

INSIGHT A Tour Through Murrelektronik





26 BRANCH OFFICES AND 4 PRODUCTION PLANTS

Oppenweiler, Germany Production of Fieldbus Systems, Interface Modules

Stollberg, Germany Production of Connectors **Stod, Czech Republic** Production of Interface Modules, Switch Mode Power Supplies, Transformers



STAY CONNECTED – REPRESENTED ON ALL CONTINENTS WORLDWIDE

The company was founded in 1975 by Franz Hafner

Over 1,900 employees, including 200 sales reps and customer service center technicians Top student training is very important for Murrelektronik. Each year we offer a large number of apprenticeships in technical and commercial areas, as well as in logistics







MURRELEKTRONIK FIGURES & FACTS

Shanghai, China Production for the Asian markets



MURRELEKTRONIK IS YOUR PARTNER

- Over 65,000 products available to order conveniently in our online shop
- Subdivided into four product groups:
 - Electronics in the Control Cabinet
 - Interfaces
 - Connection Technology
 - I/O Systems
- For industries and market segments like:
 - Machine Tools
 - Machine Building and Plant Engineering
 - Assembly and Handling Technology
 - Food & Beverage
 - Automotive Industry
 - Warehousing and Logistics
- Founded in Oppenweiler, Germany, in 1975
- Family-owned company
- Over \$260 million turnover in 2014



CUSTOMER SERVICE INDIVIDUAL AND RELIABLE ON-SITE HELP

Products for processoptimized installations



Developing cost-efficient solutions





MURRELEKTRONIK YOUR BENEFITS

MURRELEKTRONIK OFFERS REAL BENEFITS

- Over 200 sales reps and personal contacts in technical and inside sales
- On-site support
- Murrelektronik Express Service (MEX) guarantees the production of individual cable lengths within 48 hours
- 4 international warehouses (USA, Brazil, China, Germany)
- 1 million products in stock





SYSTEMATIC AND SUSTAINABLE QUALITY MANAGEMENT ACCORDING TO EN ISO 9001

Accredited test center and EMC laboratory

Endurance tests under extreme conditions

Practice-oriented test procedures guarantee best product quality

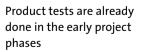




MURRELEKTRONIK QUALITY

MURRELEKTRONIK STANDS FOR QUALITY

- Accredited test center and EMC laboratory
- Individualized advice and support
- No hazardous materials used
- Complies with RoHS requirements
- First-class design and production quality: "Made in Germany"









WORLDWIDE AND INDUSTRY-WIDE! BENEFIT FROM OUR CROSS-INDUSTRY EXPERIENCE AND EXPERTISE

Warehousing & Logistics

Food & Beverage

Machine Tools







Automotive Industry

Airports





Offshore Industry





MURRELEKTRONIK REFERENCES

WE STAY CONNECTED TO OUR CUSTOMERS

- Customers in many industries
- Regional, national and international references
- ABB / Arburg / Atlas Copco Rock Drills / Audi BMW / Bosch / Bosch Rexroth / Chiron / Daimler Deckel Maho Gildemeister / EMAG / Festo FORD-Werke / Grob / HAWE Hydraulik / Heller Hermle / Homag / Index Werke / Krones / Liebherr LQ / Moeller / Mori Seiki / OKU / Rieter / Rosenbauer Salvagnini / Schneider Electric / Schuler / Schweiger Sidel / Siemens / Stihl / Teamtechnik / Trumpf Volkswagen / Witron

stay connected

At Murrelektronik, we create lasting connections, both personally and technically.



