



**FELTEN**

WIRE & CABLE SOLUTIONS

**BizLink**

# *SeaLine<sup>®</sup> cables & services* *for commercial shipbuilding*

*Applications  
as multifaceted  
as the ocean.*

Marine





# Market portrait Marine

Our solutions for marine applications

With the market Marine, BizLink provides the customers with all the expertise of a global enterprise, focused on the needs of the shipbuilding industry. With an extensive portfolio of products and services, BizLink will assist you across the entire lifecycle of your projects – worldwide.

As a strong partner, BizLink offers application-specific cables and cable system solutions meeting national and international standards. You can trust in the well-founded sector and product knowledge as well as many years of experience.

Innovative quality products, prove and project-related system solutions, as well as highest availability and sustainable service management are matter of course for BizLink.

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# BizLink SeaLine® range of services

Yet in this exceptionally demanding market, BizLink has have specialised in one thing above all > **THE BEST SOLUTION FOR YOU.**

The outstanding properties of our cable types at a glance

> **THE RIGHT SOLUTION FOR EVERY APPLICATION**

SeaLine® cable properties

BizLink SeaLine® product range

[Fire resistant cables >](#)

[Explosion proof cables >](#)

[Ethernet category cables  
\(Cat 5,6,7\) >](#)

[Bus cables >](#)

[CCTV camera cables >](#)

[Coaxial cables >](#)

[Installation cables >](#)

[BWTs cables >](#)

[Control cables >](#)

[High temperature cables >](#)

[Hybrid cables >](#)

[Cable systems >](#)

[Onboard services >](#)

**BizLink SeaLine® cables and cable systems for commercial ship building are exposed to very widely varying and sometimes extreme ambient conditions.**

With BizLinks extensive knowledge, they offer the customers products that will match these extraordinary requirements at any time.

From fire protection and high temperature applications to bus cable systems and through to high requirements in terms of resistance to oil or suitability for trailing and submersion, the developments set the highest standards.



CPR  
approved



Halogen free



Mud resistant



Oil resistant



Rodent  
protection



High temperature  
resistant



Heat resistant



UV resistant

# DATA CABLES WITH FUNCTIONAL INTEGRITY FOR USE ON SHIPS AND MARITIME PLANTS



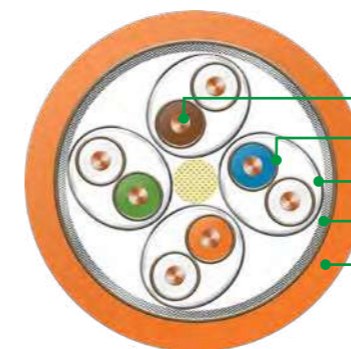
BizLink offers an adapted RJ-45 connector system including the tools needed for assembly for these new cables

BizLink SeaLine® data cables with functional integrity boast excellent data transmission during normal shipboard operation, but simultaneously ensure reliable, continued data transfer in the event of a fire for a period of at least 180 minutes.

These cables are on principle halogen free and, in the event of fire, generate low smoke density as well as low corrosiveness of the fumes.

**BizLink thereby makes an important contribution to increasing personal safety and ensuring effective emergency operation on board ships and other maritime structures.**

## BizLink SeaLine® Ethernet (category) cables with functional integrity during fire (PH 180) CAT 7, CAT 6A, CAT 6, CAT 5e



- Conductor > Bare copper wire
- Insulation > Foamed Polythylene (PE) / Fire resistant layer
- Screen > Aluminated foil
- Shield > Tin-plated copper braid / Fire resistant layer
- Outer jacket > FRNC (SHF1, SHF2, mud res)



### APPLICATION >

Data cables with functional integrity during fire over 180 minutes, for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.

The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376, IEC 60092-379, EN 50289-4-16

### BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-1-2, IEC 60754-1 & -2, IEC 60331-23, EN 50200

### TECHNICAL DATA >

Loop resistance	≤150 mΩ/km
Transit time	≤5.3 ns/m
Insulation resistance	≥500 MΩ·km
Characteristic Impedance (1–100 MHz)	100 ± 15 Ω
Testing voltage (core/core/shield)	700 V

### MECHANICAL PROPERTIES >

Temperature range	
during operation	–25 °C to +80 °C
during installation	–10 °C to +80 °C
Bending radius	
during operation	10 × D
during installation	7.5 × D

### CABLE CONSTRUCTION

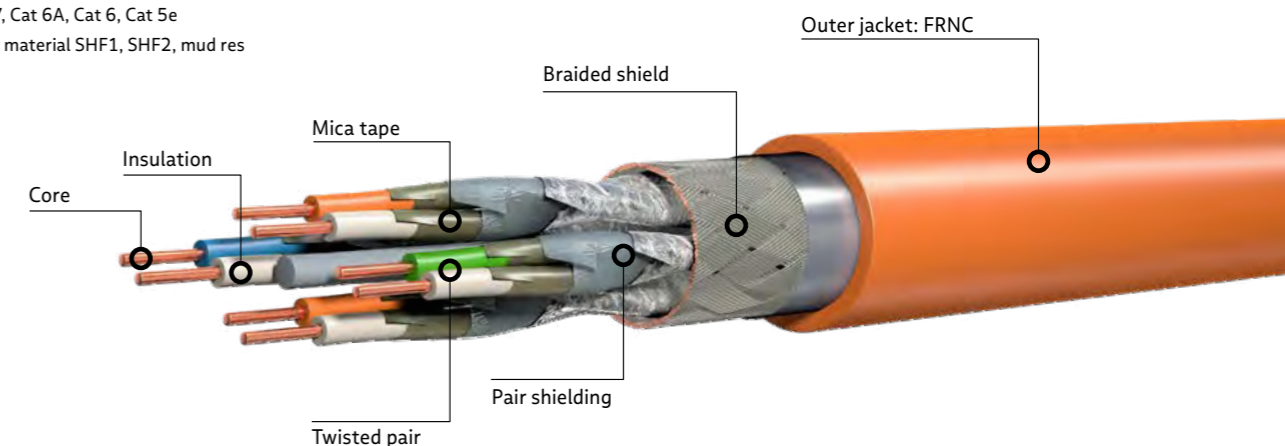
Type designation	Order no.
02YS(FE)C(FE)H 4×2×0.6/1.67-100 PIMF OG	L45467-J416-C626
02YS(FE)C(FE)H 4×2×0.6/1.67-100 PIMF BK	L45467-J416-C616

Available from AWG22/1 up to AWG26/7

Available with metal covering SWB or SWA, galvanized steel

Available for Cat 7, Cat 6A, Cat 6, Cat 5e

Available in jacket material SHF1, SHF2, mud res



# DATA CABLES FOR POTENTIALLY EXPLOSIVE ATMOSPHERES (ATEX)

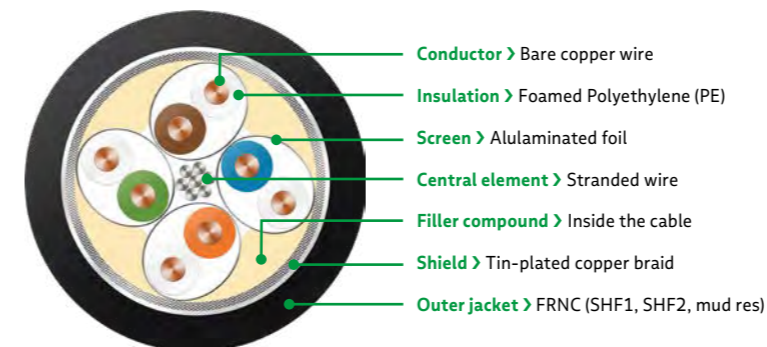


ATEX cables are specifically designed and certified to be used in environments where there is a risk of explosion due to the presence of flammable gases, vapors or mists.

The ATEX cables must comply with specific ATEX directives and standards to ensure their safety in explosive atmospheres. The certification process involves testing and assessing the cables' ability to operate safely in these environments.

BizLink thereby makes an important contribution to increasing safety on board ships and other offshore structures.

## BizLink SeaLine® Ethernet (category) cables for installation in ATEX environment CAT 7, CAT 6A, CAT 6, CAT 5E



### APPLICATION >

High-speed Ethernet data cables for installation between explosive and non-explosive areas in ships (LNG application between ATEX Zone 1 and 2), for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.

The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376, IEC 60092-379, IEC 60079-14 (Annex E).

### BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

### TECHNICAL DATA >

Loop resistance	≤140 mΩ/km
Transit time	≤5.13 ns/m
Insulation resistance	≥500 MΩ·km
Characteristic Impedance (1–100 MHz)	100 ± 15 Ω
Testing voltage (core/core/shield)	700 V

### MECHANICAL PROPERTIES >

Temperature range	
during operation	–25 °C to +80 °C
during installation	–10 °C to +80 °C
Bending radius	
during operation	10 × D
during installation	7.5 × D

### CABLE CONSTRUCTION

Type designation	Order no.
02YSFCH 4×2×0.6/1.43-100 PIMF SW	L45467-J416-C796

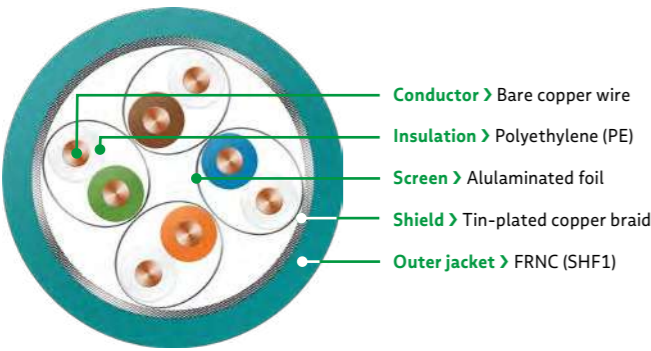
Available from AWG22/1, 23/1, 24/1

Available with metal covering SWB or SWA, galvanized steel

Available for for Cat 7, Cat 6A, Cat 6, Cat 5e

Available in jacket material SHF1, SHF2 mud res

BizLink *SeaLine® Ethernet (category) arctic cables*  
CAT 6, CAT 6A, CAT 7



APPLICATION >

Ethernet data cables with a temperature behaviour down to –65 °C. These cables can be installed in all types of ships e.g. in ice breakers, container vessels, tankers or expedition cruise liners. The cables are suitable for installation inside and outside the vessels. The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376, IEC 60092-379.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22

TECHNICAL DATA >

Insulation resistance	≥500 MΩ·km
Characteristic Impedance (1–100 MHz)	100 ± 5 Ω
Testing voltage (core/core/shield)	700 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	–65 °C to +80 °C
during installation	–65 °C to +80 °C
Bending radius	
during operation	10 × D
during installation	7.5 × D

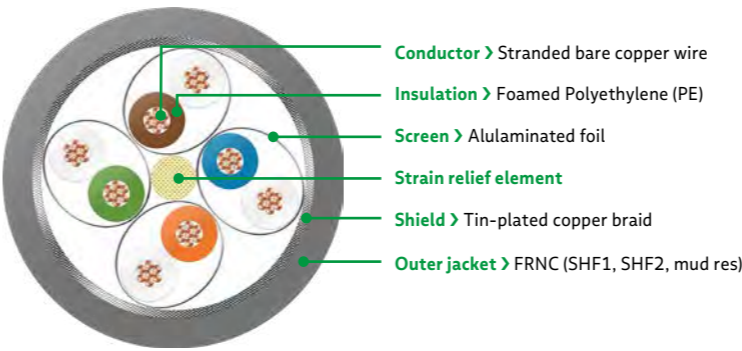
Cross section and type of wires	Data transmission rate	Type of sheathing material
AWG 22/1	Cat 6 / Cat 6A / Cat 7	SHF1
AWG 22/7		
AWG 23/1		
AWG 23/7		
AWG 24/1		
AWG 24/7		
AWG 26/1		
AWG 26/7		

All types optional available with armor steel (steel wire braid).

CABLE CONSTRUCTION

Type designation	Order no.
02YSCH 4×2×0.6 / 1.43-100 PIMF TQ	L45467-J416-C1036

BizLink *SeaLine® Ethernet (category) 4-pair cables*  
CAT 7, CAT 6A, CAT 6



APPLICATION >

Ethernet data cables for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants. The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376, IEC 60092-379.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

Transit time	≤5.3 ns/m
Insulation resistance	≥500 MΩ·km
Characteristic Impedance (1–100 MHz)	100 ± 15 Ω
Testing voltage (core/core/shield)	700 V

MECHANICAL PROPERTIES >

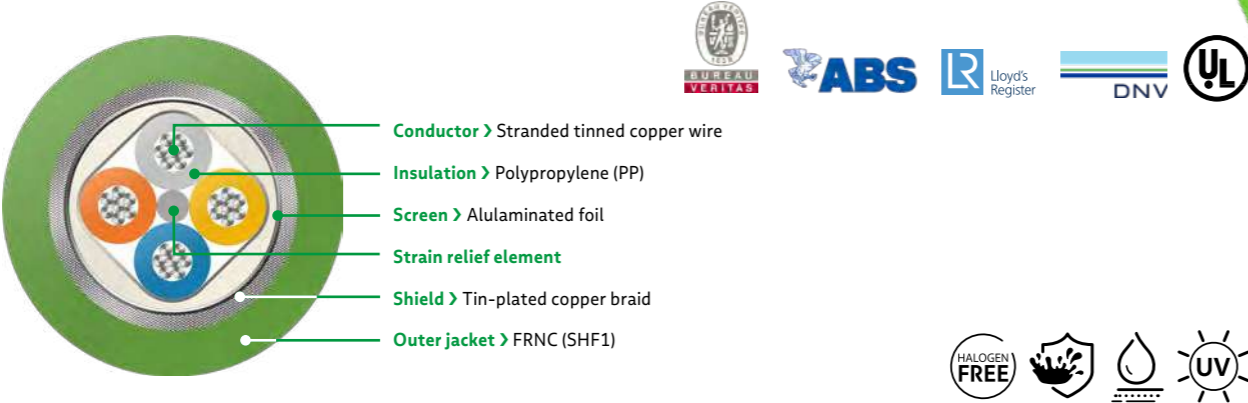
Temperature range	
during operation	–25 °C to +80 °C
during installation	–10 °C to +80 °C
Bending radius	
during operation	10 × D
during installation	7.5 × D

Cross section and type of wires	Data transmission rate	Type of sheathing material
AWG 22/1	Cat 6 / Cat 6A / Cat 7	SHF1 / SHF2 / mud res
AWG 22/7		
AWG 23/1		
AWG 23/7		
AWG 24/1		
AWG 24/7		
AWG 26/1		
AWG 26/7		

All types optional available with armor steel (steel wire braid).

BizLink SeaLine® Ethernet (category) 2-pair cables

CAT 5e ES



APPLICATION >

Ethernet data cables for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants with PROFINET characteristics. The cables meet the technical requirements of the standards IEC 600092-350, IEC 60092-360, IEC 60092-376, IEC 60092-379.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

Loop resistance	≤120 mΩ/km
Transit time	≤5.3 ns/m
Insulation resistance	≥500 MΩ·km
Characteristic Impedance (1–100 MHz)	100 ± 15 Ω
Testing voltage (core/core/shield)	1500 V

MECHANICAL PROPERTIES >

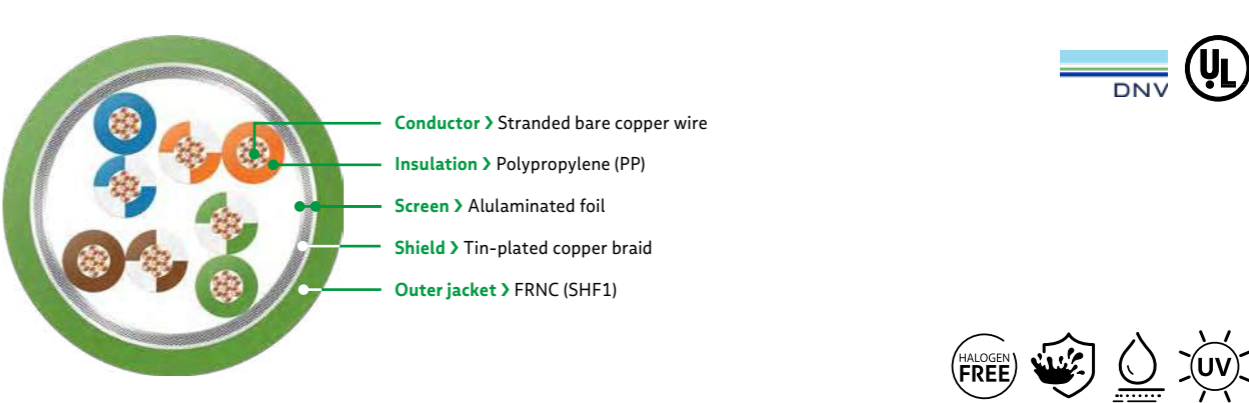
Temperature range	
during operation	–25 °C to +80 °C
during installation	–10 °C to +80 °C
Bending radius	
during operation	10 × D
during installation	7.5 × D

CABLE CONSTRUCTION

Type designation	Order no.
9YH(ST)CH 2×2×0.75/1.5-100 LI GN VZN	L45467-J16-B26

BizLink SeaLine® Ethernet multipair cables

CAT 5e ES



APPLICATION >

Ethernet data cables for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants. The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376, IEC 60092-379.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

Transit time	≤5.3 ns/m
Characteristic Impedance (1–100 MHz)	100 ± 15 Ω
Testing voltage (core/core/shield)	700 V

MECHANICAL PROPERTIES >

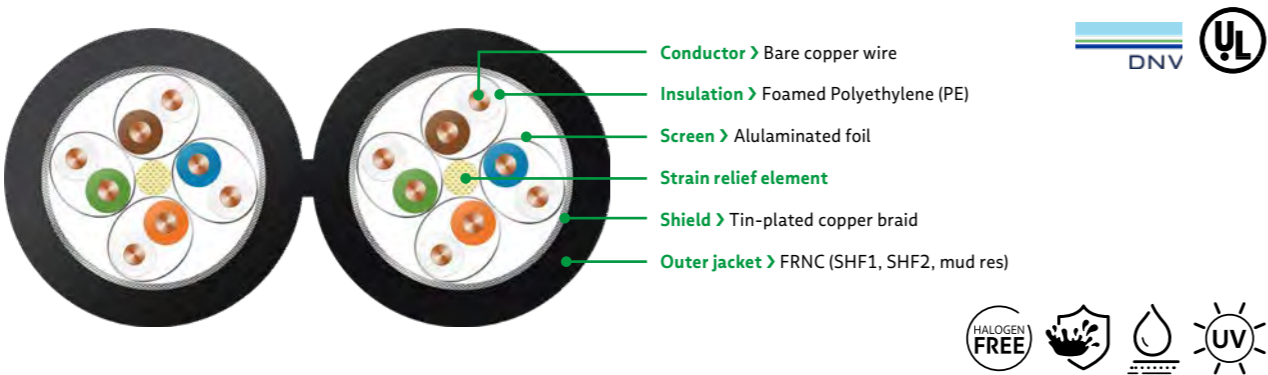
Temperature range	
during operation	–25 °C to +80 °C
during installation	–10 °C to +80 °C
Bending radius	
during operation	10 × D
during installation	5 × D

