Edition 10

LÜTZE-REPORT

The international magazine of the Lütze Group

PROFIBUS DP MODULE FOR THE HAZARDOUS SECTOR

LÜTZE OFFERS HIGH-SPEED FLEXIBLE SOLUTION

UNIQUE LÜTZE FOR UNIQUE ZURICH AIRPORT

SERVING THE «BIG THREE» WITH OUR PARTNER HH BARNUM

A PERMANENT SOLUTION FOR LASER TECHNOLOGIES

TEMPERATURE/FREQUENCY CONVERTER FOR SUPERVAC

LÜTZE

Systematic Technology

e d i t o r i a l

EDITORIAL

Friedrich Lütze
founder of the Lütze Group

The Internet - a key element of our business

Innovation is by no means a strange word at Lütze and we are always busy providing our customers with innovative solutions. This philosophy is not limited to our products, but also extends to our customer service.
Lütze has had its own homepage on the Internet since 1995 and it is being developed and extended all the time. Our aim is not only to have an electronic company brochure on the Internet, but also to offer our customers useful applications which are available at all times as resources.

At the moment we provide the following:
- Lütze in 5 languages and 8 countries
- Online product catalogue for our complete range
- Special pages for the LSC wiring system and DIONet
- Online training centre (USA)
- Stock queries
- Technical database / Product informations
- e-commerce

Our aim is to offer our customers a comprehensive range of information in several languages. Today, the Internet is an information resource that makes it easier for customers to work with our products. In the future, we want to communicate and co-operate even more by electronic means. We want to use the many options open to us to your advantage. Please take a look at our website:
http://www.luetze.com

Yours sincerely,

F. Lütze

INDEX

IMPRINT

Published by:
LÜTZE INTERNATIONAL GmbH
Postfach 1224 • Bruckwiesenstrasse 17-19
D-71384 Weinstadt Germany
Tel0049 71516053-0 • Fax0049 715160 53-277
e-mail: info@luetze.de
Internet: www.luetze.com

Editorial/Co-ordination:
LÜTZE AG
Oststrasse 2 • CH-8854 Siebnen/SZ
Tel 0041 55 450 23 23 • Fax 0041 55 450 23 13
e-mail: info@luetze.ch
Internet: www.luetze.ch

Copywriting/Layout:
RITTER KREATIV....
Unternehmensberatung + Kommunikation AG
Gerberngasse 44 • 3000 Bern 13
Tel 0041 31 313 30 30 • Fax 0041 31 313 30 39
e-mail: info@ritterkreativ.ch
Internet: www.ritterkreativ.ch

Photography by:
zVg + FOTarena Bern • Tel 0041 31 313 30 36
e-mail: fotarena@complot.ch

Printed by:
Schaer Thun AG, Uetendorf

OUR PRESENCE AT TRADE FAIRS AND EXHIBITIONS

Lütze goes around the world:

Trade fair	Place	Date	
Hanover Fair HMI	Hanover (D)	23.04 – 28.04.2001	Lütze D
IH/BEST	Zurich (CH)	15.05. – 18.05.2001	Lütze CH
INDUSTRIA	Budapest (H)	22.05. – 26.05.2001	Lütze A
Intl. Machine Construction Fair	Nitra (SK)	29.05. – 01.06.2001	Lütze A
INELTEC 2001	Basle (CH)	04.09. – 07.09.2001	Lütze CH
MSV Machine Construction Fair	Brünn (CZ)	24.09. – 28.09.2001	Lütze A
Eltefa	Stuttgart (D)	26.09. – 28.09.2001	Lütze D
SOBODNA ELEKTRONIKA	Ljublijana (SLO)	01.10. – 05.10.2001	Lütze A
Viet	Vienna (A)	09.10. – 12.10. 2001	Lütze A

CUSTOMER-SPECIFIC DEVELOPMENT FOR THE PROCESS INDUSTRY

PROFIBUS DP MODULE FOR THE HAZARDOUS SECTOR

André Kengerter

Field bus technology has now made an appearance in all sectors of industry. In the process industry as well, people are becoming more and more dependent on serial data transmission. This development is quite understandable as there is great potential for savings in the cabling, especially in process systems which often have many cable branches. However, up to now the predominant environmental conditions in this sector of industry have been a problem. As easily combustible or even explosive products are frequently used, any electrical components in this type of environment must be explosion-proof.

