

VAHLE PORTFOLIO

MORE THAN JUST PRODUCTS



FROM TECHNOLOGY TO CUSTOM SOLUTIONS

We are

the inventor of the conductor rail and a reliable partner for our customers. As a globally established specialist in energy and data communication, positioning and control, we serve a wide range of industry segments – and are responsible wherever innovative solutions are required.

We offer

individual components and systems "Made in Germany" that reliably ensure process reliability and efficiency as tailor-made customer solutions in a wide variety of applications.

We stand for

the certainty that you have made the best choice in terms of technology, economy and long-term viability – and thus for the firm confidence in the feasibility of your vision.



YOUR PARTNER WHO THINKS AHEAD

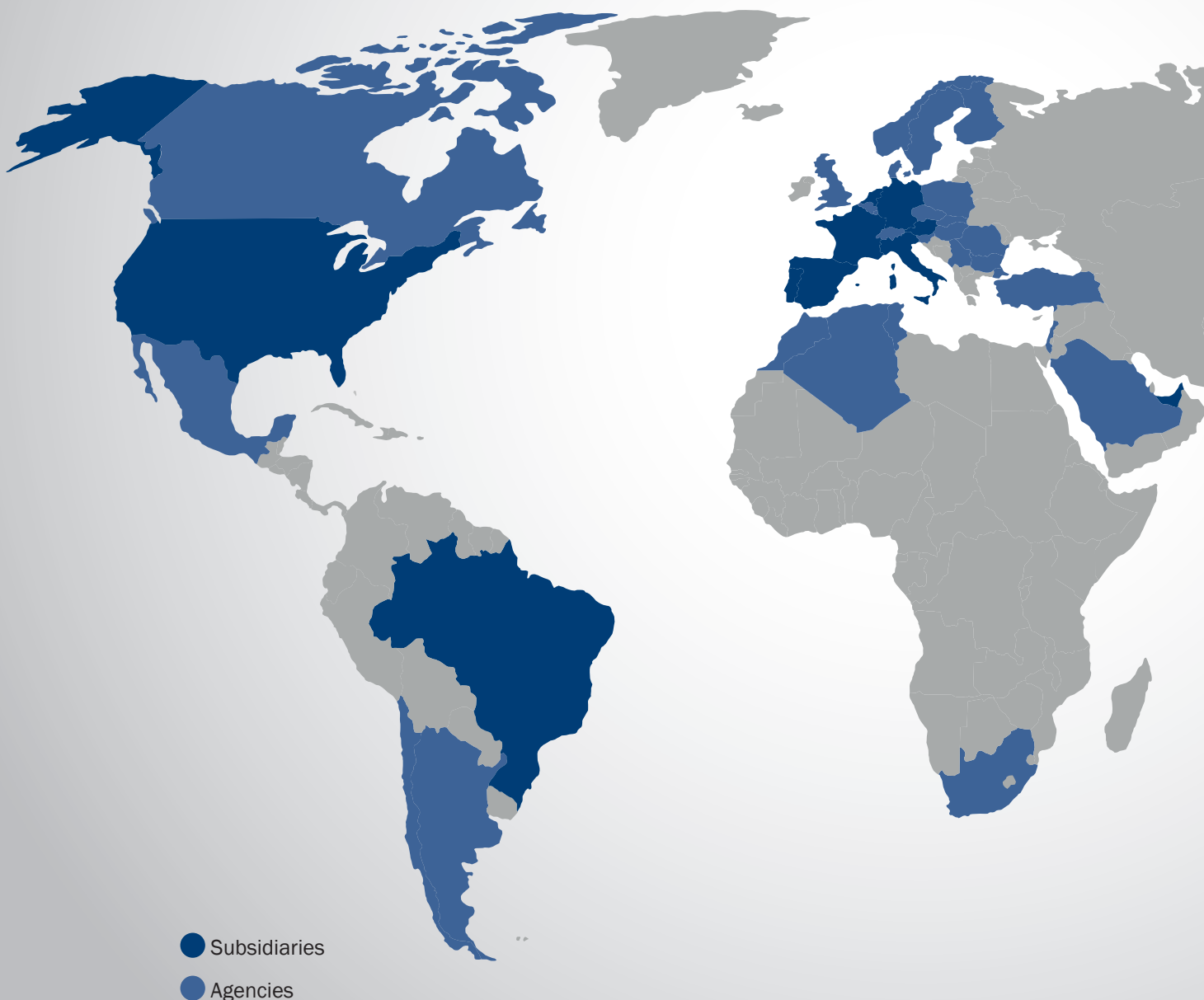
When reliability is non-negotiable, you need solutions you can trust – and a partner who thinks ahead. For process stability, efficiency and future readiness, you need technology and systems designed to meet your unique needs.

Your Vision. Our Solution.



IN ACTION, WHERE ENERGY AND DATA FLOW

With a global presence, experienced partners and a close-knit service and sales network, VAHLE is wherever you need your applications worldwide. We speak energy and data – ensuring your processes remain safe, efficient and future-proof everywhere.





Rounded values from 2024



200 Mil.

Turnover in euros



900

Employees



40

Locations



5000

Products for your systems

YOUR INDUSTRY IS UNIQUE

FORTUNATELY, WE UNDERSTAND IT

From a comprehensive system solution to that one critical component, your application has a unique set of needs – and it's critical to have a solution tailored to those needs.

This is because every industry has its own individual requirements for energy and data communication, positioning and control. What connects them is the demand for maximum availability, safety and efficiency.

It's good to have a partner at your side who understands your industry – technically, economically and in detail. VAHLE does not think in terms of products, but in terms of solutions that are precisely tailored to your needs.



THE PERFECT FIT



Crane Technology

With VAHLE, you can design your crane technology to be efficient and reliable. Whether you require a standard solution or an automated customised product: We adapt to your requirements so that your crane application becomes a powerful tool for your processes.



Intralogistics

Optimize your internal processes with innovative systems from VAHLE. By combining electrification, data communication, positioning and control, we create the basis for smooth and future-proof logistics processes in both manufacturing and shipping.