CABLE CONSTRUCTION

Type designation	Order no.
9Y(ST) CH 4×2×AWG 24/7 LI GN FRNC	L45467-J816-B6
9Y(ST) CH 4×4×AWG 24/7 LI GN FRNC	L45467-J17-B26
9Y(ST) CH 4×4×2×AWG 24/7 LI GN FRNC	L45467-J16-B76
9Y(ST) CH 8×4×2×AWG 24/7 LI GN FRNC	L45467-J16-B86
9Y(ST) CH 4×2×AWG 22/7 LI GN FRNC	L45467-J817-B6
9Y(ST) CH 4×4×AWG 22/7 LI GN FRNC	L45467-J817-B16
9Y(ST) CH 4×4×2×AWG 22/7 LI GN FRNC	L45467-J817-B46
9Y(ST) CH 8×4×2×AWG 22/7 LI GN FRNC	L45467-J817-B56
LI09YS(ST)CH 4×2×0.15/0.98 GN	L45581-B42-Y269

BizLink SeaLine® Ethernet (category) Duplex data cables

CAT7, CAT6A, CAT6



APPLICATION >

Especially for shipbuilding, duplex data cables that are particularly suitable for space-saving installation in network cabinets. Instead of two cables, only one network cable is laid, which saves considerable time during installation and assembly.

In addition, there is often very small space in the network cabinet. If more components are integrated more space is required. The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376, IEC 60092-379, IEC 60079-14 (Annex E).

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

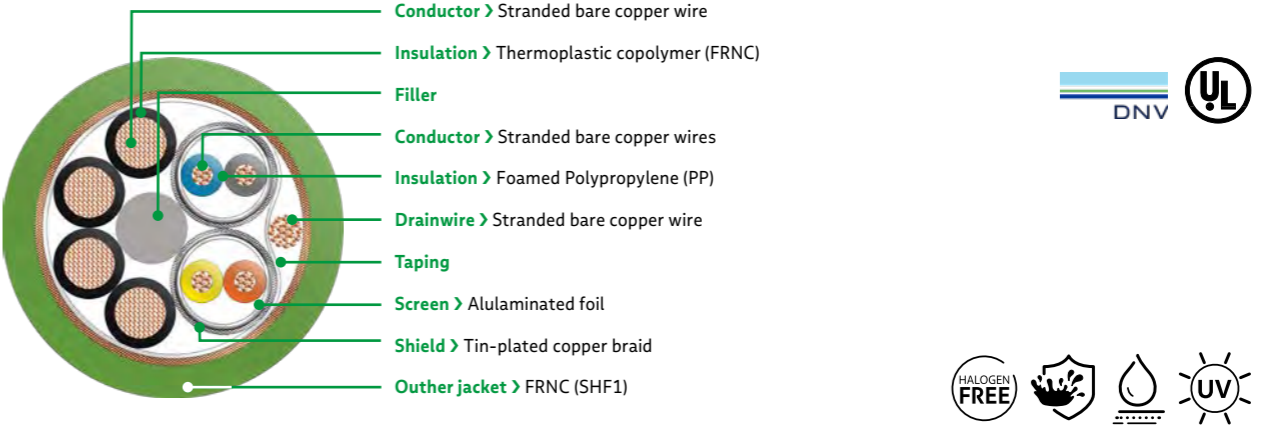
Loop resistance	≤140 mΩ/km
Insulation resistance	≥500 MΩ·km
Operating voltage (peak)	≤100 V
Characteristic Impedance at 100 MHz	100 ± 5 Ω
Testing voltage (core/core/shield)	700 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-40 °C to +80 °C
during installation	-30 °C to +80 °C
Bending radius	
during operation	8 × D
during installation	4 × D

BizLink SeaLine® Ethernet-Link cables

CAT 5e



APPLICATION >

Ethernet data cables with additional power cores for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants. The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376, IEC 60092-379.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

	Data pairs 0.43 mm²	Power supply wires 1.5 mm²
Loop resistance	≤120 mΩ/km	≤14 mΩ/km
Transit time	≤4.4 ns/m	
Insulation resistance	≥500 MΩ·km	≥20 MΩ·km
Charac. Impedance (1–100 MHz)	100 ± 15 Ω	
Testing voltage (core/core/shield)	700 V at rms 50 Hz 1 min	1000 V at rms 50 Hz 1 min

MECHANICAL PROPERTIES >

Temperature range	
during operation	-25 °C to +80 °C
during installation	-10 °C to +80 °C
Bending radius	
during operation	10 × D
during installation	7.5 × D

CABLE CONSTRUCTION

Type designation	Order no.
02YSC H 2×4×2×0.6/1.43-100 PIMF SW	L45467-J816-C126

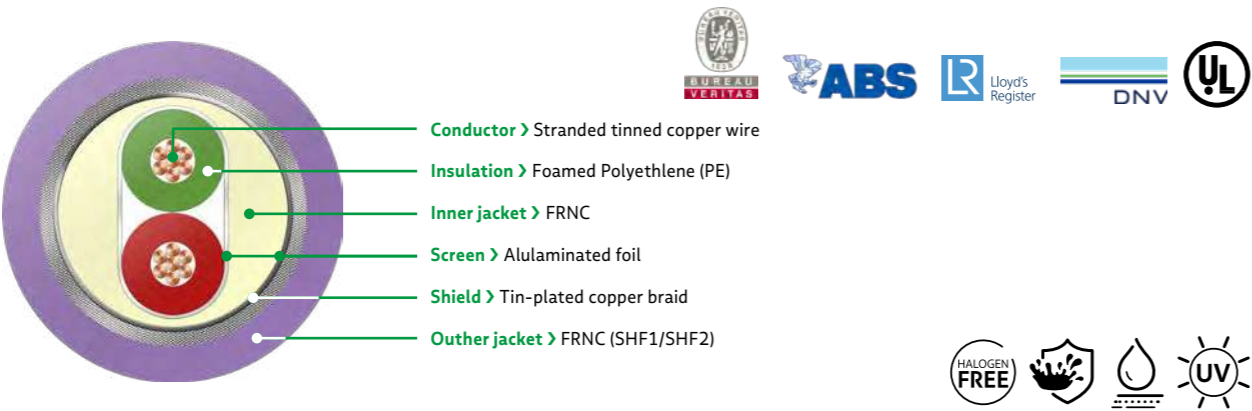
Additional AWG types available

CABLE CONSTRUCTION

Type designation	Order no.
09YS(ST)C 2×2×0.75/1.5-100LI +LIH-ZCH 4×1×1.5 GN	L45467-J217-W16



BizLink SeaLine® PROFIBUS cables



APPLICATION >

PROFIBUS cable for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants. The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

Loop resistance	≤110 mΩ/km
Insulation resistance	≥16 GΩ·km
Characteristic Impedance (3–20 MHz)	150 ± 15 Ω
Capacity (1 kHz)	≈28.5 nF/km
Operating voltage	≤60 V
Testing voltage (core/core/shield)	1000 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-25 °C to +80 °C
during installation	-10 °C to +80 °C
Bending radius	
during operation	5 × D
during installation	10 × D

CABLE CONSTRUCTION	
Type designation	Order no.
02YSH(ST)CH 1×2×0.75/2.55-150 LI VI FRNC	<a href="#">L45467-G17-C46 (SHF1)</a>
02YSH(ST)CH× 1×2×0.75/2.55-150 LI VI FRNC	<a href="#">L45467-G17-C56 (SHF2)</a>



BizLink SeaLine® CAN Bus cables



APPLICATION >

CAN Bus data cables for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants. The cables meet the technical requirements of the standards IEC 600092-350, IEC 60092-360, IEC 60092-376.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

Conductor resistance	≤44 mΩ/km
Insulation resistance	≥5 GΩ·km
Characteristic Impedance (1 MHz)	120 ± 18 Ω
Capacity	≈36 nF/km
Operating voltage (max.)	300 V
Testing voltage (core/core/shield)	5000 V

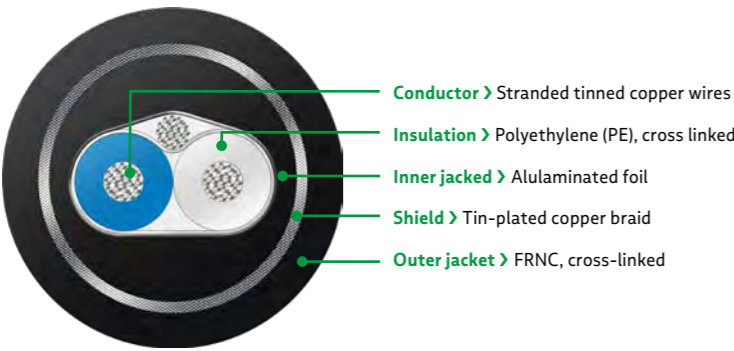
MECHANICAL PROPERTIES >

Temperature range	
during operation	-25 °C to +80 °C
during installation	-10 °C to +80 °C

CABLE CONSTRUCTION	
Type designation	Order no.
09YSH(ST)CH 1×2×0.9/2.4	<a href="#">L45467-F19-C16</a>
09YSH(ST)CH 2×2×0.9/2.2	<a href="#">L45467-F19-C26</a>
09YSH 1×2×0.9/2.4-120 VZN LI PIMF	<a href="#">L45467-F219-W6</a>



BizLink *SeaLine®* **Fieldbus cables**



APPLICATION >

Fieldbus cable for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.