All field bus components available on the market for the hazardous sector guarantee protection against explosions through intrinsic safety. However, as the permitted energy consumption is very limited for intrinsically safe components, this results in considerable limitations to functionality. For example, the RS485 transmission system used with a great number of field buses cannot be used here, because the signal voltages are too high for intrinsic safety. Field buses developed especially for the process industry, such as the ProfibusPA, can only achieve very low transmission rates because of the above-mentioned limitations.

Working closely with Fahlke Control Systems, Lütze has therefore developed a ProfibusDP module which complies with International Protection Class Eex dIIC T6.

With this module, protection against explosions is achieved by means of pressure-sealed encapsulation of the electronic components. The module has 8 digital inputs and 4 digital outputs and is designed for an operating voltage of 24 V. It can be mounted directly onto electrically-driven ball valves which are used, for instance, in oil pipelines. The module also complies with Protection Class IP68 and boasts an operating temperature range from -40ºC to +80ºC.

With this development, Lütze has yet again shown that innovative products can be created by working together with our clients.

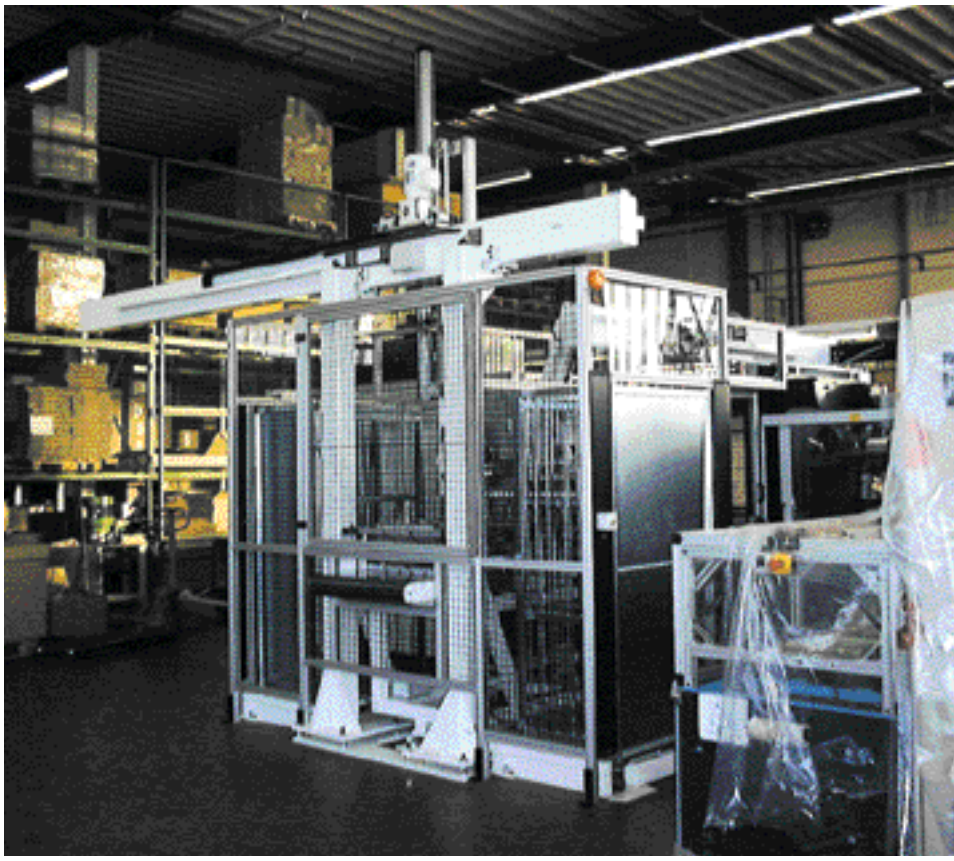
LÜTZE OFFERS HIGH-SPEED FLEXIBLE SOLUTION

Nigel Broad

Recording media and data storage systems have come a long way over the last few years, moving from Compact Cassettes via MiniDiscs to CDs. Sales volumes are high and set to continue increasing with growing markets in the field of home entertainment electronics.

