



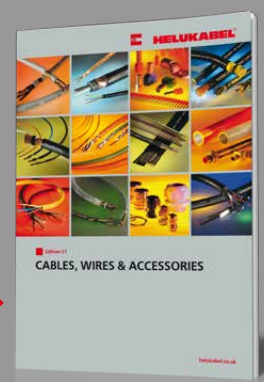
HELUKABEL®



Cable Selection Guide for Industrial Automation

Motor, servo, and feedback cables
Single core • Control cables
Data cables • Bus cables
Industrial Ethernet cables

Includes page references
for Version 27 of the
Cables, Wires & Accessories
catalogue



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5 CABLE QUALIFYING QUESTIONS

1. Are you looking for a flexible cable for fixed installation or occasional movements (page 4) or a highly flexible cable for continuous movements (page 14) such as a drag chain?
2. What kind of cable do I need (control cable, data cable, servo cable, BUS cable, ...)?
3. What kind of sheath material?
4. Screened or unscreened?
5. Without UL/CSA, with UL/CSA or according to NFPA 79?

Drag chain class

	DC1	DC2	DC3
Movement distance (max.)	5 m	15 m	50 m
Bending radius (min.)	10 x Ø	7,5 x Ø	7,5 x Ø ¹ Screened 5 x Ø ² Unscreened
Speed (max.)	2 m/s	3 m/s	5 m/s
Acceleration (max.)	10 m/s²	10 m/s²	50 m/s²
Cycles (min.)	1 Mio	5 Mio	5 Mio

This classification is intended as an initial pre-selection. The exact drag chain values can be found in Version 27 of the Cables, Wires and Accessories catalogue.

Notes

- red

Halogen-free cables
- green

Bio-oil & microbe-resistant cables
- blue

Intrinsically safe cables

* Oil resistance
Please contact us first for special applications.

Dimensions and specifications may change without prior notice.
Errors excepted.

RESEARCH & DEVELOPMENT

We develop optimal, customized cable solutions for our customers.

Research and development are the foundation of our work and are an important engine for growth. In interdisciplinary teams we continuously develop our products and seek to enhance them for multiple applications. Moreover, we rely on customer feedback as well as cooperation with regional colleges and research institutes.

The materials that will be used are an important starting point of our work. In this regard, we place as much emphasis on searching for and utilizing new materials as we do on manufacturing our plastic mixtures (granulates) ourselves, in order to enhance mechanical properties, such as oil resistance, temperature range or chemical compatibility. Furthermore, we are capable of pulling a majority of our copper ourselves, and thus ensure a uniform, high quality relative to properties and workmanship.



By continuously optimizing our manufacturing processes and procedures, we have become more efficient and economical, and yet we are still able to take the complex requirements of a wide variety of applications (such as cables for industrial robots or for applications under cleanroom conditions) into account.

A crucial stage in the development process of our products is the work done in our Test Centre. For example, cables suitable for drag chain implementation can be tested with acceleration up to 10 G. Temperature ranges from -50°C to +250°C are simulated in a special climate device so that drag chain cables can be tested for series production readiness before they are installed in applications like refrigerated warehouses or steel mills.

Our test facilities:

- Test systems for bending and torsion requirements
- Drag chain test systems with movement distances from 1 m, 3 m, 5 m, 6 m, 18 m, and 40 m
- Fire testing systems
- Abrasion testing systems
- Torsion test tower for wind turbines
- Aging ovens in accordance with UL, VDE, CSA, HAR, TÜV, CCC

PRODUCTION

We specialize in the production of high-quality cables and wires.

In our two German plants, using the latest production methods, we manufacture approximately one million conductor kilometers (= 77 times around the world) each year. More than 300 qualified employees are specialized in the production of high-quality standard and specialty cables. Through use of the latest materials and collaboration with international test institutes, we drive innovation in the areas of automation, data technology, building system technology, and renewable energy.
Since 2014, in a 7,000 m² facility in the Chinese city of Taicang (approx. 50 km northwest of Shanghai) HELUKABEL® has been producing cable and wires, primarily for the Asian region. As in the German plants, the focus here is also on high-quality, flexible and highly flexible cables and wires that are manufactured in accordance with Chinese and international standards. The use of flexible manufacturing cells enable short delivery times.



Continue: PRODUCTION



Our production in numbers:

- 40,000 m² production area
- 23 extruder systems
- 19 stranding machines
- 50 braiding machines
- Cables & wires from 0.05 to 1,000 mm²
- Manufacturing in accordance with: VDE, EAC (GOST-R), UL, CSA, HAR, CCC, Germanischer Lloyd, TÜV or customer specification

LOGISTICS

Cable industry logistics redefined.

At its corporate headquarters in the Swabian town of Hemmingen, HELUKABEL® operates Europe's largest distribution centre for cables and wires. This is where a majority of the more than 33,000 products are housed in a 160,000 m² storage area. Through the use of state-of-the-art conveyor and control technology, more than 1,000 orders can be picked and shipped daily to destinations around the world.

Neuenhagen/Berlin is the central warehouse location for underground cable, medium-voltage cable, and other infrastructure cables. Storage capacities of

more than 5,000 m² in the warehouse and 50,000 m² outdoors enable fast deliveries of cable, configured from 1 – 30 kV, to construction sites and major projects.

The patented heavy load length-cutting machines with more than 10 tons of load capacity are the largest of their type in Germany.

The new logistics centre at the Taicang (China) production facility serves as a product distribution hub for the Asian region, and offers incredible advantages, particularly for servicing time-critical and volume-critical major projects.



Industrial cables

Our logistics center – Hemmingen/Stuttgart

- 40,500 Euro-pallet racks 16 aisles with 16 storage and retrieval devices
- 35,900 bin locations in the automatic small parts warehouse capacity: 1,000 bins per hour
- 670 storage spaces in the heavy load warehouse: Reels to max. 4,000 kg and 2.20 m diameter
- 2 km conveyor line for pallets
- Conveyer connection directly to the length-cutting machines
- Manual processes reduced to merely packing

Infrastructure cables

Our logistics centre – Neuenhagen/Berlin

- 11,000 cable reels in stock
- Automatic processing of reels to 2.80 m Ø and 10 t
- 10 rewinding machines
- Cut to length with state-of-the-art 1,200 mm² cutting tools
- 24 h delivery is possible

