

# LÜTZE-REPORT

The international magazine of the Lütze Group

**LOC-BOX  
MAKES CONNECTIONS**

**A PASSION FOR  
C-TRACK CABLES**

**LÜTZE USA HELPS  
VW CHATTANOOGA**

**KEEPING THINGS CLEAN  
RAILWAY WASHING SYSTEM  
IN LUXEMBOURG**

**NETWORK AND CONTROL  
IN THE SAME CABLE**

**HERE COMES THE SUN!  
TERMOFLEX SOLAR**

# EDITORIAL

e d i t o r i a l



Udo Lütze  
CEO Friedrich Lütze  
International Group

The solution is in the details!

Many of our products and solutions are concealed inside switchgear cabinets and electrical installations. That is a pity, if you consider how much time and effort we have expended on tackling and mastering new challenges. Whether it is a special cable that has simplified the electrical installation work on a machine, or a wiring system that has set new standards in an electrical cabinet at Volkswagen: together with our customers, we have invested innumerable hours in order to implement optimal solutions. This is nothing unusual for us, however - because we have made solving problems the focus of our work. Our goal is not to correct problems, but to prevent them from arising in the first place. The following pages will give you just a small sample of our day-to-day business. We hope you enjoy reading it!

With best regards,

Udo Lütze

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## LOCC Box makes connections - Ralf Coors, LÜTZE Germany

The automation specialist Friedrich Lütze of Weinstadt, Germany has expanded its intelligent LOCC Box current monitoring system to include an additional gateway for connection to PROFINET (PROcess FIEld NETwork) field bus.

This makes it possible to manage up to 254 LOCC Box net modules. The gateway gives the user a remote maintenance option for the first time. It is thus possible to monitor, control, and switch output loads, and to detect faults at an early stage. Further information in the form of an operating hours meter and status messages help to reduce maintenance and servicing costs, while also increasing system safety and operational reliability. Use of the free LOCC-Pads Windows software also makes it possible to record all operating states, and provides a plotter function for current and voltage at selected consumer loads. The gateway can be integrated into an existing application, and facilitates communication between additional devices in RT (Real Time) and IRT (Isochronous Real Time) mode.



### Exhibitions 2010



Exhibition	Place	Country	Date
MOTEK	Stuttgart	D	13.-16.09.2010
InnoTrans	Berlin	D	21.-25.09.2010
Vienna-Tec	Vienna	AT	12.-15.10.2010
MATELEC	Madrid	ES	26.-29.10.2010
SPS/IPC/DRIVES	Nuremberg	D	23.-25.11.2010



One of the pioneers in cable development and a joint inventor of the LÜTZE SUPERFLEX® PLUS C-track cables, Helmut Schubnell went into retirement at the end of May, 2010.

High cycle rates in continuous operation, long traverse paths, constantly moving machine and system components and accelerations like in the Formula 1: C-track cables are subjected to enormous loads nowadays. For over 50 years, Friedrich LÜTZE GmbH & Co. KG, Weinstadt, Germany has been committed to meeting the increasing requirements on cables, and has been one of the worldwide leaders in the field. Here the success of the LÜTZE C-track cables – known under the brand name LÜTZE SUPERFLEX® - are closely associated with the name of Helmut Schubnell, who has been one of the pioneers in the field of C-track cables since the 1980s. Based on his developments with advanced cable constructions and state-of-the-art materials and production technologies, thousands of LÜTZE C-track installations were implemented worldwide.

## 20 years of technical innovation

If, like Helmut Schubnell, you look back on the technological progress in the last 20 years as regards C-track cables, then you will see that there have been some significant changes. Thanks to new materials, today it is possible to create much higher-performance cable constructions. Thus over 10 million motion cycles were performed in endurance tests for LÜTZE SUPERFLEX® cables. This is based on sig-

nificantly improved sliding characteristics of the materials – e.g thanks to the use of new thermoplastic elastomers – "TPEs" - in the cable group. Cables with significantly smaller diameter with simultaneously higher resistance to reverse bending cycle loads can be implemented nowadays. Likewise the electrical characteristics of many materials have been improved, thus allowing higher transmission frequencies. Helmut Schubnell considers that one of the most important design improvements in recent years – which became the standard in the mid 1990s – were thicker single wires. Also important here was distancing oneself from the relative hard polyester insulations.

Helmut Schubnell looks forward to the future with confidence: LÜTZE has recently acquired Dipl.-Ing. Jörg Bör (44) a cable expert with many years of experience, and a worthy successor in the field of C-track cables.

