

For the highest requirements
**Servo, feedback
and bus cables for
machine construction**



1958 - 2008 | 50 Years



Tradition in Automation

Reaching new heights in automation

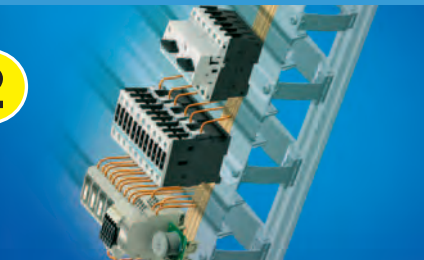
Machine and System Installation Technology

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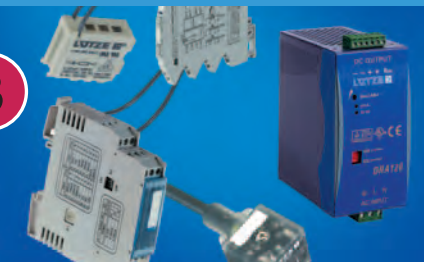
Control cabinet LSC wiring systems

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Suppression technology, module and interface technology, power supplies

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SUPERFLEX® Servo cables

LÜTZE SUPERFLEX® PLUS N (C) PUR SERVO - Motor-/ power supply cables 0,6/1 kV



C-track cables for motor and power connection, shielded, especially for frequency converters and SERVO drives. High active and passive interference resistance (EMC).

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111460	(4x1,5)	PUR orange	8,0	1.000V 80°C
111461	(4x2,5)	PUR orange	9,6	1.000V 80°C
111462	(4x4)	PUR orange	11,1	1.000V 80°C
111463	(4x6)	PUR orange	13,4	1.000V 80°C
111464	(4x10)	PUR orange	16,7	1.000V 80°C
111465	(4x16)	PUR orange	19,7	1.000V 80°C
111466	(4x25)	PUR orange	25,4	1.000V 80°C
111467	(4x35)	PUR orange	28,3	1.000V 80°C
111468	(4x50)	PUR orange	32,9	1.000V 80°C

LÜTZE SUPERFLEX® PLUS N (C) PUR SERVO - Motor-/ power supply cables 0,6/1 kV



C-track cables for motor and power connection, shielded, especially for frequency converters and SERVO drives. High active and passive interference resistance (EMC). With inside jacket, for the highest requirements and long traverse paths over 100 mts.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111480	(4x1,5)	PUR orange	10,0	1.000V 80°C
111481	(4x2,5)	PUR orange	11,7	1.000V 80°C
111482	(4x4)	PUR orange	13,3	1.000V 80°C
111483	(4x6)	PUR orange	15,3	1.000V 80°C
111484	(4x10)	PUR orange	17,9	1.000V 80°C
111485	(4x16)	PUR orange	21,7	1.000V 80°C
111486	(4x25)	PUR orange	26,3	1.000V 80°C
111487	(4x35)	PUR orange	31,0	1.000V 80°C

LÜTZE SUPERFLEX® PLUS N PUR SERVO Motor-/ power supply cables 0,6/1 kV

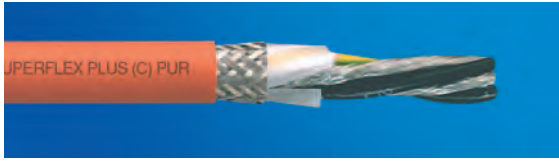


C-track cables for motor and power connection, shielded, especially for machine and device construction, transport and conveyor technology.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111370	4x1,5	PUR black	7,7	1.000V 80°C
111371	4x2,5	PUR black	9,3	1.000V 80°C
111372	4x4	PUR black	10,8	1.000V 80°C
111373	4x6	PUR black	12,9	1.000V 80°C
111374	4x10	PUR black	15,5	1.000V 80°C
111375	4x16	PUR black	18,8	1.000V 80°C
111376	4x25	PUR black	23,7	1.000V 80°C
111377	4x35	PUR black	26,6	1.000V 80°C
111378	4x50	PUR black	31,8	1.000V 80°C

SUPERFLEX® Servo cables

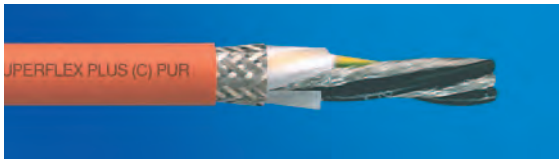
LÜTZE SUPERFLEX® PLUS N (C) PUR SERVO - Supply line motor / brake 0,6/1 kV