People Mover

Rely on proven system solutions for passenger transport. VAHLE supports you with reliable technology that meets the increasing demands for safety, efficiency and availability at all times – for sustainable mobility today and tomorrow.



Amusement Rides

Ensure safe thrills and reliable operation of your rides with innovative VAHLE solutions. Perfectly coordinated for roller coasters, Ferris wheels and all other attractions.

FOR EVERY INDUSTRY



Automotive

Make your manufacturing processes flexible, efficient and safe – with systems from VAHLE. Our solutions ensure stable processes and maximum availability in vehicle production.



Port Technology

Automated terminals have special requirements. VAHLE systems help you to fulfil these requirements efficiently. From planning to operation, we support you with innovative solutions for high-performance and sustainable port technology.



Clean Room

Where maximum purity counts, you need certified technologies you can rely on. VAHLE enables high-performance energy and data communication, positioning and control – even under the most stringent clean room conditions.



General Industries

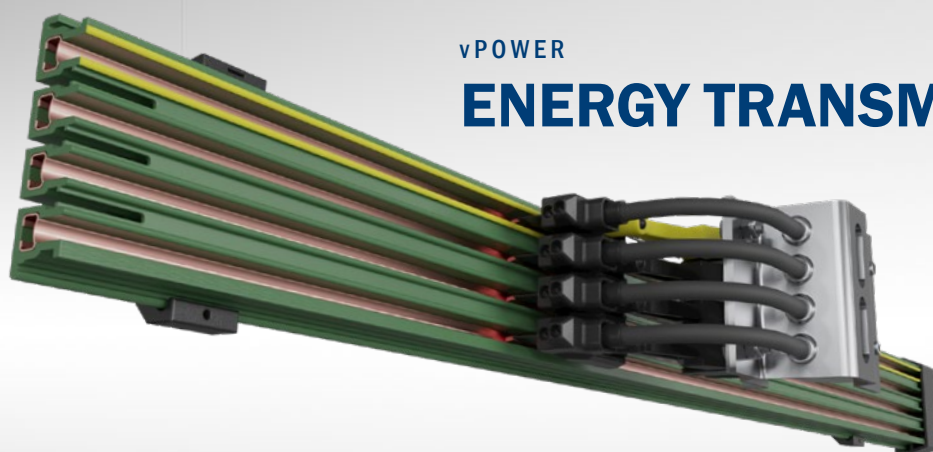
Not every application can be clearly assigned to a specific industry, but VAHLE is ready to take on any challenge. With expertise, experience and a broad portfolio of solutions, we bring energy and data exactly where you need it.

EXPERTISE FOR YOUR APPLICATION

THE VAHLE PORTFOLIO

Whether energy transmission, data communication, positioning, control or complete system solutions – with VAHLE, all disciplines work together to make your processes safe, efficient and future-proof. Each product category delivers what matters most: top quality, maximum flexibility and absolute reliability – strong on their own, even stronger together.

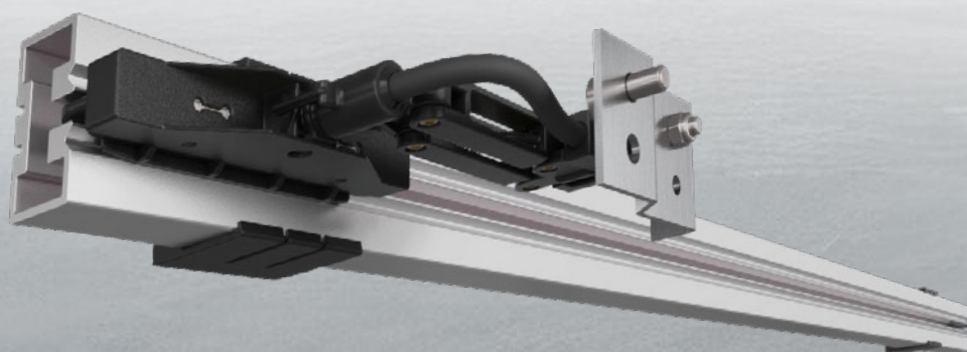
You also benefit from our comprehensive range of services, which supports you right from the start, secures your processes and improves your applications in the long term.



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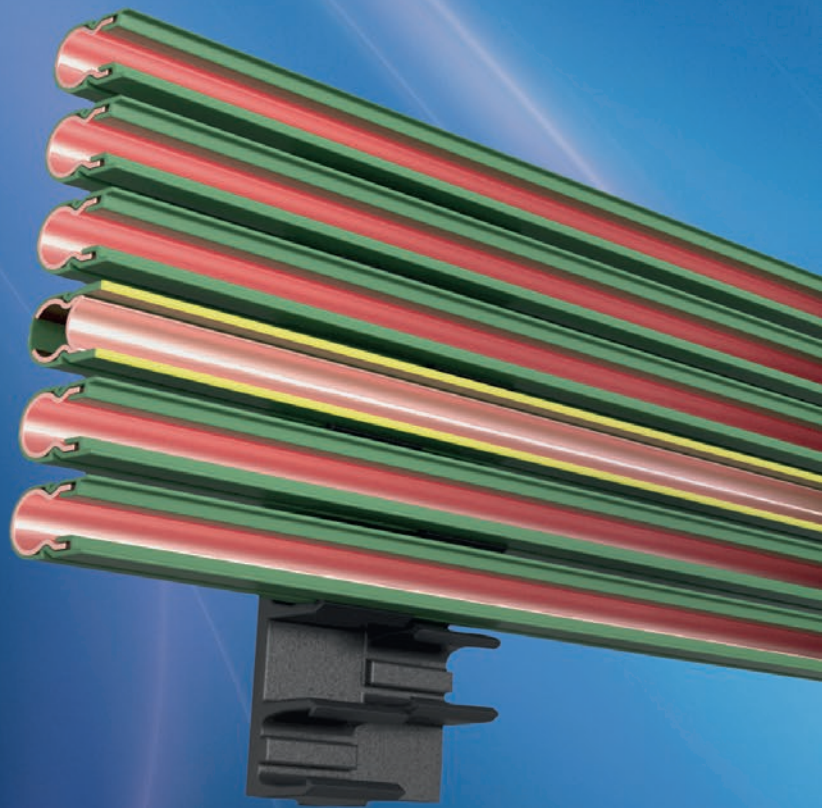
SYSTEM SOLUTIONS

