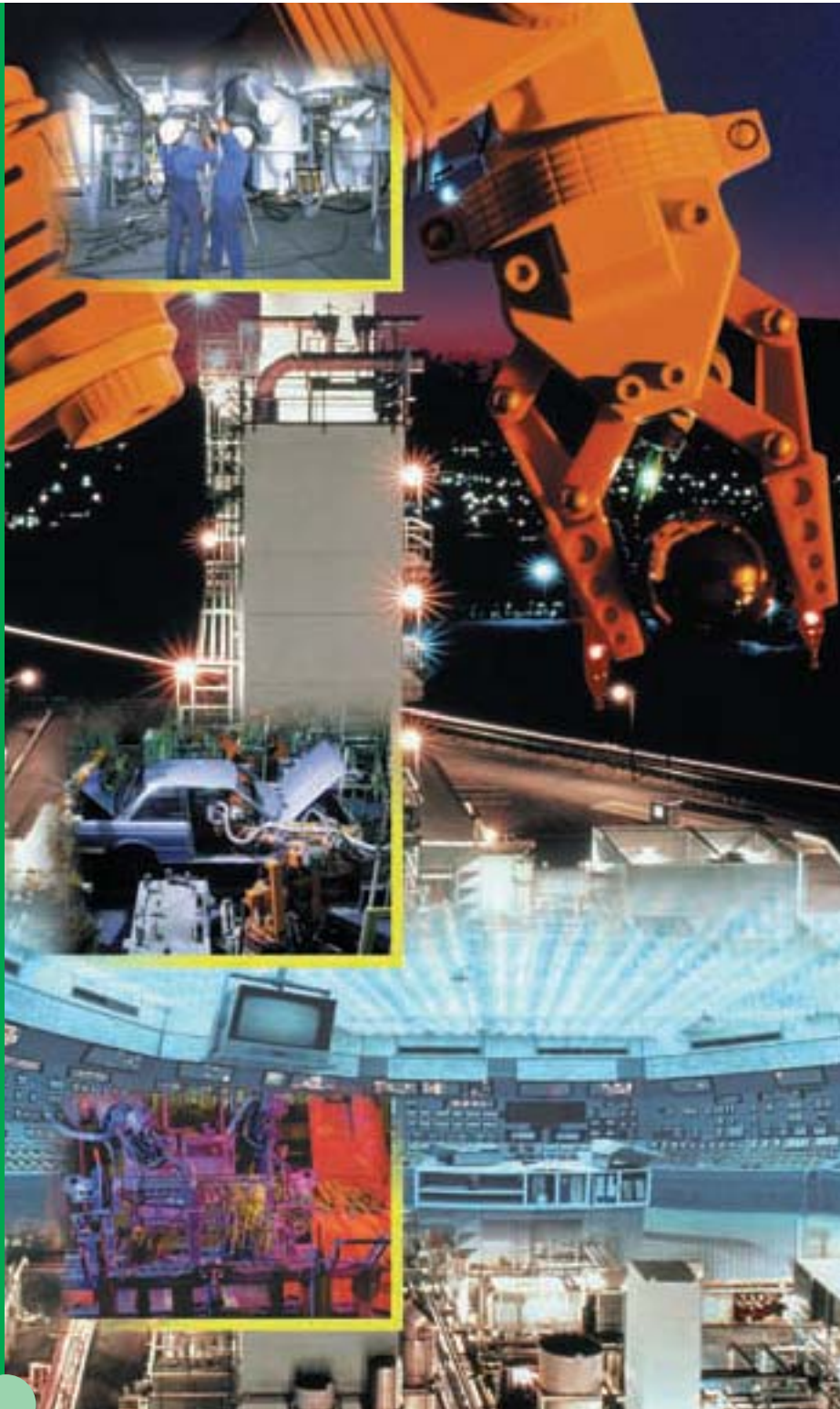


Belden
Wire & Cable



Belden

Industrial Data Solutions®

Industrial Data Solutions®

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Belden Worldwide



Belden makes a contribution to the advancing technology.

Since the foundation in 1902 Belden has concentrated on manufacturing high quality cable and wire products for ever changing applications in constantly changing markets. Throughout the world we are dedicated to finding appropriate solutions that comply with the demands of the markets we serve.

Belden has been for years the leading company for proprietary systems. Hundreds of instrumentation companies have specified Belden Wire & Cable part numbers for use in their systems all over the world. Belden has worldwide production facilities, worldwide

technical- and sales support-offices and a worldwide distribution network making it to the global partner you can rely on.

Belden is proud on the reputation that we hold with leading companies and we intend to carry this excellent reputation into the ever increasing markets of Industrial Data Solutions® and/or Open Fieldbus Applications.

Belden does not only offer you the cables for the systems on the market today but we are also ready to serve you with the cabling solutions for the future.

This brochure holds a selection of Belden "INDUSTRIAL DATA SOLUTIONS® cables".

If you need more information request our "Belden Master Catalog", contact your local sales office or visit us at: <http://www.belden.com>

Belden Production

All Belden products are built on a philosophical foundation of quality. To us this means meeting your requirements 100% of the time. What this means to the industrial cable user is really quite simple: every Belden industrial cable product receives the same committed attention.



USA



Germany



The Netherlands

Belden Cables – outstanding reliability:

M e t e r b y m e t e r

1. *Manufacturer-Warranty*

With all Belden products you are buying quality from the market-leader. Customers worldwide value the reliability of Belden cables. This is a result of a complete quality assurance program.

2. *Real Belden Quality*

Belden guarantees that all supplied products worldwide are comprehensively tested and only faultless products go out from Belden. The use of statistical process analysis ensures that the fixed specification is maintained. The stability of individual electrical and mechanical values is guaranteed using the most up-to-date process controls.

All Belden development plants, production plants and sales offices are certified according to ISO 9001 and ISO 9002.

3. *Distribution*

If you order Belden products, you'll get impartial advice from our strong partners. Plus expertise, service and support you can rely on. They'll make sure your order is quickly dispatched to reach you as soon as possible. Backed by in-depth stockholding of standard products.

This makes Belden products worldwide available from stock.

4. *Product Variety*

Belden offers the widest choice of standard cables from stock. Belden is the specialist in data cables application. In this brochure you will find a selection as needed for the "Industrial Data Solutions®". With its local presence in Europe Belden is also able to tailor make customer solutions.

If you need more information request our "Belden Master Catalog", contact your local sales office or visit us at: <http://www.belden.com>

Belden Features

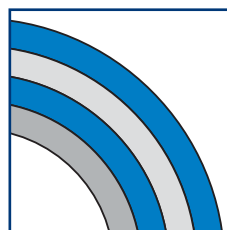
Datalene®

An insulation material for data-transmission cables. Datalene® is crush resistant, lightweight and offers outstanding performance characteristics over a wide range of temperatures.

DuoBond®

A smart combination of shielding techniques providing you with the type of shielding necessary for your application.

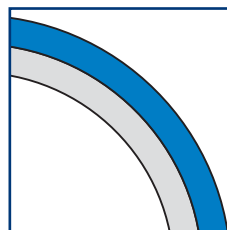
100%



- Foil
- Film
- Adhesive

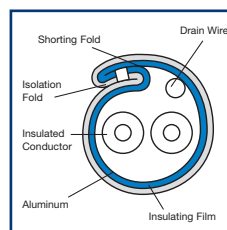
Beldfoil®

The first aluminum/polyester foil developed for use as a cable shield. Provides 100% shield coverage for optimum protection.



Z-Fold®

A shorting fold provides metal to metal contact and an isolation fold prevent adjacent shields from shorting to one another.