As unit prices are driven down, the cost and style of packaging becomes an ever more important issue. Packaging machine speeds, flexibility and reliability are significant aspects in this market sector.

This is where the company, G-Mat fits in. Based in Coventry in the UK, G-Mat manufactures a system for automating the production of multi-media packaging. G-Mat's system is one of the most advanced, reliable and efficient on the market.



G-Mat and Lütze co-operated very closely when they encountered the problem of high-speed bending stress in sensor cables when installing their machines. These sensor cables run in chains with linear speeds of up to 5 metres/second and acceleration values of up to 5 G. The existing cabling suffered from early failure and was putting machine reliability into question.

With the aid of the Lütze actuator sensor distribution box and a special Superflex Plus cable and connector assembly it was possible to find a solution. This cable has highly flexible PUR sheathing and TPE conductor insulation. This makes it especially suitable for applications under external stress and continuous bending stress, as is the case with the G-Mat multi-media packaging machine. This high-speed application also demanded careful cable installation, in order to guarantee the maximum useful life of the system. Lütze was able to put to use its many years of skilled experience in the installation of flexible cables in power supply chains in this project, thus guaranteeing a long service life and a high level of flexibility.

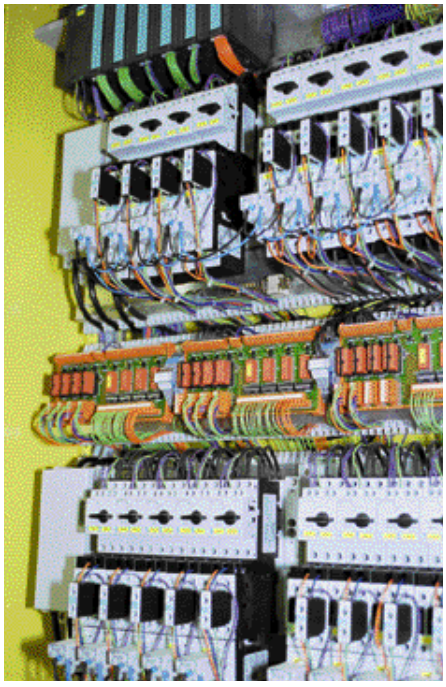
The heavily fought over packaging market continues to develop all the time and G-Mat is already working on a solution which will eliminate a plug connection and therefore potentially increase reliability even further. Lütze will continue to co-operate closely with G-Mat in the future, to make sure they always have the best possible solution at their disposal.

BAGGAGE CONVEYANCE AND SORTING SYSTEM
UNIQUE LÜTZE FOR UNIQUE ZÜRICH AIRPORT

Karl Heberle

Unique Zurich Airport
"Unique Zurich" International airport enjoys an important position in global air travel and is the most important airport in Switzerland. It connects all the continents directly via 80 countries and over 150 cities, and is used by over 130 airline companies. In the near future, it will have to cope every year with in excess of 240,000 flight movements, 20 million passengers and 650,000 tonnes of freight.

In order to match the infrastructures to future requirements, it has been necessary to plan substantial construction projects, some of which have already been completed and others that have to be finalised within the coming months.



The 1st construction phase at "Unique Zurich Airport"

Apart from the new "Midfield" dock, creating considerably more handling space and more parking area for aircraft, new capacity for passenger handling is being created, primarily in the airport terminal and railway station areas with the building of spacious check-in facilities.