Paper Industry



1975 1976 1978 1982 1977



Company founded Pioneer product: RC-S01/220

First international branch office in

1984

Switzerland



First presence at trade fairs: Eltec. Dortmund and EMO, Hanover (Germany)

1985

Interface technology the second product range | 30 employees working in Oppenweiler

1986



Murrelektronik becomes sponsor of the TV Oppenweiler

1989

1983



Branch office in China Third product

founded | First trainee range developed:



valves and sensor

connectors

Beginning of automation technology Number of **employees** rises to 148



Murrelektronik enters the, field of power supplies with switch mode power supply units



Moving to the current building with 270 employees Pioneering into fieldbus technology

1993

is hired



















Murrelektronik acquires the company KSG in Stollberg, Germany

is expanded Branch office in USA is founded

Interface technology Commitment made to Brazilian charity house for children: Casa do Zezinho | Branch office

online presence, and unveils the new company logo

Murrelektronik has New trade fair concept is created | 400 employees in Oppenweiler

2001





in Brazil founded







The Murrelektronik group expands to 1,000 employees worldwide Launch of the MVK plastic fieldbus system

Start of SAP Launch of MVK Metal, a product for demanding requirements

Milestone: Cube67 wins the coveted Automation Award

Breaking ground for the new logistics center in Oppenweiler | 30 years Murrelektronik

Murrelektronik's Cube67 receives the **IF Design Award**



MURRELEKTRONIK HISTORY

Murrelektronik unites Yesterday, Today and Tomorrow ...

In 1975, Franz Hafner began this company in Oppenweiler with a vision. Today, Murrelektronik is a worldwide company that is still owner-managed and driven by that vision.

2007 2010 2012 2009 2008









Branch office in

Murrelektronik's hot air balloon takes off Introduction of **MICO** = Top product

Murrelektronik is among the **TOP 100 Mid-Sized Companies**

Start of the campaign Entry into active CONNECTIVITY

safety technology Turkey is founded

CONNECTIVITY by Murrelektronik becomes a system consulting brand

2013







Murrelektronik's **Connectivity App Wins** the Automation App Award | Murrelektronik has 1,700 employees worldwide

Murrelektronik has received the award for: Best B2B Shop in the Electronic Industry

Murrelektronik has received the "Best Place to Learn" award | 40 years Murrelektronik

MURRELEKTRONIK HAS OFFICES **WORI DWIDF** TO ASSIST YOU



GERMANY

Murrelektronik GmbH Falkenstraße 3 D-71570 Oppenweiler Phone +49 7191 47-0 Fax +49 7191 47-130 info@murrelektronik.com www.murrelektronik.com



ARGENTINA

NAKASE SRL ventas@nakase.com www.nakase.com.ar



AUSTRALIA

Sick Ptv. Ltd. sales@sick.com.au www.sick.com.au



AUSTRIA

Murrelektronik GmbH Austria info@murrelektronik.at www.murrelektronik.at



Murrelektronik B.V.B.A. info@murrelektronik.be www.murrelektronik.be



BRAZIL

Murrelektronik do Brasil Indústria e Comércio Ltda. info@murrelektronik.com.br www.murrelektronik.com.br



Murrelektronik GmbH Austria info@murrelektronik.at www.murrelektronik.at



CANADA

Murrelektronik Canada 2sales@murrelektronik.ca www.murrelektronik.ca



CHILE

Electrónica Rhomberg Ltda. ventas@rhomberg.cl www.rhomberg.cl

CHINA



Murrelektronik Components Co. Ltd. info@murrelektronik.com.cn www.murrelektronik.com.cn