## Interview with the C-track cable expert Helmut Schubnell

**LÜTZE Report (LR):** You have been working with cables since 1988, and have been a manager for LÜTZE for many years. During this time LÜTZE has developed into one of the leading suppliers of C-track cables under your leadership. What is your recipe for success?

**Helmut Schubnell:** Our LÜTZE cable team has always put their first priority on customer requirements. This means that technically perfect solutions take first priority. After that come cost-effective solutions for our customer. Cost-effectiveness means not only developing economical cables, but also offering reliability. Because cable failures can be very costly, when one considers machine downtimes and lost production. Here we have always found the most efficient middle course for our worldwide customers.

**LR:** If you think back on the first years at LÜTZE. What were the decisive steps in the development of the LÜTZE SUPERFLEX®PLUS C-track cables.

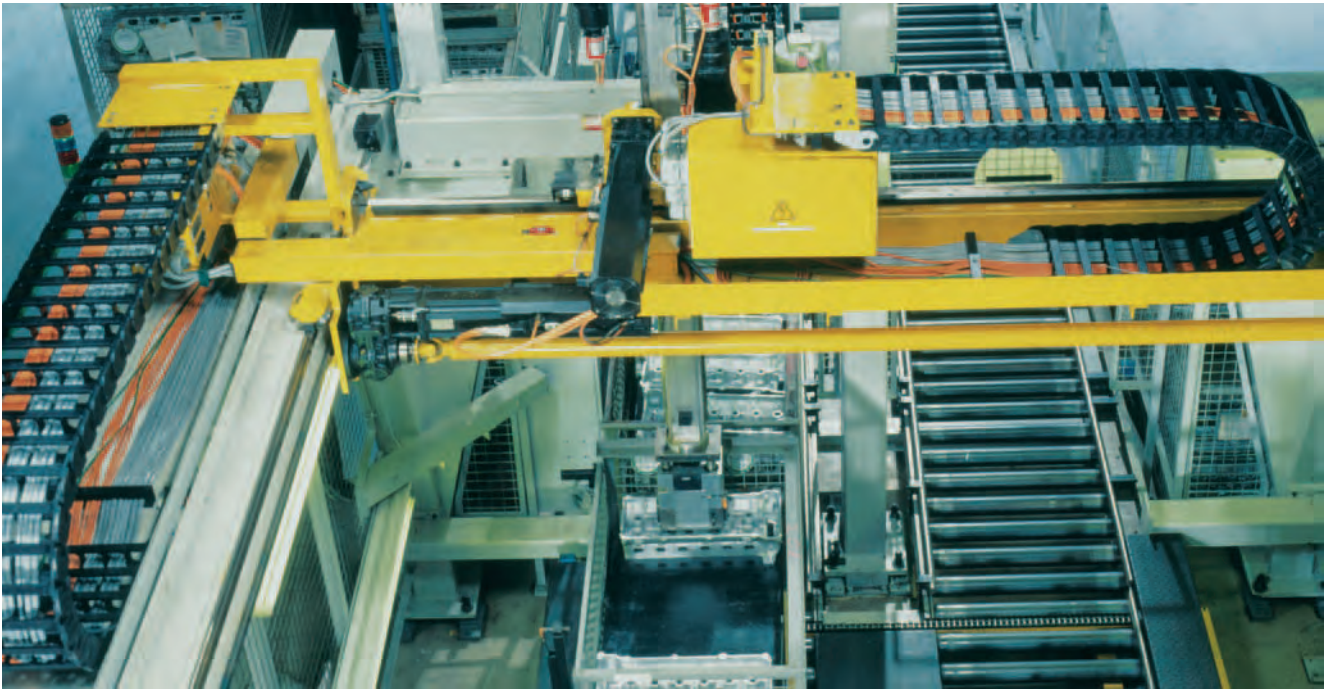
**Helmut Schubnell:** We had to learn by our own experience. Using a large number of sample products and extensive tests we learned, as it were, from the product as it was developed. I think that this trial-and-error strategy has remained a part of our cable innovation culture at LÜTZE up to

the current day. That is why even today you can often find me in the cable production, i.e. where the quality of our cables is created: at the extruder or at the stranding machine.

**LR:** What has changed in cable construction over the years?

**Helmut Schubnell:** Today other materials are used, which means, for example, that thicker single wires are used, because these are more effective than ultra-fine wires.





