the basic unit, enclosed by polyester tape and shielded with a 75% optical coverage braid and an aluminum/polyester/aluminum tape contained within a TPE jacket.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 5
ANSI/TIA-568-C.2	Category 5e
Coupling Attenuation	Type I
Transfer Impedance	Grade 2

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):

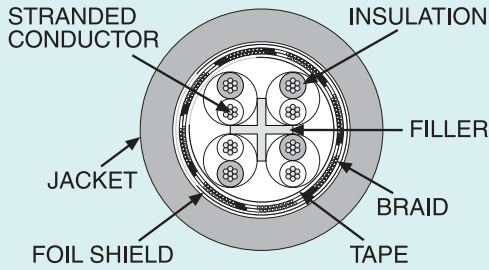
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-C545



Cat 6A, 4-Pair, 24 AWG, High Flex, SF/UTP, 600v, Oil-Sun Res, CMR-CMX Outdoor, TPE

COPPER CABLES



TEMPERATURE RATING	
Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C
RATING	
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)

Heavy-Duty, highly flexible shielded cable that delivers higher bandwidth performance in harsh industrial environments.

600V AWM design | Durable TPE jacket | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 6A requirements and 10 Gigabit Ethernet
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type I
- 600V AWM design for best electrical performance near machines and panels
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75 degree C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations
- Transitions wells from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations



COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Green	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099210	LANmark-C545 Cat 6A 24 AWG High Flex Shielded TPE	1000 ft. Reel	Teal



TECHNICAL DATA	
Construction Characteristics	
Conductor material	24 AWG Stranded Tinned Copper (7/32)
Filler	HDPE Cross Filler
Insulation	HDPE
Jacket Material	TPE
Braid	Tinned copper - 75% optical coverage
Shielding	Aluminum/Polyester/Aluminum
Core Tape	Polyester
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.045 in
Average jacket thickness	0.03 in
Minimum jacket thickness at any point	0.024 in
Cable diameter (Nominal)	0.322 in
Nominal cable weight	48 lb/kft
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	4 %
Nominal velocity propagation	67 %
Maximum pair to ground unbalance	330 pF/100m
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.2
Usage Characteristics	
Minimum Bending Radius - Install	2.58 in
Cable length rating	83 m
Cold Bend	-40 °C
Weld spatter resistance	Yes

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

24 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair. Four such pairs and a cross filler form the basic unit, enclosed by polyester tape and shielded with a 75% optical coverage braid and aluminum/polyester/aluminum tape contained within a TPE jacket.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801	Category 6A
ANSI/TIA-568-C.2	Category 6A
Coupling Attenuation	IEC 61156-5 Type I
Transfer Impedance	IEC 61156-5 Grade 2

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):

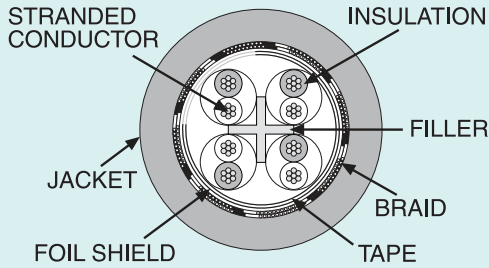
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-C637



Cat 6A, 4-Pair, 26 AWG, High Flex, SF/UTP, 600v, Oil-Sun Res, CMR-CMX Outdoor, TPE

COPPER CABLES



TEMPERATURE RATING

Operation	-40°C to +80°C
Installation	-20°C to +80°C
Storage	-40°C to +80°C

RATING

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)

Small-diameter, Heavy-Duty, highly flexible shielded cable that delivers higher bandwidth performance in harsh industrial environments.

600V AWM design | Durable TPE Jacket | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 6A requirements and 10 Gigabit Ethernet
- Small diameter with 26AWG conductor for optimal connectivity
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type I
- 600V AWM design for best electrical performance near machines and panels
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75 °C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations



COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Green	Orange
Pair-3	White/Green	Green
Pair-4	White/Green	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
11099211	LANmark-C637 Cat 6A 26 AWG High Flex Shielded TPE	1000 ft. Reel	Teal



TECHNICAL DATA	
Construction Characteristics	
Conductor material	26 AWG Stranded Tinned Copper (7/34)
Filler	HDPE Cross Filler
Insulation	HDPE
Jacket Material	TPE
Braid	Tinned copper - 75% optical coverage
Shielding	Aluminum/Polyester/Aluminum
Core Tape	Foamed polypropylene
Dimensional Characteristics	
Insulated conductor diameter (Nominal)	0.034 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	40 lb/kft
Electrical Characteristics	
Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	4 %
Nominal velocity propagation	68 %
Maximum pair to ground unbalance	330 pF/100m
Transmission Characteristics	
Skew (max.)	45 ns/100m
Insertion loss de-rating factor	1.5
Usage Characteristics	
Minimum Bending Radius - Install	2.32 in
Cable length rating	66 m
Cold Bend	-40 °C
Weld spatter resistance	Yes

RELATED STANDARDS

Low Voltage	EU Directive 2014/35/EU, CE Approved
RoHS PoE+	EU Directive 2011/65/EU Type 2 (802.3at)

STANDARDS

International	ISO/IEC 11801
National	ANSI/TIA-568-C.2 UL 444

CONSTRUCTION

26 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair. Four such pairs and a cross filler form the basic unit, enclosed by polypropylene tape and shielded with an aluminum/polyester tape and 75% optical coverage braid contained within a TPE jacket.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801		Category 6A
ANSI/TIA-568-C.2		Category 6A
Coupling Attenuation	IEC 61156-5	Type I
Transfer Impedance	IEC 61156-5	Grade 2

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):

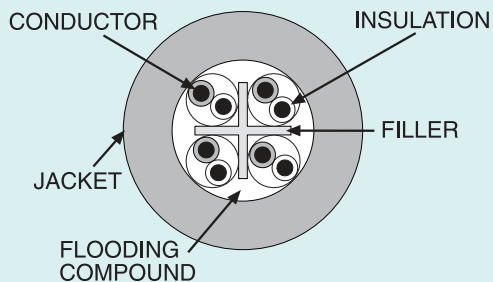
Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/ 1.5 lb. load

LANMARK-6A OSP

Cat 6A, 4-Pair, 23 AWG, UTP

OUTSIDE
PLANT

OSP



TEMPERATURE RATING

Operation	-40°C to +70°C
Installation	-30°C to +60°C

Designed for outside applications, either aerial or buried in conduit or duct, where building to building interconnections must be made.

23 AWG bare copper wire insulated with polyethylene | Intended for high speed data applications

- Meets the requirements of ANSI/TIA/EIA-568-C.2
- Usable bandwidth up to 500 MHz
- Fully water blocked
- Can be used to interconnect buildings or can be run beneath a slab in duct or conduit
- Simplified structured cabling solution preserving long-term network investment
- Warranted, trouble-free cabling installation and maintenance
- Meets NEC requirement for wet locations

COLOR CODE		
Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
N180.6AO10R	LANmark-6A OSP	1000 ft. Reel	Black





TECHNICAL DATA	
Physical	
Conductor	23 AWG Bare Copper
Conductor Diameter	0.023 in
Insulated Conductor Diameter	0.047 in
Cable Diameter	0.355 in
Cable Weight	50 lb/kft
Cable Jacket	25 lb
Min. Bend Radius	1.42 in
Parametric Measurements	
Velocity of Propagation	5.3 nF/100 m nom.
DC Resistance	9.38 Ohms/100 m nom.
Skew	45 ns/100 m max.
Pair to ground Unbalance	330 pF/100 m max.
Velocity of Propagation	64% nom.

APPLICATIONS

Nexans' LANmark-6A UTP cable is intended for high speed data applications including:

IEEE 802.3	1000BASE-T	1 Gbps
TIA/EIA-854	1000BASE-TX	1 Gbps
ATM	155 Mbps	155 Mbps
IEEE 802.3	100BASE-TX	100 Mbps
CDDI		100 Mbps
IEEE 802.3	10BASE-T	10 Mbps
802.3af PoE		
802.3af PoE+		

STANDARDS

North American	ANSI/TIA/EIA-568-C.2
	Category 6A
	ETL Verified
	ANSI/ICEA S-56-434 Outdoor Use
	ANSI/ICEA S-107-704-2012
	PAR 8.2.1 Water Penetration

CONSTRUCTION

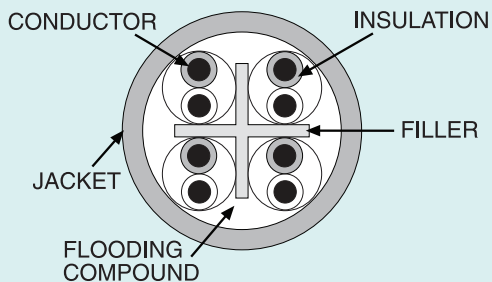
23 AWG bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled around a cross filler to form the basic unit which is injected with a water resistant flooding compound and jacketed with black weather resistant polyethylene jacket.

LANMARK-1000 OSP

Cat 6, 4-Pair, 23 AWG, UTP

OUTSIDE
PLANT

OSP



TEMPERATURE RATING

Operation	-40°C to +75°C
Installation	0°C to +60°C

Designed for outside applications, either aerial or buried in conduit or duct, where building to building interconnections must be made.

