Your partner for customised electronics development

CONTACLIP

From the idea to series production

Everything from a single source, developed individually for you.

With over **40 years of experience in electronics development**, we are a competent and reliable partner for implementing the customised requirements of our customers in many industries. There are two main pillars to our expertise.

Our **experience in the developing and producing series products** in the field of functional electronics. This includes relay modules, interface units, power supplies and surge protection.

We have **gained industry-specific expertise** through **numerous projects and long-standing collaborations with well-known companies** in the fields of mechanical engineering, production technology, electrical engineering, traffic engineering, process engineering, power engineering, heating and transportation technology.

Our electronics development, procurement and production team, based in the Netherlands, develops high-performance hardware and software for your **customised in small or large series** by applying and adapting proven and cutting-edge technologies.

Our motto “everything from a single source” focusses on providing you with a complete solution, consisting of hardware and software, series production and an after-sales service. **We are your reliable partner from the idea to the finished product.**

A perfect fit in many industries!

Our expertise makes many things possible

We design and manufacture products for a wide range of applications – including virtually all industrial sectors that need or create power to run your installation or machines.

- Machine and facility construction
- Electrical engineering
- Traffic engineering
- Process engineering
- Environment engineering
- Power engineering
- Measurement, regulation and control technology
- Building automation
- Agroindustry
- Wireless communications
- Shipbuilding
- E-mobility
- Clean-room technology

And what is your industry?
Machine and device manufacturers who produce products in series and want to optimise them after a successful start are going to find our electronics developments interesting. Do you need a control unit for your customised system? We are happy to work with you to develop a suitable design.










The development process

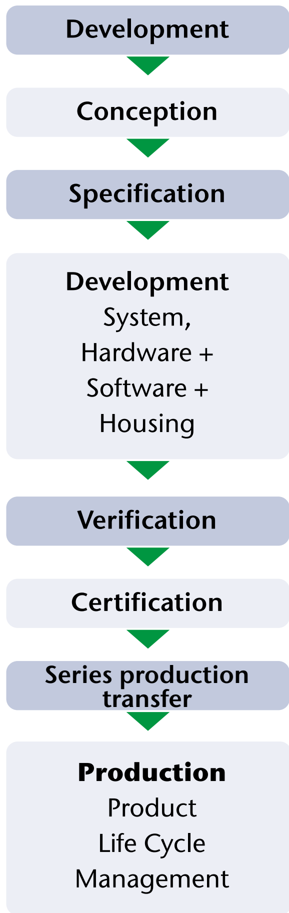
Together we create customised solutions

Our customers greatly appreciate our dedication to clear coordination, high efficiency and consistent quality in all projects. The development process is continuously being improved and modern methods are always being added.

Everything from a single source for your success:

- we plan
- we communicate
- we develop the hard- and software
- we procure the materials
- we build prototypes
- we test the components
- we manufacture small and medium-sized series in our own production facilities

... and you are always in the loop!



Our services at a glance

We support you using all our expertise

Hardware development:

Our goal is to construct robust hardware components for a wide range of applications. We use simulation software for analog design.

Software development:

We develop customised control and operating software for embedded systems. From basic software to the entire application: We have a wide range of software modules for every requirement.

Series production:

We specialise in cost-efficient embedded systems and the long-term availability of electronic series solutions.

