Solutions for
Industrial Automation

SYSTEMATIC TECHNOLOGY

From Product to Solution:
LÜTZE Solutions for Industrial Automation

For more than 50 years, Friedrich Lütze GmbH has been active in automation technology. This high-tech company has been developing and producing electronic and electro-mechanical components and solutions for the automation industry. The innovations and expertise of LÜTZE are applied in control cabinets as well as in machine or system installations.

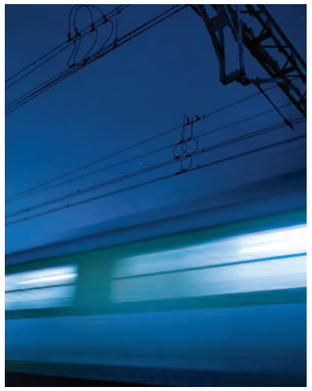
Company Philosophy

The company's autonomy is an integral part of the business philosophy. LÜTZE is a solutions provider that focuses on customer benefits which is why the main importance is on in-house expertise and know-how. The continual development and implementation of innovative product ideas and solutions is part of the daily activity of the construction planning and development departments at LÜTZE.

Automation applies technological advancements which assist us on a daily basis to solve automation tasks more quickly, safely and efficiently. LÜTZE offers a wide range of products and solutions that are deployed by many prestigious customers.

LÜTZE know-how at a glance

- 32-bit processors from Netx or Pentium class
- Security level SIL 1 to SIL 3
- Full casting of electronic devices
- Working temperatures of -40 °C to +85 °C
- Field bus technology in CANopen, Ethernet IP, ProfiNet
- IEC 61131-based control software
- Parameterisation via FDT/DTM
- Aluminium and plastic housings for extended working temperatures
- Cable technology for field bus and network technology, motion and C-track cables
- Installation systems for space-saving use in industrial environments
- UL, Class I, Div2, GL, CCC approved



Control systems:
Decentralised input/output systems

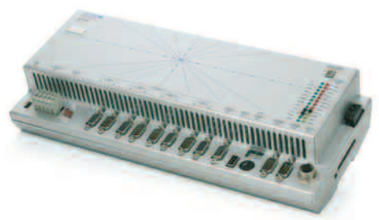
In the automation industry, field bus systems guarantee a smooth and open communication of information. Sensors, actuators, drives and controls communicate between each other or via master systems. These assemblies are often exposed to many other external factors. However, they must still display a long service life and reliability. A great deal of experience is required to develop these parts especially with higher demands on precision and safety such as in railway engineering.

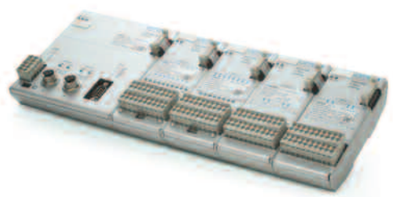
Decentralised I/O modules

- Programmable for decentralisation
- CANopen
- Digital inputs and outputs
- Analogue inputs and outputs
- Temperature range according to EN 50155
  -40 °C to +70 °C
- Stable metal housing

Controls

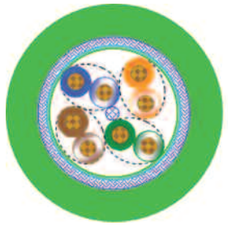
- Modular control computer
- Compact, high-performance communication for central or decentralised control tasks
- Up of 4 CAN buses
- IEC 61131 programming system for applications conforming to EN 50128
- Optional compliance with EN 50129 SIL3





The LÜTZE product portfolio includes extremely sophisticated high-tech components that deliver maximum reliability even with customised solutions.

Structured networks - **E thernet connectivity**



Category 5 cables are generally available at LÜTZE with an all-round braided shield (S/UTP).

LÜTZE provides category 6 and 7 shielded pair cables with an additional all-round braided-copper shield (S/FTP).

Plug & Play in Industrial Ethernet

Save time, costs and stress: LÜTZE can cost-efficiently and quickly solve your assembly requirements.