CROATIA Murrelektronik GmbH Austria info@murrelektronik.at www.murrelektronik.at

CZECH REPUBLIC

Murrelektronik CZ spol. s.r.o. info@murrelektronik.cz www.murrelektronik.cz

DENMARK



Murrelektronik Aps info@murrelektronik.dk www.murrelektronik.dk

EGYPT

DANA Import & Export usama@dana-egy.com www.murrelektronik.com/en

FINLAND Murrelektronik Power Oy



sales@murrelektronik.fi www.murrelektronik.fi

FRANCE Murrelektronik S.A.S. info@murrelektronik.fr www.murrelektronik.fr

GREAT BRITAIN

Murrelektronik Ltd. sales@murrelektronik.co.uk www.murrelektronik.co.uk

HUNGARY



Murrelektronik Kft. info@murrelektronik.hu www.murrelektronik.hu

INDIA



Murrelektronik India chetan.t.a@murrelektronik.in www.murrelektronik.in



INDONESIA

PT Sensor Haustama Jaya adminid@sensorhaus.com www.sensorhaus.com



O.M.S.T Marketing & Import Ltd. miki@omst.co.il www.omst.co.il

Ancitech Ltd. info@ancitech.com www.ancitech.com

ITALY



Murrelektronik S.r.l. info@murrelektronik.it www.murrelektronik.it

JAPAN



K.MECS Co., Ltd. info@kmecs.co.jp www.kmecs.co.jp



Profa-Tech Ltd. info@profa-tech.com www.profa-tech.com

MALAYSIA



SensorHaus (M) Sdn. Bhd. adminmy@sensorhaus.com www.sensorhaus.com

PAN-M Solution pms@gmail.com www.murrelektronik.com

NETHERLANDS



Murrelektronik B.V. sales@murrelektronik.nl www.murrelektronik.nl







MURRELEKTRONIK REPRESENTED WORLDWIDE



NEW ZEALAND

Sick Pty. Ltd. sales@sick.co.nz www.sick.co.nz



NORWAY

Murrelektronik A.S. post@murrelektronik.no www.murrelektronik.no



PAKISTAN

Overseas Enterprises info@oe.com.pk rehan k@oe.com.pk www.oe.com.pk



POLAND

Murrelektronik Sp. z o.o. info@murrelektronik.pl www.murrelektronik.pl



PORTUGAL

F.Fonseca S.A. ffonseca@ffonseca.com www.ffonseca.com



ROMANIA

Murrelektronik GmbH info@murrelektronik.at www.murrelektronik.at



RUSSIA

Murrelektronik igor.kalinin@murrelektronik.de www.murrelektronik.ru



SERBIA

Murrelektronik GmbH Austria info@murrelektronik.at www.murrelektronik.at



SINGAPORE Pan-M Pte. Ltd.

alvin@pan-m.com.sg www.murrelektronik.com



SINGAPORE

SensorHaus Pte. Ltd. adminsg@sensorhaus.com www.sensorhaus.com

SLOVAKIA





www.murrelektronik.at **SLOVENIA**

Murrelektronik GmbH Austria info@murrelektronik.at www.murrelektronik.at

SPAIN

Murrelektronik Spain S.L.U. ventas@murrelektronik.es www.murrelektronik.es



Rubicon Electrical and Automation greg@rubiconsa.com www.rubiconsa.com

SOUTH KOREA

SOUTH AFRICA



Murrelektronik Korea Ltd. info@murrelektronik.kr www.murrelektronik.kr



SRI LANKA

Sim Lanka (Pvt) Ltd. info@simlanka.com www.simlanka.com



SWEDEN Murrelektronik AB



www.murrelektronik.se

SWITZERLAND



Murrelektronik AG info@murrelektronik.ch www.murrelektronik.ch

info@murrelektronik.se



TAIWAN

Lintronix Co. Ltd. info@lintronix.com.tw www.lintronix.com.tw



THAILAND

Maxtech Control Co., Ltd. info@maxtechcontrol.co.th www.maxtechcontrol.co.th



TURKEY

Murr Elektronik San. ve Tic. Ltd. Sti info@murrelektronik.com.tr www.murrelektronik.com.tr

UNITED ARAB EMIRATES



King Power Electrical Accessories Trading kpower@emirates.net.ae www.murrelektronik.com/en

USΔ

Murrelektronik Inc. 2info@murrinc.com www.murrinc.com

VIETNAM



OMINA Industrial Automation J.S.C inquiry@omina.com.vn

www.omina.com.vn







SYSTEM ADVICE WITH **CONNECTIVITY CITY**



Go from the industry overview to your application ...



TANK LANS. (M.B.