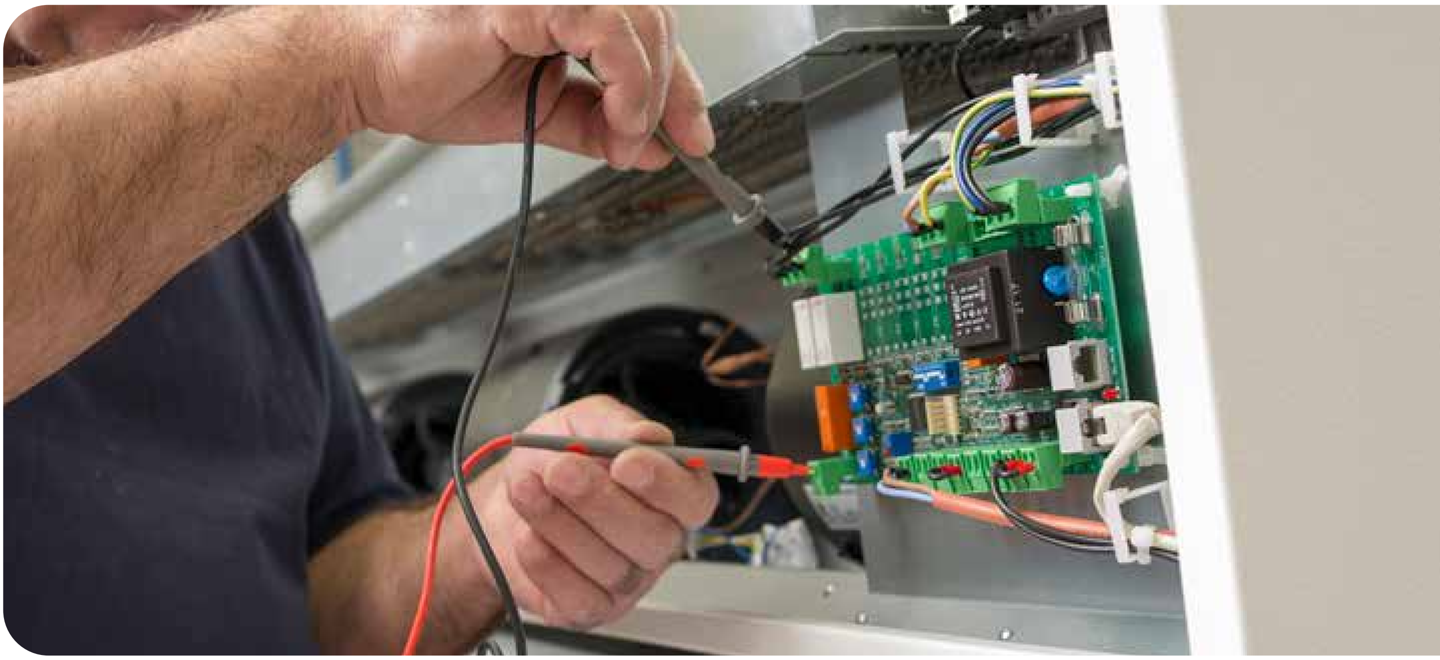
Repair service:

With our repair service, we are a reliable partner that can help you throughout the entire product life cycle.

Remote maintenance:

CONTA-CLIP's remote maintenance package is a finely-tuned overall concept: we control embedded systems – from the device level to the server right down to the operator level.

Are you looking for a contract manufacturer for your product series?
We populate your printed circuit boards to fit your project perfectly!




CONTACLIP
CONTACLIP
Eingang
Zentrale
Besucher-
parkplätze

Over 40 years of expertise and experience

We are growing with our tasks and your requirements

The market, and demands are changing. Thanks to our experienced team and broad expertise, we can offer you customised solutions – today and in the future.

Development portfolio
(Areas of expertise and experience)

Digital

- Standard logic
- Microprocessor-controller
- Serial I/O bus, Ethernet
- Power circuit (100A)
- Mobile communications 2.3.4G/LTE-M/NB-IoT
- WiFi and BLE
- HMI (human-machine interface)
- LCD/TFT/alphanumeric displays
- LED lighting

Analogue

- Signal conversion (V, mA, Ω, Hz, Pa)
- Data conversion (ADC, DAC)
- Measurement engineering/ sensor evaluation
- Power electronics (Power-MOSFET)
- Power supplies
- Insulation
- Filter

Passive & mechanical

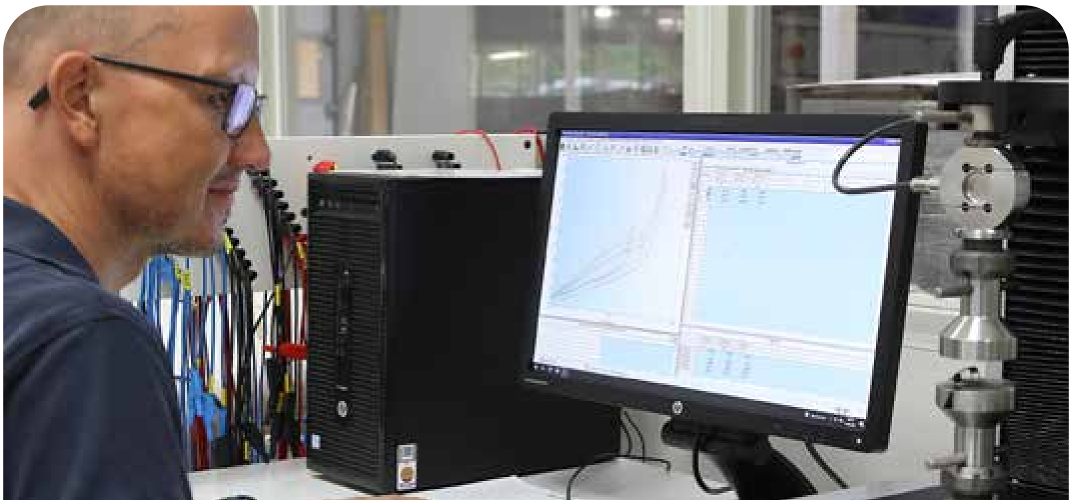
- PCB connections
- Electromechanical (relay)
- DIN-rail carrier
- Housing
- Customer-specific housing design

