FieldLink® Cable solutions for Automation & Drives

***Field**Link®*
Bus cables & Industrial Ethernet cables

Field**Link® **MC
for Motion Control

Factory Automation & Machinery

BizLink

FieldLink®
Bus cables & Industrial Ethernet cables

The FieldLink product family is designed to provide optimal solutions for all commonly used bus systems, making it a versatile choice for a wide range of industrial applications. Whether your needs involve AS-Interface, PROFIBUS, or PROFINET/Industrial Ethernet, FieldLink offers reliable and efficient connectivity to ensure seamless communication within your automation infrastructure.

As active members of various industry associations and user organizations, we are consistently engaged in shaping the future of automation technology. By participating in these associations, we stay at the forefront of emerging trends and technological developments, enabling us to offer solutions that are not only compliant with current industry standards but also aligned with future requirements.

In modern automation, the trend is moving towards increasingly complex bus systems that must handle all data transmission, from the supervisory level to the actuator/sensor level on machines, using more advanced cabling solutions.

At the same time, these new systems must meet or surpass the reliability and security of traditional industrial cabling.

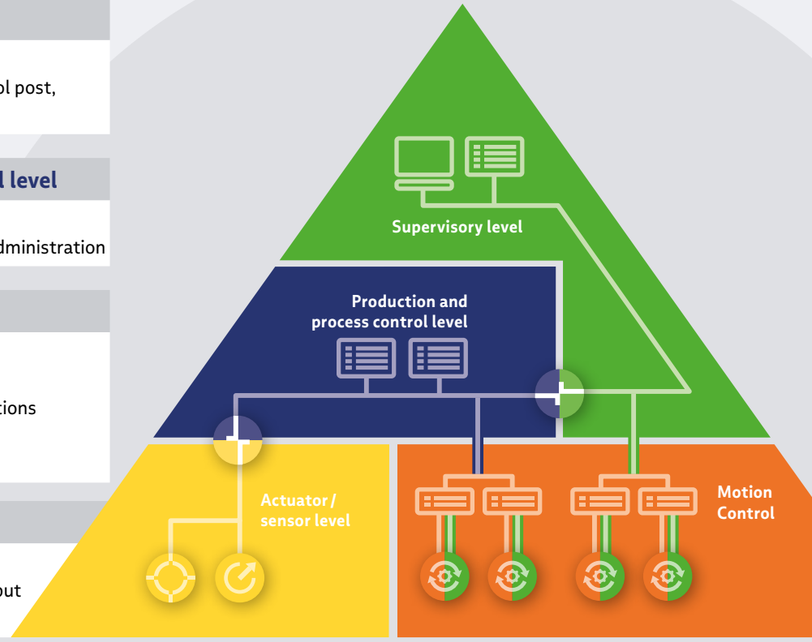
Fields of application

Supervisory level
- IT communication – WAN
- Task › visualisation, archival, e.g. control post, interference indicating station

Production and process control level
- Data communication – LAN
- Task › system control, e.g. reception, administration

Actuator / sensor level
- Field communication (process signals)
- Task (operation level): processing, e.g. regulation/control of realtime functions
- Task (drive control): input and output, e.g. measure, regulate, move, switch

Motion control
- Field communication and power supply
- Task › drive control with input and output and additional power supply



Green PROFINET

Our innovative PROFINET Green cables offer an eco-friendly, cutting-edge solution for industrial Ethernet applications.

These cables, crafted from plant-based materials instead of fossil fuels, set a new standard in sustainability.

The innovative PVC and PUR cables not only deliver exceptional performance and durability but also actively contribute to reducing the CO_2 footprint. Rely on connections that not only excel in reliability but also help preserve the environment.

Innovative jacket material made on plant basis

Green PROFINET	***Green PROFINET***	
Green PROFINET cable for flexible installation acc. to PROFINET type B	Green PROFINET cable for trailing applications acc. to PROFINET type C	Application
Stranded tinned copper wire (22 AWG) Ø 0.75 mm (0.030 in) Insulation of PE Ø 1.5 mm (0.059 in)	Stranded tinned copper wire (22 AWG) Ø 0.75 mm (0.030 in) Insulation of PE Ø 1.5 mm (0.059 in)	Conductor
Filler as central element 4 wires WH-YE-BU-OG Plastic tape overlapped Inner jacket: PVC	Filler as central element 4 wires WH-YE-BU-OG Plastic tape overlapped Inner jacket: FRNC	Core
Alulaminate foil overlapped applied longitudinally Shield braiding of tinned copper wires	Alulaminate foil overlapped Shield braiding of tinned copper wires	Shield
PVC green Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	PUR green Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	Jacket
Jacket material acc. to DIN EN 50290-2-22 (VDE 0819) Oil resistant acc. to IEC 60811-2-1 (4 hours / 70 °C) Flame retardant acc. to UL 2556 Flame retardant acc. to IEC 60332-1-2 RoHS compliant	Jacket material acc. F45052-F5100 (similar to DIN VDE 0282) Oil resistant acc. to DIN EN 60811-404 (7x24h / 90 °C) Flame retardant acc. to IEC 60332-1-2 Flame retardant acc. to UL 2556 Smoke-density acc. to IEC 61034 Sunlight resistant acc. to UL 2556 Halogen free RoHS compliant	Characteristics
2YY(ST)CY 2X2X0.75/1.5 LI VZN GN	2YH(ST)C11Y 2X2X0.75/1.5-100 LI VZN GN	Type designation
L45467-J17-B395	**L45467-J17-B518**	Order no.

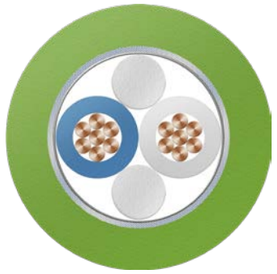
PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

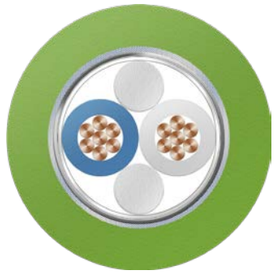
SPE – Single Pair Ethernet

Our Single Pair Ethernet (SPE) cables are designed to meet the demands of modern industrial communication.

Offering performance up to 1 Gbit/s at 600 MHz, these cables ensure reliable data transmission over distances up to 1000 meters. Built to withstand harsh environments, the SPE cables are oil-resistant, suitable for drag chains and torsional applications, and support Power over Data Line (PoDL).

Available in various jacket materials, including PUR, FRNC, PVC, and FEP, these cables provide versatile, high-performance solutions for any industrial setting. Trust BizLink's SPE cables to deliver the connectivity your operations require.





Single Pair Ethernet cable	***Single Pair Ethernet cable***	***Single Pair Ethernet cable***	
SPE cable cable for flexible installations 1x2x22AWG	SPE PROFINET cable type B 1x2x22AWG	SPE hybrid cable for flexible installation 1x2x24AWG + 2x18AWG	Application
Stranded bare copper wire Ø 0.76 mm (0.030 in) Insulation of foamed PE with skin Ø 1.8 mm (0.071 in)	Stranded bare copper wire (22 AWG) Ø 0.76 mm (0.030 in) Insulation of foamed PE with skin Ø 1.6 mm (0.063 in)	Stranded bare copper wire (18 AWG) Ø 1.2 mm (0.047 in) Insulation of PP Ø 1.6 mm (0.063 in)	Conductor
2 wires twisted to a pair + fillers Alulaminate foil overlapped, applied longitudinally	2 wires white/blue twisted to a pair with fillers in gaps Plastic tape overlapped Alulaminate foil overlapped, applied longitudinally	1 pair 02YSC 2X0.6/1.43-100 LI PIMF white/blue 2 wires LI9Y 0.86/1.6 red, black + fillers Plastic tape overlapped Alulaminate foil overlapped	Core
Shield braiding of tinned copper wires Ø 4.2 mm (0.165 in)	Shield braiding of tinned copper wires Ø 3.9 mm (0.154 in)	Shield braiding of tinned copper wires	Shield
PUR green Ø 5.8 ±0.3 mm (0.228 ±0.012 in)	PUR green Ø 5.8 ±0.3 mm (0.228 ±0.012 in)	PUR green Ø 6.9 ±0.3 mm (0.272 ±0.012 in)	Jacket
Flame retardant acc. to IEC 60332-1-2 Oil resistant acc. to DIN EN 60811-404 (7x24 h / 90 °C) UL-Style 20233 (80 °C / 300V) Halogen free UV-resistant RoHS compliant	Jacket material acc. to F45052-F5100 Flame retardant acc. to IEC 60332-1-2 Oil resistant acc. to DIN EN 60811-404 (7x24 h / 90 °C) Flame retardant acc. to UL 1581 UL-Style 20233 (80 °C/300 V) RoHS compliant Halogen free UV-resistant	Flame retardant acc. to UL 2556 Sec. 9.3 (FT1), CSA C22.2 No.2556 and Sec. 9.4 (old UL 1581, Sec. 1080) VW-1 UL-Style 20233 (80 °C / 300 V) RoHS compliant Halogen and Silicone free	Characteristics
02YS(ST)C11Y 1X2X0.76/1.8-100 LI GN	02YS(ST)C11Y 1X2X0.76/1.6-100 LI GN	02YSC 1X2X0.6/1.43-100 LI PIMF LI9Y (ST)C11Y 2X1X0.86 GN	Type designation
L45467-J117-C18	**L45467-J117-C68**	**L45467-J117-W8**	Order no.

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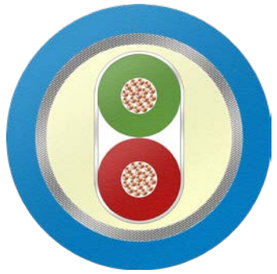
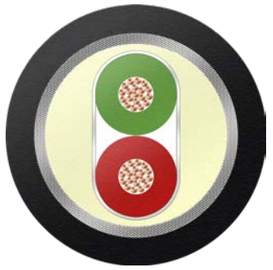
Ethernet-APL

Our new Ethernet-APL cable offers a comprehensive solution tailored for the evolving demands of process automation.

This cable supports smooth integration with Ethernet-APL while maintaining compatibility with existing PROFIBUS PA systems, providing a seamless transition for industrial setups.

Available in both trunk and spur versions, these cables are built to endure tough industrial conditions, being oil- and UV-resistant, which ensures long-lasting performance even in hazardous environments. With these cables, we deliver reliable and adaptable communication solutions that meet the rigorous needs of modern process automation.





APL	***APL***	
Ethernet-APL cable according to the PROFIBUS PA, Single Pair Ethernet and APL catergory 4 standard, available as trunk and spur version	Ethernet-APL cable according to the PROFIBUS PA, Single Pair Ethernet and APL catergory 4 standard, available as trunk and spur version	Application
Stranded bare copper wire (18 AWG) Ø 1.21 mm (0.048 in) Insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Stranded bare copper wire (18 AWG) Ø 1.21 mm (0.048 in) Insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Conductor
2 wires, RD and GN twisted to a pair Plastic tape overlapped Inner jacket PVC Ø 5.4 mm (0.213 in)	2 wires, RD and GN twisted to a pair Plastic tape overlapped Inner jacket PVC Ø 5.4 mm (0.213 in)	Core
Alulaminate foil overlapped, applied longitudinally Shield braiding of tinned copper wires	Alulaminate foil overlapped, applied longitudinally Shield braiding of tinned copper wires	Shield
PVC blue Ø 8.0 ±0.2 mm (0.315 ±0.008 in)	PVC black Ø 8.0 ±0.2 mm (0.315 ±0.008 in)	Jacket
Oil resistant acc. to DIN EN 50290-2-22 (VDE 0819), UL-Style 2570 (80 °C / 600 V) IEC 60079-14 RoHS compliant Sunlight resistant acc. to UL 2556	Oil resistant acc. to DIN EN 50290-2-22 (VDE 0819), UL-Style 2570 (80°C / 600V) RoHS compliant Sunlight resistant acc. to UL 2556 Sec. 4.2.8.5 (720 h)	Characteristics
02YSY(ST)CY 1X2X1.2/2.55-100 LI BL	02YSY(ST)CY 1X2X1.2/2.55-100 LI SW	Type designation
L45467-J20-C375	**L45467-J20-C385**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

Industrial Ethernet / PROFINET

Cable characteristics:

- Flame retardant
- Weld splatter resistant
- Sunlight resistant
- Oil resistant
- Cold resistant
- Chemical resistant
- Highly flexible
- For permanent installation
- For trailing applications
- Halogen free
- Silicon free
- Compliant acc. to RoHS

BizLink Special Cables Germany is a member of PROFIBUS International.

www.profinet.com
and of EtherCAT Technology Group
www.ethercat.org

	Industrial Ethernet Cat 5e ES	*Industrial Ethernet Cat 5e ES*	*Industrial Ethernet Cat 5e ES*
Application	PROFINET cable for permanent installation (easy to strip), 2x2x22AWG1, UL listed: CMG and PLTC and ITC	PROFINET cable for permanent installation (easy to strip, FRNC), 2x2x22AWG1, UL listed: CMG	PROFINET cable for permanent installation (easy to strip) with additional rodent protection, 2x2x22AWG1
Conductor	Bare copper wire Ø 0.64 mm (0.025 in), insulation of PE Ø 1.5 mm (0.059 in)	Bare copper wire Ø 0.65 mm (0.026 in), insulation of PE Ø 1.5 mm (0.059 in)	Bare copper wire Ø 0.65 mm (0.026 in), insulation of PE Ø 1.5 mm (0.059 in)
Core	Filler as central element, 4 wires twisted to a quad Inner jacket: PVC	Filler as central element, 4 wires twisted to a quad Inner jacket: FRNC	Filler as central element, 4 wires twisted to a quad Inner jacket: PVC
Shield	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in) Armouring: 2 layers of galvanised steel tape, intercalated tapes
Jacket	PVC green Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	FRNC green Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	PE black Ø 9.3 ±0.5 mm (0.366 ±0.020 in)
Characteristics	Flame retardant acc. to IEC 60332-1-2 and UL 1685 (CSA FT 4), limited oil resistant, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 12 Page 1, UL-File E116441 Vol. 1 Sec. 6 Page 8, UL-File E352715 Vol. 1 Sec. 1 Page 1 verified Cat 5e, UL-File E306668 Vol. 1 Sec. 3 Page 1, UL-Style 21694 (600 V)	Flame retardant acc. to IEC 60332-3 Cat A/F, halogen free acc. to IEC 60754, sunlight resistant, UL-File E119100 Vol. 1 Sec. 11 Page 1, UL-Style 21279 (600 V)	Rodent protection, sunlight resistant, crush resistant, for direct burial, EMC resistant
Type designation	2YY(ST)CY 2x2x0.64/1.5-100 GN	2YH(ST)CH 2x2x0.64/1.5-100 GN FRNC KF25	2YY(ST)CYB2Y 2x2x0.64/1.5-100 (2B0.1VZK) BK
Order no.	**L45467-J16-B35**	**L45467-J16-B136**	**L45467-J16-B56**

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	Industrial Ethernet Cat 5e ES	*Industrial Ethernet Cat 5e*	*Industrial Ethernet Cat 5e ES*	
Application	PROFINET cable for flexible installation (easy to strip), 2x2x22AWG7, UL listed: CMG and PLTC	PROFINET Type R cable for robotic applications 2x2x22AWG19, UL recognized: AWM	PROFINET cable for flexible installation with special sunlight resistance (easy to strip), 2x2x22AWG7, UL listed: CMG and PLTC	Application
Conductor	Stranded tinned copper wire 7x0.25 mm (0.010 in), Ø 0.75 mm (0.030 in), insulation of PE Ø 1.5 mm (0.059 in)	Stranded tinned copper wire 19 × 0.15 mm (0.006 in), Ø 0.74 mm (0.029 in), insulation of PP Ø 1.6 mm (0.063 in)	Stranded tinned copper wire 7x0.25 mm (0.010 in), Ø 0.75 mm (0.030 in), insulation of PE Ø 1.56 ±0.03 mm (0.061 ±0.001 in)	Conductor
Core	Filler as central element, 4 wires twisted to a quad Inner jacket: PVC	Filler as central element, 4 wires twisted to a quad	Filler as central element, 4 wires twisted to a quad Inner jacket: PVC	Core
Shield	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Shield
Jacket	PVC green Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	TPU green Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	PVC black Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	Jacket
Characteristics	Flame retardant acc. to IEC 60332-1-2 and UL 1685 (CSA FT 4), oil resistant acc. to IEC 60811-2-1 (4 hrs, 70 °C, 158 °F), sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 12 Page 1, UL-File E116441 Vol. 1 Sec. 6 Page 8, UL-Style 21694 (600 V)	Flame retardant acc. to IEC 60332-1-2, UL-Style 21329 Trailing cable suitable for the following requirements › • 5 million bending cycles Torsional strength • 5 million cycles at 180° on 1 meter #Reversed bending strength (tic-toc test) • 1 million bending cycles	Flame retardant acc. to UL 1685 (CSA FT 4), sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 12 Page 1, UL-File E116441 Vol. 1 Sec. 6 Page 8, UL-Style 21695 (600 V)	Characteristics
Type designation	2YY(ST)CY 2x2x0.75/1.5-100 LI GN VZN	9Y(ST)C11Y 1X4X0.75/1.6-100 LI VZN GN	2YY(ST)CY 2x2x0.75/1.5-100 LI VZN	Type designation
Order no.	**L45467-J17-B15**	**L45467-J17-K18**	**L45467-J17-B115**	Order no.

