





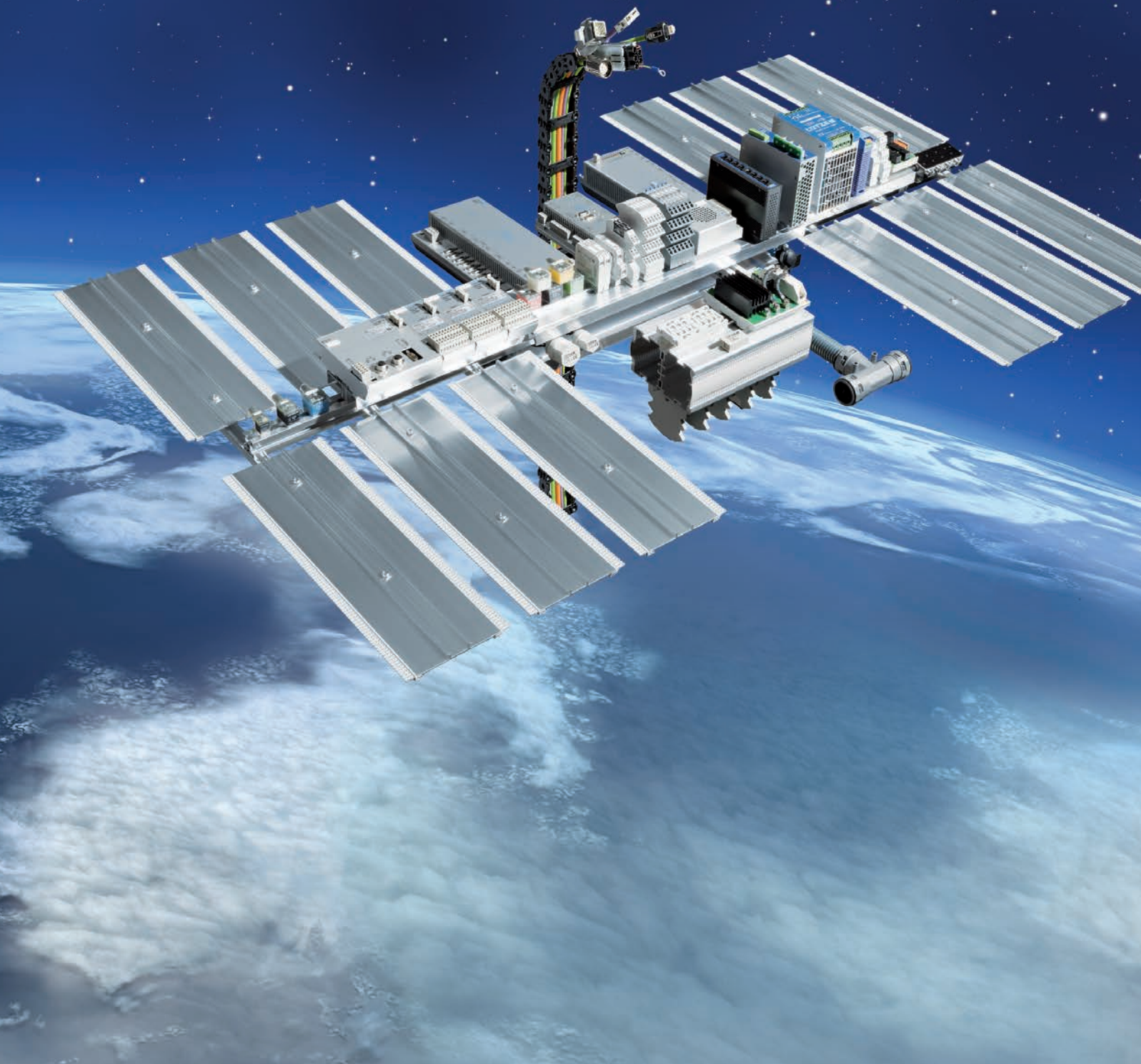


## Product overview

-  Cable + Connectivity Solutions
-  Cabinet Solutions
-  Automation Solutions
-  Transportation Solutions

# Efficiency in Automation

Cable • Connectivity • Cabinet • Control





# Welcome to LÜTZE

## Cable Solutions



## Connectivity Solutions



## Cabinet Solutions



## Control Solutions



## Transportation Solutions



**Efficiency in Automation** - A reflection of our company philosophy

As an experienced specialist in automation technology, with solutions for flexible and high flexing cables, cable assemblies, interfaces, current control and cabinet wiring, we have had a focus on efficiency for many years.

LÜTZE defines Efficiency in Automation as the use of sustainable products and solutions to further increase the performance of our products in our customers applications.

We realise this by using components for highly efficient control systems, products with above average life cycles and raising energy efficiency in control cabinets by means of the LSC wiring system.

Efficiency in Automation reflects our efforts in striving for efficient working relationships with our customers: in a medium sized family owned company we have short communication channels and a high level of manufacturing competence.