C-track cable for motor / brake, shielded, especially for frequency converters and SERVO drives in machine and installation technology, transport and conveyor technology. With control pair, SIEMENS system compatible.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111469	(4x1,0+(2x0,75))	PUR orange	9,6	1.000V 80°C
111420	(4x1,5+(2x1,5))	PUR orange	10,5	1.000V 80°C
111421	(4x2,5+(2x1,5))	PUR orange	12,1	1.000V 80°C
111422	(4x4+(2x1,5))	PUR orange	13,6	1.000V 80°C
111423	(4x6+(2x1,5))	PUR orange	15,6	1.000V 80°C
111424	(4x10+(2x1,5))	PUR orange	18,3	1.000V 80°C
111425	(4x16+(2x1,5))	PUR orange	21,6	1.000V 80°C
111426	(4x25+(2x1,5))	PUR orange	27,5	1.000V 80°C
111427	(4x35+(2x1,5))	PUR orange	29,9	1.000V 80°C
111428	(4x50+(2x1,5))	PUR orange	33,2	1.000V 80°C

LÜTZE SUPERFLEX® PLUS N (C) PUR SERVO - Supply line motor / brake 0,6/1 kV



C-track cable motor / brake, shielded, especially for frequency converters and SERVO drives in machine and installation technology, transport and conveyor technology. With two control pairs, INDRAMAT system compatible.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111270	(4x1,0+2x(2x0,75) StC)	PUR orange	11,4	1.000V 80°C
111271	(4x1,5+2x(2x0,75) StC)	PUR orange	12,5	1.000V 80°C
111272	(4x2,5+2x(2x0,75) StC)	PUR orange	13,5	1.000V 80°C
111279	(4x2,5+2x(2x1,0) StC)	PUR orange	13,7	1.000V 80°C
111273	(4x4+2x(2x1,0) StC)	PUR orange	15,6	1.000V 80°C
111280	(4x4+2x(2x1,5) StC)	PUR orange	16,3	1.000V 80°C
111274	(4x6+2x(2x1,0) StC)	PUR orange	17,3	1.000V 80°C
111281	(4x6+2x(2x1,5) StC)	PUR orange	17,9	1.000V 80°C
111275	(4x10+2x(2x1,0) StC)	PUR orange	19,3	1.000V 80°C
111282	(4x10+2x(2x1,5) StC)	PUR orange	19,8	1.000V 80°C
111276	(4x16+2x(2x1,5) StC)	PUR orange	23,6	1.000V 80°C
111277	(4x25+2x(2x1,5) StC)	PUR orange	29,4	1.000V 80°C
111278	(4x35+2x(2x1,5) StC)	PUR orange	33,0	1.000V 80°C

SUPERFLEX® Feedback cables

LÜTZE SUPERFLEX® PLUS (C) PUR SERVO - Feedback cables for C-tracks



Feedback cables for tacho sensor, brake sensor or speed sensor. Through full PUR-jacket and TPE wire insulation optimally suited for C-tracks, extremely harsh operating conditions and aggressive coolants and lubricants.

For Heidenhain system

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111476	(4x0,5+4x2x0,14+(4x0,14)StC)	PUR black	7,9	30V 80°C
111478	(4x0,5+4x2x0,14)	PUR black	8,0	30V 80°C
111092	(2x0,5+10x0,14)	PUR black	8,0	30V 80°C
111093	(4x0,5+10x0,14)	PUR orange	6,6	-
111094	(2x(0,5)+3x(2x0,14))	PUR orange	7,6	-
111101	(2x1,0+3x(2x0,14))	PUR orange	8,4	-

For Indramat system

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
109208	(2x1,0+4x2x0,25)	PUR orange	8,8	300V 80°C
110940	(9x0,5)	PUR orange	8,8	300V 80°C
111139	(2x0,5+10x0,14)	PUR orange	6,9	300V 80°C