LSNH (Low Smoke Non Halogen)

All cables that carry the extension **NH** use a grade of non halogen jacketing material that allows most cables to carry the **IEC 332-3C*** specifications (the toughest IEC flame retardant rating). *Depending on cable construction verify with data-sheet.


SWA (Steel Wire Armor)

All cables that carry the extension **LS** are equipped with a steel wire serve armor in accordance with the BS specifications, are fully halogen-free and have a LSNH outer jacket. All cables are in accordance with the **IEC 332-3C**.

IEC 61158-2 (SP50) Fieldbus Foundation / WorldFip / Profibus PA

TYPE A

18 AWG one pair Polyolefin insulated cable with Z-Fold® Beldfoil® screen and orange PVC jacket. The cables are intended for Fieldbus Foundation/WorldFip/Profibus PA.


Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom. Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	3076F 1 pair	250	76.2	9	4	0.253	6.4	100	66%	NEC PLTC CM CEC CM	10k	0.06	0.2
		500	152.4	18	8						39k	0.08	0.3
		1000	304.8	36	16						100k	0.2	0.6
		2500	762	84	38						500k	0.8	2.5
		5000	1524	168	76						1M	1.1	3.4
		10000	3048	348	157								

Color code: White & Black

Conductor	18 (7 x 26) AWG tinned copper // DCR: 6.92 ohm/Mft. = 22 ohm/km
Insulation	Polyolefin
Construction	Paired // Capacitance conductors: 24 pF/ft. = 78 pF/m
Shield	Z-Fold® Beldfoil® // DCR: 7.5 ohm/Mft. = 24.6 ohm/km
Jacket	Orange PVC

TYPE B

22 AWG one pair Polyolefin insulated cable with Z-Fold® Beldfoil® screen and orange PVC jacket. The cables are intended for Fieldbus Foundation/WorldFip/Profibus PA.


Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom. Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	3077F 1 pair	250	76.2	5	2	0.196	4.9	100	66%	NEC PLTC CM CEC CM	10k	0.1	0.4
		500	152.4	10	4						39k	0.1	0.5
		1000	304.8	20	9						100k	0.2	0.7
		2500	762	51	23						500k	0.9	3.0
		5000	1524	99	45						1M	1.4	4.5
		10000	3048	197	89								

Color code: White & Black

Conductor	22 (7 x 30) AWG tinned copper // DCR: 17.1 ohm/Mft. = 56 ohm/km
Insulation	Polyolefin
Construction	Paired // Capacitance conductors: 23.5 pF/ft. = 77 pF/m
Shield	Z-Fold® Beldfoil® // DCR: 11.4 ohm/Mft. = 37.4 ohm/km
Jacket	Orange PVC

HIGH SPEED

22 AWG one pair Cellular Polyolefin insulated cable with Z-Fold® Beldfoil® screen and orange PVC jacket. The cables are intended for Fieldbus Foundation/WorldFip/Profibus PA.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom. Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	3078F 1 pair	250	76.2	13	5	0.373	9.4	150	78%	NEC PLTC CM CEC CM	250k	0.2	0.6
		500	152.4	25	11						625k	0.3	0.9
		1000	304.8	48	21						3M125	0.3	1.1
		2500	762	116	52						5M	0.6	1.8
											10M	0.7	2.2
										0.9	3.1		


Color code: White & Black

Conductor	22 (7 x 30) AWG tinned copper // DCR: 17.1 ohm/Mft. = 56 ohm/km
Insulation	Cellular Polyolefin
Construction	Paired // Capacitance conductors: 8.5 pF/ft. = 27 pF/m
Shield	Z-Fold® Beldfoil® // DCR: 11.1 ohm/Mft. = 36.4 ohm/km
Jacket	Orange PVC

Profibus DP Siemens SINEC L2

STANDARD

22 AWG one pair Cellular Polyethylene insulated with a Z-Fold® Beldfoil® and 65% tinned copper braid, PVC gray jacket.


Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	3079A 1 pair	1000	304.8	57	25	0.315	8	150	78%	NEC PLTC CMG CL2 CEC CMG	300k	0.2	0.7
		2000	609.6	114	51						1M	0.4	1.3
		3600	1097	205	92						10M	1.1	3.6
											20M	3.5	11.0
										100M	3.8	12.0	

Color code: Red & Green

Conductor	22 (solid) AWG bare copper // DCR: 16 ohm/Mft. = 52 ohm/km
Insulation	Cellular Polyethylene
Construction	Paired // Capacitance conductors: 9 pF/ft. = 29 pF/m
Shield	Z-Fold® Beldfoil® & 65% tinned copper braid // DCR: 3.9 ohm/Mft. = 12.7 ohm/km
Jacket	Chrome PVC

STRANDED

22 (7 x 30) one pair Cellular Polyethylene insulated with polyester and aluminum foil and 65% tinned copper braid cabled together with two strength members under a purple PVC jacket. The European choice for connecting Profibus DP installations due to the stranding the cable is capable of a small bending radius and has less re-fit of broken conductors at termination points.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3079E 1 pair	1640	500	42	19	0.32	8.1	150	78%	-	300k	0.2	0.6
		3280	1000	84	38						1M	0.4	1.2
											10M	1.1	3.5
											20M	1.5	4.8


Color code: Red & Green

Conductor	22 (7 x 30) AWG stranded bare copper // DCR: 15.5 ohm/Mft. = 50 ohm/km
Insulation	Cellular Polyethylene
Construction	Paired // Capacitance conductors: 7.1 pF/ft. = 23 pF/m
Shield	Polyester + aluminum foil & 65% tinned copper braid // Capacitance to conductor: 15 pF/ft. = 49 pF/m // DCR: 3.9 ohm/Mft. = 12.7 ohm/km
Jacket	Purple PVC

InterBus-S

POWER + DATA PAIRS

Cables for standard InterBus-S protocol. As designed for Phoenix contact.


Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 3119A 3 pair + 3C		500 1000	152.4 304.8	35 62	15 28	0.305	7.7	100	66%	UL AWM STYLE 20233	-	-	-

Color code: Power = Red & Blue & Green / Yellow // Data = White & Brown // Pink & Gray // Yellow & Green

Conductor	Power: 18 (7 x 24) AWG tinned copper // DCR: 3.7 ohm/Mft. = 12 ohm/km Data: 24 (7 x 32) AWG tinned copper // DCR: 24 ohm/Mft. = 78 ohm/km
Insulation	Power: PVC Data: Polyethylene
Construction	3 pair + 3 single // Capacitance conductors: 15.4 pF/ft. = 50 pF/m
Shield	Overall aluminum polyester + 90% tinned copper braid // DCR: 2.7 ohm/Mft. = 8.8 ohm/km
Jacket	Green PUR

DATA PAIRS

Cables for standard InterBus-S protocol. As designed for Phoenix contact.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 3120A 3 pair		500 1000	152.4 304.8	30 54	13 24	7.7	195.5	100	66%	UL AWM STYLE 20233	-	-	-




Color code: pr1 = White & Brown // pr2 = Pink & Gray // pr3 = Yellow & Green

Conductor	24 (7 x 32) AWG tinned copper // DCR: 24 ohm/Mft. = 78 ohm/km
Insulation	Polyethylene
Construction	Paired // Capacitance conductors: 15.4 pF/ft. = 50 pF/m
Shield	Overall aluminum polyester + 90% tinned copper braid // DCR: 2.7 ohm/Mft. = 8.8 ohm/km
Jacket	Gray PUR

WorldFip

THIN CABLES

These cables are designed to be used in automation projects for WorldFip applications where there is limited space and limited transmission length. The cables are 26 AWG have individual shielded pairs and an overall braid shielded for excellent noise immunity.


Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 1 pair	7724A	1000	304.8	19	9	0.264	6.7	150	75%	IEC 332	1M	0.6	1.8
											2M	0.7	2.2
											3M	0.9	2.8
											4M	1.0	3.2
											5M	1.1	3.5
											10M	1.5	4.8
 2 pair	7725A	1000	304.8	37	17	0.29	7.3	150	75%	IEC 332	1M	0.6	1.8
											2M	0.7	2.2
											3M	0.9	2.8
											4M	1.0	3.2
											5M	1.1	3.5
											10M	1.5	4.8
 4 pair	7726A	1000	304.8	53	24	0.36	9.1	150	75%	IEC 332	1M	0.6	1.8
											2M	0.7	2.2
											3M	0.9	2.8
											4M	1.0	3.2
											5M	1.1	3.5
											10M	1.5	4.8

Color code: pr1 = Black & White // pr2 = Red & Green // pr3 = Brown & Blue // pr4 = Orange & Yellow

Conductor	26 (7 x 34) AWG tinned copper // DCR: 44.4 ohm/Mft. = 145 ohm/km
Insulation	Foam Polyethylene
Construction	Paired // Capacitance conductors: 9.1 pF/ft = 29 pF/m
Shield	Individual Beldfoil® with 26 (7 x 34) AWG common drain wire and 90% overall tinned copper braid // DCR: 3.65 ohm/Mft. = 12 ohm/km
Jacket	Orange PVC

THIN CABLE OUTSIDE

This cable is designed for outside use in WorldFip projects it can be exposed to all kinds of weather or can be used as cable that will be in water filled ducts or in constant deluge. The cable is suitable for direct burial provided the ground is free of harsh materials.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 1 pair	7723A	1000	304.8	22	11	0.326	8.2	150	75%	-	1M	0.6	1.8
											2M	0.7	2.2
											3M	0.9	2.8
											4M	1.0	3.2
											5M	1.1	3.5
											10M	1.5	4.8


Color code: White & Black

Conductor	26 (7 x 34) AWG tinned copper // DCR: 44.4 ohm/Mft. = 145 ohm/km
Insulation	Foam Polyethylene
Construction	Paired // Capacitance conductors: 9.1 pF/ft = 29 pF/m
Shield	Individual Beldfoil® with 26 (7 x 34) AWG drain wire and 90% overall tinned copper braid // DCR: 3.65 ohm/Mft. = 12 ohm/km
Jacket	Black Polyethylene

IEEE 802.4 (MAP) & IEEE 802.7 (Mini-MAP)

RG-6/U TYPE


Sweep tested broadband RG-6/U coax cables with Quad shield.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3131A coax	500	152.4	30	13	0.298	7.5	75	82%	RG-6/U NEC CL2 CMR CEC CMR	1M	0.5	1.6
		1000	304.8	53	24						10M	0.9	3.0
		2000	609.6	116	52						50M	1.5	4.9
											100M	2.0	6.6

Conductor	18 (solid) AWG bare copper covered steel // DCR: 28 ohm/Mft. = 91 ohm/km
Insulation	Foamed Polyethylene
Construction	Coax // Capacitance conductors: 16.5 pF/ft. = 54 pF/m
Shield	Duobond® IV Quad Shield: foil + 60% aluminum braid + foil + 40% aluminum braid Capicittance to conductor: 16.5 pF/ft. = 54 pF/m // DCR: 7.2 ohm/Mft. = 23.6 ohm/km
Jacket	Gray PVC

TEFLON®* RG-6/U TYPE

Plenum Sweep tested broadband coax RG-6/U cables with Quad shield for use in plenum space, outdoor and direct burial.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3132A coax	500	152.4	30	13	0.273	6.9	75	82%	NEC CMP PLTC CEC CMP	1M	0.3	1.0
		1000	304.8	53	24						10M	0.7	2.2
											50M	1.5	4.9
											100M	2.1	6.9


Conductor	18 (solid) AWG bare copper covered steel // DCR: 28 ohm/Mft. = 91 ohm/km
Insulation	Foamed FEP Teflon®*
Construction	Coax // Capacitance conductors: 16.5 pF/ft. = 54 pF/m
Shield	Duobond® IV Quad Shield: foil + 60% aluminum braid + foil + 40% aluminum braid Capicittance to conductor: 16.5 pF/ft. = 54 pF/m // DCR: 7.2 ohm/Mft. = 23.6 ohm/km
Jacket	Gray Fluorocopolymer

* Teflon® is a trademark of DuPont Company

IEEE 802.4 (MAP) & IEEE 802.7 (Mini-MAP)

RG-11/U TYPE


Sweep tested broadband RG-11/U coax cables with Quad shield.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3094A coax	500	152.4	52	23	0.407	10.3	75	82%	NEC CL2R CMR CEC CMR	1M	0.3	1.0
		1000	304.8	100	45						10M	0.6	2.0
		2000	609.6	220	99						50M	0.9	3.0
											100M	1.2	3.9

Conductor	14 (solid) AWG bare copper covered steel // DCR: 8.7 ohm/Mft. = 28 ohm/km
Insulation	Foamed Polyethylene
Construction	Coax // Capacitance conductors: 16.5 pF/ft. = 54 pF/m
Shield	Duobond® IV Quad Shield: foil + 60% aluminum braid + foil + 40% aluminum braid Capicittance to conductor: 16.5 pF/ft. = 54 pF/m // DCR: 1.8 ohm/Mft. = 5.9 ohm/km
Jacket	Gray PVC with 2.6 meter ring-band PVC

TEFLON®* RG-11/U TYPE

Plenum Sweep tested broadband coax RG-11/U cables with Quad shield for use in plenum space, outdoor and direct burial.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3095A coax	500	152.4	52	23	0.387	9.8	75	82%	NEC CMP PLTC CEC CMP	1M	0.2	0.7
		1000	304.8	100	45						10M	0.4	1.3
											50M	1.2	3.9
											100M	1.7	5.6


Conductor	14 (solid) AWG bare copper covered steel // DCR: 8.7 ohm/Mft. = 28 ohm/km
Insulation	Foamed FEP Teflon®*
Construction	Coax // Capacitance conductors: 16.5 pF/ft. = 54 pF/m
Shield	Duobond® IV Quad Shield: foil + 60% aluminum braid + foil + 40% aluminum braid Capicittance to conductor: 16.5 pF/ft. = 54 pF/m // DCR: 1.8 ohm/Mft. = 5.9 ohm/km
Jacket	Gray Fluorocopolymer with ring-band every 2.6 meters

* Teflon® is a trademark of DuPont Company

ControlNet


These coaxes are the base cables for the ControlNet systems they are available in standard PVC, a flexible version and a Teflon®* (plenum version). A CPE jacket or a blue PVC jacket are optional. (Allen-Bradley ControlNet cables)

PVC VERSION

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3092A coax	500	152.4	30	13	0.298	7.5	75	82%	NEC CL2R CMR CEC CMR	1M	0.4	1.2
		1000	304.8	53	24						2M	0.4	1.2
		2000	609.2	116	35						5M	0.5	1.5
											10M	0.6	1.9
											20M	0.9	2.8
						50	1.4	4.5					


Conductor	18 (solid) AWG bare copper covered steel // DCR: 28 ohm/Mft. = 91 ohm/km												
Insulation	Foamed Polyethylene												
Construction	Coax // Capacitance conductors: 16.5 pF/ft. = 54 pF/m												
Shield	Duobond® IV Quad Shield: foil + 60% aluminum braid + foil + 40% aluminum braid Capacitance to conductor: 16.5 pF/ft. = 54 pF/m // DCR: 7.2 ohm/Mft. = 23.6 ohm/km												
Jacket	Gray (Black and Blue optional) PVC												

