

Nexans Industrial Solutions
BULK CABLE SELECTOR GUIDE



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.










Nexans' Industrial Ethernet Cabling Solutions ensure reliable and worry-free Control, Monitor and Process applications under harsh industrial environments, for best production performance.

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 I	SR II	600V Rating AWM	Yes	-40°C to 80°C	40 lbs.
	LANmark-A774	4 Pair U/UTP	24 AWG	None	TPE	0.24"	Solid	CM	OR II	SR II	300V Rating	Yes	-40°C to 75°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 X/UTP	23 AWG	Discontinuous Foil	PVC	0.31"	Solid	Riser CMX Outdoor	OR I	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 (DryGel)	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 (12 fibers max), and Outside Plant All Dielectric. MSHA Approval is available for Premises Distribution Riser (6-144 fibers) and Heavy Duty Breakout (2-24 fibers).

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-B536	2 Pair SF/UTP	24 AWG	Braid and Foil	TPE	0.27"	Solid	Riser 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-B789*	2 Pair SF/UTP	22 AWG	Braid and Foil	TPE	0.30"	Solid	CM 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.

* LANmark-B789 is PROFINET Type A and Power Limited Tray Cable (PLTC)

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



Conductor



Weld Spatter Resistant



Indoor/Outdoor Use



Pull Tension



Flame Rating



Voltage Rating



Water block/resistance



Fungus Resistant



Operating Temperature



Oil Resistance I (60 °C) and II (75 °C)



Abrasion Resistance











Continuous High Flex Life



UV/Sunlight Resistance I (300hrs) and II (720hrs)

🔑 = New Product

Zone C | Product Recommendations | Copper









Zone C: Near Machines and Equipment															
LANmark Industrial Heavy Duty Series															
		Physical Characteristics				Performance Rating									
		Construction	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.
	LANmark-C826**	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.

*LANmark-C547 is PROFINET Type B & C and Power Limited Tray Cable (PLTC)

**LANmark-C826 is 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 (Dry-Gel)	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

MSHA Approval is available for Premise Distribution Harsh Environment (6-24 fibers).

www.nexans.us/industrial | industrial.support@nexans.com | 800-237-5835