Tested to 250 MHz | Outdoor Use | High speed data applications

- Meets the requirements of ANSI/TIA/EIA-568-C.2
- Usable bandwidth up to 250 MHz
- Fully water blocked
- Can be used to interconnect buildings or can be run beneath a slab in duct or conduit
- Simplified structured cabling solution preserving long-term network investment
- Warranted, trouble-free cabling installation and maintenance
- Meets NEC requirement for wet locations
- ANSI/ICEA 5-107-704-2012, PAR 8.2.1 - Water Penetration

COLOR CODE

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

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
N180.61010R	LANmark-1000 OSP	1000 ft. Reel	Black





TECHNICAL DATA	
Physical	
Conductor	23 AWG Bare Copper
Conductor Diameter	0.022 in
Insulated Conductor Diameter	0.040 in
Cable Diameter	0.245 in
Nominal Cable Weight	30.5 lb/kft
Max. installation tension	25 lb
Min. Bend Radius	1 in
Parametric Measurements	
Mutual Capacitance	5.3 nF/100 m nom.
DC Resistance	9.38 Ohms/100 m nom.
Skew	35 ns/100 m max.
Pair to ground Unbalance	330 pF/100 m max.
Velocity of Propagation	65% nom.

APPLICATIONS

Nexans' LANmark-6A UTP cable is intended for high speed data applications including:

IEEE 802.3	1000BASE-T	1 Gbps
TIA/EIA-854	1000BASE-TX	1 Gbps
ATM	155 Mbps	155 Mbps
IEEE 802.3	100BASE-TX	100 Mbps
CDDI		100 Mbps
IEEE 802.3	10BASE-T	10 Mbps
802.3af PoE		
802.3at PoE+		

STANDARDS

North American	ANSI/TIA/EIA-568-C.2 Category 6
	ANSI/ICEA S-56-434 Outdoor Use

CONSTRUCTION

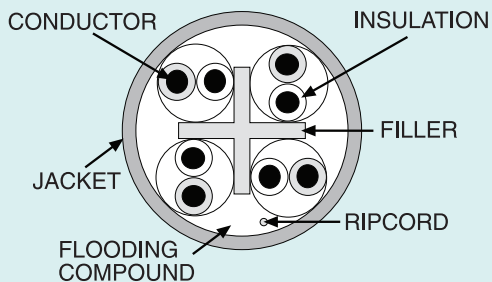
23 AWG bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled around a cross filler to form the basic unit which is injected with a water resistant flooding compound and jacketed with black weather resistant polyethylene jacket.

LANMARK-6 OSP

Cat 6, 4-Pair, 23 AWG, UTP

OUTSIDE
PLANT

OSP



TEMPERATURE RATING

Operation	-40°C to +70°C
Installation	0°C to +60°C

Designed for outside applications, either aerial or buried in conduit or duct, where building-to-building interconnections must be made.

Tested to 250 MHz | Supports 1000BASE-TX | Outdoor and Wet Compliant | 5% Propagation Allowance

- Meets the requirements of ANSI/TIA-568-C.2
- Usable bandwidth up to 250 MHz
- Fully water blocked
- Can be used to interconnect buildings or can be run beneath a slab in duct or conduit
- Simplifies structured cabling solution preserving long-term network investment
- Meets NEC requirement for cable in wet locations

COLOR CODE

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

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
N180.60010R	LANmark-6 OSP	1000 ft. Reel	Black





TECHNICAL DATA	
Physical	
Conductor	23 AWG Bare Copper
Conductor Diameter	0.022 in
Insulated Conductor Diameter	0.04 in
Cable Diameter	0.250 in
Cable Weight	31 lb/kft
Cable Jacket	Weather resistant polyethylene
Min. Bend Radius	1.0 in
Electrical	
Velocity of Propagation	65% nom.
Time Delay Skew	45 nsec./100 m max.

APPLICATIONS

Nexans' LANmark-6 OSP UTP cable is intended for high-speed data applications including:

IEEE 802.3	1000BASE-T	1 Gbps
TIA/EIA-854	1000BASE-TX	1 Gbps
ATM	155 Mb/s	155 Mbps
IEEE 802.3	100BASE-TX	100 Mbps
CDDI		100 Mbps
IEEE 802.3	10BASE-T	10 Mbps
IEEE 802.3af	PoE	
IEEE 802.3at	PoE+	
HDBASE-T		

STANDARDS

North American	ANSI/TIA/EIA-568-C.2 Category 6A ETL Verified ANSI/ICEA S-56-434 Outdoor Use ANSI/ICEA S-107-704-2012 PAR 8.2.1 Water Penetration
International	ISO/IEC 11801 EU Directive 2011/65/EU (RoHS)

CONSTRUCTION

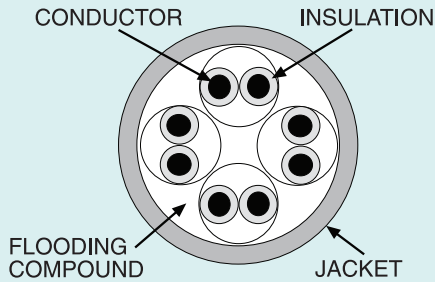
Bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled together around a cross-filler to form the basic unit. This basic unit is injected with a water-resistant flooding compound and jacketed with UV resistant polyethylene.

ESSENTIAL 5e OSP

Cat 5e, 4-Pair, 24 AWG, UTP

OUTSIDE
PLANT

OSP



TEMPERATURE RATING

	CMP
Operation	-20°C to +60°C
Installation	-20°C to +60°C

Designed for outside applications, either aerial or buried in conduit or duct, where building-to-building interconnections must be made.

Tested to 100 MHz | Supports 1000BASE-TX | Outdoor and Wet Environments

- Supports most data and voice applications
- Meets ANSI/ICEA 5-56-434 Standard for Polyolefin Insulated Communications Cables for Outdoor Use
- ETL Verified to ANSI/TIA-568-C.2
- Fully water blocked
- Can be used to interconnect buildings or can be run beneath a slab in duct or conduit
- Simplified structured cabling solution preserves long-term network investment
- Meets NEC requirement for cable in wet locations

COLOR CODE

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

PART NUMBER	DESCRIPTION	PACKAGING	COLOR
N180.53010R	essential-5e OSP	1000 ft. Reel	Black





TECHNICAL DATA	
Physical	
Conductor	24 AWG Bare Copper
Conductor Diameter	0.021 in
Insulated Conductor Diameter	0.038 in
Cable Diameter	0.207 in
Cable Weight	22 lb/kft
Cable Jacket	Weather resistant polyethylene
Min. Bend Radius	1.0 in
Electrical	
Velocity of Propagation	% nom.
Time Delay Skew	25 nsec/100 m max.

APPLICATIONS

Nexans' essential-5e OSP UTP cable is intended for high-speed data applications up to 100 MHz including:

IEEE 802.3 ATM	1000BASE-T	1 Gbps
IEEE 802.3 CDDI	155 Mbps	155 Mbps
IEEE 802.3 IEEE 802.3af	100BASE-TX	100 Mbps
IEEE 802.3at		100 Mbps
HDBASE-T	10BASE-T	10 Mbps
	PoE	
	PoE+	

STANDARDS

North American	ANSI/TIA-568-C.2
	ANSI/ICEA 5-56-434
International	ISO/IEC 11801 2nd Edition CAT 5
	EU Directive 2002/95/EC (RoHS)

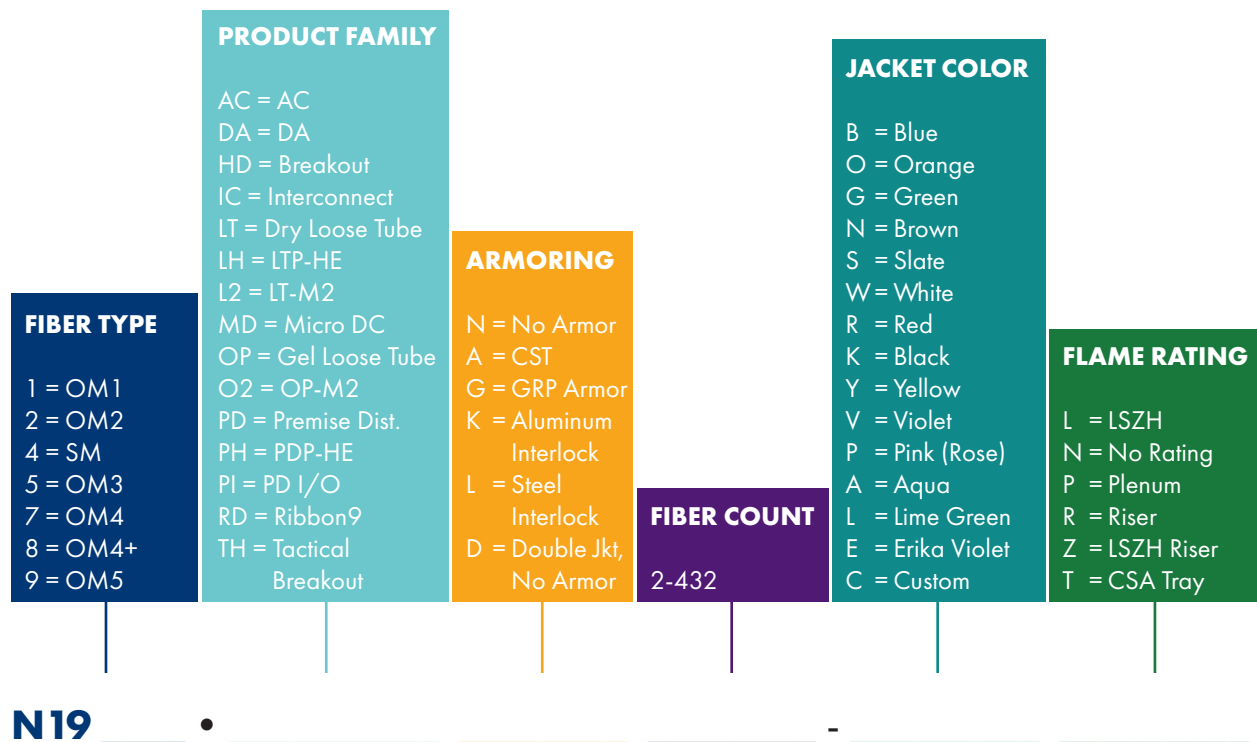
CONSTRUCTION

Bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit which is injected with a water resistant flooding compound and jacketed with UV resistant polyethylene.