FLEXIBLE VERSION

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3092F coax	500	152.4	30	13	0.295	7.4	75	82%	UL 1581 Vertical Tray CL2 or CM	5M	0.2	0.6
		1000	152.4	53	24						10	0.6	2.0
											20	0.9	2.9
											50	1.6	5.2

Conductor	20 (42 x 36) AWG tinned copper // DCR: 9.9 ohm/Mft. = 32 ohm/km												
Insulation	Foamed Polyethylene												
Construction	Coax // Capacitance conductors: 16.5 pF/ft. = 54 pF/m												
Shield	Duobond® IV Quad Shield: foil + 60% aluminum braid + 40% aluminum braid Capacitance to conductor: 16.5 pF/ft. = 54 pF/m // DCR: 7.2 ohm/Mft. = 23.6 ohm/km												
Jacket	Black PVC												

TEFLON®* VERSION

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3093A coax	500	152.4	30	13	0.273	6.9	75	82%	NEC CMP PLTC CEC CMP RG-6/U	1M	0.4	1.2
		1000	304.8	53	24						2M	0.4	1.2
											5M	0.5	1.6
											10M	0.7	2.1
											20M	1.0	3.1
											50M	1.5	4.9

Conductor	18 (solid) AWG bare copper covered steel // DCR: 28 ohm/Mft. = 91 ohm/km												
Insulation	Foamed FEP Teflon®*												
Construction	Coax // Capacitance conductors: 16.5 pF/ft. = 54 pF/m												
Shield	Duobond® IV Quad Shield: foil + 60% aluminum braid + foil + 40% aluminum braid Capacitance to conductor: 16.5 pF/ft. = 54 pF/m // DCR: 7.2 ohm/Mft. = 23.6 ohm/km												
Jacket	Black (Blue optional) Fluorocopolymer												

* Teflon® is a trademark of DuPont Company

DeviceNet

TRUNK-CABLES

This group of cables is intended for Open DeviceNet as promoted by ODVA. The cables consist of a 15 AWG power pair and a 18 AWG data pair.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3082A 2 pair	500	152.4	59	26	0.48	12.1	120	75%	CMG PLTC UL AWM 20201 600V CSA AWM I/II A/B	125k	0.1	0.4
		1000	304.8	119	53						500k	0.3	0.8
		2000	609.6	238	107						1M	0.4	1.2

Color code: Power = Black & Red // Data = Blue & White

Conductor	Power: 15 (19 x 27) AWG tinned copper // DCR: 3.6 ohm/Mft. = 11.8 ohm/km Data: 18 (19 x 30) AWG tinned copper // DCR: 6.9 ohm/Mft. = 22.7 ohm/km
Insulation	Power: PVC/Nylon Data: Cellular PE
Construction	Paired // Capacitance conductors: 12 pF/ft. = 39 pF/m
Shield	Each pair Beldfoil® + overall 18 AWG (19 x 30) tinned copper drain wire + 65% tinned copper braid // DCR: 1.8 ohm/Mft. = 5.9 ohm/km
Jacket	Light Gray PVC


Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3083A 2 pair	500	152.4	59	26	0.48	12.1	120	75%	CSA AWM I/II A/B	125k	0.1	0.4
		1000	304.8	119	53						500k	0.3	0.8
		2000	609.6	238	107						1M	0.4	1.2

Color code: Power = Black & Red // Data = Blue & White

Conductor	Power: 15 (19 x 27) AWG tinned copper // DCR: 3.6 ohm/Mft. = 11.8 ohm/km Data: 18 (19 x 30) AWG tinned copper // DCR: 6.9 ohm/Mft. = 22.7 ohm/km
Insulation	Power: PVC/Nylon Data: Cellular PE
Construction	Paired // Capacitance conductors: 12 pF/ft. = 39 pF/m
Shield	Each pair Beldfoil® + overall 18 AWG (19 x 30) tinned copper drain wire + 65% tinned copper braid // DCR: 1.8 ohm/Mft. = 5.9 ohm/km
Jacket	Yellow CPE


DROP CABLES

This group of cables is intended for Open DeviceNet as promoted by ODVA. The cables are meant as drop cables. They are also extremely suitable for all RS-485 application such as CAN that need power and data through the same cable.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3084A 2 pair	500	152.4	23	10	0.275	6.9	120	75%	CMG CL2 150V 80°C UL AWM 20201 600V CSA AWM I/II B	125k	0.3	1.0
		1000	304.8	46	21						500k	0.5	1.6
		2000	609.6	93	42						1M	0.7	2.3


Color code: Power = Black & Red // Data = Blue & White

Conductor	Power: 22 (19 x 34) AWG tinned copper // DCR: 17.5 ohm/Mft. = 57.4 ohm/km Data: 24 (19 x 36) AWG tinned copper // DCR: 27.7 ohm/Mft. = 90.9 ohm/km
Insulation	Power: PVC/Nylon Data: Cellular PE
Construction	Paired // Capacitance conductors: 12 pF/ft. = 39 pF/m
Shield	Each pair Beldfoil® + overall 22 AWG (19 x 34) tinned copper drain wire + 65% tinned copper braid // DCR: 1.8 ohm/Mft. = 5.9 ohm/km
Jacket	Light Gray PVC

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3084F 2 pair flex	500	152.4	23	10	0	0	120	75%	-	125k	0.3	1.0
		1000	304.8	46	20						500k	0.5	1.6
		2000	609.6	92	41						1M	0.7	2.3

Color code: Power = Black & Red // Data = Blue & White

Conductor	Power: 22 (154 x 44) AWG tinned copper // DCR: 17.5 ohm/Mft. = 57.4 ohm/km Data: 24 (19 x 36) AWG tinned copper // DCR: 27.7 ohm/Mft. = 90.9 ohm/km
Insulation	Power: PVC/Nylon Data: Cellular PE
Construction	Paired // Capacitance conductors: 12 pF/ft. = 39 pF/m
Shield	Each pair Beldfoil® + overall 65% tinned copper braid // DCR: 1.8 ohm/Mft. = 5.9 ohm/km
Jacket	Light Gray PVC

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3085A 2 pair	1000	304.8	46	21	0.275	6.9	120	75%	150V 80°C CSA AWM I/II B	125k	0.3	1.0
											500k	0.5	1.6
											1M	0.7	2.3


Color code: Power = Black & Red // Data = Blue & White

Conductor	Power 22 (19 x 34) AWG tinned copper // DCR: 17.5 ohm/Mft. = 57.4 ohm/km Data 24 (19 x 36) AWG tinned copper // DCR: 27.7 ohm/Mft. = 90.9 ohm/km
Insulation	Power: PVC/Nylon Data: Cellular PE
Construction	Paired // Capacitance conductors: 12 pF/ft. = 39 pF/m
Shield	Each pair Beldfoil® + overall 65% tinned copper braid // DCR: 1.8 ohm/Mft. = 5.9 ohm/km
Jacket	Yellow CPE

LonWorks

STANDARD

Unshielded cable for Echelon LonWorks.



Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	8471 1 pair	500	152.4	28	12	0.274	6.9	100	-	UL 2598 NEC CMG CEC CMG	-	-	-
		U-500	U-152.4	29	13								
		1000	304.8	59	27								

Color code: Black & White

Conductor	16 (19 x 29) AWG tinned copper // DCR: 4.35 ohm/Mft. = 14 ohm/km
Insulation	PVC
Construction	Paired // Capacitance conductors: 33 pF/ft. = 108 pF/m
Jacket	Chrome PVC
Shield	Unshielded

UNSHIELDED

Unshielded cables for use in Echelon LonWork systems. The cables are standard halogen-free and are therefore suitable for use indoor and outdoor.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available as LSNH version	7701NH 1 pair	1000	304.8	10	4	0.138	3.5	100	68%	IEC 332-1	772k	0.6	1.9
											1M	0.7	2.1
											4M	1.3	4.2
											10M	2.2	7.2
											16M	2.7	8.8
											20M	3.1	10.0
 Available as LSNH version	7702NH 2 pair	1000	304.8	19	8	0.205	5.2	100	68%	IEC 332-1	772k	0.6	1.9
											1M	0.7	2.1
											4M	1.3	4.2
											10M	2.2	7.2
											16M	2.7	8.8
											20M	3.1	10.0



Color code: pr1 = White/Blue & Blue/White // pr2 = White/Orange & Orange/White

Conductor	22 (solid) AWG bare copper // DCR: 17.5 ohm/Mft. = 57 ohm/km
Insulation	Foamed PE
Construction	Paired // Capacitance conductors: 14 pF/ft. = 45 pF/m
Jacket	White LSNH
Shield	Unshielded

LonWorks

SHIELDED

Shielded cables for use in Echelon LonWork systems. The cables are standard halogen-free and are therefore suitable for use indoor and outdoor.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available as LSNH version	7703NH 1 pair	1000	304.8	15	7	0.177	4.4	100	68%	IEC 332-3C	772k	0.6	1.9
											1M	0.7	2.1
											4M	1.1	3.5
											10M	1.7	5.6
											20M	2.4	7.9
 Available as LSNH version	7704NH 2 pair	1000	304.8	26	11	0.256	6.5	100	68%	IEC 332-3C	772k	0.6	1.9
											1M	0.7	2.1
											4M	1.1	3.5
											10M	1.7	5.6
											20M	2.4	7.9


Color code: pr1 = White/Blue & Blue/White // pr2 = White/Orange & Orange/White

Conductor	22 (solid) AWG bare copper // DCR: 17.5 ohm/Mft. = 57 ohm/km
Insulation	Foamed PE
Construction	Paired // Capacitance conductors: 14 pF/ft. = 45 pF/m
Shield	Beldfoil® (aluminum Polyester) // Capacitance to conductor: 24.4 pF/ft. = 80 pF/m // DCR: 5.2 ohm/Mft. = 17 ohm/km
Jacket	White LSNH

ASI-bus

FLAT RIBBON

ASI two wire geometrically coded flat ribbon cable with a yellow TPE oil-resistant jacket.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	3999A flat	1640	499.9	63	28	0.157	4	-	-	-	-	-	-
		328	99.97	127	57	x	x						
						0.393	10						


Color code: Blue & Brown

Conductor	1.5 mm (84 x 0.15) AWG tinned copper // DCR: 4.05 ohm/Mft. = 13 ohm/km
Insulation	PVC
Construction	Flat // Polarized Ribbon cable
Shield	Unshielded
Jacket	Yellow TPE-O

Seriplex

Cables as intended for Seriplex. Combination cables with power and data pairs and control singles under an orange PVC jacket.


STANDARD POWER + DATA

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 3124A conductor		500 1000	152.4 304.8	26 47	11 21	0.3	7.6	150	78%	UL Subj 13 CL2	-	-	-

Color code: Power = Red & Black // Data = White & Green

Conductor	Power: 18 (16 x 30) AWG tinned copper // DCR: 6.8 ohm/Mft. = 21 ohm/km Data: 22 (7 x 30) AWG tinned copper // DCR: 18.1 ohm/Mft. = 59.4 ohm/km
Insulation	Power and Data foamed HDPE
Construction	Conductors // Capacitance conductors: 9 pF/ft. = 29 pF/m
Shield	Overall aluminum foil + 22 AWG drain wire // Capacitance to conductor: 9 pF/ft. = 29 pF/m // DCR: 10.7 ohm/Mft. = 35.1 ohm/km
Jacket	Orange PVC


EXTENDED POWER + DATA

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 3125A conductor		500 1000	152.4 304.8	31 55	14 24	0.36	9.1	150	78%	UL Subj 13 CL2	-	-	-

Color code: Power = Red & Black // Data = White & Green

Conductor	Power: 16 (26 x 30) AWG tinned copper // DCR: 4.5 ohm/Mft. = 15 ohm/km Data: 22 (7 x 30) AWG tinned copper // DCR: 18.1 ohm/Mft. = 59.4 ohm/km
Insulation	Power and Data foamed HDPE
Construction	Conductors // Capacitance conductors: 9 pF/ft. = 29 pF/m
Shield	Overall aluminum foil + 22 AWG drain wire // Capacitance to conductor: 9 pF/ft. = 29 pF/m // DCR: 10.7 ohm/Mft. = 35.1 ohm/km
Jacket	Orange PVC

POWER + DATA + CONTROL

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 3126A conductor		500 1000	152.4 304.8	37 65	16 29	0.48 x 0.35	12.1 x 8.92	150	78%	UL Subj 13 CL2	-	-	-


Color code: Power Control = Red & Black // Data = White & Green // Power = Red/White & Black/White

Conductor	Power Control: 16 (26 x 30) AWG tinned copper // DCR: 4.5 ohm/Mft. = 15 ohm/km Data: 22 (7 x 30) AWG tinned copper // DCR: 18.1 ohm/Mft. = 59.4 ohm/km Power: 12 (65 x 30) AWG tinned copper // DCR: 1.8 ohm/Mft. = 5.9 ohm/km
Insulation	Power and Data foamed HDPE
Construction	Conductors // Capacitance conductors: 9 pF/ft. = 29 pF/m
Shield	Overall aluminum foil + 22 AWG drain wire // Capacitance to conductor: 9 pF/ft. = 29 pF/m // DCR: 10.7 ohm/Mft. = 35.1 ohm/km
Jacket	Orange PVC

Modbus

9841+

Modbus+ this special version of the 9841 is specially designed to guarantee a tight fit in the Modbus+ connectors.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	YM29560 1 pair	500	152.4	21	9.5	0.265	6.7	120	66%	NEC CM CEC CM	1M	0.6	2
		1000	304.8	42	19.0								
		1500	457.2	63	28.5								






Color code: White/Blue & Blue/White

Conductor	24 (7 x 32) AWG tinned copper // DCR: 24 ohm/Mft. = 78 ohm/km
Insulation	PE
Construction	Paired // Capacitance conductors: 12.8 pF/ft. = 41 pF/m
Shield	Z-Fold® + 90% tinned copper braid // Capacitance to conductor: 23 pF/ft. = 75 pF/m // DCR: 3.35 ohm/Mft. = 10.9 ohm/km
Jacket	Gray PVC

EIA RS-485 (HART)

HART

The approved cable for HART automated systems. 22 AWG paired cables with Datalene® insulation and an overall Z-Fold® Beldfoil® and a black sunlight resistant PVC jacket.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation																		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m																
	3105A 1 pair	1000 5000	304.8 1524	44 220	19 99	0.286	7.2	120	78%	NEC CM NEC PLTC CEC CM	1M	0.5	1.6																
	3106A 1.5 pair	1000 5000	304.8 1524	48 240	21 108									0.302	7.6	120	78%	NEC CM NEC PLTC CEC CM	1M	0.5	1.6								
	3107A 2 pair	1000 4000	304.8 1219	73 292	33 132																	0.36	9.1	120	78%	NEC CM NEC PLTC CEC CM	1M	0.5	1.6
	3108A 3 pair	1000 2000	304.8 609.6	85 170	38 77									0.424	10.7	120	78%	NEC CM NEC PLTC CEC CM	1M	0.5	1.6								
	3109A 4 pair	1000 2000	304.8 609.6	97 194	43 87																								




Color code: pr1 = White/Blue & Blue/White // pr2 = White/Orange & Orange/White // pr3 = White/Green & Green/White // pr4 = White/Brown & Brown/White

Conductor	22 (7 x 30) AWG tinned copper // DCR: 48.2 ohm/Mft. = 158 ohm/km
Insulation	Datalene®
Construction	Paired // Capacitance conductors: 11 pF/ft. = 36 pF/m
Shield	Overall Z-Fold® Beldfoil® + 22 (7 x 30) AWG stranded tinned copper drain wire + 90% tinned copper braid Capacitance to conductor: 20 pF/ft. = 65 pF/m // DCR: 1.1 ohm/Mft. = 3.6 ohm/km
Jacket	Black PVC

EIA RS-485

CAN

Tinned copper, polyethylene insulated, twisted pairs. Overall Beldfoil® aluminum-polyester shield with Z-Fold®. 24 AWG stranded tinned copper drain wire. Overall tinned copper braid shield (90% coverage). Chrome PVC Jacket.


Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	9841 1 pair	100	30.48	3	1	0.232	5.8	120	66%	NEC CM CEC CM	1M	0.6	2
		500	152.4	19	8								
		1000	304.8	36	16								
 Available in LSNH and LSNH steel wire serve version	9842 2 pair	100	30.48	5	2	0.34	8.6	120	66%	NEC CM CEC CM	1M	0.6	2
		500	152.4	28	13								
		1000	304.8	53	24								
 Available in LSNH and LSNH steel wire serve version	9843 3 pair	100	30.48	7	3	0.36	9.1	120	66%	NEC CM CEC CM	1M	0.6	2
		500	152.4	37	16								
		1000	304.8	72	32								

Color code: pr1 = White/Blue & Blue/White // pr2 = White/Orange & Orange/White // pr3 = White/Green & Green/White

Conductor	24 (7 x 32) AWG tinned copper // DCR: 24 ohm/Mft. = 78 ohm/km
Insulation	PE
Construction	Paired // Capacitance conductors: 12.8 pF/ft. = 41 pF/m
Shield	Z-Fold® + 90% tinned copper braid // Capacitance to conductor: 23 pF/ft. = 75 pF/m // DCR: 2.34 ohm/Mft. = 7.6 ohm/km
Jacket	Gray PVC

TEFLON®* CABLE

A 24 AWG cable with Teflon®* conductors and a Solef jacket. This cable is suitable in extreme conditions it is resistant to all types of chemicals it will withstand temperatures up to 150°C and can be used for direct burial.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	YQ29258 1 pair	500	152.4	17	7.7	0.224	5.6	120	69%	NEC CMP	-	-	-
		1000	304.8	34	15.5								
		1640	499.9	56	25.3								

Color code: White & Blue

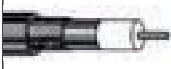
Conductor	24 (7 x 32) AWG tinned copper // DCR: 24 ohm/Mft. = 78 ohm/km
Insulation	FEP Teflon®*
Construction	Paired // Capacitance conductors: 11.7 pF/ft. = 38 pF/m
Shield	Z-Fold® + 90% tinned copper braid // Capacitance to conductor: 23 pF/ft = 75 pF/m // DCR: 3.35 ohm/Mft. = 10.9 ohm/km
Jacket	Black SOLEF

* Teflon® is a trademark of DuPont Company

Industrial Ethernet

10BASE2 COAX


Coax cables for industrial applications for traditional 10base2 (cheapnet) applications. Due to its extreme tight tolerance on impedance ($\pm 3\%$) the maximum described length for 10base2 can be reached. (DEC approved)

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom. Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available as LSNH version	9907 coax	500	152.4	11	5	0.185	4.6	50	80%	NEC CL2 CM CEC CM UL 1354 DEC 17-01248-00	1M	0.4	1.4
		U-1000	U-304.8	23	10						10M	1.3	4.3
		1000	304.8	23	10						50M	2.9	9.5
		1640	499.9	38	17						100M	4.2	14.0
		U-2500	U-762.0	58	26						1000M	14.8	48.6
		2500	762.0	62	28								
		3280	999.7	79	36								

Conductor	20 (19 x 32) AWG tinned copper // DCR: 8.8 ohm/Mft. = 28 ohm/km
Insulation	Foam Polyethylene
Construction	Coax // Capacitance conductors: 25.4 pF/ft. = 83 pF/m
Shield	Duobond® II + 93% tinned copper braid // Capacitance to conductor: 25.4 pF/ft. = 83 pF/m // DCR: 5.8 ohm/Mft. = 19 ohm/km
Jacket	Gray PVC

TEFLON®* 10BASE2 COAX


Teflon®* insulated Coax cables for industrial applications. For outside use and direct burial and plenum spaces. (DEC approved)

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom. Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	89907 coax	500	152.4	15	6	0.16	4.0	50	80%	NEC CL2P CMP CEC CMP DEC 17-01246-00	1M	0.4	1.4
		1000	304.8	25	11						10M	1.3	4.3
		2500	762.0	63	28						50M	2.9	9.5
											100M	4.2	14.0
											1000M	14.8	48.6

Conductor	20 (19 x 32) AWG tinned copper // DCR: 8.8 ohm/Mft. = 28 ohm/km
Insulation	Foam FEP Teflon®*
Construction	Coax // Capacitance conductors: 25.4 pF/ft. = 83 pF/m
Shield	Duobond® II + 93% tinned copper braid // Capacitance to conductor: 25.4 pF/ft. = 83 pF/m // DCR: 5.8 ohm/Mft. = 19 ohm/km
Jacket	Gray Fluorocopolymer

10BASE2 TRIAX

An alternative for 10base2 cables for an electrical noisy environment where the outerbraid is used for shielding purposes.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom. Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	9222 triax	100	30.48	4	2	0.24	6.0	50	66%	-	1M	0.5	1.6
		U-500	U-152.4	19	8						10M	1.5	4.9
		500	152.4	20	9						100M	4.9	16.0
											1G	24.0	79.0


Conductor	20 (7 x 28) AWG tinned copper // DCR: 9.5 ohm/Mft. = 31.0 ohm/m
Insulation	Polyethylene
Construction	Triax coax // Capacitance conductors: 30.8 pF/ft. = 101 pF/m
Shield	Inner 95% tinned copper braid // DCR: 4.7 ohm/Mft. = 15.5 ohm/km // Outer 95% tinned copper braid // DCR: 4.3 ohm/Mft. = 14.1 ohm/km
Jacket	Yellow PVC

* Teflon® is a trademark of DuPont Company

Industrial Ethernet

10BASE5 COAX


The traditional thick yellow Ethernet cables for 10base5 applications. (DEC approved)

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available as LSNH version	9880 coax	500	152.4	60	27	10.29	261.3	50	78%	NEC CM or CL2 CEC CM UL 1478 DEC 17-00451-00	1M	0.2	0.6
		1000	304.8	122	55						5M	0.4	1.2
		1640	499.9	200	91						10M	0.5	1.7
											50M	1.2	3.9
										100M	1.7	5.6	

Conductor	12 (solid) AWG bare copper // DCR: 1.42 ohm/Mft. = 4 ohm/km
Insulation	Foam Polyethylene
Construction	Coax // Capacitance conductors: 26 pF/ft. = 85 pF/m
Shield	Duobond® II + 94% tinned copper braid + Duofoil® + 90% tinned copper braid Capicittance to conductor: 26 pF/ft. = 85 pF/m // DCR: 1.52 ohm/Mft. = 4.9 ohm/km
Jacket	Yellow PVC with ring-band stripes every 2.5 meters

TEFLON®* 10BASE5

Teflon®* insulated Coax cables for industrial applications. For outside use and direct burial and plenum spaces. (DEC approved)