There was also a decisive combination with the insulation materials and material combinations. Based on our test series at LÜTZE we have determined, among other things, that optimal cable characteristics with regard to bending resistance are only present if the materials are identical as to their hardness and stiffness.

**LR:** What is the special feature of LÜTZE SUPERFLEX® cables?

**Helmuth Schubnell:** Our objectives were and are medium-sized companies that view LÜTZE as a development partner on an

equal basis. Therefore we deliver cable solutions not just "off-the-shelf". We think about our customers' requirements. Thus LÜTZE has three SUPERFLEX® variants on offer so that we can cover over 95% of all potential applications.

**LR:** What is LÜTZE's future as regards cables? Is your successor Jörg Bör also a trained expert for cables?

**Helmuth Schubnell:** Yes, that was also what our management board wanted. The only possible successor was a trained expert for cables with broad experience. Mr

Bör and I have been working together for two years. He also contributes extensive knowledge in the important future-oriented field of data technology.

**LR:** What do you want to do during your retirement?

**Helmuth Schubnell:** First of all I want to shift down a gear and pay more attention to my family and to the things that I really didn't have any time for: for example my greatest love, Italy. Our camper has been waiting for us for some time...

## Peter Burger new branch manager in Switzerland

**Since March 1st 2010 Mr Peter Burger has been Lütze AG's new branch manager in Siebnen, Switzerland.**

Until 2000 the 52-year-old was sales manager and executive board member at Cab-Tec AG. Prior to that he worked at SA in Boudry, Switzerland as a sales manager for cable assemblies. In the last eight years he has performed various duties at Dätwyler Cables in Altdorf, including responsibility for the Swiss market in the area of fire safety cables and as sales manager for the industrial harnessing segment.

With Lütze AG, Mr Burger is now also

head of the sales department, where he will support and reinforce the existing sales team. In addition, for many years he was a member of the Swiss Marketing and Sales Manager Club, and a founding member and 1st President of the Junior Chamber International Zug-Land.

Mr Burger is the father of four grown children, and has been married for 25 years. His main free-time activities are growing and breeding bonsais, designing and throwing boomerangs, and flying remote-controlled helicopters.





# Choo Choo for Chattanooga...

LUTZE USA helps VW Chattanooga to maintain deadlines

Sari Gregson, Chris Stanke, Mike Smith, LÜTZE USA

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LÜTZE's LSC Wiring System is part of VW's global equipment specification, and therefore included in VW's new plant currently being built in Chattanooga, TN. Production of a brand new automobile, a sedan designed specifically for the North American Market, is planned to start in early 2011. The initial production capacity is estimated to be 150,000 vehicles. LÜTZE has played a role in keeping this \$1 billion dollar investment on schedule by providing VW's suppliers the required LSC Wiring System frames on time to be installed in their control cabinets.

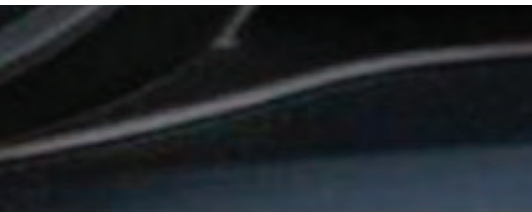
As soon as the preliminary design for LSC frames were agreed upon and the scope of the project was known, LÜTZE USA and LÜT-

ZE Germany started proactively to coordinate and prepare materials for production, even before the hard copy POs were received. After receiving the anticipated quantity estimates from the vendors supplying VW Chattanooga, LÜTZE USA was able to evaluate necessary adjustments to meet vendor expectations and keep the project deadline on time. Adjustments were made to raw material order replenishment, labor requirements, production times, and delivery and transportation methods. Personnel were increased for the short term demand spike, a shift was added to production, overtime was required even over the Holidays and availability of raw materials was secured.

As the initial delivery times got closer, inno-

vative and streamlined shipping arrangements were organized to prevent damage to frames during transportation and to improve already tight delivery schedules. The logistics were handled with finesse for overall benefit.

Simultaneously LÜTZE product and sales management was working diligently with VW suppliers in Michigan to ensure that they in turn could keep their commitments and deadlines to VW. LÜTZE provided extensive product training on LSC Wiring Systems for all the VW suppliers using LSC to familiarize them with this innovative and flexible product. In the end, all this training would speed up their installation process as the wiring was done faster and more efficiently than originally estimated.