The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

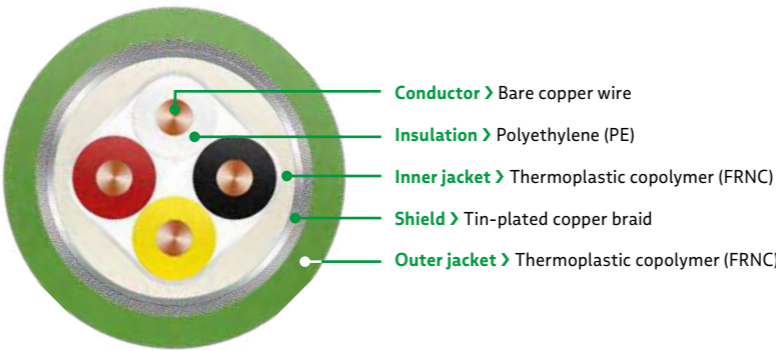
TECHNICAL DATA >

Conductor resistance	≤24 mΩ/km
Insulation resistance	≥200 MΩ·km
Characteristic Impedance (31.25 MHz)	100 ± 20 Ω
Operation Voltage	300 V
Testing voltage (core/core/shield)	1500 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-25 °C to +80 °C
during installation	-10 °C to +80 °C

BizLink *SeaLine®* **KNX / EIB Bus cables**



APPLICATION >

Bus cable for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.

The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2, Fire class B2CA

TECHNICAL DATA >

Conductor resistance	≤37 mΩ/km
Insulation resistance	≥100 GΩ·km
Characteristic Impedance (1 MHz)	80 ± 18 Ω
Capacity	≤90 nF/km
Operating voltage (max.)	250 V
Testing voltage (core/core/shield)	500 V

MECHANICAL PROPERTIES >

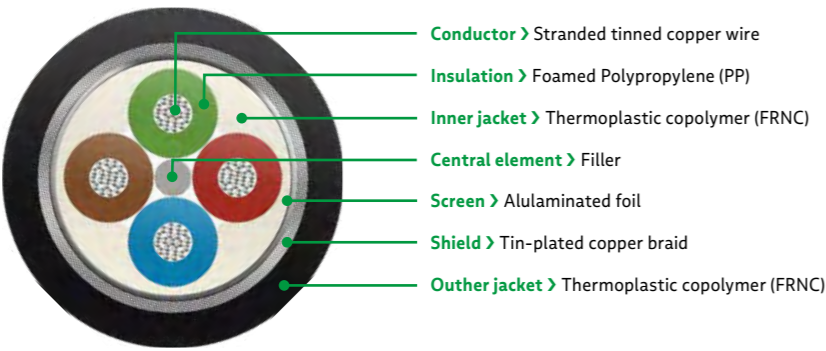
Temperature range	
during operation	-25 °C to +80 °C
during installation	-10 °C to +80 °C

CABLE CONSTRUCTION	
Type designation	Order no.
2×(ST)H×(Z)H× 1×2×1.2 / 2.9-100 VZN LI	L45467-J20-B6
2×(ST)H×(Z)H× 2×2×1.2 / 2.9-100 VZN LI SW	L45467-J220-B6

CABLE CONSTRUCTION	
Type designation	Order no.
J-HH(ST)CH 2×2×0.8 GN FRNC	L45480-F26-C77



BizLink SeaLine® RS485 Bus cables



APPLICATION >

Bus cable for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.  
The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

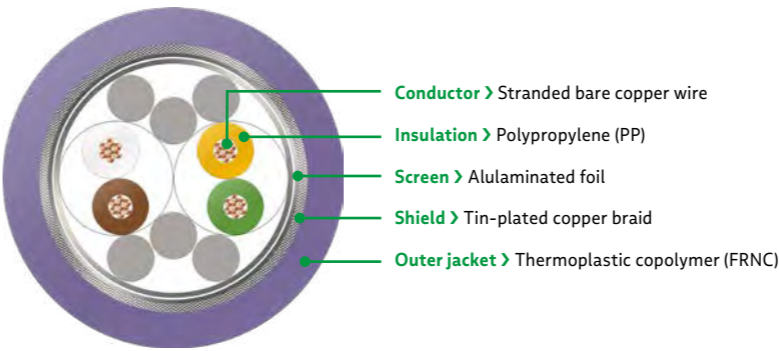
TECHNICAL DATA >

Conductor resistance	≤44 mΩ/km
Insulation resistance	≥5 GΩ·km
Characteristic Impedance (1 MHz)	120 ± 18 Ω
Capacity	≈36 nF/km
Operating voltage (max.)	300 V
Testing voltage (core/core/shield)	2000 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-20 °C to +80 °C
during installation	-10 °C to +80 °C

BizLink SeaLine® MOD Bus cables



APPLICATION >

MOD bus calbe for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.  
The cable meets the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

Conductor resistance	≤186 mΩ/km
Insulation resistance	≥5 GΩ·km
Characteristic Impedance (1 MHz)	100 ±20 Ω
Capacity	≈60 nF/km
Operating voltage (max.)	50 V
Testing voltage (core/core/shield)	1500 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-25 °C to +80 °C
during installation	-10 °C to +80 °C

CABLE CONSTRUCTION

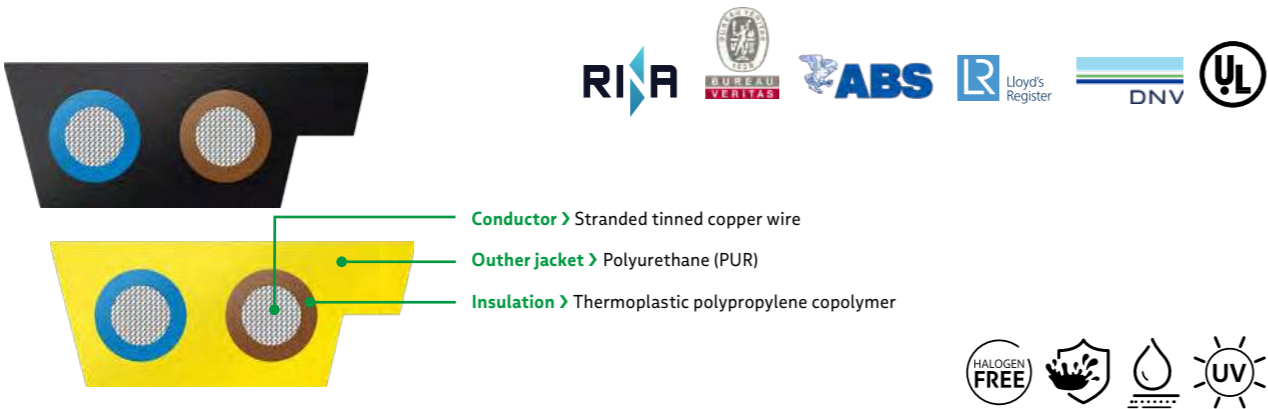
Type designation	Order no.
09YSH(ST)CH 2×2×0.9/2.2	L45467-F19-C26

CABLE CONSTRUCTION

Type designation	Order no.
2Y(ST)CH 2×2×0.6/1.3-100 LI VT	L45467-J216-B36



BizLink SeaLine® AS-Interface cables



APPLICATION >

AS-Interface cables for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.

BURNING CHARACTERISTICS >

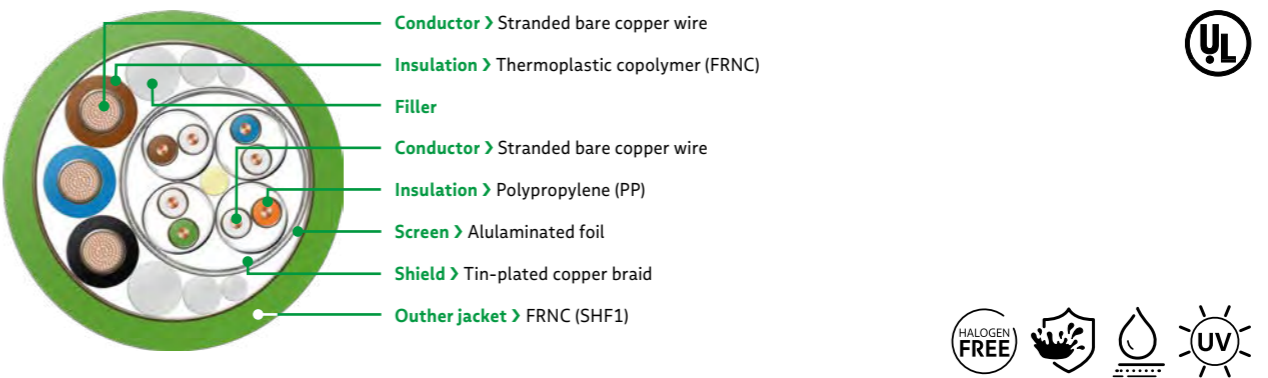
IEC 60332-1-2, IEC 60754

TECHNICAL DATA >

According to AS-Interface specifications.

CABLE CONSTRUCTION	
Type designation	Order no.
FLI-9Y11Y 2X1X1.5 VZN SW	L45587-M21-B48
FLI-9Y11Y 2X1X1.5 VZN GE	L45587-M21-B38
FLI-9Y11Y 2X1X2.5 VZN SW	L45587-M21-B208
FLI-9Y11Y 2X1X2.5 VZN GE	L45587-M21-B198

BizLink SeaLine® Digital CCTV camera cables



APPLICATION >

CCTV camera cable for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.