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	89880 coax	100	30.48	69	31	0.375	9.5	50	78%	NEC CMP CL2P CEC CMP DEC 17-00324-00	1M	0.2	0.6
		500	152.4	134	60						5M	0.4	1.2
		1000	304.8	165	74						10M	0.5	1.7
		1640	499.9	219	99						50M	1.2	3.9
											100M	1.7	5.6


Conductor	12 (solid) AWG bare copper // DCR: 1.42 ohm/Mft. = 4 ohm/km
Insulation	Foam Polyethylene
Construction	Coax // Capacitance conductors: 26 pF/ft. = 85 pF/m
Shield	Duobond® II + 94% tinned copper braid + Duofoil® + 90% tinned copper braid Capicittance to conductor: 26 pF/ft. = 85 pF/m // DCR: 1.52 ohm/Mft. = 4.9 ohm/km
Jacket	Orange Fluorocopolymer with ring-band stripes every 2.5 meter

* Teflon® is a trademark of DuPont Company

PLC and DCS Cables (Belden Standards)


BELDEN STANDARDS

Belden has been the leading manufacturer of industrial communication cables for years. Below you will find a selection of a choice of Belden cables for general use and proprietary systems. For a full overview see the Belden Master Catalog.

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	9463 twinax	100	30.48	7	3	0.243	6.1	78	66%	NEC CM CL2 CEC CM UL 2464	1M	0.6	2.0
		500	152.4	19	8						10M	2.1	6.9
		U-500	U-152.4	19	8						50M	5.0	16.0
		1000	304.8	38	17						100M	7.5	25.0
		U-1000	U-304.8	38	17								
		6000	1524.0	205	92								


Color code: Clear & Blue

Conductor	20 (7 x 28) AWG tinned copper // DCR: 9.5 ohm/Mft. = 31 ohm/km
Insulation	Polyethylene
Construction	Twinax // Capacitance conductors: 19.7 pF/ft. = 64 pF/m
Shield	Z-Fold® Beldfoil® + 55% tinned copper braid // DCR: 4.1 ohm/Mft. = 13.4 ohm/km
Jacket	Blue PVC

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	9182 twinax	500	152.4	21	9	0.35	8.8	150	78%	NEC CL2X CMX CEC CMX UL 2668	1M	0.4	1.3
		U-500	U-152.4	22	10						10M	1.2	3.9
		1000	304.8	46	21						50M	2.7	8.7
		5000	1524.0	230	104						100M	4.3	14.0

Color code: Black & Yellow

Conductor	22 (19 x 34) AWG tinned copper // DCR: 14 ohm/Mft. = 45 ohm/km
Insulation	Datalene®
Construction	Twinax // Capacitance conductors: 8.8 pF/ft. = 28 pF/m
Shield	Duofoil® with stranded tinned copper drain wire // DCR: 6.3 ohm/Mft. = 20.6 ohm/km
Jacket	Black PVC

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	89182 twinax	100	30.48	71	32	0.308	7.8	150	78%	NEC CMP CL2P CEC CMP	1M	0.4	1.3
		500	152.4	307	139						10M	1.2	3.9
		1000	304.8	577	261						50M	2.7	8.7
											100M	4.3	14.0


Color code: Blue & White

Conductor	22 (19 x 34) AWG tinned copper // DCR: 14 ohm/Mft. = 45 ohm/km
Insulation	Cellular FEP Teflon®*
Construction	Twinax // Capacitance conductors: 8.8 pF/ft. = 28 pF/m
Shield	Duofoil® with stranded tinned copper drain wire // DCR: 6.3 ohm/Mft. = 20.6 ohm/km
Jacket	Black Tint FEP

* Teflon® is a trademark of DuPont Company


PLC and DCS Cables (Belden Standards)

BELDEN STANDARDS

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	9860 twinax	500	152.4	54	24	0.44	11.1	124	78%	NEC CL2X CEC CMX UL 2448	1M	0.2	0.6
		1000	304.8	106	48						10M	0.7	2.3
		2000	609.6	213	96						100M	2.9	9.5
											400M	6.2	20.0


Color code: Blue & White

Conductor	16 (solid) AWG bare copper // DCR: 4.2 ohm/Mft. = 13 ohm/km
Insulation	Foam Polyethylene
Construction	Twinax // Capacitance conductors: 10.9 pF/ft. = 35 pF/m
Shield	Duofoil® + 90% tinned copper braid // Capacitance to conductor: 35.8 pF/ft. = 117 pF/m // DCR: 1.3 ohm/Mft. = 4.2 ohm/km
Jacket	Black PVC

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	9250 twinax	100	30.48	14	6	0.42	10.6	95	66%	RG-22B/U Type VW-1	1M	0.3	1.0
		500	152.4	66	30						10M	0.9	3.0
		1000	304.8	129	58						20M	1.3	4.3
											50M	2.1	6.9
										100M	3.0	9.8	

Color code: Clear (1 conductor has a tinned center strand)

Conductor	18 (7 x 26) AWG bare copper // DCR: 6.6 ohm/Mft. = 21 ohm/km
Insulation	Polyethylene
Construction	Twinax // Capacitance conductors: 16 pF/ft. = 52 pF/m
Shield	2 tinned copper braids 95% shield coverage // DCR: 0.9 ohm/Mft. = 3 ohm/km
Jacket	Black PVC (non contaminating)


Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
 Available in LSNH and LSNH steel wire serve version	9207 twinax	100	30.48	6.6	2.9	0.33	8.3	100	66%	NEC CM CL2 CEC CM IBM 7362211	1M	0.3	1.0
		500	152.4	33.0	15						10M	1.2	3.9
		U-500	U-152.4	33.0	15						50M	2.8	9.2
		1000	304.8	69.0	31						100M	4.1	13.0
		1640	499.9	111.0	50								
		2000	609.6	136.0	61								
		3280	999.7	221.0	100								
		5000	1524.0	349.0	158								

Color code: Clear (1 bare copper conductor, 1 tinned copper conductor)

Conductor	20 (7 x 28) AWG 1 tinned copper, 1 bare copper // DCR: 9.5 ohm/Mft. = 31 ohm/km
Insulation	Polyethylene
Construction	Twinax // Capacitance conductors: 15.5 pF/ft. = 50 pF/m
Shield	Duofoil® + 86% tinned copper braid // DCR: 2.5 ohm/Mft. = 8.2 ohm/km
Jacket	Black PVC


PLC and DCS Cables (Belden Standards)

BELDEN STANDARDS

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	9271 twinax	100	30.48	2	1	0.24	6.0	124	66%	NEC CM CEC CM UL 2092	1M	0.6	2.0
		500	152.4	13	6						10M	1.7	5.6
		U-500	U-152.4	14	6						100M	5.0	16.0
		1000	304.8	27	12						400M	9.6	31.0
		U-1000	U-304.8	27	12								

Color code: Clear & Blue

Conductor	25 (7 x 33) AWG tinned copper // DCR: 31.8 ohm/Mft = 104 ohm/km
Insulation	Polyethylene
Construction	Twinax // Capacitance conductors: 12.2 pF/ft. = 40 pF/m
Shield	Beldfoil® with stranded tinned copper drain wire // DCR: 12 ohm/Mft. = 39.3 ohm/km
Jacket	Blue PVC

Description	Trade No.	Standard Length		Weight		Nominal O.D.		Nom Imp.	Nom. Vel. of Prop.	Specifications	Attenuation		
		ft.	m	Lbs.	kg	Inch	mm				Hz	dB/100 ft.	dB/100 m
	9272 twinax	100	30.48	4	1	0.244	6.1	78	66%	NEC CM CEC CM UL 2092	1M	0.6	2.0
		500	152.4	19	8						10M	2.1	6.9
		U-500	U-152.4	20	9						50M	5.0	16.0
		1000	304.8	40	18						100M	7.5	25.0
		U-1000	U-304.8	41	18								

