



# Shipboard and Offshore Cables

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## Introduction

### All Aboard and Shipshape

Conditions at sea can get rough, so reliable communication is vital. Equipment must function well at all times and in all weathers. Belden cables meet the highest international marine standards – serving across the seven seas.

Belden's new Shipboard & Offshore cable line is comprised of Belden Brilliance®, DataTwist® and classic design cables designed to implement a wide range of shipboard audio, video, security, networking, control, instrument, communication and power applications. The Belden shipboard series also includes a selection of all-dielectric fiber optic cables.

### Key Applications

- Navigational instruments
- A/V equipment
- Propulsion and control system
- Marine networking

### Special Features

- Delivery of the highest quality A/V performance to operators and owners of private yachts, and passengers and crew on commercial ships.
- Fast, easy installation using standard connectors, with no special installation techniques or equipment required.
- Exclusive and unmatched Belden 10 Year Warranty.

### Availability

To assist you in selecting the approval of the proper cable for your application, the approval logos are indicated for each applicable product in this section.

Most of our Shipboard & Offshore cables are available from stock. Many of these are available off the shelf from distributors. If you have a new or unusual application or you cannot find a Shipboard & Offshore cable in this catalog section that meets your technical requirements contact technical support at +31-77-3875-414 or techsupport.venlo@belden.com.

### Corresponding Literature


#### Product Bulletins

NP222: Shipboard Audio/Video ABS approved by ABS for Marine Installations


### Meeting the Standards

Cables comply with industry standards IEEE 45 and applicable sections of IEC 60092-376 for low-smoke and zero-halogen. Because of the global nature of the marine industry, the cables are designed and manufactured to comply with European Union RoHS Directive (2002/95/EC, 27-Jan-2003) governing the Reduction of Hazardous Substances in electrical and electronic equipment.

All Belden Shipboard & Offshore cables are designed to match the type approval program from either:

- ABS (American Bureau of Shipping) is the most widely recognized Safety Standards organization serving the shipbuilding and marine structures industries. This offers third-party certification of products – known as “Type Approval Program”. With ABS approval, no additional special approvals or insurance company exceptions are required for Belden cable system installations. 

or

- GLC (Germanischer Lloyd Certification) offers an independent and professional service for the evaluation of management systems. The Germanischer Lloyd network is a very wide international service covering more than 135 countries. 

# Audio, Control and Instrumentation Cables

## Low-Smoke Zero-Halogen

De-scription	Part No.	UL NEC / C(UL)/CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Color Code
			ft.	m	lbs.	kg		inch	mm		inch	mm			pF/ft.	pF/m	

**22 AWG • Stranded (7x30) 0.8 mm Tinned Copper • Twisted Pair • Overall Beldfoil® Shield • 22 AWG Tinned Copper Drain Wire**

Polypropylene Insulation • Black FRNC/LSNH Jacket																		
300V RMS 150°C	<b>9451SB</b>	NEC: CEC: CMG-LS FT4 Limited Smoke	1000	305	20.0	9.1	0.76 mm 22 AWG (7x30) TC	0.046	1.16	Overall Beldfoil® + Drain Wire (22 AWG TC)	0.160	4.06	45	66%	CDR/CDR CDR/SCR	35 67	115.0 220.0	Black, Red



0.34 mm²  
1-Pair



The jacket and shield are bonded so both can be removed with automatic stripping equipment.  
Drain wire is inside foil shield.

**22 AWG • Stranded (7x30) 0.8 mm Tinned Copper • Twisted Pair • Beldfoil® • 24 AWG Tinned Copper Drain Wire**

Polypropylene Insulation • Black FRNC/LSNH Jacket																		
300V RMS 105°C	<b>8723SB</b>	NEC: CEC: CMG-LS FT4 Limited Smoke	1000	305	26.0	11.8	0.76 mm 22 AWG (7x30) TC	0.046	1.16	Individual Beldfoil® + Drain Wire (24 AWG TC)	0.196	4.98	45	66%	CDR/CDR CDR/SCR	35 67	115.0 220.0	Black & Red, Green & White



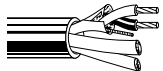
2-Pair



Pairs cabled on common axis to reduce diameter.

**22 AWG • Stranded (7x30) 0.8 mm Tinned Copper • Twisted Pair • Beldfoil® • 22 AWG Tinned Copper Drain Wire**

Polypropylene Insulation • Black FRNC/LSNH Jacket																		
U300V RMS Non-Conduit	<b>8777SB</b>	NEC: CEC: CMG-LS FT4 Limited Smoke	† 500	152	19.6	8.9	0.76 mm 22 AWG (7x30) TC	0.050	1.26	Individual Beldfoil® + Drain Wire (22 AWG TC)	0.273	6.93	50	66%	CDR/CDR CDR/SCR	30 55	98.0 180.0	Black & Red, Black & White, Black & Green



3-Pair



TC = Tinned Copper • DCR = DC resistance  
† Spools are one piece, but length may vary 0% to +20% from length shown.