The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

<b>Loop resistance</b>	≤180 mΩ/km
<b>Insulation resistance</b>	≥5 GΩ·km
<b>Transit time</b>	≤5.3 ns/m
<b>Capacity (1 kHz)</b>	≈50 nF/km
<b>Operating voltage</b>	100 V
<b>Testing voltage (core/core/shield)</b>	1000 V

MECHANICAL PROPERTIES >

<b>Temperature range</b>	
during operation	-25 °C to +90 °C
during installation	-10 °C to +90 °C
<b>Bending radius</b>	
during operation	7 × D
during installation	5 × D

CABLE CONSTRUCTION	
Type designation	Order no.
LI9Y(ST)C 4×2×0.6/1.2-100	L45467-J316-W6

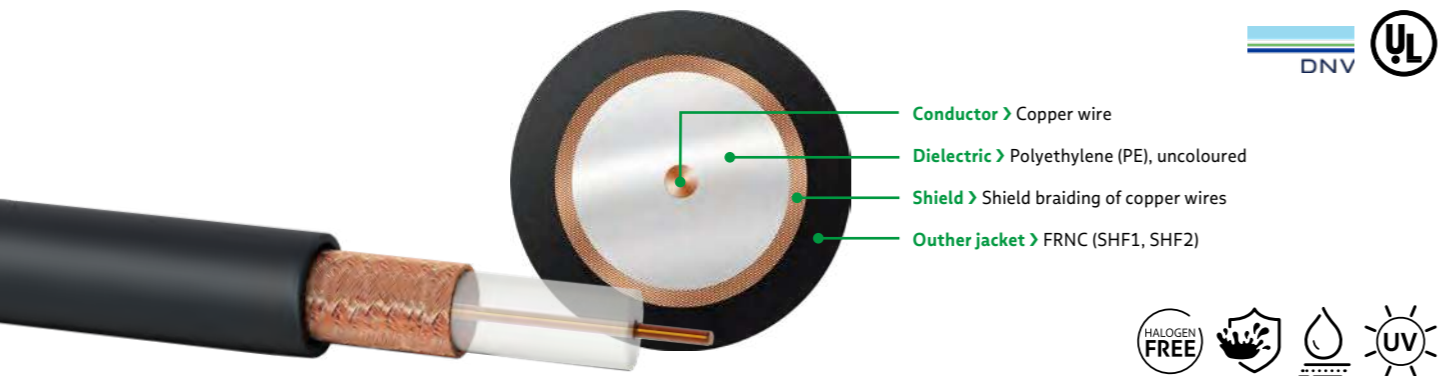
Remark:

For further information and cable types – visit our website >

<https://marine.bizlinktech.com/products-services/marine-cables/bizlink-sealiner-cctv-camera-cables/>



BizLink *SeaLine® Coaxial cables*



APPLICATION >

Coaxial cables for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.  
The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

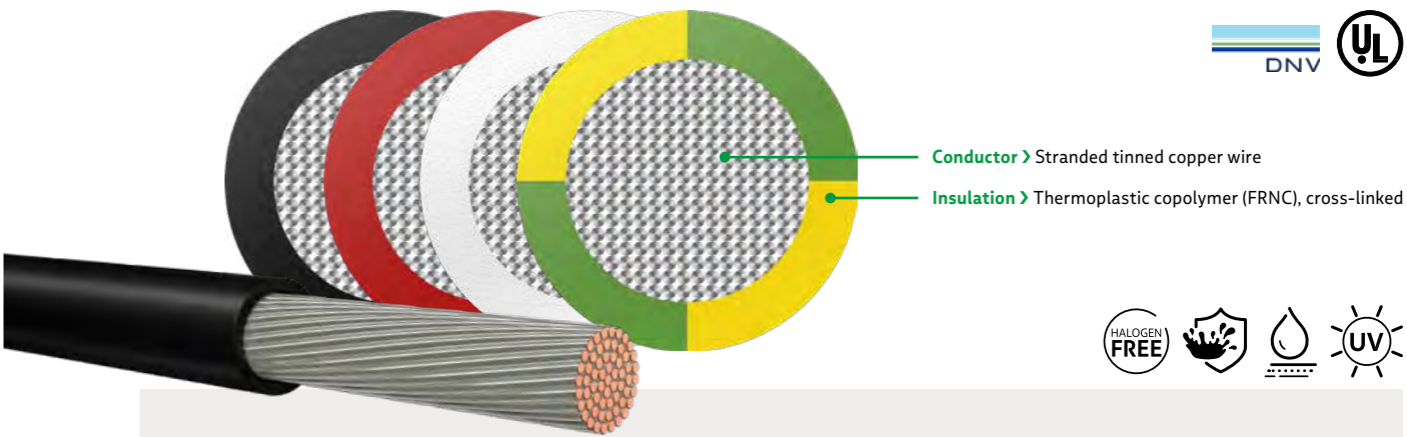
MECHANICAL PROPERTIES >

<b>Temperature range</b>	
during operation	-25 °C to +80 °C
during installation	-10 °C to +80 °C
<b>Bending radius</b>	
during operation	15 × D
during installation	15 × D

CABLE CONSTRUCTION		
Designation	Inner conductor	Order no.
SHF1-RG6	ST-DR-BL	<a href="#">L45466-D15-B256</a>
SHF2-RG6	ST-DR-BL	<a href="#">L45466-D15-B266</a>
SHF1-RG11	CU-LI-VZ	<a href="#">L45466-D18-B156</a>
SHF2-RG11	CU-LI-VZ	<a href="#">L45466-D18-B166</a>
SHF1-RG12	CU-LI-VZ	<a href="#">L45466-D18-B196</a>
SHF2-RG12	CU-LI-VZ	<a href="#">L45466-D18-B206</a>
SHF1-RG58	CU-LI-VZ	<a href="#">L45466-B13-B266</a>
SHF2-RG58	CU-LI-VZ	<a href="#">L45466-B13-B276</a>
SHF1-RG59	CU-DR-BL	<a href="#">L45466-D14-B136</a>
SHF2-RG59	CU-DR-BL	<a href="#">L45466-D14-B146</a>
SHF1-RG213	CU-LI-BL	<a href="#">L45466-B18-B56</a>
SHF2-RG213	CU-LI-BL	<a href="#">L45466-B18-B66</a>
SHF1-RG214	CU-LI-VS	<a href="#">L45466-B18-B76</a>
SHF2-RG214	CU-LI-VS	<a href="#">L45466-B18-B86</a>

**Cable construction >**  
ST = copper-clad-steel      BL = bare  
CU = copper                      VZ = tin-plated  
DR = solid conductor        VS = silver-plated  
LI = stranded conductor

BizLink *SeaLine® Installation wires*



APPLICATION >

For fixed and flexible installation in switch cabinets, terminal boxes, control panels, devises and other connecting elements of commercial ships without constant exposure to oil, grease and other lubricants.  
The cables meet the technical requirements of the standards IEC 600092-350, IEC 60092-360, IEC 60092-376, IEC 60092-353.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3, IEC 61034-2, IEC 60754-1 & -2

MECHANICAL PROPERTIES >

<b>Temperature range</b>	
during operation	-25 °C to +140 °C
during installation	-10 °C to +80 °C
<b>Bending radius</b>	
during operation	5 × D
during installation	4 × D

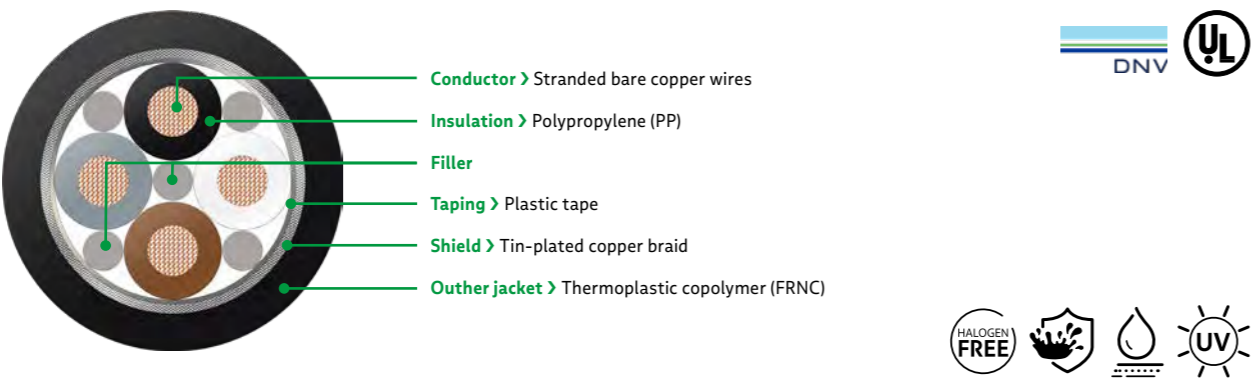
CABLE CONSTRUCTIONS >

Available cross sections 0.5 mm² – 95 mm²  
Standard colours: Black, white, red, green-yellow, further colours on request

CABLE CONSTRUCTION		
No. of cores	Nom. cross section mm²	Order no.
1	4, 6, 10, 16, 25, 35, 50, 70, 95	<a href="#">on request</a>
1	0.5; 0.75; 1; 1.5; 2.5	<a href="#">on request</a>



BizLink SeaLine® Power cables 0.6/1 kV



APPLICATION >

Power cables for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.

The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-353, IEC 60092-360.