Color code: Clear & Blue

Conductor	20 (7 x 28) AWG tinned copper // DCR: 9.5 ohm/Mft = 31 ohm/km
Insulation	Polyethylene
Construction	Twinax // Capacitance conductors: 19.7 pF/ft. = 64 pF/m
Shield	Tinned copper braid 93% // DCR: 3.8 ohm/Mft. = 12.4 ohm/km
Jacket	Blue PVC

Belden Technical Information

COMPARATIVE PROPERTIES OF JACKETING COMPOUNDS

	PVC	LSNH	FEP Teflon®*
Oxidation Resistance	E	E	O
Heat Resistance	G	G-E	O
Oil Resistance	F	G	E
Low Temperature Flexing	F	F-G	O
Weather, Sun Resistance	G	G	O
Ozone Resistance	E	E	E
Abrasion Resistance	F	F-G	E
Electrical Properties	F	G	E
Flame Resistance	E	E	E
Nuclear Radiation Resistance	F	F	P
Water Resistance	F	G	E
Acid Resistance	G	P-F	E
Alkali Resistance	G	G	E
Gasoline, Kerosine, etc. (Aliphatic Hydrocarbons) Resistance	P	F	E
Benzol, Toluol, etc. (Aromatic Hydrocarbons) Resistance	P-F	P-F	E
Degreaser Solvents (Halogenated Hydrocarbons) Resistance	P	P	E
Alcohol Resistance	G	G	E
Underground Burial	P	F	E

P= Poor, F= Fair, G= Good, E= Excellent, O= Outstanding

* Teflon® is a trademark of DuPont Company

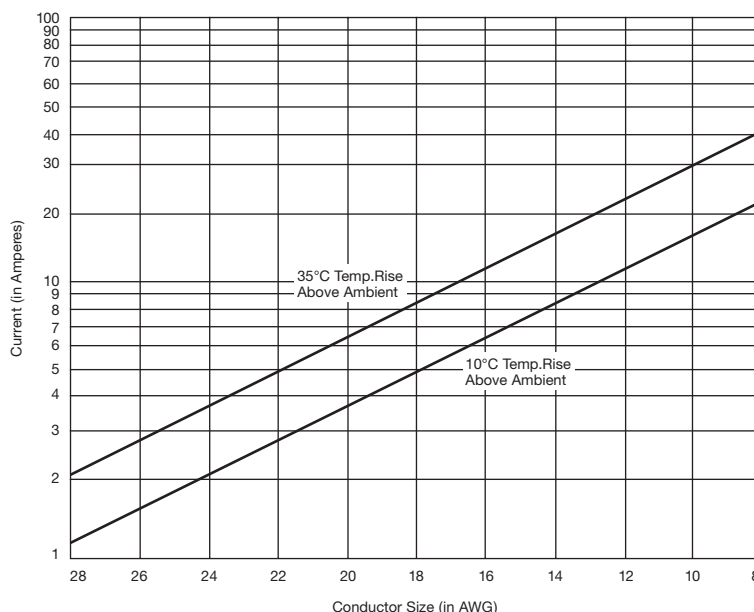
CURRENT RATINGS FOR BELDEN ELECTRONIC CABLES

The maximum continuous current rating for an electronic cable is limited by conductor size, number of conductors contained within the cable, maximum temperature rating of the cable, and environmental conditions such as ambient temperature and air flow. To use the current capacity chart, first determine conductor size, temperature rating, and number of conductors from the applicable product description for the cable of interest.

Next, find the current value on the chart for the proper temperature rating and conductor size. To calculate the maximum current rating/conductor, multiply the chart value by the appropriate conductor factor. The chart assumes cable is surrounded by still air at an ambient temperature of 25°C. Current values are in RMS Amperes and are valid for copper conductors only. For conditions other than specified, contact the Belden Wire & Cable Customer Service Department.

Phone: +31 77 3878555

Note: Current ratings are intended as general guidelines for low power electronic communications and control applications. Current ratings for power applications generally are set by regulatory agencies such as UL, CSA, NEC, and others.



No. of Conductors*	Factors
1	1.6
2 - 3	1.0
4 - 5	0.8
6 - 15	0.7
16 - 30	0.5

*Do not count shields unless used as a conductor.

Belden Technical Information

EQUIVALENCY CHART FOR AMERICAN WIRE GAUGE (AWG)

AWG Size	Composition of Conductor	Approx. O.D. mm	Section mm ²
40	Solid	0.079	0.005
39	Solid	0.089	0.006
38	Solid	0.102	0.008
37	Solid	0.114	0.010
36	Solid	0.127	0.013
	7/44	0.153	0.014
35	Solid	0.142	0.016
34	Solid	0.160	0.020
	7/42	0.191	0.022
33	Solid	0.180	0.025
32	Solid	0.209	0.032
	7/40	0.203	0.034
	19/44	0.229	0.039
31	Solid	0.226	0.040
30	Solid	0.255	0.051
	7/38	0.305	0.056
	19/42	0.305	0.060
29	Solid	0.287	0.064
28	Solid	0.320	0.080
	7/36	0.381	0.071
	19/42	0.406	0.093
27	Solid	0.361	0.102
	7/35	0.457	0.111
26	Solid	0.404	0.127
	7/34	0.483	0.140
	10/36	0.533	0.127
	19/38	0.508	0.153
25	Solid	0.455	0.163
24	Solid	0.511	0.203
	7/32	0.610	0.226
	10/34	0.584	0.200
	19/36	0.610	0.239
	41/40	0.584	0.201
23	Solid	0.574	0.259
22	Solid	0.643	0.322
	7/30	0.762	0.352
	19/34	0.787	0.380
	26/36	0.762	0.327

AWG Size	Composition of Conductor	Approx. O.D. mm	Section mm ²
21	Solid	0.724	0.412
20	Solid	0.813	0.514
	10/30	0.890	0.504
	19/32	0.940	0.612
	26/34	0.914	0.520
	41/36	0.914	0.533
19	Solid	0.912	0.653
18	Solid	1.020	0.816
	7/26	1.220	0.891
18	16/30	1.200	0.808
	19/30	1.240	0.957
	41/34	1.200	0.819
	65/34	1.200	0.845
17	Solid	1.150	1.039
16	Solid	1.290	1.300
	7/24	1.520	1.420
	19/29	1.470	1.216
	26/30	1.500	1.310
	65/34	1.500	1.300
	105/36	1.500	1.365
15	Solid	1.450	1.651
14	Solid	1.630	2.070
	7/20	1.850	2.260
	19/27	1.850	1.930
	41/30	1.850	2.060
	105/36	1.850	2.100
13	Solid	1.830	2.630
12	Solid	2.050	3.290
	7/20	2.440	3.610
	19/25	2.360	3.070
	65/30	2.410	3.270
	165/34	2.410	3.300
11	Solid	2.300	4.155
10	Solid	2.600	5.230
	37/26	2.920	4.710
	65/28	2.950	5.230
	105/30	2.950	5.355

CONVERSION TABLE

To convert		
From	To	Multiply by
To	From	Divide by
in	mm	25.4
in	cm	2.54
ft.	m	0.3048
mi	km	1.6093
Lbs.	kg	0.4536
Lbs./1000 ft.	kg/km	0.67197

To convert		
From	To	
°C	°F	1.8 x °C + 32
°F	°C	(°F - 32)/1.8

Belden Technical Information

TRADE NUMBER INDEX

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Product Information



Optical-Fibre Catalog



Audio/Video Cables Catalog



Online-Product Service



Industrial-Cable Catalog



Master Catalog



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