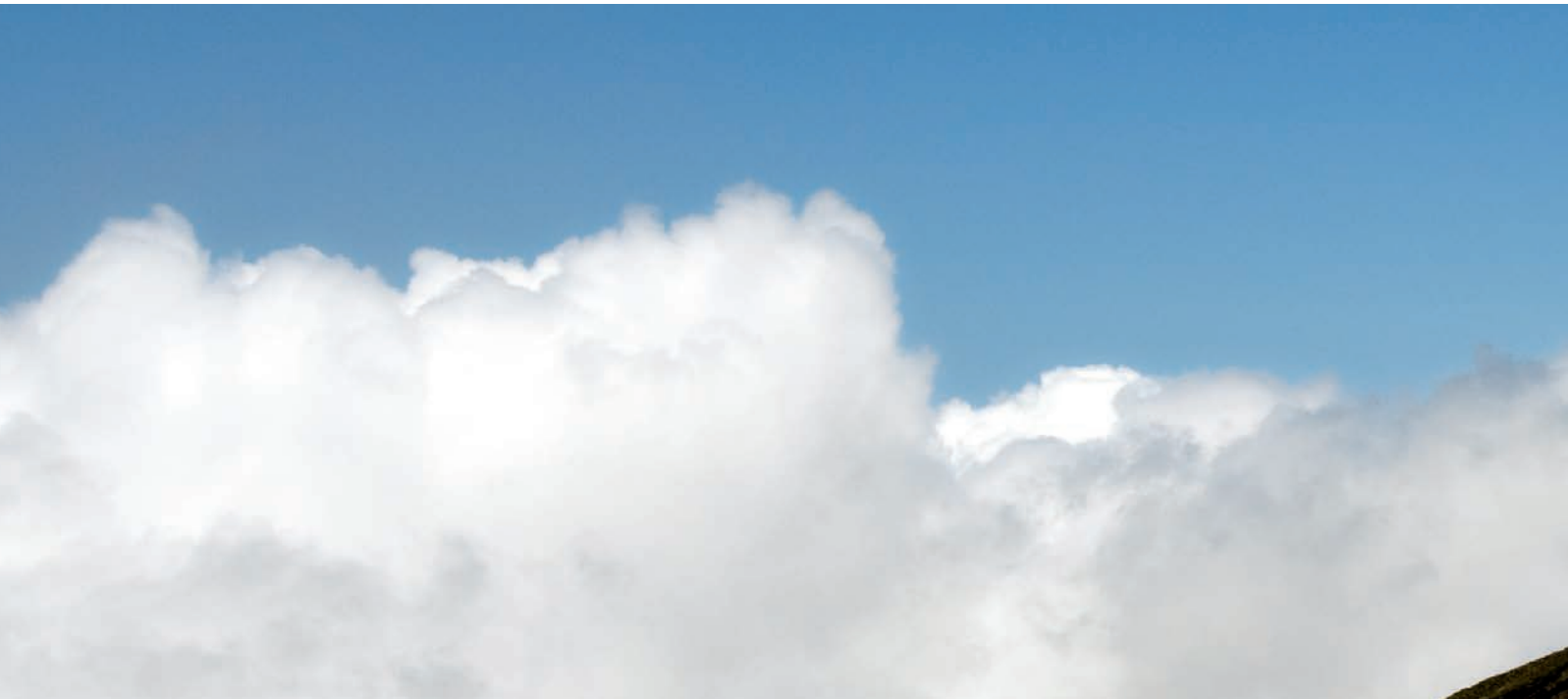
The value of a product or a solution from LÜTZE is determined by its sustainable qualities. Every innovation will only be successful in the future if it has a long term positive effect. Therefore, we provide long lasting as well as highly efficient components.

Thus LÜTZE creates value through efficiency. LÜTZE provides answers and demonstrates how to handle resources responsibly, with our environment and our future in mind. **LÜTZE - Efficiency in Automation**

**For more information on our solutions, please visit [www.luetze.com](http://www.luetze.com)**



# Business Management: Sustainable and forw



## The future is blue

Sustainable enterprise means thinking and planning ahead, understanding and embedding the belief that long lasting success is more important than short-term profit maximisation.

This is an attitude that has existed within LÜTZE for quite some time. Economic and environmental responsibilities complement each

other well and are reflected in the sustainable management and product policy - and from now in the **SkyBLUE** campaign.

We manufacture our products in a resourceful and energy-conscious manner. We use long lasting, environmentally-friendly materials. And our products, in turn, help our customers save energy and resources.

Good for everyone: for us, for the environment, for our customers a win-win-win situation.

# ard-looking

*„The competitiveness of our industry and of its suppliers depends quite substantially on how we succeed in developing practical results. The results that we produce together today, are our competitive advantages in the future.“*

Udo LÜTZE,

Member of the Executive Committee of  
the Green Carbody Innovation Alliance



## Goods with real value

The value of a product or a solution from LÜTZE is determined by its sustainable qualities as well. Every innovation is only as successful in the future if it has a long-term positive effect. Therefore, we provide long lasting as well as highly efficient components.

We are incorporating the necessary knowledge and manufacturing competence in numerous joint

projects with the objective of improving energy efficiency and sustainable technologies and industries. Thus, LÜTZE provides answers and demonstrates how to handle resources responsibly, with our environment and our future in mind.