Optimized for Ballast Water Treatment Systems

BWTS Compact Clean

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

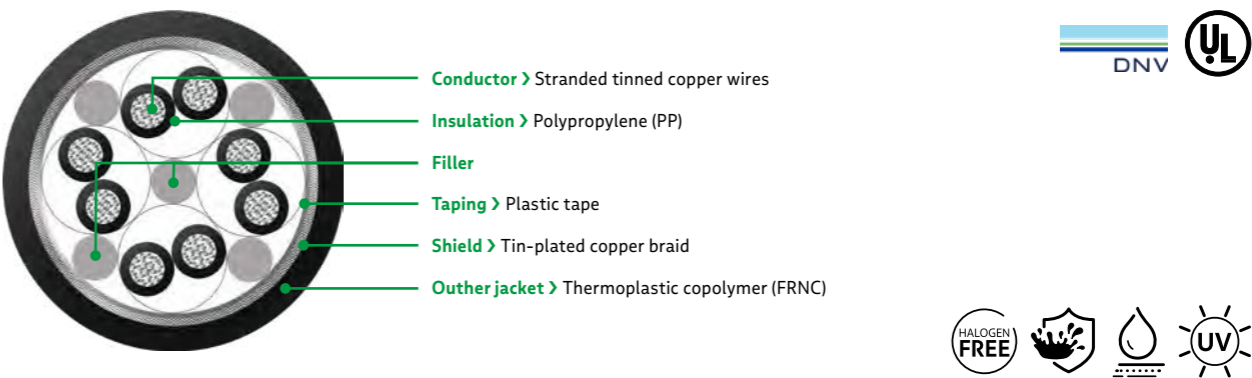
Insulation resistance	≥10 MΩ·km
Operation voltage	0.6 kV / 1 KV
Testing voltage (core/core/shield)	1500 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-20 °C to +90 °C
during installation	-10 °C to +90 °C

CABLE CONSTRUCTION		
No. of cores	Nom. cross section mm²	Order no.
1 to 10	1; 1.5; 2.5	on request
1 to 5	4; 6; 10; 16; 25; 35	on request
1	50; 70; 95; 120; 150; 185	on request

BizLink SeaLine® Control cables



APPLICATION >

Control cables for fixed installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.

The cables meet the technical requirements of the standards in accordance with IEC 600092-350, IEC 60092-360, IEC 60092-376.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

Conductor resistance	58 Ω/km
Insulation resistance	≥1.5 GΩ/km
Operating voltage (max.)	300 V
Testing voltage (core/core/shield)	2000 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-20 °C to +90 °C
during installation	-10 °C to +90 °C

CABLE CONSTRUCTION		
No. of cores	Nom. cross section mm²	Order no.
1 to 10	0.75	on request

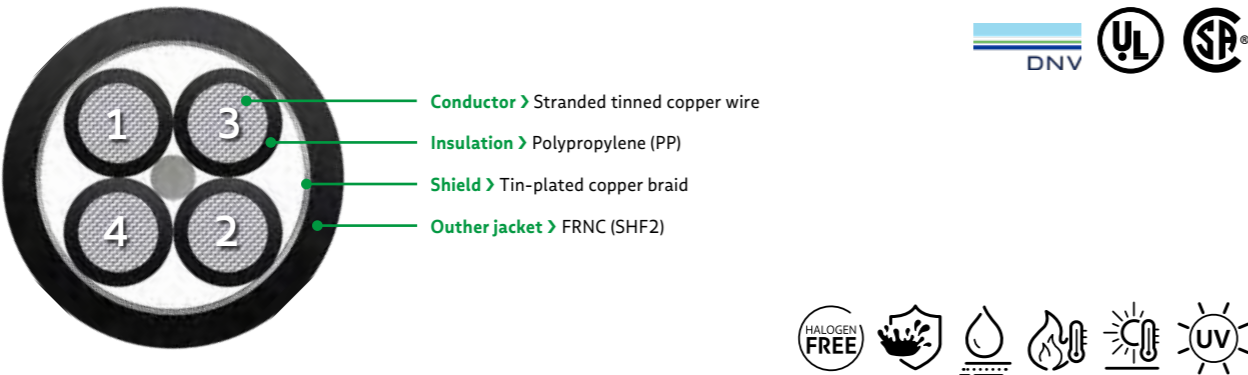


SeaLine® BWTS cable

> Ballast Water Treatment Systems

BizLink SeaLine® High temperature cables

pair design, halogen free types



APPLICATION >

For connecting fixed and sporadically moving parts inside and outside of marine applications. These halogen free SHF2 sheathed cables have very good fire safety characteristics and resistance to high temperatures, which allows them to be used in an extremely wide range of applications.

The cables meet the technical requirements of the standards in accordance with IEC 60092-376, IEC 60092-360.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

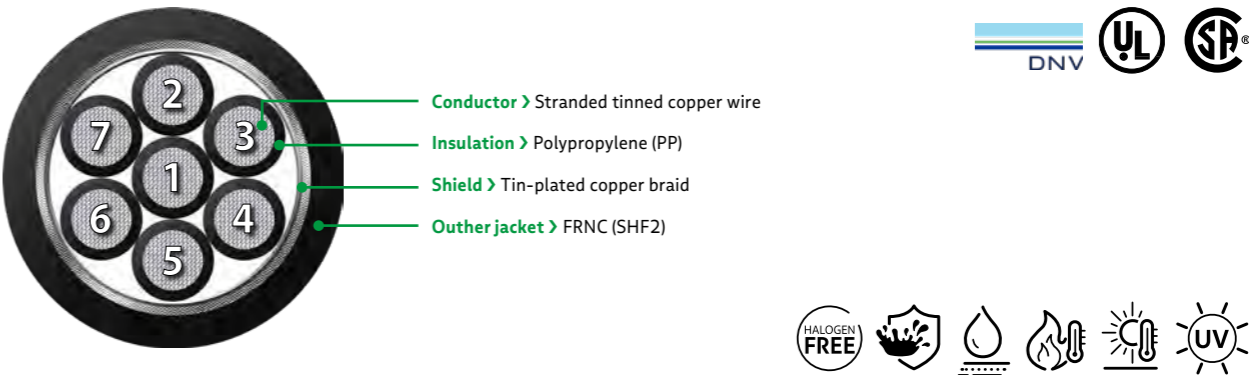
Insulation resistance	≥500 MΩ·km
Operating voltage	150 V/250 V
Testing voltage (core/core/shield)	3000 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-30 °C to +120 °C
during installation	-10 °C to +120 °C
Bending radius	
during operation	10 × D
during installation	7.5 × D

BizLink SeaLine® High temperature cables

multicore design, halogen free types



APPLICATION >

For connecting fixed and sporadically moving parts inside and outside of marine applications. These halogen free SHF2 sheathed cables have very good fire safety characteristics and resistance to high temperatures, which allows them to be used in an extremely wide range of applications.

The cables meet the technical requirements of the standards in accordance with IEC 60092-376, IEC 60092-360.

BURNING CHARACTERISTICS >

IEC 60332-1-2, IEC 60332-3-22, IEC 61034-2, IEC 60754-1 & -2

TECHNICAL DATA >

Insulation resistance	≥500 MΩ·km
Operating voltage	150 V/250 V
Testing voltage (core/core/shield)	3000 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-40 °C to +120 °C
during installation	-10 °C to +120 °C
Bending radius	
during operation	10 × D
during installation	7.5 × D

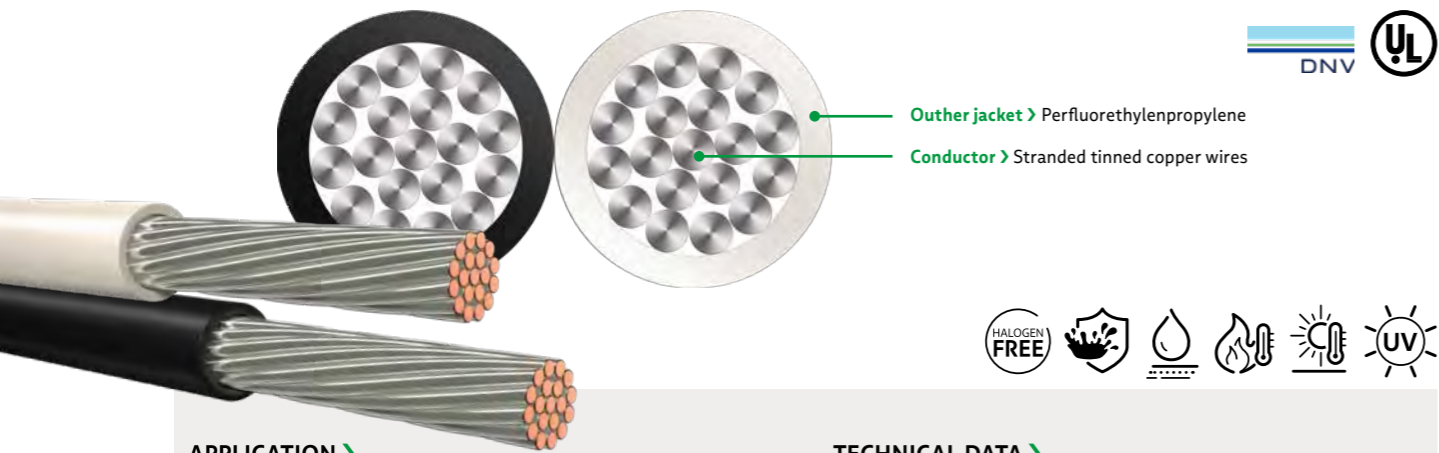
CABLE CONSTRUCTION		
No. of cores	Nom. cross section mm²	Order no.
4×2 to 5×2	0.5	on request
1×2 to 24×2	0.75	on request
2×2 to 4×2	1.5	on request

CABLE CONSTRUCTION		
No. of cores	Nom. cross section mm²	Order no.
50	0.5	on request
2 to 50	0.75	on request
2 to 12	1.5	on request
2 to 27	2.5	on request
2 to 5 / 6 / 10	6 / 10	on request



BizLink *SeaLine®* High temperature cables

FEP types, single or twisted



APPLICATION >

High temperature cable for connecting fixed and sporadically moving parts inside and outside of marine applications. These FEP sheathed cables have very good fire safety characteristics and resistance to high temperatures, which allows them to be used in an extremely wide range of applications.  
The cables meet the technical requirements of the standard IEC 60092-350.

