

# LÜTZE-REPORT

The international magazine of the Lütze Group

**LÜTZE PRESENT  
AT INTERNATIONAL  
TRADE FAIRS**

**STRATEGIC  
PARTNERSHIP BETWEEN  
ALTERSYS CORP. AND  
LÜTZE INC.**

**LÜTZE  
POWER-SUPPORT**

**CUSTOMER-SPECIFIC  
SOLUTIONS  
FIELD BUS TECHNOLOGY  
FOR RAIL VEHICLES**

**LÜTZE  
CREATES SPACE IN NEW  
FEDERAL CHANCELLERY**

**MOTORWAY NETWORK  
STAY IN THE OVERTAKING LANE  
WITH DATATRANS**



**Systematic Technology**

e d i t o r i a l

# EDITORIAL



Friedrich Lütze  
founder of the  
Lütze Group

## Innovative technology for our customers

When it comes to cracking technical nuts, you will always find our technical specialists at the premises of customers who have interesting problems they need solving. In this respect, we always work in very close cooperation with our customers to find the right solutions, which often prove to be somewhat unconventional, yet cost-saving.

Such is the case in the field of building management where space- and cost-saving mounting racks have been developed with the LSC wiring system, which would be impossible using conventional designs.

Also in the field of bus technology, a new range has been developed for rail engineering, which achieved recognition from the specialists at INNO-TRANS in Berlin.

We look forward to accepting more challenges – takes us at our word.

Yours sincerely,

F. Lütze

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# TRADE FAIR PRESENCE

## Lütze goes around the world:

Fair	Location	Date	
SPS-IPC	Nuremberg	28.11. – 30.11.2000	Lütze D
EMV	Augsburg	13.03. – 15.03.2001	Lütze D
Ampere	Prague	10.04. – 12.04.2001	Lütze A
HMI 2001	Hannover	23.04. – 28.04.2001	Lütze D
IH/BEST	Zurich	15.05. – 18.05.2001	Lütze CH
INDUSTRIA	Budapest	22.05. – 26.05.2001	Lütze A





# STRATEGIC PARTNERSHIP: ALTERSYS CORP. AND LÜTZE INC. CHARLOTTE, USA

**Leaders in PC-Based Control technology are joining forces to offer a complete Open Control Solution to industrial users and OEM's.**

AlterSys, a global supplier of advanced manufacturing software solutions, and Lütze, a leading supplier of open control components, announce that they have formed a partnership to offer an embedded solution combining AlterSys' Virgo 2000 open control software with the Lütze DIONet PC controller for decentralized Ethernet control and networking.

The DIONet PC from Lütze will come out of the box pre-configured with the Virgo 2000 control engine, which offers a **small footprint and efficient design enabling it to run on small, less costly hardware platforms.** The system's configuration is accomplished through AlterSys' workbench, which features all the IEC 61131 languages plus flowchart, as well as debugging and online monitoring tools. The DIONet system provides the backbone to the entire control architecture. DIONet seamlessly integrates with existing or new control components communicating on open networks. Full integration between logic control, motion control and HMI can be realized without

suffering the common pitfalls usually accompanied by this kind of architecture. Since control is decentralized, network bottlenecks can be avoided. **DIONet offers a true "plug & play" environment for building distributed control systems.**

**Terry Miller, AlterSys Corp. President said:** «We are very excited about our new partnership with Lütze and believe it offers a great deal of added value to users and OEM's. It's the perfect example of two innovative companies working together to make life easier for control system designers. Industry professionals will benefit from an integrated solution that offers open connectivity in a modular form factor for control and data visibility throughout the enterprise. This is another example of AlterSys' commitment to providing scalable, yet powerful, automation components and solutions.»

**Udo Lütze, President and CEO of Lütze Inc. added:** «The performance of a control system depends on the control architecture and it's flexibility. However, the best architecture will not prevail if the soft and hardware components don't work together efficiently. The Lütze DIONet architecture mirrors

the decentralized control capabilities of Virgo 2000. Both hardware and software components have been designed to work in a totally integrated fashion. Decentralized control is simple and powerful if everything is working in harmony. It is our goal to provide, together with AlterSys, out of the box solutions that work from concept to implementation without turning a customer into a test center. **We at Lütze Inc. are committed to performance and compatibility.**

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## NEW VICE PRESIDENT AT LÜTZE. INC.

Charlotte, NC-- Lütze, Inc. Charlotte, NC is please to announce the appointment of **Kenneth C. McCown to the position of Vice President of Sales** for Lütze Inc. US operations. Mr. McCown has over 20 years of sales and marketing

experience in the industrial and process automation industries and will be located at Lütze's US headquarters in Charlotte NC.