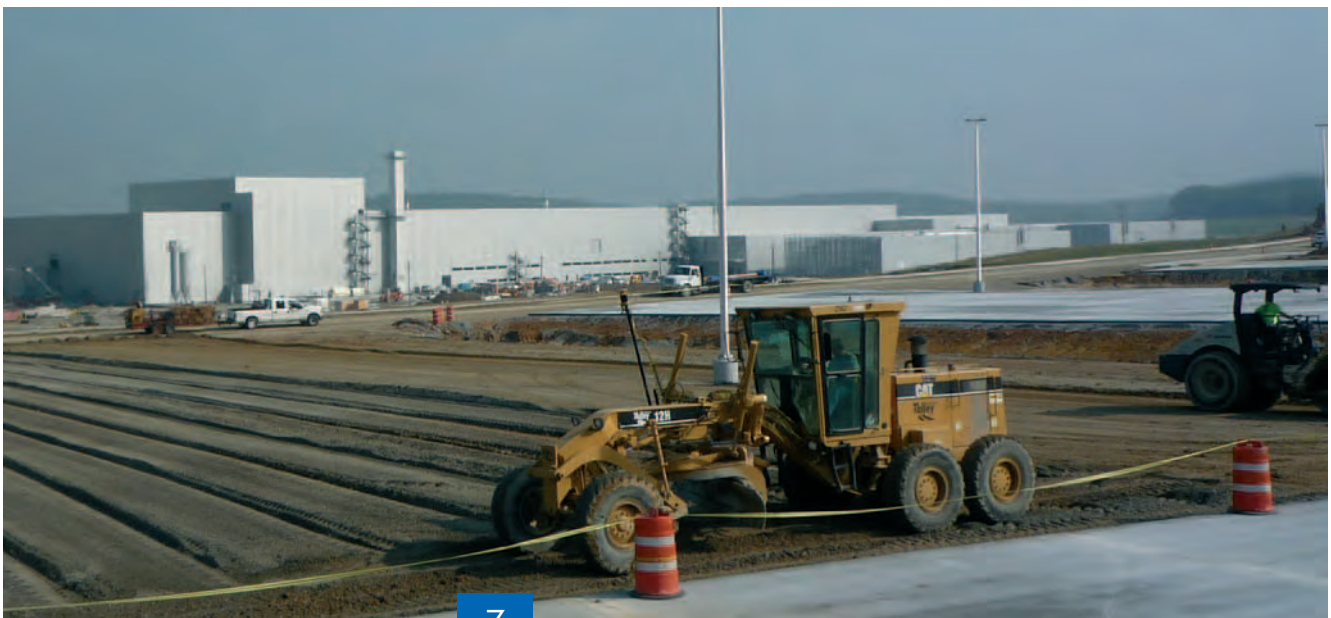
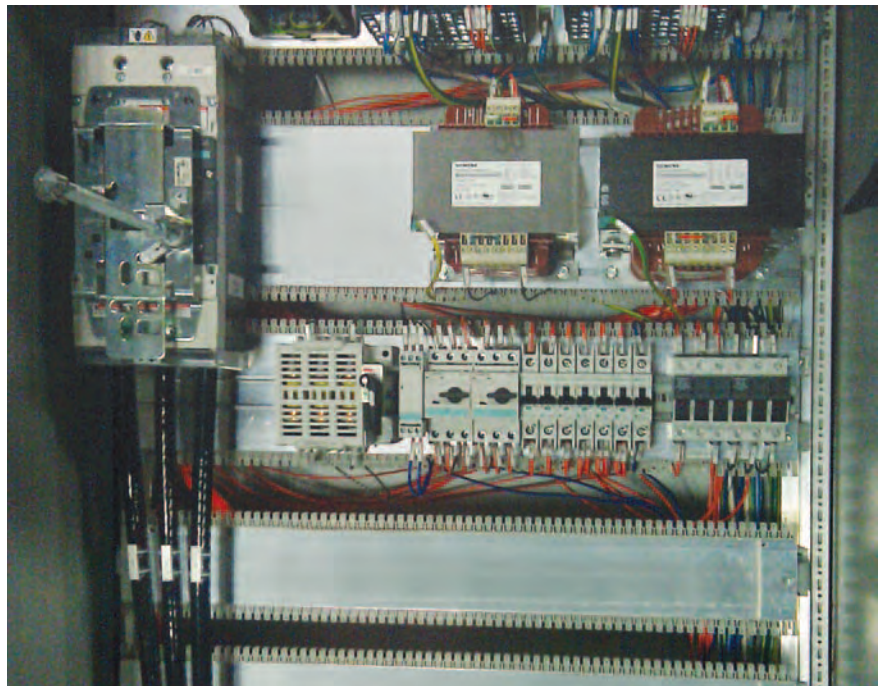


Another key point in the success is the versatility of the LSC Wiring System. Thanks to the design, pre-produced basic frames built prior to the final design details allowed for revisions to the frame designs meeting US component specifications while working within the VW's global plant standards. LÜTZE also provided flexibility in production that allowed last minute design changes for VW prior to shipment. LSC Wiring System lends itself well for last minute design changes and retrofitting.