### Broadband Coaxial Cables

#### CATV Cables, Series 6, Low-Smoke Zero-Halogen

De- scription	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			ft.	m	lbs.	kg		inch	mm		inch	mm			pF/ft.	pF/m	MHz	dB/ 100 ft.	dB/ 100 m
<b>Series 6 • 18 AWG • Solid 1.0 mm Copper-Covered Steel • Duobond® II • 60% Aluminum Braid</b>																			
<b>Gas-Injected Foam Polyethylene Insulation • Black FRNC/LSNH Jacket</b>																			
75°C	<b>9116SB</b>	NEC: CEC: CMG-LS FT4 Limited Smoke	1000	305	31.1	14.1	1.02 mm 18 AWG Solid CCS 121.4 Ω/km* 91.9 Ω/km**	0.180	4.57	Duobond® II + 60% AL Braid 29.5 Ω/km*** 5.4 mm	0.274	6.96	75	83%	16.2	53.1	5	0.54	1.77
																	55	1.45	4.76
																	211	2.64	8.66
																	270	2.97	9.74
																	300	3.13	10.27
																	350	3.39	11.12
																	375	3.52	11.55
																	400	3.65	11.97
																	450	3.88	12.73
																	500	4.09	13.42
																	600	4.51	14.80
																	650	4.72	15.49
																	700	4.92	16.14
																	750	5.11	16.76
																	800	5.27	17.29
																	862	5.47	17.95
																	870	5.49	18.01
																	900	5.60	18.37
																	950	5.79	19.00
																	1000	5.99	19.65
																	1450	7.80	25.60
																	1800	8.60	28.20
																	2250	9.82	32.20
																	3000	11.31	37.10

\* DC loop resistance • \*\* DC resistance inner conductor • \*\*\* DC resistance outer conductor • DCR = DC resistance • CCS = Copper-Covered Steel • AL = Aluminum

### Precision Video Cable for Analog and Digital

#### Low Loss Serial Digital Coax, RG-6U Type, Low-Smoke Zero-Halogen

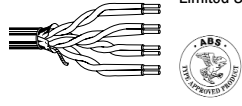
De- Description	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			ft.	m	lbs.	kg		Inch	mm		Inch	mm			pF/ft.	pF/m	MHz	dB/ 100 ft.	dB/ 100 m
<b>RG-6/U Type • 18 AWG • Solid 1.0 mm Bare Copper • Duofoil® • 95% Tinned Copper Braid</b>																			
<b>Gas-injected Foam HDPE Insulation • Black FRNC/LSNH Jacket</b>																			
SDI/HDTV Digital Video 75°C	<b>1694SB</b>	NEC: CEC: CMG-LS FT4 Limited Smoke	1000	305	46.0	20.9	1.02 mm 18 AWG Solid BC 30.2 Ω/km* 21.0 Ω/km**	0.180	4.57	Duofoil® + 95% TC Braid 9.2 Ω/km***	0.274	6.96	75	82%	16.2	53.1	1	0.2	0.8
																	3.6	0.5	1.5
																	10	0.7	2.4
																	71.5	1.6	5.2
																	135	2.1	6.9
																	270	3.0	9.7
																	360	3.4	11.3
																	540	4.2	13.9
																	720	4.9	16.2
																	750	5.0	16.4
																	1000	5.9	19.3
																	1500	7.3	24.0
																	2250	9.1	30.0
																	3000	10.7	35.0
																	4500	13.3	43.6

\* DC loop resistance • \*\* DC resistance inner conductor • \*\*\* DC resistance outer conductor • DCR = DC resistance • BC = Bare Copper • TC = Tinned Copper