**Kenneth C. McCown**



# POWER-SUPPORT AT LÜTZE

At Lütze, we are particularly fond of the word «service», by which we understand much more than the usual concept of the word, which is so often little more than a poor excuse for what it really should mean.

**For many years, the Lütze Group has been putting everything into the provision of innovative and efficiency-increasing solutions when building systems and putting them into service.** You cannot do that successfully with just a standard product straight out of a brochure. Working in co-operation with far-sighted customers, Lütze has come to recognise that steps towards optimisation in the industry do not just mean “reducing work”. Improved organisation and planning allow both rationalisation and cost-reducing measures and, at the same time, even promote increased performance - in other words, advance integrated support solutions, as always used by Lütze as a successful partner to industry.

The market acknowledges this knowledge by concentrating on a few, reliable, competent partners. Lütze has created a

few advantages for itself in this change of values. Therefore, Lütze’s professionals will always be found already involved in the preliminary work before a project, keeping to the defined guidelines.

Needless to say, integrated solutions for us start with advising the customer, right from the start. System configurations are worked out, optimum components defined, project organisation agreed and the entire procedure clarified. **In this way, machine constructors and manufacturers of electrical equipment and control systems benefit from the planning, administrative and logistic support of the Lütze Group.** Lütze is best described as a system supplier with a comprehensive range of products that are all matched to one another, that, as the center of competence, also takes on the responsibility for any special developments and product applications in the various system areas.

**A large warehousing facility and efficient logistics also make better-than-average deliveries a reality.**

• If you would like to enjoy the advantages offered by the modernisation of your switch cabinet system: we clarify

the requirements of the LSC wiring system and offer the appropriate solution, including a drawing and prototype. Perhaps you would prefer to carry out the installation yourself, or maybe you would like to get the complete rack, fully fitted, from Lütze, suitable for all current types of switch cabinet.

- If you are counting on all the advantages: no warehousing costs, no installation costs and rapid reaction times.
- If you want to use cable: available in a wide variety of types, fully assembled according to your instructions, favourably priced and delivered on time.

... if you appreciate a partner who knows about development and design and will be committed to the progress of your project, even if things get a bit hectic and the jobs are not all that easy.

# LÜTZE SUCCESSFUL IN CENTRAL EUROPE

For many years now, Lütze has also had a presence in the Czech Republic, Hungary, Slovakia, Slovenia and Croatia, where it has acquired some very interesting customers. We have our own technical field staff on site, catalogues in the respective languages, are always present at the most important trade fairs for our sector (Brno, Prague, Nitra, Budapest and Laibach) and have a successful dealer network, all of which guarantee a competent consultancy service and fast, problem-free deliveries.

This business goes via Lütze/Vienna and ensures that Lütze has an excellent starting position in these countries that are candidates for EU membership. With an increase in exports, the use of more elaborate industrial products will also become a necessity and the movement of wage levels nearer to EU standards will require a greater degree of production automation.

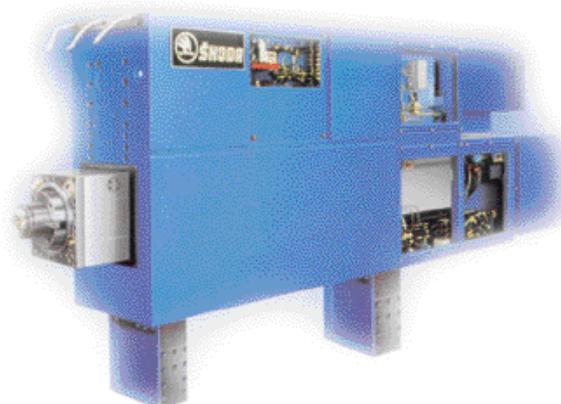
In the Czech Republic, the **SKODA motor works** in Mlada Boleslav and Kvasiny and their suppliers are equipped with a great number of Lütze products in order to achieve the required performance. Also, **SKODA MACHINE TOOLS** in Pilsen make use of Lütze products in their large machinery. The web offset printing presses of the company **ADAST** Adamov are supplied all over the world and operate with the help of special Lütze cables.

**TRENS** in Trencin/Slovakia produce CNC machines and use Superflex motor controls, timed power supply units and micro-compact relay components from Lütze. It is because of the outstanding quality of these machines that it was possible for a supply contract to be signed with Gildemeister, Germany. **MATA-DOR** (machines for the rubber industry) in Dubnica nad vahom utilises valve amplifiers to control hydraulic valves.