CONTROL CABLE | Flexible cables for fixed installation or occasional movements

Control cables Halogen-free cables are marked in red / Bio-oil & microbe-resistant cables are marked in green / Intrinsically safe cables marked in blue	Sheath material	Screening	Voltage class	without UL Standard	UV-resistant	Colour	Core number	Temperature range	Cat. page
					Laying outside	Increased oil resistance*	Cross section	flexing	
								Fixed installation	
PVC	without screen	300/ 500V	JZ-500 flexible, numbered, VDE Reg.	no	grey	2 - 100	-15°C to +80°C	30	
		300/ 500V	JZ-500 black flexible, numbered	yes	black	2 - 25	-15°C to +80°C	32	
		300/ 500V	JB-500 flexible, colour coded	yes	no	0.5 - 35	-40°C to +80°C		
		300/ 500V	H05VV5-F (NYSLV6-JZ) flexible, numbered, extremely oil resistant	no	grey	2 - 25	-15°C to +80C	42	
		300/ 500V	H05VV5-F (NYSLV6-JZ) flexible, numbered, extremely oil resistant	no	grey	2 - 65	-5°C to +70°C	35	
		300/ 500V	H05VV5-F (NYSLV6-JZ) flexible, numbered, extremely oil resistant	no	yes	0.5 - 2.5	-40°C to +70°C		
		300/ 500V	JZ-500 orange flexible, VDE-Reg., for interlocking purposes	no	orange	2 - 5	-15°C to +80°C	33	
		300/ 500V	JZ-500 orange flexible, VDE-Reg., for interlocking purposes	no	no	1 - 2.5	-40°C to +80°C		
		300/ 500V	H05VV-F PVC sheathed cable	no	bw o. w	2 - 100	-5°C to +70°C	46	
		300/ 500V	H05VV-F PVC sheathed cable	no	no	0.5 - 185	-40°C to +70°C		
		300/ 500V	OZ-BL intrinsically safe, flexible, numbered	no	blue	2 - 41	-15°C to +80°C	105	
		300/ 500V	OZ-BL intrinsically safe, flexible, numbered	no	no	0.75 - 2.5	-40°C to +80°C		
		450/ 750V	JB-750 flexible, colour coded	no	grey	2 - 11	-15°C to +80°C	43	
		450/ 750V	JB-750 flexible, colour coded	no	no	2.5 - 185	-40°C to +80°C		
		450/ 750V	JB-750 yellow flexible, for warning indication	no	yellow	3 - 5	-15°C to +80°C	44	
		450/ 750V	JB-750 yellow flexible, for warning indication	no	no	1.5 - 2.5	-40°C to +80°C		
		0,6/ 1kV	JZ-600 flexible, numbered	yes	black	2 - 100	-15°C to +80°C	40	
		0,6/ 1kV	JZ-600 flexible, numbered	yes	no	0.5 - 185	-40°C to +80°C		
		with screen	300/ 500V	F-CY-JZ flexible, numbered, Cu-screened, VDE Reg.	no	grey	2 - 100	-10°C to +80°C	50
			300/ 500V	F-CY-JZ flexible, numbered, Cu-screened, VDE Reg.	no	no	0.5 - 50	-40°C to +80°C	
	300/ 500V		JZ - 500 C black flexible, numbered	yes	grey	2 - 100	-10°C to +80°C	52	
	300/ 500V		JZ - 500 C black flexible, numbered	yes	no	0.5 - 50	-40°C to +80°C		
	300/ 500V		H05VVC4V5-K (NYSLYCYÖ-JZ) flexible, numbered, oil-resistant, Cu-screened	no	grey	2 - 65	-5°C to +70°C	57	
	300/ 500V		H05VVC4V5-K (NYSLYCYÖ-JZ) flexible, numbered, oil-resistant, Cu-screened	no	yes	0.5 - 2.5	-40°C to +70°C		
	300/ 500V		Y-CY-JZ flexible, numbered, transparent, Cu-screened	no	transp.	2 - 100	-15°C to +80°C	53	
	300/ 500V		Y-CY-JZ flexible, numbered, transparent, Cu-screened	no	no	0.5 - 150	-40°C to +80°C		
	300/ 500V		Y-CY-JB flexible, colour coded, transparent, Cu-screened	no	transp.	2 - 5	-15°C to +80°C	62	
	300/ 500V		Y-CY-JB flexible, colour coded, transparent, Cu-screened	no	no	0.5 - 185	-40°C to +80°C		
	300/ 500V		SY-JZ flexible, numbered, with steel wire braiding	no	transp.	2 - 100	-15°C to +80°C	55	
	300/ 500V		SY-JZ flexible, numbered, with steel wire braiding	no	no	0.5 - 150	-40°C to +80°C		
	300/ 500V	SY-JB flexible, colour coded with steel wire braiding	no	transp.	2 - 12	-15°C to +80°C	64		
	300/ 500V	SY-JB flexible, colour coded with steel wire braiding	no	no	0.5 - 150	-40°C to +80°C			
	300/ 500V	OZ-BL-CY intrinsically safe, flexible, numbered, Cu-screened	no	blue	2 - 41	-10°C to +80°C	106		
	300/ 500V	OZ-BL-CY intrinsically safe, flexible, numbered, Cu-screened	no	no	0.5 - 1.5	-40°C to +80°C			
	300/ 500V	OB-BL-PAAR-CYr intrinsically safe, flexible, numbered, Cu-screened	no	blue	2 - 25	-10°C to +80°C	107		
	300/ 500V	OB-BL-PAAR-CYr intrinsically safe, flexible, numbered, Cu-screened	no	no	0.5 - 0.75	-30°C to +80°C			
	0,6/ 1kV	JZ-600-Y-CY flexible, numbered, Cu-screened	yes	black	2 - 25	-15°C to +80°C	60		
	0,6/ 1kV	JZ-600-Y-CY flexible, numbered, Cu-screened	yes	no	0.5 - 185	-40°C to +80°C			
	0,6/ 1kV	TOPFLEX® 600-C-PVC Motor power supply, Cu-screened	no	grey	4	-15°C to +80°C	198		
	0,6/ 1kV	TOPFLEX® 600-C-PVC Motor power supply, Cu-screened	no	no	1.5 - 120	-40°C to +80°C			
	Oil-resistant PUR	without screen	300/ 500V	JZ-500 PUR Wear resistant, numbered	yes	grey	2 - 42	-15°C to +80°C	67
			300/ 500V	JZ-500 PUR Wear resistant, numbered	yes	no	0.5 - 16	-40°C to +80°C	
300/ 500V			PUR6-JZ Wear resistant, coolant-resistant, extremely oil resistant	yes	grey	2 - 50	-20°C to +80°C	68	
300/ 500V			PUR6-JZ Wear resistant, coolant-resistant, extremely oil resistant	yes	no	0.5 - 95	-40°C to +80°C		
300/ 500V			PUR-ORANGE (also available as PUR-yellow, see page 71) abrasion resistant, coolant-resistant	yes	orange	2 - 7	-15°C to +80°C	70	
300/ 500V			PUR-ORANGE (also available as PUR-yellow, see page 71) abrasion resistant, coolant-resistant	yes	yes	0.75 - 35	-40°C to +80°C		
300/ 500V			H05BQ-F / H07BQ-F abrasion resistant, wear resistant, tear and cut-resistant	yes	orange	2 - 12	-40°C to +80°C	72	
300/ 500V			H05BQ-F / H07BQ-F abrasion resistant, wear resistant, tear and cut-resistant	yes	no	0.75-240	-50°C to +90°C		
300/ 500V			UNIPUR flexible at low temperature, wear resistant, robust, colour coded	yes	n. Kw.	2 - 41	-40°C to +90°C	73	
300/ 500V			UNIPUR flexible at low temperature, wear resistant, robust, colour coded	yes	yes	0.5 - 16	-		
450/ 750V		PUR-750 flexible at low temperature, colour coded, halogen-free	yes	orange	2 - 25	-40°C to +80°C	75		
450/ 750V		PUR-750 flexible at low temperature, colour coded, halogen-free	yes	yes	0.75 - 120	(short +100°C)			
with screen		300/ 500V	F-C-PUR6-JZ Notch resistant, numbered, coolant-resistant	yes	grey	2 - 50	-20°C to +80°C	78	
		300/ 500V	F-C-PUR6-JZ Notch resistant, numbered, coolant-resistant	yes	no	0.5 - 6	-40°C to +80°C		
		300/ 500V	YÖ-C-PURÖ-JZ Notch resistant, numbered, coolant-resistant	yes	grey	2 - 50	-20°C to +80°C	80	
		300/ 500V	YÖ-C-PURÖ-JZ Notch resistant, numbered, coolant-resistant	yes	yes	0.5 - 120	-40°C to +80°C		
300/ 500V		UNIPUR-CP flexible at low temperature, wear resistant, robust, colour coded, Cu-screended	yes	n. Kw.	2 - 41	-40°C to +90°C	82		
300/ 500V		UNIPUR-CP flexible at low temperature, wear resistant, robust, colour coded, Cu-screended	yes	yes	0.5 - 16	-			
FRNC Halogen-free	without screen	300/ 500V	JZ-500 HMH flexible, numbered, extremely fire resistant, oil-resistant, halogen-free	no	grey	2 - 65	-15°C to +70°C	86	
		300/ 500V	JZ-500 HMH flexible, numbered, extremely fire resistant, oil-resistant, halogen-free	no	yes	0.5 - 120	-40°C to +70°C		
		300/ 500V	MEGAFLEX® 500 flexible, halogen-free, flame retardant, oil-resistant	yes	grey	2 - 65	-30°C to +80°C	88	
		300/ 500V	MEGAFLEX® 500 flexible, halogen-free, flame retardant, oil-resistant	yes	no	0.5 - 150	-40°C to +80°C		
		450/ 750V	H07 ZZ-F Halogen-free, cross-linked sheathed cable	no	black	1 - 36	-5°C to +70°C	90	
	450/ 750V	H07 ZZ-F Halogen-free, cross-linked sheathed cable	no	no	1.5 - 300	-20°C to +70°C			
	450/ 750V	JB-750 HMH flexible, colour-coded, halogen-free, extremely fire resistant, oil-resistant	no	grey	3 - 5	-15°C to +70°C	93		
	450/ 750V	JB-750 HMH flexible, colour-coded, halogen-free, extremely fire resistant, oil-resistant	no	yes	1.5 - 120	-40°C to +70°C			
	0,6/ 1kV	JZ-600 HMH flexible, numbered, extremely fire resistant, oil-resistant, halogen-free	yes	black	2 - 25	-15°C to +70°C	91		
	0,6/ 1kV	JZ-600 HMH flexible, numbered, extremely fire resistant, oil-resistant, halogen-free	yes	yes	0.5 - 120	-40°C to +70°C			
with screen	300/ 500V	JZ-500 HMH-C flexible, numbered, oil-resistant, halogen-free, Cu-screened, extremely fire resistant	no	grey	2 - 25	-15°C to +70°C	96		
	300/ 500V	JZ-500 HMH-C flexible, numbered, oil-resistant, halogen-free, Cu-screened, extremely fire resistant	no	yes	0.5 - 120	-40°C to +70°C			
	300/ 500V	MEGAFLEX® 500-C flexible, halogen-free, flame retardant, oil-resistant, Cu-screened	yes	grey	2 - 25	-30°C to +80°C	98		
	300/ 500V	MEGAFLEX® 500-C flexible, halogen-free, flame retardant, oil-resistant, Cu-screened	yes	no	0.5 - 150	-40°C to +80°C			
	450/ 750V	JB-750 HMH-C flexible, colour-coded, oil-resistant, halogen-free, Cu-screened, extremely fire resistant	no	grey	3 - 5	-15°C to +70°C	102		
450/ 750V	JB-750 HMH-C flexible, colour-coded, oil-resistant, halogen-free, Cu-screened, extremely fire resistant	no	yes	1.5 - 120	-40°C to +70°C				
0,6/ 1kV	JZ-600 HMH-C flexible, numbered, oil-resistant, halogen-free, Cu-screened, extremely fire resistant	yes	black	3 - 25	-15°C to +70°C	100			
0,6/ 1kV	JZ-600 HMH-C flexible, numbered, oil-resistant, halogen-free, Cu-screened, extremely fire resistant	yes	yes	0.5 - 150	-40°C to +70°C				
TPE-O Oil-resistant	without screen	300/ 500V	KOMPOFLEX JZ-500 halogen-free, numbered, microbe-resistant	yes	black	2 - 61	-30°C to +90°C	112	
	with screen	300/ 500V	KOMPOFLEX JZ-500 halogen-free, numbered, microbe-resistant	yes	yes	0.5 - 50	-40°C to +100°C		
300/ 500V	KOMPOFLEX JZ-500-C halogen-free, numbered, Cu-screen	yes	black	2 - 61	-30°C to +90°C	113			
300/ 500V	KOMPOFLEX JZ-500-C halogen-free, numbered, Cu-screen	yes	yes	0.5 - 50	-40°C to +100°C				