LÜTZE ET Series - Reliable transmission even with Giga power
The LÜTZE ET Series of switches and media converters enable you to set up a Plug & Play network infrastructure in industrial environments - without any configuration necessary.

MDI/MDI-X functionality uncrossed cables can also be used between the switch and end device. Because industrial areas are synonymous with harsh environments, all of our systems feature aluminium housings, expanded temperature ranges from -40 °C / +75 °C and fibre-optic transmission..

Additional features include:

- Transfer rates of up to 1 Gbit/s
- Conforms to IEEE 802.3 and 802.3u
- Broadcast storm protection
- Auto negotiation, Auto Crossing, Auto Polarity
- Redundant infeed
- Wide range supply
- Full / half duplex data flow monitoring
- PoE variants

Cables – a lot depends on them

The correct transmission of process data is absolutely essential. An important requirement is the correct choice of cables, connection technology and components.

Procurement, logistics and production all need to be organised perfectly. The quality of cable must comply with the system's requirements. Whether you are looking for standard or customised applications, C-track or torsion-resistant cables: LÜTZE delivers customised solutions for your applications in CAT5, CAT6, CAT7, POF or HCS.

You can also take advantage of our comprehensive portfolio of connectors, outlets and wall bushings. The connectors conform to IEC 61076-3-106.

All connectors facilitate quick and easy assembly.

Customised Industrial Ethernet:
Besides supplying standard products, LÜTZE can also produce customised solutions thanks to its years of expertise in Industrial Ethernet.

Power supply - **the hea rt of the system**

Power supplies are at the heart of every application. Unsuitable devices can result in system breakdown and enormous subsequent costs. Power supply units must offer maximum efficiency and compact sizes and a constant uninterruptible power supply in safe areas.

Energy-efficient and space-saving

LÜTZE offers the entire spectrum of standard and uninterruptible power supplies.

By deploying the latest digital technology, the devices deliver up to >94 % effectiveness, extremely compact sizes, power boost and a patented charging technique for uninterruptible power supplies that can double a battery's service life.

The spectrum covers the power range of between 10 W to 960 W and output voltages of DC 5 V to DC 72 V.

LÜTZE power supplies

LÜTZE UPS

DC device protection **b efore the fuse is triggered**

The benefits of a reliable power supply only come into effect if a suitable safety concept has been developed that meets the selective switch-off requirements with high cable attenuation and integration into the existing communication level.

Intelligent and reliable monitoring of DC 24V circuits

The reliable power supply needs to optimally connect capacitive loads, quickly detect a power surge during operation and only disconnect the affected path.

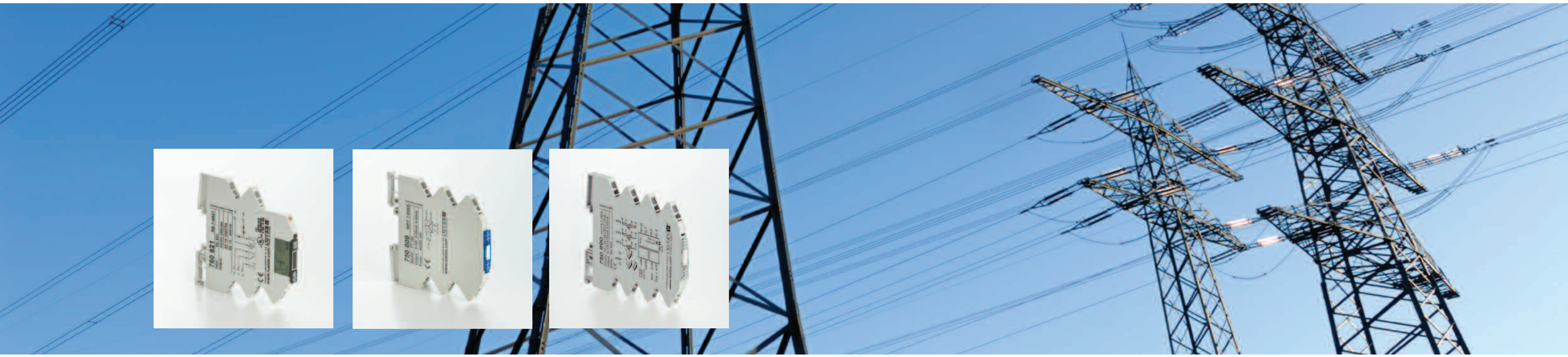
This type of system must save the error in order to prevent risks when the system is switched on again and to diagnose the error using hardware or via a field bus interface.