LÜTZE made decisions as a strong global company to react upon instinct to meet our customer's needs. The employees acted

swiftly, without any hesitation and believing in themselves together with intelligence regarding the customer's needs and a well-balanced product knowledge contributed to success of the project. LÜTZE is a single source supplier with multiple geographic outlets, e.g. in the USA and Germany. This set up provides no hassle to the clients. VW Chattanooga plant was able to stay on schedule thanks to LÜTZE's responsiveness and proactive approach as a team in both Weinstadt, Germany, and Charlotte, NC.

**To learn more about LSC Wiring System, please visit [www.luetze.com](http://www.luetze.com) for video tutorials**



## Keeping Things Clean - Railway Washing System in Luxembourg - Patrick Büsser, LÜTZE Suisse

Elektro Nauer AG of Schattdorf in the Swiss Canton of Uri plans, builds and installs industrial switchgear equipment. In their own factory workshop they manufacture control cabinets and panels for both power distribution and machine control systems.

On behalf of Railway Cleaning Systems GmbH, Elektro Nauer AG builds machine control and visualisation systems for railway washing installations Europe-wide.

One of the largest installations of this type is in Luxembourg. This 220 m long washing bay can be used to wash a number of train compositions at the same time. Four washing car pairs move on tracks along the stationary train, washing its front, rear, double-stack, sides and aprons.

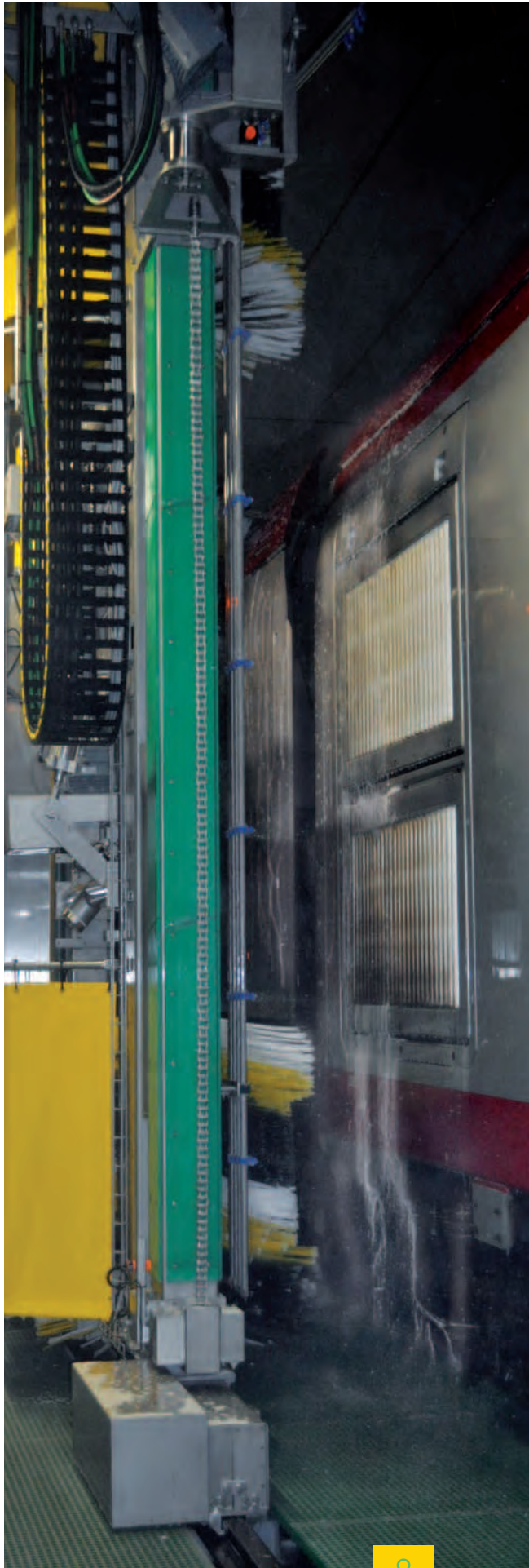
Power, bus and emergency stop cables are routed to the washing car by means of cable carriers. Depending on the washing program, the ambient air is saturated with

acidic or alkali cleaning agent. This means that the cables have to satisfy extremely high quality requirements.

