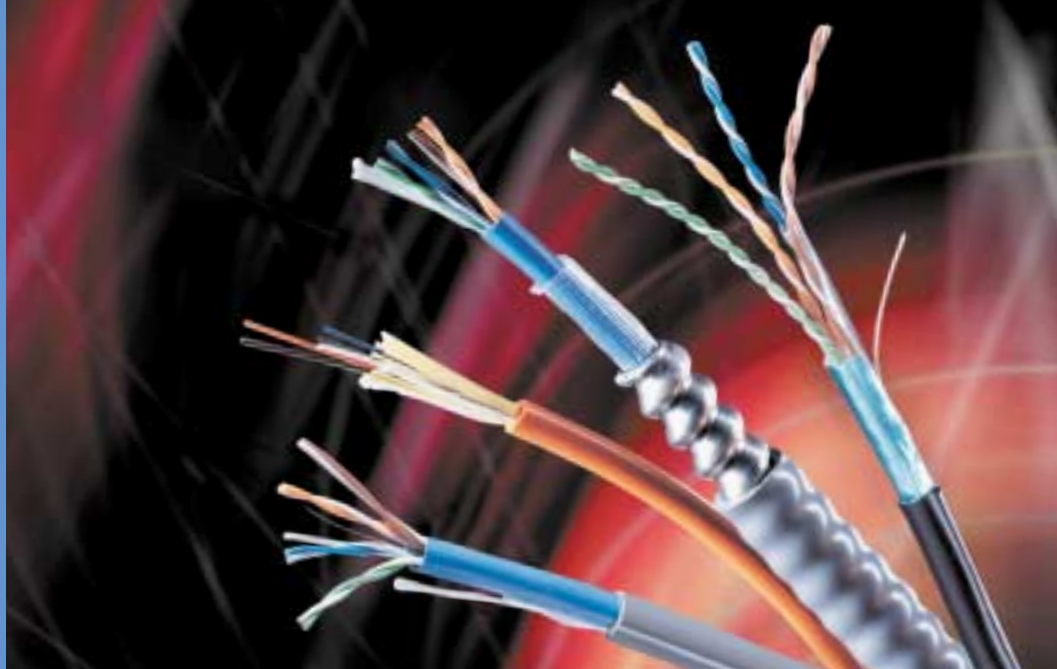


**Peak network efficiency
and reliability are achieved
with Belden's DataTuff
Industrial Ethernet cables.
Bonded-Pair versions also
offer the unique advantage
of Installable Performance.™**



DataTuff® Category 6 and 5e Ethernet Cables Are Made for Tough Industrial Environments

The reliability of your Industrial Ethernet network depends on the cable infrastructure: Data transmission errors can lead to interruptions in critical control functions resulting in lost production time and even safety issues. To help ensure optimum factory floor performance, Belden has consistently built both quality and reliability into each cable it manufactures. From the introduction and dominant call-out of Belden's Blue Hose® cables, to our present line of DataTuff Category 6 and 5e copper cables and TrayOptic® fiber optic Industrial Ethernet cables, Belden has always supplied the cable you need, when you need it.

And because we have been at the forefront of the industrial marketplace for decades and understand the rigors of the industrial environment, we also have the unique ability to provide top performing cables — regardless of the work environment. So, even if your cabling system is exposed to the following conditions you can turn to Belden for the right solution:

- > Oil and sunlight
- > Temperature variations
- > Abrasion and crushing
- > Presence of EMI/RFI (electromagnetic interference or radio frequency interference)

Only DataTuff Cables with Belden's Patented Bonded-Pair Technology Offer The Benefit of Installable Performance

Many versions of DataTuff cables feature Belden's patented Bonded-Pair technology. This construction feature affixes the conductors of the cable pairs along their longitudinal axes to ensure that no performance-robbing gaps can develop between the conductor pairs. Since no gaps can occur and the conductor-to-conductor spacing is always

uniform, the cable offers excellent and consistently reliable electrical performance — even after the cable has been subjected to the bending, pulling and twisting that is inherent in the installation process. Belden calls this unique after-installation performance capability Installable Performance.