## Networking Cables

### DataTwist® 5e ScTP, Low-Smoke Zero-Halogen

De- scription	Part No.	UL NEC / C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Freq. MHz	Max. Atten. dB/100m	Min. PSUM			ACR dB/100m	Min. RL dB
			ft.	m	lbs.	kg		inch	mm		inch	mm			NEXT dB	ACR dB/100m	ELFEXT dB/100m		
<b>Cat 5e • 24 AWG • Twisted Pairs • Solid 0.5 mm BC • Overall Beldfoil® Shield • RJ-45 Compatible • 24 AWG TC Drain Wire • 100 Ohm ± 15 %</b>																			
<b>Polypropylene Insulation (Color Code: see chart below) • Black FRNC/LSNH Jacket</b>																			
105°C	<b>1300SB</b>	NEC: CEC: CMG-LS FT4 Limited Smoke	1000	305	35.1	15.9	0.51 mm 24 AWG Solid BC	0.042	1.07	Non- Bonded-Pair Unshielded Overall Beldfoil® + Drain Wire (24 AWG TC)	0.260	6.60	1 4 8 10 16 20 25 31.25 62.5 100	2.0 4.1 5.8 6.5 8.2 9.3 10.4 11.7 17.0 22.0	62.3 53.3 48.8 47.3 44.3 42.8 41.3 39.9 35.4 32.3	60.3 49.2 43.0 40.8 36.1 33.5 30.9 28.2 24.8 20.8	60.3 48.7 42.7 40.8 36.7 34.7 32.8 30.9 28.2 24.8 20.3	60.3 49.2 43.0 40.8 36.1 33.5 30.9 28.2 24.8 20.3	20.0 23.0 24.5 25.0 25.0 25.0 24.3 23.6 21.5 20.1
4-Pair		Shield is bonded to jacket inner wall for electrical stability. Jacket sequentially marked at 0.6 m intervals. Third party verified to TIA/EIA-568-B.2, Category 5e																	



BC = Bare Copper • TC = Tinned Copper • ACR = Attenuation Crosstalk Ratio • DCR = DC resistance •  
 ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum •  
 RL = Return Loss • ScTP = Screened (Overall Foil) Twisted Pair(s)

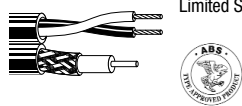
#### Color Code

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

## Security Composite Cables

### CCTV plus Audio or Pan/Tilt/Zoom CCTV Control Applications Low-Smoke Zero-Halogen

De- scription	Part No.	UL NEC / C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Color code	Nominal OD		Compo- nent	Description	Shielding Material & Nom. DCR	Insulation Material & Colors	Component Jacket Material & Colors	Component OD	
			ft.	m	lbs.	kg		inch	mm						inch	mm
<b>Composite • (1) Series 6 Coax • 2 Conductor (Audio) stranded</b>																
<b>FPE Coax Insulation • Polypropylene Pair Insulation • Black FRNC/LSNH Jacket</b>																
75°C	<b>1306SB</b>	NEC: CEC: CMG-LS FT4 Limited Smoke	500	152	37.0	16.8	Black & Red	0.514	13.06	1xAudio	1-Pair 18 AWG 1.2 mm (7x26) BC	Unshielded	Polypropylene	FRNC Black	0.239	6.07
										1xCCTV	Series 6 18 AWG 1.0 mm Solid BC	95% BC Braid	FPE	FRNC Black	0.275	6.99
Coax sweep tested to 2.25 GHz and jacket sequentially marked. Third party verified to TIA/EIA-568-B.2, Category 5e																



BC = Bare Copper • DCR = DC resistance

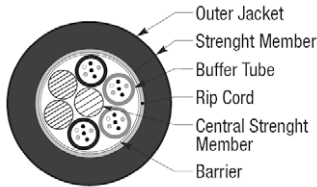
# RiserLite® Loose Tube Indoor/Outdoor, Fiber Optic Cables#

## Single-Mode and Multimode-Riser-Rated, Low-Smoke Zero-Halogen

De- scription	Part No.	No. of Fibers	Standard Lengths		Standard Unit Weight		Fiber Size µm	Nom. Buffer/ Tube OD		Strength Members	Nominal OD		Central Element mm	Pulling Tension N	Crush Re- sistance kN/m	Energy kJ/m	Bending Radii Cable (mm)	
			ft.	m	lbs.	kg		inch	mm		inch	mm					static	dyna- mic

**M9W • Loose Tube • Single-Mode**

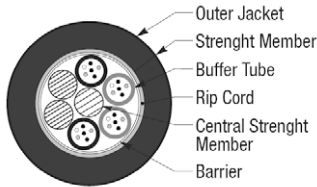
Synthetic Thixotropic Gel Construction • Overall Water-Blocking Tape • Black FRNC/LSNH Jacket																		
70°C	<b>M9W830</b>	6 (1x6)	Manufactured	233.5	105.9	∅ 250 ± 15	0.07	1.90	Aramid Yarn	0.38	9.65	no	2700	20	–	145	193	
	<b>M9W831</b>	12 (2x6)	per Order	233.5	105.9					0.38	9.65							
	<b>M9W832</b>	24 (4x6)		233.5	105.9					0.38	9.65							
	<b>M9W834</b>	48 (4x12)*		332.0	150.6					0.48	12.18							