For Siemens system

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111452	(2x2x0,18)	PUR green	5,0	30V 80°C
111453	(4x2x0,18)	PUR green	6,4	30V 80°C
111412	(8x2x0,18)	PUR green	8,8	30V 80°C
111454	(12x0,23)	PUR green	6,7	30V 80°C
111455	(4x0,5+4x2x0,14)	PUR green	8,0	300V 80°C
111456	(4x0,5+4x2x0,38)	PUR green	9,2	300V 80°C
111457	(2x0,5+3x(2 x 0,14)+4x0,23+4x0,14)	PUR green	10,3	30V 80°C
111458	(2x0,5+3x(2x0,14)+4x0,14)	PUR green	8,5	30V 80°C
111459	(2x(0,5)+3x(2x0,14))	PUR green	8,7	300V 80°C

For NUM system

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111416	4x(2xAWG22)	PUR green	10,3	300V 80°C
111417	4x(2xAWG24)+2x(2x0,5)	PUR green	12,5	300V 80°C

For Berger Lahr system

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111479	(5x2x0,25+1x2x0,5)	PUR green	8,7	300V 80°C

For B+R system

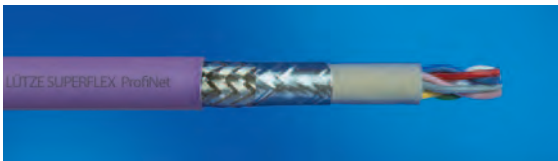
Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111437	(3x2xAWG24/19)	PUR green	6,6	300V 80°C

For Fanuc system

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
111490	(5x0,5+1x2x0,18)	PUR green	7,5	300V 80°C
111491	(5x0,5+2x2x0,18)	PUR green	7,8	300V 80°C
111492	(6x0,5+3x2x0,18)	PUR green	8,7	300V 80°C

SUPERFLEX® Bus cables

LÜTZE SUPERFLEX® INDUSTRIAL FAST ETHERNET / ProfiNet - for C-tracks



Ethernet cables suitable for applications in C-tracks. For cabling of industrial field bus system.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104241	(2x2xAWG24/19) StC Cat 5 FC	PUR violet	6,1	-
104245	(2x2xAWG24/19) StC Cat 5 FC	PUR violet	6,1	30V 80°C
104242	(4x2xAWG24/19) StC Cat 5 FC	PUR violet	9,6	-
104246	(4x2xAWG24/19) StC Cat 5 FC	PUR violet	9,6	30V 80°C
104303	(2x2xAWG22/7) StC Cat 5 FC ProfiNet Typ C	PUR green	6,5	30V 80°C
104304	(2x2xAWG22/19) StC Cat 5 FC ProfiNet	PUR green	6,6	30V 80°C
104318	(2x2xAWG26/19) StC Cat 5 FC Ethernet TORSION	PUR violet	6,1	-
104319	(4x2xAWG26/19) StC Cat 5 FC Ethernet TORSION	PUR violet	7,6	-

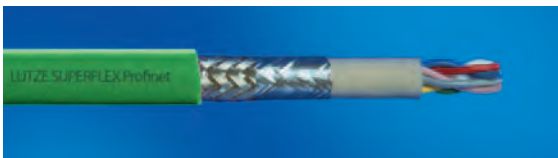
LÜTZE ELECTRONIC INDUSTRIAL FAST ETHERNET / ProfiNet - for flexible applications



Ethernet cables for flexible application without compulsory guide or for static application in the industrial field bus systems.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104247	(2x2xAWG24/7)StC Cat 5 FC	PUR violet	6,1	30V 80°C
104243	(2x2xAWG24/7)StC Cat 5 FC	PUR violet	6,1	-
104301	(2x2xAWG22/1)StC Cat 5 FC ProfiNet Typ A	PVC green	6,5	600V 60°C
104307	(2x2xAWG22/7)StC Cat 5 FC ProfiNet Typ B	PVC green	6,5	600V 60°C

LÜTZE SUPERFLEX® ProfiNet HYBRID - for C-tracks



Ethernet cables suitable for applications in C-tracks. For wiring of industrial field bus systems with power supply.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104315	((2x2xAWG22/19)StC+4x1,5) StC Cat 5 ProfiNet	PUR green	10,7	30V 80°C

LÜTZE ELECTRONIC ProfiNet HYBRID - for flexible applications



Ethernet cables for flexible application without compulsory guide or for static application in industrial field bus systems with power supply.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104316	(2x2xAWG22/7+4x1,5)StC Cat 5 ProfiNet	PVC green	10,7	30V 80°C
104317	(2x2xAWG22/7+4x1,5)StC Cat 5 ProfiNet	HM green	10,7	30V 80°C