# RoHS



## Cable Solutions

## Connectivity Solutions

### Cable Solutions

Intelligent product portfolio, better logistics, short delivery times - the efficient cable philosophy from LÜTZE

<b>Control Cables</b>	P. 4
<b>Electronic Cables</b>	P. 4
<b>Actuator Sensor Cables</b>	P. 5
<b>Bus and Network Cable</b>	P. 5
<b>Motor, Drive and Power Cables</b>	P. 5
<b>Cable Fittings and Protective Conduits</b>	P. 6
<b>Assembly Accessories, Labelling Systems</b>	P. 7

### Connectivity Solutions

<b>Cable Assemblies</b>	P. 7
<b>Actuator Sensor Interface</b>	P. 8
<b>Suppression Technology</b>	P. 8

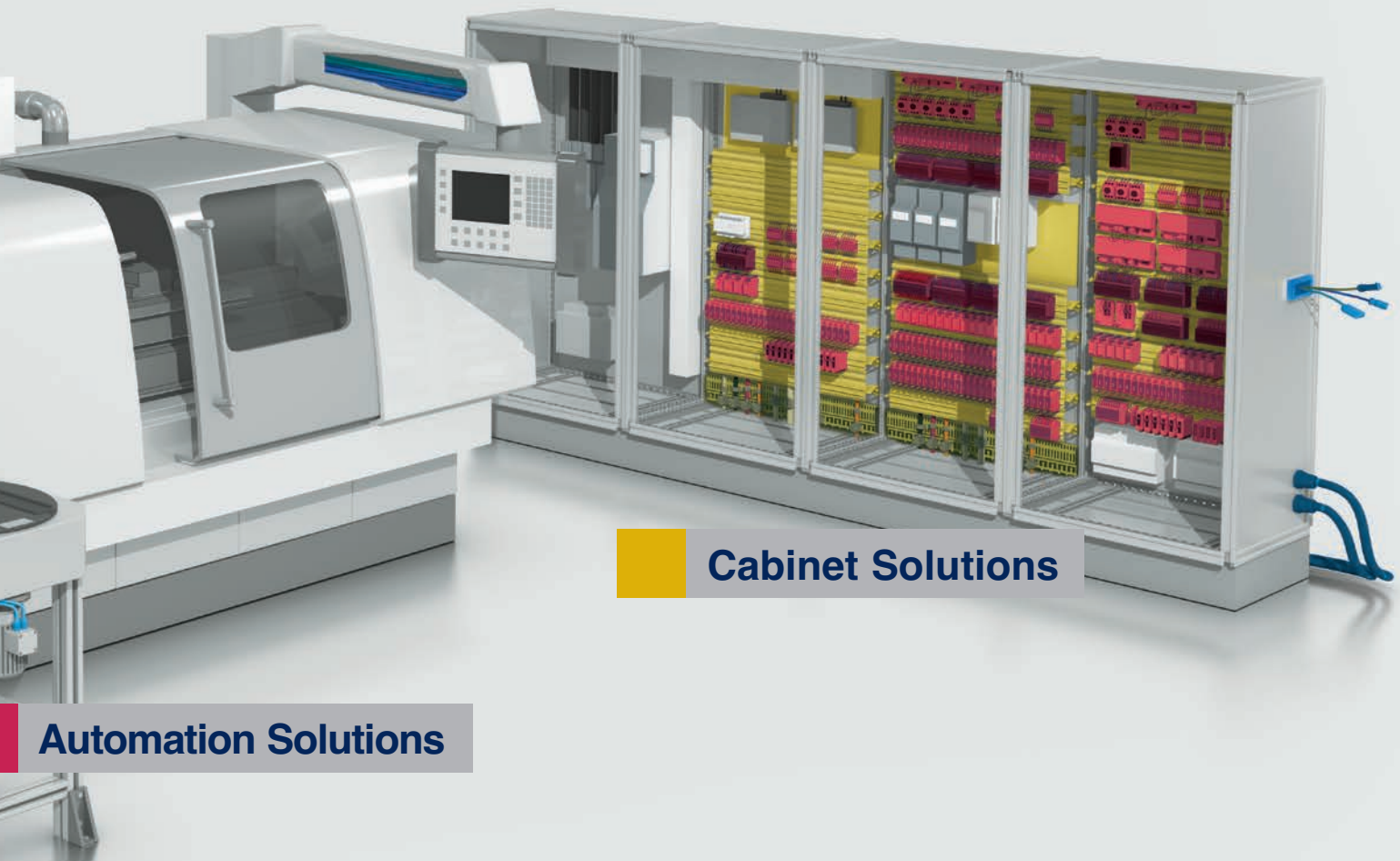
### Cabinet Solutions

With the LSC system, LÜTZE offers benefits in three dimensions: smaller control cabinets thanks to optimal use of space, reduced wiring time and lower cooling requirements thanks to optimised thermodynamic properties.

Combined with the LÜTZE Online Configurator, the LÜTZE system is the ideal solution for extra-quick configuration of control cabinets.

<b>LSC AirSTREAM Wiring System</b>	P. 9
<b>LSC-B and LSC-C</b>	P. 10
<b>LÜTZE LSC Online Configurator</b>	P. 10
<b>EMC-compatible design in LSC wiring system</b>	P. 10

# in Automation - LÜTZE solutions at a glance



## Automation Solutions

### Automation Solutions

LÜTZE solutions for automation technology combine highly innovated approaches with a comprehensive range of products.

<b>Power Supplies</b>	<b>P. 11</b>
<b>LOCC-Box Current Control/</b>	<b>P. 11</b>
<b>LCOS CC</b>	<b>P. 11</b>
<b>Ethernet-Connectivity</b>	<b>P. 12</b>
<b>Interface Technology</b>	<b>P. 12</b>
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### Transportation Solutions

For over 20 years, LÜTZE has been developing and supplying solutions and products for the demanding field of railway technology. Numerous locomotives, railcars, and control cars are able to operate safely thanks to LÜTZE know-how.

Our solutions mean high technology with supreme reliability.