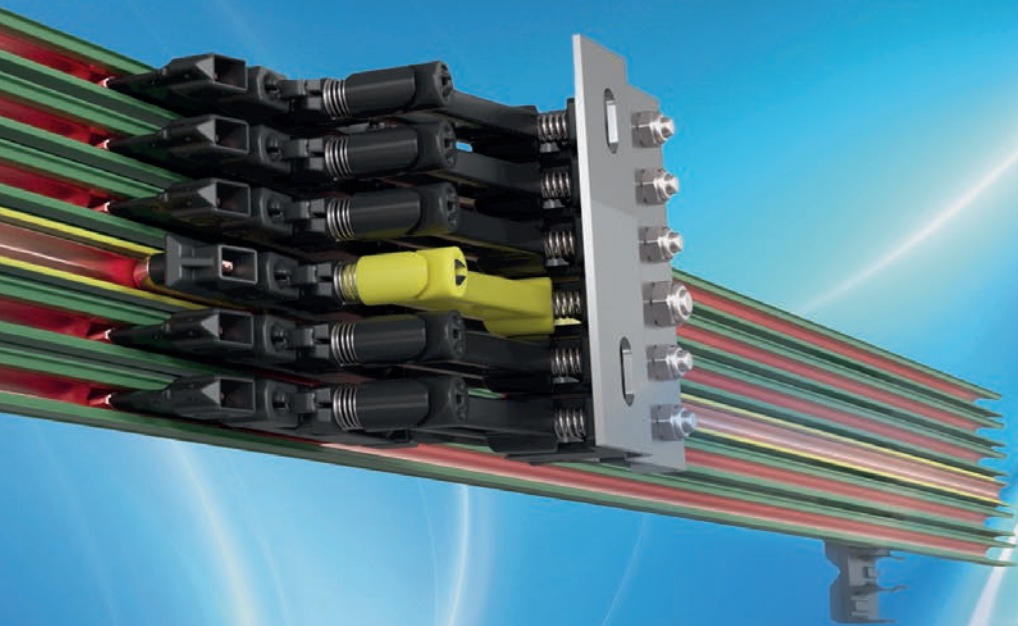


vPOWER

ENERGY TRANSMISSION

VAHLE offers various technologies for the safe and efficient operation of your systems with its vPOWER solutions: Inductive energy transmission, conductor systems, conductor rails, charging contacts, festoon systems and cable reels. This ensures that you receive exactly the energy supply that reliably powers your processes and enables sustainable industry.





ENERGY TRANSMISSION

Open conductor systems



Up to 2360 amps | Up to 250 m/min | -40 °C to +200 °C

- High versatility due to different conductor materials
- Robust design for particularly adverse environments
- Durable and low-maintenance system
- Customizable for individual requirements

AREAS OF APPLICATION

Standard cranes, Heavy-duty cranes, Process cranes, Gantry cranes, Ferris wheels, Trams



Insulated conductor systems

U10 | FABA100



Up to 100 amps | Up to 400 m/min | -30 °C to +85 °C

- Durable and low maintenance
- Especially suitable for EMS systems
- Easy adjustment during installation
- Suitable for lateral and suspended arrangement
- Protective conductor prevents unintentional polarity reversal (U10)

AREAS OF APPLICATION

Skillet lines, Sorter, Shuttle, Electric monorail systems, Electric pallet systems, Automated storage and retrieval systems, Rides, Studio technology



Insulated conductor systems U15 | U25 | U35



Up to 1250 amps | Up to 600 m/min | -30 °C to +130 °C

- Universal for hanging, side and vertical arrangement
- High safety due to IP23 contact protection
- Heatable to prevent icing up
- Can be combined with data and positioning systems

AREAS OF APPLICATION

Standard, Heavy-duty, Process and gantry cranes, Bucket conveyor systems, Automated storage and retrieval systems, eRTG & STS cranes, Rides, Freefall Tower, Ferris wheels, Cable Liner, etc.



Insulated conductor systems U20 | U30



Up to 530 amps | Up to 600 m/min | -30 °C to +85 °C

- Durability due to solid copper continuous casting profile
- Resistant even to high frequency installations
- Acid and alkali resistant
- High safety due to IP23 contact protection
- Can be combined with data and positioning systems

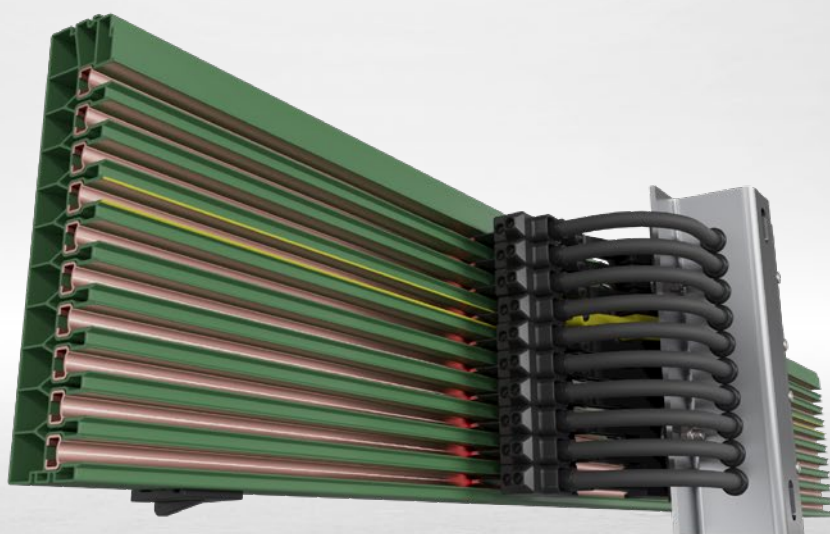
AREAS OF APPLICATION

Standard cranes, Process cranes, Gantry cranes, Sorter, Rides, Freefall Tower, Ferris wheels, Dark rides, Facade accesses