SUPERFLEX® Bus cables

LÜTZE SUPERFLEX® PROFIBUS (C) PUR - for C-tracks, impedance 150 Ω, operating capacitance < 30



Profibus cables for C-tracks applications. For wiring of industrial field bus systems e.g. Profibus DP, SINEC L2, F.I.P.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104215	(1x2x0,64/AWG24/19) StC TRAILING	PUR violet	8,0	-
104265	(1x2x0,64/AWG24/19) StC TRAILING UL	PUR violet	8,0	30V 80°C
104275	(1x2x0,64/AWG24/19+3x0,75) StC TRAILING + POWER	PUR violet	9,8	30V 80°C
104287	(1x2x0,64/AWG24/19) StC TRAILING FC UL	PUR violet	8,0	30V 80°C
104262	(1x2x0,64/AWG24/19+4x1,5) StC TRAILING + POWER	PUR violet	11,1	-

LÜTZE ELECTRONIC PROFIBUS, impedance 150 Ω, operating capacitance < 30 pF/m



Profibus cables for flexible applications without compulsory guide or for static application in the industrial field bus systems.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104214	(1x2x0,64/AWG22/7)StC FLEXIBLE	PVC violet	8,0	-
104264	(1x2x0,64/AWG24/19)StC FLEXIBLE UL	PVC violet	8,0	30V 60°C
104224	(1x2x0,64/AWG22/7+3x0,75)StC FLEXIBLE POWER	PVC violet	10,7	-
104292	(1x2x0,64/AWG22/1)StC STANDARD	PVC violet	8,0	-
104293	(1x2x0,64/AWG22/1)StC STANDARD FC UL	PVC violet	8,0	30V 60°C
104290	(1x2x0,64/AWG22/1)StC FOOD	PE black	8,0	-
104291	(1x2x0,64/AWG22/1)StC FOOD FC	PE black	8,0	-
104283	(1x2x0,64/AWG22/1)StC GROUND	PE black	8,0	-
104284	(1x2x0,64/AWG22/1)StC GROUND FC	PE black	10,0	-
104266	(1x2x0,64/AWG22/1)StC FRNC	PE black	8,0	-
104267	(1x2x0,64/AWG22/1)StC FRNC FC	HM violet	8,0	-
104251	(1x2x0,64/AWG22/1)StC ROBUST FC	PUR violet	8,0	-
104296	(1x2x0,30)StC TORSION FC	PUR violet	8,0	-
104295	(1x2x0,64/AWG24/19)StC VERTICAL FC	PUR violet	13,0	-
104297	(1x2x0,64/AWG24/19)StC SHIP	HXOE black	10,6	-

FC for a fast installation compatible to Siemens Fast Connect®

LÜTZE ELECTRONIC PROFIBUS PA impedance 100 Ω, operating capacitance < 60 pF/m



For wiring of industrial field bus systems e.g. Profibus DP, SINEC L2, F.I.P. for static application

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104277	((1x2x1,0/AWG18/1)StC	PVC blue	7,7	-
104278	(1x2x1,0/AWG18/1)StC	PVC black	7,7	-

LÜTZE ELECTRONIC ASI BUS - to connect Actuator-Sensor interface components

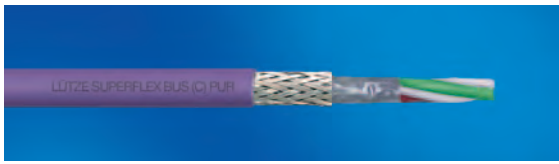


ASI-System cables to connect Actor-Sensor interface components

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm
104203	2x1,5 EPDM	PUR yellow	10,7
104204	2x1,5 EPDM	PUR black	10,7
104216	2x1,5 PVC	TPE yellow	10,7
104217	2x1,5 PVC	TPE black	10,7
104219	2x1,5 EPDM	EPDM yellow	10,7
104218	2x1,5 EPDM	EPDM black	10,7

SUPERFLEX® Bus cables

LÜTZE SUPERFLEX® CAN-BUS - for C-tracks, impedance 120 Ω, operating capacitance <55 pF/m