In order to be able to guarantee that it will be possible to cope with the massive flow of baggage, it will be necessary to implement extensive technical measures in terms of conveyance, sorting and checking:

- Passengers' baggage will be taken from the check-ins (Terminal B and rail station) to the new "Southern Distribution Centre"
- A single vehicle system on tracks will transport the items of baggage at a speed of 10 m/s via a tunnel system to Sorting Unit A4 or to the separate sorting unit in the midfield area
- In two-storey Sorting Unit A4, the heart of the new baggage system, security checks (100%) are carried out and the baggage then sent on to the fine sorting unit or the early baggage store.
- Capacity is 60,000 baggage items per day
- Transport time between check-in areas and laterals is a maximum of approximately 18 minutes
- Investment costs of approximately 380 million Swiss francs for construction work and baggage handling system

About the baggage system project
Under the project management of "Unique Zurich Airport", Siemens AG, in its capacity as main contractor, has the responsibility for the baggage area. Subcontractors working on the system are the Dutch company VanderLande Industries and on the sorter Swiss company, Müller Martini AG. The project team from Siemens AG, Zurich working on the system is made up of around 15 people. We spoke to Project Manager (Hardware), Mr. Rolf Hänggi (see photo) and discovered some interesting details during the course of our discussion.

Rolf Hänggi, 42 years old
Team Manager for Siemens AG, Zurich
Federal Diploma in Electrical Installation
Has worked for Siemens for 11 years
Hobbies:
His family (7-year old daughter)
home and garden

Mr. **Rolf Hänggi** told us that, in the system, a total of in the region of 2,500 motors have to be monitored and controlled. As space is somewhat restricted in the current building, even the switch cabinets (these were manufactured by Siemens themselves) had to be designed with the smallest possible dimensions. Mr. Hänggi quickly came to the conclusion, that if a conventional design were used, the switch cabinets would simply take up too much space and would therefore lead to extra costs.

It was during this phase that Mr. Hänggi and the Siemens project team decided to use the "Lütze LSC wiring system". The following arguments influenced the decision to go with this modern wiring system:

- Exceptionally compact design, i.e. the small dimensions of the cabinets
- Modular structure of the wiring racks
- Implementation of the highest possible level of efficiency in the cabinets
- Neat, clear design
- LSC wiring system fits well into existing cabinets (when converting)
- Excellent thermal conditions in cabinets (no heat accumulation)
- Halogen-free materials
- Excellent price-to-performance ratio

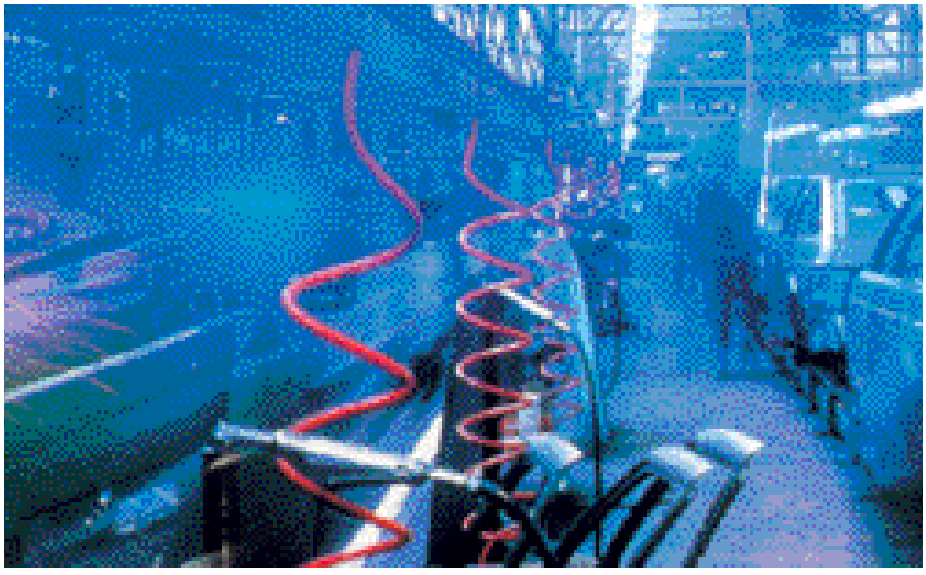
Mr. **Rolf Hänggi** of Siemens AG, Zurich had the following to say about the co-operation with Lütze in connection with its "LSC wiring system" and the baggage handling project at "Unique Zurich Airport":
"I have been very satisfied with Lütze's delivery service, in other words orders are executed promptly, reliably and according to the schedule (a very important consideration when dealing with a system as large and complex as this). Technical advice during the design phase and support during the construction phase were outstanding. I was fully convinced technically about Lütze's LSC wiring system and it has met my expectations fully.