ENERGY TRANSMISSION

Compact conductor systems VKS10



Up to 280 amps | Max. 10 poles | Up to 450 m/min | -30 °C to +55 °C

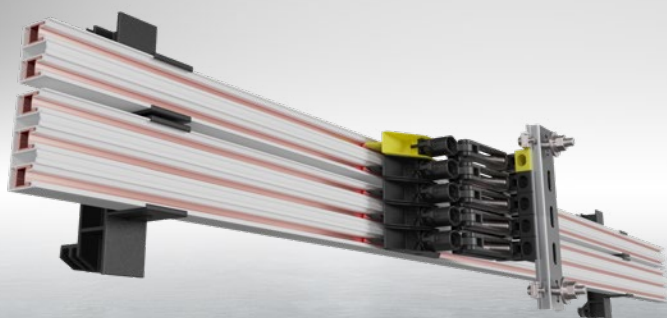
- High compatibility with common rack profiles and positioning systems
- Compact design
- Simple and fast mounting due to clips technology and plug-in connections
- Protected against accidental contact (IP 2X) and UL approval

AREAS OF APPLICATION

Automated storage and retrieval systems, Automatic small parts warehouses, Cross transfer cars, Cold and deep-freeze storages, Transfer trolleys



Compact conductor systems VCL



**Up to 100 amps | Max. 6 poles |
Up to 400 m/min | -30 °C to
+55 °C**

- Modular system with 2 to 6 poles for universal solutions
- Contact protection (IP 2X) and UL approval
- Simple, safe and fast installation due to clips technology
- Concealed implementation in drive profiles due to ultra compact dimensions
- Wide power range from 40 to 100 amps and 12 to 500 volts

AREAS OF APPLICATION

Single and multi-level-shuttle, Automated storage and retrieval systems, Automatic small parts warehouses, Cross transfer cars, Transfer trolleys



Compact conductor systems VKS



**Up to 140 amps | Max. 6 poles |
Up to 450 m/min | -30 °C to
+55 °C**

- Minimal space requirements due to ultra-flat design
- Simple, safe and fast installation even in curved tracks
- Contact protection (IP 2X) and UL approval
- Universal for hanging, lateral and vertical arrangement

AREAS OF APPLICATION

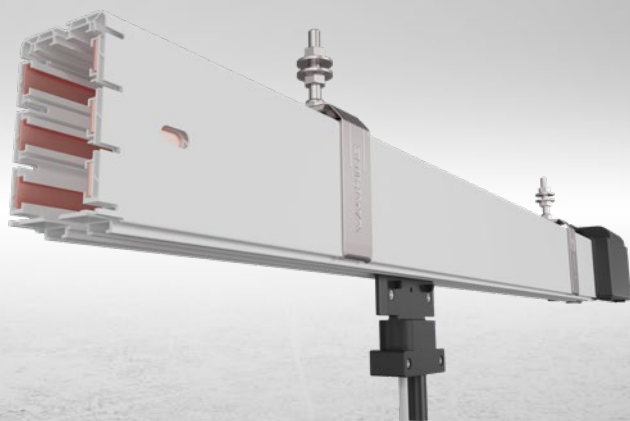
Shuttle, Skillet lines, Automated storage and retrieval systems, Automatic small parts warehouses, Cross transfer cars, Cold and deep-freeze storages, Transfer trolleys



ENERGY TRANSMISSION

Enclosed conductor systems

MKH



Up to 200 amps | Max. 10 poles | Up to 250 m/min | -30 °C to +60 °C

- Combination of power and signal transmission
- Very compact dimensions even with high number of poles
- IP23 contact protected (with sealing lip IP24)
- Fast assembly due to prefabricated parts and clip technology
- APOS Magnetic positioning system can be fully integrated

AREAS OF APPLICATION

Standard cranes, Process cranes, Gantry cranes, Bucket conveyor systems, Transfer trolleys, Studio technology



Enclosed conductor systems

LSV | LSVG



Up to 300 amps | Max. 11 poles | Up to 300 m/min | -40 °C to +120 °C

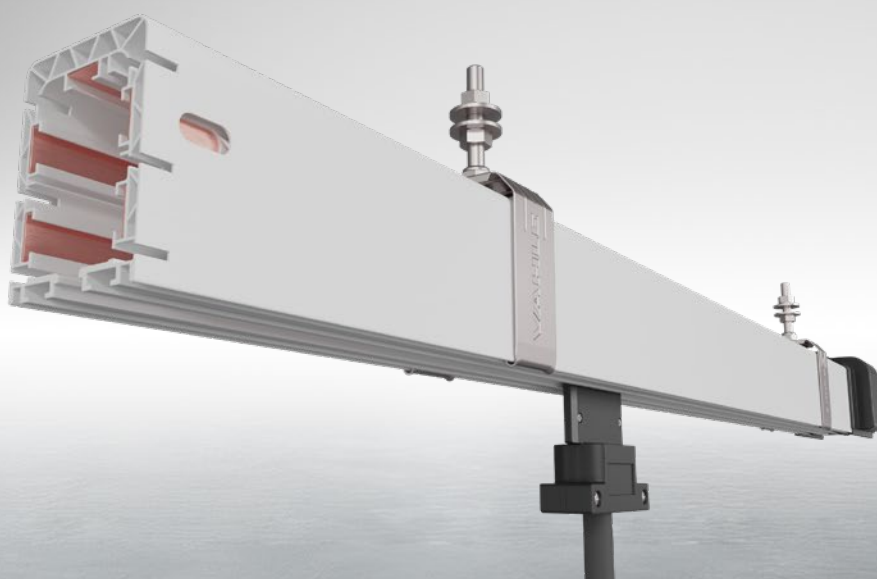
- Combination of power and signal transmission
- Most robust enclosed conductor system on the market
- High reserves for clearances and creepage distances
- IP23 contact protected (with sealing lip IP24)
- Quick and easy installation due to plug and screw connections