For wiring of industrial field bus systems e.g. CAN-BUS. For continuous flexible applications in C-tracks.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104202	(1x2x0,25)	PUR violet	6,1	-
104252	(1x2x0,25/AWG24/19)	PUR violet	6,1	300V 80°C
104270	(2x2x0,25/AWG24/19)	PUR violet	6,0	300V 80°C
104210	(1x2x0,25+3x1,0)	PUR violet	7,5	-
104220S	(2x2x0,25/AWG24/19)	PUR violet	6,0	-

LÜTZE ELECTRONIC CAN-BUS, impedance 120 Ω, operating capacitance < 55 pF/m



For wiring of industrial field bus systems e.g. CAN-BUS. For static application or for moving use without compulsory guide.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104205	(1x2x0,22/AWG24/7)	PVC violet	4,7	300V 60°C
104206	(2x2x0,22/AWG24/7)	PVC violet	7,0	300V 60°C
104238	(2x2x0,34)	PVC violet	10,5	-
104268	(2x2x0,22/AWG24/7+3x1,5)	PUR violet	9,6	300V 60°C

LÜTZE SUPERFLEX® INTERBUS - for C-tracks, impedance 100 Ω, operating capacitance <60 pF/m



For wiring of industrial field bus systems e.g. CAN-BUS. For continuous flexible applications in c-tracks.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104208	(3x2x0,25)	PUR violet	7,7	-
104258	(3x2x0,25/AWG24/19)	PUR violet	7,8	300V 80°C
104259	(3x2x0,25/AWG24/19+3x1,0)	PUR violet	8,3	300V 80°C

LÜTZE ELECTRONIC INTERBUS impedance 100 Ω, operating capacitance < 60 pF/m

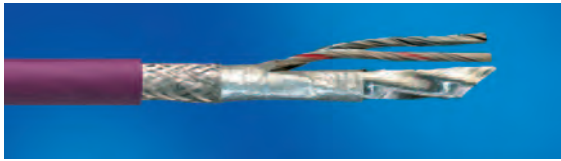


For wiring of industrial field bus systems e.g. Interbus-S. For static application or for moving use without compulsory guide.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104207	(3x2x0,22/AWG24/7)	PVC violet	7,5	300V 60°C
104257	(3x2x0,22/AWG24/7+3x1)	PVC violet	8,0	300V 60°C

SUPERFLEX® Bus cables

LÜTZE SUPERFLEX® DeviceNet – for C-tracks, impedance 100 Ω



For continuous flexible applications in c-tracks, DeviceNet is the leading BUS system in the USA in industrial automation.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104279	((2x0,75)+(2x1,5))StC - THICK	PUR violet	11,9	300V 80°C
104289	((2x0,22)+(2x0,34))StC - THIN	PUR violet	6,8	300V 80°C

LÜTZE ELECTRONIC DeviceNet - For static application or for moving use without compulsory guide, impedance 120 Ω



For static applications, DeviceNet is the leading BUS system in the USA in industrial automation.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104280	((2x0,22)+(2x0,34))StC - THIN STATIC	PVC grey	7,2	300V 80°C
104281	((2x0,75)+(2x1,5))StC - THICK STATIC	PVC grey	12,2	300V 80°C
104282	((2x0,22)+(2x0,34))StC - THIN STATIC	PVC violet	7,2	300V 80°C
104288	((2x0,75)+(2x1,5))StC - THICK STATIC	PVC violet	12,2	300V 80°C

LÜTZE SUPERFLEX® compatible to Siemens Drive Cliq - for C-tracks impedance 100 Ω, (BUS pairs 0,15mm²)



For continuous flexible applications in c-tracks. 3 pairs data cables, 2 BUS pairs 0,15 mm² and 1 supply pair 0,34 mm².

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104310	(2x2x0,15+1x2x0,34)	PUR green	7,0	30V 80°C

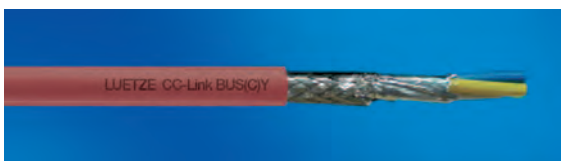
LÜTZE ELECTRONIC compatible to Siemens Drive Cliq - For static application or for moving use without compulsory guide, impedance 100 Ω, (BUS pairs 0,15mm²)



For continuous flexible applications in c-tracks. 3 pairs data cables, 2 BUS pairs 0,15 mm² and 1 supply pair 0,38 mm².