The **EXCEL** company has been a Lütze customer for a long time and produces CNC- and grinding machines, primarily for customers in America and France. The most up-to-date systems, featuring cables, hoses and power supplies from Lütze, are being manufactured in Budapest by the new proprietors from Singapore under the **CSEPEL** name that is well-known on the world market. Supplies to Lütze dealers in Prevalje/Slovenia and Zagreb/Croatia complete our presence in this region. Finally, a

young planning company in Russia, with locations in Moscow and Yekaterinburg, Siberia, has been adopted into the organisation and supported by our participation in the electrical trade fair in Moscow.

You can find the addresses of our local representatives and contact persons at the respective dealers on the Internet at [www.lütze.com](http://www.lütze.com), under the globe marked «Welcome to Lütze World Wide».



# LÜTZE PROVIDES SOLUTION

Engineers have long been aware of the savings that can be made on the installation of automation equipment by using a Fieldbus, the majority of these savings being made in cabling costs associated with the input/output signals.

The remote I/O modules communicate to the main controller via a bus cable, usually containing just two wires. However, the power supply (24v) for the I/O is normally wired conventionally. Either one power supply is housed in the main cabinet wired to the remote I/O or individual power supplies are mounted within each I/O station. The decision on which method to employ is usually dictated by the size of the application and cost.

Distributed I/O systems are now being employed in safety critical applications utilising safety PLC's and special remote I/O blocks. **The installation of any safety system demands that care and attention is paid to the installation techniques employed. Of particular importance are those which effect the noise immunity of the system.** The distribution of the power to the remote I/O blocks is often made by installing a separate power supply in each remote I/O station to control the 24 volts required for the commu-

nication electronics in the remote I/O modules with a separate power supply system for the I/O.

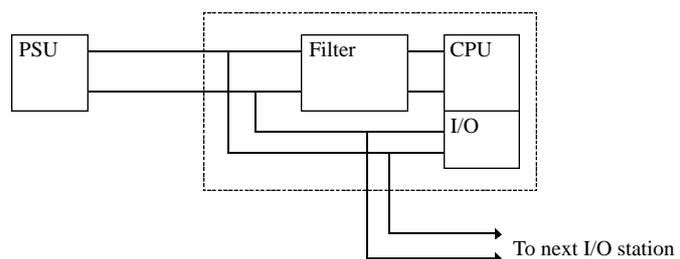
**Safety specialists, LC Automation Limited, based in Preston in the UK are experts in the design of safety systems for industrial applications.**

LC Automation recognises, when designing safety systems that there is a need to employ the best possible noise immunity techniques. After careful consideration of all the factors they use one power supply but fit specially designed filters in each remote I/O box. This removes the need for any mains powered power supply in the remote boxes, thus improving noise

immunity with the filter being fitted on the supply to the communication electronics. **The filter, provided by Lütze, provides noise and voltage transient protection and is mounted in a mini-compact din rail mounted housing only 22.5mm wide.**

The use of the filter means that there is additional cost savings on installation, as the mains power wiring is greatly reduced.

Lütze takes pride in working closely with the customer in achieving solutions. In addition to our standard range of products, we are constantly working with clients developing «custom solutions».



# MODULAR SYSTEM FOR CUSTOMER-SPECIFIC SOLUTIONS: FIELD BUS TECHNOLOGY FOR RAIL VEHICLES



Field bus technology, which has been making greater inroads into the industrial sector in recent times, has now also made its presence felt in rail traffic. **DaimlerChryslerRailsystems GmbH is equipping 400 new Series 185 locomotives with bus technology for Deutsche Bahn AG [German Railways].** In modern multi-system electric locos for

international goods traffic, the CANopen bus is now replacing the parallel cabling between the control system and the sensor or actuator systems. **In the case of the bus coupling, they decided on a modular system from Lütze, convinced not only by its robust construction, but also its flexibility and very favourable price to performance ratio.** The DIOCOM system is specially designed for installation in terminal and distribution boxes on 35 mm top-hat rails and consists of bus couplers and I/O modules, which can be put together according to the customer's requirements in an aluminium casing in the form of a compact station. The mechanical structure makes it possible to have variable module widths and connection panels, matching them perfectly to the particular application. **The "custom-built" DIORAIL compact station easily passed the**

**hardness test for mobile use on railway locomotives.** With regard to their resistance to oscillation and impact, they fulfil the requirements of the European Standard EN50155. Permissible operating temperatures lie between -40 and +85°C. Short-term condensation (100 %) is not critical. Their EMC resistance is in line with EN 50121, i.e. even strong magnetic fields have no influence on their correct operation. The inputs and outputs are connected by means of sprung fast-on terminals. 9-pin sub-D plug connectors are provided for connecting the bus.