Construction: 6 fibers per tube, cabled with fillers. \*12 fibers per tube

**M9 • Loose Tube • Multimode 50/125 Grade 4**

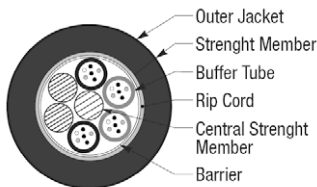
Synthetic Thixotropic Gel Construction • Overall Water-Blocking Tape • Black FRNC/LSNH Jacket																		
70°C	<b>M97537</b>	2 (2x1)**	Manufactured	233.5	105.9	∅ 250 ± 15	0.07	1.90	Aramid Yarn	0.38	9.65	no	2700	20	–	145	193	
	<b>M9A830</b>	6 (1x6)	per Order	233.5	105.9					0.38	9.65							
	<b>M9A831</b>	12 (2x6)		233.5	105.9					0.38	9.65							
	<b>M9A832</b>	24 (4x6)		233.5	105.9					0.48	12.18							
	<b>M9A834</b>	48 (4x12)*		332.0	150.6													



Construction: 6 fibers per tube, cabled with fillers. \*12 fibers per tube, \*\*1 fiber per tube

**M9C • Loose Tube • Multimode 50/125 Grade 4**

Synthetic Thixotropic Gel Construction • Overall Water-Blocking Tape • Black FRNC/LSNH Jacket																		
70°C	<b>M9C830</b>	6 (1x6)	Manufactured	233.5	105.9	∅ 250 ± 15	0.07	1.90	Aramid Yarn	0.38	9.65	no	2700	20	–	145	193	
	<b>M9C831</b>	12 (2x6)	per Order	233.5	105.9					0.38	9.65							
	<b>M9C832</b>	24 (4x6)		233.5	105.9					0.38	9.65							
	<b>M9C834</b>	48 (4x12)*		332.0	150.6					0.48	12.18							



Construction: 6 fibers per tube, cabled with fillers. \*12 fibers per tube

# Available in fiber counts 1 through 144, and in all glass types.

**RiserLite® Loose Tube Indoor/Outdoor, Fiber Optic Cables<sup>#</sup>**Single-Mode and Multimode-Riser-Rated, Low-Smoke Zero-Halogen (*continued*)

Glass Types and Specifications	UOM	Single-Mode Fiber *	Multimode Grade 4	Multimode Grade 5
Operating Wavelength (Short) – nm	nm	1310	850	850
Operating Wavelength (Long) – nm	nm	1550	1300	1300
Min. OFL Bandwidth (@ Short Wavelength)	MHz-km	–	500	1500
Min. OFL Bandwidth (@ Long Wavelength)	MHz-km	–	500	500
Min. Laser Bandwidth (@ Short Wavelength)	MHz-km	–	510	2000
Min. Laser Bandwidth (@ Long Wavelength)	MHz-km	–	500	500
Max. Attenuation (@ Short Wavelength)	db/km	0.4	3.0	3.0
Max. Attenuation (@ Long Wavelength)	db/km	0.3	1.0	1.0
100 Mb/s Fast Ethernet Link Length @ WL = 850 nm	m	–	300	300
100 Mb/s Fast Ethernet Link Length @ WL = 1310 nm	m	5000	2000	2000
1 Gb/s Ethernet Link Length @ WL = 850 nm	m	–	600	1000**
1 Gb/s Ethernet Link Length @ WL = 1310 nm	m	5000	600	600
10 Gb/s Ethernet Link Length @ WL = 850 nm	m	–	82	300
10 Gb/s Ethernet Link Length @ WL = 1310 nm	m	10000	300	300

# Available in fiber counts 1 through 144, and in all glass types.

\* Low water peak single-mode suitable for CWDM use complies with ITU G.652.c/d.

\*\* &gt; 200 m for engineered links

OFL: Overfilled Launch

Laser bandwidth: effective modal bandwidth, determined by RML or DMD performance specifications

Other constructions and fiber-types available, up to 144 fibers.

Minimum order for each construction is 1000 meters. Bulk long reels, manufactured per order.

Operating temperature: -40°C to +70°C

**Control for Propulsion Systems**

300/500V, 180°C

De- scription	Part No.	No. of Cond. (CDR)	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Conductor OD		Shielding Material Nom. DCR	Nominal OD		Application
			ft.	m	lbs.	kg		AWG	Section mm <sup>2</sup>		inch	mm	

**180°C • 18 - 8 AWG • Stranded Tinned Copper • FEP Inner Sheath • Galvanized Steel Wire Braid****PTFE Insulation • Overall Clear FEP Jacket**

GL 7334077 HH

Unshielded

In industrial areas with high temperature and increased mechanical stress, e.g.