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104311	(2x2x0,15+1x2x0,34)	PUR green	7,0	30V 80°C
104313	(2x2x0,22)	PUR green	6,9	30V 80°C

LÜTZE ELECTRONIC CC-Link, impedance 110 Ω

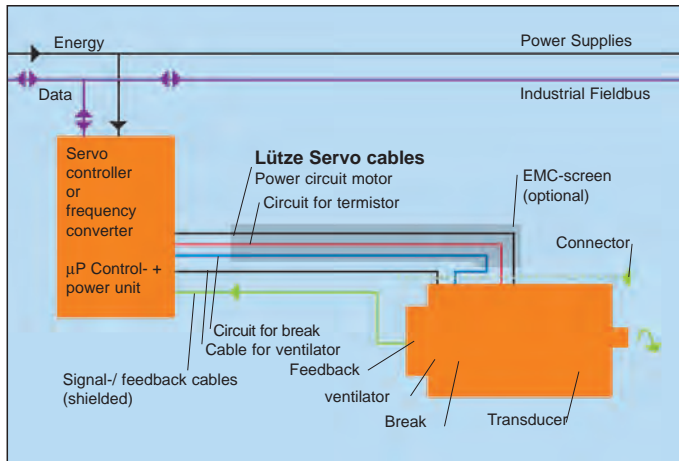


CC-Link (control and communication link) is mainly used in Asia, USA and Great Britain.

Part no.	Number of conductors / cross-section	Jacket	Outer-Ø, approx. mm	cULus
104300	(3x0,5)StC	PVC red	7,7	30V 60°C
104314	(3x1,0)StC+2x1,0	PVC red	10,1	-

Cables for the electrical drive technology

Servo cables



Schematic diagram for servo drive

Today's electrical drive technology is not imaginable without rotation speed control. Rotation speed control allows to optimize motion sequences required for the process and to increase the efficiency of machines or industrial plants. There are high expectations for the Rotation speed controls:

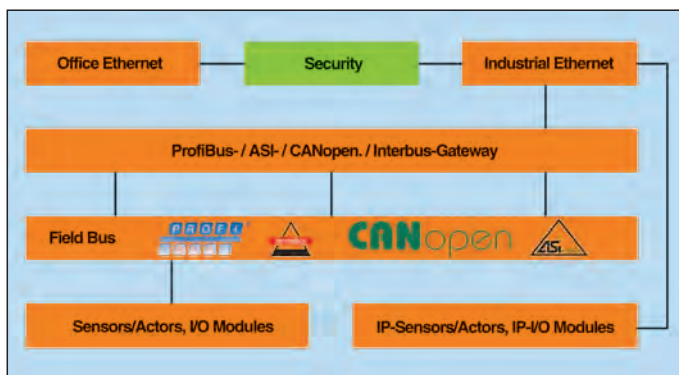
- Highest efficiency of the whole drive section
- Drive characteristics: broad control range for the rotating direction rotation speed, torques, accelerations and speeds
- Maintenance freedom and high durability
- High ability for short-time overstraining

Bus systems

Since the mid 1980's, field bus-systems are essential in industry automation. Field bus systems are in use in three main areas:

- Factory automation: field bus systems like PROFIBUS, INTERBUS, DeviceNet, CAN and more
- Process automation: chemical, petrochemical industry and more
- Building automation: property management

Besides hardware and software components, passive components like the bus cables and connector assemblies also play an important role for the operational reliability. Bus systems must comply with all electro technical parameters of the particular



Servo cables

Combined motor connection cables for the supply of motors, which depending on their machine type, require a composite cable combining supply- and control leads (thermo contact/holdingbrake). The cables are able for high mechanical stress and also to various environmental influences.

Motor-feedback and Encoder cables

Regulate the motor rotation speed and indicate the as-is state. Encoder cables pass on control inputs such positioning and state of motion, like for example the connections to the speed indicator or brakes.

Motor cables for motors 0.6/1kV

Able for flexible applications in engineering and plant construction with high mechanical stress.

- Electro-magnetic compatibility
- Little space requirements
- good price/performance ratio

The reliability of the whole drive system depends on the proper wiring. Often, the cables are routed through moving machine parts in C-tracks, or they are exposed to strong bending and/or torsional loads.

system accurately. The industrial requirements are diverse and this is the reason, why there is no universally applicable bus cable.