<b>Control Technology</b>	<b>P. 14</b>
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## Cable Solutions

The LÜTZE strategy for the increasing demands of the manufacturing Industry:

### 1. Intelligent product portfolio

- High availability of numerous cables from stock
- Expansion of the cable portfolio for industrial automation

### 2. Optimized logistics and processes

### 3. Short delivery times

- Also available in small quantities

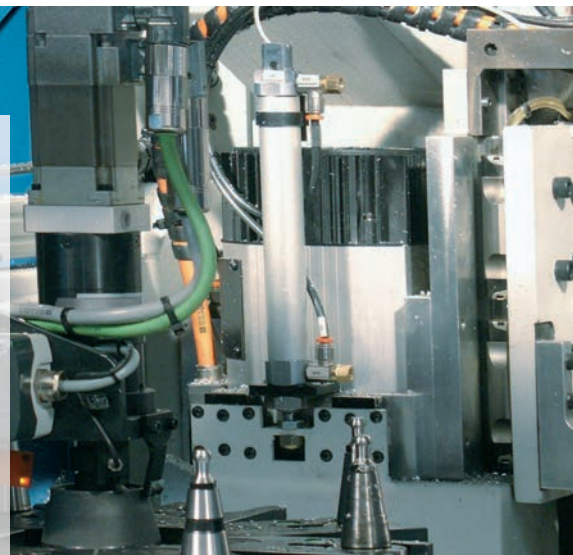
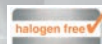
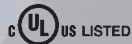
## LÜTZE SUPERFLEX® connected

The LÜTZE SUPERFLEX® Connected - Label: more than 30 years of experience with high quality cables for continuous flexing in drag chains

RoHS



DESINA



## Cables for Industrial Automation



### Control Cables

- Rugged, industrial grade construction
- Many Versions with low capacitance insulation and halogen free jacket
- High performance flexible cables
- UL Approvals
- Silicon free, oil resistance
- Small cable diameters



Direct link  
LÜTZE Online Catalogue  
Control Cables



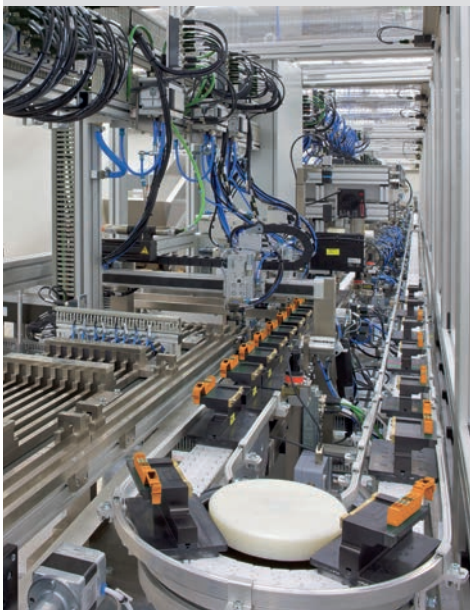
### Electronic Cables

- LiYY, LiY(C)Y and LiY(C)Y TP
- LÜTZE SUPERFLEX® TRONIC with low capacitance insulation and halogen free jacket
- High performance flexing cables
- UL Approvals
- Silicon free, oil resistance
- Halogen free, flame retardant



Direct link  
LÜTZE Online Catalogue  
Electronic Cables



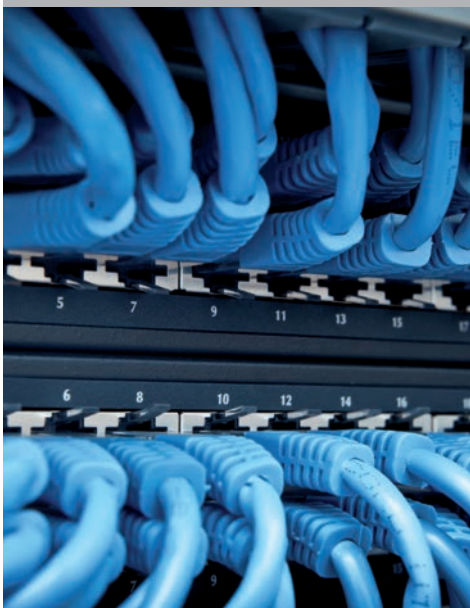


### Actuator Sensor Cables

- Shielded and not shielded
- low capacitance
- PUR, halogen free
- Easy stripping and installation
- UL Approvals
- High flexing
- Flame retardant
- Silicon free, oil resistance



Direct link  
LÜTZE Online Catalogue  
Actuator Sensor Cables



### Bus and Network Cables

- For industrial use, 100 % compatible with the BUS Standard
- Broad offering covering all standard industrial BUS systems
- UL Approvals
- DESINA compliant
- Industrial Ethernet, Profinet, EtherNet IP, EtherCat



Direct link  
LÜTZE Online Catalogue  
Bus and  
Network Cables



### Motor, Drive and Power Cables

- Low capacitance for efficient power transmission
- Highly efficient
- System compliant
- DESINA compliant
- Broad offering covering many systems
- Cable assembly available
- UL Approvals



Direct link  
LÜTZE Online Catalogue  
Motor, Drive  
and Power Cables

### Cable fittings and cabinet entry systems



#### **LÜTZE CABLEFIX- The intelligent type of cable gland**

- Convenient, time-saving and secure
- For actuator, sensor, bus and control cables
- Simple assembly, quick installation
- For clearly-organised arrangement of the cables



#### **LÜTZE CABLEFIX VARIO- The innovative cable gland for all cables and wires pre-assembled with connectors**

- Also ideal for retrofitting
- Protection class IP65
- The wide variety of options can solve practically any fastening problem
- Optionally available in very high technical quality glass fibre reinforced polyamide 66 GF30 with additional inner brass reinforcement or of solid aluminium