FIBER OPTIC CABLE PART NUMBERING SYSTEM

Fiber Optic Cable Part Numbering System

Nexans' Fiber Optic Cable part numbers are composed of several sections that represent the cable's characteristics. To accurately build your fiber cable part numbers, select the correct codes from the diagram below.



Example:

N19 **5** • **PI** **N** **024** - **A** **P**



FIBER CABLES

Zone A: Light Duty

Premises Distribution Indoor/Outdoor (Plenum/Riser)	54
Heavy Duty Breakout Cable (Plenum/Riser)	56
Adventum Indoor/Outdoor Loose Tube (Riser)	58
Outside Plant All Dielectric	60
Outside Plant (Riser)	62

Zone C: Heavy Duty

Premises Distribution Harsh Environment (Plenum)	64
Adventum Loose Tube Harsh Environment (Plenum)	66
Tactical Fiber Cable	68
Armor-Tek Interlock Armor	70

PREMISES DISTRIBUTION INDOOR/ OUTDOOR (PLENUM/RISER)

ZONE

A

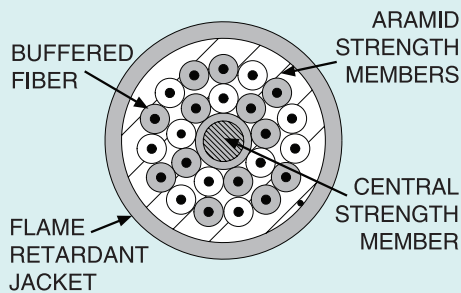
Indoor/Outdoor, 900 m Tight Buffer, Water Blocked, Sunlight Resistant



ARMORED OPTION
AVAILABLE



FIBER CABLES



TEMPERATURE RATING

Operation	-40°C to +75°C
Storage	-40°C to +85°C
Installation	0°C to +75°C

FLAME RATING

Plenum	OFNP/FT-6
Riser	OFNR/FT-4

Indoor/outdoor cable is designed for LAN/WAN campus and building backbone cabling infrastructure.

- Available in plenum and riser ratings
- Enables installations to go directly from outside plant into building with no transition point requirement
- High tensile strength, crush-resistant and small-diameter all dielectric design
- Ready for direct termination, no fan-out kits are needed
- Available with Armor-Tek™ Interlocking Armor
- Fully water-blocked core or subunits using all dry technology
- Fungus and sunlight resistant
- Designed for outside plant installation in conduit under the frost line (non-aerial lashed)
- Greater pulling distances possible due to high tensile strength
- Low cable plant maintenance and ease of installation
- Flexible, reduced cable diameter with easy access to tight buffer fibers
- Suitable for in-tray applications
- MSHA approval for Riser 6-144 fibers

SPECIAL OPTIONS

Fiber in a box packaging optional for 6 and 12 fiber constructions.

PLENUM (OFNP) RATED TECHNICAL DATA — PHYSICAL					Install		Long Term		Install		Long Term	
Fibers	Diameter		Weight		Min. Bend Radius				Max. Loading			
	in.	mm	lb./kft.	kg/km	in.	cm	in.	cm	lbf.	N	lbf.	N
6	0.180	4.6	12	18	2.7	6.9	1.8	4.6	100	30	30	133
12	0.210	5.3	18	26	3.2	8.0	2.1	5.3	100	30	30	133
24	0.305	7.7	41	61	4.6	11.6	3.1	7.7	150	45	45	200
48	0.558	14.2	136	202	8.4	21.3	5.6	14.2	600	180	180	800
72	0.671	17.0	212	316	10.1	25.6	6.7	17.0	600	180	180	800
96	0.847	21.5	313	466	12.7	32.3	8.5	21.5	600	180	180	800
144	0.896	22.8	318	474	13.4	34.1	9.0	22.8	1000	300	300	1335

Riser (OFNR) rated cables are also available. Call for more information.

Nexans reserves the right to change product numbers and/or product specifications at any time.



SUPPORTED BANDWIDTH

ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)

Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC) SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)

SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)

OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)

CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)

PON (SMF): (RfOG, APON, BPON, EPON, GPON, WDM-PON, NG-PON)

NOTE: Nexans recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

STANDARDS

North American NFPA 130

Telcordia GR-409

ANSI/ICEA S-104-696

European EN 50173

International ISO/IEC 11801

CONSTRUCTION

900 µm buffered fibers surrounded by water-blocking aramid yarns. Cables with >24 fibers feature 12 fiber subunits stranded around a dielectric central member with water-blocking yarns. Sheathed using a next-generation high performance polymer.

TECHNICAL DATA									
Fiber Type	Nexans Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz · km)	Distance (meters)			
Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE
OM1	GIGAlite	62.5 µm	850/1300	3.5/1.0	200	300	33	N/A	N/A
OM2+	GIGAlite	50 µm	850/1300	3.0/1.0	950	750	150	N/A	N/A
OM3	GIGAlite-10	50 µm	850/1300	3.0/1.0	2000	1000	300	100	70
OM4	GIGAlite-10FB	50 µm	850/1300	3.0/1.0	4700	1040	550	150	100
OM4+	GIGAlite-10XB	50 µm	850/1300	3.0/1.0	4900	1210	600	300	150
WideBand Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE
OM5	GIGAlite-WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100
Single-Mode - Bend Insensitive - ITU-T G.657.A1						1 GbE	10 GbE	40 GbE	100 GbE
OS2	Standard for Tight Buffer	SMF	1300/1550	0.5/0.5	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000

HEAVY DUTY BREAKOUT CABLE (PLENUM/RISER)

ZONE

A

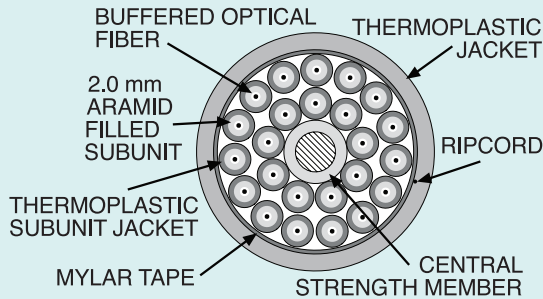
2-48 Fibers – Riser, Rugged Construction for Harsh Environments, Tape Wrapped Dry Core



ARMORED OPTION
AVAILABLE



FIBER CABLES



TEMPERATURE RATING

Operation	-20°C to +75°C
Storage	-40°C to +85°C
Installation	-20°C to +75°C

FLAME RATING

Plenum	OFNP/FT-6
Riser	OFNR/FT-4

Designed for installation in horizontal, industrial and other harsh environments where additional strength and fiber protection is required.

- Available in plenum and riser ratings
- Multimode, Single-mode, and GIGAlite™ fibers
- High tensile strength, crush resistant
- All-dielectric, aluminum or steel interlock armored designs available
- Water-blocked indoor/outdoor designs available
- High tensile strength provides for greater pulling distances
- Ease of installation
- Broad design selection allows for mix and match of fiber components to specific networking applications
- Suitable for conduit or in-tray installations
- Low cable plant maintenance
- Armor option adds crush resistance and protection from rodent attacks
- MSHA approved for Riser 2-24 fibers

PLENUM (OFNP) RATED TECHNICAL DATA — PHYSICAL					Install		Long Term		Install		Long Term	
Fibers	Diameter		Weight		Min. Bend Radius				Max. Loading			
	in.	mm	lb./kft.	kg/km	in.	cm	in.	cm	lbf.	N	lbf.	N
2	0.200	5.1	13	20	3.0	7.6	2.0	5.1	150	660	45	198
4	0.264	6.7	35	53	4.0	10.1	2.6	6.7	150	660	45	198
6	0.312	7.9	56	83	4.7	11.9	3.1	7.9	150	660	45	198
12	0.474	12.0	124	185	7.1	18.1	4.7	12.0	300	1320	90	396
24	0.556	14.1	164	245	8.3	21.2	5.6	14.1	600	2640	180	792
36	0.641	16.3	205	305	9.6	24.4	6.4	16.3	1000	4448	300	1320

Riser (OFNR) rated cables are also available. Call for more information.



SUPPORTED BANDWIDTH

ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)

Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)

SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)

SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)

OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)

CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)

STANDARDS

North American Telcordia GR-409
ANSI/TIA-568-C.3

European EN 50173

International ISO/IEC 11801

CONSTRUCTION

Each cable utilizes individual subunits containing a single 900 µm tight buffered fiber, surrounded by aramid yarns. Subunits are stranded around a dielectric central strength member, wrapped with mylar tape, and sheathed with a high-performance next-generation thermoplastic jacket.