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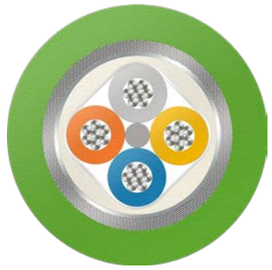

	Industrial Ethernet Cat 5e	*Industrial Ethernet Cat 5e ES*	*Industrial Ethernet Cat 5e*
Application	PROFINET hybrid cable for flexible installation, (FRNC) 2x2x22AWG 7 + 4x1.5 mm² (0.059 square in), UL recognised: AWM	PROFINET trailing cable (easy to strip, FRNC), 2x2x22AWG7, UL listed: CMX	PROFINET flexible cable for torsional stress applications (FRNC), 2x2x22AWG19, UL recognised: AWM
Conductor	Wire LIH 1.5/2.4 Stranded bare copper wire 84x0.15 mm (0.006 in), Ø 1.55 mm (0.061 in), insulation of FRNC Ø 2.4 mm (0.094 in) Wire 02YS 1x0.75/1.5 LI Stranded bare copper wire 7x0.25 mm (0.010 in), Ø 0.75 mm (0.030 in), insulation of foamed PE with skin Ø 1.5 mm (0.059 in)	Stranded tinned wire 7x0.25 mm (0.010 in), Ø 0.75 mm (0.030 in), insulation of PE Ø 1.5 mm (0.059 in)	Stranded tinned copper wire 19x0.15 mm (0.006 in), Ø 0.75 mm (0.030 in), insulation of foamed PE with skin Ø 1.5 mm (0.059 in)
Core	2 wires twisted to a pair, filler as central element, 2 screened pairs, 4 wires	Filler as central element, 4 wires twisted to a quad, inner jacket: FRNC	Filler as central element, 4 wires twisted to a quad
Shield	Datawire: Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.1 mm (0.004 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)
Jacket	FRNC green Ø 10.3 ±0.3 mm (0.406 ±0.012 in)	TPU green Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	TPU green Ø 6.5 ±0.2 mm (0.256 ±0.008 in)
Characteristics	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL Style 21282	Flame retardant acc. to IEC 60332-1-2 and UL 2556 Sec. 9.4 (VW 1), halogen free acc. to IEC 60754, oil resistant acc. to DIN EN 60811-404 (7x24hrs / 90 °C, 194 °F), sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 13 Page 1, UL-File E352715 Vol. 1 Sec. 1 Page 3 verified Cat 5e	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, UL-Style 21161
Type designation	02YS 2x2x0.75/1.5-100 LI(STC) FRNC LIH-Z H 4x1x1.5 GN	2YH(ST)C11Y 2x2x0.75/1.5-100 LI GN VZN FRNC	02YSC11Y 1x4x0.75/1.5-100 LI VZN FRNC GN
Order no.	**L45467-J116-C6**	**L45467-J17-B18**	**L45467-J17-B78**

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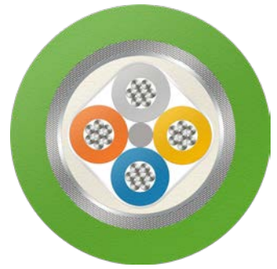

Industrial Ethernet Cat 5e	*Industrial Ethernet Cat 5e ES*	*Industrial Ethernet Cat 5e ES*	
PROFINET cable for flexible installation with insulation preservation in case of fire (FE90, FRNC), 2x2x22AWG7, UL recognised: AWM	PROFINET flexible cable for marine applications (easy to strip, FRNC), 2x2x22 AWG7, UL listed: CMG and PLTC	PROFINET cable for flexible installation in offshore applications with higher oil resistance acc. to NEK 606 (easy to strip, FRNC), 2x2x22AWG7	Application
Stranded tinned copper wire 7x0.25 mm (0.010 in), Ø 0.75 mm (0.030 in), insulation of PE Ø 1.56 mm (0.061 in), fire resistant tape	Stranded tinned copper wire 7x0.25 (0.010 in), Ø 0.75 mm (0.030 in), insulation of PP Ø 1.5 mm	Stranded tinned copper wire 7x0.25 (0.010 in), Ø 0.75 mm (0.030 in), insulation of PE Ø 1.5 mm	Conductor
4 wires twisted to a quad	Filler as central element, 4 wires twisted to a quad, plastic tape, overlapped Inner jacket: FRNC	Filler as central element, 4 wires twisted to a quad, plastic tape, overlapped Inner jacket: FRNC	Core
Alulaminate foil overlapped, shield braiding of tinned copper wires, fire resistant tape	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires, coverage about 85 %	Shield
FRNC black Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	FRNC green Ø 6.5 ±0.4 mm (0.256 ±0.016 in)	FRNC green Ø 6.5 ±0.2 mm (0.256 ±0.008 in)	Jacket
Flame retardant acc. to IEC 60331-23 (90 min.), halogen free acc. to IEC 60754, UL-Style 21281 (300 V)	Flame retardant acc. to IEC 60332-3-22 Cat A/F, halogen free, sunlight-resistant, limited oil resistant, UL-File E119100, Vol. 1, Sec. 11, Page 1, UL-File E352715 Vol. 1 Sec. 1 Page 1 verified Cat 5e, UL-File E116441, Vol. 1, Sec. 6, Page 4 **Maritime and offshore approvals:** Germanischer Lloyd, Lloyds Register of Shipping, ABS Europe, Bureau Veritas, Det Norske Veritas	Flame retardant acc. to IEC 60332-3-24, halogen free acc. to IEC 60754, mud resistant acc. to NEK 606, sunlight resistant	Characteristics
2Y(FE)(ST)C(FE)H 2x2x0.75/1.9-100 LI	L-9YH(ST)CH 2x2x0.34/1.5-100 GN VZN FRNC	2YH(ST)CH 2x2x0.75/1.5-100 LI VZN GN	Type designation
L45467-J17-B46	**L45467-J16-B26**	**L45467-J16-B216**	Order no.

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	Industrial Ethernet similar Cat 5 (FRNC)	***Industrial Ethernet similar Cat 5 (FRNC)***	***Industrial Ethernet Cat 5e***
Application	Trailing patch cable (FRNC), 2x2x26AWG19	Trailing patch cable (FRNC), 4x2x26AWG19, UL recognised: AWM	PROFINET Patch cable for marine applications (FRNC), 4x2x24AWG7
Conductor	Stranded bare copper wire 19x0.1 mm (0.004 in), Ø 0.5 mm (0.020 in), insulation of PP Ø 1.0 mm (0.039 in)	Stranded bare copper wire 19x0.1 mm (0.004 in), Ø 0.5 mm (0.020 in), insulation of PP Ø 1.0 mm (0.039 in)	Stranded bare copper wire 7x0.2 mm (0.008 in), Ø 0.6 mm (0.024 in), insulation of PP Ø 1.2 mm (0.047 in) 2 wires twisted to a pair
Core	Strain member out of kevlar, 4 wires twisted to a quad	2 wires twisted to a pair, 4 pairs twisted	4 pairs twisted, plastic tape overlapped
Shield	Shield braiding of tinned copper wires Ø 0.1 mm (0.004 in), plastic tape conductive	Shield braiding of tinned copper wires Ø 0.1 mm (0.004 in), plastic tape conductive	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)
Jacket	TPU green Ø 4.8 −0.3 mm (0.189 −0.012 in)	TPU green Ø 6.8 −0.3 mm (0.268 −0.012 in)	FRNC green Ø 7.8 ±0.3 mm (0.307 ±0.012 in)
Characteristics	Halogen free acc. to IEC 60754, oil resistant acc. to IEC 60811-2-1, sunlight resistant	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, oil resistant acc. to UL 758 Sec. 15 (60 °C, 140 °F), sunlight resistant, UL-Style 20963	Flame retardant acc. to IEC 60332-3-22 Cat A, halogen free acc. to IEC 60754-2, smoke density acc. to IEC 61034, sunlight-resistant **Maritime and offshore approvals:** Germanischer Lloyd
Type designation	LI9YC(ST)11Y 4x1x0.15 GN	LI9YC(ST)11Y 4x2x0.15 GN	9Y(ST)CH 4x2x0.6/1.2-100 LI GN FRNC
Order no.	**L45581-B41-K8**	**L45581-B42-K8**	**L45467-J816-B6**

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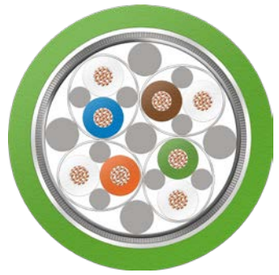
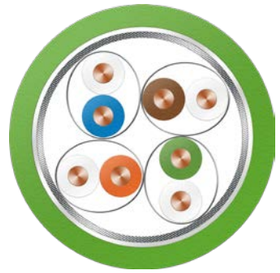


	Industrial Ethernet similar Cat 5 (FRNC)	***Industrial Ethernet Cat 6 ES***	***Industrial Ethernet Cat 6 ES***	
Application	Flexible patch cable for trailing and torsional stress applications (FRNC), 4x2x26AWG19, UL recognised: AWM	Cable for fixed installation (easy to strip), 4x2x24AWG1, UL listed: CMG	PROFINET trailing cable for flexible installation (easy to strip), 4x2x24AWG7, UL listed: CMG	Application
Conductor	Stranded bare copper wire 19x0.1 mm (0.004 in), Ø 0.5 mm (0.020 in), insulation of PP Ø 0.95 mm (0.037 in)	Bare copper wire Ø 0.51 mm (0.020 in), insulation of PE Ø 1.0 mm (0.039 in), 2 wires twisted to a pair	Stranded bare copper wires 7x0.2 mm (0.008 in) Ø 0.6 mm (0.024 in), insulation of foamed PE with skin Ø 1.1 mm (0.043 in) 2 strands twisted to a pair	Conductor
Core	2 wires twisted to a pair, 4 pairs stranded	4 pairs in separating element, plastic tape overlapped Inner jacket: FRNC	4 pairs in separating element, plastic tape overlapped Inner jacket: FRNC	Core
Shield	Alulaminate foil overlapped, wire covering	Alulaminate foil overlapped, applied longitudinally, shield braiding of tinned copper wires Ø 0.1 mm (0.004 in)	Alulaminate foil overlapped, applied longitudinally, shield braiding of tinned copper wires Ø 0.1 mm (0.004 in)	Shield
Jacket	TPU green Ø 7.5 ±0.2 mm (0.295 ±0.008 in)	PVC green Ø 8.0 ±0.2 mm (0.315 ±0.008 in)	PVC green Ø 8.0 ±0.2 mm (0.315 ±0.008 in)	Jacket
Characteristics	Halogen free acc. to IEC 60754, oil resistant, UL-Style 20963	Flame retardant acc. to UL 1685 (CSA FT 4), sunlight-resistant acc. to UL 2556 Sec. 4.2.8.5, limited oil resistant acc. to DIN EN 50290-2-22, UL-File E119100 Vol. 1 Sec. 33 Page 1	Flame retardant acc. to UL 1685 (CSA FT 4) and IEC 60332-3-24 (Cat C), sunlight resistant, limited oil resistant, UL-File E119100 Vol. 1 Sec. 33 Page 1	Characteristics
Type designation	LI9Y(ST)D11Y 4x2x0.15 GN	2YH(ST)CY 4x2x0.5/1.0-100 GN	02YSH(ST)CY 4x2x0.6/1.1-100 LI GN	Type designation
Order no.	**L45581-B42-K68**	**L45467-J15-B15**	**L45467-J415-C5**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

	Industrial Ethernet Cat 6 ES	*Industrial Ethernet Cat 6a*	*Industrial Ethernet Cat 6a ES*
Application	Trailing patch cable (easy to strip, FRNC), 4x2x26AWG19, UL listed: CMX	PROFINET cable for flexible installation, 4x2x23AWG7, UL recognised: AWM	Trailing patch cable (easy to strip, FRNC), 4x2x25AWG19, UL recognised: AW
Conductor	Stranded tinned copper wire Ø 0.55 mm (0.022 in), insulation of PP Ø 0.98 mm (0.039 in) 2 wires twisted to a pair	Stranded tinned copper wire Ø 0.72 mm (0.028 in), insulation of foamed PE with skin Ø 1.58 mm (0.062 in)	Stranded tinned copper wire Ø 0.55 mm (0.022 in), insulation of PP Ø 0.98 mm (0.039 in) 2 wires twisted to a pair
Core	4 pairs twisted, filler as central element Inner jacket: FRNC	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	4 pairs in separating element, plastic tape overlapped Inner jacket: FRNC
Shield	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.1 mm (0.004 in)	Shield braiding of tinned copper wires, coverage 85 %	Alulaminate foil overlapped, shield braiding of tinned copper wires, plastic tape overlapped
Jacket	TPU green Ø 7.8 ±0.2 mm (0.307 ±0.008 in)	PVC green Ø 8.7 ±0.2 mm (0.343 ±0.008 in)	TPU green Ø 8.8 ±0.2 mm (0.346 ±0.008 in)
Characteristics	Flame retardant acc. to IEC 60332-1-2, UL 2556 Sec 9.4 (VW1) and UL 1581, Sec. 1060 (CSA FT-1), halogen free acc. to IEC 60754-1, oil resistant acc. to CSA-C22.2 (4x24 hrs / 100 °C, 212 °F), UL-File E119100 Vol. 1 Sec. 17 Page 1a	Flame retardant acc. to IEC 60332-1-2, sunlight resistant, limited oil resistant, UL-Style 2461	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754-1, oil resistant acc. to DIN EN 60811-404 (7x24 hrs / 90 °C, 194 °F), UL-Style 21198
Type designation	9YH(ST)C11Y 4x2x0.55/0.98-100 LI GN	02YSCY 4x2x0.72/1.58-100 LI VZN PIMF GN	9YH(ST)C11Y 4x2x0.55/0.98-100 LI GN
Order no.	**L45467-J415-C48**	**L45467-J416-C5**	**L45467-J415-K28**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer



	Industrial Ethernet Cat 6a ES	*Industrial Ethernet Cat 6a ES*	*Industrial Ethernet Cat 7*	
Application	PROFINET patch cable for trailing and torsional stress applications (easy to strip, FRNC), 4x2x24AWG7, UL recognised: AWM	PROFINET cable for flexible installation in offshore applications with higher oil res. acc. to NEK 606 (easy to strip, FRNC), 4x2x24AWG7	Standard cable for permanent installation in harsh environments (FRNC), 4x2x23AWG1, UL recognised: AWM	Application
Conductor	Stranded bare copper wire Ø 0.6 mm (0.024 in), insulation of PE Ø 1.05 mm (0.041 in), 2 wires twisted to a pair	Stranded bare copper wires 7x0.2 mm (0.010 in), insulation of Polyethylene (PE) Ø 1.05 mm (0.041 in), 2 strands twisted to a pair	Bare copper wire Ø 0.6 mm (0.024 in), insulation of foamed PE with skin Ø 1.4 mm (0.055 in)	Conductor
Core	4 pairs in separating element, plastic tape overlapped Inner jacket: FRNC	4 pairs in separating element, plastic tape, overlapped Inner jacket: FRNC	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	Core
Shield	Alulaminate foil overlapped, shield braiding of tinned copper wires, plastic tape overlapped	Alulaminate foil overlapped, applied longitudinally, shield braiding of tinned copper wires Ø 0.1 mm (0.004 in)	Shield braiding of tinned copper wires Ø 0.1 mm (0.004 in)	Shield
Jacket	TPU green Ø 8.9 ±0.2 mm (0.350 ±0.008 in)	FRNC green Ø 8.0 ±0.2 mm (0.315 ±0.008 in)	TPU green Ø 8.2 ±0.2 mm (0.323 ±0.008 in)	Jacket
Characteristics	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754-1, oil resistant acc. to DIN EN 60811-404 (7x24 hrs / 90 °C, 194 °F), UL-Style 21198	Flame retardant acc. to IEC 60332-3-24 (Cat C), halogen free acc. to IEC 60754, mud resistant acc. to NEK 606, sunlight resistant	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754-1, oil resistant acc. to IEC 60811-2-1 (4 hrs / 70 °C, 158 °F), UL-Style 20963	Characteristics
Type designation	2YH(ST)C11Y 4x2x0.6/1.05-100 LI GN	2YH(ST)CH 4x2x0.6/1.05-100 LI GN	02YSC11Y 4x2x0.6/1.4-100 FRNC GN PIMF	Type designation
Order no.	**L45467-J416-B28**	**L45467-J416-B16**	**L45467-J816-C38**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

	Industrial Ethernet Cat 7	***Industrial Ethernet Cat 7***	***Industrial Ethernet Cat 7***
Application	Cable for flexible installation in marine applications (FRNC), 4x2x22AWG7	Cable for flexible installation in marine applications with higher oil resistance (FRNC), 4x2x22AWG7	Cable for flexible installation in offshore applications with higher oil resistance acc. to NEK 606 (FRNC), 4x2x22AWG7
Conductor	Stranded bare copper wire 7x0.25mm (0.010 in), Ø 0.76 mm (0.03 in), insulation of foamed PE with skin Ø 1.8 mm (0.071 in)	Stranded bare copper wire 7x0.25mm (0.010 in), Ø 0.76 mm (0.03 in), insulation of foamed PE with skin Ø 1.8 mm (0.071 in)	Stranded bare copper wire 7x0.25mm (0.010 in), Ø 0.76 mm (0.03 in), insulation of foamed PE with skin Ø 1.8 mm (0.071 in)
Core	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted
Shield	Shield braiding of tinned copper wires, coverage 65 %	Shield braiding of tinned copper wires, coverage 65 %	Shield braiding of tinned copper wires, coverage 65 %
Jacket	FRNC black Ø 10.0 ±0.2 mm (0.394 ±0.008 in)	FRNC black Ø 10.0 ±0.2 mm (0.394 ±0.008 in)	FRNC black Ø 10.0 ±0.2 mm (0.394 ±0.008 in)
Characteristics	Flame retardant acc. to IEC 60332-1-2 and 60332-3-22 (Cat A), halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to EN 60811-2-1 (4 hrs / 70 °C, 158 °F), sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Flame retardant acc. to IEC 60332-1-2 and 60332-3-22 (Cat A), halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to EN 60811-2-1 (24 hrs / 100 °C, 212 °F), sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Flame retardant acc. to IEC 60332-1-2 and 60332-3-22 (Cat A), halogen free acc. to IEC 60754, oil resistant acc. to NEK 606, sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas
Type designation	02YSCH 4x2x0.76/1.8-100 LI PIMF	02YSCHX 4x2x0.76/1.8-100 LI PIMF	02YSCH 4x2x0.76/1.8-100 LI PIMF
Order no.	**L45467-J417-C6**	**L45467-J417-C16**	**L45467-J417-C26**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

	Industrial Ethernet Cat 7	***Industrial Ethernet Cat7***	***Industrial Ethernet Cat 7***	
Application	Cable for permanent installation in marine applications (FRNC), 4x2x23AWG1	Cable for permanent installation in marine applications with higher oil resistance (FRNC), 4x2x23AWG1	Cable for permanent installation in offshore applications with higher oil resistance acc. to NEK 606 (FRNC), 4x2x23AWG1	Application
Conductor	Bare copper wire, Ø 0.6 mm (0.024 in), insulation of foamed PE with skin Ø 1.43 mm (0.056 in)	Bare copper wire, Ø 0.6 mm (0.024 in), insulation of foamed PE with skin Ø 1.43 mm (0.056 in)	Bare copper wire, Ø 0.6 mm (0.024 in), insulation of foamed PE with skin Ø 1.43 mm (0.056 in)	Conductor
Core	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	Core
Shield	Shield braiding of tinned copper wires, coverage 55 %	Shield braiding of tinned copper wires, coverage 55 %	Shield braiding of tinned copper wires, coverage 55 %	Shield
Jacket	FRNC black Ø 8.7 ±0.2 mm (0.343 ±0.008 in)	FRNC black Ø 8.7 ±0.2 mm (0.343 ±0.008 in)	FRNC black Ø 8.7 ±0.2 mm (0.343 ±0.008 in)	Jacket
Characteristics	Flame retardant acc. to IEC 60332-1-2 and 60332-3-22 (Cat A), halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to EN 60811-2-1 (4 hrs / 70 °C, 158 °F), sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Flame retardant acc. to IEC 60332-1-2 and 60332-3-24 (Cat C), halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to EN 60811-2-1 (24 hrs / 100 °C, 212 °F), sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Flame retardant acc. to IEC 60332-1-2 and 60332-3-24 (Cat C), halogen free acc. to IEC 60754, oil resistant acc. to NEK 606, sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Characteristics
Type designation	02YSCH 4x2x0.6/1.43-100 LI PIMF	02YSCHX 4x2x0.6/1.43-100 LI PIMF	02YSCH 4x2x0.6/1.43-100 LI PIMF	Type designation
Order no.	**L45467-J416-C476**	**L45467-J416-C96**	**L45467-J416-C106**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

	Industrial Ethernet Cat 7	***Industrial Ethernet Cat 7***	***Industrial Ethernet Cat 7***
Application	Patch cable for flexible installation in marine applications (FRNC), 4x2x24AWG7	Patch cable for flexible installation in marine applications with higher oil resistance (FRNC), 4x2x24AWG7	Patch cable for flexible installation in offshore applications with higher oil resistance acc. to NEK 606 (FRNC), 4x2x24AWG7
Conductor	Stranded bare copper wire 7x0.2mm (0.008 in), Ø 0.6 mm (0.024 in), insulation of foamed PE with skin Ø 1.43 mm (0.056 in)	Stranded bare copper wire 7x0.2mm (0.008 in), Ø 0.6 mm (0.024 in), insulation of foamed PE with skin Ø 1.43 mm (0.056 in)	Stranded bare copper wire 7x0.2mm (0.008 in), Ø 0.6 mm (0.024 in), insulation of foamed PE with skin Ø 1.43 mm (0.056 in)
Core	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted
Shield	Shield braiding of tinned copper wires, coverage 60 %	Shield braiding of tinned copper wires, coverage 60 %	Shield braiding of tinned copper wires, coverage 60 %
Jacket	FRNC black Ø 8.7 ±0.2 mm (0.343 ±0.008 in)	FRNC black Ø 8.7 ±0.2 mm (0.343 ±0.008 in)	FRNC black Ø 8.7 ±0.2 mm (0.343 ±0.008 in)
Characteristics	Flame retardant acc. to IEC 60332-1-2 and 60332-3-22 (Cat A), halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to EN 60811-2-1 (4 hrs / 70 °C, 158 °F), sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Flame retardant acc. to IEC 60332-1-2 and 60332-3-24 (Cat C), halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to EN 60811-2-1 (24 hrs / 100 °C, 212 °F), sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Flame retardant acc. to IEC 60332-1-2 and 60332-3-24 (Cat C), halogen free acc. to IEC 60754, oil resistant acc. to NEK 606, sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas
Type designation	02YSCH 4x2x0.6/1.4-100 LI PIMF	02YSCHX 4x2x0.6/1.4-100 LI PIMF	02YSCH 4x2x0.6/1.4-100 LI PIMF
Order no.	**L45467-J416-C16**	**L45467-J416-C26**	**L45467-J416-C36**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