I would be happy to use this modern wiring system again at any time, but certain modifications or options (based on values actually experienced) should be included. An important aspect for me was that both the cabinet construction staff and the installation engineers working on the system, as well as the maintenance department (a subsidiary company of the Unique Group) had no objections to the wiring system we (i.e. our planners and designers) had chosen and were quite happy to work with it."

LÜTZE SUPPORTS THE US AUTOMOTIVE INDUSTRY

SERVING THE «BIG THREE» TOGETHER WITH OUR PARTNER HH BARNUM

Udo Lütze



The automotive industry and related OEM markets have always been of great importance to Lütze. This is no different in the USA, where the automobile industry sets the standard for the machine tool construction sector.

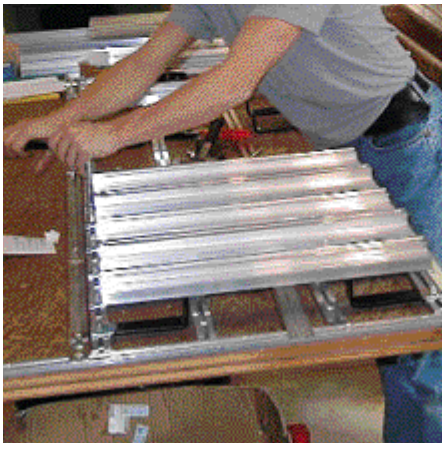
With the aim of supporting this market, Lütze has teamed up with HH Barnum, one of the most respected distribution companies in the USA, servicing the heart of the US automobile industry and its suppliers. HH Barnum not only specialises in holding stocks of products, but also provides extensive technical support.

HH Barnum Company is a regional sales company, also offering value-added solutions in the factory automation and process control sectors. With its headquarters in Brigh-ton, the company also has branches in Toledo, Cleveland and Grand Rapids.

Founded in 1946, the Barnum company works in partnership with such well-known national and international companies as Lütze. The number of partnerships now stands at a total of 25. HH Barnum's company philosophy has always been concentrated on quality products, innovative solutions and good service, which always exceed the expectations of both existing and potential customers.

Support and local stockholding extend from an extensive range of cables via control equipment right up to modern, space-saving and cost-saving LSC wiring systems. HH Barnum runs a "Full Service LSCenter" for the design and building of Lütze LSC wiring systems. With HH Barnum as our partner, not only are our products available off-the-shelf locally, but they also have the support of well-trained, proficient support personnel.

In the automotive industry, HH Barnum is currently supplying Daimler-Chrysler, Ford and General Motors with Lütze products for current projects.



LÜTZE INTERNATIONAL

Think globally, act locally
Make direct contact with your local Lütze partner.