TECHNICAL DATA										
Fiber Type	Nexans Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz · km)	Distance (meters)				
Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE	
OM1	GIGAlite	62.5 µm	850/1300	3.5/1.0	200	300	33	N/A	N/A	
OM2+	GIGAlite	50 µm	850/1300	3.0/1.0	950	750	150	N/A	N/A	
OM3	GIGAlite-10	50 µm	850/1300	3.0/1.0	2000	1000	300	100	70	
OM4	GIGAlite-10FB	50 µm	850/1300	3.0/1.0	4700	1040	550	150	100	
OM4+	GIGAlite-10XB	50 µm	850/1300	3.0/1.0	4900	1210	600	300	150	
WideBand Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE	
OM5	GIGAlite-WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100	
Single-Mode - Bend Insensitive - ITU-T G.657.A1						1 GbE	10 GbE	40 GbE	100 GbE	
OS2	Standard for Tight Buffer	SMF	1300/1550	0.5/0.5	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000	

ADVENTUM INDOOR/OUTDOOR (PLENUM/RISER)



Indoor/Outdoor, Up to 432 Fibers, Riser or Zero-Halogen, Totally Dry Construction

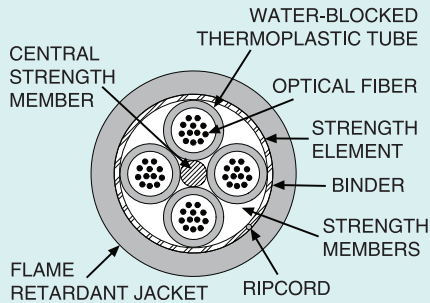
FIBER CABLES



ARMORED OPTION AVAILABLE



LSZH OPTION AVAILABLE



TEMPERATURE RATING

Operation	-40°C to +75°C
Storage	-60°C to +85°C
Installation	-20°C to +60°C

FLAME RATING

Plenum	OFNP/FT-6
Riser	OFNR/FT-4

Place Adventum® anywhere in a network, bypassing the traditional transition points required in most installations, saving significant cost over traditional OSP cables.

- Available in plenum and riser ratings
- Enables installation to go directly from outside plant to riser shaft or plenum space with no transition points
- Cable core and buffer tubes use dry water-blocking technology
- Interlocking armor designs available
- No transition point required
- Greatly reduced installation time and cost because there is no cleaning of gels required for installation
- System grounding requirements are eliminated (for non-armored versions)
- Suitable for conduit or in-tray installations

PLENUM (OFNP) RATED TECHNICAL DATA — PHYSICAL					Install		Long Term		Install		Long Term	
Fibers	Diameter		Weight		Min. Bend Radius				Max. Loading			
	in.	mm	lb./kft.	kg/km	in.	cm	in.	cm	lbf.	N	lbf.	N
6	0.260	6.6	30	45	3.9	9.9	2.6	6.6	300	1335	90	400
12	0.260	6.6	33	49	3.9	9.9	2.6	6.6	300	1335	90	400
24	0.370	9.4	55	82	5.6	14.1	3.7	9.4	300	1335	90	400
48	0.370	9.4	56	83	5.6	14.1	3.7	9.4	300	1335	90	400
72	0.460	11.7	80	119	6.9	17.5	4.6	11.7	600	2670	200	890
144	0.670	17.0	209	311	10.1	25.5	6.7	17.0	1000	4448	300	1335
432	0.940	23.9	362	539	14.1	35.8	9.4	23.9	1000	4448	300	1335

Riser (OFNR) rated cables are also available. Call for more information.



SUPPORTED BANDWIDTH

ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)

Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)

SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)

SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)

OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)

CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)

PON (SMF): (RfOG, APON, BPON, EPON, GPON, WDM-PON, NG-PON)

NOTE: Nexans recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

STANDARDS

North American	Telcordia GR-409 ICEA S-104-696 & ANSI/ICEA S-87-640
European	EN 50173
International	ISO/IEC 11801

CONSTRUCTION

Water-blocked color-coded loose tubes containing up to 12, 250 µm, individually colored fibers. Fiber counts over 12 use a dielectric central strength member. Water-blocking strength yarns are covered by a high performance next-generation thermoplastic jacket.

TECHNICAL DATA									
Fiber Type	Nexans Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz · km)	Distance (meters)			
						1 GbE	10 GbE	40 GbE	100 GbE
Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE
OM1	GIGAlite	62.5 µm	850/1300	3.5/1.0	200	300	33	N/A	N/A
OM2+	GIGAlite	50 µm	850/1300	3.0/1.0	950	750	150	N/A	N/A
OM3	GIGAlite-10	50 µm	850/1300	3.0/1.0	2000	1000	300	100	70
OM4	GIGAlite-10FB	50 µm	850/1300	3.0/1.0	4700	1040	550	150	100
OM4+	GIGAlite-10XB	50 µm	850/1300	3.0/1.0	4900	1210	600	300	150
WideBand Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE
OM5	GIGAlite-WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100
Single-Mode - Bend Insensitive - ITU-T G.657.A1						1 GbE	10 GbE	40 GbE	100 GbE
OS2	Standard for Loose Tube	SMF	1300/1550	0.4/0.3	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000

OUTSIDE PLANT ALL DIELECTRIC

ZONE

A

Outdoor, Duct, Aerial or Direct Burial, Up to 216 Fibers



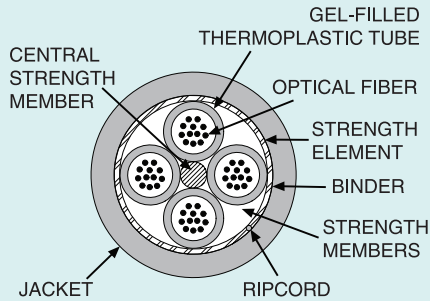
ARMORED OPTION AVAILABLE



LSZH OPTION AVAILABLE



FIBER CABLES



TEMPERATURE RATING

Operation	-40°C to +75°C
Storage	-60°C to +85°C
Installation	-30°C to +60°C

Designed for installation in harsh environments such as direct burial, aerial lashing, conduits and pathways that are subjected to wide temperature variations.

- Outdoor, duct, aerial or direct burial
- Riser or low-smoke zero-halogen (LSZH) options.
- Gel-filled loose tubes
- Suitable for outside plant, in conduit, aerial lashing and cable tray installations
- Fully water-blocked core using dry water-blocking technology
- All dry constructions available by request
- All-dielectric and corrugated steel armor available for rodent resistance and direct buried installation
- High tensile strength, crush-resistant and small-diameter design allows for installation in small interior spaces
- Single-mode, multimode and hybrid design options available
- Armored designs available: all-dielectric, corrugated steel, interlocking armor aluminum and steel
- Provides for greater pulling distances, reducing installation time



TECHNICAL DATA — PHYSICAL					Install		Long Term		Install		Long Term	
Fibers	Diameter		Weight		Min. Bend Radius				Max. Loading			
	in.	mm	lb./kft.	kg/km	in.	cm	in.	cm	lbf.	N	lbf.	N
2	0.400	10.2	54	81	6.0	15.2	4.0	10.2	400	1779	120	534
4	0.400	10.2	55	81	6.0	15.2	4.0	10.2	400	1779	120	534
6	0.400	10.2	55	81	6.0	15.2	4.0	10.2	400	1779	120	534
8	0.400	10.2	56	84	6.0	15.2	4.0	10.2	400	1779	120	534
12	0.400	10.2	57	84	6.0	15.2	4.0	10.2	400	1779	120	534
24	0.451	11.5	59	88	6.8	17.2	4.5	11.5	600	2670	180	800
36	0.451	11.5	62	93	6.8	17.2	4.5	11.5	600	2670	180	800
48	0.451	11.5	65	97	6.8	17.2	4.5	11.5	600	2670	180	800
72	0.489	12.4	82	122	7.5	18.6	4.9	12.4	600	2670	180	800
96	0.565	14.4	106	158	8.5	21.5	5.7	14.4	800	3560	240	1068
144	0.716	18.2	169	252	10.7	27.3	7.2	18.2	1000	4445	300	1335
216	0.740	18.8	178	265	11.1	28.2	7.4	18.8	1000	4445	300	1335

SUPPORTED BANDWIDTH

ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)

Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)

SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)

SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)

OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)

CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)

OUTDOOR CONSIDERATIONS

Nexans recommends loose tube cables for outside plant installations, especially if aerially lashed or if the interbuilding conduit system is above the frost line and likely to fill with water.

STANDARDS

National	Telcordia GR-20 ANSI/ICEA S-87-640
International	EN 50173; ISO/IEC 11801

CONSTRUCTION

Water-blocked color-coded loose tubes containing up to 12, 250 µm, individually colored fibers. Fiber counts 12 and below use two dielectric strength members parallel to the loose tube. Fiber counts over 12 use a dielectric strength member. Water-blocking strength yarns are covered by a polyethylene jacket.

TECHNICAL DATA										
Fiber Type	Nexans Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz • km)	Distance (meters)				
Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE	
OM1	GIGAlite	62.5 µm	850/1300	3.5/1.0	200	300	33	N/A	N/A	
OM2+	GIGAlite	50 µm	850/1300	3.0/1.0	950	750	150	N/A	N/A	
OM3	GIGAlite-10	50 µm	850/1300	3.0/1.0	2000	1000	300	100	70	
OM4	GIGAlite-10FB	50 µm	850/1300	3.0/1.0	4700	1040	550	150	100	
OM4+	GIGAlite-10XB	50 µm	850/1300	3.0/1.0	4900	1210	600	300	150	
WideBand Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE	
OM5	GIGAlite-WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100	
Single-Mode - Bend Insensitive - ITU-T G.657.A1						1 GbE	10 GbE	40 GbE	100 GbE	
OS2	Standard for Loose Tube	SMF	1300/1550	0.4/0.3	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000	

OUTSIDE PLANT (RISER)

ZONE

A

Loose Tube Riser Rated, 2 to 144 Fibers, Armored and Low-Smoke Zero-Halogen (LSZH) Options



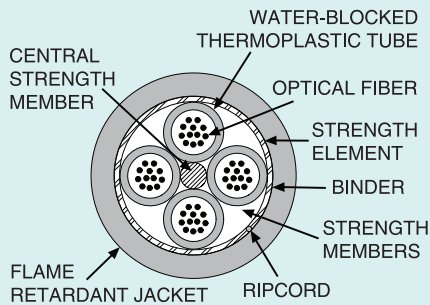
ARMORED OPTION AVAILABLE



LSZH OPTION AVAILABLE



FIBER CABLES



TEMPERATURE RATING

Operation	-40°C to +75°C
Storage	-60°C to +85°C
Installation	-30°C to +60°C

FLAME RATING

Riser	OFNR/FT-4
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Designed for installation in harsh environments such as conduit and pathways that are subjected to wide temperature variations.