	Industrial Ethernet Cat 7	***Industrial Ethernet Cat7***	***Industrial Ethernet Cat 7***	
Application	Patch cable for flexible installation in marine applications (FRNC), 4x2x26AWG7	Patch cable for flexible installation in marine applications with higher oil resistance(FRNC), 4x2x26AWG7	Patch cable for flexible installation in offshore applications with higher oil resistance acc. to NEK 606 (FRNC), 4x2x26AWG7	Application
Conductor	Stranded bare copper wire 7x0.16mm (0.008 in), Ø 0.48 mm (0.019 in), insulation of foamed PE with skin Ø 1.0 mm (0.039 in)	Stranded bare copper wire 7x0.16mm (0.008 in), Ø 0.48 mm (0.019 in), insulation of foamed PE with skin Ø 1.0 mm (0.039 in)	Stranded bare copper wire 7x0.16mm (0.008 in), Ø 0.48 mm (0.019 in), insulation of foamed PE with skin Ø 1.0 mm (0.039 in)	Conductor
Core	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	2 wires twisted to a pair, each pair shielded with alulaminate foil, 4 pairs twisted	Core
Shield	Shield braiding of tinned copper wires, coverage 65 %	Shield braiding of tinned copper wires, coverage 65 %	Shield braiding of tinned copper wires, coverage 65 %	Shield
Jacket	FRNC black Ø 7.1 ±0.2 mm (0.280 ±0.008 in)	FRNC black Ø 7.1 ±0.2 mm (0.280 ±0.008 in)	FRNC black Ø 7.1 ±0.2 mm (0.280 ±0.008 in)	Jacket
Characteristics	Flame retardant acc. to IEC 60332-1-2 and 60332-3-22 (Cat A), halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to EN 60811-2-1 (4 hrs / 70 °C, 158 °F), sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Flame retardant acc. to IEC 60332-1-2 and 60332-3-22 (Cat A), halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to EN 60811-2-1 (24 hrs / 100 °C, 212 °F), sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Flame retardant acc. to IEC 60332-1-2 and 60332-3-24 (Cat C), halogen free acc. to IEC 60754, oil resistant acc. to NEK 606, sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Characteristics
Type designation	02YSCH 4x2x0.5/1.0-100 LI PIMF	02YSCHX 4x2x0.5/1.0-100 LI PIMF	02YSCH 4x2x0.5/1.0-100 LI PIMF	Type designation
Order no.	**L45467-J415-C246**	**L45467-J415-C256**	**L45467-J415-C266**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

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Cable characteristics:

- Flame retardant
- Weld splatter resistant
- Sunlight resistant
- Oil resistant
- Cold resistant
- Chemical resistant
- Insulation integrity (180 min)
- Highly flexible
- For Permanent installation
- Direct burial
- For festoon applications
- For torsional applications
- For trailing applications
- Halogen free
- Silicon free
- EMC cable for electromagnetic compatibility
- Compliant acc. to RoHS

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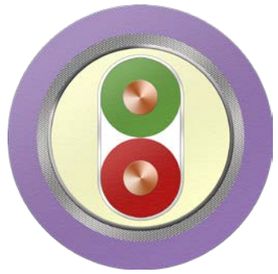
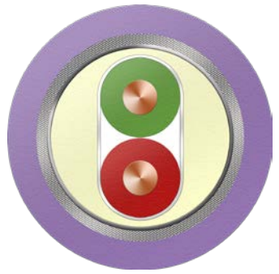
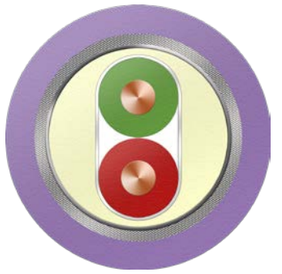
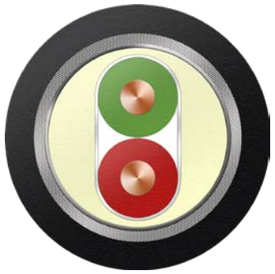


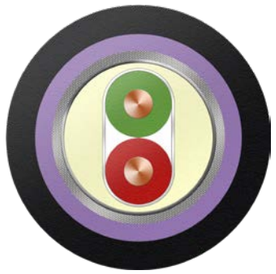


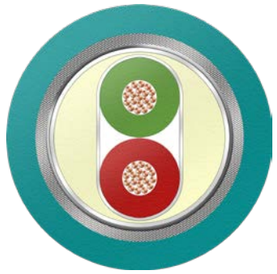


PROFIBUS DP ES	***PROFIBUS DP ES***	***PROFIBUS DP ES***	
Cable for permanent installation (easy to strip), 2x22AWG1, UL listed: CMG and CL3	Cable for permanent installation (easy to strip, FRNC), 2x22AWG1, UL listed: CM	Cable for permanent installation in harsh environments (easy to strip), 2x22AWG1, UL listed: CMX	Application
Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Conductor
2 wires twisted to a pair Inner jacket: PVC	2 wires twisted to a pair Inner jacket: FRNC	2 wires twisted to a pair Inner jacket: PVC	Core
Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.06 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.06 in)	Alulaminate foil overlapped, shield braiding of tinned	Shield
PVC violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	FRNC violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	TPU violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	Jacket
Flame retardant acc. to IEC 60332-3-24 and UL 1685 (CSA FT 4), cold bending resistant acc. to IEC 60811-1-4, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 16 Page 7, UL-File E116441 Vol. 1 Sec. 6 Page 7, UL-Style 21694 (600 V)	Flame retardant acc. to IEC 60332-3-24 and UL 1685 Sec. 1160 (Vertical Tray), halogen free acc. to IEC 60754, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, limited oil resistant, UL-File E119100 Vol. 1 Sec. 11 Page 1	Flame retardant acc. to IEC 60332-1-2, cold bending resistant acc. to IEC 60811-1-4, sunlight resistant, mineral oil and fat resistant, oil resistant acc. to UL 2556 Sec. 4.2.8.3, UL-File E119100 Vol. 1 Sec. 8 Page 1	Characteristics
02YSY(ST)CY 1x2x0.64/2.55-150 VI KF40 FR	02YSH(ST)CH 1x2x0.64/2.55-150 VI KF25 FRN	02YSY(ST)C11Y 1x2x0.64/2.55-150 VI KF40 FR	Type designation
L45467-G16-C185	**L45467-G16-C286**	**L45467-G16-C118**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

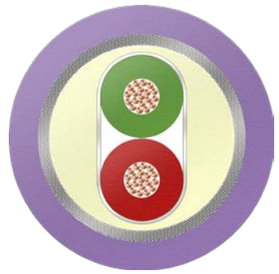


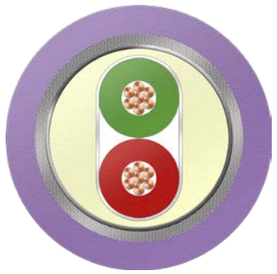


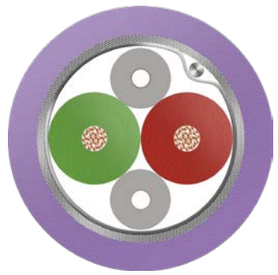


	PROFIBUS DP ES	PROFIBUS DP ES	PROFIBUS DP ES
Application	Cable for food industry (easy to strip), 2x22AWG1	Cable for direct burial (easy to strip), 2x22AWG1	Trailing cable (easy to strip), similar to 2x23AWG19, UL listed: CMX
Conductor	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Stranded bare copper wire 19x0.14 mm (0.006 in), Ø 0.65 mm (0.026 in), insulation of foamed PE Ø 2.56 mm (0.101 in)
Core	2 wires twisted to a pair Inner jacket: PVC	2 wires twisted to a pair Inner jacket: PVC	2 wires twisted to a pair Inner jacket: PVC
Shield	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)
Jacket	PE black Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	Inner jacket: PVC violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in) Outer jacket: PE black Ø 1.8 ±0.5 mm (0.425 ±0.020 in)	TPU petrol Ø 8.0 ±0.4 mm (0.315 ±0.016 in)
Characteristics	Cold bending resistant acc. to IEC 60811-1-4, sunlight resistant, limited mineral oil and fat resistant	Cold bending resistant acc. to IEC 60811-1-4, sunlight resistant, limited mineral oil and fat resistant	Flame retardant acc. to IEC 60332-1-2, cold bending resistant acc. to IEC 60811-1-4, mineral oil and fat resistant, oil resistant acc. to UL 13 Sec. 40 (60 °C, 140 °F), oil resistant acc. to UL 2556 Sec. 4.2.8.3, UL-File E119100 Vol. 1 Sec. 8 Page 1
Type designation	02YSY(ST)C2Y 1x2x0.64/2.55-150 KF40 BK	02YSY(ST)CY2Y 1x2x0.64/2.55-150 KF40 BK	02YY(ST)C11Y 1x2x0.65/2.56-150 LI KF40 FR petrol
Order no.	**L45467-G16-C246**	**L45467-G16-C236**	**L45467-G16-C98**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

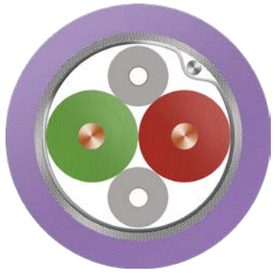


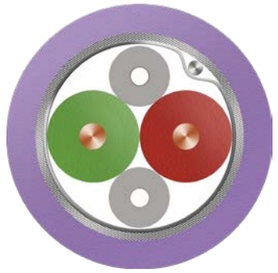


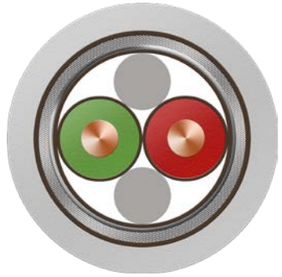


PROFIBUS DP ES	PROFIBUS DP ES	PROFIBUS DP ES	
Cable for flexible installation (easy to strip), similar to 2x23AWG19, UL listed: CMG and CL3	Cable for flexible installation in marine applications (easy to strip, FRNC), 2x22AWG7 [a] SHF 1 [b] SHF 2, with higher oil resistant	Cable for flexible installation in offshore applications with higher oil res. acc. to NEK 606 (easy to strip, FRNC), 2x22AWG7	Application
Stranded bare copper wire 19x0.14 mm (0.006 in), Ø 0.67 mm (0.026 in), insulation of foamed PE with skin Ø 2.56 mm (0.101 in)	Stranded bare copper wire Ø 0.76 mm (0.030 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Stranded bare copper wire Ø 0.76 mm (0.030 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Conductor
2 wires twisted to a pair Inner jacket: PVC	2 wires twisted to a pair, plastic tape overlapped Inner jacket: FRNC	2 wires twisted to a pair, plastic tape overlapped Inner jacket: FRNC	Core
Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, applied longitudinally, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, applied longitudinally, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Shield
PVC violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	FRNC violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	FRNC violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	Jacket
Flame retardant acc. to IEC 60332-3-24 and UL 1685 (CSA FT 4), cold bending resistant acc. to DIN VDE 50290-2-22, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 16 Page 7, UL-File E116441 Vol. 1 Sec. 6 Page 7, UL-Style 21694 (600 V)	Flame retardant acc. to IEC 60332-1-2 and 60332-3-22 (Cat A/F), halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to EN 60811-2-1 (SHF1: 4 hrs / 70 °C, 158 °F, SHF2: 24 hrs/100 °C, 212 °F), sunlight resistant **Maritime and offshore approvals:** Germanischer Lloyd, Lloyds Register of Shipping, ABS Europe, Bureau Veritas, Det Norske Veritas	Flame retardant acc. to IEC 60332-3-22 (Cat A), halogen free acc. to IEC 60754, mud resistant acc. to NEK 606, sunlight resistant	Characteristics
02YSY(ST)CY 1x2x0.65/2.55-150 LI VI	[a] 02YSH(ST)CH 1x2x0.75/2.55-150 LI VI FRNC [b] 02YSH(ST)CHX 1x2x0.75/2.55-150 LI VI FRNC	02YSH(ST)CH 1x2x0.75/2.55-150 LI VI	Type designation
L45467-G16-C375	**[a] L45467-G17-C46** **[b] L45467-G17-C56**	**L45467-G17-C106**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

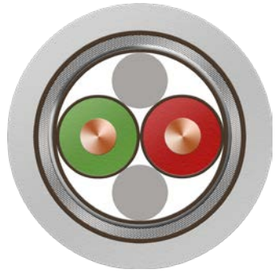


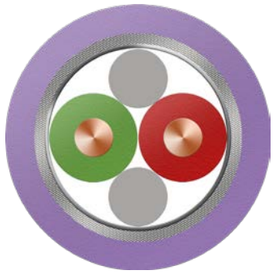


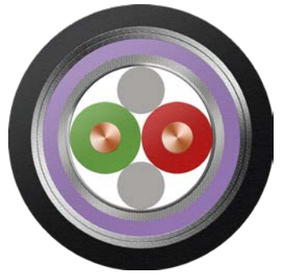


	PROFIBUS DP ES	PROFIBUS DP	PROFIBUS DP
Application	Cable for permanent installation, 2x22AWG1, UL listed: CMG and PLTC	Cable for permanent installation (FRNC), 2x22AWG1	Cable for permanent installation with 90 minutes insulation integrity under fire conditions (FE90, FRNC), 2x22AWG1
Conductor	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in), flame protection foil overlapped Ø 2.75 mm (0.108 in)
Core	2 wires twisted to a pair with fillers in gaps	2 wires twisted to a pair with fillers in gap	2 wires twisted to a pair with fillers in gaps
Shield	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in), flame protection foil overlapped
Jacket	PVC violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	FRNC violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	FRNC grey Ø 8.8 ±0.4 mm (0.346 ±0.016 in)
Characteristics	Flame retardant acc. to IEC 60332-3-24 and UL 1685 (CSA FT 4), cold bending resistant acc. to IEC 60811-1-4, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, limited oil and fat resistant, UL-File E119100 Vol. 1 Sec. 16 Page 7, UL-File E116441 Vol. 1 Sec. 6 Page 7, UL-Style 21694 (600 V)	Flame retardant acc. to IEC 60332-3-24, halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5	Insulation effect under fire conditions acc. to IEC 60331-21, halogen free
Type designation	02YS(ST)CY 1x2x0.64/2.55-150 VI KF40 FR	02Y(ST)CH 1x2x0.64/2.55-150 VI FRNC KF25	02YS(ST)CH 1x2x0.64/2.55-150 GR FRNC FE 90
Order no.	**L45467-G16-C145**	**L45467-G16-C206**	**L45467-G16-C266**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

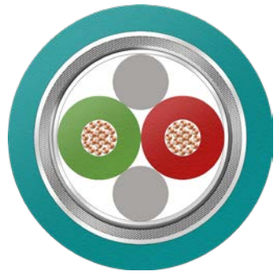






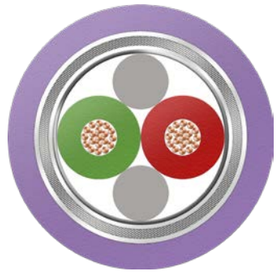
	PROFIBUS DP	PROFIBUS DP	PROFIBUS DP
Application	Cable for permanent installation with 180 minutes insulation integrity under fire conditions (FE180, FRNC), 2x22AWG1	High temperature cable for permanent installation, 2x22AWG1	Cable for permanent installation with rodent protection, 2x22AWG1
Conductor	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in), flame protection foil overlapped Ø 2.75 mm (0.108 in)	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed FEP Ø 2.55 mm (0.100 in)	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)
Core	2 wires twisted to a pair with fillers in gaps	2 wires twisted to a pair with fillers in gaps	2 wires twisted to a pair with fillers in gaps
Shield	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in), flame protection foil overlapped	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in) Inner jacket: PVC violet, Ø 8.0 ±0.4 mm (0.315 ±0.016 in) Armouring: 2 layers galvanised steel tape, intercalated tapes
Jacket	FRNC grey Ø 8.8 ±0.4 mm (0.346 ±0.016 in)	FEP violet Ø 7.2 ±0.25 mm (0.283 ±0.010 in)	PE black Ø 10.8 ±0.5 mm (0.425 ±0.020 in)
Characteristics	Insulation effect under fire conditions acc. to IEC 60331-23, halogen free	High temperature range (up to 180 °C, 356 °F), oil resistant, sunlight resistant	Sunlight resistant, limited mineral oil and fat resistant
Type designation	02YS(ST)CH 1x2x0.64/2.55-150 GR FRNC FE 180	06Y(ST)C6Y 1x2x0.64/2.55-150 VI	02YS(ST)CYB2Y 1x2x0.64/2.55-150 (2B0.1VZK)
Order no.	**L45467-G16-C436**	**L45467-G16-N17**	**L45467-G16-C276**

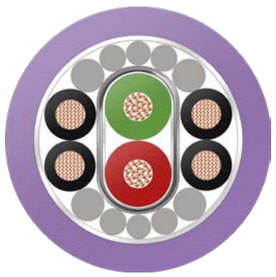
PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer



	PROFIBUS DP	PROFIBUS DP	PROFIBUS DP
Application	EMC cable for permanent installation indoor or outdoor with high electromagnetic compatibility and weld splatter resistant, 2x22AWG1	Trailing cable (FRNC), similar to 2x23AWG19, UL listed: CMX	Festoon cable, similar to 2x23AWG19, UL listed: CM and CL3
Conductor	Bare copper wire Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Stranded bare copper wire 19x0.14 mm (0.006 in), Ø 0.64 mm (0.025 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Stranded bare copper wire 19x0.14 mm (0.006 in), Ø 0.65 mm (0.026 in), insulation of foamed PE with skin Ø 2.56 mm (0.101 in)
Core	2 wires twisted to a pair with fillers in gaps, tinned copper drain wire	2 wires twisted to a pair with fillers in gaps	2 wires twisted to a pair with fillers in gaps
Shield	Alulaminate foil overlapped, copper tape longitudinal welded and spiral corrugated	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.1 mm (0.004 in)
Jacket	PVC violet Ø 11.1 ±0.3 mm (0.437 ±0.012 in)	TPU petrol Ø 8.5 ±0.4 mm (0.335 ±0.016 in)	PVC petrol Ø 8.0 ±0.3 mm (0.315 ±0.012 in)
Characteristics	Flame retardant acc. to IEC 60332-1-2, sunlight resistant	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, oil resistant acc. to UL 13 Sec. 40 (60 °C, 140 °F), sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 8 Page 1	Flame retardant acc. to UL 1685 (Vertical tray), oil resistant acc. to UL 758 Sec. 15 (60 °C, 140 °F), sunlight resistant acc. to UL 1581 Sec. 1200, UL-File E119100 Vol. 1 Sec. 16 Page 6, UL-File E116441 Vol. 1 Sec. 6 Page 6, UL-Style 21694 (600 V)
Type designation	02YS(ST)WKY 1x2x0.64/2.55-150 VI KF40 FR	02YS(ST)C11Y 1x2x0.64/2.55-150 LI FRNC petrol	02YS(ST)CY 1x2x0.65/2.56 -150 LI petrol FR
Order no.	**L45467-G16-C355**	**L45467-G16-C88**	**L45467-G16-C555**

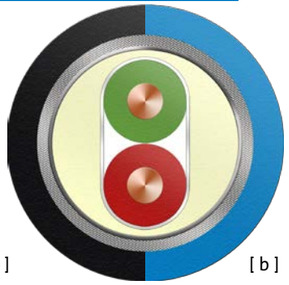
PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