- Shipbuilding industry
- Motor and turbine engineering
- Mechanical engineering



Steel Wire Braid

SHO0001	2	3280	1000	156.5	71.0	(24x0.20) TC	18	0.75	0.284	6.30
SHO0002	3	3280	1000	194.0	88.0	(24x0.20) TC	18	0.75	0.260	6.60
SHO0003	5	3280	1000	291.0	132.0	(24x0.20) TC	18	0.75	0.287	7.30
SHO0004	2	3280	1000	191.8	87.0	(32x0.20) TC	17	1.00	0.256	6.50
SHO0005	3	3280	1000	262.3	119.0	(32x0.20) TC	17	1.00	0.268	6.80
SHO0006	4	3280	1000	286.6	130.0	(32x0.20) TC	17	1.00	0.287	7.30
SHO0007	2	3280	1000	218.3	99.0	(30x0.25) TC	16	1.50	0.280	7.10
SHO0008	3	3280	1000	269.0	122.0	(30x0.25) TC	16	1.50	0.291	7.40
SHO0009	4	3280	1000	310.8	141.0	(30x0.25) TC	16	1.50	0.315	8.00
SHO0010	5	3280	1000	379.2	172.0	(30x0.25) TC	16	1.50	0.339	8.60
SHO0011	7	3280	1000	474.0	215.0	(30x0.25) TC	16	1.50	0.366	9.30
SHO0012	12	3280	1000	868.6	394.0	(30x0.25) TC	16	1.50	0.465	11.80
SHO0013	2	3280	1000	328.5	149.0	(50x0.25) TC	14	2.50	0.327	8.30
SHO0014	3	3280	1000	432.1	196.0	(50x0.25) TC	14	2.50	0.343	8.70
SHO0015	4	3280	1000	540.1	245.0	(50x0.25) TC	14	2.50	0.370	9.40
SHO0016	5	3280	1000	665.8	302.0	(50x0.25) TC	14	2.50	0.406	10.30
SHO0017	7	3280	1000	806.9	366.0	(50x0.25) TC	14	2.50	0.437	11.10
SHO0018	2	3280	1000	487.2	221.0	(56x0.30) TC	12	4	0.394	10.00
SHO0019	3	3280	1000	634.9	288.0	(56x0.30) TC	12	4	0.413	10.50
SHO0020	4	3280	1000	787.0	357.0	(56x0.30) TC	12	4	0.449	11.40
SHO0021	5	3280	1000	1018.5	462.0	(56x0.30) TC	12	4	0.488	12.40
SHO0022	2	3280	1000	608.5	276.0	(84x0.30) TC	10	6	0.492	12.50
SHO0023	3	3280	1000	840.0	381.0	(84x0.30) TC	10	6	0.520	13.20
SHO0024	4	3280	1000	1036.2	470.0	(84x0.30) TC	10	6	0.563	14.30
SHO0025	2	3280	1000	877.4	398.0	(80x0.40) TC	8	10	0.602	15.30
SHO0026	3	3280	1000	1212.5	550.0	(80x0.40) TC	8	10	0.638	16.20
SHO0027	4	3280	1000	1538.8	698.0	(80x0.40) TC	8	10	0.697	17.70

TC = Tinned Copper • DCR = DC resistance



### Control for Propulsion Systems

300/500V, 180°C

De-scription	Part No.	No. of Cond. (CDR)	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Conductor OD		Shielding Material Nom. DCR	Nominal OD		Application
			ft.	m	lbs.	kg		AWG	Section mm <sup>2</sup>		inch	mm	

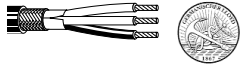
**180°C • 18 - 8 AWG • Stranded Tinned Copper • Impregnated Glass Fiber Yarn Inner Sheath • Galvanized Steel Wire Braid**

**PTFE Insulation**

GL 6371373 HH

Unshielded

In industrial areas with high temperature and increased mechanical stress, e.g.  
 - Shipbuilding industry  
 - Motor and turbine engineering  
 - Mechanical engineering