AREAS OF APPLICATION

Standard cranes, Process cranes, Gantry cranes, Electric monorail systems, Cold and deep-freeze storages, Stadium roofs



Enclosed conductor systems KBH



Up to 200 amps | Max. 5 poles | Up to 250 m/min | -30 °C to +60 °C

- Robust and inexpensive system
- Very compact dimensions
- IP23 contact protected (with sealing lip IP24)
- APOS Magnetic positioning system can be fully integrated
- Short delivery times and fast assembly due to prefabricated parts

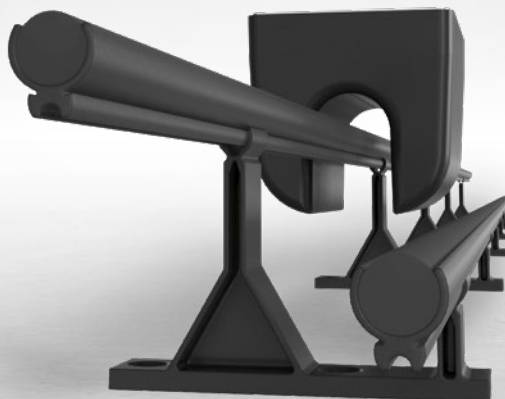
AREAS OF APPLICATION

Standard cranes, Process cranes, Gantry cranes, Electric monorail systems, Cold and deep-freeze storages



ENERGY TRANSMISSION

Contactless power supply CPS 140 kHz



Up to 30 kW per line | unlimited speed | -30 °C to +40 °C

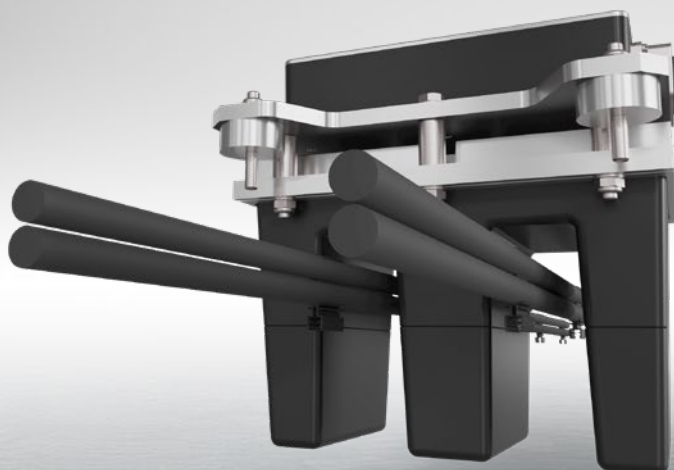
- Low-maintenance and wear-free system
- IP54 or better protected pickups
- High power density with low power loss
- Customized system layouts with switches and transfer elements
- Wide power range from 10 to 560 volts and 70 W to 30 kW

AREAS OF APPLICATION

Automated guided vehicles, Sorter, Shuttle, Skillet lines, Electric monorail and electric pallet systems, Automated storage and retrieval systems, Overhead Hoist Transport Systeme, Dark rides, etc.



Contactless power supply CPS 20 kHz



Up to 90 kW per line | unlimited speed | 0 °C to +40 °C

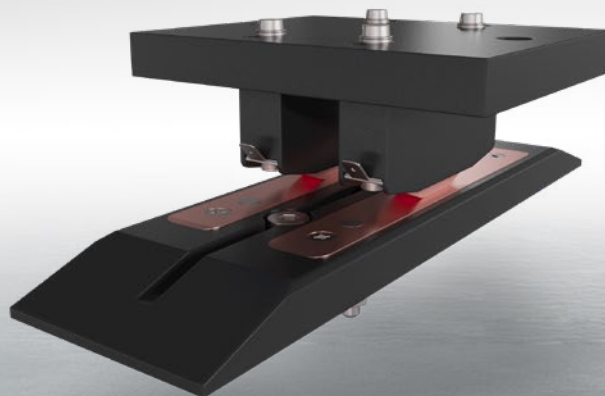
- Low-maintenance and wear-free system
- IP54 or better protected pickups
- Protective functions against short circuit, overtemperature or undervoltage
- Wide range of power outputs from 24 to 560 volts and 500 W to 90 kW

AREAS OF APPLICATION

E-Forklifts, Automated guided vehicles, Sorter, Skillet lines, Electric monorail systems, Electric pallet systems, eRTG cranes, Elevators



Charging contacts



Up to 600 amps | Up to 1 m/s up or down speed | -30 °C to +55 °C

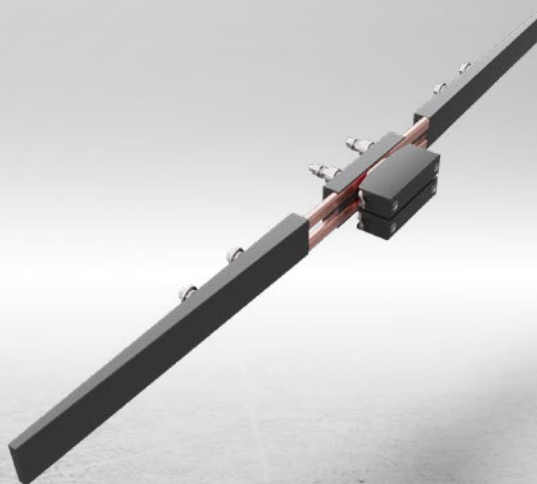
- Broad standard portfolio and customized solutions
- Particularly robust thanks to high-quality materials
- Large tolerances possible thanks to linear guide elements
- Optionally available with pilot contacts
- Available with UL approval

AREAS OF APPLICATION

E-Forklifts, Automated guided vehicles, Shuttle, Rides, Parking garages, Robotics



Shuttle charging systems SLS



Up to 140 amps | Up to 4 m/s up or down speed | -30 °C to +55 °C

- Modular system enables individual adaptation and free scalability
- Maximum efficiency thanks to short charging cycles and high charging speeds
- Easy installation (plug and play)
- Concealed implementation in driving profiles thanks to ultra-compact dimensions

