Spreewindtage Linstow 2018 / Weidmüller Forum 08.11.2018

Weidmüller – Our passion for wind
Best results with our wind-specific solutions
We are growing– our new CTC
The Weidmüller Executive Board

José Carlos Álvarez Tobar
Chief Marketing and Sales Officer (CSO)

Jörg Timmermann
Speaker of the Executive Board
Chief Financial Officer (CFO)

Volker Bibelhausen
Chief Technology Officer (CTO)
We offer a broad range of products and solutions
Our divisions

Cabinet Products
Device and Field Connectivity
Automation Products and Solutions
Weidmüller at a glance
Being connected is everything

We connect people, markets and industries

More than 30,000 sellable products

Family owned since 1850. Reestablishment in 1948 in Detmold.

6 plants, 31 sales companies and ~60 exclusive agencies & representatives

4,700 employees worldwide

3 Divisions:
Cabinet Products
Device and Field Connectivity
Automation Products and Solutions

740 million euro sales in 2017

More than 40 market launches of innovative products a year
Our global presence
Connected around the world

Central Europe
- Germany
- Benelux
- Switzerland
- Israel

North & Eastern Europe
- Finland
- Czech Republic
- Hungary
- Poland
- Russia
- Sweden
- Denmark
- UK
- Norway
- Austria
- Turkey

North America
- USA
- Canada
- Mexico

Our sales companies and representatives
- Spain / Portugal
- Italy
- France
- South & Middle America

Asia
- Japan
- Korea
- China / HK / Taiwan

Middle East & Africa
- Africa
- Middle East
- Central Asia

South Asia Pacific
- South East Asia
- Australia
- India

Our plants
- Detmold | Germany
- Wutha-Farnroda | Germany
- Lanškroun | Czech Republic
- Tautii Magheraus | Romania
- Suzhou | China
- Sao Paulo | Brazil

6 plants
31 sales companies
60 exclusive agencies & representatives

+ 10 Assembly Sites worldwide

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We are there wherever we are needed
Our global development, production and sales network

- 31 sales companies
- ~60 exclusive agencies and representatives
- other distributors and direct delivery in particular cases

- Detmold Headquarters Development | Production
- São Paulo Development | Production
- Shanghai Development
- Singapore Development
- Sydney Development | Production
- Wutha-Farnroda/Eisenach Production
- Logatec Production
- Lanškroun Production
- Tautii Magheraus/Baia Mare Production
- Puebla Production
- Richmond Production
- Toronto Production
- Suzhou Development | Production
- Dresden Development
- Puebla Production
- Richmond Production
We connect to our customer all over the world
## Our industries

Connected in many different industries

<table>
<thead>
<tr>
<th>Machinery &amp; Factory Automation</th>
<th>Energy</th>
<th>Process</th>
<th>Transportation</th>
<th>Device Manufacturer</th>
<th>Building infrastructure</th>
</tr>
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<tbody>
<tr>
<td>Machine Tools</td>
<td>Wind</td>
<td>Water Treatment</td>
<td>Railway</td>
<td>Control Devices</td>
<td>Offices</td>
</tr>
<tr>
<td>Food &amp; Beverage</td>
<td>Elevators &amp; Escalators</td>
<td>Oil &amp; Gas</td>
<td>Infrastructure</td>
<td>Motion Controls &amp; Power Electronics</td>
<td>Industrial</td>
</tr>
<tr>
<td>Smart Factory</td>
<td>Conveying Systems</td>
<td>Traditional</td>
<td>Ship Building</td>
<td>Telecommunication Devices</td>
<td>Public</td>
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<tr>
<td></td>
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Levers to continue the growth path

3. CMS / Digitization Solutions
   - Intelligent
   - With integrated controllers

Solutions business
Hand shake with our customers for application-specific solution using controller /data acquisition technologies

2. Customer-specific-assemblies
   - Combination of Components
   - Additional Value for the customers application

Best-fitting combinations for customer applications
Portfolio for the Focus Segment “Wind” at Weidmüller

1. Single Components
   - Developed, manufactured, assembled and distributed by Weidmüller
   - From easy to complex

Optimization of the Portfolio
Our portfolio as a basis for improved and better solutions
Products
1: Cabinet products

- Relays for wind turbines
- Ethernet-products for wind turbines
- Lightning and Surge Protection for wind turbines
- Logic Unit WCU for wind turbine applications
- DC Power Supplies and UPS Systems for wind turbine applications

Electronics and Communication
Industrial Connectivity for Cabinet, Device and Field
Industrial Connectivity for Cabinet, Device and Field

- Power Feed In
- Control Voltage
- Signal Processing
- Automation

Installation Terminals
- Heavy Duty Connectors
- SAI Power
- Solid-State Relays
- Motor Terminals

Power Terminals
- Field Power
- OMNIMATE Power
- Distribution Terminals

Data Communication
- Shielding, Earthing & Protection
- Cabinet & Field Infrastructure
- Value Added Services

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Industrial Connectivity for Cabinet, Device and Field

- Power Supply
- Control Voltage
- Signal Processing
- Automation
- Modular Plug-In Connectors
- FreeCon Contactless
- Fuse Terminals
- Power Supplies
- Electronic Fusing
- OMNIMATE Power
- Feed-through Terminals
- SAI Control Voltage Distribution
- Field Power
- Control Voltage Distribution Terminals

- Data Communication
- Shielding, Earthing & Protection
- Cabinet & Field Infrastructure
- Value Added Services

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Industrial Connectivity for Cabinet, Device and Field