Lütze offers the worldwide most established systems for static (inside and outside) and flexible applications. The selection of the materials must meet the mechanical and chemical requirements of the industry and the cable construction must be robust. Also EMC concerns require a high quality of the shielding.

A continuous communication structure between equipment devices all the way to the office level must be guaranteed. Thereby, a consistent information flow from the actuator/sensor level to the administration level arises.

Due to the difference between the requirements in the industrial environment and the ones in the office level environment, end devices for example switches, firewalls and hubs must be adapted to the usually rough environmental conditions, for example the 35mm DIN rail, 24V power supply, higher IP-protection as well as higher resistances against miscellaneous oils.

Cables for the electrical drive technology

Bus cables - Application range

Profibus cables

Profibus according to IEC 61158-2

The transfer mode system according to IEC 61158-2 meets the requirements of the chemical and petrochemical industry and also ensures the intrinsic safety and bus connection of field devices. Profibus is synchronous protocols with DC-current flow free transmission, which is also often designated as H1. The IEC 61158-2 technique is applied at the PROFIBUS-PA.

Profibus type B according to EN 50170

Especially for the communication between automation systems and decentralized peripheral devices in the field range.

Profibus with Fast Connect® feature

These cables have an optimized circular shape and allow to be stripped with special tools. Thereby, bus connector plugs can be assembled in a fast and installation-friendly way.

Profibus-DP cables

This Profibus version is optimized for high speed and low installation cost. It was developed specifically for the communication between automation systems and decentralized peripheral devices in the field range. Profibus-DP an alternative for conventional parallel data communication with 24V or 0-20 mA. The requirement conditions for Profibus-DP type A according to EN 50170 are kept. Profibus-DP und Profibus FMS use the same transfer mode system and a unified Bus protocol. Thus, both options can be used simultaneously on one cable.

DeviceNet cables

Device Net is based on the approved CAN-Technology for fast exchange of data using, trunk and drop cable configurations. Device Net is a connection-oriented network. Application as highly flexible cable.

Interbus cables

The two-pairs Interbus-Loop circuit is intended for the application as backbone and for the supply of sensors. The three-pairs version is used for the supply of actuators. These cables are also suitable for Interbus-Loop 2.

CAN-Bus cables

Can-Bus according to ISO 11898. The Can-Bus cables are used for the exchange of digital information, Controller Area Network (CAN) for faster data transfer/data exchange. Application in c-tracks with highly flexible data cables.

Interbus-S cables, bus cables, installation bus cables

The Interbus-S is an open sensor/actuator bus, which is primarily used for the communication in the field level (e.g. sensors, actuators, controls), but also for the information transfer between field level and the control level lying above (e.g. SPS). Thus, the Interbus-S belongs to the category of the so called field busses and can be characterized particularly as a fast sensor/actuator. Its main field of operation is the production engineering, process engineering, transport- and bearing technology. Here, the main focus is the automotive industry as well as the drive technology.

EtherNet/IP

This is an on Ethernet based fieldbus that is mainly used in the automation technology. EtherNet/IP was developed by Allen-Bradley (Rockwell Automation) and later adopted by the Open DeviceNet Vendor Association (ODVA) as an open standard. In 1998, a workshop of ControlNet International designed a process to set the application protocol Common Industrial Protocol onto the already published Ethernet protocol. Based on this process, EtherNet/IP was published as an open industry standard in March 2000. The Control Net International (CI), the ODVA as well as the Industrial Ethernet Association (IEA) were all involved in that process.

Industrial Ethernet

Why Industrial Ethernet?

Ethernet is the most commonly used communication technology. It provides various transmission media like copper, fiber glass, polymer fiber, and also wireless. Compared to Ethernet, fieldbus systems work with various physical transmission methods. Thus, specific infrastructure components are necessary for each particular systems. Therefore, a commitment to the type of field bus is often the case. The connection of a fieldbus system to the higher-ranking Ethernet can be realized by gateways. The Ethernet standard allows for a remarkable increase of the bandwidth from 12 Mbit/s for bus systems to up to 10 Gbit/s. Also, the Ethernet protocol is open and allows a vertical integration. Various systems can be included into the Ethernet technology. Therefore, the interest in involving the Ethernet standard in production processes grows more and more.

In the Office environment, the Ethernet standard has already established itself as the standard technology. Nevertheless, the requirements for wiring systems and active components in the industrial environment distinguish themselves considerably from the ones in the office environment.

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