- Gel-filled loose tubes
- Suitable for indoor/outdoor, in conduit, aerial lashing, and cable tray installations
- Fully water-blocked core using dry water-blocking technology
- All dry constructions available by request
- Corrugated steel armor available for rodent resistance and direct buried installation
- High tensile strength, crush-resistant and small diameter design for installation in small interior spaces
- Single-mode, multimode and hybrid design options
- Armored designs available: corrugated steel, interlocking armor aluminum and steel
- Provides for greater pulling distances, reducing installation time
- Broad design selection allows for mix and match of fiber components to specific networking applications
- System grounding problems eliminated
- Long-term reliability
- Low cable-plant maintenance, ease of installation
- Reduced network costs



RISER (OFNR) RATED TECHNICAL DATA — PHYSICAL					Install		Long Term		Install		Long Term	
Fibers	Diameter		Weight		Min. Bend Radius				Max. Loading			
	in.	mm	lb./kft.	kg/km	in.	cm	in.	cm	lbf.	N	lbf.	N
2	0.400	10.2	74	110	6.0	15.2	4.0	10.2	400	1779	120	534
4	0.400	10.2	74	110	6.0	15.2	4.0	10.2	400	1779	120	534
6	0.400	10.2	74	110	6.0	15.2	4.0	10.2	400	1779	120	534
8	0.400	10.2	74	110	6.0	15.2	4.0	10.2	400	1779	120	534
12	0.400	10.2	74	110	6.0	15.2	4.0	10.2	400	1779	120	534
18	0.461	11.7	85	127	6.9	17.6	4.6	11.7	600	2670	180	800
24	0.461	11.7	89	132	6.9	17.6	4.6	11.7	600	2670	180	800
48	0.461	11.7	90	134	6.9	17.6	4.6	11.7	600	2670	180	800
96	0.575	14.6	143	213	8.6	21.9	5.7	14.6	800	3560	240	1068
144	0.730	18.5	229	340	11.0	27.8	7.3	18.5	1000	4445	300	1335

Nexans reserves the right to change product numbers and/or product specifications at any time.

SUPPORTED BANDWIDTH

ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)

Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)

SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)

SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)

OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)

CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)

PON (SMF only): RFoG, APON, BPON, EPON, GPON, WDM-PON, NG-PON

NOTE: Nexans recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

STANDARDS

National	Telcordia GR-20 Telcordia GR-409 ANSI/TIA-568.C.3 ANSI/ICEA S-104-696 ANSI/ICEA S-83-596 ANSI/ICEA S-87-640
International	EN 50173; ISO/IEC 11801

CONSTRUCTION

Gel-filled loose tubes with up to 12 fibers each, dielectric strength members (2 for fiber counts 2-12), water-blocking yarns, and a riser-rated jacket.

TECHNICAL DATA									
Fiber Type	Nexans Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz · km)	Distance (meters)			
Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE
OM1	GIGAlite	62.5 μm	850/1300	3.5/1.0	200	300	33	N/A	N/A
OM2+	GIGAlite	50 μm	850/1300	3.0/1.0	950	750	150	N/A	N/A
OM3	GIGAlite-10	50 μm	850/1300	3.0/1.0	2000	1000	300	100	70
OM4	GIGAlite-10FB	50 μm	850/1300	3.0/1.0	4700	1040	550	150	100
OM4+	GIGAlite-10XB	50 μm	850/1300	3.0/1.0	4900	1210	600	300	150
WideBand Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE
OM5	GIGAlite-WB	50 μm	850-953/1300	3.0/1.0	4700	1040	550	190	100
Single-Mode - Bend Insensitive - ITU-T G.657.A1						1 GbE	10 GbE	40 GbE	100 GbE
OS2	Standard for Loose Tube	SMF	1300/1550	0.4/0.3	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000

PREMISES DISTRIBUTION HARSH ENVIRONMENT (PLENUM)



Loose Tube Riser Rated, 2 to 144 Fibers, Armored and Low-Smoke Zero-Halogen (LSZH) Options

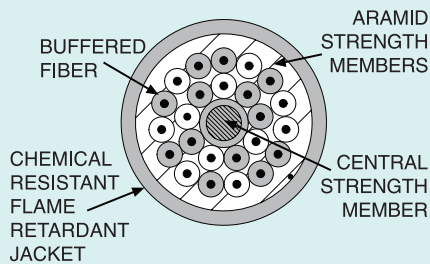
FIBER CABLES



ARMORED OPTION AVAILABLE



LSZH OPTION AVAILABLE



TEMPERATURE RATING

Operation	-40°C to +75°C
Storage	-40°C to +85°C
Installation	-20°C to +75°C

FLAME RATING

Plenum	OFNP/FT-6
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Cables can be utilized inside or between buildings or industrial environments where corrosive chemicals, fuels, or vapors may be present.

- Designed for use in airports, automotive plants, and other harsh industrial petrochemical environments
- Plenum grade thermoplastic jacket, resistant to corrosive chemicals, fuels, and de-icing agent
- Suitable for installation in conduits, ducts, or cable trays
- 2 to 144 count fiber construction plenum designs ideal for horizontal and backbone installation
- Flexible, small diameter, 900 µm tight buffered construction
- High tensile strength and small diameter design
- Single-mode, multimode, and hybrid designs available
- Other standard colors available
- Available with Armor-Tek™ Interlocking Armor
- Cost-saving design, easy to install and terminate
- Provides for greater pulling distances, reducing installation time
- Broad design selection allows for mix and match of fiber components to specific networking applications
- One cable design meeting all structured cabling network communications applications
- MSHA approval for 6-24 fibers

PLENUM (OFNP) RATED TECHNICAL DATA — PHYSICAL					Install		Long Term		Install		Long Term	
Fibers	Diameter		Weight		Min. Bend Radius				Max. Loading			
	in.	mm	lb./kft.	kg/km	in.	cm	in.	cm	lbf.	N	lbf.	N
2	0.170	4.6	12	18	2.6	6.5	1.7	4.3	150	660	45	198
4	0.170	4.8	13	19	2.6	7.2	1.7	4.8	150	660	45	198
6	0.208	5.3	18	26	3.1	7.9	2.1	5.3	300	1335	90	400
12	0.255	6.5	30	44	3.8	9.7	2.6	6.5	300	1335	90	400
24	0.287	7.3	36	53	4.3	10.9	2.9	7.3	300	1335	90	400
48	0.580	14.7	135	201	8.7	22.1	5.8	14.7	600	2670	180	800
72	0.701	17.8	206	307	10.5	26.7	7.0	17.8	600	2670	180	800
96	0.847	21.5	313	466	12.7	32.3	8.5	21.5	800	3559	240	1068
144	0.896	22.8	318	474	13.4	34.1	9.0	22.8	1000	4445	300	1335

Nexans reserves the right to change product numbers and/or product specifications at any time.

SUPPORTED BANDWIDTH

ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)

Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)

SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)

SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)

OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)

CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)

PON (SMF only): RFoG, APON, BPON, EPON, GPON, WDM-PON, NG-PON

NOTE: Nexans recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

STANDARDS

National	Telcordia GR-409 ANSI/TIA-568-C.3 ANSI/ICEA S-104-696 NFPA 130
International	EN 50173; ISO/IEC 11801

CONSTRUCTION

900 µm buffered fibers, water-blocking aramid yarns, and a chemical resistant next-generation high-performance polymer outer jacket. PDP-HE designs use a dielectric central member. 36-144 fiber designs use 12-fiber subunits.

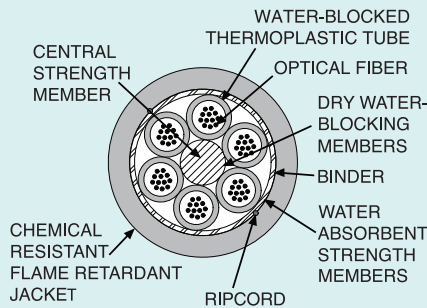
TECHNICAL DATA									
Fiber Type	Nexans Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz • km)	Distance (meters)			
Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE
OM1	GIGAlite	62.5 µm	850/1300	3.5/1.0	200	300	33	N/A	N/A
OM2+	GIGAlite	50 µm	850/1300	3.0/1.0	950	750	150	N/A	N/A
OM3	GIGAlite-10	50 µm	850/1300	3.0/1.0	2000	1000	300	100	70
OM4	GIGAlite-10FB	50 µm	850/1300	3.0/1.0	4700	1040	550	150	100
OM4+	GIGAlite-10XB	50 µm	850/1300	3.0/1.0	4900	1210	600	300	150
WideBand Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE
OM5	GIGAlite-WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100
Single-Mode - Bend Insensitive - ITU-T G.657.A1						1 GbE	10 GbE	40 GbE	100 GbE
OS2	Standard for Tight Buffer	SMF	1300/1550	0.5/0.5	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000

ADVENTUM HARSH ENVIRONMENT (PLENUM)



Chemical-Resistant Jacket, Indoor/Outdoor Plenum rated, 2 to 432 count fiber

FIBER CABLES



TEMPERATURE RATING	
Operation	-40°C to +75°C
Storage	-60°C to +85°C
Installation	-20°C to +60°C

FLAME RATING	
Plenum	OFNP/FT-6

Plenum-Rated Indoor/Outdoor Harsh Environment cable designed for industrial environments.