... to the appropriate product and link to the online catalog

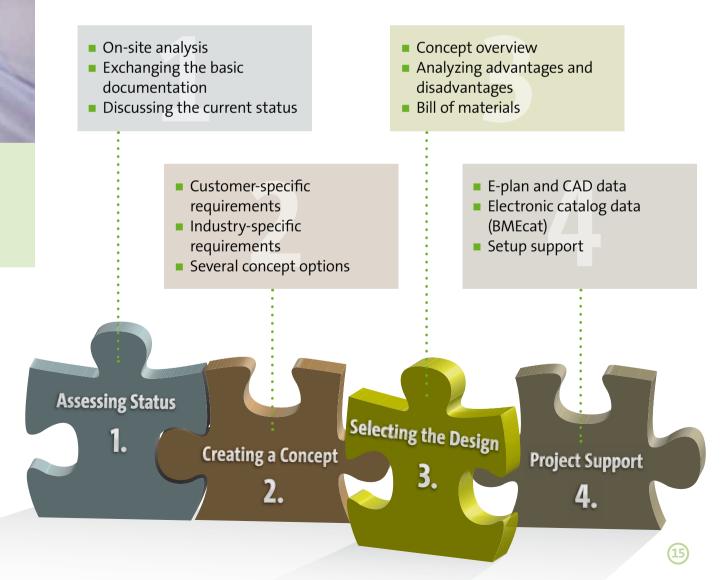


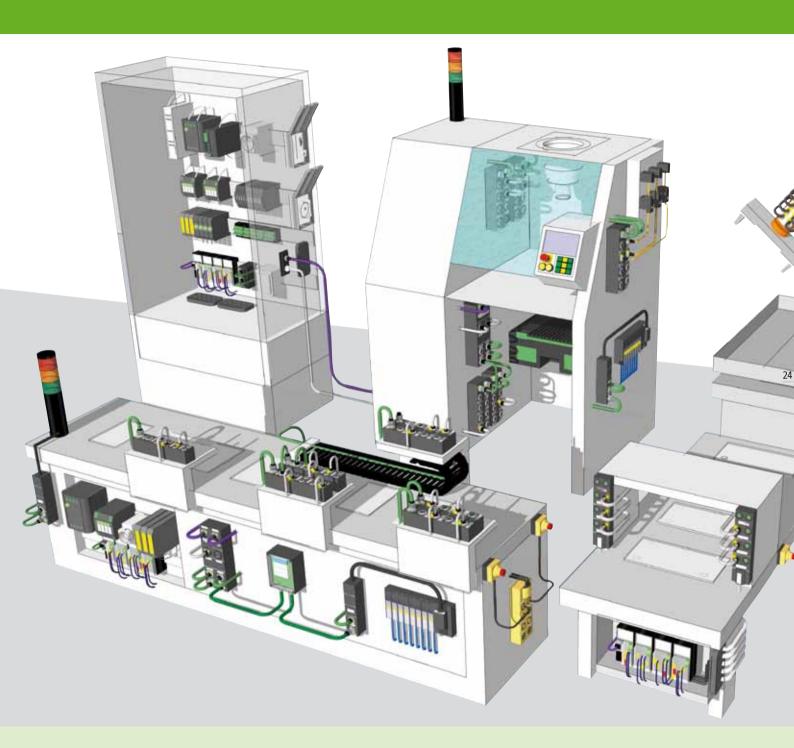




CONNECTIVITY BY MURRELEKTRONIK

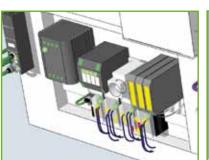
PROCESS OVERVIEW





WITH CUSTOM INSTALLATION CONCEPTS SAVE TIME AND MONEY!

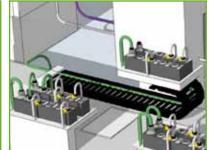
ELECTRONICS IN THE CONTROL CABINET





INTERFACES

CONNECTION TECHNOLOGY





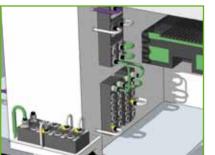
MURRELEKTRONIK BEST PRACTICE APPLICATIONS

REDUCING THE TOTAL COSTS WHEN INSTALLING I/Os

- Flexible installation concepts =>
 Optimized processes in all segments
- Convenient diagnostics => Increased machine availability
- Reducing assembly and setup time
- Optimizing logistics
- Fewer wiring efforts

INTEGRATED APPROACH = COST-EFFECTIVE RESULTS!