Werner Christen, responsible project manager: "SUPERFLEX® cables from Lütze satisfy these demanding requirements, which is why we use them in the cable carriers and on the washing car. As a long-term customer, we also especially appreciate our close cooperative partnership with Lütze."







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# Lutze Cables 2 in 1 with Network and control in the same cable

Alain Lancelle, LÜTZE France



Increasingly, technicians are asking for hybrid cables combining a network component (Ethernet, Sercos, Profibus, Can) and one or more powered (electric motor for example) or control components (inputs/outputs, encoder).

Indeed, this achieves two goals that users are looking for; simplification and economy: Sourcing a single cable from a single supplier is easier than sourcing 2 or 3 cables from several suppliers.

Installing a single cable is easier than installing 2 or 3 cables, be it a cable carrier chain or a fixed installation.

Moreover, if switching from several cables to a single cable was behind the success of servo motor and encoder cables, why would not the same be true of combining network and control?

Numerous applications in France are being researched, manufactured or installed in a variety of sectors:

- Packaging machines :  
Sercos network with 5G2.5 and 4x0.34
- Theatre machinery :  
Ethernet Cat.5 network with 18G1
- Aeronautical engineering machinery :  
Ethernet Cat.5 network with engine encoder and 18G0.75
- Telemetry antennas :  
Ethernet Cat.5 network with motor and encoder
- Liquid control systems :  
Ethernet network with thermocouple

- Agricultural equipment :  
DeviceNet network with 7G1
- Welding machines: Can and Ethernet network with 12G0.75

As Christophe Marty of the company Midi ingénierie was saying to us recently: "I didn't think it was possible to find the network and control functions in the same cable; I would like to thank LUTZE for having proved us wrong!"

Indeed, Lutze's 50 years of in-depth cable design expertise has enabled us to develop this type of cable while ensuring that the field buses work as they should.





## Here comes the Sun! - Jörg Bör, LÜTZE Germany

**LÜTZE introduces THERMOFLEX Solar cable and connector range (MC4) for photovoltaic applications.**

LÜTZE is introducing its XPE connector and cable range for the growing worldwide photovoltaic market. All of these cables and connectors are suitable for rugged use in all weather conditions, being resistant to UV light, seawater, acids and bases. High air humidity, extreme temperature fluctuations and mechanical stresses are also no problem for THERMOFLEX Solar cables and connectors. All cables and connectors are made of flame retardant, halogen-free materials and comply with the European RoHS Directive. Thanks to their durable structure, LÜTZE can guarantee constant electrical and mechanical properties over a service life of more than 25 years. The THERMOFLEX Solar XPE range has approvals for Europe, Asia and North America. LÜTZE also supplies "plug & play solutions" ex

stock in completely assembled sets.

### **LÜTZE THERMOFLEX Solar XPE cables**

With German approval according to DKE/TÜV specifications, LÜTZE THERMOFLEX Solar cables enjoy international acceptance in Europe and Asia. The German approval for LÜTZE THERMOFLEX Solar cables corresponds to the new specifications (2007 edition), which set significantly more stringent requirements than the old 2004 edition. For the North American market, where the requirements are different, the THERMOFLEX Solar XPE cables have a different structure in accordance with American standards, and are thus approved according to US standard UL 4703 ("UL listing"). For hard wiring the cables can be used in a temperature range from -50° C to + 150° C. The LÜTZE THERMOFLEX Solar XPE cables are available with wire cross-sections from

2.5 - 35 mm<sup>2</sup>. On request, LÜTZE Solar cables are available in a duplex version with two Solar wires in a figure-eight shape.

### **LÜTZE THERMOFLEX Solar XPE connectors (MC4)**

The LÜTZE THERMOFLEX Solar plug-in connections (sockets and plugs) satisfy the requirements for a long-lasting electrical connection, and facilitate efficient, time-saving cabling work. Socket and plugs are dimensioned for the standard cable cross-sections 4 and 6 mm<sup>2</sup>, and fulfil the requirements of protection class IP 67. The connectors are certified by TÜV Rheinland according to specification 2 PFG 1161/01.06. In addition to the MC4-compatible Solar connectors, LÜTZE can also supply other common connectors for photovoltaic systems.





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