TrayOptic Cables Feature Laser Certified Fiber (LCF™) and Water-Blocking Capability

When the installation demands the combination of sophisticated fiber optic technology and rugged durability, turn to Belden's line of TrayOptic indoor/outdoor fiber optic cables — now upgraded to include a water-blocking agent. All TrayOptic products also utilize Laser Certified Fiber to handle Gigabit Ethernet light sources and any expanded bandwidth requirements. For information on Belden's full line of BelOptix® fiber optic cables, including TrayOptic cables, contact Belden at 1-800-BELDEN-4 or visit www.belden.com.

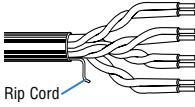
Quality You Can Trust

All Belden products are manufactured to the industry's highest standards of quality, utilizing the most advanced equipment, systems, controls and processes. In fact, Belden has long been a pioneer in production processes, such as statistical process control (SPC), that have become industry standards. And Belden was the first major designer and manufacturer of cable products to achieve ISO 9000 registration for the majority of its domestic and overseas facilities.

Belden Quality Means Uptime and Superior Safety Performance

Today's critical industrial networking applications can't afford data transmission errors that can cause downtime, delays, and even safety concerns. Belden quality gives you the performance and reliability you need on a day-by-day basis.



Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nom. Insulated Conductor OD		Nominal OD		Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)			
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm										
Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC • Rip Cord • See Color Code Chart																					
Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																					
	7923A new	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	28.0	12.7	.038	.97	.230	5.94	1	2.0	65.3	63.3	60.8	100±12	20.0			
				2000	609.6	54.0	24.5	x	x			4	4.0	56.3	52.3	48.7	100±12	23.0			
								.075	1.91			8	5.7	51.8	46.1	42.7	100±12	24.5			
												10	6.4	50.3	43.9	40.8	100±12	25.0			
												16	8.1	47.3	39.1	36.7	100±12	25.0			
												25	10.3	44.3	34.1	32.8	100±15	24.3			
												31.25	11.6	42.9	31.3	30.9	100±15	23.6			
												62.5	16.8	38.4	21.6	24.8	100±15	21.5			
												100	21.7	35.3	17.1	20.8	100±15	20.1			
												155	27.7	32.5	4.7	16.9	100±18	19.0			
												200	32.0	30.8	3.0	14.7	100±18	19.0			
												250	36.4	29.3	—	12.8	100±20	18.0			
												350	44.3	27.2	—	9.9	100±22	17.0			

RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126

Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e

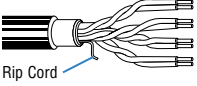
RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126
Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e

Cat 5e • 24 AWG Bonded-Pairs Solid BC • Overall Beldfoil® Shield • 24 AWG Stranded TC Drain Wire • See Color Code Chart																		
Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																		
	7929A new	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	36.0	16.3	.045	1.14	.265	6.73	1	2.0	62.3	60.3	60.8	100±15	20.0
				2000	609.6	70.0	31.8	x	x			4	4.1	53.3	49.2	48.7	100±15	23.0
								.088	2.24			10	6.5	47.3	41.8	40.8	100±15	25.0
												16	8.2	44.3	36.0	36.7	100±15	25.0
												31.25	11.7	39.9	28.2	30.9	100±15	23.6
												62.5	17.0	35.4	18.4	24.8	100±15	21.5
												100	22.0	32.3	10.3	20.8	100±15	20.1
												200	32.4	27.8	1.0	14.7	100±25	15.0

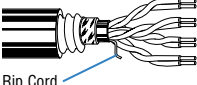
RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126
Shield is bonded to jacket inner wall for electrical stability. • Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e