Steel Wire Braid

SHO0028	2	3280	1000	108.0	49.0	(24x0.20) TC	18	0.75	0.193	4.90
SHO0029	3	3280	1000	152.1	69.0	(24x0.20) TC	18	0.75	0.201	5.10
SHO0030	5	3280	1000	207.2	94.0	(24x0.20) TC	18	0.75	0.240	6.10
SHO0031	2	3280	1000	134.5	61.0	(32x0.20) TC	17	1.00	0.205	5.20
SHO0032	3	3280	1000	180.8	82.0	(32x0.20) TC	17	1.00	0.217	5.50
SHO0033	4	3280	1000	207.2	94.0	(32x0.20) TC	17	1.00	0.236	6.00
SHO0034	2	3280	1000	185.2	84.0	(30x0.25) TC	16	1.50	0.224	5.70
SHO0035	3	3280	1000	220.5	100.0	(30x0.25) TC	16	1.50	0.240	6.10
SHO0036	4	3280	1000	260.1	118.0	(30x0.25) TC	16	1.50	0.260	6.60
SHO0037	5	3280	1000	313.1	142.0	(30x0.25) TC	16	1.50	0.287	7.30
SHO0038	7	3280	1000	379.2	172.0	(30x0.25) TC	16	1.50	0.315	8.00
SHO0039	12	3280	1000	612.9	278.0	(30x0.25) TC	16	1.50	0.413	10.50
SHO0040	2	3280	1000	231.5	105.0	(50x0.25) TC	14	2.50	0.268	6.80
SHO0041	3	3280	1000	308.6	140.0	(50x0.25) TC	14	2.50	0.283	7.20
SHO0042	4	3280	1000	383.6	174.0	(50x0.25) TC	14	2.50	0.315	8.00
SHO0043	5	3280	1000	471.8	214.0	(50x0.25) TC	14	2.50	0.343	8.70
SHO0044	7	3280	1000	575.4	261.0	(50x0.25) TC	14	2.50	0.374	9.50
SHO0045	2	3280	1000	348.3	158.0	(56x0.30) TC	12	4	0.327	8.30
SHO0046	3	3280	1000	454.1	206.0	(56x0.30) TC	12	4	0.354	9.00
SHO0047	4	3280	1000	562.2	255.0	(56x0.30) TC	12	4	0.390	9.90
SHO0048	5	3280	1000	729.7	331.0	(56x0.30) TC	12	4	0.425	10.80
SHO0049	2	3280	1000	436.5	198.0	(84x0.30) TC	10	6	0.382	9.70
SHO0050	3	3280	1000	599.7	272.0	(84x0.30) TC	10	6	0.409	10.40
SHO0051	4	3280	1000	740.7	336.0	(84x0.30) TC	10	6	0.461	11.70
SHO0052	2	3280	1000	632.7	287.0	(80x0.40) TC	8	10	0.520	13.20
SHO0053	3	3280	1000	868.6	394.0	(80x0.40) TC	8	10	0.555	14.10
SHO0054	4	3280	1000	1106.7	502.0	(80x0.40) TC	8	10	0.614	15.60

TC = Tinned Copper • DCR = DC resistance

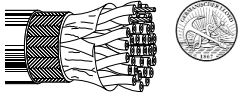
**Instrument & Communication**

250V, 90°C

De- scription	Part No.	No. of Pairs	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Conductor OD		Shielding Material Nom. DCR	Nominal OD		Application
			ft.	m	lbs.	kg		AWG	Section mm <sup>2</sup>		inch	mm	

**90°C • 18 AWG • Stranded Bare Copper • Twisted Pair • Fleece Cloth • Overall Bare Copper Braid****TPE-E-112 Insulation • Black TPE-O-107 Jacket**

GL 2067604 HH

Overall  
BC BraidIn industrial areas, e.g.  
- Shipbuilding industry  
- Mechanical engineering

<b>SHO0055</b>	1	3280	1000	167.5	76.0	(7x0.36) BC	18	0.75		0.252	6.40	
<b>SHO0056</b>	2	3280	1000	227.1	103.0	(7x0.36) BC	18	0.75		0.280	7.10	
<b>SHO0057</b>	4	3280	1000	401.2	182.0	(7x0.36) BC	18	0.75		0.402	10.20	
<b>SHO0058</b>	7	3280	1000	573.2	260.0	(7x0.36) BC	18	0.75		0.492	12.50	
<b>SHO0059</b>	10	3280	1000	745.2	338.0	(7x0.36) BC	18	0.75		0.563	14.30	
<b>SHO0060</b>	14	3280	1000	987.7	448.0	(7x0.36) BC	18	0.75		0.646	16.40	
<b>SHO0061</b>	19	3280	1000	1239.0	562.0	(7x0.36) BC	18	0.75		0.713	18.10	
<b>SHO0062</b>	24	3280	1000	1567.5	711.0	(7x0.36) BC	18	0.75		0.815	20.70	

BC = Bare Copper • DCR = DC resistance

**Power & Control**

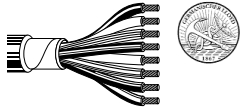
300/500V, 90°C

De- scription	Part No.	No. of Cond. (CDR)	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Conductor OD		Shielding Material Nom. DCR	Nominal OD		Application
			ft.	m	lbs.	kg		AWG	Section mm <sup>2</sup>		inch	mm	