I/O SYSTEMS







PRODUCTS 4 PRODUCT RANGES



ELECTRONICS IN THE CONTROL CABINET EMC FILTERS, SUPPRESSION TECHNOLOGY, INTERFACE, POWER SUPPLIES AND POWER DISTRIBUTION

Electronic components for applications in the cabinet, for different tasks and applications on a high technical level.



Over 4,000 interface combinations possible to go from the control cabinet into the field, offering maximum flexibility.



Murrelektronik offers one of the most comprehensive product ranges on the market to connect sensors and actuators.

I/O SYSTEMS FIELDBUS TECHNOLOGY, DISTRIBUTION SYSTEMS

I/O Systems are the distributing link between PLC and sensor/actuator level that go from passive distribution systems to fieldbus technology in compact or modular design.





EMC filters are essential components that ensure interference-free operation of machines and systems. They function in two directions: First, they dampen interferences that originate from the inside of a machine or a system, a problem that is hard to avoid. Second, they ensure that interferences from adjacent machines and installations do not disturb the intact field within the system. Murrelektronik offers a comprehensive product line with single and 3-phase units (up to 180 A).

Filters are available in a slim book design with convenient DIN rail mounting. Two-stage filters help to meet the limits of radio frequency interference in residential and mixed zones. Ground straps are another important suppression technology: They connect filters to the protective earth (PE). This way, ground straps discharge all interference safely and comply with the relevant standards.



PRODUCTS ELECTRONICS IN THE CONTROL CABINET



Suppressor modules from Murrelektronik help avoid damage when load voltage spikes create problems (for example contactors, motors or valves). They enable an EMC-compatible design of systems, machines, and equipment. They considerably limit voltage spikes – especially if they are installed close to the interference source. Using a suppressor increases the lifetime of contacts and coil-windings, as well as reduces the operating and maintenance costs. When developing the products, Murrelektronik collaborates closely with the manufacturers of motors, contactors, and valves. Therefore, the modules are precisely matched for the sources of voltage spikes.







POWER SUPPLY AND DISTRIBUTION

Power supply modules are the heart of every control cabinet. They set the pace. Murrelektronik is your one-stop supplier for these products! We offer a wide range of transformers for adjusting voltages – they are available as control, isolation and safety transformers.

Rectified power supplies (for transforming AC voltage into smoothed DC voltage) and switch mode power supplies (for transforming into regulated DC voltage) are also offered in a wide product range.

Murrelektronik's portfolio also features a wide selection of redundancy and buffer modules. They protect power supplies from interferences. Intelligent current management is another important product line. MICO monitors currents, indicates when approaching the maximum load, and detects over-stress.



PRODUCTS ELECTRONICS IN THE CONTROL CABINET



INTERFACE TECHNOLOGY

Converting, amplifying, transferring signals - interface components have to fulfill various requirements while being potential-free. Murrelektronik offers a comprehensive product range for this field of automation technology. Relays are available for all voltage ranges. They are especially slim, so they don't take up a lot of space in the control cabinet.

Optocoupler modules from Murrelektronik are suitable for coupling and isolating elements for various control functions. Active interface modules collect signals and transfer them into formats that the following receiver can process. Murrelektronik's active brake rectifiers simplify connecting DC brakes. The tree switches can combine up to eight Ethernet terminal devices in a single, compact device.





PRODUCTS INTERFACES

2

SERVICE INTERFACE, CABLE ENTRY SYSTEMS, SIGNAL TOWERS

Interfaces that connect the control cabinet to the field are an important part of all machines and installations. Murrelektronik's MSDD Modlink front panel interfaces are a modular system for servicing the panel. They are designed to connect analysis or programming devices to the control cabinet. The MPV control cabinet coupling is the right solution for permanent plug connections. Murrelektronik also supplies cable entry systems that ensure sealed connections. The innovative MSDD hybrid fieldbus couplings combine repeater and entry systems. Eurocard holders connect individual parts to control units. We have large number of outlets available for almost all countries worldwide. For optical indication of all operating states, the signal towers of the Modlight product group are available in different models for all kinds of machines and installations.