Software

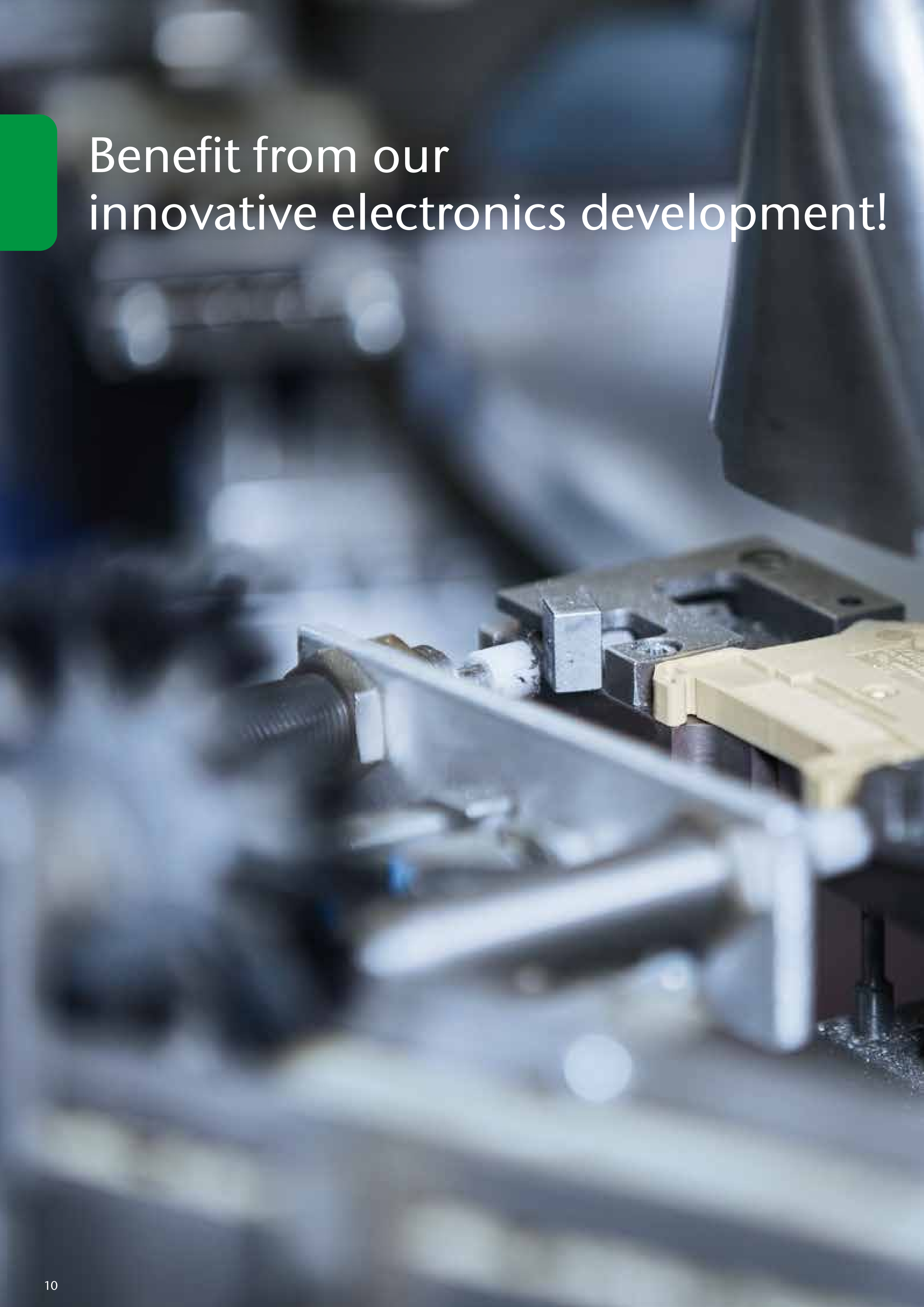
- Embedded microcontroller firmware, usually written in C
- PC (Windows) software for communication between the embedded system and the PC

Services

- EMC measurements
- CE/UKCA certification.
- After-sales service



Benefit from our innovative electronics development!