- Harsh Environment (HE), chemical resistant jacket
- UV resistant outer jacket protects the cable in outside plant installations
- Can be installed directly from outside plant to riser shaft or through plenum spaces; transition points not needed
- Resistant to chemicals, fuels and de-icing agent
- Dry water-blocked, plenum rated, flexible loose tube design of all dielectric construction allows for installation in any outside plant or interior space
- No cleaning of gels required for installation, greatly reducing installation time and cost
- System grounding requirements are eliminated
- Suitable for conduit or in-tray installations



PLENUM (OFNP) RATED TECHNICAL DATA — PHYSICAL					Install		Long Term		Install		Long Term	
Fibers	Diameter		Weight		Min. Bend Radius				Max. Loading			
	in.	mm	lb./kft.	kg/km	in.	cm	in.	cm	lbf.	N	lbf.	N
2	0.460	11.7	87	129	6.9	17.5	4.6	11.7	600	2670	200	890
4	0.460	11.7	87	129	6.9	17.5	4.6	11.7	600	2670	200	890
6	0.460	11.7	87	129	6.9	17.5	4.6	11.7	600	2670	200	890
8	0.460	11.7	87	129	6.9	17.5	4.6	11.7	600	2670	200	890
12	0.460	11.7	87	129	6.9	17.5	4.6	11.7	600	2670	200	890
24	0.460	11.7	87	130	6.9	17.5	4.6	11.7	600	2670	200	890
36	0.460	11.7	88	131	6.9	17.5	4.6	11.7	600	2670	200	890
48	0.460	11.7	88	131	6.9	17.5	4.6	11.7	600	2670	200	890
60	0.460	11.7	89	132	6.9	17.5	4.6	11.7	600	2670	200	890
72	0.460	11.7	89	132	6.9	17.5	4.6	11.7	600	2670	200	890
96	0.532	13.5	126	187	8.0	20.3	5.3	13.5	600	2670	200	890
144	0.700	17.8	212	315	10.5	26.7	7.0	17.8	1000	4448	300	1335
216	0.700	17.8	180	269	10.5	26.7	7.0	17.8	1000	4448	300	1335
432	0.940	23.9	362	539	14.1	35.8	9.4	23.9	1000	4448	300	1335

SUPPORTED BANDWIDTH

ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)

Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)

SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)

SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)

OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)

CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)

PON (SMF only): RFoG, APON, BPON, EPON, GPON, WDM-PON, NG-PON

NOTE: Nexans recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

STANDARDS

National	Telcordia GR-409 ICEA S-104-696 ANSI/TIA-568-3.C ANSI/ICEA S-83-596 NFPA 130
International	EN 50173; ISO/IEC 11801

CONSTRUCTION

Chemical resistant water-blocked loose tubes with up to 12 250 µm fibers. Fiber counts >12 use a dielectric central strength member. Water-blocking strength yarns are covered by a chemical resistant plenum thermoplastic jacket.

TECHNICAL DATA										
Fiber Type	Nexans Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz · km)	Distance (meters)				
Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE	
OM1	GIGAlite	62.5 µm	850/1300	3.5/1.0	200	300	33	N/A	N/A	
OM2+	GIGAlite	50 µm	850/1300	3.0/1.0	950	750	150	N/A	N/A	
OM3	GIGAlite-10	50 µm	850/1300	3.0/1.0	2000	1000	300	100	70	
OM4	GIGAlite-10FB	50 µm	850/1300	3.0/1.0	4700	1040	550	150	100	
OM4+	GIGAlite-10XB	50 µm	850/1300	3.0/1.0	4900	1210	600	300	150	
WideBand Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE	
OM5	GIGAlite-WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100	
Single-Mode - Bend Insensitive - ITU-T G.657.A1						1 GbE	10 GbE	40 GbE	100 GbE	
OS2	Standard for Tight Buffer	SMF	1300/1550	0.4/0.3	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000	

TACTICAL FIBER CABLE

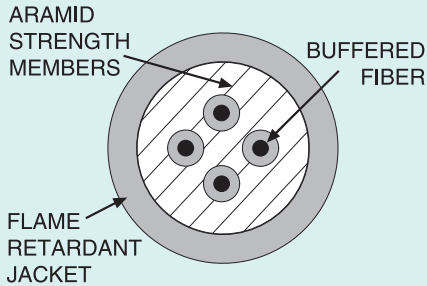


Outdoor tactical cable, Tight-buffered 2-24 fibers

FIBER CABLES



LSZH OPTION AVAILABLE



TEMPERATURE RATING

Operation	-46°C to +71°C
Storage	-55°C to +85°C
Installation	-46°C to +71°C

Able to withstand the harshest conditions, enabling field deployment in industrial environments.

- Wide operating temperature range
- Rugged, durable jacket
- Superior mechanical properties
- Superior flexibility in cold temperatures
- Available with optional radiation-hardened optical fibers
- Tight-buffered design allows direct connector termination
- Breakout or distribution style construction
- Available with a LSZH jacket



TECHNICAL DATA — PHYSICAL					Install		Long Term		Install		Long Term	
Fibers	Diameter		Weight		Min. Bend Radius				Max. Loading			
	in.	mm	lb./kft.	kg/km	in.	cm	in.	cm	lbf.	N	lbf.	N
2	0.228	5.8	16	24	3.4	8.7	2.3	5.8	150	667	45	200
4	0.228	5.8	17	25	3.4	8.7	2.3	5.8	150	667	45	200
4	0.301	7.6	26	39	4.5	11.5	3.0	7.6	490	2200	120	550

SUPPORTED BANDWIDTH

ETHERNET: 10BASE – 100GBASE (10BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE)

Fibre Channel: FC-PH (1.062 Gb/s)

NOTE: Nexans recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

STANDARDS

National Telcordia GR-409
 ICEA S-104-696
 International EN 50173; ISO/IEC 11801

TECHNICAL DATA										
Fiber Type	Nexans Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz • km)	Distance (meters)				
Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE	
OM1	GIGAlite	62.5 µm	850/1300	3.5/1.0	200	300	33	N/A	N/A	
OM2+	GIGAlite	50 µm	850/1300	3.0/1.0	950	750	150	N/A	N/A	
OM3	GIGAlite-10	50 µm	850/1300	3.0/1.0	2000	1000	300	100	70	
OM4	GIGAlite-10FB	50 µm	850/1300	3.0/1.0	4700	1040	550	150	100	
OM4+	GIGAlite-10XB	50 µm	850/1300	3.0/1.0	4900	1210	600	300	150	
WideBand Multimode - Bend Insensitive						1 GbE	10 GbE	40 GbE	100 GbE	
OM5	GIGAlite-WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100	
Single-Mode - Bend Insensitive - ITU-T G.657.A1						1 GbE	10 GbE	40 GbE	100 GbE	
OS2	Standard for Tight Buffer	SMF	1300/1550	0.4/0.3	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000	

ARMOR-TEK INTERLOCK ARMOR

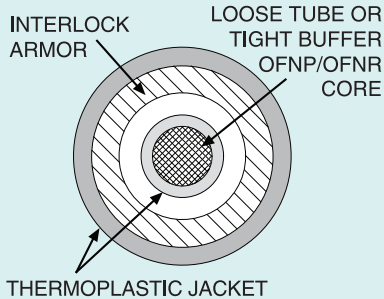


Replaces Innerduct, Up to 432 Fibers, Plenum, Riser or Low-Smoke Zero-Halogen (LSZH)

FIBER CABLES



ARMORED OPTION
AVAILABLE



TEMPERATURE RATING

Operation	-40°C to +75°C
Storage	-60°C to +85°C
Installation	-20°C to +60°C

Sample Part Number: LTPK012FB3010/F5

FLAME RATING

Plenum	OFCP/FT-6
Riser	OFCR/FT-4

Armor-Tek fiber cables can be used in any of the following installation environments: indoor, indoor/outdoor, building and campus backbones, and industrial.

- Jacketed armor that remains flexible due to the spiral wrap armoring process
- Easy one-pull installation into any environment
- Available in aluminum or steel interlock armor
- Compact outside diameters when compared to plenum innerduct or conduit
- Available in tight buffer or loose tube and composite copper and fiber designs
- Aluminum interlock offers 4 to 8 times the crush resistance of a standard dielectric fiber cable (steel, 5 to 10 times)
- Eliminates the need for conduit or plenum innerduct
- Significant cost savings in both materials and labor – up to 25%
- Suitable for hazardous environments or difficult installations
- Accommodates last minute relocations or pathway changes
- Provides a higher concentration of cables in an area than conduit
- Can be installed in campus environments due to the durability and indoor/outdoor rating of the cable
- Rugged armoring materials provide additional security for your fiber backbone
- Suitable for tray installations

NOTE: Armored cable installed in an outdoor environment should be bonded when passing into an indoor environment.