- Power Supply
- Control Voltage
- Signal Processing
- Automation

- OMINIMATE Signal
- Sensor-Actuator Interfaces
- M12 Connectors
- Analog Signal Converters
- Modular Plug-In Connectors

- Relays & Solid-State Relays
- Sensor-Actuator Cables
- Sensor-Actuator Terminals
- Feed-through Terminals
- Pluggable Terminals

- Data Communication
- Shielding, Earthing & Protection
- Cabinet & Field Infrastructure
- Value Added Services

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Industrial Connectivity for Cabinet, Device and Field

- Power Supply
- Control Voltage
- Signal Processing
- Automation

OMNIMATE Housing
- Remote I/O Safety
- Remote I/O IP67
- Control
- Remote I/O Sub-Bus

Multi-touch Panels
Remote I/O IP20

Data Communication
Shielding, Earthing & Protection
Cabinet & Field Infrastructure
Value Added Services

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Industrial Connectivity for Cabinet, Device and Field

- Power Supply
- Control Voltage
- Signal Processing
- Automation

- Routers
- RJ45 Connectors
- DIN-Rail Outlets
- Security Routers
- W-Lan Access Points

- Service Interfaces
- RJ45 Patch cables
- OMNIMATE Data
- Switches
- Fibre-optic cables

- Data Communication
- Shielding, Earthing & Protection
- Cabinet & Field Infrastructure
- Value Added Services
Industrial Connectivity for Cabinet, Device and Field

- Power Supply
- Control Voltage
- Signal Processing
- Automation

- PE Terminals
- Surge Protection Data
- EMC Cable Glands
- Surge Protection Signal

- Surge Protection Energy
- Filters
- Potential Bonding Brackets
- Shield Clamping Yokes

- Data Communication
- Shielding, Earthing & Protection
- Cabinet & Field Infrastructure
- Value Added Services
## Industrial Connectivity for Cabinet, Device and Field

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<td>Industry Light</td>
<td>Cable Ducts</td>
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<td>Tools &amp; Machines for Cable Processing</td>
<td>Installation Material</td>
<td>Ventilation and Heating</td>
<td>DIN Rails &amp; Brackets</td>
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# Industrial Connectivity for Cabinet, Device and Field

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<td>Automation Solutions</td>
<td>Energy Monitoring</td>
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<td>Assembly Service Rails</td>
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We are innovative
Connected for over 70 years

- Reestablishment in Detmold (1948)
- SAK-Series: First plastic insulated terminal blocks (1948)
- 1959
- 1978
- Start of internationalisation by a group company in England (1959)
- Foundation of the Weidmüller Academy (2003)
- Start of internationalisation by a group company in England (2013)
- FreeCon Contactless: Contactless power transmission (2015)
- u-remote: Modular remote I/O system (2017)
- Start of internationalisation by a group company in England (2018)
Our recent innovations

- **A-Series**
  Spring connection with PUSH IN Technology

- **u-mation**
  Platform-independent automation toolbox

- **OMNIMATE Power – Hybrid**
  Hybrid connector for power, signals and EMC

- **FreeCon Contactless**
  Contactless power transmission

- **THM Plus**
  Thermal transfer printer for flexible label marking

- **Industrial Analytics**
  Generating added value from machinery and production data

- **Fast Delivery Service**
  Assembled rails and populated boxes
Customer-specific assemblies
Customer-specific assemblies for tower, nacelle and hub
Tailored to your requirements
Your path to achieving a project-specific solution

Defining the task
- Analysis of the current situation
- Project definition

Advice
- Individual project support
  - Over the phone and on site
  - Selection of products
  - Intensive dialogue

Application-specific development
- Development of an application-specific solution
  - Individualized configuration
  - Production of prototypes on request

Production, logistics and documentation
- Everything from a single source
  - Cutting-edge production technology
  - Intelligent inventory management
  - Comprehensive project documentation
Nacelle

Surge protection for aircraft warning lights
Multifunctional junction box for the nacelle, with surge Protection modules and relay modules to protect the unit during lightning strikes and transmits digital status signals of the aircraft warning lights.

Acoustic alarm junction box
Safety device in the nacelle emits an acoustic alarm if anyone tries to access the rotor hub without all the necessary safety provisions having been met.

Lubrication/LED lighting junction box
For connecting the signal lines for the central lubrication in the hub area. The enclosure cover has been fitted with a Fieldpower LED to illuminate the hub during service.
**Tower**

*Junction box for current measurements*
For easy and error-free current and voltage measurements on live conductors in the tower, positioned after the U/I converter.

*Communications junction box*
Junction box for connecting the cables of communication systems along the tower simply and securely.

**Hub**

*Anemometer junction box*
For connecting the power supply and signal transmission lines of the anemometer. An additional built-in surge protection module protects the downstream of electrical components.
Customer Specific Assemblies

LED Lighting System
- Nacelle + Tower
In the early stages of product development we test in our laboratory exactly which components, materials and systems are suitable for your application. This ensures that our solutions work with absolute reliability, are perfectly tailored to your requirements and can be used internationally. Satisfied customers around the world attest to the high quality of our work and trust the expert advice of our staff when it comes to the implementation of individual solutions.
Digitization
A molded interconnect device is on customer request designed thermoplastic substrate with integrated electronic circuit.
Application Center

- Real life Test Scenarios
- Mixed Hardware/ Software Integration Test
- System tested Function Blocks
Let's connect!
Let's share ideas!

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Wherever you are!
www.weidmueller.com

Find out more about our passion for wind!
www.weidmueller.com/wind
Operating wind turbines efficiently
Best results with our wind-specific solutions

Let's connect.

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