Sometimes it is a small detail that makes a big difference

We pay attention to the minutest details: How can we make something better, faster, more space-saving or more user-friendly? We are constantly innovating our products: for you!

An overview of advantages

- **Space savings:** Embedded systems are compact and require less space than bulky PLC systems.
- **Customised development:** Embedded systems are developed individually for specific requirements, which avoids unnecessary components.
- **Cost efficiency:** By using customised components and avoiding redundant functions, the manufacturing costs can be significantly reduced.
- **Flexible programming:** The use of high-quality software platforms allows for flexible programming, customisation and expansion of functionalities.
- **Seamless integration into existing systems:** Embedded systems can be seamlessly integrated into existing systems due to their customised development.
- **Seamless connectivity:** Embedded systems offer a wide range of connectivity options that go beyond traditional PLC systems, enabling effective networking in Industry 4.0.
- **Improved user experience:** Embedded systems offer improved user guidance through the targeted selection of functions and the option of user-friendly programming.
- **No standard sensor technology:** In contrast to standard sensor technology in PLC systems, our flexible selection of sensors enables optimal adaptation to the corresponding application requirements..
- **Resource-saving:** Take advantage of the key benefits of outsourcing, such as cost reduction, time savings, our expertise and the opportunity to focus on your core business.

Shape your future with innovative electronics development from CONTA-CLIP.

Success stories

Discover how our solutions are used

As a medium-sized family business, we live and breathe reliability and customer focus every day. Moreover, we are ready to adapt to the specific applications and requirements of a wide range of industries on a customised basis. This results in our specific solutions that we are pleased to present here.

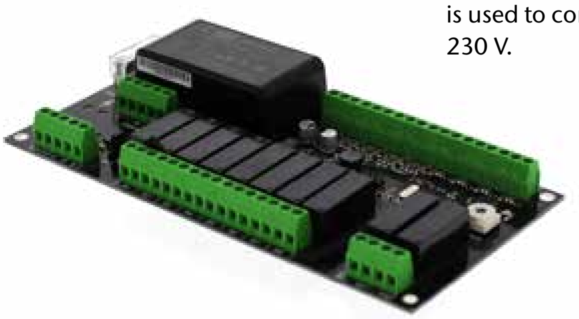
Industrial automation

Cellular GSM-PRO2E

CONTA-CLIP's GSM-PRO2 series provides a 4G remote control and maintenance solution that allows you to monitor and control decentralised facilities. The GSM-PRO2E module informs you when the process reaches a user-defined status or limit value. Digital and analogue inputs values can also be transmitted via e-mail or SMS (text message). The digital relay outputs can be switched using an SMS sent from the decentralised control room or from the service technician. The process can be monitored and controlled remotely. Monitoring and controlling the GSM-PRO2E module is even easier when using our iPhone or Android apps. The inputs and outputs of the modules and their desired functions can be configured using an easy-to-understand application.
We also supply this module as a brand-name product.

Modbus I/O module

A specially developed Modbus-based I/O module with analog and digital I/O including relay outputs for industrial applications in combination with a PLC. A Modbus/RS485 is used to communicate with the PLC. The supply voltage is 230 V.



Fill level monitoring relay

This liquid detection module has been specially developed for a pluggable 11-pole industrial housing. The level of liquid in the tank is measured electronically by an analog circuit. A relay is switched when a set value is exceeded. The supply voltage is 230 V.

Cellular auto-SMS module

This auto-SMS module was developed for pump stations. The limited space available and the lack of mounting options was the reason for developing a special housing that can be attached with Velcro.
Ease of use: the module sends an SMS as soon as the power supply (24 Vac/dc or 230 V) is connected. The phone numbers are fully configurable with your Windows PC using a USB connection. The GSM-TMM is therefore perfect for use as a simple fault indicator.


MSC NEW YORK
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Offshore

Bow thruster controller

This device controls the bow thrusters and enables the precision docking of inland and offshore ships. It ensures that the ailerons and turbines can be controlled without interference from other signals such as those sent out by navigation or radar systems. The housing is protected so that it can be directly mounted on the bridge or superstructure of a ship. The system uses its Modbus RS485 bus interface to communicate with other networked modules.