SUPPORTED BANDWIDTH

ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)

Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)

SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)

SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)

OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)

CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)

PON (SMF; I/O ONLY): (RfOG, APON, BPON, EPON, GPON, WDM-PON, NG-PON)

STANDARDS

North American ANSI/TIA/EIA-568-B.3

ANSI/ICEA S-87-640

ANSI/ICEA S-83-596

Telcordia GR-409

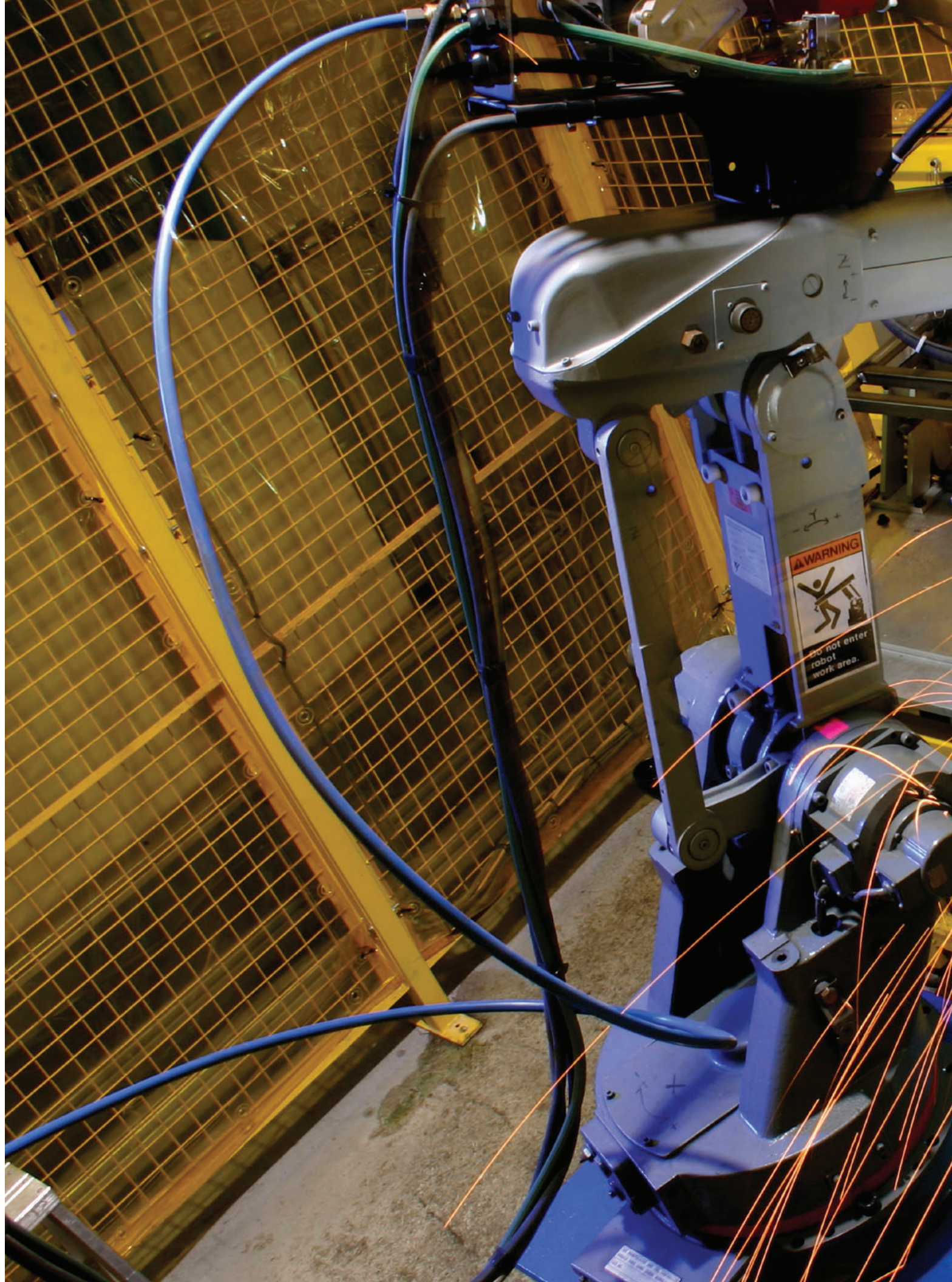
European EN 50173

International ISO/IEC 11801

CONSTRUCTION

Spirally-wrapped interlocked aluminum or steel armor surrounds the core cable.

TECHNICAL DATA										
Fiber Type	Part Number Suffix	Nexans Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz • km)	Distance (meters)			
Multimode - Bend Insensitive							1 GbE	10 GbE	40 GbE	100 GbE
OM1	CB3510/25	GIGAlite	62.5 µm	850/1300	3.5/1.0	200	300	33	N/A	N/A
OM2+	LB3010/75	GIGAlite	50 µm	850/1300	3.0/1.0	950	750	150	N/A	N/A
OM4	FB3010/F5	GIGAlite-10FB	50 µm	850/1300	3.0/1.0	4700	1040	550	150	100
OM4+	XB3010/X5	GIGAlite-10XB	50 µm	850/1300	3.0/1.0	4900	1210	600	300	150
WideBand Multimode - Bend Insensitive							1 GbE	10 GbE	40 GbE	100 GbE
OM5	WB3010/W5	GIGAlite-WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100
Single-Mode - Bend Insensitive - ITU-T G.657.A1							1 GbE	10 GbE	40 GbE	100 GbE
OS2	AB0707	Standard for Tight Buffer	SMF	1300/1550	0.5/0.5	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000
OS2	AB0403	Standard for Loose Tube	SMF	1300/1550	0.4/0.3	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000





FIELD INSTALLABLE CONNECTORS

LANmark RJ-45 Field Installation Connectors

Unshielded IP20 Plug kit	74
Shielded IP20 Plug kit	75
Unshielded IP67 kit	76

LANmark M12 Field Installation Connectors

M12 D-Coded IP67 Connector	77
M12 X-Coded IP67 Connector	77

FIELD INSTALLABLE CONNECTORS

Nexans LANmark Industrial Connectors enable the expansion and integration of Ethernet into machines, sensors, PLC/DCS networks and various industrial environments.

LANMARK RJ UNSHIELDED IP20 PLUG KITS

These three field-installable RJ-45 unshielded plug kits are optimized for LANmark unshielded industrial cables based on diameter, wire size and application performance.



LANMARK CONNECTOR	OPTIMIZED FOR LANMARK CABLES	CABLE DIAMETER	WIRE ALIGNER	APPLICATION PERFORMANCE
B540-RJU-PKB	Cat5E: B540, C539, C538, B535, B585	0.240 - 0.250"	None	100 Mbit Ethernet
A753-RJU-PKB	Cat5E: A753	0.220 - 0.230"	None	100 Mbit Ethernet
A689-RJU-PKB	Cat6: A689	0.300 max	Polycarbonate	10 Gbit Ethernet

PART NUMBER	DESCRIPTION
81000740	B540-RJU-PKB: RJ45 Unshielded Plug Kit IP20
81000742	A753-RJU-PKB: RJ45 Unshielded Plug Kit IP20
81000743	A689-RJU-PKB: RJ45 Unshielded Plug Kit IP20

Nexans reserves the right to change product numbers and/or product specifications at any time.



LANMARK RJ SHIELDED IP20 PLUG KITS

These four field-installable RJ-45 shielded plug kits are optimized for LANmark shielded industrial cables based on diameter, wire size and application performance.



LANMARK CONNECTOR	OPTIMIZED FOR LANMARK CABLES	CABLE DIAMETER	WIRE ALIGNER	APPLICATION PERFORMANCE
C542-RJS-PK	C542, A750, B751, B752	0.217 - 0.315"	0.042 - 0.048"	Polycarbonate
B537-RJS-PKB	B537, C541, B587	0.270 - 0.295"	0.042 - 0.048"	None
C637-RJS-PKB	C637	0.270 - 0.295"	0.033 - 0.038"	Polycarbonate
C545-RJS-PKB	C545	0.295 - 0.340"	0.042 - 0.048"	Polycarbonate

PART NUMBER	DESCRIPTION
81000744	C542-RJS-PKB: RJ45 Shielded Plug Kit IP20
81000745	C637-RJS-PKB: RJ45 Shielded Plug Kit IP20
81000746	C545-RJS-PKB : RJ45 Shielded Plug Kit IP20
81000747	C537-RJS-PKB: RJ45 Shielded Plug Kit IP20

FIELD INSTALLABLE CONNECTORS

LANMARK RJ IP-67 KIT

This field-installable RJ-45 plug kit is ideal for IP-67 Ingress Protection rated applications using RJ-45 connectivity. The kit includes two part numbers, the plug kit and the mating jack kit.

This kit is optimized for the following LANmark industrial cables based on diameter, wire size and application performance: A753 , B535, C538, C539, 8540 , B585.

PART NUMBER	DESCRIPTION
81000749	A753-RJ-IP67-PKB: RJ45 Plug Kit IP67
81000750	A753-RJ-IP67-JKB: RJ45 Jack Kit IP67



Plug Kit



Jack Kit



LANMARK M12 D-CODED IP-67 CONNECTOR

This field-installable M12 D-Coded connector kit is ideal for more ruggedized industrial connectivity requiring threaded connection, 2 pair Cat5E Ethernet and IP-67 Ingress Protection rating.

This connector is optimized for the following LANmark Industrial cables: C541, C538, B587, B535, B585 and C547.



PART NUMBER	DESCRIPTION
81000751	C541-M12D-PKB: M12 D-code, 4-pin screw term male IP67 connector

LANMARK M12 X-CODED IP-67 CONNECTOR

This field-installable M 12 X-Coded connector kit is ideal for more ruggedized industrial connectivity requiring threaded connection, 10 Gbit Ethernet and IP-67 Ingress Protection rating

This connector is optimized for the following LANmark Industrial Cat 6 and Cat 6A cables: C545, C637, A750 , B751, A689 , B752.