AREAS OF APPLICATION

Shuttle, Automated guided vehicles



ENERGY TRANSMISSION

Small festoon systems



Up to 55 kg load per wagon | Up to 120 m/min | -30 °C to +100 °C
Running rail: S1 | S2 | S3 | K1 | V3

- Perfect for light and medium duty applications
- Easy connection to on-site technology
- Suitable for indoor and outdoor installations
- Curved tracks possible, Runway V3 perfectly suited for curved tracks
- Accommodates flat as well as round cables and hoses
- Pre-assembly for plug and play installation

AREAS OF APPLICATION

Standard cranes, Process cranes, Gantry cranes, Bucket conveyor systems, Studio technology



Large festoon systems



Up to 500 kg load per wagon | Up to 240 m/min | -30 °C to +100 °C
Running rail: INP, IPE, HEA and others

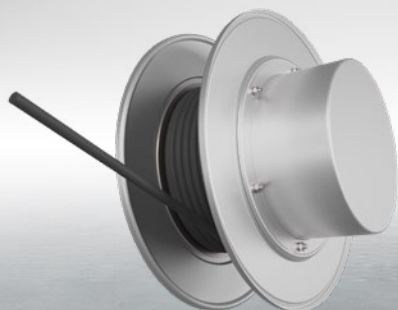
- Withstands harsh environments (waste, steel and coal industries, ports)
- Suitable for indoor and outdoor installations
- Accommodates flat as well as round cables and hoses
- Pre-assembly for plug and play installation

AREAS OF APPLICATION

Standard cranes, Heavy-duty cranes, Process cranes, Gantry cranes, eRTG cranes, STS cranes, RMG cranes



Spring operated cable reels



Up to 60m/min | Up to 60m travel path | -20 °C to +40 °C

- Up to 120,000 spring cycles possible
- For use in harsh environments
- IP55 protected *

AREAS OF APPLICATION

Standard cranes, Process cranes, Stadium roofs, Facade accesses, Studio technology



Motor powered cable reels



Up to 200m/min | Up to 1.000m travel path | -20 °C to +40 °C

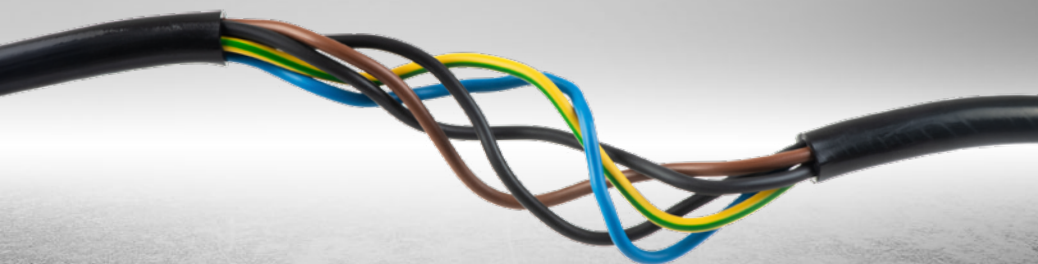
- For highly dynamic applications
- Maximum corrosion protection of the drum bodies
- Resistant to aggressive environmental influences
- IP55 protected *
- VDE and UVV compliant

AREAS OF APPLICATION

Heavy-duty cranes, Gantry cranes, STS cranes



Cables



Up to 240m/min | -35 °C to +80 °C | Round, flatform cables and hoses

- Robust under any load
- Can be used in- and outdoors on reels and festoon systems
- Available for energy, data and media transmission
- Data cable can be assembled with connectors

AREAS OF APPLICATION

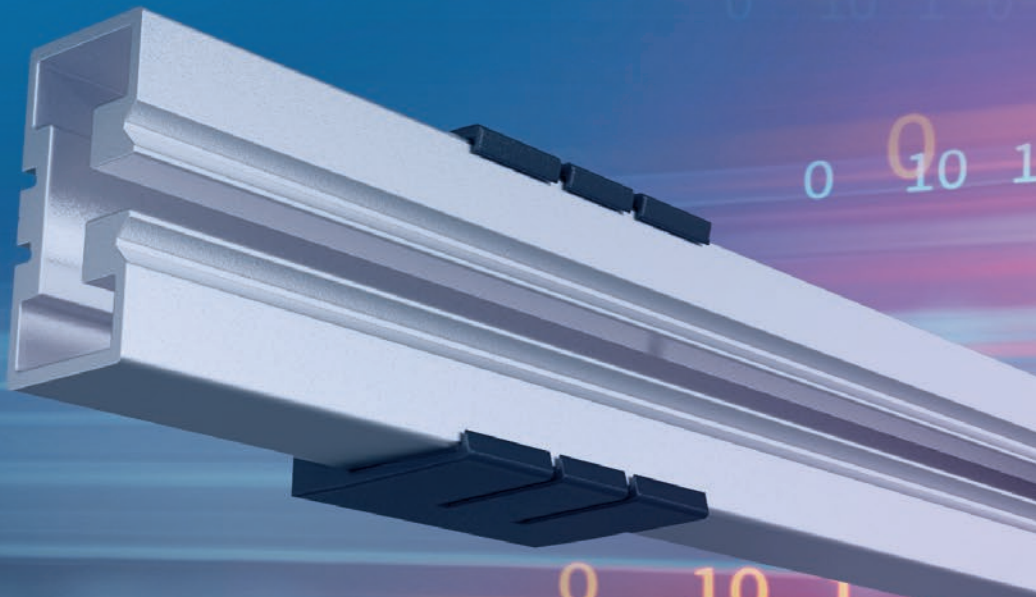
Standard cranes, Process cranes, eRTG cranes, STS cranes, RMG cranes