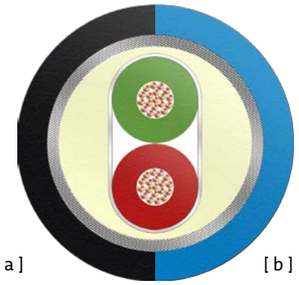




	PROFIBUS DP	PROFIBUS DP-Desina	PROFIBUS DP-ET 200X	
Application	Flexible cable for torsional stress applications (FRNC), 2x22AWG19, UL listed: CMX	Hybrid cable for trailing applications (FRNC), 2x23AWG19 + 4x1.5mm² (0.059 square in), UL recognised: AWM	Hybrid cable for trailing application, 2x22AWG19 + 3x0.75mm² (0.030 square in), UL recognised: AWM	Application
Conductor	Stranded bare copper wire 19x0.16 mm (0.006 in), Ø 0.8 mm (0.031 in), insulation of foamed PE with skin Ø 2.56 mm (0.101 in)	Wire LIH 1.5/2.4 Stranded bare copper wire 84x0.15 mm (0.006 in), Ø 1.55 mm (0.061 in), insulation of FRNC Ø 2.4 mm (0.094 in) Wire 02Y 0.65/2.56 LI Stranded bare copper wire 19x0.14 mm (0.006 in), Ø 0.65 mm (0.256 in), insulation of foamed PE Ø 2.56 mm (0.101 in) Screened pair 02Y(ST)C 2 wires twisted to a pair, alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Wire LIY 0.75/1.7 Stranded bare copper wire 24x0.2 mm (0.008 in), Ø 1.15 mm (0.045 in), insulation of PVC Ø 1.7 mm (0.067 in) Wire 02Y 0.65/2.56 LI Stranded bare copper wire 19x0.13 mm (0.005 in), Ø 0.65 mm (0.256 in), insulation of foamed PE Ø 2.56 mm (0.101 in) Screened pair 02Y(ST)C 2 wires twisted to a pair, alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Conductor
Core	2 wires twisted to a pair with fillers in gaps	1 screened pair, 4 wires	1 pair twisted, 3 wires	Core
Shield	2 layers of plastic tape conductive, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)			Shield
Jacket	TPU violet Ø 8.0 ±0.4 mm (0.315 ±0.016 in)	TPU violet Ø 11.0 ±0.3 mm (0.433 ±0.012 in)	TPU petrol, Ø 9.5 ±0.5 mm (0.374 ±0.020 in)	Jacket
Characteristics	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, sunlight resistant, oil resistant acc. to UL 13 Sec. 40 (60 °C, 140 °F), UL-File E119100 Vol. 1 Sec. 8 Page 1	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, oil resistant acc. to UL 758 Sec. 15 (60 °C, 140 °F), sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-Style 21198	Flame retardant acc. to IEC 60332-1-2, oil resistant acc. to IEC 60811-2-1 (4h, 70 °C, 158 °F), UL-Style 20351	Characteristics
Type designation	02YS(ST)C11Y 1x2x0.8/2.56-150 LI FR VI	02Y(ST)C 1x2x0.65/2.56-150 LI LIH-Z 11Y 4x1x1.5 VI FRNC	02Y(ST)C 1x2x0.65/2.56-150 LI LIY-J 11Y 3x1x0.75 petrol	Type designation
Order no.	**L45467-G18-C18**	**L45467-G116-W58**	**L45467-G116-W38**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer


[a] [b]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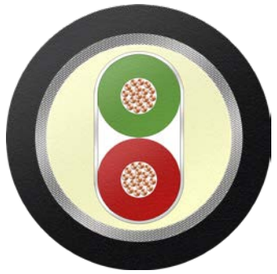
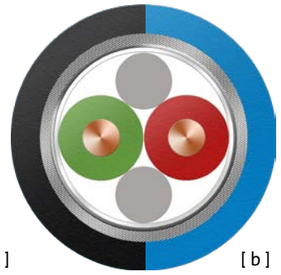
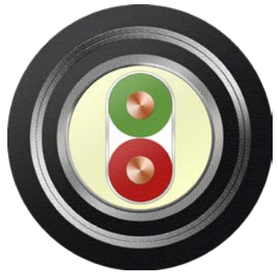


	PROFIBUS PA ES	***PROFIBUS PA ES***	***PROFIBUS PA ES***
Application	Cable for permanent installation [a] (easy to strip), 2x18AWG1, UL listed: CM and CL3 [b] in hazardous Ex-areas (easy to strip), 2x18AWG1, UL listed: CM and CL3	Cable for flexible installation [a] standard (easy to strip) [b] in hazardous Ex-areas (easy to strip) 2x18AWG19, UL recognised: AWM	Cable for flexible installation (easy to strip, FRNC), 2x18AWG7, UL listed: CM
Conductor	Bare copper wire Ø 1.05 mm (0.041 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Stranded bare copper wire 19x0.26 mm (0.010 in), Ø 1.3 mm (0.049 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Stranded bare copper wire 7x0.4 mm (0.016 in), Ø 1.2 mm (0.047 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)
Core	2 wires twisted to a pair Inner jacket: PVC	2 wires twisted to a pair Inner jacket: PVC	2 wires twisted to a pair Inner jacket: FRNC
Shield	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)
Jacket	[a] PVC black Ø 8.0 ±0.4 mm (0.315 ±0.016 in) [b] PVC blue Ø 8.0 ±0.4 mm (0.315 ±0.016 in	[a] PVC black Ø 8,0 ±0,3 mm (0,315 ±0,012 in) [b] PVC blue Ø 8.0 ±0.3 mm (0.315 ±0.012 in)	FRNC black Ø 8.0 ±0.2 mm (0.315 ±0.008 in)
Characteristics	Flame retardant acc. to UL 1685 (Vertical tray), oil resistant acc. to UL 758 Sec. 15 (60 °C, 140 °F), sunlight resistant acc. to UL 1581 Sec. 1200, UL-File E119100 Vol. 1 Sec.16 Page 6, UL-File E116441 Vol. 1 Sec. 6 Page 6, UL-Style 21694	Flame retardant acc. to IEC 60332-1-2, UL-Style 2905	Flame retardant acc. to IEC 60332-3-24, halogen free acc. to IEC 60754, smoke density acc. to IEC 61034, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 16 Page 5
Type designation	[a] 02YSY(ST)CY 1x2x1.0/2.55-100 OE FR [b] 02YSY(ST)CY 1x2x1.0/2.55-100 BL OE FR	[a] 02YSYCY 1x2x1.3/2.55-100 LI BK FR KF40 [b] 02YSYCY 1x2x1.3/2.55-100 LI BL FR KF40	02YSH(ST)CH 1x2x1.2/2.55-100 BK LI FRNC
Order no.	**[a] L45467-J20-C225** **[b] L45467-J20-C275**	**[a] L45467-J21-C45** **[b] L45467-J21-C35**	**L45467-J20-C6**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer


[a] [b]



	PROFIBUS PA	***PROFIBUS PA***	***PROFIBUS PA ES***	
Application	Cable for permanent installation in hazardous Ex-areas 2x18AWG 1, UL listed: CMX	EMC cable for permanent installation indoor or outdoor or in hazardous Ex-areas with high electromagnetic compatibility and weld splatter resistance, 2x18AWG1	Cable for permanent installation with additional rodent protection (easy to strip), 2x18AWG1	Application
Conductor	Bare copper wire Ø 1.05 mm (0.041 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Bare copper wire Ø 1.05 mm (0.041 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Bare copper wire Ø 1.05 mm (0.041 in), insulation of foamed PE with skin Ø 2.55 mm (0.100 in)	Conductor
Core	2 wires twisted to a pair with fillers in gaps	2 wires twisted to a pair with fillers in gaps	2 wires twisted to a pair Inner jacket: PVC	Core
Shield	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, copper tape longitudinal welded and spiral corrugated	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)	Shield
Jacket	[a] PVC black Ø 7.5 + 0.2 – 0.25 mm (0.295 + 0.008 – 0.010 in) [b] PVC blue Ø 7.5 + 0.2 – 0.25 mm (0.295 + 0.008 – 0.010 in)	PVC blue Ø 11.1 ±0.3 mm (0.437 ±0.012 in)	Inner jacket: PVC black Ø 8.0 ±0.4 mm (0.315 ±0.016 in) Armouring: 2 layers of galvanised steel tape, intercalated tapes Outer jacket: PE black Ø 10.8 ±0.5 mm (0.425 ±0.020 in)	Jacket
Characteristics	Flame retardant acc. to IEC 60332-1-2 and UL 2556 Sec. 9.4 (VW-1), oil resistant acc. to UL 13 Sec. 40 (60 °C, 140 °F), sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 8 Page 1	Flame retardant acc. to IEC 60332-1-2, oil resistant acc. to UL 758 Sec. 19 (60 °C, 140 °F), sunlight resistant	Sunlight resistant, limited mineral oil and fat resistant	Characteristics
Type designation	[a] 02YS(ST)CY 1x2x1.0/2.55-100 OE FR [b] 02YS(ST)CY 1x2x1.0/2.55-100 BL OE FR	02YS(ST)WKY 1x2x1.0/2.55-100 BL OE FR	02YSY(ST)CYB2Y 1x2x1.0/2.55-100 (2B0.10 VZK) BK	Type designation
Order no.	**[a] L45467-J20-C75** **[b] L45467-J20-C85**	**L45467-J20-C135**	**L45467-J20-C26**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

DeviceNet™

Cable characteristics:

- Flame retardant
- Sunlight resistant
- Oil resistant
- Cold resistant
- Highly flexible
- For permanent installation
- Trailing cable
- Halogen free
- Silicon free
- Compliant acc. to RoHS

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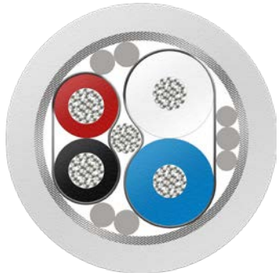
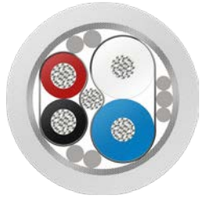
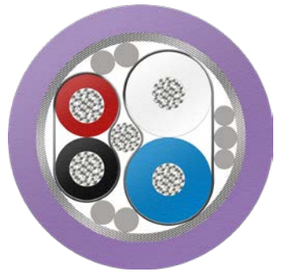
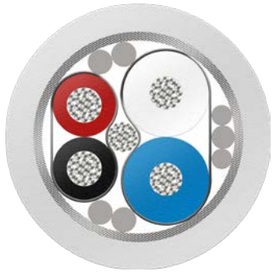


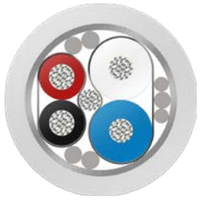




DeviceNet™	***DeviceNet™***	***DeviceNet™***	
[a] Thick cable for permanent installation [b] Economy thick cable for permanent installation 2x18AWG + 2x15AWG UL listed: CMG and PLTC	[a] Thin cable for permanent installation [b] Economy thin cable for permanent installation 2x23AWG + 2x22AWG, UL listed: CMG and CL2	Thick cable for for permanent installation 2x18AWG + 2x15AWG UL listed: CMG and PLTC	Application
Data pair 02YS 1.3/3.8 Stranded tinned copper wire 19x0.25 mm (0.010 in), Ø 1.3 mm (0.051 in), insulation of foamed PE with skin Ø 3.8 mm (0.150 in), 2 wires side by side, alulaminate foil overlapped **Power pair LIY** Stranded tinned copper wire 19x0.34 mm (0.013 in), Ø 1.7 mm (0.067 in), insulation of PVC Ø 2.7 mm (0.106 in), 2 wires side by side, alulaminate foil overlapped	**Data pair 02YS 0.67/1.9** Stranded tinned copper wire 19x0.13 mm (0.005 in), Ø 0.67 mm (0.026 in), insulation of foamed PE with skin Ø 1.9 mm (0.075 in), 2 wires side by side, alulaminate foil overlapped **Power pair LIY** Stranded tinned copper wire 19x0.16 mm (0.006 in), Ø 0.75 mm (0.030 in), insulation of PVC Ø 1.4 mm (0.055 in), 2 wires side by side, alulaminate foil overlapped	**Data pair 02YS 1.3/3.8** Stranded tinned copper wire 19x0.25 mm (0.010 in), Ø 1.3 mm (0.051 in), insulation of foamed PE with skin Ø 3.8 mm (0.150 in), 2 wires side by side, alulaminate foil overlapped **Power pair LI2Y** Stranded tinned copper wire 19x0.34 mm(0.013 in), Ø 1.7 mm (0.067 in), insulation of PE Ø 2.7 mm (0.106 in), 2 wires side by side, alulaminate foil overlapped	Conductor
Central element Stranded tinned copper drain wire, 1 data pair, 1 power pair	**Central element** Stranded tinned copper drain wire, 1 data pair, 1 power pair	**Central element** Stranded tinned copper drain wire, 1 data pair, 1 power pair	Core
Shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Shield
PVC grey [a] Ø 1..2 ±0.3 mm (0.480 ±0.012 in) [b] Ø 1..0 ±0.5 mm (0.433 ±0.020 in)	PVC grey [a] Ø 6.9 ±0.3 mm (0.272 ±0.012 in) [b] Ø 6.4 ±0.3 mm (0.252 ±0.012 in)	FRNC violet Ø 12.2 ±0.3 mm (0.480 ±0.012 in)	Jacket
Flame retardant acc. to UL 1685 (CSA FT 4), sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 17 Page 3, UL-File E116441 Vol. 1 Sec. 7 Page 3 [a] additional: oil resistant acc. to UL 13 Sec. 40 (60 °C, 140 °F)	Flame retardant acc. to UL 1685 (CSA FT 4), sunlight resistant acc. to UL 2556 4.2.8.5, UL-File E119100 Vol. 1 Sec. 17 Page 4, UL-File E116441 Vol. 1 Sec. 7 Page 4 [a] additional: oil resistant acc. to UL 13 Sec. 40 (60 °C, 140 °F)	Flame retardant acc. to UL 1685 (CSA FT 4), halogen free acc. to IEC 60754, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 17 Page 3, UL-File E116441 Vol. 1 Sec. 7 Page 3	Characteristics
02YS 1x2x1.3/3.8-120 LI VZN PIMF LIY CY 1x2x1.5 VZN PIMF GR	[a] 02YS 1x2x0.67/1.9-120 LI VZN PIMF LIY CY 1x2x0.38 VZN PIMF GR [b] 02YS 1x2x0.67/1.9-120 LI VZN PIMF LIY CY 1x2x0.38 VZN PIMF GR	02YS 1x2x1.3/3.8-120 LI VZN PIMF LI2Y CH 1x2x1.5 VZN PIMF VI FRNC	Type designation
[a] L45467-F21-W5 **[b] L45467-F21-W55**	**[a] L45467-F16-W5** **[b] L45467-F16-W55**	**L45467-F21-W6**	Order no.

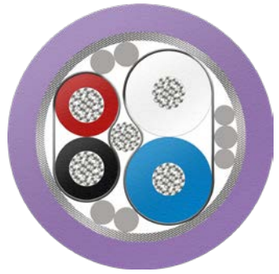
PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer





	DeviceNet™	*DeviceNet*™	*DeviceNet*™
Application	Thin cable for permanent installation (FRNC) 2x23AWG + 2x22AWG UL listed: CMG and CL2	[a] Thick cable for high flexible installation [b] Economy thick cable for high flexible installation 2x18AWG + 2x15AWG, UL listed: CMG and PLTC	[a] Thin cable for high flexible installation [b] Economy thin cable for high flexible installation 2x23AWG + 2x22AWG, UL listed: CMG and CL2
Conductor	**Data pair 02YS 0.67/1.9** Stranded tinned copper wire 19x0.13 mm (0.005 in), Ø 0.67 mm (0.026 in), insulation of foamed PE with skin Ø 1.9 mm (0.075 in), 2 wires side by side, alulaminate foil overlapped **Power pair LI2Y** Stranded tinned copper wire 19x0.16 mm (0.006 in), Ø 0.75 mm (0.030 in), insulation of PE Ø 1.4 mm (0.055 in), 2 wires side by side, alulaminate foil overlapped	**Data pair 02YS 1.3/3.8** Stranded tinned copper wire 40x0.18 mm (0.007 in), Ø 1.3 mm (0.051 in), insulation of foamed PE with skin Ø 3.8 mm (0.150 in), 2 wires side by side, alulaminate foil overlapped **Power pair LIY** Stranded tinned copper wire 84x0.16 mm (0.006 in), Ø 1.7 mm (0.067 in), insulation of PVC Ø 2.7 mm (0.106 in), 2 wires side by side, alulaminate foil overlapped	**Data pair 02YS 0.67/1.9** Stranded tinned copper wire 19x0.13 mm (0.005 in), Ø 0.67 mm (0.026 in), insulation of foamed PE with skin 0 1.9 mm (0.075 in), 2 wires side by side, alulaminate foil overlapped **Power pair LIY** Stranded tinned copper wire 19x0.16 mm (0.006 in), Ø 0.75 mm (0.030 in), insulation of PVC Ø 1.4 mm (0.055 in), 2 wires side by side, alulaminate foil overlapped
Core	**Central element** Stranded tinned copper drain wire, 1 data pair, 1 power pair	**Central element** Stranded tinned copper drain wire, 1 data pair, 1 power pair	**Central element** Stranded tinned copper drain wire, 1 data pair, 1 power pair
Shield	Shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Plastic tape conductive, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Plastic tape conductive, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)
Jacket	FRNC violet Ø 6.9 ±0.3 mm (0.272 ±0.012 in)	PVC grey [a] Ø 12.2 ±0.3 mm (0.480 ±0.012 in) [b] Ø 11.4 ±0.3 mm (0.449 ±0.012 in)	PVC grey [a] Ø 6.9 ±0.3 mm (0.272 ±0.012 in) [b] Ø 6.8 ±0.3 mm (0.268 ±0.012 in)
Characteristics	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 17 Page 4, UL-File E116441 Vol. 1 Sec. 7 Page 4	Flame retardant acc. to UL 1685 (CSA FT 4), sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 17 Page 3, UL-File E116441 Vol. 1 Sec. 7 Page 3 [a] additional: oil resistant acc. to UL 13 Sec. 40 (60°C, 140°F)	Flame retardant acc. to UL 1685 (CSA FT 4), sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, UL-File E119100 Vol. 1 Sec. 17 Page 4, UL-File E116441 Vol. 1 Sec. 7 Page 4, [a] additional: oil resistant acc. to UL 13 Sec. 40 (60°C, 140°F)
Type designation	02YS 1x2x0.67/1.9-120 LI VZN PIMF LI2Y CH 1x2x0.38 VZN PIMF VI FRNC	[a] 02YS 1x2x1.3/3.8-120 LI VZN PIMF LIY CY 1x2x1.5 VZN PIMF GR [b] 02YS 1x2x1.3/3.8-120 LI VZN PIMF LIY CY 1x2x1.5 VZN PIMF GR	[a] 02YS 1x2x0.67/1.9-120 LI VZN PIMF LIY CY 1x2x0.38 VZN PIMF GR, [b] 02YS 1x2x0.67/1.9-120 LI VZN PIMF LIY CY 1x2x0.38 VZN PIMF GR
Order no.	**L45467-F16-W6**	**[a] L45467-F21-W15** **[b] L45467-F21-W65**	**[a] L45467-F16-W15** **[b] L45467-F16-W65**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer



	DeviceNet™	*DeviceNet*™	
Application	Thick cable for high flexible installation 2x18AWG + 2x15AWG UL listed: CMX and CL2X	Thin cable for high flexible installation 2x23AWG + 2x22AWG UL listed: CMX and CL2X	Application
Conductor	**Data pair 02YS 1.3/3.8** Stranded tinned copper wire 40x0.18 mm (0.007 in), Ø 1.3 mm (0.051 in), insulation of foamed PE with skin Ø 3.8 mm (0.150 in), 2 wires side by side, alulaminate foil overlapped **Power pair LI2Y** Stranded tinned copper wire 84x0.16 mm (0.006 in), Ø 1.7 mm (0.067 in), insulation of PE Ø 2.7 mm (0.106 in), 2 wires side by side, alulaminate foil overlapped	**Data pair 02YS 0.67/1.9** Stranded tinned copper wire 19x0.13 mm (0.005 in), Ø 0.67 mm (0.026 in), insulation of foamed PE with skin Ø 1.9 mm (0.075 in), 2 wires side by side, alulaminate foil overlapped **Power pair LI2Y** Stranded tinned copper wire 19x0.16 mm (0.006 in), Ø 0.75 mm (0.030 in), insulation of PE Ø 1.4 mm (0.055 in), 2 wires side by side, alulaminate foil overlapped	Conductor
Core	**Central element** Stranded tinned copper drain wire, 1 data pair, 1 power pair	**Central element** Stranded tinned copper drain wire, 1 data pair, 1 power pair	Core
Shield	Plastic tape conductive, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Plastic tape conductive, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Shield
Jacket	TPU violet Ø 12.2 ±0.3 mm (0.480 ±0.012 in)	TPU violet Ø 6.9 ±0.3 mm (0.272 ±0.012 in)	Jacket
Characteristics	Flame retardant acc. to 2556 Sec. 9.4 (VW-1), halogen free acc. to IEC 60754, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, oil resistant acc. to UL 13 Sec. 40 (60°C, 140°F), UL-File E119100 Vol. 1 Sec. 17 Page 1, UL-File E116441 Vol. 1 Sec. 7 Page 1	Flame retardant acc. to UL 2556 Sec. 9.4 (VW-1), halogen free acc. to IEC 60754, sunlight resistant acc. to UL 2556 Sec. 4.2.8.5, oil resistant acc. to UL 13 Sec. 40 (60°C, 140°F), UL-File E119100 Vol. 1 Sec. 17 Page 2, UL-File E116441 Vol. 1 Sec. 7 Page 2	Characteristics
Type designation	02YS 1x2x1.3/3.8-120 LI VZN PIMF LI2Y C11Y 1x2x1.5 VZN PIMF VI FRNC	02YS 1x2x0.67/1.9-120 LI VZN PIMF LI2Y C11Y 1x2x0.38 VZN PIMF VI FRNC	Type designation
Order no.	**L45467-F21-W8**	**L45467-F16-W8**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

CAN

Cable characteristics:

- Flame retardant
- Oil resistant
- Cold resistant
- Highly flexible
- For permanent installation
- For trailing applications
- Halogen free
- Silicon free
- Compliant acc. to RoHS)

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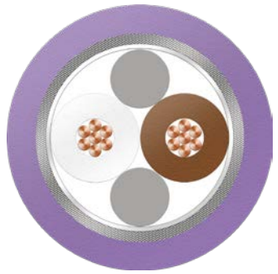
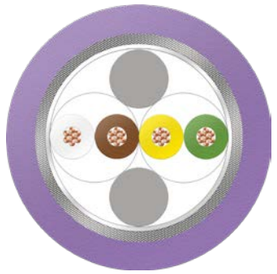
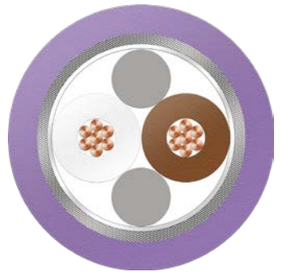
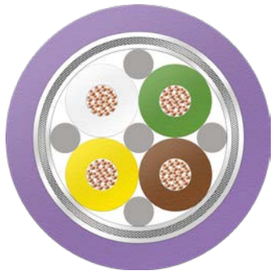


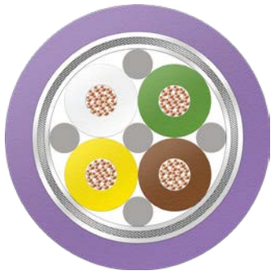


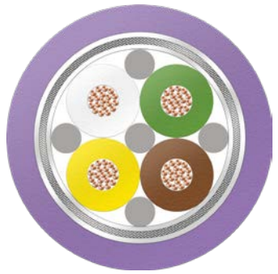


CAN	CAN	CAN	
Cable for permanent and flexible installation [a] 2x24AWG7 [b] 2x22AWG7 [c] 2x20AWG7 UL recognised: AWM	Cable for permanent and flexible installation [a] 2x2x24AWG7 [b] 2x2x22AWG7 [c] 2x2x21AWG7 UL listed: CMX	Cable for high flexible installation in harsh environments [a] 2x24AWG19 [b] 2x22AWG44 [c] 2x21AWG66	Application
Stranded bare copper wire [a] 7x0.2 mm (0.008 in), Ø 0.6 mm (0.024 in) [b] 7x0.25 mm (0.010 in), Ø 0.75 mm (0.030 in) [c] 7x0.3 mm (0.012 in), Ø 0.9 mm (0.035 in), insulation of foamed PE with skin [a] Ø 1.55 mm (0.061 in) [b] Ø 2.0 mm (0.079 in) [c] Ø 2.4 mm (0.095 in)	Stranded bare copper wire [a] 7x0.2 mm (0.008 in), Ø 0.6 mm (0.024 in) [b] 7x0.25 mm (0.010 in), Ø 0.75 mm (0.030 in) [c] 7x0.3 mm (0.012 in), Ø 0.9 mm (0.035 in), insulation of foamed PE with skin [a] Ø 1.3 mm (0.051 in) [b] Ø 1.7 mm (0.067 in) [c] Ø 2.0 mm (0.079 in)	Stranded bare copper wire [a] 19x0.135 mm (0.005 in), Ø 0.7 mm (0.028 in) [b] 44x0.1 mm (0.004 in), Ø 0.75 mm (0.030 in) [c] 66x0.1 mm (0.004 in), Ø 0.95 mm (0.037 in), insulation of foamed PE with skin [a] Ø 1.6 mm (0.063 in) [b] Ø 2.0 mm (0.079 in) [c] Ø 2.4 mm (0.095 in)	Conductor
2 wires twisted to a pair with fillers in gaps	2 wires twisted to a pair with fillers in gaps, 2 pairs twisted	2 wires twisted to a pair with fillers in gaps	Core
Shield braiding of tinned copper wires [a] Ø 0.10 mm (0.004 in) [b+c] Ø 0.13 mm (0.005 in)	Shield braiding of tinned copper wires [a+b] Ø 0.13 mm (0.005 in) [c] Ø 0.15 mm (0.016 in)	Shield braiding of tinned copper wires [a] Ø 0.15 mm (0.016 in) [b+c] Ø 0.13 mm (0.005 in)	Shield
PVC violet [a] Ø 5.8 ±0.3 mm (0.228 ±0.012 in) [b] Ø 6.8 ±0.3 mm (0.268 ±0.012 in) [c] Ø 7.5 ±0.3 mm (0.295 ±0.012 in)	PVC violet [a] Ø 7.5 ±0.3 mm (0.295 ±0.012 in) [b] Ø 8.5 ±0.3 mm (0.335 ±0.012 in) [c] Ø 9.6 ±0.3 mm (0.378 ±0.012 in)	TPU violet [a] Ø 6.5 ±0.3 mm (0.256 ±0.012 in) [b] Ø 6.9 ±0.3 mm (0.027 ±0.012 in) [c] Ø 7.7 ±0.3 mm (0.303 ±0.012 in)	Jacket
Flame retardant acc. to IEC 60332-1-2, UL-Style 2464	Flame retardant acc. to IEC 60332-1-2, UL-File E119100 Vol. 1 Sec. 25 Page 1, UL-Style 2464	Flame retardant acc. to IEC 60332-1-2, oil resistant acc. to IEC 60811-2-1 [b] additional: UL-Style 20351	Characteristics
[a] L-02YSCY 1x2x0.22/1.55-120 VI [b] L-02YSCY 1x2x0.34/2.0-120 VI [c] L-02YSCY 1x2x0.5/2.4-120 VI	[a] L-02YSCY 2x2x0.22/1.55-120 VI [b] L-02YSCY 2x2x0.34/1.7-120 VI [c] L-02YSCY 2x2x0.5/2.0-120 VI	[a] L-02YSC11Y 1x2x0.25/1.6-120 VI FR [b] L-02YSC11Y 1x2x0.34/2.0-120 VI FR [c] L-02YSC11Y 1x2x0.5/2.4-120 VI FR	Type designation
[a] L45551-A21-C35 **[b] L45551-P21-C5** **[c] L45551-C21-C5**	**[a] L45551-A22-C5** **[b] L45551-P22-C5** **[c] L45551-C22-C5**	**[a] L45551-B21-C8** **[b] L45551-P21-C8** **[c] L45551-C21-C8**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

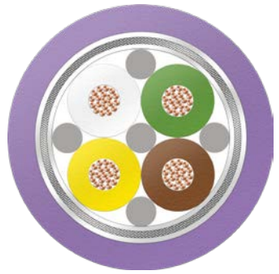


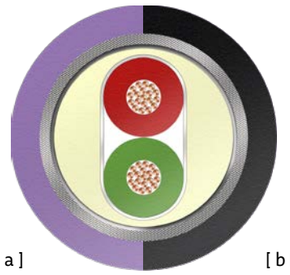




	CAN	CAN	CAN
Application	Trailing cable for high flexible installation in harsh environments 4x24AWG19 UL listed: CMX	Trailing cable for high flexible installation in harsh environments 4x22AWG19 UL listed: CMX	Trailing cable for high flexible installation in harsh environments 4x21AWG66 UL listed: CMX
Conductor	Stranded bare copper wire 19x0.125 mm (0.005 in), Ø 0.6 mm (0.024 in), insulation of foamed PE Ø 1.4 mm (0.055 in)	Stranded bare copper wire 19x0.16 mm (0.006 in), Ø 0.77 mm (0.030 in), insulation of foamed PE Ø 1.8 mm (0.071 in)	Stranded bare copper wire 66x0.1 mm (0.004 in), Ø 0.95 mm (0.037 in), insulation of foamed PE Ø 2.3 mm (0.091 in)
Core	4 wires twisted to a quad	4 wires twisted to a quad	4 wires twisted to a quad
Shield	Shield braiding of tinned copper wires Ø 0.1 mm (0.004 in)	Shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Shield braiding of tinned copper wires Ø 0.15 mm (0.006 in)
Jacket	TPU violet Ø 6.4 ±0.2 mm (0.252 ±0.008 in)	TPU violet Ø 7.4 ±0.2 mm (0.291 ±0.008 in)	TPU violet Ø 8.8 ±0.4 mm (0.346 ±0.016 in)
Characteristics	Sunlight resistant, UL-File E119100 Vol. 1 Sec. 25 Page 1	Sunlight resistant, UL-File E119100 Vol. 1 Sec. 25 Page 1	Sunlight resistant, halogen free acc. to IEC 60754, UL-File E119100 Vol. 1 Sec. 25 Page 1
Type designation	L-02YC11Y 2x2x0.22/1.4-120 VI FR	L-02YC11Y 2x2x0.38 VI FR	L-02YC11Y 2x2x0.5/2.3-120 VI FRNC
Order no.	**L45551-B14-C8**	**L45551-P14-C8**	**L45551-C14-C8**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer





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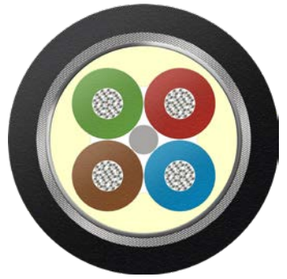


	CAN	CAN ES	CAN ES	
Application	Trailing cable for high flexible installation in harsh environments, 4x19AWG37 UL listed: CMX	Cable for marine applications (easy to strip) [a] 2x21AWG19 [b] 2x21AWG19	Cable for marine applications (easy to strip) 4x21AWG19	Application
Conductor	Stranded bare copper wire 37x0.16 mm Ø 1.12 mm (0.044 in), insulation of foamed PE Ø 2.6 mm (0.102 in)	Stranded tinned copper wire 19x0.18 mm Ø 0.9 mm (0.035 in), insulation of foamed PP with skin Ø 2.4 mm (0.094 in)	Stranded tinned copper wire 19x0.18 mm Ø 0.9 mm (0.035 in), insulation of foamed PP with skin Ø 2.2 mm (0.094 in)	Conductor
Core	4 wires twisted to a quad	2 wires twisted to a pair with fillers in gaps, plastic tape, overlapped Inner jacket: FRNC	Fillers as central element 4 wires, plastic tape, overlapped Inner jacket: FRNC	Core
Shield	Shield braidingof tinned copper wires Ø 0.15 mm (0.006 in)	Alulaminate foil overlapped, applied longitudinally, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Alulaminate foil overlapped, shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Shield
Jacket	TPU violet Ø 9.0 ±0.2 mm (0.374 ±0.008 in)	[a] FRNC violet Ø 7.7 ±0.2 mm (0.303 ±0.008 in) [b] FRNC black Ø 7.7 ±0.2 mm (0.303 ±0.008 in)	FRNC black Ø 8.4 ±0.2 mm (0.331 ±0.008 in)	Jacket
Characteristics	Sunlight resistant, halogen free acc. to IEC 60754, UL-File E119100 Vol. 1 Sec. 25 Page 1	Flame retardant acc. to IEC 60332-3-22 (Cat A/F), halogen free acc. to IEC 60754 **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas	Flame retardant acc. to IEC 60332-3-22 (Cat A/F), halogen free acc. to IEC 60754 **Maritime and offshore approvals:** Germanischer Lloyd, Det Norske Veritas, Lloyds Register	Characteristics
Type designation	L-02YC11Y 2x2x0.75/2.6-120 VI FRNC	[a] 09YSH(ST)CH 1x2x0.9/2.4-120 LI VZN VI FRNC [b] 09YSH(ST)CH 1x2x0.9/2.4-120 LI VZN BK FRNC	09YSH(ST)CH 2x2x0.9/2.2-120 LI VZN BK FRNC	Type designation
Order no.	**L45551-D14-C8**	**[a] L45467-F19-C6** **[b] L45467-F19-C16**	**L45467-F19-C26**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

CC-Link®

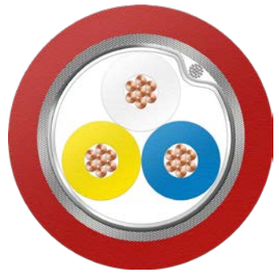
Cable characteristics:

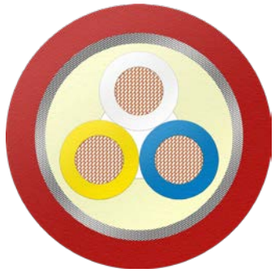
- Flame retardant
- Sunlight resistant
- Cold resistant
- For flexible installation
- For permanent installation
- For trailing applications with up to 3 million bending cycles
- Silicon free
- Compliant acc. to RoHS)

BizLink Special Cables Germany is a member of the CC-Link Partner Association (CLPA)

CC-Link is a registered trademark of the Mitsubishi Electric Corporation

www.cc-link.org





CC-Link	***CC-Link ES***	***CC-Link***	
Cable for flexible installation, compliant with CC-Link specification 1.10, capable of 10 Mbps operation 3x20AWG7 UL listed: CM and PLTC	Trailing cable (easy to strip) 3x20AWG71 UL recognised: AWM	Power limited tray cable for flexible installation, compliant with CC-Link specification 1.10, capable of 10 Mbps operation 3x20AWG/7 and 2x18AWG/7	Application
Stranded bare copper wire 7x0.32 mm (0.013 in), Ø 0.96 mm (0.038 in), insulation of foamed PE with skin Ø 2.2 mm (0.087 in)	Stranded bare copper wire 71x0.1 mm Ø 1.0 mm (0.039 in), insulation of foamed PE with skin Ø 2.2 mm (0.087 in)	Wire LIY 0.9/2.3 Stranded tinned copper wire 7x0.4 mm (0.016 in), Ø 1.21 mm (0.048 in), insulation of PVC Ø 2.3 mm (0.091 in) Wire 02YS Stranded bare copper wire 7x0.32 mm (0.13 in), Ø 0.96 mm (0.038 in), insulation of foamed PE with skin Ø 2.2 mm (0.087 in) Triple 02YS(ST)CY 3 wires, alulaminate foil overlapped, stranded tinned copper drain wire 0.38 mm2 (0.015 square in), shield braiding of tinned copper wires Ø 0.13 mm (0.005 in) jacket: PVC red	Conductor
3 wires twisted, alulaminate foil overlapped, stranded tinned copper drain wire 0.38 mm² (0.015 square in)	3 wires twisted Inner jacket: FRNC	Triple, 2 wires	Core
Shield braiding of tinned copper wires Ø 0.13 mm (0.005 in)	Shield braiding of tinned copper wires Ø 5.9 mm (0.232 in)		Shield
PVC red Ø 7.7 ±0.3 mm (0.303 ±0.012 in)	TPU red Ø 8.5 ±0.3 mm (0.335 ±0.012 in)	PVC red Ø 12.8 ±0.3 mm (0.504 in ±0.012 in)	Jacket
UL-File E119100 Vol. 1 Sec. 19 Page 1, UL-File E116441 Vol. 1 Sec. 11 Page 1	UL-Style 20233 (80 °C, 176 °F / 300 V), halogen free acc. to IEC 60754		Characteristics
02YS(ST)CY 3x1x0.96/2.2-110 LI RD	02YSHC11Y 3x1x1.0/2.2-110 LI RD	02YS(ST)CY 3x1x0.96/2.2-110 LI LIY Y 2x1x0.9 RD	Type designation
L45467-Y19-C15	**L45467-Y20-C28**	**L45467-Y19-W5**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

KNX (EIB)

Cable characteristics:

- Flame retardant
- Cold resistant
- For permanent installation
- Halogen free
- Silicon free
- Compliant acc. to RoHS

www.knx.org

KNX (EIB)	***KNX (EIB)***	
KNX / European Installation bus cable for permanent installation 4x20AWG1	KNX / European Installation bus cable for permanent installation (FRNC) 2x2x20AWG1	Application
Bare copper wire Ø 0.8 mm (0.031 in), insulation of PVC Ø 1.6 mm (0.063 in)	Bare copper wire Ø 0.8 mm (0.031 in), insulation of PE Ø 1.4 mm (0.055 in)	Conductor
4 wires twisted to a quad	2 wires twisted to a pair, 2 pairs	Core
Tinned copper drain wire Ø 0.4 mm^2 (0.016 square in), alulaminate foil overlapped	Stranded tinned drain wire Ø 0.14 mm^2 (0.006 square in), alulaminate foil overlapped	Shield
PVC green Ø 6.1 mm (0.240 in)	FRNC green Ø 6.3 +0.4 – 0.2 mm (0.248 +0.016 – 0.008 in)	Jacket
Flame retardant acc. to IEC 60332-1-2	Flame retardant acc. to IEC 60332-1-2, halogen free acc. to IEC 60754	Characteristics
J-Y(ST) Y 2x2x0.8 GN	J-H(ST)H 2x2x0.8 FRNC GN	Type designation
L45480-F25-B155	**V45493-D49-A159**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

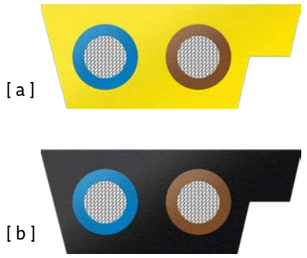
AS-Interface

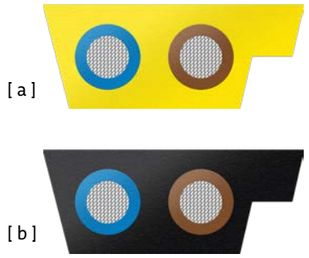
Cable characteristics:

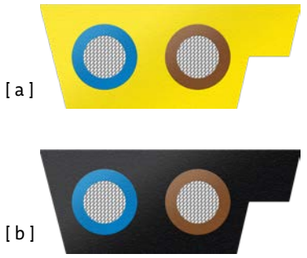
- Flame retardant
- Oil resistant
- Chemical resistant
- Cold resistant
- Highly flexible
- For permanent installation
- For trailing applications
- Halogen free
- Silicon free
- Compliant acc. to RoHS

BizLink Special Cables Germany is a member of the AS-International Association e.V.