The LÜTZE LOCC box system used for monitoring the current meets these demands like no other system and is combined with other intelligent functions:

- Class of flammability according to UL 94-V0
- Temperature-independent response time
- Uninterruptible supply via copper bar and contact slide
- Settings can be sealed
- Status indicator: operation, error and 90 % load
- Adjustable properties
- “Power-ON” effect to switch on capacitive loads
- Save last system status
- 8.1 mm modul width
- Remote ON/OFF and manual ON/OFF
- Individual and centralised error signalling
- Adjustable rated current up to DC10 A
- Gateways to master field bus systems such as CANopen and ProfiNet
- Free monitoring software for network analysis

Connecting, converting **and monitoring**

Monitoring: power, voltage and temperatures are the parameters that require monitoring. In the wind power industry, for example, the battery voltage is monitored with a voltage monitoring unit. A current monitoring unit is connected in series with high-current transformers in aluminium production or in low-voltage distributors. Temperature monitoring is used to monitor the control cabinet temperature for wind power or as a two-point controller in cold storage warehouses. The applications are extremely diverse.

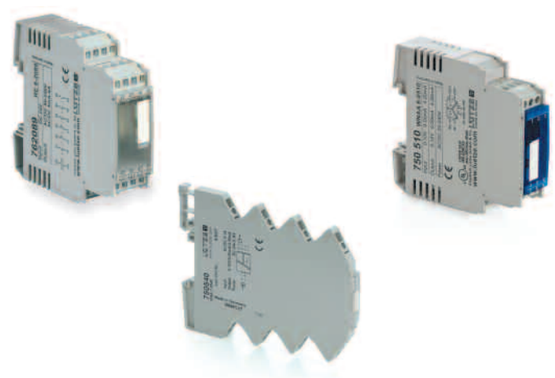


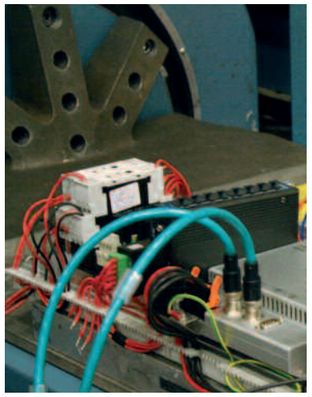
Connecting, converting, monitoring

Relay, solid state relay
LÜTZE offers products for a wide range of applications especially for coupling signals and for switching loads of up to 250 V/16 A at temperatures ranging from -40 °C to +75 °C. The micro-compact devices with an extremely compact width of 6.2 mm are used for narrow applications. Devices are also available with spring-loaded connections for areas exposed to strong vibrations.

Analogue signal processing
The 6.2 mm wide devices ensure extremely accurate processing for this industry. Whether used for converting signals or recording temperatures or limit values, the LÜTZE signal transformers complete a wide range of tasks. Thanks to the use of hybrid technology, the power loss remains minimal so that they can operate at temperatures between -40 °C and + 75 °C.
The electronics integrated into the devices enable operation at 3,000 m above sea level without requiring any modifications (such as with wind turbines)