DATA CABLES | Flexible cables for fixed installation or occasional movements

Data cables Halogen-free cables are marked in red	Sheath material	Screening	Voltage class (Peak operating voltage)	without UL Standard	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
					Laying outside	Increased oil resistance*	Cross section	flexing	
								Fixed installation	
PVC	without screen		300/ 500V	TRONIC (LiYY) flexible, colour code according to DIN 47100	no	grey	2 - 100	-5°C to +80°C	124
					no	no	0.14 - 1.5	-40°C to +80°C	
			300/ 500V	PAAR-TRONIC twisted pairs, flexible, colour code according to DIN 47100	no	grey	1 - 55	-5°C to +80°C	126
					no	no	0.14 - 0.75	-30°C to +80°C	
			350V	SENSORFLEX Senor actuator cable, colour coded	no	gb/or	3 - 5	-5°C to +80°C	128
	with screen		300/500V	VERTEILERFLEX for senor actuator cable, colour coded	no	no	0.25 - 0.34	-30°C to +80°C	129
					no	grey/bw	3 - 5	-5°C to +80°C	
					no	no	0.25 - 0.34	-30°C to +80°C	
			250V	PAAR-TRONIC-Li-2YCYw PE-insulated, low capacitance, Termi-Point®, colour-coded	no	black	2 - 10	-5°C to +70°C	138
					yes	no	0.22 - 1	-30°C to +80°C	
			250V	PAAR-TRONIC-Li-2YCY PE-insulated, low capacitance, Termi-Point®, colour-coded	no	grey	2 - 10	-5°C to +70°C	139
					no	no	0.2	-30°C to +80°C	
			350V	LifYCY Highly flexible, in pairs, fully screened	no	grey	2 - 32	-5°C to +70°C	140
					no	no	0.22 - 0.5	-40°C to +70°C	
			300/ 500V	TRONIC-CY (LiY-CY) flexible, colour code according to DIN 47100, Cu-screened	no	grey	1 - 100	-5°C to +80°C	131
					no	no	0.14 - 1.5	-40°C to +80°C	
			300/ 500V	PAAR-TRONIC-CY twisted pairs, flexible, colour code according to DIN 47100, Cu-screened	no	grey	1 - 61	-5°C to +80°C	133
					no	no	0.14 - 1.5	-30°C to +80°C	
			300/ 500V	PAAR-CY-OZ twisted pairs, flexible, numbered, Cu-screened	no	grey	2 - 25	-5°C to +80°C	135
					no	no	1 - 1.5	-40°C to +80°C	
FRNC Halogen-free	without screen		300/ 500V	DATAFLAMM Halogen-free	no	grey	2 - 50	+5°C to +70°C	130
					no	no	0.14 - 0.75	-40°C to +70°C	
	with screen		350V	DATAFLAMM-C Halogen-free, Cu-screened	no	grey	2 - 40	+5°C to +70°C	145
					no	no	0.14 - 0.75	-40°C to +70°C	
			350V	DATAFLAMM-C PAAR Halogen-free, Cu-screened	no	grey	2 - 18	+5°C to +70°C	146
					no	no	0.14 - 0.75	-40°C to +70°C	
Oil-resistant PUR	without screen								
	with screen		350V	DATAPUR-C flexible, colour code according to DIN 47100, Cu-screened	yes	grey	2 - 25	-5°C to +80°C	144
					yes	yes	0.14 - 0.5	-40°C to +80°C	
FRNC Halogen-free	without screen		300/ 500V	DATAFLAMM Halogen-free	no	grey	2 - 50	+5°C to +70°C	130
					no	no	0.14 - 0.75	-40°C to +70°C	
	with screen		350V	DATAFLAMM-C Halogen-free, Cu-screened	no	grey	2 - 40	+5°C to +70°C	145
					no	no	0.14 - 0.75	-40°C to +70°C	
			350V	DATAFLAMM-C PAAR Halogen-free, Cu-screened	no	grey	2 - 18	+5°C to +70°C	146
					no	no	0.14 - 0.75	-40°C to +70°C	
Oil-resistant PUR	without screen								
	with screen		350V	DATAPUR-C flexible, colour code according to DIN 47100, Cu-screened	yes	grey	2 - 25	-5°C to +80°C	144
					yes	yes	0.14 - 0.5	-40°C to +80°C	
FRNC Halogen-free	without screen		300/ 500V	DATAFLAMM Halogen-free	no	grey	2 - 50	+5°C to +70°C	130
					no	no	0.14 - 0.75	-40°C to +70°C	
	with screen		350V	DATAFLAMM-C Halogen-free, Cu-screened	no	grey	2 - 40	+5°C to +70°C	145
					no	no	0.14 - 0.75	-40°C to +70°C	
			350V	DATAFLAMM-C PAAR Halogen-free, Cu-screened	no	grey	2 - 18	+5°C to +70°C	146
					no	no	0.14 - 0.75	-40°C to +70°C	
Oil-resistant PUR	without screen								
	with screen		350V	DATAPUR-C flexible, colour code according to DIN 47100, Cu-screened	yes	grey	2 - 25	-5°C to +80°C	144
					yes	yes	0.14 - 0.5	-40°C to +80°C	

SINGLE CORES | Flexible cables for fixed installation or occasional movements

Single cores Halogen-free cables are marked in red	Sheath material	Screening	Voltage class	without UL Standard	UV-resistant	Colour	Core number	Temperature range	Cat. page
					Laying outside	Increased oil resistance*	Cross section	flexing	
								Fixed installation	
PVC	without screen		300/ 500V	H05V-K PVC core, fine stranded	no	different	1	-5°C to +70°C	289
					no	no	0.5 - 1	-30°C to +80°C	
			450/ 750V	H07V-K/ (H)07V-K PVC core, fine stranded	no	different	1	-5°C to +70°C	291
					no	no	1.5 - 240	-30°C to +80°C	
				H05V-K 300/ 500V (H)07V-K 2-coloured 450/750V	no	different	1	-5°C to +70°C	293
					no	no	0.5 - 240	-30°C to +80°C	
				H05V-K Fassware 300/500V H07V-K Fassware 450/750V	no	different	1	-5°C to +70°C	296
					no	no	0.5 - 6	-30°C to +80°C	
				H05V-U / (H)05V-U / (H)07V-U 05= 300/ 500V, 07= 450/750V	no	different	1	-5°C to +70°C	294
					no	no	0.5 - 10	-30°C to +80°C	
	with screen		450/ 750V	H07V-R PVC single-cores multi-wire	no	different	1	-5°C to +70°C	295
					no	no	16 - 240	-30°C to +80°C	
			300/ 500V	H05V2-K/LiYW PVC single-cores, 90°C, heat-resistant	no	different	0.5 - 1	+5°C to +90°C	303
					no	different	0.14 - 0.5	-10°C to +105°C	
			450/ 750V	H07V2-K PVC single-cores, 90°C, heat-resistant	no	bw	1	+5°C to +90°C	304
					no	no	1.5 - 240	-	
Oil-resistant PUR	without Screen		1kV	PUR-SINGLE CORES Cold resistant, halogen-free	yes	different	1	-40°C to +80°C	299
					yes	no	0.5 - 1.5	-	
	with screen								
FRNC	without screen		300/ 500V	HELUTERM 145 flexible, cross-linked, halogen-free,	yes	different	1	-	305
			450/ 750V		yes	no	0.25 - 240	-55°C to +145°C	
	with screen								

* Extremely oil resistant: Please contact us first for special applications.

Voltage class	According to UL/CSA	NFPA	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
			Laying outside	Increased oil resistance*	Cross section	flexing	
						Fixed installation	
300V	Control cable UL (LiYY) Style 2464/300V (80°C)	no	no	bw o. gr	2 - 30	-10°C to +80°C	403
			no	no	0.14 - 1.3	-20°C to +80°C	
600V	Control cable UL (LiYY) Style 2516/600V (105°C)	no	no	bw o. gr	2 - 36	-10°C to +105°C	404
			no	no	2.08 - 3.2	-20°C to +105°C	
300V	Control cable UL (LiYY-TP) twisted pairs, Style 2464/300V (80°C)	no	no	bw o. gr	1 - 25	-10°C to +80°C	407
			no	no	0.14 - 0.56	-20°C to +80°C	
300V	TRAYCONTROL 300 flexible, oil-resistant, NPFA79	yes	no	grey	2 - 50	-25°C to +105°C	405
			no	yes	0.08 - 1.5	-	
300V	TRAYCONTROL 300 TP twisted pairs, flexible, oil-resistant, NPFA79	yes	no	grey	1 - 250	-25°C to +105°C	409
			no	yes	0.14 - 1.0	-	
300V	Control cable UL (LiYCY) Style 2464/300V (80°C), Cu-screened	no	no	bw o. gr	2 - 30	-10°C to +80°C	413
			no	no	0.14 - 1.3	-20°C to +80°C	
300V	Control cable UL (LiYCY) twisted pairs, Cu-screened, Style 2464/300V (80°C)	no	no	bw o. gr	1 - 25	-10°C to +80°C	418
			no	no	0.14 - 0.56	-20°C to +80°C	
300V	TRAYCONTROL 300-C flexible, Cu-screened, oil-resistant, NPFA79	yes	no	grey	2 - 50	-	416
			no	yes	0.08 - 1.5	-25°C to +105°C	
300V	TRAYCONTROL 300-C TP twisted pairs, flexible, Cu-screened, oil-resistant, NPFA79	yes	no	grey	1 - 25	-	420
			no	yes	0.14 - 1.0	-25°C to +105°C	
600V	Control cable UL (LiYCY) Style 2516/600V (105°C), Cu-screened	no	no	bw o. gr	2 - 30	-10°C to +105°C	415
			no	no	2.08 - 3.2	-20°C to +105°C	
0,6/ 1kV	HELWIND WK 135-T UV-resistant, Single-/Multicore 90°C	no	yes	black	1 - 32	-40°C to +90°C	810
			yes	yes	0.34 - 400	-40°C to +90°C	
0,6/ 1kV	HELWIND WK 135 D-EMV T UV-resistant, Single-/Multicore 90°C	no	yes	black	1 - 32	-40°C to +90°C	810
			yes	yes	0.34 - 300	-40°C to +90°C	
0,6/ 1kV	HELWIND WK 137 D-EMV T UV-resistant, Single-/Multicore 90°C	no	yes	black	3 - 18	-40°C to +90°C	811
			yes	yes	0.75 - 35	-40°C to +90°C	
0,6/ 1kV	HELWIND WK 137-T FT4 UV-resistant, Single-/Multicore 90°C	no	yes	black	3 - 18	-40°C to +90°C	811
			yes	yes	0.75 - 35	-40°C to +90°C	
0,6/ 1kV	HELWIND WK 137 D-EMV T UV-resistant, Single-/Multicore 90°C	no	yes	black	3 - 18	-40°C to +90°C	811
			yes	yes	0.75 - 35	-40°C to +90°C	

* Extremely oil resistant: Please contact us first for special applications.