vCOM

DATA COMMUNICATION

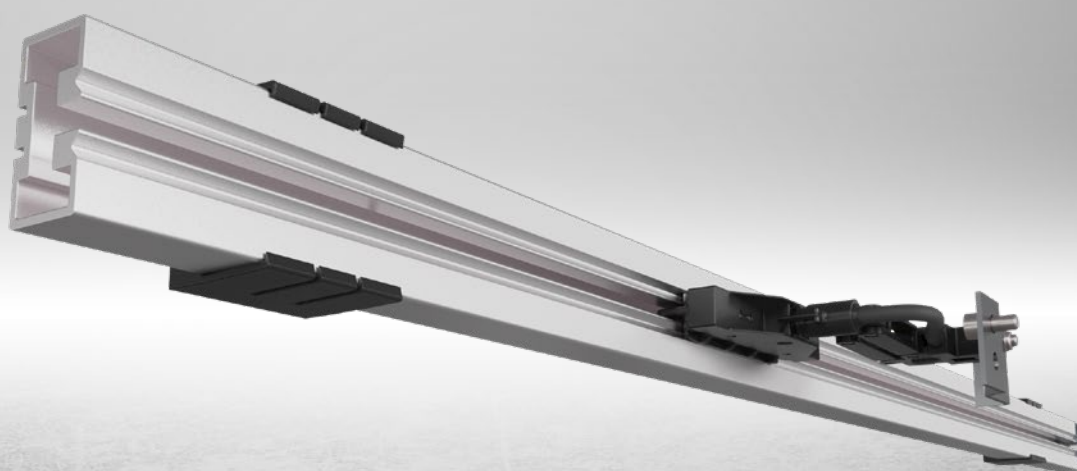
Automated processes require fast, stable and disturbance-free data transmission. vCOM technologies from VAHLE – from power-supplying conductor systems to shielded slotted microwave guide systems (SMG) – ensure that your plant data arrives reliably and precisely where it's needed.





DATA COMMUNICATION

Slotted microwave guides SMGM



Up to 100 MBit/s | Up to 180 m/min | 0 °C to +50 °C

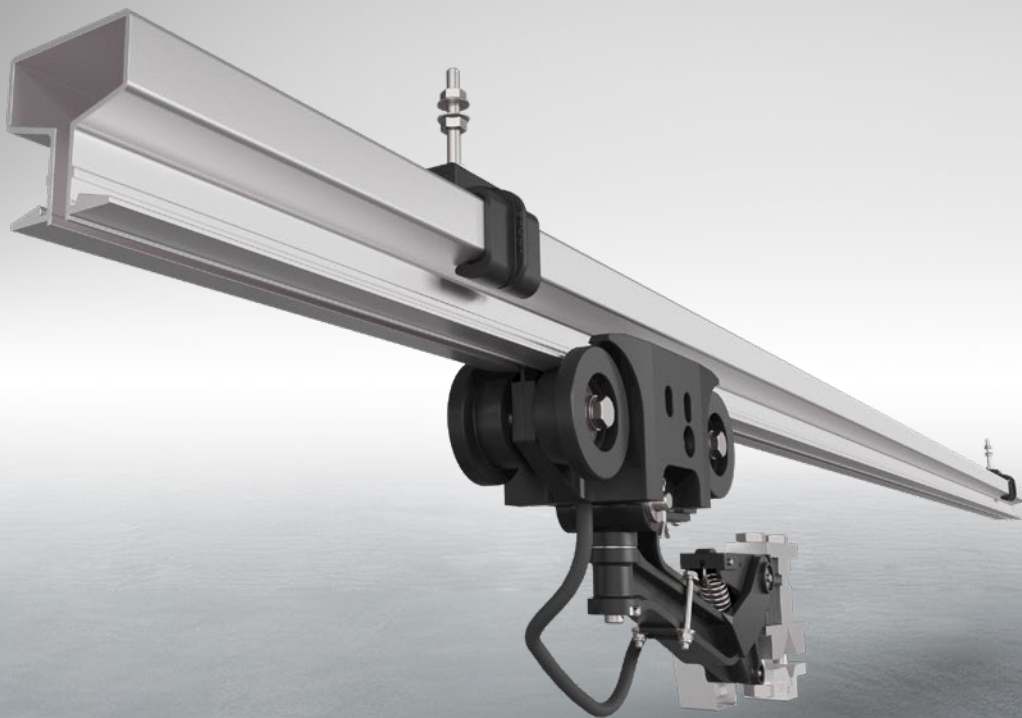
- Secure and reliable data communication
- Very compact design
- Can be integrated into all common EMS profiles
- Easy installation and commissioning (plug and play)
- Coexistence with existing free radio systems
- Compatible with PROFINET and PROFIsafe

AREAS OF APPLICATION

Standard cranes, Heavy-duty cranes, Process cranes, Sorter, Skillet lines, Electric monorail systems, Electric pallet systems, Automated storage and retrieval systems, Dark rides, Studio technology



Slotted microwave guides SMGX



Up to 100 MBit/s | Up to 300 m/min | -20 °C to +70 °C

- Secure and reliable data communication
- Simple installation and commissioning (plug and play)
- Coexistence with existing free radio systems
- Indoor and outdoor use
- Compatible with PROFINET and PROFIsafe
- Optionally expandable with heating system