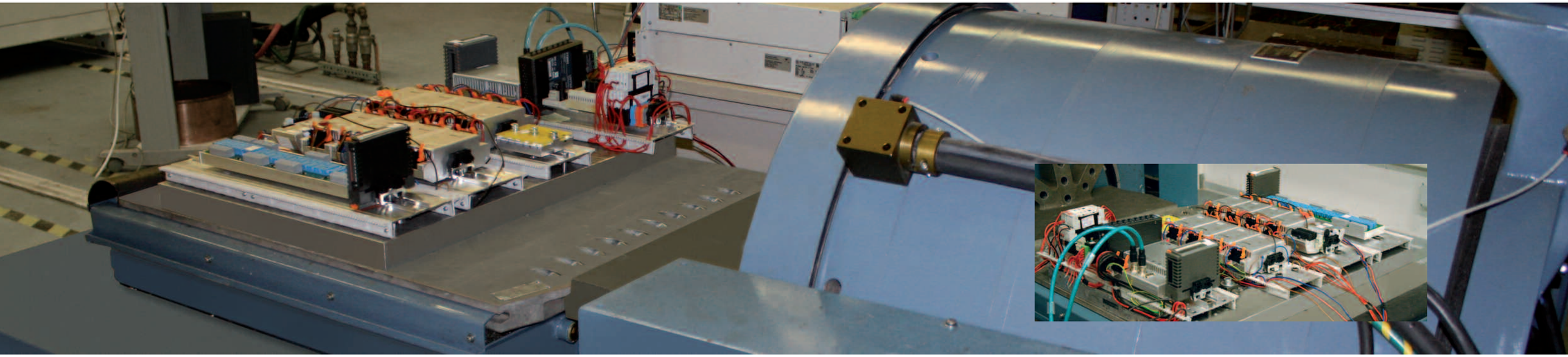
For monitoring applications, LÜTZE can also offer 6.2 mm wide devices that have two independent switch outputs.
The monitoring function covers the normal threshold function, hysteresis as well as monitoring tendencies. If required, all functions in one unit or that can be parameterised via FDT/DTM.





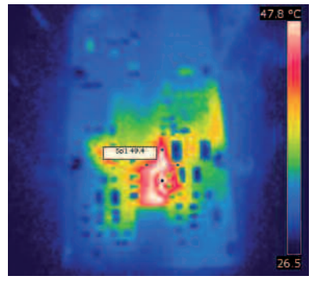
There is no getting ar ound the fact:
Test, inspect and guara ntee quality

Steadfast quality. *Vibration and shock testing* are just as part of the service as *EMC testing* for *bursts*, *surges* and *ESD*. The stability of assemblies and individual parts can only be guaranteed if they are first subject to cable and radiated electromagnetic interference.

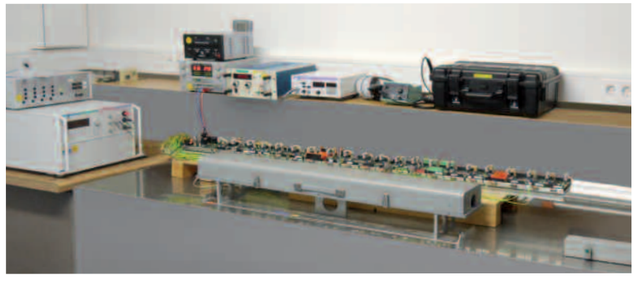


Despite increasingly shorter development timeframes, components and assemblies still need to be reliable and sustainable regardless of whether they are used in ice-cold or burning-hot conditions.
Besides type-testing in accordance with general standards, LÜTZE also offers routine testing in accordance with customer specifications:
- High-voltage resistance up to 5 kV
- Extreme climate from -40 °C to 85 °C (as run-in test from -20 °C to 45 °C)
- Up to 95 percent air humidity With condensing of assemblies

Testing is conducted for the application in tools and special machines and systems and for construction machinery, wind power plants, rail vehicles, power plants.



Thermal imaging sheds light on heat development; here in the development testing stage on a transformer module.



By conducting *burst testing*, it can be tested during product development whether products will meet future requirements.

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Cables

Cable assembly

C-tracks

Cable protection

Cable glands

LSC wiring system

Module and interface technology

Industrial Ethernet

Suppression technology, UPS Power supplies

Railway engineering

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