MOTOR AND SERVO CABLES | Flexible cables for fixed installation or occasional movements

	Sheath material	Screening	Voltage class	without UL Standard	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
					Laying outside	Increased oil resistance*	Cross section	flexing	
								Fixed installation	
Motor & servo cables	PVC	without screen	0,6/ 1kV	TOPFLEX® 600-PVC Motor cable without pair, flexible, numbered	no	grey	4	-15°C to +80°C	197
		with screen	0,6/ 1kV	TOPFLEX® 600-C-PVC Motor cable without pair, flexible, Cu-screened, numbered	no	grey	4	-15°C to +80°C	198
			0,6/ 1kV	TOPFLEX®-EMV-2YSLCYK-J Motor cables for power supply connections to frequency converters	no	no	1,5 - 120	-40°C to +80°C	204
			0,6/ 1kV	TOPFLEX®-EMV-3 PLUS 2YSLCY-J Motor cables for power supply connections to frequency converters	no	transp.	4	-5°C to +70°C	205
			0,6/ 1kV	TOPFLEX®-EMV-UV-2YSLCK-J Motor cables for power supply connections to frequency converters	no	no	1,5 - 185	-40°C to +70°C	206
			0,6/ 1kV	TOPFLEX®-EMV-UV-3 PLUS 2YSLCYK-J Motor-supply cable with control cores	yes	black	4	-5°C to +70°C	207
			0,6/ 1kV	TOPFLEX®-EMV-UV-2XSLCYK-J Motor-supply cable with control cores	yes	no	1,5 - 185	-40°C to +70°C	209
			0,6/ 1kV	TOPFLEX®-EMV-UV-3 PLUS 2XSLCYK-J Motor-supply cable with control cores	yes	black	4	-5°C to +90°C	211
			0,6/ 1kV	TOPFLEX®-EMV-UV-2XSLCH-J Motor-supply cable with control cores	yes	no	1,5 - 240	-40°C to +90°C	213
			0,6/ 1kV	TOPFLEX®-EMV-UV-3 PLUS 2XSLCH-J Motor-supply cable with control cores	yes	black	4	-5°C to +90°C	215
			0,6/ 1kV	TOPFLEX® MOTOR 109 Low capacitance motor power supply cable, increased load rating	no	no	1,5 - 240	-40°C to +90°C	217
			0,6/ 1kV		yes	orange	3 - 7	-5°C to +70°C	
			0,6/ 1kV		yes	no	1,5 - 25	-40°C to +80°C	
	Oil-resistant PUR	without screen							
		with screen	0,6/ 1kV	TOPFLEX® MOTOR 109 Low capacitance motor power supply cable, increased load rating	yes	orange	3 - 7	-5°C to +70°C	217
					yes	no	1,5 - 25	-40°C to +80°C	

FEEDBACK CABLES | Flexible cables for fixed installation or occasional movements

	Sheath material	Screening	Voltage class	without UL Standard	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
					Laying outside	Increased oil resistance*	Cross section	flexing	
								Fixed installation	
Feedback cables	PVC	without screen							
		with screen	300V	Feedback cables PVC	no	grey	-	-5°C to +70°C	202
	PUR Oil-resistant	without screen			no	no	-	-30°C to +80°C	
		with screen	300V	Feedback cables PUR	no	grey	-	-30°C to +80°C	203
					no	no	-	-40°C to +80°C	

* Extremely oil resistant: Please contact us first for special applications.

Energy drag chains

Energy drag chains

- Open chains
- Closed chains
- Accessories
- Installation instructions
- Selection tables

YOU WILL FIND ADDITIONAL ACCESSORIES IN THE CABLE ACCESSORIES CATALOGUE!



Voltage class	According to UL/CSA	NFPA	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
			Laying outside	Increased oil resistance*	Cross section	flexing	
						Fixed installation	
0,6/ 1kV	TOPSERV® 108 PVC acc. to Siemens 6FX5008 Motor cable without pair, flexible, Cu-screened, numbered	no	no	orange	4	-0°C to +60°C	465
0,6/ 1kV	TOPSERV® 112 PVC acc.to such as Siemens 6FX5008, Lenze Servo cable with single pair, flexible, Cu-screened	no	no	orange	4	0°C to +60°C	465
0,6/ 1kV	TOPSERV® 119 PVC similar Indramat INK Servo cable with two pairs, flexible, Cu-screened	no	no	orange	4	-0°C to +60°C	465
0,6/ 1kV	TOPFLEX® 600 VFD Motor cable without pair, flexible	yes	yes	or o. bw	4	-25°C to +90°C	458
0,6/ 1kV	TOPFLEX® 650 VFD Servo cable with single pair	yes	yes	or o. bw	4	-25°C to +105°C	459
1kV	TOPFLEX®-EMV-UV-2YSLCYK Motor cables for power supply connections to frequency converters	no	yes	black	4	-5°C to +80°C	453
1kV	TOPFLEX®-EMV-UV-3 PLUS 2YSLCYK-J Motor cables for power supply connections to frequency converters	no	yes	black	3	-5°C to +80°C	455
1kV	TOPFLEX®-EMV-UV-2YSLAC11Y-J UL/CSA Motor cables for power supply connections to frequency converters	no	yes	black	4	-5°C to +80°C	461
1kV	TOPFLEX® 1000 VFD Motor-supply cable with control cores	yes	yes	black	4	-5°C to +80°C	460
1kV	TOPSERV® Hybrid Hybrid cable for SICK HIPERFACE DSL motor-feedback systems	no	yes	orange	8	-30°C to +80°C	474

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Voltage class	According to UL/CSA	NFPA	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
			Laying outside	Increased oil resistance*	Cross section	flexing	
						Fixed installation	
30V + 300V	TOPGEBER 511 PVC acc. to such as Siemens 6FX5008, Lenze, similar to Indramat	no	no	gn o. or	-	-0°C to +60°C	467
			no	yes	-	-20°C to +80°C	
30V + 300V	TOPGEBER 512 PVC acc. to such as Siemens 6FX5008, Lenze, similar to Indramat	no	yes	gn	-	-30°C to +80°C	470
			yes	no	-	-40°C to +80°C	

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Bundling, binding, and fastening

Bundling, binding, and fastening

- Plastic helix
- Cable tie
- Velcro fastener
- Mounting base

YOU WILL FIND ADDITIONAL ACCESSORIES IN THE CABLE ACCESSORIES CATALOGUE!



PROFINET / INDUSTRIAL ETHERNET | Flexible cables for fixed installation or occasional movements

	Category	Sheath material	Frequency range	without UL Standard	UV-resistant	Article number		Temperature range	Cat. page
					Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame resistant	
INDUSTRIAL ETHERNET <small>Halogen-free cables are marked in red</small>	CAT 5e	PVC		Cables are only available with UL/CSA standard; shown on the opposite column, right page					
		FRNC	100 MHz	HELUKAT® 100IND, SF/UTP 2x2xAWG24/1	no		805699	-30°C to +80°C	AUR
			100 MHz	HELUKAT® 100IND, SF/UTP 2x2xAWG26/7	no		805701	-5°C to +60°C	AUR
				Cables are only available with UL/CSA standard; shown on the opposite column, right page	no		5,6 mm	IEC 60332-1-2	
		PUR	100 MHz	HELUKAT® 100IND PROFinet A, robust 2x2xAWG22/1, Fast Connect	yes		801194	-40°C to +80°C	699
			100 MHz	HELUKAT® 200IND S-FTP, Robustflex 4x2xAWG26/7	no		800068	-40°C to +80°C	692
			100 MHz	HELUKAT® 100IND PROFinet A, radiation-resistant 2x2xAWG22/7, Fast Connect	yes		801195	-40°C to +80°C	700
	CAT 6 / CAT 6 _a	PVC		Cables are only available with UL/CSA standard; shown on the opposite column, right page					
	CAT 7 / CAT7 _u / CAT 7e	FRNC PVC	600 MHz	HELUKAT® 600IND S/STP, robust 4x2xAWG23/1	no		801197	-40°C to +80°C	687
			600 MHz	HELUKAT® 600IND S/FTP, SHIPLINE 4x2xAWG24/7	no		803382	-20°C to +75°C	688
		PUR		Cables are only available with UL/CSA standard; shown on the opposite column, right page					

Frequency range	According to UL/CSA	NFPA	UV-resistant	Article number		Temperature range	Cat. page
			Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame resistant	
100 MHz	HELUKAT® 100IND PROFinet A FRNC, fixed laying CMG 2x2xAWG22/1, Fast Connect	yes	no		805653	-40°C to +80°C	699
100 MHz	HELUKAT® 100IND PROFinet B, flexible CMG 2x2xAWG22/7, Fast Connect	yes	yes		800654	-40°C to +70°C	703
100 MHz	HELUKAT® 100IND PROFinet B, Festoon 2x2xAWG22/7, Fast Connect	yes	yes		803295	-10°C to +80°C	702
100 MHz	HMCB200 Industrial Ethernet PVC green UL Style 2502	no	no		802471	-20°C to +80°C	724
100 MHz	HMCB500S Industrial Ethernet PVC green UL Style 2502	no	no		803672	0°C to +60°C	725
100 MHz	HELUKAT® 100IND PROFinet A FRNC, fixed laying CMG 2x2xAWG22/1, Fast Connect	yes	no		805653	-40°C to +80°C	699
100 MHz	HELUKAT® 100IND PROFinet B, flexible CMG 2x2xAWG22/7, Fast Connect	yes	yes		800654	-40°C to +70°C	703
100 MHz	HELUKAT® 100IND PROFinet B, hybrid UL style 21282 2x2xAWG22/7+4x1,5	no	yes		801651	-40°C to +70°C	701
100 MHz	HELUKAT® 100IND PROFinet B, WINDKRAFT 105°C 2x2xAWG22/7, Fast Connect	yes	yes		802293	-40°C to +105°C	693
100 MHz	HELUKAT® 100IND PROFinet B, Shipline 2x2xAWG22/7, Fast Connect	yes	yes		802185	-40°C to +70°C	702
	Cables are only available without UL/CSA standard; shown on the opposite column, left page						
250 MHz	HELUKAT® 250IND SF/UTP, AWM 4x2xAWG24/1	no	no		805681	-40°C to +80°C	AUR
250 MHz	HELUKAT® 250IND SF/UTP, CMG 4x2xAWG24/1	yes	no		805655	-40°C to +80°C	AUR
500 MHz	HELUKAT® 500IND S/FTP, 10GIG CM 4x2xAWG22/1	yes	no		803693	-40°C to +70°C	690
	Cables are only available without UL/CSA standard; shown on the opposite column, left page						
	Cables are only available without UL/CSA standard; shown on the opposite column, left page						
600 MHz	HELUKAT® 600IND S/FTP, Robustflex UL style 20963 4x2xAWG26/7	no	no		802184	-40°C to +80°C	689