Retail

Air curtain control unit

Innovations to the design were initiated in order to modernise and expand the existing air curtain controller. The existing version had a control unit with LEDs with separate buttons. The challenge for its redesign was to create a cost-effective embedded control unit based on a colour TFT touch screen. The redesign also included a customised housing. An RS485 bus is used for communication with one or more associated I/O modules.

Agroindustry

Control unit for lorries/trolleys

This integrated control system was developed for lorries and trolleys used in the mushroom industry. These are autonomously controllable, mobile and height-adjustable platforms that the mushroom pickers can stand on and move along the mushroom fields.
We developed a special housing for the colour TFT touch screen that is directly mounted into the cabinet door recess and only needs a (customer-specific) self-adhesive film to be applied to the outside of the cabinet. The control board is operated by 24 V batteries. This provides large currents to switch the motors, 100 A continuous to 600 A peak currents. A power FET circuit is used for the change-over. All available analog/digital I/O and serial communications with the touch screen are controlled by microcontrollers.

Heat pump industry

RJ45 connector interface

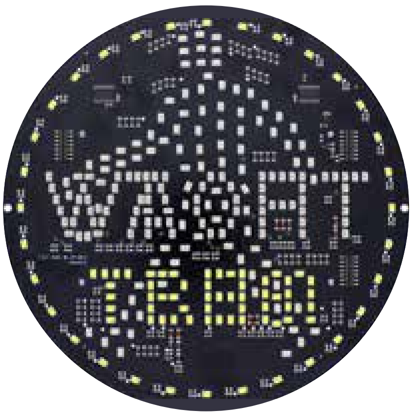
Customised development for a well-known heat pump manufacturer. This special interface module offers a data interface for the service technician. It provides fast and service-friendly access, thereby reducing downtime and the costs of each service call.

Infratechnology

Acoustic signal generator

The acoustic signal generator is a system used to help pedestrians at crosswalks. This encapsulated, waterproof module was designed to be used in conjunction with traffic lights. A varying acoustic signal is emitted during traffic light phases. The signal allows visually impaired people to hear when it is safe to cross the street. The volume and type of signal can be customised for each project. The various available versions of the module are, for example, 42 V or 230 V, with or without a push button as a control signal and with or without automatic volume control.

Traffic light modules



We have developed several traffic lights with SMD LED technology for traffic infrastructure technology. The challenge was to meet the required light wavelength and the requirements of traffic management systems with regard to their compatibility with the now obsolete incandescent lamps.

Building automation

Webeasy remote I/O module

Our I/O modules make automation easy: compact, intelligent and fast. The modules were developed with building and machine automation in mind. They are used to carry signals for both centralised (electrical cabinet) and decentralised (field) applications. This transmission takes place with the Modbus-RTU serial interface and can be easily integrated into bus-based systems. An Ethernet-Modbus gateway module is also available.

At the local I/O level, the modules can simply be clicked together using the integrated plug-in connector (Webeasy connector) to form the electrical connection. The Webeasy connector connects the supply voltage and the bus signal to the modules.

A twisted-pair cable can be used for the bus connection in a decentralised setup. The modules can also be used as stand-alone systems for controlling small-scale building and machine functions.

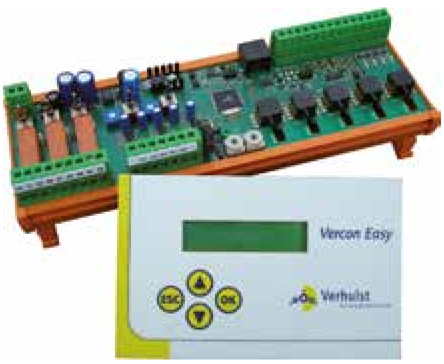
Analog splitter/buffer

Analog distributor/buffer for analog signals. The aim was to develop an easy-to-use connection solution for the safe and simple connection and expansion of analog signals in a building system. The module is equipped with surge protection against faulty connections and with an internal 230 V power supply with fuse protection.

I/O modules for centralised systems

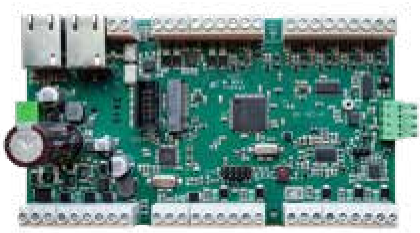
This product was designed to automatically control building blinds and lighting systems. The control system consists of relay and bypass modules that forward signals from a PLC to four groups of eight signals.