www.as-interface.net

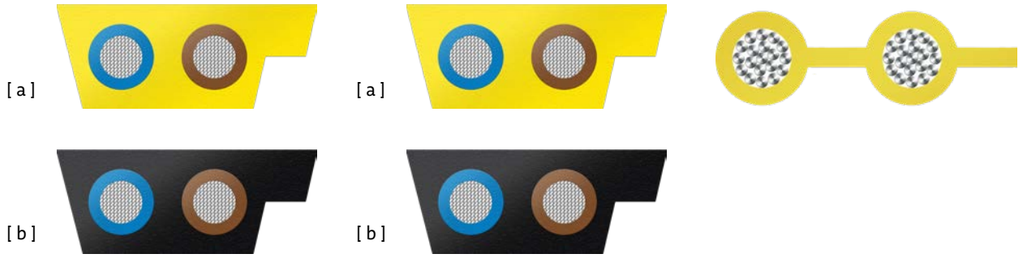






AS-Interface	***AS-Interface***	***AS-Interface***	
[a] Economy rubber cable 2x1.5 mm² (0.059 square in) [b] Economy rubber cable for additional power (24V DC), 2x1.5 mm2 (0.059 square in)	TPE-cable UL listed: CMG and CL2 [a] 2x1.5 mm² (0.059 square in) UL and CSA certified AWM [b] for additional power (24V DC) 2x1.5 mm² (0.059 square in) UL and CSA certified AWM	Trailing cable [a] 2x1.5 mm² (0.059 square in) [b] for additional power (24V DC), 2x1.5 mm² (0.059 square in)	Application
[a] Stranded tinned copper wire Ø 1.5 mm (0.059 in), insulation of EPDM Ø 2.5 mm (0.098 in) [b] Stranded tinned copper wire Ø 1.5 mm (0.059 in), insulation of EPDM 0 2.5 mm (0.098 in)	Stranded tinned copper wire 84x0.15 mm (0.006 in), Ø 1.5 mm (0.059 in), insulation of TPE Ø 2.5 mm (0.098 in)	Stranded tinned copper wire 84x0.15 mm (0.006 in), Ø 1.5 mm (0.059 in), insulation of TPE Ø 2.5 mm (0.098 in)	Conductor
[a] Rubber (EPDM) yellow [b] Rubber (EPDM) black	[a] TPE compound yellow [b] TPE compound black	[a] TPU yellow [b] TPU black	Jacket
Halogen free	Oil and cut oil resistant acc. to UL 1581, Sec. 480 (60°C) Cold bending resistant acc. to UL 444 (–20°C) Flame retardant acc. to UL 1581, Sec. 1061 (Cable Flame), UL 1581, Sec. 1060 (FT-1), UL 1685 (CSA FT 4), IEC 60332-1-2 UL-Style 2103 CSA-File LL55255-42 CPR Fire Class acc. to EN 13501-6 Eca Torsional strength for >10 million cycles Bendings resistant >10 million bending cycles	Flame retardant acc. to IEC 60332-1-2, oil and cut oil resistant acc. to UL 758 Sec. 15 (60°C, 140°F), cold bending resistant acc. to IEC 60811-1-4, halogen free acc. to IEC 60754	Characteristics
[a] FLI-3G3G 2x1x1.5 VZN YE [b] FLI-3G3G 2x1x1.5 VZN BK	[a] FLI-99Y99Y 2x1x1.5 VZN YE [b] FLI-99Y99Y 2x1x1.5 VZN BK	[a] FLI-9Y11Y 2x1x1.5 VZN FRNC YE [b] FLI-9Y11Y 2x1x1.5 VZN FRNC BK	Type designation
[a] L45587-M21-Y1 **[b] L45587-M21-Y11**	**[a] L45587-M21-Y659** **[b] L45587-M21-Y669**	**[a] L45587-M21-B58** **[b] L45587-M21-B68**	Order no.

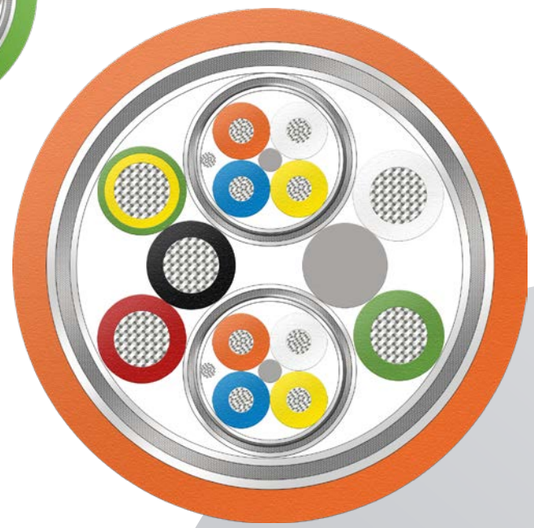
PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

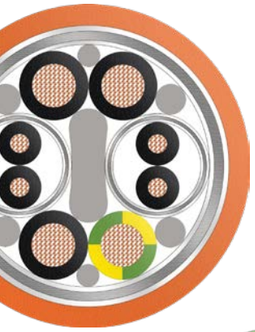


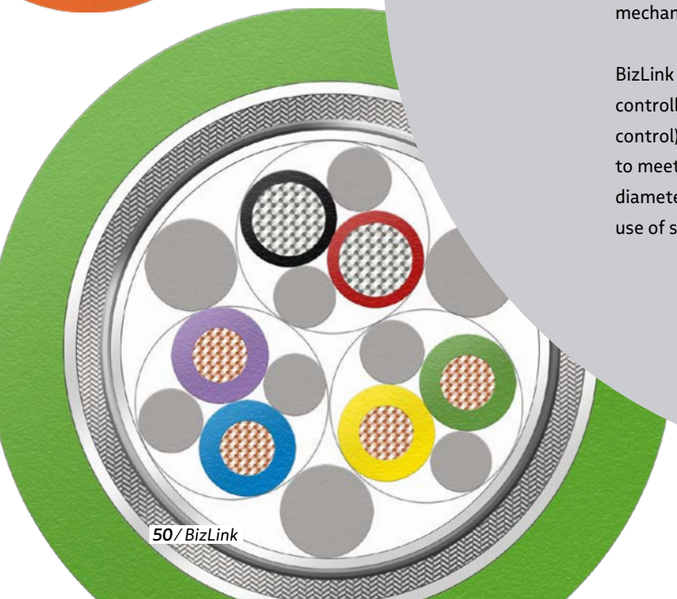
	AS-Interface	AS-Interface	AS-Interface
Application	Cable for marine applications [a] 2x1.5 mm² (0.059 square in) [b] for additional power (24V DC), 2x1.5 mm² (0.059 square in)	Trailing cable with thick wires for less voltage drop, 2x2.5 mm²	Flat cable for switchboard cabinets (IP20, FRNC) 2x18AWG 19 UL recognised: AWM
Conductor	Stranded tinned copper wire 84x0.15 mm (0.006 in), Ø 1.5 mm (0.059 in), insulation of FRNC Ø 2.5 mm (0.098 in)	Stranded tinned copper wire 140x0.15 mm (0.006 in), Ø 2.0 mm (0.079 in), insulation of TPE Ø 2.5 mm (0.098 in)	Stranded tinned copper wire 19x0.24 mm (0.010 in)
Jacket	[a] TPU yellow [b] TPU black	[a] TPU yellow [b] TPU black	FRNC yellow
Characteristics	Flame retardant acc. to IEC 60332-1-2, cold bending resistant, halogen free acc. to IEC 60754, oil resistant acc. to IEC 60811-2-1 **Maritime and offshore approvals:** [a] Germanischer Lloyd, Lloyds Register of Shipping, ABS Europe Ltd., Bureau Veritas, Det Norske Veritas [b] VDE Reg. No. 9971, Germanischer Lloyd, Lloyds Register of Shipping, ABS Europe Ltd., Bureau Veritas, Det Norske Veritas	Flame retardant acc. to IEC 60332-1-2	Flame retardant acc. to UL 1581 Sec. 1090 (H), corrosiveness of fumes acc. to IEC 60754-2, smoke density acc. to IEC 61034, UL-Style 2444
Type designation	[a] FLI-9Y11Y 2x1x1.5 VZN FRNC YE [b] FLI-9Y11Y 2x1x1.5 VZN FRNC BK	[a] FLI-9Y11Y 2x1x2.5 VZN YE [b] FLI-9Y11Y 2x1x2.5 VZN BK	FLIH 2x0.86/2.5 VZN GE
Order no.	**[a] L45587-M21-B38** **[b] L45587-M21-B48**	**[a] L45587-M21-B198** **[b] L45587-M21-B208**	**L45587-J21-Y**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane FRNC = Thermoplastic copolymer

FieldLink® MC for Motion Control







In drive technology, the trend is towards ever more complex cable systems and fully cabled modules. The quantity of data and speed of transmission are simultaneously rising rapidly.

Interference-proof, fixed and dragline-compatible feedback and power cables are required. In addition, harsh industrial environments require extremely robust, permanently flexible cables that are long-lasting and reliable under high mechanical loads.

BizLink provides cables and cable systems for motion-controlled drive mechanisms in machine tools (MC = motion control) under the brand name FieldLink MC. BizLink is able to meet the market's requirements through a smaller outer diameter, application-oriented cable assemblies and the use of special materials.

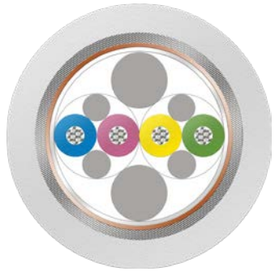
Feedback cables for Motion Control

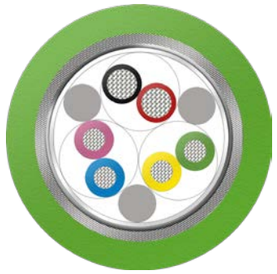
Feedback cables for Motion Control enable the information supply of any drive in a factory. BizLink provides all current feedback cable types for up to date motion control standards and standardisation according to UL, CSA and DESINA.

FieldLink MC feedback cables provide the connected drive with the necessary data and programming of its potential. They also provide the information for positioning and control of the drive's actuation.

Assembly Information ›

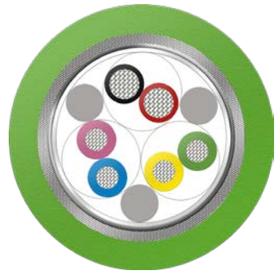
The FieldLink MC product range provides also cable system solutions optimised for drive technology with a large number of precisely harmonised components, reduced process costs as well as easy, safe and rapid installation. FieldLink MC cable systems consist of assembled, disruption-resistant BizLink feedback, power and hybrid cords for fixed installation or use in drag chains.





	Digital feedback cable	Digital feedback cable	Digital feedback cable
Application	Cable for permanent installation and flexible applications with low mechanical stress 2x2x0.22	Cable for permanent installation and flexible applications with low mechanical stress 2x2x0.22 + 2x0.38	Cable for flexible installation and very high temperature range 2x2x0.18 + 2x0.38
Conductor	Stranded bare copper wire, insulation of foamed PE with skin, wire identification by colour	Stranded bare and tinned copper wire, insulation of modified PE, wire identification by colour	Stranded tinned copper wire, insulation of FEP, wire identification by colour
Core	Twisted to pairs, pairs twisted with fillers in gaps, foil	Twisted to pairs, pairs twisted with fillers in gaps, foil	Twisted to pairs, pairs twisted with fillers in gaps
Shield	Copper foil overlapped, shield braiding of tinned copper wires, covering ≥90 %	Alulaminated foil overlapped, shield braiding of tinned copper wires, covering ≥85 %	Alulaminated foil overlapped, shield braiding of tinned copper wires, covering ≥85 %
Jacket	PVC grey	PVC green	FEP green
Characteristics	Very good EMC performance, flame retardant and self-extinguishing acc. to 60332-1-2, oil resistant acc. to DIN EN 60811-1-1/2-1, (7x24 h, 100 °C, 212 °C), also available as cable assembly	Very good EMC performance, flame retardant and self-extinguishing acc. to 60332-1-2, oil resistant acc. to DIN EN 60811-1-1/2-1, (7x24 h, 100 °C, 212 °C), also available as cable assembly	Very good EMC performance, flame retardant and self-extinguishing acc. to IEC 60332-1-1 to 1-3, oil resistant acc. to EN 60811-2-1 (7x24h, 90 °C, 194 °C), also available as cable assembly
Type designation	LI02YS(ST)CY 2x20.22/1.04-100 GR	LI02YS 2x2x0.22/1.04-100 LI2Y (ST)CY 1x2x0.38 VZN GN	LI6Y 2x2x0.18/1.03-100 VZN LI6Y (ST)C6Y 1x2x0.38 VZN GN
Order no.	**L45467-J216-C5**	**L45467-J317-C15**	**L45467-J315-G7**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride FEP = Perfluoroethylene propylene



	Digital feedback cable	Digital feedback cable	Digital feedback cable	
Application	Cable for flexible installation in offshore applications with higher oil res. acc. to NEK606 (FRNC) 2x2x0.22 + 2x0.38	Cable for flexible installation with high mechanical stress 2x2x0.2 + 2x0.38	Cable for flexible installation with high mechanical stress and higher temperature range 2x2x0.18 +2x0.38	Application
Conductor	Stranded bare and tinned copper wire, insulation of modified PE, wire identification by colour	Stranded bare and tinned copper wire insulation of modified PE, wire identification by colour	Stranded tinned copper wire insulation of FEP, wire identification by colour	Conductor
Core	Twisted to pairs, pairs twisted with fillers in gaps, foil	Twisted to pairs, pairs twisted with fillers in gaps,	Twisted to pairs, pairs twisted with fillers in gaps	Core
Shield	Copper foil overlapped, shield braiding of tinned copper wires, covering ≥85 %	Alulaminated foil overlapped, shield braiding of tinned copper wires, covering ≥85 %	Alulaminated foil overlapped, shield braiding of tinned copper wires, covering ≥85 %	Shield
Jacket	FRNC green	TPU green	TPU green	Jacket
Characteristics	Very good EMC performance, flame retardant and self-extinguishing acc. to IEC 60332-3-24, halogen free acc. to IEC 60754, mud resistant acc. to NEK606, also available as cable assembly	High endurance, trailing applicable, very good EMC performance, flame retardant and self-extinguishing acc. to IEC 60332-1-2 to 1-3, halogen free acc. to IEC 60754, oil resistant acc. to DIN VDE 0282 Part 10, also available as a cable assembly	High endurance, trailing applicable, very good EMC performance, flame retardant and self-extinguishing acc. to IEC 60332-1-2 to 1-3, halogen free acc. to IEC 60754, oil resistant acc. to DIN VDE 0282 Part 10, also available as a cable assembly	Characteristics
Type designation	LI02YS 2x2x0.22/1.04-100 LI2Y (ST)CH 1x2x0.38 VZN GN	LI2Y 2x2x0.2/1.3-100 LI2Y (ST)C(ST)11Y 1x2x0.38 VZN GN	LI6Y 2x2x0.18/1.03-100VZN LI6Y(ST)C11Y 1x2x0.38 VZN GN	Type designation
Order no.	**L45467-J317-C6**	**L45467-J317-B8**	**L45467-J315-G8**	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride FEP = Perfluoroethylene propylene

FieldLink® MC analog feedback cable

for permanent installation and flexible applications with low mechanical stress

DESINA

RoHS2

- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Oil resistant acc. to DIN VDE 0281 Part 1 (TM5) (HD 21.1)
- Also available as cable assembly

All feedback cables are available for marine and offshore aplications, e.g. with a special SHF1, SHF2 , mud resistant or special armoured outer jacket.

See the following example:

Application:
Feedback cable for flexible installation in offshore applications with higher oil resistance acc. to NEK606 (FRNC)

Type designation:
LI9Y2Y 3x2x0.14 (D)
LI9Y 1x4x0.14
LI9Y 1x4x0.22
LI9Y CH 1x2x0.5 VZN GN

Order No.
L45551-W169-K6

Cable construction

Conductor	Stranded bare and tinned copper wire, insulation of modified PP, wire identification by colour
Core	Partly twisted to pairs, spinning of tinned copper wires (covering ≥90 %), tinned copper drain wire, foils overlapped, insulation of PE; pairs and wires twisted in layer with fillers in gaps and central filler, fleece foil overlapped
Shield	Shield braiding of tinned copper wires (covering ≥85 %)
Jacket	PVC green acc. to RAL 6018

Technical data

Nominal voltage	30 V
Test voltage	500 V
Min. bending radius allowed	5 x outer diameter (single), 12 x outer diameter (repeated)
Max. acceleration	2 m/s² (6.56 ft/s²)
Process velocity	180 m/min (590.55 ft/min)
Bendings	2,000,000 at ≥12 x outer diameter
Torsion	≤ ±30 °/m (≤ ±3.82 °/ft)
Temperature range	–20 °C to + 80 °C (–4 °F to +176 °F) fixed installation, +0 °C to +60 °C (+32 °F to +140 °F) repeated +150 °C (+302 °F) short-time (≤1 s)

	*Dimensions**	*Number of wires*	*Order no.*
	(12x0.22 mm²)	12	**L45551-A121-K5**
	(2x2x0.18 mm²)	4	**L45581-E41-K125**
	(4x2x0.18 mm²)	8	**L45551-A42-K5**
	(8x2x0.18 mm²)	16	**L45581-E82-K5**
	(4x2x0.14 mm² + 4x0.5 mm²)	12	**L45551-W129-K55**
	(4x2x0.34 mm² + 4x0.5 mm²)	12	**L45551-W129-K45**
	(5x2x0.14 mm² + 2x0.5 mm²)	12	**L45551-W79-K5**
	(5x2x0.14 mm² + 2x0.5mm²)	8	**L45551-W42-K5**
	(3x (2x0.14 mm²) + 2x(0.5 mm²))	8	**L45551-W89-K5**
	(3x (2x0.14 mm²) + 4x0.14 mm² + 4x0.22 mm² + 2x0.5 mm²)	16	**L45551-W169-K15**
	(3x (2x0.14 mm²) + 4x0.14 mm² + 2x0.5 mm²)	12	**L45551-W129-K35**

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride

**additional dimensions available on request*

FieldLink® MC analog feedback cable

for flexible installation with high mechanical stress

- High endurance
- Trailing applicable
- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Halogen free acc. to IEC 60754
- Oil resistant acc. to DIN VDE 0282 Part 10
- Also available as cable assembly

DESINA

RoHS2

Cable construction

Conductor	Stranded bare and tinned copper wire, insulation of modified PP, wire identification by colour
Core	Partly twisted to pairs, spinning of tinned copper wires (covering ≥90 %), tinned copper drain wire, foils over-lapped, insulation of PE; pairs and wires twisted in layer with fillers in gaps and central filler, fleece foil overlapped
Shield	Shield braiding of tinned copper wires (covering ≥85 %)
Jacket	TPU green acc. to RAL 6018

Technical data

Nominal voltage	30 V
Test voltage	500 V
Min. bending radius allowed	4 x outer diameter (single), 7.5 x outer diameter (repeated)
Max. acceleration	20 m/s² (65.62 ft/s²)
Process velocity	300 m/min (984.25 ft/min)
Bendings	10,000,000 at ≥7.5 x outer diameter
Torsion	≤ ±30°/m (≤ +3.28°/ft)
Temperature range	−50 °C to +80 °C (−58 °F to +176 °F) storage, −20 °C to +60 °C (−4 °F to +140 °F) repeated, +150 °C (+302 °F) short-time (≤1 s)

PE = Polyethylene PP = Polypropylene TPU = Thermoplastic Polyurethane

	*Dimensions**	*Number of wires*	*Order no.*
	(12x0.22 mm²)	12	**L45551-A121-K18**
	(2x2x0.18 mm²)	4	**L45581-E41-K18**
	(4x2x0.18 mm²)	8	**L45551-A42-K18**
	(8x2x0.18 mm²)	16	**L45581-E82-K18**
	(4x2x0.14 mm² + 4x0.5 mm²)	12	**L45551-W129-K48**
	(4x2x0.34 mm² + 4x0.5 mm²)	12	**L45551-W129-K28**
	(10x0.14 mm² + 2x0.5 mm²)	12	**L45551-W79-K8**
	(5x2x0.14 mm² + 2x0.5mm²)	8	**L45551-W42-K8**
	(3x (2x0.14 mm²) + 2x0.5 mm²	8	**L45551-W89-K18**
	(3x (2x0.14 mm²) + 4x0.14 mm² + 4x0.22 mm² + 2x0.5 mm²)	16	**L45551-W169-K18**
	(3x (2x0.14 mm²) + 4x0.14 mm² + 2x0.5 mm²)	12	**L45551-W129-K38**
	3x (2x0.14 mm2 + 2x0.34 mm2)	8	**L45551-W42-K28**