PRODUCTS CONNECTION TECHNOLOGY



Murrelektronik offers one of the most comprehensive program ranges on the market for connecting sensors and actuators. A great number of connectors are available from stock or will produced within 48 hours from when you place your order – with order quantities starting from 1 piece!

The connectors are available in various forms. The product range includes the classic M8- and M12 round plug connectors, valve connectors and many more models. Different types of connectors are offered: with connection cable, with open ended wires or for field wiring. They feature various cable materials, wire sections, jacket colors, and number of poles. Murrelektronik offers models for demanding industrial environments (as used in machine and plant construction) as well as for applications that require quick connections, like in handling technology. Furthermore, the selection comprises versions for outdoor applications, the Food and Beverage industry, or for the mobile hydraulic sector.







FIELDBUS TECHNOLOGY

With Murrelektronik's fieldbus technology you can connect sensors and actuators conveniently and systematically to a higher control level. This allows cost-effective installation and automation solutions in machines and plants for many industries like: assembly and handling technology, machine building, materials-handling technology, logistics, process technology and building installations.

Murrelektronik offers solutions for any application. Cube67 is a modular system especially for application-friendly installations. Impact67 equals major cost savings. MVK Metal is made for demanding industrial environments. MASI is unique because of its extremely simple installation technology. Murrelektronik's fieldbus modules enable convenient and thorough diagnostics: with a clearly visible LEDs at the port and error messages in the control. The principle of "changing the bus without changing the system" provides flexibility. For safety-related applications, suitable solutions are available that guarantee optimum protection of man and machine. Products for the control cabinet complete the fieldbus technology range.



PRODUCTS I/O SYSTEMS



DISTRIBUTION SYSTEMS

Murrelektronik's passive distribution boxes provide a convenient method for connecting sensors and actuators to the control cabinet. These cost-efficient, safe and space saving installation solutions are designed for small and mid-sized machines. A wide range of application is possible. The comprehensive product portfolio enables the use in normally dry applications (warehousing, packaging, handling), heavy duty applications (metal and wood working, or polymer processing), in the Food and Beverage sector up to mobile outdoor applications.

Compared to single wire solutions with terminal boxes, installations with passive distribution boxes offer many advantages: smaller design, tighter connections, shorter assembly time and fewer materials are needed. Their integrated LEDs enable diagnostic options. Moreover, pluggable solutions with distribution boxes (M8 and M12) eliminate wiring errors.





BE CLEVER – REDUCE COSTS AND INCREASE EFFICIENCY WITH PREDEFINED COMPONENTS OR PRODUCTS THAT ARE SPECIALLY DESIGNED FOR YOU

Murrelektronik offers a wide range of predefined products that meet your specific requirements





SERVICE RESOURCES

BRIGHT IDEAS

- Kabelbutler[™]
- Value Added Assembly
- Customized Developments







INCREASE EFFICIENCY AND COST-EFFECTIVENESS BENEFIT FROM THE TECHNICAL EXPERIENCE

They always find the answers to your questions – Murrelektronik's Customer Service Center (CSC)



Convenient online ordering: shop.murrelektronik.com





SUPPORT

SERVICE WITH TECHNICAL BACKGROUND

- Technical Support for Cross Referencing
- Customer Service Center (CSC)
- eCatalog/BMEcat
- Online Catalog
- Murrelektronik App

Murrelektronik App

Murrelektronik product information in the palm of your hand – perfect for use in the field. Just scan the bar code or type in the part number and receive access to installation instructions, data sheets, construction files and many more.





31



www.murrelektronik.com

The information contained herein has been compiled with the utmost care. Liability for the correctness, completeness and topicality of the information is restricted to gross negligence.

Our company embraces social responsibility in all aspects of our business activities. Our brochures are printed using environmentally friendly production techniques and products.