BUS CABLES | Flexible cables for fixed installation or occasional movements

Bus system	Sheath material	Installation range	Impedance	without UL Standard	UV-resistant	Article number		Temperature range	Cat. page
					Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame resistant	
Profibus 150 OHM <small>Halogen-free cables are marked in red</small>	PVC	Indoor	150 OHM	Profibus high temperature +105°C 1x2x0,64 mm			805705	-40°C to +105°C	AUR
							7,8 mm	IEC 60332-1-2	
	PUR (oil resistant)	Indoor	150 OHM	Profibus L2 1x2x0,64 mm PUR petrol	no		81186	-40°C to +70°C	706
	FRNC	Indoor	150 OHM	Profibus L2 1x2x0,64 mm Shipline violet	no		802178	-25°C to +80°C	711
					no		8,0 mm	IEC 60332-1-2	
			150 OHM	Profibus high temperature +200°C 1x2xAWG23/1	no		805706	-50°C to +200°C	AUR
	PE	Indoor			no		8,3 mm	IEC 60332-1-2	
			150 OHM	Profibus Profibus, fixed installation, PH120 1x2xAWG23/1	no		805695	-20°C to +70°C	AUR
					no		8,3 mm	VDE0482-332-1-2	
			150 OHM	Profibus L2 1x2x0,64 mm PE black Outdoor	yes		80792	-40°C to +70°C	706
			150 OHM	Profibus L2 1x2x0,64 mm PVC/PE black direct burial	yes		82824	-40°C to +80°C	707
	FEP		150 OHM	Profibus L2 1x2x0,64 mm PVC/PE black Direct burial armoured	yes		802177	-40°C to +80°C	707
			150 OHM	Profibus L1 1x2x0,64 mm PE black Outdoor, Fast Connect	yes		81904	-20°C to +70°C	715
			150 OHM	Profibus L2 1x2x0,64 mm high temperature +180°C violet	no		802179	-50°C to +180°C	711
Profibus PA 100 OHM	PVC	Indoor	100 OHM	Profibus PA armoured 1x2x1,0/ 2,55 PVC/PVC black	yes		802181	-20°C to +70°C	715
			100 OHM	Profibus PA armoured 1x2x1,0/2,55 PVC/PVC blue EX	yes		no	10,2 mm	IEC 60332-1-2
					no		802180	-20°C to +70°C	715
					no		no	10,2 mm	IEC 60332-1-2

* Extremely oil resistant: Please contact us first for special applications.
AUR = Available upon request, or refer to the "Data, Network and BUS Technology" catalogue

Impedance	acc. to UL/CSA (please note exceptions)	NFPA	UV-resistant	Article number		Temperature range	Cat. page
			Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame resistant	
150 OHM	Profibus L2 1x2x0,64 mm PVC grey CMX	yes	no no	80384 no	7,8 mm	-40°C to +70°C IEC 60332-1-2	705
150 OHM	Profibus L2 1x2x0,64 mm PVC violet CMX	yes	no no	81448 no	7,8 mm	-40°C to +70°C IEC 60332-1-2	705
150 OHM	Profibus SK 1x2x0,64 mm VC violet CMG Fast Connect	yes	yes no	81903 no	8,0 mm	-40°C to +80°C IEC 60332-3	717
150 OHM	Profibus L2/FIP 7-wire 1x2x0,64 mm PVC violet UL 2571 continuous movements, no CSA!	no	no no	800648 no	7,8 mm	-20°C to +80°C EN 50265-2-1	708
150 OHM	Profibus SK 1x2x0,64 mm PUR violet UL style 20236 Fast Connect	no	yes no	81905 yes	8,0 mm	-40°C to +70°C IEC 60332-1-2	718
150 OHM	Profibus SK 1x2x0,64 mm FRNC violet CM Fast Connect	yes	no no	81501 no	8,0 mm	-25°C to +70°C EN 50265-2-1	718
	Cables are only available without UL/CSA standard; shown on the opposite column, left page						
	Cables are only available without UL/CSA standard; shown on the opposite column, left page						
100 OHM	Profibus PA 1x2x1,0/ 2,55 mm PVC black UL Style 2571, no CSA!	no	no no	82836 no	7,6 mm	-30°C to +80°C IEC 60332-1-2	714
100 OHM	Profibus PA Long Distance 1x2x1,6/ 3,2 mm PVC black, no CSA! UL Style 2571	no	no no	800715 no	9,5 mm	-40°C to +70°C IEC 60332-1-2	716
100 OHM	Profibus PA 1x2x1,0/2,55 mm PVC blue EX, UL Style 2571, no CSA	no	no no	82835 no	7,6 mm	-30°C to +80°C IEC 60332-1-2	714
100 OHM	Profibus PA Long Distance 1x2x1,6/3,2 mm PVC blue EX no SCA, UL Style 2571	no	no no	800650 no	9,5 mm	-40°C to +70°C IEC 60332-1-2	716

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CONTROL CABLE | Highly flexible cables for continuous movements, such as drag chains

	Sheath material	Screening	Drag chain class	Voltage class	without UL Standard	UV-resistant	Colour	Core number	Temperature range	Cat. page
						Laying outside	Increased oil resistance*	Cross section	flexing	
									Fixed installation	
Control cables Halogen-free cables are marked in red / Bio-oil & fuel-resistant cables are marked in green	PVC	without screen		300/ 500V	JZ-HF highly flexible, numbered, oil-resistant, VDE-Reg.	no	grey	2 - 65	-10°C to +80°C	160
				300/ 500V	MULTISPEED® 500-PVC Highly flexible, numbered, low torsion, 7 or more cores are bunch stranded	no	yes	0.5 - 16	-40°C to +80°C	162
						yes	black	2 - 42	-15°C to +80°C	
		with screen		300/ 500V	JZ-HF-CY Highly flexible, screened, VDE-Reg., oil-resistant	no	grey	2 - 61	-10°C to +80°C	163
				300/ 500V	MULTISPEED® 500-C-PVC Highly flexible, numbered, low torsion, 7 or more cores are bunch stranded, Cu-screened	no	yes	0.5 - 16	-40°C to +80°C	165
						yes	black	2 - 25	-15°C to +80°C	
	Oil-resistant PUR	without screen		300/ 500V	PURö-JZ-HF Highly flexible, coolant-resistant, oil-resistant	yes	grey	2 - 65	-20°C to +80°C	167
				300/ 500V	MULTIFLEX 512®-PUR highly flexible, extreme conditions, numbered, halogen-free, oil-resistant,	yes	grey	2 - 65	-30°C to +80°C	169
				300/ 500V	MULTISPEED® 500-PUR safety against high bending, low torsion, halogen-free, 7 or more cores are bunch stranded	yes	yes	0.5 - 16	-50°C to +80°C	
						yes	black	2 - 42	-30°C to +80°C	171
		with screen		0,6/ 1kV	TOPFLEX® 611-PUR Motor power supply, halogen-free	yes	grey	4	-30°C to +80°C	199
						yes	yes	1.5 - 120	-40°C to +80°C	
				300/ 500V	PURö-JZ-HF-YCP Highly flexible, numbered, Cu-screened,	yes	grey	2 - 65	-20°C to +80°C	172
						yes	yes	0.5 - 16	-40°C to +80°C	
				300/ 500V	MULTIFLEX 512®-C-PUR highly flexible, extreme conditions, halogen-free, Cu-screened	yes	grey	2 - 36	-30°C to +80°C	174
						yes	yes	0.5 - 16	-50°C to +80°C	
				300/ 500V	MULTISPEED® 500-C-PUR safety against high bending, low torsion, halogen-free, 7 or more cores are bunch stranded, Cu-screened	yes	dark blue	2 - 25	-30°C to +80°C	176
						yes	yes	0.5 - 2.5	-40°C to +80°C	
	TPE-O Oil-resistant	without screen		0,6/ 1kV	TOPFLEX® 611-C-PUR Motor power supply, halogen-free, Cu-screened	no	grey	4	-30°C to +80°C	200
						no	yes	1.5 - 120	-40°C to +80°C	
		with screen		300/ 500V	MULTISPEED® 500-TPE safety against high bending, low torsion, halogen-free, 7 or more cores are bunch stranded	yes	dark blue	2 - 42	-30°C to +80°C	177
						yes	yes	0.5 - 35	-40°C to +80°C	
	TPE-O Oil-resistant	without screen		300/ 500V	KOMPOSPEED JZ-HF-500 Highly flexible, halogen-free, numbered, microbe-resistant	yes	black	2 - 25	-30°C to +90°C	184
						yes	yes	0.5 - 2.5	-40°C to +100°C	
		with screen		300/ 500V	MULTISPEED® 500-C-TPE safety against high bending, low torsion, halogen-free, screened, 7 or more cores are bunch stranded	yes	dark blue	2 - 25	-30°C to +80°C	179
						yes	yes	0.5 - 4	-40°C to +80°C	
	TPE-O Oil-resistant	with screen		300/ 500V	KOMPOSPEED JZ-HF-500-C Highly flexible, halogen-free, numbered, Cu-screened, microbe-resistant	yes	black	2 - 25	-30°C to +90°C	185
						yes	yes	0.5 - 2.5	-40°C to +100°C	

* Extremely oil resistant: Please contact us first for special applications.