**additional dimensions available on request*

FieldLink® MC feedback cable

for permanent installation and flexible application and applications with low mechanical stress

RoHS2

- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Oil resistant acc. to DIN VDE 0281 Part 1 (TM5) (HD 21.1)
- Also available as cable assembly

Cable construction	
Conductor	Stranded bare copper wire, insulation of modified PP, wire identification by colour
Core	Pairs and wires twisted in layer with fillers in gaps and central filler, fleece foil overlapped
Shield	Shield braiding of tinned copper wires (covering ≥85 %), tinned copper drain wire
Jacket	PVC orange acc. to RAL 2003

Technical data	
Nominal voltage	300 V
Test voltage	1,500 V
Min. bending radius allowed	5 x outer diameter (single), 12 x outer diameter (repeated)
Max. acceleration	2 m/s² (6.56 ft/s²)
Process velocity	180 m/min (590.55 ft/min)
Bendings	2,000,000 at ≥12 x outer diameter
Torsion	≤ ±30 °/m (≤ ±3.28 °/ft)
Temperature range	–20 °C to +80 °C (–4 °F to +176 °F) fixed installation, +0 °C to +60 °C (+32 °F to +140 °F) repeated, +150 °C (+302 °F) short-time (≤1 s)

	Dimensions*	Outer Diameter	Order no.
	(5x2x0.14 mm² + 2x0.5 mm²)	7.8 mm (0.31 in)	**L45551-W79-K15**
	(4x2x0.25 mm² + 2x0.5 mm²)	7.99 mm (0.31 in)	**L45551-W69-K5**
	(4x2x0.25 mm² + 2x1.0 mm²)	8.7 mm (0.34 in)	**L45551-W69-K15**

PP = Polypropylene PVC = Polyvinylchloride

FieldLink® MC feedback cable

for flexible installation with high mechanical stress

RoHS2

- High endurance
- Trailing applicable
- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Oil resistant acc. to DIN VDE 0282 Part 10
- Halogen free acc. to IEC 60754
- Also available as cable assembly

Cable construction	
Conductor	Stranded bare copper wire, insulation of modified PP, wire identification by colour
Core	Pairs and wires twisted in layer with fillers in gaps and central filler, fleece foil overlapped
Shield	Shield braiding of tinned copper wires (covering ≥85 %), tinned copper drain wire
Jacket	TPU orange acc. to RAL 2003

Technical data	
Nominal voltage	300 V
Test voltage	1,500 V
Min. bending radius allowed	4 x outer diameter (single), 7.5 x outer diameter (repeated)
Max. acceleration	20 m/s² (65.62 ft/s²)
Process velocity	300 m/min (984.25 ft/min)
Bendings	10,000,000 at ≥7.5 x outer diameter
Torsion	≤ ±30 °/m (≤ ±3.28°/ft)
Temperature range	–50 °C to +80 °C (–58 °F to +176 °F) storage, –20 °C to +60 °C (– 4 °F to +140 °F) repeated, +150 °C (+302 °F) short-time (≤1 s)

Dimensions*	Outer Diameter	Order no.	
(5x2x0.14 mm² + 2x0.5 mm²)	7.8 mm (0.31 in)	**L45551-W79-K18**	
(4x2x0.25 mm² + 2x0.5 mm²)	8.2 mm (0.32 in)	**L45551-W69-K8**	
(4x2x0.25 mm² + 2x1.0 mm²)	8.7 mm (0.34 in)	**L45551-W69-K18**	

*additional dimensions available on request

Power cables for Motion Control

FieldLink MC power cables are highly flexible and designed for either the single power supply of drives or the additional signal transmission via one or two twisted pair elements for brakes or thermal sensors.

They are standardised according to UL, CSA and DESINA and are highly EMC compatible as well as insusceptible to electrical interferences.

The cables are available for flexible and trailing applications optional with brakes and thermistor.

Assembly Information ›

The FieldLink MC product range provides also cable system solutions optimised for drive technology with a large number of precisely harmonised components, reduced process costs as well as easy, safe and rapid installation. FieldLink MC cable systems consist of assembled, disruption-resistant BizLink feedback, power and hybrid cords for fixed installation or use in drag chains.

FieldLink® MC power cable

for permanent installation and flexible applications with low mechanical stress

DESINA
RoHS2
c UL us

- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Oil resistant acc. to DIN VDE 0281 Part 1 / HD 21.1
- Also available as cable assembly

Cable construction	
Conductor	Stranded bare copper wire acc. to IEC 60228, wire identification V/L2, U/L1/C/L+, W/L3/D/L-, GNYE
Core	Four wires twisted in layers with fillers in gaps
Shield	Shield braiding of tinned copper wires (covering ≥85 %)
Jacket	PVC orange acc. to RAL 2003

Technical data	
Nominal voltage	0.6 / 1 kV (DIN VDE), 1000 V (UL / CSA)
Test voltage	4 kV 50Hz AC
Min. bending radius allowed	5 x outer diameter (single), 20 x outer diameter (repeated)
Max. acceleration	2 m/s² (6.56 ft/s²)
Process velocity	30 m/min (98.43 ft/min)
Bendings	100,000 at ≥20 x outer diameter
Torsion	≤ ±30 °/m (≤ ±3.28 °/ft)
Horizontal length	max. 5 m (max. 16.40 ft)
Temperature range	– 20 °C to +80 °C (– 4 °F to +176 °F) fixed installation, +0 °C to +60 °C (+32 °F to +140 °F) repeated, +150 °C (+302 °F) short-time (≤ 1 s)

Dimensions*	Outer diameter	Order no.
(4x1.50 mm²)	8.0 mm (0.31 in)	**LEC 003344**
(4x2.50 mm²)	9.6 mm (0.38 in)	**LEC 003346**
(4x4.00 mm²)	11.0 mm (0.43 in)	**LEC 003348**
(4x6.00 mm²)	13.1 mm (0.52 in)	**LEC 003350**
(4x10.00 mm²)	19.5 mm (0.77 in)	**LEC 003352**
(4x16.00 mm²)	23.5 mm (0.93 in)	**LEC 003354**

FieldLink® MC power cable

for flexible installation with high mechanical stress

DESINA
RoHS2
c UL us

- High endurance
- Trailing applicable
- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Oil resistant acc. to DIN VDE 0282, Part 10 / HD 22.10
- Halogen free acc. to IEC 60754
- Also available as cable assembly

Cable construction	
Conductor	Stranded bare copper wire acc. to IEC 60228 Cl. 6, wire identification V/L2, U/L1/C/L+, W/L3/D/L-, GNYE
Core	Four wires twisted in layers with fillers in gaps
Shield	Shield braiding of tinned copper wires (covering ≥85 %)
Jacket	TPU orange acc. to RAL 2003

Technical data	
Nominal voltage	0.6 / 1 kV (DIN VDE), 1000 V (UL / CSA)
Test voltage	4 kV 50 Hz AC
Min. bending radius allowed	5 x outer diameter (single), 7.5 x outer diameter (repeated) for wire dimension ≤16 mm², 10 x outer diameter (repeated) for wire dimension ≥25 mm²
Max. acceleration	50 m/s² (164 ft/s²)
Process velocity	300 m/min (984.25 ft/min)
Bendings	10,000,000 at ≥7.5 x / 10 x outer diameter
Torsion	≤ ±30 °/m (≤ ±3.28 °/ft)
Horizontal length	max. 50 m (max. 164 ft)
Temperature range	–50 °C to +80 °C (–58 °F to +176 °F) fixed installation, –20 °C to +60 °C (–4 °F to +140 °F repeated, +150 °C (+302 °F) short-time (≤ 1 s)

Dimensions*	Outer diameter	Order no.
(4x1.50 mm²)	10.0 mm (0.39 in)	**LEC 003713**
(4x2.50 mm²)	11.7 mm (0.46 in)	**LEC 003715**
(4x4.00 mm²)	12.8 mm (0.50 in)	**LEC 003717**
(4x6.00 mm²)	15.0 mm (0.59 in)	**LEC 003719**
(4x10.00 mm²)	18.5 mm (0.73 in)	**LEC 003721**
(4x16.00 mm²)	22.0 mm (0.87 in)	**LEC 003723**

PVC = Polyvinylchloride *TPU = Thermoplastic Polyurethane* **additional dimensions available on request*

FieldLink® MC power cable

for permanent installation and flexible applications with low mechanical stress

DESINA
RoHS 2
c UL us

- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Oil resistant acc. to DIN VDE 0281 Part 1 / HD21.1
- Also available as cable assembly

All power cables are available for marine and offshore aplications, e.g. with a special SHF1, SHF2, mud resistant or special armoured outer jacket.

See the following example:

Application:
Power cable for flexible installation
in offshore applications
with higher oil res. acc. to NEK606 (FRNC)

Type designation:
LI9Y 1x2x1.5 (C)
LI9Y-J CH 1x4x1.5 OG

Order No.
L45551-F59-K6

Cable construction	
Conductor	Stranded bare copper wire acc. to IEC 60228, wire identification power: V/L2, U/L1/C/L+, W/C3/D/L-, GNYE, signal: black, white
Core	Signal wires: twisted to pairs, braiding of tinned copper wires (covering ≥85 %); pair and four wires twisted in layer with fillers in gaps and central filler
Shield	Shield braiding of tinned copper wires (covering ≥85 %)
Jacket	PVC orange acc. to RAL 2003

Technical data	
Nominal voltage	0.6 / 1 kV for power and 24 V for signal (DIN VDE), 1,000 V for power and signal (UL / CSA)
Test voltage	4 kV 50 Hz AC
Min. bending radius allowed	5 x outer diameter (single), 20 x outer diameter (repeated)
Max. acceleration	2 m/s² (6.56 ft/s²)
Process velocity	30 m/min (98.43 ft/min)
Bendings	100,000 at ≥20 x outer diameter
Torsion	≤ ±30°/m (≤ ±3.28°/ft)
Horizontal length	max. 5 m (max. 16.40 ft)
Temperature range	–20 °C to +80 °C (–4 °F to +176 °F) single, +0 °C to +60 °C (+32 °F to +140 °F) repeated, +150 °C (+302 °F) short-time (≤25 s)

Dimensions*	Outer diameter	Order no.
4x1.00 mm² +(2x0.50 mm²)	9.6 mm (0.38 in)	**LEHC 003363**
4x0.75 mm² + (2x0.50 mm²)	9.4 mm (0.37 in)	**LEHC 004461**
4x1.00 mm² +(2x0.75 mm²)	10.0 mm (0.39 in)	**LEHC 003364**
4x1.50 mm² + (2x0.50 mm²)	10.0 mm (0.39 in)	**LEHC 003365**
4x1.50 mm² +(2x0.75 mm²)	10.3 mm (0.41 in)	**LEHC 003366**
4x1.50 mm² + (2x1.00 mm²)	10.4 mm (0.41 in)	**LEHC 003057**
4x1.50 mm² + (2x1.50 mm²)	10.5 mm (0.41 in)	**LEC 003345**
4x2.50 mm² +(2x0.50 mm²)	11.5 mm (0.45 in)	**LEHC 003367**
4x2.50 mm² +(2x0.75 mm²)	11.8 mm (0.46 in)	**LEHC 003368**
4x2.50 mm² +(2x1.00 mm²)	12.0 mm (0.47 in)	**LEHC 003369**
4x2.50 mm² +(2x1.50 mm²)	12.0 mm (0.47 in)	**LEHC 003347**
4x4.00 mm² +(2x1.00 mm²)	13.4 mm (0.53 in)	**LEHC 003370**
4x4.00 mm² +(2x1.50 mm²)	13.5 mm (0.53 in)	**LEHC 003349**
4x6.00 mm² +(2x1.00 mm²)	15.3 mm (0.60 in)	**LEHC 003371**
4x6.00 mm² +(2x1.50 mm²)	15.6 mm (0.61 in)	**LEHC 003351**
4x10.00 mm² +(2x1.00 mm²)	20.8 mm (0.82 in)	**LEHC 003372**
4x10.00 mm² +(2x1.50 mm²)	21.0 mm (0.83 in)	**LEHC 003353**
4x16.00 mm² +(2x1.00 mm²)	24.0 mm (0.94 in)	**LEHC 003373**
4x16.00 mm² +(2x1.50 mm²)	24.1 mm (0.95 in)	**LEHC 003355**

PVC = Polyvinylchloride *TPU = Thermoplastic Polyurethane*

FieldLink® MC power cable

for flexible installation with high mechanical stress

DESINA
RoHS 2
c UL us

- High endurance
- Trailing applicable
- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Oil resistant acc. to DIN VDE 0282 Part 10 / HD 22.10
- Halogen free acc. to IEC 60754
- Also available as cable assembly

Cable construction	
Conductor	Stranded bare copper wire acc. to IEC 60228 Cl. 6, wire identification power: U/L1/C/L+, V/L2, W/L3/D/L-, GNYE, signal: black, white
Core	Signal wire: twisted to pair, braidings of tinned copper wires (covering ≥85 %); pair and four wires twisted in layer with fillers in gaps and central filler
Shield	Shield braiding of tinned copper wires (covering ≥85 %)
Jacket	TPU orange acc. to RAL 2003

Technical data	
Nominal voltage	0.6 / 1 kV for power and 24 V for signal (DIN VDE), 1,000 V for power and signal (UL / CSA)
Test voltage	4 kV 50 Hz AC
Min. bending radius allowed	5 x outer diameter (single), 7.5 x outer diameter (repeated) for wire dimension ≤16 mm², 10 x outer diameter (repeated) for wire dimension ≥25 mm²
Max. acceleration	50 m/s² (164 ft/s²)
Process velocity	300 m/min (984.25 ft/min)
Bendings	10,000,000 at ≥7,5 x / 10 x outer diameter
Torsion	≤ ±30°/m (≤ ±3.28°/ft)
Horizontal length	max. 50 m (max. 164 ft)
Temperature range	–50 °C to + 80 °C (– 58 °F to +176 °F) fixed installation, –20 °C to + 60 °C (– 4 °F to + 140 °F) repeated, +150 °C (+ 302 °F) short-time (≤5 s)

Dimensions*	Wires	Outer diameter	Order no.
4x1.00 mm² + (2x0.50 mm²)	6	10.1 mm (0.40 in)	**LEHC 004815**
4x1.50 mm² + (2x0.50 mm²)	6	10.7 mm (0.42 in)	**LEHC 004816**
4x1.00 mm² + (2x1.00 mm²)	6	10.8 mm (0.43 in)	**LEC 004693**
4x1.50 mm² + (2x0.75 mm²)	6	11.1 mm (0.44 in)	**LEHC 004817**
4x1.50 mm² + (2x1.00 mm²)	6	11.3 mm (0.4 in)	**LEHC 004694**
4x2.50 mm² + (2x0.50 mm²)	6	12.2 mm (0.48 in)	**LEHC 004818**
4x1.50 mm² + (2x1.50 mm²)	6	12.5 mm (0.49 in)	**LEC 003714**
4x2.50 mm² + (2x0.75 mm²)	6	12.6 mm (0.50 in)	**LEHC 004819**
4x2.50 mm² + (2x1.00 mm²)	6	13.0 mm (0.51 in)	**LEHC 004695**
4x2.50 mm² + (2x1.50 mm²)	6	13.8 mm (0.54 in)	**LEHC 003716**
4x4.00 mm² + (2x1.00 mm²)	6	14.4 mm (0.56 in)	**LEHC 004696**
4x4.00 mm² + (2x1.50 mm²)	6	15.0 mm (0.59 in)	**LEHC 003718**
4x6.00 mm² + (2x1.00 mm²)	6	16.5 mm (0.64 in)	**LEHC 004697**
4x6.00 mm² + (2x1.50 mm²)	6	16.7 mm (0.66 in)	**LEHC 003720**
4x10.00 mm² + (2x1.00 mm²)	6	19.0 mm (0.74 in)	**LEHC 004698**
4x10.00 mm² + (2x1.50 mm²)	6	19.5 mm (0.77 in)	**LEHC 003722**
4x16.00 mm² + (2x1.00 mm²)	6	22.8 mm (0.89 in)	**LEHC 004699**
4x16.00 mm² + (2x1.50 mm²)	6	23.2 mm (0.91 in)	**LEHC 003724**

**additional dimensions available on request*

FieldLink® MC power cable

for permanent installation and flexible applications with low mechanical stress

DESINA
RoHS2

- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Oil resistant acc. to DIN VDE 0281 Part 1 HD 21.1
- Also available as cable assembly

Cable construction	
Conductor	Stranded bare copper wire acc. to IEC 60228, wire identification power: black, white with numbers 1, 2, 3, GNYE, signal: 1st pair 5, 6, 2nd pair, 7, 8
Core	Signal wires: twisted to pairs, aluminised foil wrapped, braidings of tinned copper wires (covering ≥85 %); pairs and four wires twisted in layer with fillers in gaps and central filler
Shield	Shield braiding of tinned copper wires (covering ≥85 %)
Jacket	PVC orange acc. to RAL 2003

Technical data	
Nominal voltage	0.6 / 1 kV for power and 24 V for signal (DIN VDE), 1,000 V for power and signal (UL/CSA)
Test voltage	4 kV 50 Hz AC
Min. bending radius allowed	5 x outer diameter (single), 20 x outer diameter (repeated)
Max. acceleration	2 m/s² (6.56 ft/s²)
Process velocity	30 m/min (98.43 ft/min)
Bendings	100,000 at ≥20 x outer diameter
Torsion	≤ ±30 °/m (≤ ±3.28°/ft)
Horizontal length	max. 5 m (max. 16.40 ft)
Temperature range	–20 °C to +80 °C (–4 °F to +176 °F) fixed installation, +0 °C to +60 °C (+32 °F to +140 °F) repeated, +150 °C (+302 °F) short-time (≤5 s)

Dimensions*	Outer diameter	Order no.
4x0.75 mm² + 2 x (2x0.34 mm²)	10.6 mm (0.42 in)	**LEHC 003378**
4x1.00 mm² + 2 x (2x0.75 mm²)	12.0 mm (0.47 in)	**LEHC 003379**
4x1.50 mm² + 2 x (2x0.75 mm²)	12.3 mm (0.48 in)	**LEHC 003380**
4x2.50 mm² + 2 x (2x0.75 mm²)	13.8 mm (0.54 in)	**LEHC 003381**
4x2.50 mm² + 2 x (2x1.00 mm²)	14.2 mm (0.56 in)	**LEHC 003382**
4x4.00 mm² + (2x1.00 mm²) + (2x1.50 mm²)	15.7 mm (0.62 in)	**LEHC 003383**
4x4.00 mm² + 2 x (2x1.50 mm²)	16.0 mm (0.63 in)	**LEHC 004726**
4x6.00 mm² + (2x1.00 mm²) + (2x1.50 mm²)	17.7 mm (0.70 in)	**LEHC 003384**
4x10.00 mm² + (2x1.00 mm²) + (2x1.50 mm²)	22.8 mm (0.90 in)	**LEHC 003385**
4x10.00 mm² + 2 x (2x1.50 mm²)	23.0 mm (0.91 in)	**LEHC 003386**
4x16.00 mm² + 2 x (2x1.50 mm²)	26.8 mm (1.06 in)	**LEHC 003387**

PVC = Polyvinylchloride *TPU = Thermoplastic Polyurethane*

FieldLink® MC power cable

for flexible installation with high mechanical stress

DESINA
RoHS2

- High endurance
- Trailing applicable
- Very good EMC performance
- Flame retardant and self-extinguishing acc. to IEC 60332-1-2
- Oil resistant acc. to DIN VDE 0282 Part 10 / HD 22.10
- Halogen free acc. to IEC 60754
- Also available as cable assembly

Cable construction	
Conductor	Stranded bare copper wire acc. to IEC 60228 Cl. 5 and Cl. 6, wire identification power: black, white with numbers 1, 2, 3, GNYE, signal: 1st pair 5, 6, 2nd pair 7, 8
Core	Signal wires: twisted to pairs, both sides aluminised tape wrapped, braidings of tinned copper wires (covering ≥85 %); pairs and four wires twisted in layer with fillers in gaps and central filler
Shield	Shield braiding of tinned copper wires (covering ≥85 %)
Jacket	TPU orange acc. to RAL 2003

Technical data	
Nominal voltage	0.6 / 1 kV for power and 24 V for signal (DIN VDE), 1,000 V for power and signal (UL / CSA)
Test voltage	4 kV 50 Hz AC (wires)
Min. bending radius allowed	6 x outer diameter (single), 12 x outer diameter (repeated)
Max. acceleration	5 m/s² (16.40 ft/s²)
Process velocity	180 m/min (590.55 ft/min)
Bendings	10,000,000 at ≥12 x outer diameter
Torsion	≤ ±30 °/m (≤ ±3.28°/ft)
Temperature range	–50 °C to +80 °C (–58 °F to +176 °F) fixed installation, –20 °C to +60 °C (–4 °F to +140 °F) repeated, +150 °C (+302 °F) short-time (≤5 s)

Dimensions*	Outer diameter	Order no.
4x0.75 mm² + 2x (2x0.34 mm²)	10.8 mm (0.43 in)	**LEHC 004897**
4x1.00 mm² + 2x (2x0.75 mm²)	12.0 mm (0.47 in)	**LEHC 003981**
4x1.50 mm² + 2x (2x0.75 mm²)	12.5 mm (0.49 in)	**LEHC 003982**
4x2.50 mm² + 2x (2x0.75 mm²)	13.8 mm (0.54 in)	**LEHC 004898**
4x2.50 mm² + 2x (2x1.00 mm²)	14.7 mm (0.58 in)	**LEHC 004899**
4x2.50 mm² + 2x (2x1.50 mm²)	15.0 mm (0.59 in)	**LEHC 004866**
4x4.00 mm² + 2x (2x1.00 mm²)	16.2 mm (0.64 in)	**LEHC 004900**
4x4.00 mm² + (2x1.00 mm²) + (2x1.50 mm²)	16.4 mm (0.65 in)	**LEHC 004901**
4x4.00 mm² + 2x (2x1.50 mm²)	16.7 mm (0.66 in)	**LEHC 004902**
4x6.00 mm² + (2x1.00 mm²) + (2x1.50 mm²)	18.2 mm (0.72 in)	**LEHC 004903**
4x6.00 mm² + 2x (2x1.50 mm²)	18.5 mm (0.73 in)	**LEHC 004904**
4x10.00 mm² + (2x1.00 mm²) + (2x1.50 mm²)	21.6 mm (0.85 in)	**LEHC 004905**
4x10.00 mm² + 2x (2x1.50 mm²)	22.7 mm (0.90 in)	**LEHC 004906**
4x16.00 mm² + 2x (2x1.50 mm²)	24.6 mm (0.97 in)	**LEHC 004907**

**additional dimensions available on request*

Hybrid cables for Motion Control

FieldLink MC hybrid cables reach new heights in cost efficiency and flexibility. The innovative design combines energy supply and data transfer in one single cable, thereby reducing wiring expenditures by up to 85 %.