**90°C • 16 - 2 AWG • Stranded Bare Copper • Fleece Cloth****TPE-E-112 Insulation • Black TPE-O-107 Jacket**

GL 3264106 HH

Unshielded

In industrial areas, e.g.  
- Shipbuilding industry  
- Mechanical engineering

SHO0063	2	3280	1000	158.7	72.0	(7x0.52) BC	16	1.50	0.256	6.50		
SHO0064	3	3280	1000	194.0	88.0	(7x0.52) BC	16	1.50	0.268	6.80		
SHO0065	4	3280	1000	235.9	107.0	(7x0.52) BC	16	1.50	0.291	7.40		
SHO0066	5	3280	1000	284.4	129.0	(7x0.52) BC	16	1.50	0.315	8.00		
SHO0067	7	3280	1000	361.6	164.0	(7x0.52) BC	16	1.50	0.339	8.60		
SHO0068	10	3280	1000	524.7	238.0	(7x0.52) BC	16	1.50	0.425	10.80		
SHO0069	14	3280	1000	690.0	313.0	(7x0.52) BC	16	1.50	0.476	12.10		
SHO0070	19	3280	1000	892.9	405.0	(7x0.52) BC	16	1.50	0.524	13.30		
SHO0071	24	3280	1000	1161.8	527.0	(7x0.52) BC	16	1.50	0.654	16.60		
SHO0072	2	3280	1000	233.7	106.0	(7x0.68) BC	14	2.50	0.303	7.70		
SHO0073	3	3280	1000	295.4	134.0	(7x0.68) BC	14	2.50	0.319	8.10		
SHO0074	4	3280	1000	423.3	192.0	(7x0.68) BC	14	2.50	0.346	8.80		
SHO0075	5	3280	1000	443.1	201.0	(7x0.68) BC	14	2.50	0.378	9.60		
SHO0076	2	3280	1000	324.1	147.0	(56x0.30) BC	12	4	0.343	8.70		
SHO0077	3	3280	1000	412.3	187.0	(56x0.30) BC	12	4	0.362	9.20		
SHO0078	4	3280	1000	535.7	243.0	(56x0.30) BC	12	4	0.409	10.40		
SHO0079	2	3280	1000	465.2	211.0	(84x0.30) BC	10	6	0.406	10.30		
SHO0080	3	3280	1000	597.4	271.0	(84x0.30) BC	10	6	0.429	10.90		
SHO0081	4	3280	1000	745.2	338.0	(84x0.30) BC	10	6	0.469	11.90		
SHO0082	2	3280	1000	826.7	375.0	(80x0.40) BC	8	10	0.555	14.10		
SHO0083	3	3280	1000	1073.6	487.0	(80x0.40) BC	8	10	0.594	15.10		
SHO0084	4	3280	1000	1239.0	562.0	(80x0.40) BC	8	10	0.654	16.60		
SHO0085	3	3280	1000	1560.9	708.0	(126x0.40) BC	6	16	0.697	17.70		
SHO0086	3	3280	1000	2376.6	1078.0	(196x0.40) BC	4	25	0.846	21.50		
SHO0087	3	3280	1000	3871.3	1756.0	(276x0.40) BC	2	35	0.996	25.30		

BC = Bare Copper • DCR = DC resistance

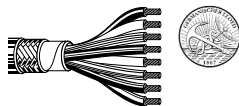
**Power & Control**

300/500V, 90°C

De- scription	Part No.	No. of Cond. (CDR)	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Conductor OD		Shielding Material Nom. DCR	Nominal OD		Application
			ft.	m	lbs.	kg		AWG	Section mm <sup>2</sup>		inch	mm	

**90°C • 18 - 8 AWG • Stranded Bare Copper • Fleece Cloth • Overall Bare Copper Braid****TPE-E-112 Insulation • Black TPE-O-107 Jacket**

GL 2067504 HH

Overall  
BC BraidIn industrial areas, e.g.  
- Shipbuilding industry  
- Mechanical engineering