#### **LÜTZE plastic cable fittings and accessories**

- Over 60 different types
- Metric and PG designs available

#### **LÜTZE metal cable fittings and accessories**

- Over 40 different types
- Metric and PG designs available



#### **LÜTZE EMC fittings**

- PG fittings and metric EMC fittings for optimal shielding

### Protective conduits



#### **LÜTZE WELLFLEX protective cable conduit WF in PE design with WFH plastic sleeve holder**

- Highly-flexible protective cable conduit for use on moving system components, such as control cabinet doors
- Halogen-free



## Cable Solutions

### Assembly accessories and labelling systems



### Labelling systems and accessories

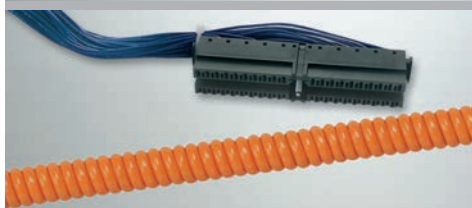
## Connectivity Solutions

### Cable assembly



### Compatible assemblies for ALLEN BRADLEY or other systems, eg. SIEMENS, SEW, BOSCH REXROTH, LENZE

- For servo motors, encoder cables and also hybrid cables
- For use in c-tracks or fixed installation
- LÜTZE offers solutions with high quality cables for highest demands



### S7

- S7 pre-assembled
- S7 plugs compatible to SIEMENS SIMATIC SPS/S7, completely wired

### Spiral Cables

- According to your specifications, for example, made for high performance machines, lifts and many other moving applications, for highest demands



### Pre-assembled cables for short-term needs

Patch cable Cat5e or Cat6 for ETHERNET applications or USB 3.0 applications



### Solutions for your assembly tasks

LÜTZE makes it easy for you, even with complex cable sets. Because all of the components are grouped under a single article number. In this way external assembly even reduces the workload for your internal administration - from the order all the way through to the invoice!



### LÜTZE SAFECON plastic moulded round connectors for industrial

- Economical and safe solution for the electrical connection of machines and systems
- The integrated protection against kinking and the inner metal housing with 360° EMC shielding ensure the cable assemblies meet the requirements for the industrial sector

## Actuator Sensor Interface



### LÜTZE actuator sensor cables

- M8 or M12, with and without shielding, straight and angled
- 3 to 8-pole cables, with free cable end or as a completely assembled connecting cable
- Field bus cables, M12
- CANopen, DeviceNet, Profibus® Ethernet applications



### LÜTZE connectors

for LÜTZE actuator sensor boxes and cables...

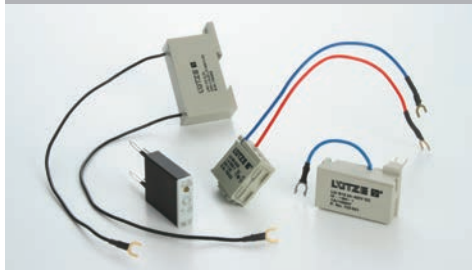
- Circular connectors of all types for self-assembly
- T distributors M8/M12, connectors shielded and not shielded
- A, B, D or X coded
- RJ 45 Connectors



### LÜTZE wall bushings

- M8, M12
- USB 3.0
- RJ45 interface

## Suppression Technology



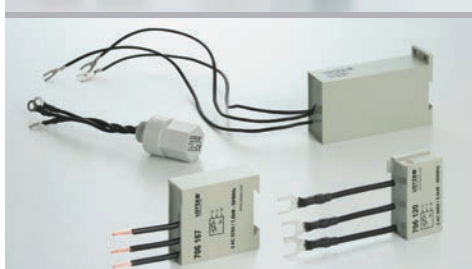
### LÜTZE suppressor for switching gear

- For AC/DC 12 to 400 V, with various protective circuits and connection options
- Universal interference suppression modules suitable for all standard commercial brands of contactor



### LÜTZE valve suppressors

- With PVC and PUR connecting cables
- With free or pre-assembled cable end
- Suitable for all standardised solenoid valves with various interference suppression functions, overvoltage protection, switching amplifiers, etc.
- With and without status displays
- Various cable lengths
- AMP connectors, Deutsch connectors



### LÜTZE motor interference suppression

- From 12 to 690 V and motor outputs up to 30 KW
- For installation in a control cabinet (DIN rail)
- Direct mounting