PART NUMBER	DESCRIPTION
81000752	C545-M 12X-PKB: M12 X-code , 8-pin IDC term male IP67 connector





INDUSTRIAL CORDSETS

LANmark RJ-RJ, IP20 Cordsets

B540-RR-IP20: Cat 5e PVC IP20 Assembly	80
C542-RR-IP20: Cat 5e TPE IP20 Assembly	80
C637-RR-IP20: Cat 6A TPE IP20 Assembly	81

LANmark M12-M12, IP67 Cordsets

C541-MMD-IP67: Cat 5e, Shielded, TPE, High Flex.	81
C538-MMD-IP67: Cat 5e, Unshielded, TPE, High Flex.	81

INDUSTRIAL CORDSETS

Nexans LANmark Industrial cordsets enable the expansion and integration of Ethernet into machines, sensors, PLC/DCS networks and various industrial environments.

LANMARK RJ-RJ B540 CAT 5e IP20 ASSEMBLY

With its 600V AWM design, stranded conductors and Industrial PVC jacket resistant to abrasion and oil, this assembly is ideal for interconnecting devices and switches in enclosures, machines and control rooms where high-vibration and tight spaces are present. This cable is also rated CMR and CMX outdoor, so it transitions easily from indoor to outdoor environment. This cable assembly is available in various lengths.



PART NUMBER	DESCRIPTION
11099839	B540-RR2M: RJ-RJ, 2m, B540 cable assembly IP20
11099841	B540-RR5M: RJ-RJ, 5m, B540 cable assembly IP20

LANMARK RJ-RJ C542 CAT 5e TPE IP20 ASSEMBLY

With its high flex life, 600V AWM, stranded shielded construction and durable TPE jacket resistant to abrasion, oil, UV light and weld spatter, this assembly is ideal for interconnecting devices and robotics in machines and C-track chains. This cable is also rated CMR and CMX outdoor, so it transitions easily from indoor to outdoor environment. This cable assembly is available in various lengths.



PART NUMBER	DESCRIPTION
11099853	C542-RR2M: RJ-RJ, 2m, B542 cable assembly IP20
11099855	C542-RR5M: RJ-RJ, 5m, B542 cable assembly IP20



LANMARK RJ-RJ C637 CAT 6A TPE IP20 ASSEMBLY

With its high bandwidth category 6A performance, shielded design, high flex life, 600V AWM and durable TPE jacket resistant to abrasion, oil, UV light and weld spatter, this assembly is ideal for interconnecting devices, robotics and high resolution video in machines, C-track chains and HMI equipment. This cable is also rated CMR and CMX outdoor, so it transitions easily from indoor to outdoor environment. This cable assembly is available in various lengths.



PART NUMBER	DESCRIPTION
11099857	C637-RR2M RJ-RJ, 2m, C637 cable assembly IP20
11099858	C637-RR5M RJ-RJ, 5m, C637 cable assembly IP20

LANMARK M12-M12 C538 CAT TPE IP67 ASSEMBLY

With its high flex life, 600V AWM, 2 pair design and durable TPE jacket resistant to abrasion, oil, UV light and weld spatter, this assembly is ideal for interconnecting devices and robotics in machines and C-track chains. This M12 assembly is IP-67 rated which is ideal for clean-in-place and wash-in-place applications. This cable is CM and CMX outdoor listed. It is also available in various lengths.



PART NUMBER	DESCRIPTION
11099859	C538-MMD2M: M12-M12, D code, 2m, C538 cable assembly IP67
11099860	C538-MMD5M: M12-M12, D code, 5m, C538 cable assembly IP67

LANMARK M12-M12 C541 CAT 5e TPE IP67 ASSEMBLY

With its high flex life, 600V AWM, 2 pair shielded design and durable TPE jacket resistant to abrasion, oil, UV light and weld spatter, this assembly is ideal for interconnecting devices and robotics in machines and C-track chains. This M12 assembly is IP-67 rated which is ideal for clean-in-place and wash-in-place applications. This cable is CM and CMX outdoor listed. It is also available in various lengths.



PART NUMBER	DESCRIPTION
11099861	C541-MMD2M: M12-M12, D code, 2m, C538 cable assembly IP67
11099862	C541-MMD5M: M12-M12, D code, 5m, C538, cable assembly IP67





INDUSTRIAL FIBER ASSEMBLIES

INDUSTRIAL FIBER ASSEMBLIES

LC-LC FIBER ASSEMBLY

- Uniboot style duplex LC connectors
- Slim round patch cord cable to reduce required space in dense patching zones
- Improved handling in high-density applications
- Low-loss connectivity enables system design flexibility
- Bend radius reduced with GIGAliteFlex bend insensitive fiber
- Designed to withstand tight bends and challenging cable routes
- Low-smoke and zero-halogen (LSZH) or Plenum (OFNP)
- Flame retardant
- Reverse polarity uniboot connector



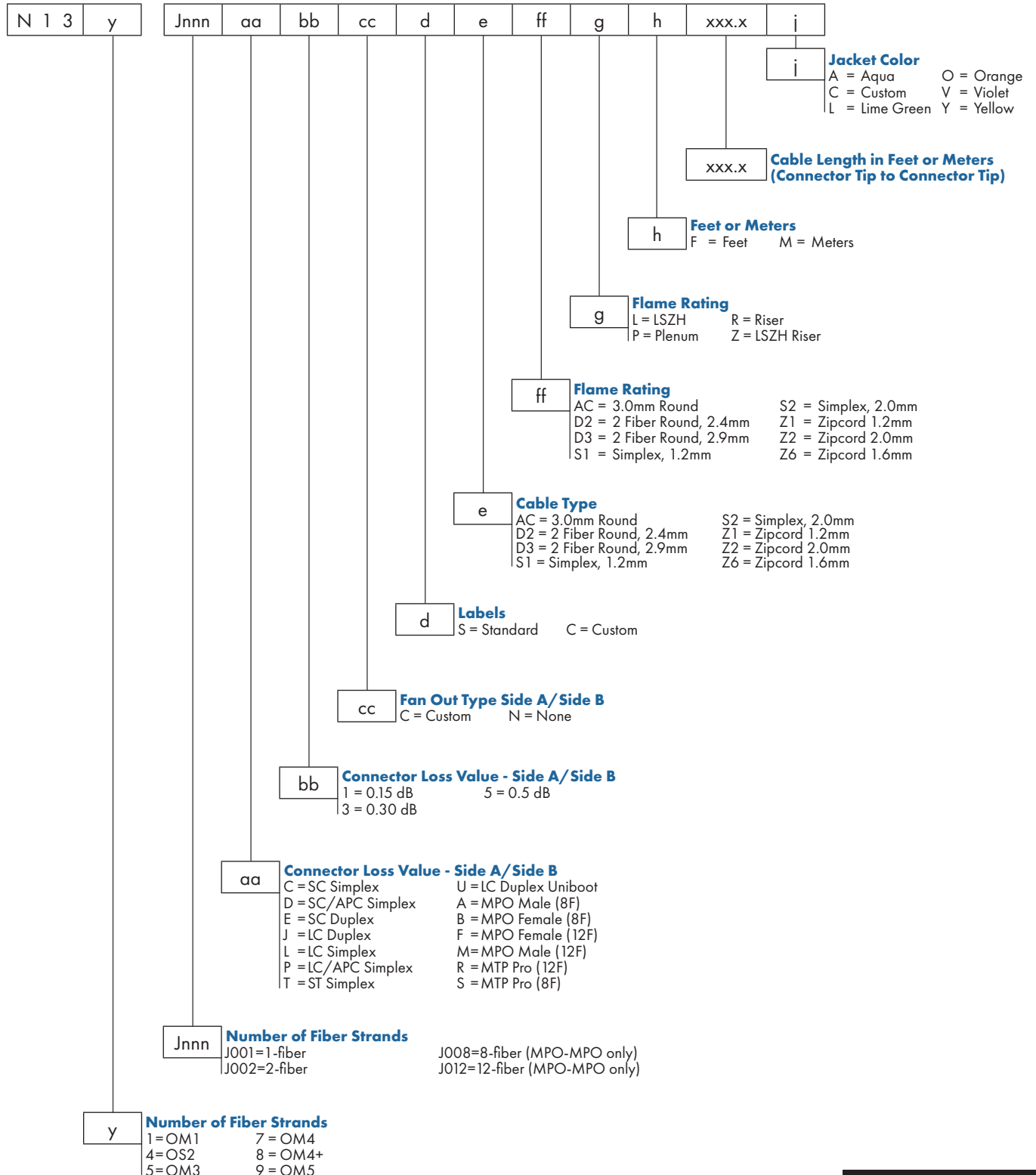
MPO-MPO FIBER ASSEMBLY

- MPO-MPO patch cords
- Slim round patch cable
- Small bend radius
- Female-Female patch cord to fit with male MPO connector of MPO Pre-Term or male QSFP+ connector
- Available in OM4, OM5 and singlemode
- Straight wiring with key up/key up (Type A) design
- Parallel Optics: 40GBASE-SR4, 100GBASE-SR10 and 100G PSM4
- Low-smoke and zero-halogen (LSZH) and Plenum (OFNP)
- Flame and fire retardant



Fiber Assembly Part Numbers

Nexan's Fiber Assembly part numbers are composed of several sections that represent the assembly's characteristics. To accurately build your fiber assembly part numbers, select the correct codes from the diagram below.





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