BURNING CHARACTERISTICS >

IEC 60332-1-2

TECHNICAL DATA >

Operating voltage	150 V/250 V
Test voltage	2000 V

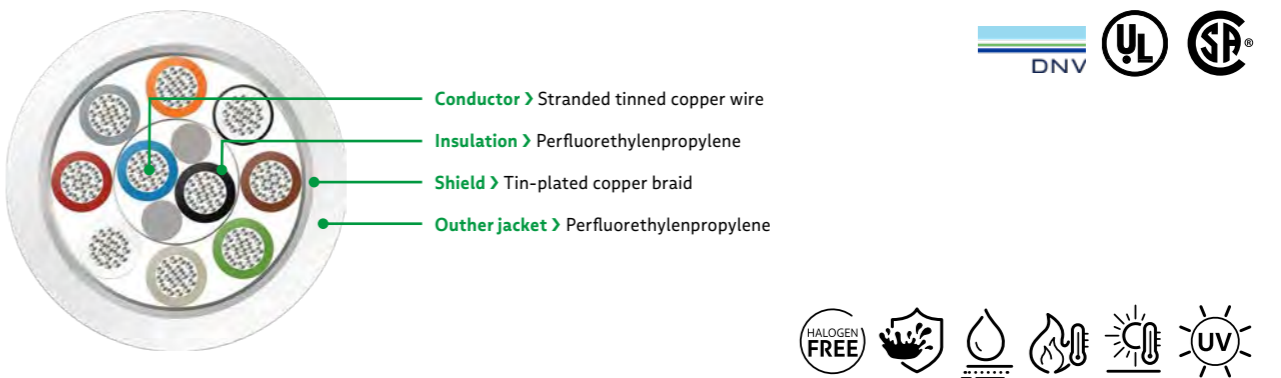
MECHANICAL PROPERTIES >

Temperature range	
during operation	-150 °C to +200 °C
during installation	-65 °C to +180 °C

CABLE CONSTRUCTION		
No. of cores	Nom. cross section mm²	Order no.
1 or 2 twisted or 3 twisted	0.5 to 50	on request

BizLink *SeaLine®* High temperature cables

FEP types, multicore design



APPLICATION >

High temperature cable for connecting fixed and sporadically moving parts inside and outside of marine applications. These FEP sheathed cables have very good fire safety characteristics and resistance to high temperatures, which allows them to be used in an extremely wide range of applications.  
The cables meet the technical requirements of the standard in accordance with IEC 60092-350 and IEC 60092-376

BURNING CHARACTERISTICS >

IEC 60332-1-2

TECHNICAL DATA >

Operating voltage	150 V/250 V
Test voltage	2000 V

MECHANICAL PROPERTIES >

Temperature range	
during operation	-150 °C to +200 °C
during installation	-65 °C to +180 °C
Bending radius	
Fixed installation	>4 × outer Ø min.
Occasionally moved	>8 × outer Ø min.

CABLE CONSTRUCTION		
No. of cores	Nom. cross section mm²	Order no.
2 to 12	0.5 to 4	on request
1 to 4	6 to 10	on request





BizLink SeaLine®

# CUSTOM DESIGN

Customised cables – for space and functionality reasons, it is often necessary to combine a wide variety of different design elements in a cable.

**This is a core competence of BizLink as an experienced manufacturer of special cables.**

**BizLink provides a wide range of hybrid solutions >**

## Hybrid solutions >

For use on cargo ships, ferries, RO/RO vessels and cruise ships. Designed and manufactured to the technical requirements of the following standards:

- IEC 60092 Part 350
- IEC 60092 Part 353
- IEC 60092 Part 360
- IEC 60092 Part 370
- IEC 60092 Part 376
- IEC 60092 Part 379

Fire resistance requirements are met in accordance with customer demands (IEC 60332-1-2 as well as 60332-3-22). Cable design and choice of materials will be done accordingly.

All cables can be made with the option of either SHF 1 (and cross-linked) or SHF 2 (cross-linked, oil resistant or mud resistant) jacket materials.

These components can be integrated in a hybrid cable:

- **POWER CORES** rated for voltage up to 0.6/1 kV
- **CONTROL CORES**  
single, paired, triple or quadruple BUS elements
- **DATA CABLES** up to CAT 7 transmission rates
- **COAXIAL ELEMENTS**
- **TRIAxIAL ELEMENTS**
- **FIBER OPTICS**
- **MEDIA HOSES**
- **SERVED WIRE** braided and/or foil shielding
- **INTERMEDIATE JACKETS**
- **FILLERS** and **EXTRUDED FILLING COMPOUNDS**
- **STRAIN RELIEF ELEMENTS**

If required, these hybrid cables are tested and approved by approval boards.

## Assembled cables & cable systems

All-in solutions  
from a single source

**BizLink provides measurable benefits with  
ready-to-fit cables and system solutions >**

Close cooperation with the customers include not only precise analysis of the cable installation and the operating conditions, but also the choice of suitable components and the optimization of existing solutions. We realize also prototyping and serial production. We invite you to benefit from our long term experience to create the best solution for your application.

We are able to develop and produce

- **Variations of the cables, presented in the catalogue**
- **Customised hybrid cable designs**
- **Cable assemblies**
- **Complete cabling systems**
- **Wiring of complete modules and components**

Among other products, we assemble

- **Round and ribbon cables**
- **Data transmission copper based cables**
- **Fiber optic cables**
- **Coaxial cables**
- **Special cables tailored to customers specifications**



# BizLink Onboard services

Seamless integration, maximum efficiency



## Technical excellence Onboard

The world of shipping is demanding and dynamic. In this environment, professional installation and maintenance is critical to ensure the smooth operation of your ships. At BizLink, we provide world-class onboard installation services tailored to the specific needs of the maritime industry.

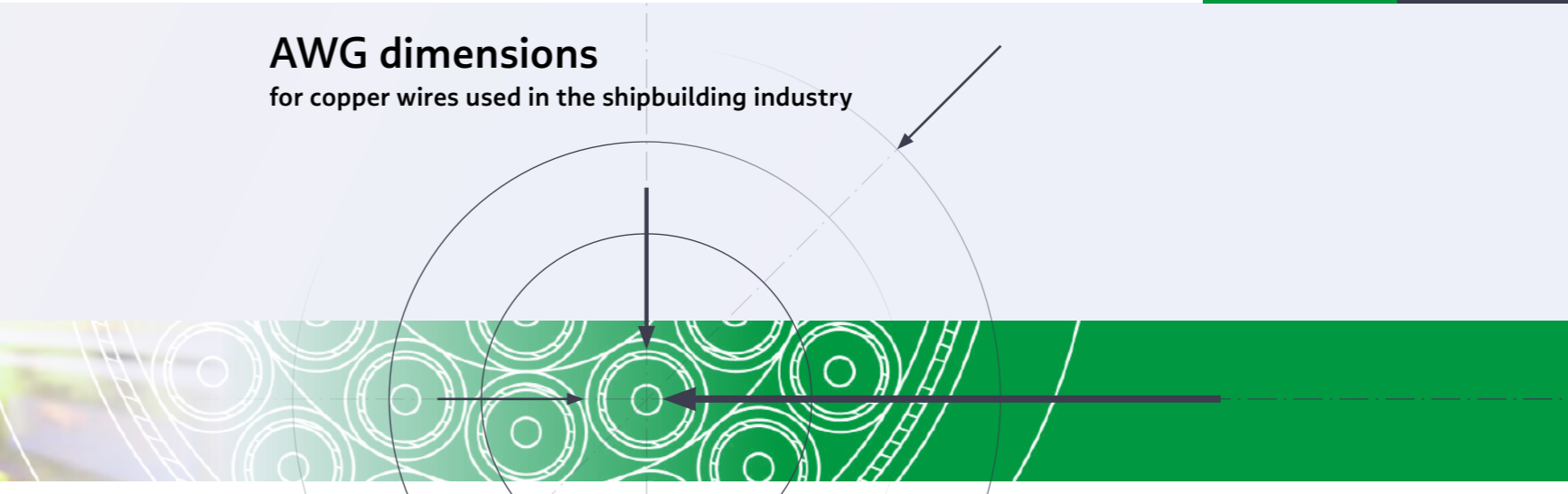
- Our services include:
- Replacement materials required on ships
  - Maintenance and repair work on ships
  - Installation and commissioning of data networks including certification

With the expanded range, BizLink wants to become a complete supplier for all low-voltage requirements on ships.