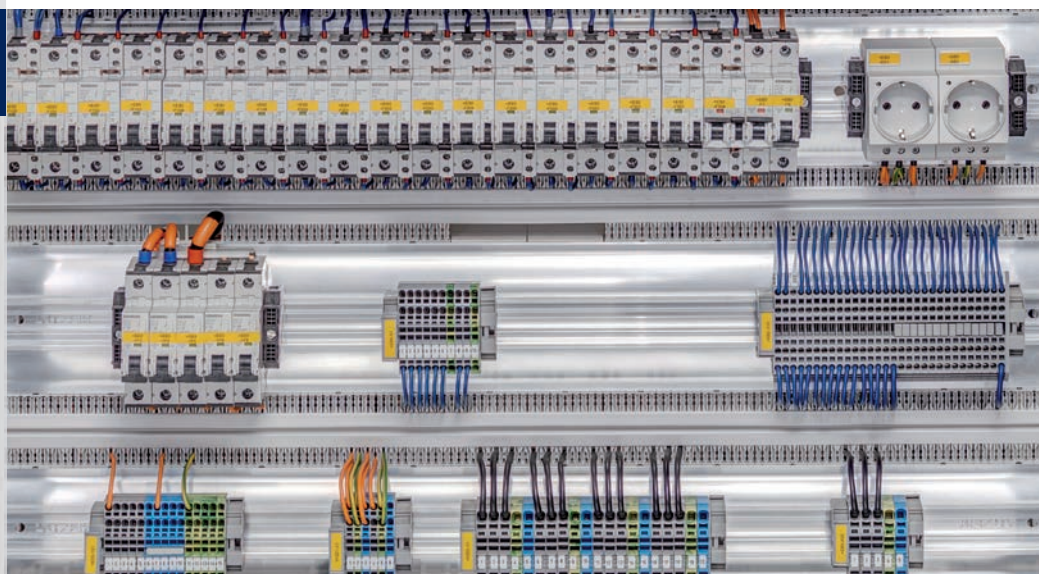


# Cabinet Solutions

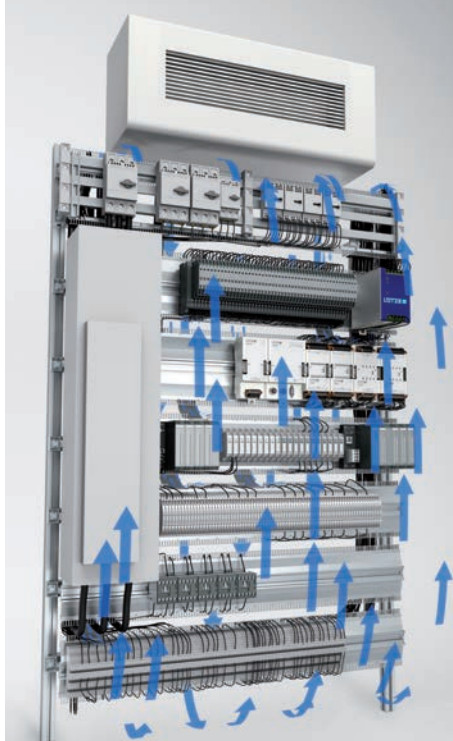
The LÜTZE LSC wiring system is available as a modular frame for all commercial control cabinet models.

The integrated wiring means cable conduits are no longer required. Almost all control components can be assembled in the cabinets.

Whether you have a large or small control cabinet, heavy or lightweight components - LÜTZE offers the right solution for all control cabinet issues!



## Energy Efficiency in Cabinets



**Less cooling power, no hotspots, less thermal stress for components and longer life for your components!**

By separating the structure into a mounting plane and a wiring layer, the air flows freely passing the modules and wires - heat is efficiently removed.

With LSC **AirSTREAM** the costs for cabinet cooling can be reduced up to 23 %\*.



\* Results of the Innovationsallianz Green Carbody, TP 3.2.1

## More Space in Cabinet



LSC **AirSTREAM**  
Space Saving

Conventional cabinet

**Simply more space!**

You can mount all your control components efficiently and integrate your wiring easily: no longer any need for cable trunking, no need for individually drilled holes or the chore of lining up the components.

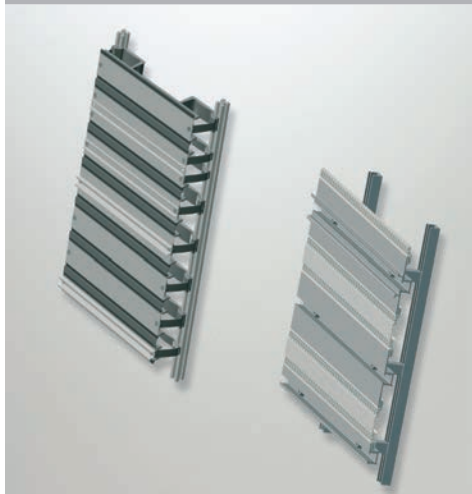
**Including reduced cabinet volume through optimised use of space!**



Direct link for more informations about the LSC **AirSTREAM** System

# Cabinet Solutions

## Other LSC Systems



### LSC-BRACKET

#### For the most efficient use of space in the control cabinet

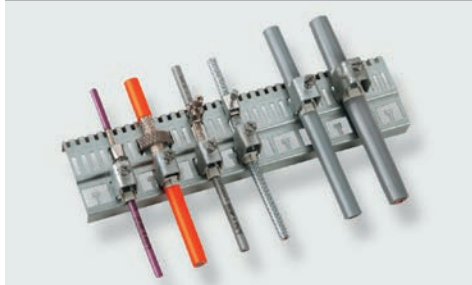
- Set-up and wiring, as well as any maintenance and expansion work can, despite the wiring in two levels, be performed from the front (in accordance with EN 60204 / VDE 0113)
- Optimal wire guiding, even with regard to rewiring or quick troubleshooting in the event of a malfunction

### LSC-COMPACT

#### The smaller, lighter version of the LÜTZE wiring system

- Optimal use of space for medium-sized and small switchboxes
- Low height
- Very light design with extremely high stability
- Wiring from front only

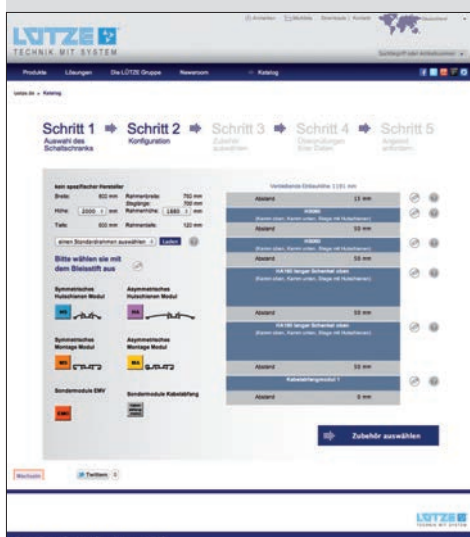
## LSC accessories



### EMC compatible design in LSC wiring system

LÜTZE offers a broad spectrum of components, from shield rails to various shield connections or cable outlet options.