**With field bus systems, the wiring costs are reduced, as are installation costs and it is possible to effectively bridge greater distances.** There are also other benefits, such as easier fault diagnosis. Modern rail vehicles, fitted with complex

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## SEMI-CONDUCTOR SWITCHES - THE RELIABLE SWITCHING ELEMENTS:



Resistance-capacitance couplings are being used predominantly as interface components between peripheral equipment and system controllers. Once they have been built in, they should function reliably for the complete working life of a machine or system. If electromechanical relays are used in the couplers as switching elements however, you can count on difficulties in many applications. **Consequently, semi-conductor switches are ideal for most applications: they work with virtually no wear and their useful life is not limited either mechanically or electrically,**

**making them the most reliable switching elements currently available.**

Until recently, the high costs involved in an electronic solution were not worthwhile in all sectors, but now **Lütze has both AC and DC semi-conductor couplers in its range which cost no more than the old relay versions. This means that all applications can benefit from the long life and reliability of electronic switches.** Non-wearing semi-conductor couplers are available in both AC and DC versions.



# LÜTZE INTERNATIONAL

Think global, act local

Make direct contact with your local Lütze partner.

control systems can only benefit from these advantages. The requirements placed on bus components for mobile use are considerably more stringent than in a normal industrial environment. **However, we now have «customised» bus components that are able to prove their reliability under the tough conditions of railway traffic.**



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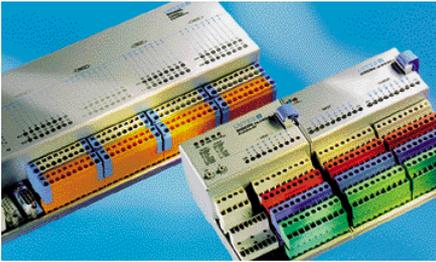
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# LÜTZE CREATES «SPACE» IN THE NEW FEDERAL CHANCELLERY

FEA Steuerungstechnik GmbH from the town of Röhrsdorf has supplied the switch cabinets equipped with the **Lütze LSC wiring system** for the Federal Chancellery. **In building management, the most important advantages offered by the LSC system have proved to be a clear reduction in working times and space-saving in comparison with conventional switch cabinet design, as well as favourable prices and simple refitting and retrofitting with two-level wiring.**

Special DDC modules form the heart of the electrotechnical switching equipment. They take care of the control and regulation of heating, ventilation, air-conditioning, cooling, long-distance heating and individual room controls. Thanks to the different mounting block profiles of the LSC system, it has been possible to achieve a very dense arrangement of the DDC modules in the cabinets.

Building management in keeping with the times has become essential for the economic use of buildings, and not only



in the industrial and hotel sectors. Public buildings, hospitals, official buildings and even ministries are now using the latest technology to save space and therefore costs. **This is why the engineering company and switch cabinet manufac-**

**turer chose to use the Lütze LSC wiring system when they were planning the new Federal Chancellery in Berlin.**

# MOTORWAY NETWORK: STAY IN THE OVERTAKING LANE WITH DATATRANS

Communications on French motorways now take place with the help of LÜTZE-DATATRANS CTS-RS485 data transmission modules.

When it came to equipping a motorway over a distance of several hundreds kilometres, involving almost a thousand industrial modules, the latest **high-performance technology** combined with **favourable prices** meant that Lütze was able to knock the competition for six with its 750241 transmission modules.

In brief: these modules take care of the conversion of electrical signals transmitted via RS-485 interfaces into optical signals.

The advantages are:

- reliable data transmission using fibre optic lines
- electrical insulation
- and data transmission over long distances between two RS-485 interfaces (up to 3,000 m with glass fibre and up to 80 m with polymer fibre lines).

**Thanks to this converter, data transmission can be carried out without any problems.** In “MultiMaster” operating mode it even recognises collisions and reports these to the terminal equipment.

A great number of possible transmission protocols are available for selection, such as InterBus-S, Profibus, Bitbus and many more.

**A further advantage of this converter: it has a transmission rate of 750 kBaud,** whereas it would only be 500 kBaud in the case of most competitive products.

Finally, we are now in a position to adapt our equipment to suit the customer's specification; in our example, an STplug instead of SMA1 for the glass fibres, screw terminals instead of D-SUB 9-pin in the case of the RS-485.

## NEW DIRECTOR AT LÜTZE FRANCE:

Since 1 September 2000, **Mr. Bruno Comby** has been the new Commercial Director of Lütze France.

He describes his priority objectives as follows:

- Optimum service for existing and new customers of Lütze in France, thanks to continuous improvement of the reaction times, reliability and competitiveness of the company.
- A lasting increase in the turnover and operating results of Lütze France as a symbol of security and consistency for customers who have voiced their confidence in our company ever since we opened our branch in France.

**Bruno Comby** is 41 years old, has degrees from Engineering and Business Colleges and many years' experience in sales and marketing to industry in France and other export markets.