<b>SHO0098</b>	2	3280	1000	227.1	103.0	(7x0.52) BC	16	1.50	0.280	7.10
<b>SHO0099</b>	3	3280	1000	266.8	121.0	(7x0.52) BC	16	1.50	0.295	7.50
<b>SHO0100</b>	4	3280	1000	321.9	146.0	(7x0.52) BC	16	1.50	0.319	8.10
<b>SHO0101</b>	5	3280	1000	348.3	158.0	(7x0.52) BC	16	1.50	0.346	8.80
<b>SHO0102</b>	7	3280	1000	436.5	198.0	(7x0.52) BC	16	1.50	0.370	9.40
<b>SHO0103</b>	10	3280	1000	637.1	289.0	(7x0.52) BC	16	1.50	0.461	11.70
<b>SHO0104</b>	12	3280	1000	743.0	337.0	(7x0.52) BC	16	1.50	0.492	12.50
<b>SHO0105</b>	14	3280	1000	815.7	370.0	(7x0.52) BC	16	1.50	0.508	12.90
<b>SHO0106</b>	16	3280	1000	932.5	423.0	(7x0.52) BC	16	1.50	0.543	13.80
<b>SHO0107</b>	19	3280	1000	1053.8	478.0	(7x0.52) BC	16	1.50	0.563	14.30
<b>SHO0108</b>	24	3280	1000	1342.6	609.0	(7x0.52) BC	16	1.50	0.654	16.60
<b>SHO0109</b>	2	3280	1000	326.3	148.0	(7x0.68) BC	14	2.50	0.323	8.20
<b>SHO0110</b>	3	3280	1000	392.4	178.0	(7x0.68) BC	14	2.50	0.346	8.80
<b>SHO0111</b>	4	3280	1000	476.2	216.0	(7x0.68) BC	14	2.50	0.378	9.60
<b>SHO0112</b>	2	3280	1000	445.3	202.0	(56x0.30) BC	12	4	0.374	9.50
<b>SHO0113</b>	3	3280	1000	533.5	242.0	(56x0.30) BC	12	4	0.394	10.00
<b>SHO0114</b>	4	3280	1000	705.5	320.0	(56x0.30) BC	12	4	0.449	11.40
<b>SHO0115</b>	2	3280	1000	615.1	279.0	(84x0.30) BC	10	6	0.437	11.10
<b>SHO0116</b>	3	3280	1000	747.4	339.0	(84x0.30) BC	10	6	0.461	11.70
<b>SHO0117</b>	4	3280	1000	948.0	430.0	(84x0.30) BC	10	6	0.508	12.90
<b>SHO0145</b>	2	3280	1000	1104.5	501.0	(80x0.40) BC	8	10	0.594	15.10
<b>SHO0146</b>	4	3280	1000	1505.7	683.0	(80x0.40) BC	8	10	0.701	17.80

BC = Bare Copper • DCR = DC resistance

## Power & Control

300/500V, 90°C

De- scription	Part No.	No. of Cond. (CDR)	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Conductor OD		Shielding Material Nom. DCR	Nominal OD		Application
			ft.	m	lbs.	kg		AWG	Section mm <sup>2</sup>		inch	mm	

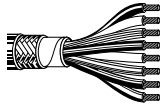
**90°C • 18 - 8 AWG • Stranded Bare Copper • Fleece Cloth • Overall Bare Copper Braid**

**TPE-E-112 Insulation • Black TPE-O-107 Jacket**

GL 2067504 HH

Overall  
BC Braid

In industrial areas, e.g.  
- Shipbuilding industry  
- Mechanical engineering



<b>SHO0088</b>	2	3280	1000	167.5	76.0	(7x0.36) BC	18	0.75	0.252	6.40
<b>SHO0089</b>	3	3280	1000	187.4	85.0	(7x0.36) BC	18	0.75	0.264	6.70
<b>SHO0090</b>	5	3280	1000	229.3	104.0	(7x0.36) BC	18	0.75	0.299	7.60
<b>SHO0091</b>	7	3280	1000	280.0	127.0	(7x0.36) BC	18	0.75	0.319	8.10
<b>SHO0092</b>	10	3280	1000	390.2	177.0	(7x0.36) BC	18	0.75	0.386	9.80
<b>SHO0093</b>	12	3280	1000	440.9	200.0	(7x0.36) BC	18	0.75	0.413	10.50
<b>SHO0094</b>	14	3280	1000	493.8	224.0	(7x0.36) BC	18	0.75	0.429	10.90
<b>SHO0095</b>	16	3280	1000	546.7	248.0	(7x0.36) BC	18	0.75	0.449	11.40
<b>SHO0096</b>	19	3280	1000	612.9	278.0	(7x0.36) BC	18	0.75	0.465	11.80
<b>SHO0097</b>	24	3280	1000	749.6	340.0	(7x0.36) BC	18	0.75	0.524	13.30

**90°C • 6 AWG - 3/0 MCM • Stranded Bare Copper • Bare Copper Braid**

**TPE-E-112 Insulation • Black TPE-O-107 Jacket**

Overall  
BC Braid

For internal wiring, e.g.  
- Shipbuilding industry  
- Mechanical engineering



<b>SHO0119</b>	1	3280	1000	593.0	269.0	(126x0.40) BC	6	16	0.398	10.10
<b>SHO0120</b>	1	3280	1000	837.7	380.0	(196x0.40) BC	4	25	0.457	11.60
<b>SHO0121</b>	1	3280	1000	1188.3	539.0	(276x0.40) BC	2	35	0.547	13.90
<b>SHO0122</b>	1	3280	1000	1554.2	705.0	(392x0.40) BC	1	50	0.610	15.50
<b>SHO0123</b>	1	3280	1000	2090.0	948.0	(356x0.50) BC	2/0	70	0.685	17.40
<b>SHO0124</b>	1	3280	1000	2788.8	1265.0	(470x0.50) BC	3/0	95	0.819	20.80

BC = Bare Copper • DCR = DC resistance

**Notes**