## LSC Online Configurator



### 5 steps to the LSC frame.

#### Configure the LSC *AirSTREAM* wiring system online.

With the free online configurator, users can easily switch to the LSC *AirSTREAM* wiring system or configure their own LSC *AirSTREAM* wiring frame as a registered customer.

The intuitive operation, numerous help features and predefined standard settings make the configurator child's play. A LÜTZE LSC *AirSTREAM* assembly frame can be configured in 5 steps.



Find more Informations  
about **LÜTZE LSC-System**  
in our Youtube channel:  
[www.youtube.de/luetzesolutions](http://www.youtube.de/luetzesolutions)



Direct link  
**LSC *AirSTREAM***  
Online Configurator



# Automation Solutions

Groundbreaking technologies and integrated solutions have a long tradition in LÜTZE automation technology. In addition to power supply units, the LOCC-Box current monitoring system, suppression technology for switch modules, valves and motors, primary switched-mode regulators and control transformers, the interface technology provides numerous modules for implementation of practically any interface.



## Power Supply



### LÜTZE Delta Power Supplies

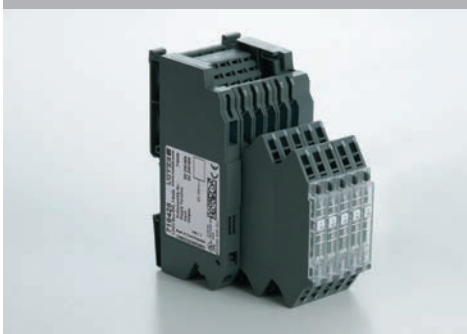
- One and three-phase units; wide range input for worldwide use
- 10 W - 960 W output
- Parallel and redundant switchable
- Up to 89 % efficiency
- Can be snapped onto 35 mm DIN rail



### LÜTZE COMPACT power supply units

- One, two and three-phase units; wide range input for worldwide use
- 10 W - 2400 W output
- Up to 94 % efficiency
- Extremely small size
- Power boost 150%, 5 s
- Can be snapped onto 35 mm DIN rail
- Parallel switchable

## Current Control



### LÜTZE LOCC-Box Current Control

- Adjustable current (1-10 A)
- Adjustable characteristics
- Electrical and optical status indication
- Communication over fieldbus like e.g. Profinet-IO, Profibus-DP, EtherCAT and CANopen
- Compact
- 1-channel version
- For 12 V-, 24 V or 48 V applications
- Modular



### LÜTZE LCOS CC

- Adjustable current (1-10 A)
- Adjustable characteristics
- Electrical and optical status indication
- 1 channel design with 2 pole disconnection (galvanic insulation)
- 2 channel design with 1 pole disconnection
- Direct connection „+“ and „-“
- Tool-free installation
- For 12 V-, 24 V or 48 V applications

## Automation Solutions

Communication with no interface problems, optimised system processes, time and cost savings thanks to custom-tailored Ethernet solutions from LÜTZE.

Thanks to a constantly increasing number of LÜTZE infrastructure components, there is an enormous number of possible applications in industry and systems engineering.

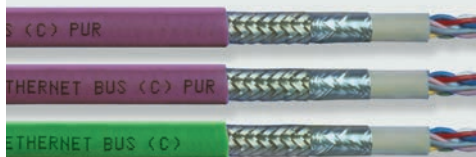


### Ethernet-Connectivity



#### LÜTZE Unmanaged Ethernet Switches

- Complete family of unmanaged switches
- Solid metal housing; expanded temperature range -40 °C/+75 °C
- 10/100/1000 MBit; Power over Ethernet
- Broadcast storm protection; auto negotiation, auto crossing, auto polarity
- Wide range and redundant supply
- UL



#### LÜTZE Ethernet cables

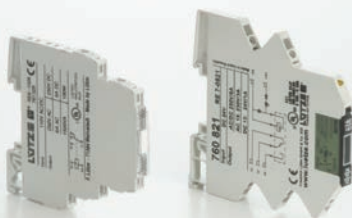
- LÜTZE-SUPERFLEX® cables with PVC and PUR outer jacket
- With and without shielding, suitable as a control, monitoring and measurement cable
- Used, for example, in robots, cable and hose carrier systems, handling devices, transport and conveyor systems

### Interface Technology



#### LÜTZE relay modules

- For potential-free switching
- Space-saving in 6.2 mm microcompact design
- Modules with approvals such as UL, GL, EN 50155, etc.
- Over 60 different designs
- Wide range input
- Plug-in



#### LÜTZE semiconductor relay modules

- For contactless switching
- For long service life with frequent, rapid switching operations
- Overload-proof
- Space-saving in 6.2 mm microcompact design, plug-in
- Over 30 different designs
- Monitoring function

## Converter Modules



### LÜTZE relay modules with positive-action contacts

- For potential-free switching
- Positive-action contacts
- Wide range input
- Complete family
- UL



### LÜTZE Microkon converter series (analogue and temperature converters)

- With fixed input/output or adjustable ranges via DIP switch and software
- High accuracy (0.1%)
- Space-saving in 6.2 mm microcompact design
- 3-way separation even in 6.2 mm
- UL, Class 1 Div 2