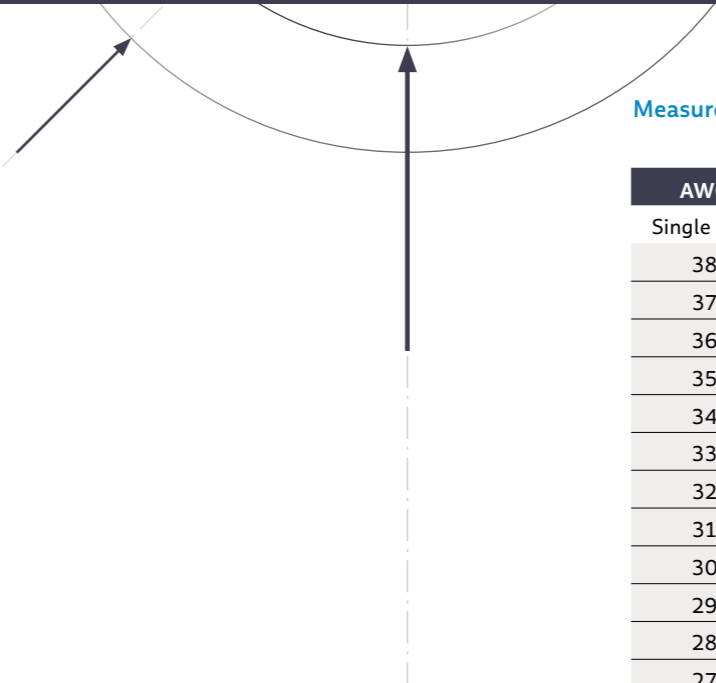


# AWG dimensions

for copper wires used in the shipbuilding industry



The dimensions and cross-sections of conductors used in information and data cables are frequently quoted in AWG (American Wire Gauge).



Measurements Dimensions according to ASTM

AWG	Ø of wire	Ø of wire	cross-section
Single wire	mils	mm	mm²
38	4.0	0.102	0.0082
37	4.5	0.144	0.0163
36	5.0	0.127	0.0127
35	5.6	0.142	0.0158
34	6.3	0.160	0.0201
33	7.1	0.180	0.0254
32	8.0	0.203	0.0324
31	8.9	0.226	0.0401
30	10.0	0.254	0.0507
29	11.3	0.287	0.0647
28	12.6	0.320	0.0804
27	14.2	0.361	0.1024
26	15.9	0.404	0.1282
25	17.9	0.455	0.1626
24	20.1	0.511	0.2051
23	22.6	0.574	0.2588
22	25.3	0.643	0.3247

AWG	Construction	cross-section	
Conductor	no. of wires/AWG	cmils	mm²
26	7 / AWG 34	253	0.128
24	7 / AWG 32	404	0.205
	19 / AWG 36		
22	7 / AWG 30	640	0.324
	19 / AWG 34		

# Colour code

acc. to Standard DIN 47100

# Abbreviation of the core colours

acc. to standard IEC 60757



Specification of the core colours for instrumentation/ control cables

Abbreviation of the core colours in technical specifications

Core colours pursuant to the DIN VDE 0293-308 standard  
Since 2003, the core colours for cable and conductors for current loads of 220 V and above have been specified in this standard.

pair no.	colour*	
1	white/brown	
2	green/yellow	
3	grey/pink	
4	blue/red	
5	black/purple	
6	grey-pink/red-blue	
7	white-green/brown-green	
8	white-yellow/yellow-brown	
9	white-grey/grey-brown	
10	white-pink/pink-brown	
11	white-blue/brown-blue	
12	white-red/brown-red	
13	white-black/brown-black	
14	grey-green/yellow-grey	
15	pink-green/yellow-pink	
16	green-blue/green-red	
17	green-red/yellow-red	
18	green-black/yellow-black	
19	grey-blue/pink-blue	
20	grey-red/pink-red	
21	grey-black/pink-black	
22	blue-black/red-black	
23	white/brown	
24	green/yellow	

\* a twin colour designation such as "white/green" means a two-colour core with white as the base colour and green as the additional colour.

colour	short mark	colour	short mark
german	german	english	english
schwarz	sw	black	BK
braun	bn	brown	BN
rot	rt	red	RD
orange	or	orange	OR
gelb	ge	yellow	YE
grün	gn	green	GN
blau	bl	blue	BU
violett	vi	violet (purple)	VT
grau	gr	grey (slate)	GY
weiß	ws	white	WH
lila	li	pink	PK
gold	-	gold	GD
türkis	tk	turquoise	TQ
silber	-	silver	SR
grün-gelb	gnge	green-and-yellow	GNYE
transparent	tr	transparent	-
natur	nt	nature	-

	former colour code		current colour code	
	with GNYE	without GNYE	with GNYE	without GNYE
2 cores				
3 cores				
4 cores				
5 cores				

## About BizLink Group

# BizLink

Find out more > [www.bizlinktech.com](http://www.bizlinktech.com)

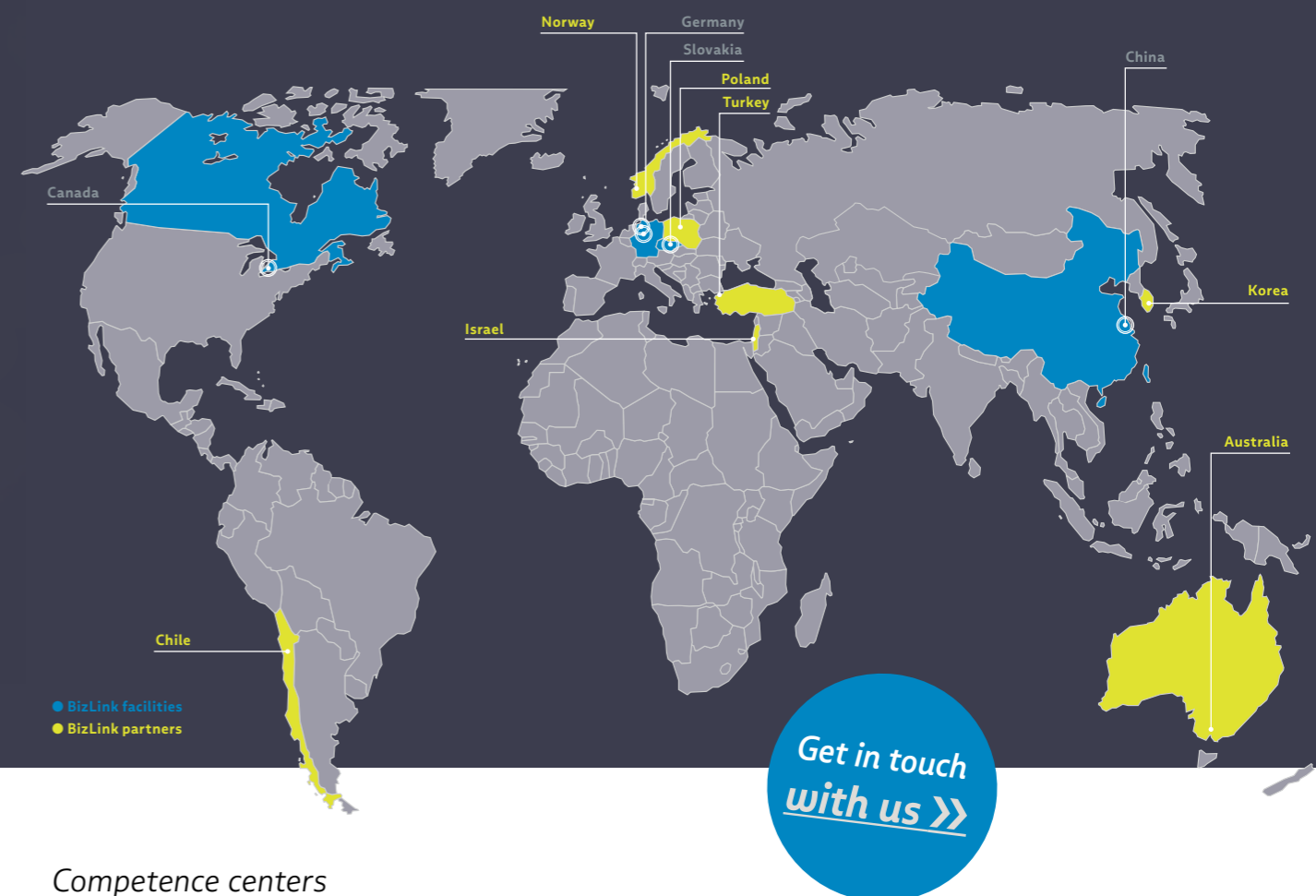
**BizLink, founded in 1996, is headquartered in Silicon Valley, USA. Our mission is to make interconnection easier and to become the leading global interconnect solution supplier.**

We support industries that are environmentally conscious and improve quality of life through providing essential components, wire harnesses, and cables to a wide variety of industries such as IT Infrastructure, Client Peripherals, Optical Fiber Communications, Telecom and Networking, Electrical Appliances, Healthcare, Factory Automation, Machinery and Sensors, Motor Vehicle, Rolling Stock, Marine, Industrial, and Solar.

In addition, with flexible production resources and global R&D teams in America, Europe, and Asia, BizLink always provides reliable interconnect solutions in close proximity to markets. BizLink also specializes in providing one-stop EMS and NPI services based on customer's requests.

At BizLink, we strive to keep collaborating closely with customers to turn their innovative ideas into reality.

## Sales network Marine – worldwide



### Competence centers

#### Germany

**BizLink Special Cables Germany GmbH**  
Eschstrasse 1  
26169 Friesoythe, Germany  
T +49 4491 291-5010

#### BizLink elocab GmbH

Obere Lerch 34  
91166 Georgensgmünd, Germany  
T +49 9172 6980-0

#### Slovakia

BizLink Industry Slovakia Spol. s.r.o.

#### Canada

BizLink elocab Ltd.

#### China

BizLink Special Cables (Changzhou) Co., Ltd.

#### BizLink partner

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