The cables withstand 5 up to 10 million bending cycles and significantly increases modularity in machines and systems.

Assembly Information ›
The FieldLink MC product range provides also cable system solutions optimised for drive technology with a large number of precisely harmonised components, reduced process costs as well as easy, safe and rapid installation. FieldLink MC cable systems consist of assembled, disruption-resistant BizLink feedback, power and hybrid cords for fixed installation or use in drag chains.

Hybrid cable

Cable with digital feedback channel (DSL) for flexible installation with high mechanical stress 4x2.50 + (2x0.24)
Power: 2.5 mm² stranded tinned copper wire acc. to IEC 60228 Cl. 6, insulation PP, black, green, yellow, blue and brown **Signal (DSL):** 0.24 mm² stranded tinned copper wire, insulation PE grey, pink
Signal wires: twisted aluminised tape wrapped, braidings of tinned copper wires, covering ≥85 %, pair and four wires twisted in layer with fillers in gaps and central filler
Shield braiding of tinned copper wires, covering ≥85 %
TPU orange acc. to RAL 2003
High endurance, trailing applicable, very good EMC performance, flame retardant and self-extinguishing acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, oil resistant acc. to DIN VDE 0282 Part 10, also available as cable assembly
LI2Y(ST)C 1x2x0.24/1.9-110 VZNLI9Y-J C11Y 4x1x2.5/2.85 VZN OR
L45467-Y516-W8

Hybrid cable

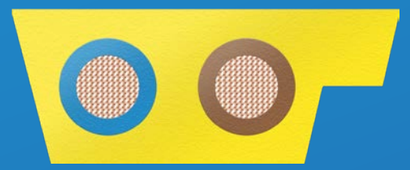
Cable with digital feedback channel (Cat5e) for flexible installation with high mechanical stress 5x2.50 + (4x0.34)
Power: 2.5 mm² stranded bare copper wire acc. to IEC 60228 Cl. 6, insulation PP, red, black with wire identification 1, 2, green-yellow and blue **Signal (Cat5e):** 0.34 mm² stranded tinned copper wire, insulation PE, white, yellow, blue and orange
Signal wires: twisted to quad, aluminised tape wrapped, braidings of tinned copper wires, covering ≥85 %, quad and power wires twisted in layer around the central filler
Shield braiding of tinned copper wires, covering ≥85 %
TPU orange acc. to RAL 2003
High endurance, trailing applicable, very good EMC performance, flame retardant and self-extinguishing acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, oil resistant acc. to DIN VDE 0282 Part 10, also available as cable assembly
2Y(ST)C(ST) 2x2x0.75/1.56-100 LI LI9Y-ZJ C11Y 5x1x2.5 OR
L45467-J617-W8

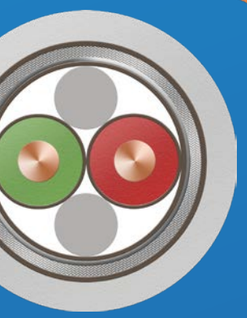
Hybrid cable

Cable with digital feedback channels (2xCat 5e) for flexible installation with high mechanical stress 5x2.50 + 2x (4x0.34)	Application
Power: 2.5 mm² stranded tinned copper wire acc. to IEC 60228 Cl. 6, insulation PP, red, black, green-yellow, white and green **Signal (Cat5e):** 0.34 mm² stranded tinned copper wire, insulation PE, white, yellow, blue and orange	Conductor
Signal wires: twisted to quad, aluminised tape wrapped, braidings of tinned copper wires, covering ≥85 %, 2x quad and power wires twisted in a layer around the central filler	Core
Shield braiding of tinned copper wires covering ≥85 %	Shield
TPU orange acc. to RAL 2003	Jacket
High endurance, trailing applicable, very good EMC performance, flame retardant and self-extinguishing acc. to IEC 60332-1-2, halogen free acc. to IEC 60754, oil resistant acc. to DIN VDE 0282 Part 10, also available as a cable assembly	Characteristics
2Y(ST)C 2x4x0.75/1.55-100 LI VZNLI9Y-JC11Y 5x1x2.5 VZN OR	Type designation
L45467-J717-W8	Order no.

PE = Polyethylene PP = Polypropylene PVC = Polyvinylchloride TPU = Thermoplastic Polyurethane

Technical information





Type designations for copper cables

B	armour
(2B...)	two layers of steel tape; thickness of one steel tape in mm
C	screen of copper wire braiding
FE 90	insulation integrity 90 minutes
FLI	flat cable with stranded conductor
FR	improved flame retardant
H	insulation or sheath of halogen-free material
J-	installation cable
-J	grounded wire, green-yellow
... IMF	separate stranding element in metal foil or in metallised paper and sheath wire (e.g. pairs PIMF)
KF ...	cold-proof implementation down to minus ... °C
L	wires with bunched conductor >0.2 mm^2
LI	cord with stranded conductor <0.2 mm^2
NC	non corrosivity of combustion gases
OE	oil-proof
(ST)	electrostatic shield made of metal foil or plastic laminated metal foil
VZN	tinned conductor
W	corrugated steel sheath
X	insulation, sheath or protective cover of cross-linked Polyvinylchloride (PVC)
2X	insulation, sheath or protective cover of cross-linked Polyethylene (PE)
11X	insulation, sheath or protective cover of cross-linked Thermoplastic Polyurethane (TPU)
Y	insulation, sheath or protective cover of Polyvinylchloride (PVC)
2Y	insulation, sheath or protective cover of Polyethylene (PE)
9Y	insulation, sheath or protective cover of Polypropylene (PP)
11Y	insulation, sheath or protective cover of Thermoplastic Polyurethane (TPU)
12Y	insulation of Polyethylene Terephthalate
99Y	insulation, sheath or protective cover of all other thermoplastics without VDE symbols
02YS	insulation of cellular Polyethylene (PE) with additional skin of solid material (foam skin)
02Y	insulation of cellular Polyethylene (PE)
-Z	wires with printed numbers

Colour code DIN IEC 60757:

BK	black
BN	brown
RD	red
OG	orange
YE	yellow
GN	green
BU	blue
VT	violet
GY	grey
WH	white
PK	pink
TQ	turquoise
GD	gold
SR	silver

Example: PROFINET cable for permanent installation (see page 12)

Order no.: L45467-J16-B35

2Y Y (ST) C Y 2x2x0.64 / 1.5-100 GN

- GN — Green outer jacket
- Y — Jacket insulation, sheath or protective cover of Polyvinylchloride (PVC)
- C — Screen of copper wire braiding
- (ST) — Electrostatic shield made of metal foil or plastic laminated metal foil
- Y — Inner jacket of PVC
- 2Y — Wire insulation of Polyethylen (PE)

Installation guidelines

for flexible cables in energy tracking chains

Please abide by the following recommendations for BizLink cables used in energy tracking chains.

1. In order to conserve the high-quality characteristics, storage should be in closed spaces under observance of the temperature thresholds correspondingly stated.

2. To ensure easy installation under optimal mechanical conditions, cables should be stored at room temperature for at least 24 hours before use.

3. Cables should be stored in cable drums until final installation. Repeated winding of the cables onto different reels should be avoided whenever possible.

4. The choice of energy tracking chains must follow the characteristics of the cables in use.

5. The bending radii of the cables must not fall short of the specified values.

6. Installation of the cables in energy tracking chains must be torsion-free. Cables must never be pulled sideways from the drum or ring, but tangentially rolled off immediately before use. If necessary, lay or hang the cables out before use.

7. Within the energy tracking chains, the cables have to be loosely laid out side by side without friction. Freedom of movement must be ensured. Make sure there is free space amounting to at least 10 % of the cable diameter on all sides, without exceeding 50 % in width. For optimal adjustment, place single cables separated by fixed links. Placing cables on top of each other (i.e. without fixed links) should be avoided whenever possible. Cables of different outer diameters and conducting materials should be installed separately.

8. In order to prevent cables from restricting each other's movement, vertically suspended energy tracking chains should allow for free space of at least 20 % of the cable diameter above and below the cable.

9. Cables within an energy tracking chain must retain freedom of movement in the longitudinal direction at all times. Use of fixations and/or guiderails is prohibited. No tensile force is to be effected in the radius.

10. In order to ensure the freedom of movement of the cores, cables must extensively be fixed by the outer jacket at both ends of the energy tracking chains. Movement up to the points of fixation, however, is prohibited. Proximity to the nearest pivot point of the chain is 20 x cable diameter at maximum.

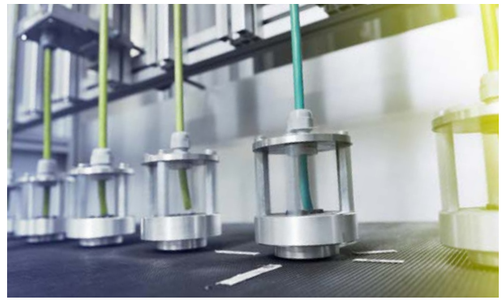
11. After a short period of operation, it is imperative to verify proper cable adjustment (stretching during operation, contortion). Verification checks have to take place after a few completed cycles each. If necessary, return the cables to center position and readjust the cable-length at the entrainer. Make sure the cable does not fly out at the inner or outer radius. Cable adjustment must be rechecked after a few test runs and should be verified every six months.

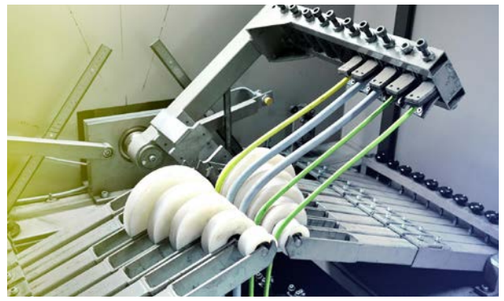
12. In the event of fracture or other damage to the energy tracking chain, all cables must be replaced. Permanent damage resulting from contortion, indentation or shearing is to be expected.

These guidelines are based on field experience with BizLink cables; they are not grounds for demands of warranty and / or recourse. Please also refer to the installation guidelines provided by the manufacturer of the energy tracking chain.

Drag chain test centre

Ensuring long-lasting dynamic requirements





We are always investing in our device equipment to satisfy the needs of our customers. The long-lasting mobility of our cables is tested in various processes in order to prove their long service life.

Drag chain tests
Our test routes have different travel ranges, accelerations and travel speeds. Each test system can test up to 40 cables over the equivalent of several years. The longest traverse path measures 50 m.

Torsion tests
In different torsion and torsional bending machines, the cables are tested for twisting and traction around themselves. They are subjected to a torsional movement of up to +/– 360° in length from 0.3 to 1 meter.

Bending tests
In test systems with rolls for different bending radii, a test is performed to see whether the cable withstands frequent bending cycles. The rolls used have a diameter of 20 to 250 mm.

S-shaped bending test
The cable is fed across two bobbins in an s-shaped flex movement. As an option and as required, weights can be fitted to both ends. The line generates up to 12 cycles per minute.

To pass the flex test, the cable may not present any power failure between the cores.

BizLink checks the quality of the cables in their in-house test centre. Discover the competence here.

The significance of UL and CSA certifications

	Approval only for Canada	Approval only for USA	Approval for Canada + USA
The two organisations, UL and CSA International, are recognised in Canada and in the USA. They issue various test marks according to validity.			
The test mark (UR) identifies products which are integrated as components in electrical equipment (recognised mark).			

Before electrical products are allowed onto the North American market they have to be tested and certified as to their hazard potential in respect of combustibility, electric shock and – for certain equipment – electromagnetic compatibility.

To comply with product liability laws a manufacturer has to ensure by the testing and certification of his components that they fully satisfy national statutory requirements.

Certification for the USA:
Certifications have to be issued by a Nationally Recognized Testing Laboratory (NRTL). NRTL status is awarded by the Occupational Safety and Health Administration (OSHA), e.g. ›

- UL (Underwriters Laboratories)
- CSA International (Canadian Standards Association)
- ITSNA (Intertek Testing Service NA, Inc.)
- TUV Rheinland of North America

Certification for Canada:
Certifications have to be issued by a qualification office recognised by the Standards Council of Canada (SCC), e.g. ›

- CSA International
- UL
- ITSNA

About BizLink

Innovative. Reliable. Sustainable.

Founded in 1996 and headquartered in Silicon Valley, USA, BizLink is dedicated to making transformative connections that bring visionary ideas to life.

We specialize in providing essential components such as wire harnesses, connectors, and cables to a broad spectrum of industries including IT Infrastructure, Client Peripherals, Optical Fiber Communications, Telecom & Networking, Electrical Appliances, Medical Equipment, Factory Automation & Machinery, Semiconductor Technology, Healthcare, Motor Vehicles, Mobility, Marine, Industrial, and Solar Energy.

Our global presence, with flexible production resources and R&D teams across America, Europe, and Asia, allows us to proactively drive innovation and enable future possibilities.

At BizLink, our customer-centric approach and commitment to relentless advancement empower us to deliver zero-distance service and continual performance optimization, making a positive and meaningful impact worldwide. We turn possibilities into reality; furthermore, we connect possibilities to world-changing visions.

Where Possibilities Connect™

Factory Automation & Machinery in all their diversity

With innovative solutions for intelligent energy and data management in automated production processes, BizLink has been a preferred supplier to numerous automotive, factory automation, and machinery customers worldwide for years.

At our international competence centers, BizLink leads the development and manufacturing of bus cables, industrial Ethernet, and motion control cables. We also offer comprehensive cable systems and services. Our product range is further enhanced by connector development and production, along with the provision of assembled drag chains. As an active member of various associations and user organizations, BizLink stays at the forefront of industry activities, actively contributing to the advancement of industrial communication.

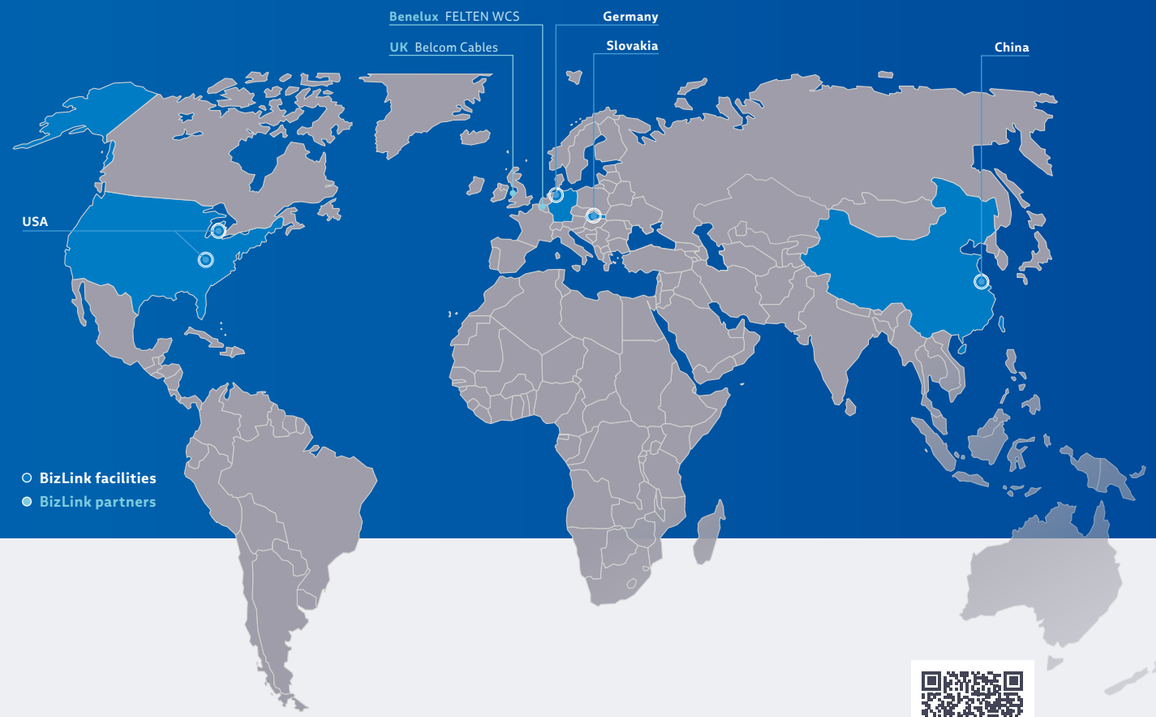
In addition, BizLink provides robotic cables and assemblies, hoses and tubes, dresspack systems, integration-ready robots, robot programming, and automation systems training - instructor-led or online. In response to the growing trend of digitalization, BizLink also offers integrated and intelligent sensor-based measurement solutions.

Moreover, BizLink develops customized special cables and assemblies, as well as complex cable systems. Whether it involves meeting specific requirements for mechanical durability, resistance to radiation and media, electrical transmission properties, or compliance with industry standards and norms, BizLink meets the demanding needs of various industrial applications.

BizLink has demonstrated its industrial expertise to machine builders, line and plant operators, as well as robot and measuring device manufacturers around the world. Whether your organization is a global OEM or a tier supplier, BizLink is ready to help you solve your most challenging industrial design and equipment needs.

Our strong focus on service and expanding product diversification drives us to continue developing these markets. With our broad product range, BizLink addresses market challenges through ongoing collaboration with technology leaders and user organizations, actively developing products and services to meet future trends, particularly in response to increasing digitalization.

Automation & Drives ***worldwide***



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Where Possibilities Connect™

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