### LÜTZE Microkon universal converter

- With 48 adjustable ranges
- With 3-way disconnection and 24 to 240 V AC/DC wide range input
- Space-saving in 17.5 mm microcompact design
- 2 and 3-way separation
- UL, Class 1 Div 2



### LÜTZE LCON monitoring modules, FDT/DTM compatible

- With electrical isolation
- High accuracy (0.1%)
- Freely settable switching thresholds
- Separately settable hysteresis
- Setting via DIP switches or software: current, voltage, temperature
- FDT/DTM
- Expanded temperature range -25/+75 °C
- UL



### LÜTZE LCON temperature converter, FDT/DTM compatible

- PT, TC, resistance
- Accuracy 0.1%
- 1 kHz transmission frequency
- Various analogue outputs
- Setting via software and/or DIP switch
- UL



### LÜTZE LCON analogue converter, FDT/DTM

- Analogue input  $\pm 0$  V to  $\pm 30$  V
- Accuracy 0.1%
- 1 kHz transmission frequency
- Various analogue outputs
- Setting via software and/or DIP switch
- UL



## Transportation Solutions

Anyone who wants to offer reliable transportation solutions has to have exact knowledge of the operational conditions, and above all a great deal of experience with electronics on wheeled vehicles.

For more than two decades, LÜTZE has been developing and supplying solutions for the demanding railways field. All over the world, numerous locomotives, railcars, and control cars are able to operate safely thanks to individual LÜTZE solutions.

Working in close cooperation with you, the engineering specialists at LÜTZE will develop the appropriate solution for your requirements as well.



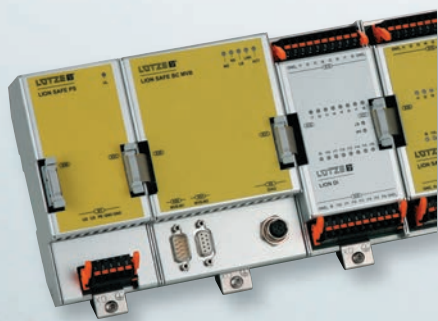
## Control technology

### Control and diagnostics systems

Control and diagnostic systems have a special task in modern rail vehicles. In order to guarantee rational planning and production of the vehicles under the continuously increasing requirements on process control technology, individually adaptable platform concepts are required.

The flexible at use process control technology components by LÜTZE take this trend consistently into account. In this way, intelligent special solutions such as the LÜTZE powerpack control are available just as complete control technology systems with individual components aligned optimally to each other.

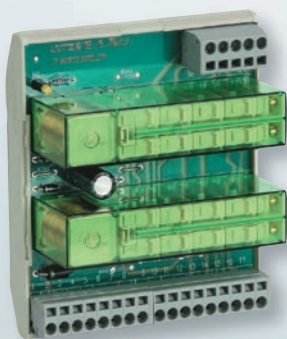
One example of this is the DIOLINE system, which, in addition to the vehicle control, also comprises the control of subsystems and the I/O level for all signal voltages generally used in the rail sector.



## Interface

### Streamlining vehicle planning and wiring, making optimal use of installation space with LÜTZE interface products for the railway industry

The large number of different electrical components on rail vehicles frequently requires amplification, adaptation and interference suppression between the process control technology and actuating elements. The interface level required for this has been optimised by LÜTZE. Innovative devices especially development for the vehicle technology combine functions which previously required a series of individual devices. This permits the minimisation of space requirements and simplifies planning and wiring. A broad spectrum of standard products thus covers numerous areas of application and is perfectly supplemented through customer-specific products which we develop according to your specifications.



## Indication



### Control gear and signal units for the driver's cab

So that everything remains under control in the driver's cab, we have developed maintenance-free, durable and ergonomically suitable LED, display and lighting elements as well as acoustic signal encoders which have proven their worth multiple times in practical use.

Do we have special solutions for you, too?  
Of course we do!







**RoHS**

**Germany**

Friedrich Lütze GmbH  
Postfach 12 24 (PLZ 71366)  
Bruckwiesenstrasse 17-19  
D-71384 Weinstadt  
Tel.: +49 7151 6053-0  
Fax: +49 7151 6053-277(-288)  
info@luetze.de



**Cable and Wire**

**Cable assemblies**

**Cable fittings**

**Cable conduits**

**LSC Wiring System**

**Module and  
Interface Technology**

**Ethernet Connectivity**

**Suppression Technology**

**Power Supplies**

**Railway Technology**

**United Kingdom**

LÜTZE Ltd.  
Unit 3 Sandy Hill Park  
Sandy Way, Amington  
Tamworth, Staffs, B77 4DU  
Tel.: +44 1827 31333-0  
Fax: +44 1827 31333-2  
sales.gb@luetze.co.uk

**USA**

LUTZE INC.  
13330 South Ridge Drive  
Charlotte, NC 28273  
Tel.: +1 704 504-0222  
Fax: +1 704 504-0223  
info@luetze.com

**Austria**

LÜTZE Elektrotechnische  
Erzeugnisse Ges.m.b.H.  
office@luetze.at

**Switzerland**

LÜTZE AG  
info@luetze.ch

**France**

LUTZE SAS  
lutze@luetze.fr

**Spain**

LUTZE, S.L.  
info@luetze.es

**China**

Luetze Trading (Shanghai) Co.Ltd.  
info@luetze.cn



[www.luetze.com](http://www.luetze.com)