Cat 5e • 24 AWG Bonded-Pairs Solid BC • Overall Beldfoil + 70% TC Braid • 24 AWG Solid Spiral Drain Wire • See Color Code Chart																		
Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																		
	Heavy-shielded 7921A new	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	55.0	24.9	.047	1.19	.330	8.38	1	2.0	62.3	60.3	60.8	100±15	20.0
				2000	609.6	108.0	49.0	x	x			4	4.1	53.3	49.2	48.7	100±15	23.0
								.091	2.31			10	6.5	47.3	41.8	40.8	100±15	25.0
												16	8.2	44.3	36.0	36.7	100±15	25.0
												31.25	11.7	39.9	28.2	30.9	100±15	23.6
												62.5	17.0	35.4	18.4	24.8	100±15	21.5
												100	22.0	32.3	10.3	20.8	100±15	20.1

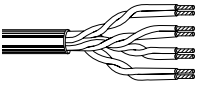
-25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126 • Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e

Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC • Rip Cord • See Color Code Chart																		
Non-Plenum • Polyolefin Insulation • PVC Inner Jacket • .035" Industrial Grade Black or Gray PVC Outer Jacket																		
	11700A	NEC: CMR CEC: CMR FT4	4	1000	304.8	39.0	17.7	.038	.97	.285	7.24	(Same as 7923A above)						
				3000	914.4	117.0	53.2	x	x									
								.075	1.91									

RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126 • Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e • Outer jacket is sunlight- and oil-resistant.

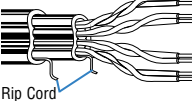
Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC • Mylar® Wrap • Rip Cord • See Color Code Chart																		
Non-Plenum • Polyolefin Insulation • PVC Inner Jacket • .045" Industrial Grade Black or Gray PVC Outer Jacket																		
	121700A	NEC: CMG CEC: HL CMG FT4	4	1000	304.8	155.0	70.5	.038	.97	.530	13.46	(Same as 7923A above)						
				3000	914.4	465.0	211.4	x	x									
								.075	1.91									

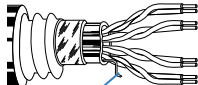
RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126 • Jacket sequentially marked at 1 meter intervals. • Verified to TIA/EIA-568-B.2, Category 5e • Outer jacket is sunlight- and oil-resistant.

Enhanced Cat 5e • 24 AWG Bonded-Pairs Stranded TC (7x32) • See Color Code Chart																		
Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																		
	7924A new	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	30.0	13.6	.039	.99	.242	6.15	1	2.4	65.3	62.9	60.8	100±12	20.0
				2000	609.6	58.0	26.3	x	x			4	4.8	56.3	51.5	48.7	100±12	23.0
								.077	1.96			8	6.8	51.8	45.0	42.7	100±12	24.5
												10	7.7	50.3	42.6	40.8	100±12	25.0

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nom. Insulated Conductor OD		Nominal OD		Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min RL (dB)
				ft.	m	Lbs.	kg	Inch	mm	Inch	mm							
Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC • See Color Code Chart																		
FEP Insulation • Sunlight-, Oil- and Gas-resistant Black FEP Jacket																		
High & Low Temp	7928A 	NEC:	4	1000	304.8	24.0	10.9	.036	.91	.187	4.75	1	2.0	65.3	63.3	60.8	100±12	20.0
Oil Res I & II		Limited						x	x			4	4.0	56.3	52.3	48.7	100±12	23.0
Gas Res		Combustible						.071	1.80			8	5.7	51.8	46.1	42.7	100±12	24.5
		FHC 25/50										10	6.4	50.3	43.9	40.8	100±12	25.0
		CMP										16	8.1	47.3	39.1	36.7	100±12	25.0
		CEC:										25	10.3	44.3	34.1	32.8	100±15	24.3
		CMP FT6										31.25	11.6	42.9	31.3	30.9	100±15	23.6
											62.5	16.8	38.4	21.6	24.8	100±15	21.5	
RJ-45 Compatible • -70°C • U.S. Patents 5,606,151 and 5,734,126																		
Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e																		