LÜTZE Ltd.
Unit 4, Brabazon Court
Borman
Lichfield Road Industrial Estate
GB-Tamworth, Staffordshire B79 7T A
Phone 0044/(0)1827/31 3330
Fax 0044/(0)1827/31 3332
e-mail: sales.gb@lutze.com
www.lutze.com

Friedrich Lütze GmbH & Co.
Postfach 1224 (PLZ 71366)
Bruckwiesenstrasse 17-19
D-71384 Weinstadt
Tel. 0049/7151/60 53-0
Fax 0049/7151/60 53-277
e-mail: info@luetze.de
www.luetze.de

LÜTZE AG
Oststrasse 2
CH-8854 Siebnen
Tel. 0041/55/450 23 23
Fax 0041/55/450 23 13
e-mail: info@luetze.ch
www.luetze.ch

LÜTZE
Elektrotechnische Erzeugnisse GmbH
Niedermoserstrasse 18
A-1220 Wien
Tel. 0043/(0)1/257 5252-0
Fax 0043/(0)1/257 5252-20
e-mail: office@luetze.at
www.luetze.at

LÜTZE S.A.
52 avenue des Châtaigniers
BP 76
F-95157 Taverny CEDEX
Tél. 0033/1/34 18 77 00
Fax 0033/1/34 18 18 44
e-mail: lutze@lutze.fr
www.lutze.com

LÜTZE Inc.
13330 South Ridge Drive
USA-Charlotte, NC 28273
Phone 001/704/504-0222
Fax 001/704/504-0223
e-mail: info@lutze.com
www.lutze.com

❒ We would like more information about this magazine:

Subject _____ Page _____

_____ Page _____

_____ Page _____

❒ We would like more information about your complete range of products

❒ We would like your advice. Please telephone us.

Sender:

Company _____

Name / First Name _____

Address _____

_____

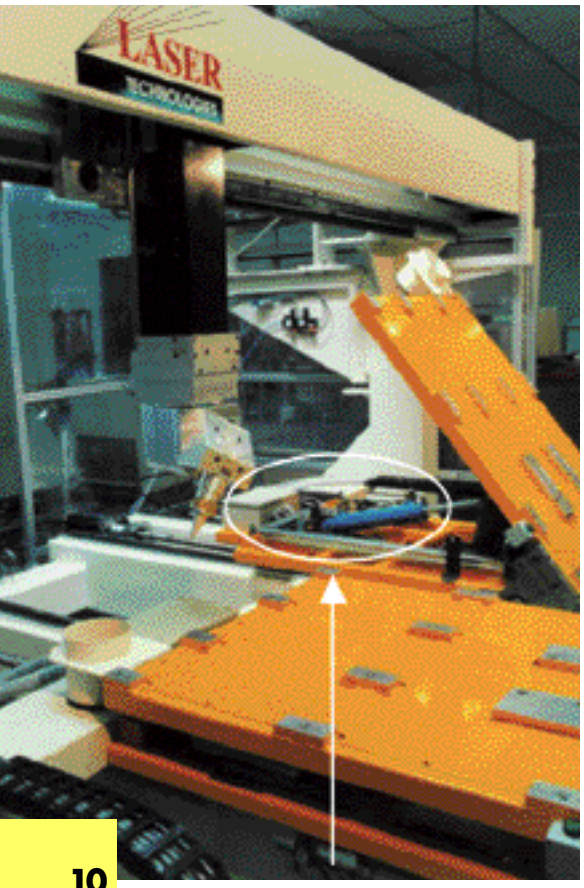
Tel _____

Fax _____

e-mail _____

CABLEFIX AND LASER CUTTERS:
A PERMANENT SOLUTION FOR LASER TECHNOLOGIES

Bruno Comby



Cutting system for car parts with 5-section frame and double bench for loading and unloading in "concealed cycle"

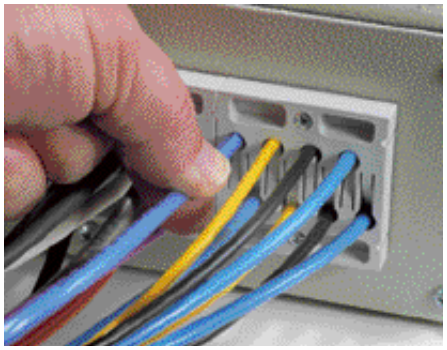
Laser technology is used these days in the most varied of product areas because of the high processing quality and speeds required in very demanding processes, such as in the case of cutting and welding. It represents an efficient and economically viable alternative to other production procedures. As a versatile, fast, programmable and controllable tool, the laser can be used to work on products in an enormous number of areas of application.