Drag chain class	Voltage class	According to UL/CSA	NFPA	UV-resistant	Colour	Core number	Temperature range	Cat. page
				Laying outside	Increased oil resistance*	Cross section	flexing	
							Fixed installation	
	600V	JZ-602 RC highly flexible, red cores	no	yes	black	3 - 34	-5°C to +90°C	423
	600V	MULTISPEED® 500-PVC UL/CSA safety against high bending, low torsion, 7 or more cores are bunch stranded, extruded as filler w/ pressure	no	yes	yes	0.5 - 35	-40°C to +90°C	425
	600V	MULTIFLEX 600 Highly flexible, oil-resistant, numbered, for exposed run TC-ER, PLTC-ER, ITC-ER	yes	yes	black	2 - 60	-5°C to +90°C	424
	600V	JZ-602 RC-CY Highly flexible, Cores red, screened (D-screen)	no	yes	yes	AWG20 - AWG2	-40°C to +90°C	427
	600V	MULTISPEED® 500-C-PVC UL/CSA safety against high bending, low torsion, with inner sheath, Cu-screened, 7 or more cores are bunch stranded	no	yes	black	2 - 42	-5°C to +80°C	429
	600V	MULTIFLEX 600-C Highly flexible, oil-resistant, numbered, Cu-screened, for exposed run TC-ER, PLTC-ER, ITC-ER	yes	yes	yes	0.5 - 2.5	-30°C to +80°C	428
	1kV	JZ-HF-FCY Highly flexible, oil-resistant, numbered, Cu-screened,	no	yes	black	2 - 25	-5°C to +90°C	426
	600V	JZ 602 RC-PUR Highly flexible, numbered	no	no	grey	2 - 25	-5°C to +80°C	430
	600V	MULTIFLEX 512®-PUR UL/CSA Highly flexible, numbered, halogen-free, two approval	no	yes	grey	AWG20 - AWG12	-40°C to +80°C	431
	600V	MULTISPEED® 500-PUR UL/CSA safety against high bending, numbered, low torsion, halogen-free, 7 or more cores are bunch stranded	no	yes	yes	2 - 65	-30°C to +80°C	433
				yes	black	0.5 - 16	-40°C to +80°C	
	1kV	PURö-JZ-HF-FCP Highly flexible, oil-resistant, Cu-screened	no	yes	grey	2 - 42	-30°C to +80°C	435
	600V	JZ-602 RC-C-PUR Highly flexible, numbered, with inner sheath, D-screen	no	yes	yes	2 - 25	-5°C to +80°C	436
	600V	MULTIFLEX 512®-C-PUR UL/CSA Highly flexible, numbered, halogen-free, two approval, Cu-screened	no	yes	grey	0.5 - 35	-40°C to +80°C	437
	600V	MULTISPEED® 500-C-PUR UL/CSA safety against high bending, numbered, low torsion, halogen-free, 7 or more cores are bunch stranded, Cu-screened,	no	yes	yes	2 - 65	-30°C to +80°C	439
	1kV	MULTISPEED® 500-TPE UL/CSA safety against high bending, highly flexible, low torsion	no	yes	black	0.5 - 2.5	-30°C to +80°C	441
				yes	yes	0.5 - 2.5	-40°C to +80°C	
	1kV	MULTISPEED® 500-C-TPE UL/CSA safety against high bending, highly flexible, low torsion	no	yes	grey	2 - 25	-30°C to +80°C	443
				yes	yes	0.5 - 2.5	-40°C to +80°C	

* Extremely oil resistant: Please contact us first for special applications.

Cable glands

Cable glands

For standard applications:

- Plastic
- Stainless steel

For specific applications:

- Electromagnetic compatibility
- Robust applications
- Increased temperature
- Hazardous area
- Special pressure & installation conditions

YOU WILL FIND ADDITIONAL ACCESSORIES IN THE CABLE ACCESSORIES CATALOGUE!



Tools

Tools

- Cable shear
- Dismantling/stripping
- Crimping/Pressing
- Shield-Kon tools
- Fastening
- Cable tie tools
- Handling
- Mounting

YOU WILL FIND ADDITIONAL ACCESSORIES IN THE CABLE ACCESSORIES CATALOGUE!



DATA CABLES | Highly flexible cables for continuous movements, such as drag chains

	Sheath material	Screening	Drag chain class	Voltage class (Peak operating voltage)	without UL Standard	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
						Laying outside	Increased oil resistance*	Cross section	flexing	
									Fixed installation	
Data cables <small>Halogen-free cables are marked in red</small>	PVC	without screen		300/ 500V	SUPERTRONIC®-PVC Drag chain cable, colour code acc. to DIN 47100	no	grey	2 - 25	-5°C to +70°C	187
				350V	SENSORFLEX Sensor actuator cable, colour coded	no	gb/or	3 - 5	-5°C to +80°C	
		with screen		300/ 500V	SUPERTRONIC®-C-PVC Drag chain cable, colour code acc. to DIN 47100, Cu-screened	no	grey	2 - 25	-5°C to +70°C	188
						no	no	0.14 - 0.34	-40°C to +70°C	
	Oil-resistant PUR	without screen		300V	SUPERTRONIC®-PURö Drag chain cable, colour code acc. to DIN 47100, Cu-screened	yes	grey	2 - 25	-5°C to +70°C	189
						yes	yes	0.14 - 0.34	-40°C to +70°C	
		with screen		300/ 500V	SUPERTRONIC®-C-PURö Drag chain cable, halogen-free, colour code acc. to DIN 47100, Cu-screened	yes	grey	2 - 25	-30°C to +70°C	190
						yes	yes	0.14 - 0.34	-40°C to +70°C	
				300/ 500V	SUPER-PAAR-TRONIC-C-PUR* Drag chain cable, twisted pairs, colour code acc. to DIN 47100, Cu-screened	yes	grey	1 - 14	-30°C to +70°C	
						yes	yes	0.25 - 1	-40°C to +70°C	

SINGLE CORE | Highly flexible cables for continuous movements, such as drag chains

	Sheath material	Screening	Drag chain class	Voltage class	without UL Standard	UV-resistant	Colour	Core number	Temperature range	Cat. page
						Laying outside	Increased oil resistance*	Cross section	flexing	
									Fixed installation	
Single cores <small>Halogen-free cables are marked in red</small>	PVC	without screen								
		with screen								
	Oil-resistant PUR	without screen								
		with screen								
	TPE-O	without Screen		0,6/ 1kV	KOMPOSPEED 600 double insulated, halogen-free, for drag chains	yes	bw	1	-30°C to +90°C	322
		with Screen				yes	no	6 - 185	-40°C to +100°C	
				0,6/ 1kV	KOMPSPEED 600-C double insulated, halogen-free, for drag chains, Cu-screened	yes	bw	1	-30°C to +90°C	322
						yes	no	6 - 240	-40°C to +100°C	

* Extremely oil resistant: Please contact us first for special applications.

Drag chain class	Voltage class	According to UL/CSA	NFPA	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
				Laying outside	Increased oil resistance*	Cross section	flexing	
							Fixed installation	
	300V	SUPERTRONIC®-310-PVC Drag chain cable, cores acc. to DIN 47100	no	no	grey	2 - 25	-5°C to +80°C	445
				no	no	0.14 - 0.34	-40°C to +80°C	
	300V	SUPERTRONIC®-310-C-PVC Drag chain cable, cores acc. to DIN 47100, Cu-screened	no	no	grey	2 - 25	-5°C to +80°C	446
				no	no	0.14 - 0.34	-40°C to +80°C	
	300V	SUPERTRONIC®-330-PURö Drag chain cable, halogen-free, cores acc. to DIN 47100	no	yes	grey	2 - 25	-30°C to +80°C	447
				yes	yes	0.14 - 0.34	-40°C to +80°C	
	300V	MULTISPEED®-TRONIC-PUR Drag chain cable, cores acc. to DIN 47100, 7 or more cores are bunch stranded, extruded as filler with pressure	no	yes	black	2 - 25	-30°C to +80°C	448
				yes	no	0.25 - 0.34	-40°C to +80°C	
	300V	SUPERTRONIC®-330-C-PURö Drag chain cable, cores acc. to DIN 47100, Cu-screened	no	yes	grey	2 - 25	-30°C to +80°C	449
				yes	yes	0.14 - 0.34	-40°C to +80°C	
	300V	SUPER-PAAR-TRONIC-340-C-PUR Drag chain cable, twisted pairs, halogen-free, cores acc. to DIN 47100, Cu-screened	no	yes	grey	1 - 14	-30°C to +80°C	451
				yes	yes	0.25 - 1	-40°C to +80°C	
	300V	MULTISPEED®-TRONIC-C-PUR Drag chain cable, Cu-screened, cores acc. to DIN 47100, 7 or more cores are bunch stranded, extruded as filler with pressure	no	yes	black	2 - 25	-30°C to +80°C	450
				yes	no	0.25 - 0.34	-40°C to +80°C	

Drag chain class	Voltage class	According to UL/CSA	NFPA	UV-resistant	Colour	Core number	Temperature range	Cat. page
				Laying outside	Increased oil resistance*	Cross section	flexing	
							Fixed installation	
	600V	SINGLE 602-RC -J/-O Special drag chains, cores 90°C,600V	no	no	bw	1	-5°C to +90°C	501
				no	no	10 - 300	-40°C to + 90°C	
	600V	SINGLE 602-RC-CY -J/-O Special drag chains, cores 90°C,600V, screened	no	no	orange	1	-5°C to +90°C	502
				no	no	10 - 300	-40°C to + 90°C	
		TOPFLEX® 301 unscreened, double insulated single core	no	no	bw	1	-15°C to +80°C	T9
				no	yes	6 - 240	-	
	0,6/ 1kV	MULTISPEED® 600-PUR -J/-O Special drag chains, cores 90°C, 600V, halogen-free	no	yes	bw	1	-30°C to +80°C	504
				yes	no	6 - 300	-40°C to +90°C	
		TOPFLEX® 301-C screened, double insulated single core	no	no	bw	1	-15°C to +80°C	T9
				no	yes	6 - 240	-	
	0,6/ 1kV	MULTISPEED® 600-C-PUR -J/-O Special drag chains, cores 90°C, 600V, screened, halogen-free	no	yes	bw	1	-30°C to +80°C	505
				yes	no	6 - 300	-40°C to +90°C	

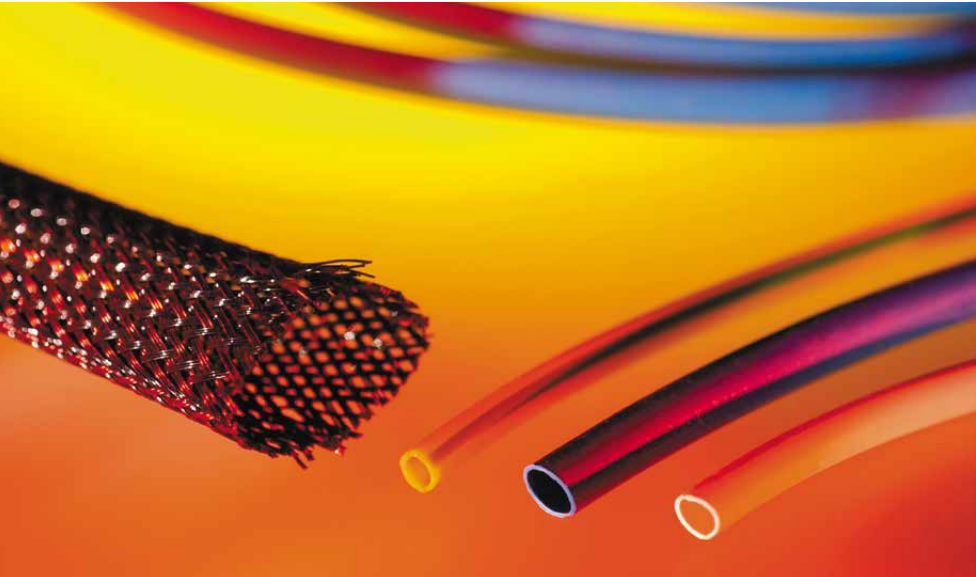
* Extremely oil resistant: Please contact us first for special applications.