Description	Part No.	UL NEC / C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nom. Insulated Conductor OD		Nominal OD		Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm								
Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC • Rip Cord • See Color Code Chart																			
Non-Plenum • Polyolefin Insulation • PVC Inner Jacket • .035" Industrial Grade Black or Gray PVC Outer Jacket																			
Upjacketed	11872A	NEC: CM CEC: CM FT1	4	1000	304.8	66.0	30.0	.041	1.04	.475	12.07	1	1.9	72.3	70	64.8	100±12	20.0	
								x	x	x	x	4	3.7	63.3	59	52.7	100±12	23.0	
								.080	2.03	.265	6.73	10	5.9	57.3	51	44.8	100±12	25.0	
												16	7.5	54.3	46	40.7	100±12	25.0	
												31.25	10.6	49.9	39	34.9	100±15	23.6	
												62.5	15.4	45.4	30	28.8	100±15	21.5	
												100	19.8	42.3	25	24.8	100±15	21.0	
												155	25.1	39.5	14	20.9	100±15	21.0	
												200	29.0	37.9	10	18.7	100±15	21.0	
												310	31.7	34.9	—	14.9	100±20	18.0	
												.365	9.27						
Rip Cord											x	x							
													350	39.8	34.2	—	13.9	100±22	17.0
													400*	43.0	33.3	—	12.7	100±25	14.0
													500*	49.0	31.8	—	10.8	100±25	14.0
RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151, 5,734,126 and 5,821,467																			
Jacket sequentially marked at 2 ft. intervals. • Verified to TIA/EIA-568-B-2-1, Category 6																			
*Value provided for information only.																			

Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC • Mylar® Wrap • Rip Cord • See Color Code Chart														
Non-Plenum • Polyolefin Insulation • PVC Inner Jacket • .055" Industrial Grade Black or Gray PVC Outer Jacket														
	121872A	NEC: CMG CEC: HL CMG FT4	4	1000	304.8	293.0	133.2	.041 x .080	1.04 x 2.03	.684	17.37	(Same as 11872A above)		
										Nominal Core OD:				
										.365		9.27		
										x		x		
										.165		4.19		
RJ-45 Compatible • -40°C • U.S. Patents 5,606,151, 5,734,126 and 5,821,467 • Jacket sequentially marked at 1 meter intervals. • Verified to TIA/EIA-568-B.2-1, Category 6														
ACR = Attenuation Crosstalk Ratio • AL = Aluminum • BC = Bare Copper • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • TC = Tinned Copper														

DataTuff® Industrial Ethernet Cable Selection Guide

Part No.	Category	Shielding		Conductor		Installation	Environmental Issues				Industrial Grade Jacket		
		Unshielded	Shielded*	Solid	Stranded**	Installation Stress Resistance†	Oil Resistance	UV Sunlight Resistance	Gasoline Resistance	HI/LO Temp	Heavy	Upjacket	Armored
7923A	Cat 5e	●		●		●	●	●			●		
7929A	Cat 5e		●	●		●	●	●			●		
7921A	Cat 5e		●	●		●	●	●			●		
11700A	Cat 5e	●		●		●	●	●				●	
121700A	Cat 5e	●		●		●	●	●					●
7924A	Cat 5e	●			●	●	●	●			●		
7928A	Cat 5e	●		●		●	●	●	●	●	●		
7918A	Cat 5e	●		●		●	●	●			●		
7919A	Cat 5e		●	●		●	●	●			●		
7927A	Cat 6	●		●		●	●	●			●		
7931A	Cat 6	●		●		●	●	●	●	●	●		
11872A	Cat 6	●		●		●						●	
121872A	Cat 6	●		●		●		●					●

* Shielded products are recommended for high-noise environments.

** Stranded products are recommended where more flexibility is needed.

† Products with Bonded-Pair technology provide Installable Performance™ advantages — refer to Belden Bonded-Pair Cable Bulletin #BP02.

This chart is meant to help the user select the right cable. Refer to cable specifications for details. See www.belden.com for fiber optic cable recommendations and technical data sheets.

Color Codes:

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

For More Information:

www.belden.com/ienp197.pdf

Belden Electronics Division Technical Support 1- 800-BELDEN-1 or 1- 800-BELDEN-3