LASER TECHNOLOGIES is a French company which has specialised in the industrial application of high power lasers. Having installed almost 60 systems in all sectors of industry, Laser Technologies is now one of the market leaders in Europe.

The company has now decided to replace screw-type cable fittings with the unique CableFix design from Lütze for CO2 laser cutting systems in the automobile industry. With the conventional system, the screw-type cable fitting made sure that switch cabinets and junction boxes remained sealed.

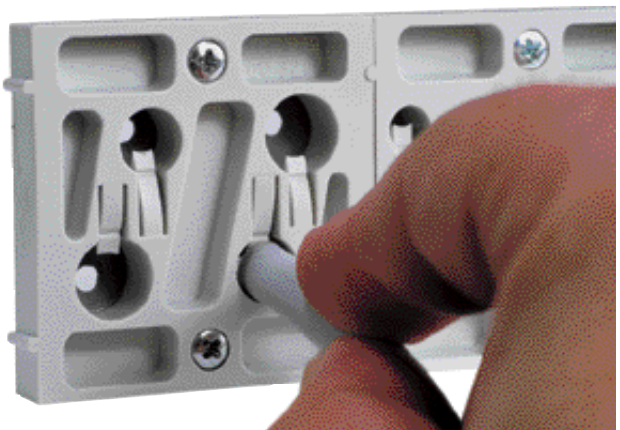
Laser Technologies decided on the CableFix solutions because of the following three reasons:

- **Saving time during installation**
  Completely doing without drilling any mounting holes or elaborate screw fittings for individual cables, pipes or hoses, CableFix guarantees the sealed passage (IP67) of a maximum of 8 cables/pipes through a single cut-out in the housing measuring 50 x 50 mm and using a CableFix block. All that installation involves is pushing the cables or pipes through the opening provided. Without any screwing, but with exceptional mechanical properties.



- **Saving space in the switch cabinet**
  8 cables or pipes with a maximum diameter of 6.4 mm are fed into the casing in an area of just 50 mm x 50 mm and with IP67 protection. Also, the CableFix plate is no thicker than 7 mm, in other words considerable flatter than a complete screw-type cable fitting serving the same purpose would be.

- **Improved reliability**
  In the case of CableFix, the sealing function (self-closing connector) is completely separate from the mechanical one. Restraining cables/pipes/hoses (simply loosen the lock with a screwdriver blade): there is no longer any danger of squashing a compressed air hose, because you have tightened the fitting too much in order to get the best possible seal.



TEMPERATUR/FREQUENCY CONVERTER FOR SUPERVAC

Gottfried Kainradl

The SUPERVAC company in Vienna produces packaging machines for the foodstuffs industry, mainly packaging lines for meat and sausage products.

A line consists of the Servomatic vacuum packaging machine with hot water shrink tank and conveyor belts. Separating devices and separating perforators are further helpful pieces of equipment.

The food, which is packed into shrink sleeves, is passed through a high pressure welding system and vacuum-packed. Any excess lengths of packaging are automatically trimmed off. The packaged goods are then fed into the hot water shrink tank where they are immersed, making the film as thin as skin. Lütze temperature/frequency converters are used to check and control the water temperature. They convert the PT100 value into a proportional frequency which is entered on the numeric input of the small PLC. This makes it possible to achieve favourably priced temperature monitoring without the need for expensive analogue PLC cards. Lütze analogue frequency converters are available in many versions, including some with 2 input channels which can also process different input signals (e.g. 1st channel NiCr-Ni 0 to 500º and 2nd channel 0 - 50 mV).

New to the Lütze range of products are single channel converters in a MICRO-COMPACT housing that is only 6.2 mm wide. These can convert PT100 -27 to 100º or 0 - 10 V to a frequency of 10 to 265 Hz. This modern version currently represents the most attractively priced way of inputting temperatures in a small control system.