Air conditioning control unit



This unit controls air conditioning systems in workspaces or private rooms. Numerous parameters on the display can be defined to meet custom requirements and various “control groups” can be connected online using a network.

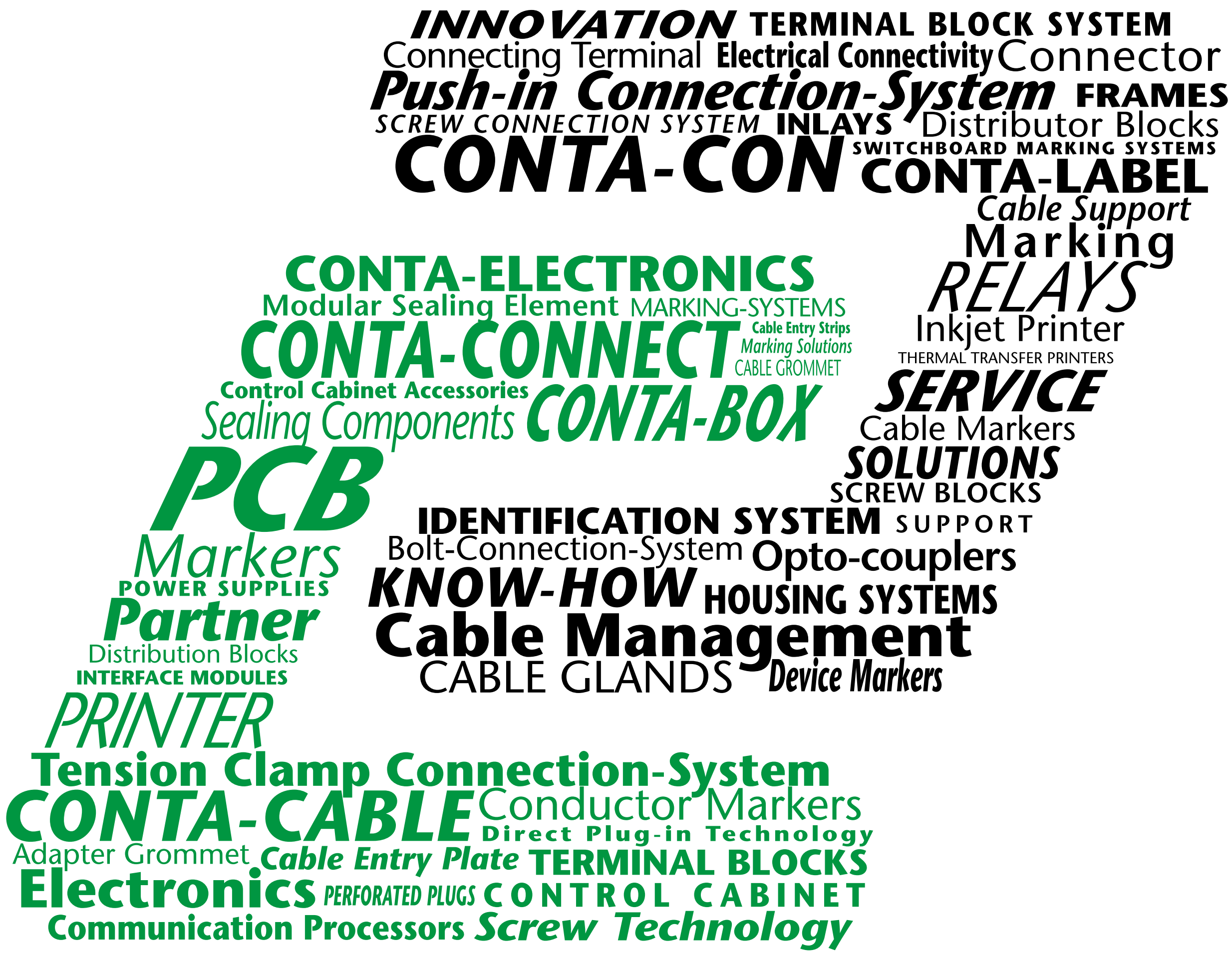
Room controller



The room controller is used for measuring, monitoring and controlling an office unit, based on Ethernet communication. The challenge here was to minimise the network cabling and to make the connection of different modules as easy as possible. This was achieved by utilising daisy-chain Ethernet, which allows up to 32 modules to be connected to each other “serially” via Ethernet, rather than the traditional point-to-point cabling between the Ethernet switch and the module.

The module also includes configurable analog and digital I/O and an RS485 serial bus.

Experts for Electrical Connectivity



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