Insulated, shrink, braided, and temperature protection tubes

Insulated, shrink, braided, and temperature protection tubes

- Insulation tubes
- Heat shrink tubing
- Braided hose
- High-temperature protection
- End caps

YOU WILL FIND ADDITIONAL ACCESSORIES IN THE CABLE ACCESSORIES CATALOGUE!



Core end sleeves and cable lugs

Core end sleeves and cable lugs

- Core end sleeves
- Shield connectors
- Solderless terminals
- Tubular cable lugs
- Compression joints

YOU WILL FIND ADDITIONAL ACCESSORIES IN THE CABLE ACCESSORIES CATALOGUE!



MOTOR and SERVO CABLES | Highly flexible cables for continuous movements, such as drag chains

	Sheath material	Screening	Drag chain class	Voltage class	without UL Standard	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
						Laying outside	Increased oil resistance*	Cross section	flexing	
									Fixed installation	
Motor and servo cable <small>Halogen-free cables are marked in red</small>	PVC	without screen								
		with screen								
	Oil-resistant PUR	without screen		0,6/ 1kV	TOPFLEX®611-PUR Motor cable without pair, highly flexible, numbered, halogen-free	yes	grey	4 1.5 - 120	-30°C to +80°C -40°C to +80°C	199
		with screen		0,6/ 1kV	TOPFLEX®611-C-PUR Motor cable without pair, Cu-screened, highly flexible, numbered, halogen-free	yes	grey	4 1.5 - 120	-30°C to +80°C -40°C to +80°C	200
		with screen		0,6/ 1kV	TOPSERV® 110 Servo cables with 1 pair	yes	petrol	4+2 1.5 - 50	-30°C to +80°C -40°C to +80°C	201
				0,6/ 1kV	TOPSERV® 120 Servo cables with 2 pairs	yes	petrol	4+2+2 1.5 - 50	-30°C to +80°C -40°C to +80°C	201
	TPO	without screen								
		with screen								

FEEDBACK CABLE | Highly flexible cables for continuous movements, such as drag chains

	Sheath material	Screening	Drag chain class	Voltage class	without UL Standard	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
						Laying outside	Increased oil resistance*	Cross section	flexing	
									Fixed installation	
Feedback cables <small>Halogen-free cables are marked in red</small>	PVC	without screen								
		with screen		350 V	Feedback cable PVC Coloured cores	no	grey	10 + 4 0.14 - 0.5	-5°C to +70°C -30°C to +80°C	202
	Oil-resistant PUR	without screen								
		with screen		300 V	Feedback cable PUR	yes	grey	-	-30°C to +80°C	203
						yes	yes	-	-40°C to +80°C	

* Extremely oil resistant: Please contact us first for special applications.

Voltage class	According to UL/CSA	NFPA	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
			Laying outside	Increased oil resistance*	Cross section	flexing	
						Fixed installation	
0,6/ 1kV	TOPSERV® PVC see catalogue for Drag chain class	no	no	orange	4 1.5 - 50	-0°C to +60°C -20°C to +80°C	465
1kV	TOPSERV® Hybrid Hybrid cable for SICK HIPERFACE DSL motor-feedback systems	no	yes	orange	8 0.5 - 16	-30°C to +80°C -40°C to +80°C	474
0,6/ 1kV	TOPSERV® PUR	no	yes	orange	4 1.5 - 50	-30°C to +80°C -40°C to +80°C	468
0,6/ 1kV	TOPSERV® 109 Single Drag chain cable, halogen-free, meter marking	no	no	orange	1 6 - 50	-30°C to +80°C -40°C to +80°C	AUR
0,6/ 1kV	TOPSERV® 600 VFD Motor cable without pair, highly flexible	yes	yes	or o. bw	4 1,5 - 35	-25°C to +90°C	472
0,6/ 1kV	TOPSERV® 650 VFD Servo cable with single pair, highly flexible	yes	yes	or o. bw	4 1,5 - 35	-25°C to +105°C	473

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Drag chain class	Voltage class	According to UL/CSA	NFPA	UV-resistant	Colour	Core number/ Number of pairs	Temperature range	Cat. page
				Laying outside	Increased oil resistance*	Cross section	flexing	
							Fixed installation	
30V + 300V	TOPSERV® PVC see catalogue for Drag chain class	no	no	gn o. or	-	-	-0°C to +60°C -20°C to +80°C	467
30V + 300V	TOPGEBER 512 PUR acc. to Siemens 6FX8008Plus, Lenze, Indramat, Elau, B+R, Heidenhain, Berger Lahr etc.	no	yes	gn o. or	-	-	-30°C to +80°C -40°C to +80°C	470

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HELUTEC® SIGNAL AND POWER PLUG CONNECTORS

The innovative
HELUTEC® system



This sensational, quick fastening connector is safe and stable while saving time and installation costs. The vibration resistant lock mechanism was perfected for plug connectors sizes M17, M23 and M40, which can be found in the HELUTEC® series 617, 917, 623, 723, 923 and 940. The HELUTEC® angle junction boxes can be easily combined at any time with the HELUTEC® system or with standard lock nuts. This also addresses the issue of downward compatibility. Slide it on and rotate for a tight fit. Patented perfection included.

The Patented Special Development
for the HELUTEC® Series 615/915



Fits in tight locations. In areas with limited space, just wind the pre-tensioned lock nut before sliding the nut into the lock position. A small rotation with a little pull at the plug releases the lock nut preventing an unintended release of the vibration resistant quick fastener. Only a quarter turn and a slight pull on the connector is required to disconnect. The connection is absolutely vibration proof. This was specially developed and patented for the HELUTEC® series 615/915.

The freely customizable
connector



Bonded for life. This overmolded connector consists of a housing and the overmold, which are bonded together and cannot be disassembled. This provides the required manipulation security for customized units - a design that is normally only available for cast versions. All commercially available cables at any length can be connected to the inner section of the robust metal housing. This is for both options: Standard screw connections or those items that include a patented fast lock system. For almost any pin design.

HELUTEC®-Serie 617 / 623 / 627
Signal connectors – Controlling – Monitoring



Stable, versatile, safe: HELUTEC® series can be found where a safe connection is required within a limited installation space. The plug connectors in the 617, 623 and 627 series are designed especially for extra-low voltages, and are used in any application that transmits signals, controls motors or monitors the smooth functioning of a system. For this purpose, a multitude of multi-pin insulation bodies - matching a variety of different designs such as plugs, couplings and flush-mounted boxes - are available for the user. Consequently, HELUTEC® engineers are able to handle a multitude of customer-specific connector requirements in a very innovative way.

HELUTEC®-Serie 917 / 923 / 932 / 940 / 958
Power plug connectors – Strong and Safe



Extremely resilient: HELUTEC® power plug connectors accelerate torque heavy drive motors, spindle drives and servo motors reliably up to the highest rotational speeds while tolerating millions of abrupt starts and stops. Voltages up to 630 V and currents of up to 200 A are transferred reliably even in continuous operation and under the most demanding conditions. Cable cross sections of up to 50 mm² and the smallest possible designs are - depending on the application - part of the scope of delivery as well as a perfect EMC shielding for the highest operational and work safety. Strong vibrations and sudden stops have no impact on these plug connectors in day-to-day operations

Online configurator:
www.helukabel.de

PROFINET / INDUSTRIAL ETHERNET | Highly flexible cables for continuous movements, such as drag chains

	Sheath material	Category	Drag chain class	Frequency range	without UL Standard	UV-resistant	Part no.		Temperature range	Cat. page
						Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame resistance	
Industrial Ethernet <small>Halogen-free cables are marked in red</small>	PUR	CAT 5	**	100 MHz	HELUKAT® 200S SF/UTP, drag chain 4 x 1 x AWG24/19	no	800088		-25°C to +70°C IEC 60332-1-2	696
			**	100 MHz	HELUKAT® 200S SF/UTP, drag chain 4x2xAWG24/19	no	yes	6,2 mm	-25°C to +70°C IEC 60332-1-2	697
	PUR or PVC	CAT 5e			Cables are only available with UL/CSA standard; shown on the opposite column, right page					
	PUR or PVC	CAT 6 / CAT 6 _A			Cables are only available with UL/CSA standard; shown on the opposite column, right page					
		CAT 7			Cables are only available with UL/CSA standard; shown on the opposite column, right page					

BUS CABLES | Highly flexible cables for continuous movements, such as drag chains

	Sheath-material	Installation range	Drag chain class	Impedance	without UL Standard	UV-resistant	Part no.		Temperature range	Cat. page
						Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame-retardant	
Profibus <small>Halogen-free cables are marked in red</small>	PVC	Indoor	**		Cables are only available with UL/CSA standard; shown on the opposite column, right page					
	Oil-resistant PUR	Indoor	**	150 OHM	Profibus L2 drag chain 1x2x0,64 mm (Litze) PUR petrol	no	81003		-30°C to +70°C IEC60332-1	709
			**	150 OHM	Profibus L2 drag chain 1x2x0,64 mm (Litze) PUR violet	no	yes	8,0 mm	-30°C to +70°C IEC60332-1	709
					Cables are only available with UL/CSA standard; shown on the opposite column, right page					
CANBUS	PUR oil-resistant	Indoor	**	120 OHM	CAN Bus drag chain 1x2x0,25 mm² PUR violet	no	81911		-40°C to +70°C	740
			**	120 OHM	CAN Bus drag chain 4x1x0,25 mm² PUR violet	no	yes	6,1 mm	-30°C to +70°C	740
DEVICENET	Oil-resistant PUR	Indoor			Cables are only available with UL/CSA standard; shown on the opposite column, right page					
AS-INTERFACE	Oil-resistant PUR	Indoor			Cables are only available with UL/CSA standard; shown on the opposite column, right page					
POF	PUR	Indoor	**		DESINA-HYBRID BUS POF + 4x1,5	no	81713		-20°C to +80°C	712
			**		POF/PA 2P980 I-V4Y(ZN)11Y	no	yes	8,8 mm	-20°C to +70°C	649
						no	801201		-20°C to +70°C	
						no	yes	8,0 mm	no	

* Extremely oil resistant: Please contact us first for special applications.
** Drag chain classes are available on request (dnb@helukabel.de).

Drag chain class	Frequency range	According to UL/CSA	NFFA	UV-resistant	Part no.		Temperature range	Cat. page
				Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame-retardant	
**	100 MHz	HELUKAT® 100T SF/UTP, Tordierflex UL Style 20963 4x2xAWG26/19, Torsion	no	no	800067		-40°C to +80°C IEC 60332-1-2	698
				no	yes	7,5 mm		
**	100 MHz	HELUKAT® 100IND PROFINet C, highly flexible CMG, PVC 2x2xAWG22/7, Fast Connect	yes	no	802914		-20°C to +70°C IEC 60332-3	AUR
**	100 MHz	HELUKAT® 100IND PROFINet C, highly flexible CMX, PUR 2x2xAWG22/7, Fast Connect	yes	no	800655	6,5 mm	-20°C to +70°C IEC 60332-1-2	703
**	100 MHz	HELUKAT® 100IND PROFINet C, Torsion UL Style 21161 2x2xAWG26/19, no CSA!	no	no	802186	6,5 mm	-40°C to +80°C IEC 60332-1-2	704
**	155 MHz	HELUKAT® 100S SF/UTP, drag chain ECO, UL Style 20963 4x1xAWG26/19	no	no	82838	4,8 mm	-40°C to +80°C IEC 60332-1-2	694
**	155 MHz	HELUKAT® 100S SF/UTP, drag chain ECO, UL Style 20963 4x2xAWG26/19	no	no	82839	6,6 mm	-40°C to +80°C IEC 60332-1-2	695
**	100 MHz	HMCB500S Industrial Ethernet PVC green UL Style 2502 2x2xAWG24+1x2xAWG22	no	no	803672	6,8 mm	-20°C to +80°C no	725
**	100 MHz	HMCB800W Industrial Ethernet PUR green UL Style 20236 2x2x0,20+1x2x0,38	no	no	804767	6,95 mm	-20°C to +60°C no	726
**	250 MHz	HELUKAT® 250S SF/UTP, drag chain, CMX 4x2xAWG26/19	yes	no	803387	7,8 mm	-30°C to +70°C IEC 60332-1-2	691
**	500 MHz	HELUKAT® Industrial Ethernet S/FTP, drag chain, CM, PVC 4x2xAWG24/7	yes	no	805704	8,9 mm	-10°C to +80°C IEC 60332-3	AUR
**	500 MHz	HELUKAT® Industrial Ethernet S/FTP, drag chain, CMX, PUR 4x2xAWG24/7	no	no	805703	8,9 mm	-40°C to +80°C IEC 60332-1-2	AUR
**	500 MHz	HELUKAT® S/FTP, drag chain, CMX, PUR 4x2xAWG26/7	yes	no	805548	7,8 mm	-10°C to +70°C IEC 60332-1-2	AUR
**	600 MHz	HELUKAT® SF/FTP, drag chain, PUR 4x2xAWG24/7	yes	no	805614	8,7 mm	-30°C to +70°C IEC 60332-1-2	AUR
**	600 MHz	HELUKAT® SF/FTP, Torsion, PUR 4x2xAWG24/7	yes	no	805828	8,7 mm	-30°C to +70°C IEC 60332-1-2	AUR

Drag chain class	Impedance	According to UL/CSA	NFFA	UV-resistant	Part no.		Temperature range	Cat. page
				Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame-retardant	
**	150 OHM	Profibus L2 FESTOON 1x2x0,65 mm PVC petrol CMG	yes	yes	800649	8,0 mm	-40°C to +60°C EN 50265-2-1	713
**	150 OHM	Profibus ET200X PUR petrol UL Style 20351 1x2x0,65+3x1x1,5	no	no	82913	9,7 mm	-5°C to +60°C no	710
**	150 OHM	Profibus ECOFAST TPU petrol UL Style 20233 1x2x0,65+4x1x1,5	no	no	800044	11,5 mm	-15°C to +60°C IEC 60332-1-2	710
**	150 OHM	Profibus L2 Torsion 1x2x0,8 mm PUR violet CMX	yes	no	800109	8,0 mm	-25°C to +75°C IEC60332-1	713
**	150 OHM	Profibus SK drag chain 1x2x0,64 mm (Litze) PUR petrol CMX Fast Connect	yes	no	81906	8,0 mm	-40°C to +70°C IEC 60332-1-2	719
**	150 OHM	Profibus SK drag chain 1x2x0,64 mm (Litze) PUR violet CMX Fast Connect	yes	no	801659	8,0 mm	-40°C to +70°C IEC 60332-1-2	719
**	120 OHM	CAN Bus drag chain 1x2x0,34 mm² PUR violet CMX no CSA!	yes	no	802182	6,9 mm	-30°C to +70°C IEC 60332-1-2	741
**	120 OHM	CAN Bus drag chain 4x1x0,34 PUR mm² violet CMX no CSA!	yes	no	802339	7,5 mm	-30°C to +70°C IEC 60332-1-2	741
**	120 OHM	CAN BUS drag chain 1x2x0,5 mm² CMX	yes	no	805685	8,0 mm	-40°C to +70°C IEC 60332-1-2	AUR
**	120 OHM	CAN BUS drag chain 4x2x0,5 mm² CMX	yes	no	805696	8,2 mm	-40°C to +70°C IEC 60332-1-2	AUR
**	120 OHM	DeviceNet™ Thick PUR violet 1x2xAWG18 + 1x2xAWG15 CMX	yes	no	81909	12,2 mm	-40°C to +80°C VW1	756
**	120 OHM	DeviceNet™ Thin PUR violet 1x2xAWG24 + 1x2xAWG22 CMX	yes	no	81910	6,9 mm	-40°C to +80°C VW1	756
**	-	A-BUS PUR yellow 2x1,5 mm² UL Style 20549	no	no	82434	-	-40°C to +80°C IEC 60332-1-2	749
**	-	A-BUS PUR black 2x1,5 mm² UL Style 20549	no	yes	82822	-	-40°C to +80°C IEC 60332-1-2	749
**		A-BUS PUR yellow 2x2,5 mm² UL Style 20549	no	no	804410	-	-40°C to +80°C	750
**		A-BUS PUR black 2x2,5 UL mm² Style 20549	no	yes	804411	-	-40°C to +80°C	750
		Cables are only available without UL/CSA standard; shown on the opposite column, left page						

* Extremely oil resistant: Please contact us first for special applications.
** Drag chain classes are available on request (dnb@helukabel.de).
AUR = Available upon request, or refer to the "Data, Network and BUS Technology" catalogue

BUS CABLES | Highly flexible cables for continuous movements, such as drag chains

	Sheath-material	Installation range	Drag chain class	Impedance	without UL Standard	UV-resistant	Part no.		Temperature range	Cat. page
						Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame-retardant	
MULTI BUS	PUR	Indoor			Cables are only available with UL/CSA standard; shown on the opposite column, right page					
USB 2.0 / 3.0	PUR	Indoor			Cables are only available with UL/CSA standard; shown on the opposite column, right page					
Safety BUS	PUR	Indoor			Cables are only available with UL/CSA standard; shown on the opposite column, right page					

* Extremely oil resistant: Please contact us first for special applications.
** Drag chain classes are available on request (dnb@helukabel.de).

End caps & core end sleeves

End caps & Core end sleeves for

- Telecommunication cables
- Low-voltage
- Medium-voltage
- Accessories/component parts

YOU WILL FIND ADDITIONAL ACCESSORIES IN THE CABLE ACCESSORIES CATALOGUE!



Cable protection tube systems

Cable protection tube systems

- Corrugated tubes:**
- For standard applications
 - Oversized
 - Dividable corrugated tubes:
- Highly flexible cable tubes**
- Plastic with coil springs
 - Metal, spiral wound

Cable protection tubes for heavy duty applications

YOU WILL FIND ADDITIONAL ACCESSORIES IN THE CABLE ACCESSORIES CATALOGUE!



Drag chain class	Impedance	According to UL/CSA	NFPA	UV-resistant	Part no.		Temperature range	Cat. page
				Laying outside	Increased oil resistance*	Outer-Ø ca.	Flame-retardant	
**	see catalogue	Multibus I 15-core highly flexible, Torsion C-UL	no	no	801652		-30°C to +80°C	745
**	see catalogue	Multibus II 15-core highly flexible, Torsion C-UL	no	no	804115	14,7 mm	-20°C to +80°C	746
**	90 OHM	USB S 2.0 drag chain 1x2xAWG28 + 1x2xAWG20 UL Style 20963	no	no	802469	5,0 mm	-30°C to +60°C	727
**	90 OHM	USB L 2.0 drag chain 1x2xAWG24 + 1x2xAWG20 UL Style 20963	no	no	802470	6,3 mm	-30°C to +70°C	728
**	90 OHM	USB 3.0 drag chain 2x2xAWG28 + 2x2xAWG28 UL Style 20236	no	no	805287	6,5 mm	-30°C to +70°C	729
**	110 OHM	SafetyBUS PUR yellow 3x0,75 CMX	yes	no	800652	7,8 mm	-30°C to +80°C	758

* Extremely oil resistant: Please contact us first for special applications.
** Drag chain classes are available on request (dnb@helukabel.de).

NOTES

Prices

Errors excepted. All prices are subject to change and without obligation

Technical modifications

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