AREAS OF APPLICATION

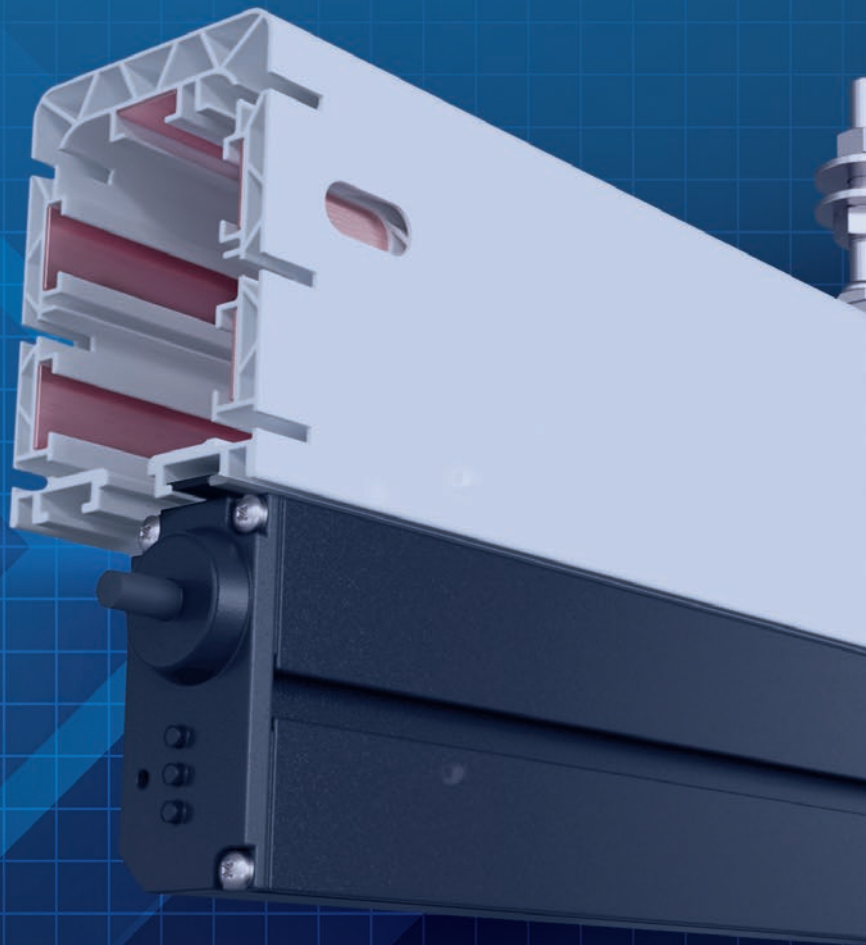
Standard, Heavy-duty, Process and Gantry cranes, Bucket conveyor systems, Automated storage and retrieval systems, eRTG, STS and RMG cranes, Rides, Freefall Tower Elevators, Stadium roofs, Facade accesses

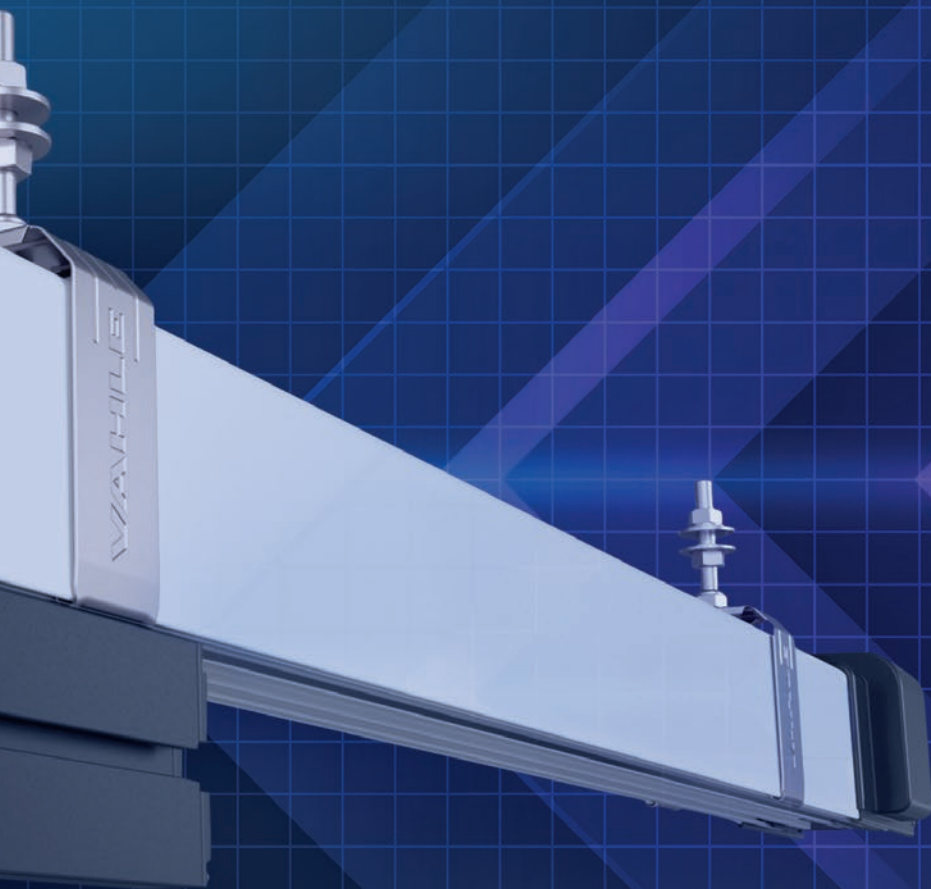


vPOS

POSITIONING

Precise processes require accurate positioning of mobile systems – even at high speeds and in demanding environments. vPOS solutions from VAHLE detect positions absolutely and reliably – optically or magnetically, depending on the application. This allows you to maintain control over your processes at all times, avoid downtime and ensure quality along your entire value chain.





POSITIONING

APOS Magnetic (Touchless)



Up to 180 m/min | Up to 262 m system length | -20 °C to +60 °C

- Absolute position value
- Resolution accuracy of 1 mm
- Robust magnetic method
- Non-contact scanning of the code tape
- Easy integration due to universal interface

AREAS OF APPLICATION

Standard cranes, Heavy-duty cranes, Process cranes, Gantry cranes, Bucket conveyor systems, Transfer trolleys, Transfer platforms



APOS Magnetic (Gliding)



Up to 360m/min | -20 °C to +60 °C | Up to 524m system length

- Absolute position value
- Resolution accuracy of 1 mm
- Robust magnetic method
- High repeatability
- Can also be used in adverse environments

AREAS OF APPLICATION

Standard, Heavy-duty, Process and Gantry cranes, Skillet lines, Electric monorail and electric pallet systems, Automated storage and retrieval systems, Dark rides, Rides, Studio technology



APOS Optic



Up to 180m/min | 0 °C to +60 °C | Integrated LED code band lighting

- System lengths up to 10 km
- Easy installation of the reading head on the base plate of the current collector
- Low susceptibility to errors due to DataMatrix code
- High compatibility with various conductor and control systems

AREAS OF APPLICATION

Skillet lines, Electric monorail systems, Electric pallet systems

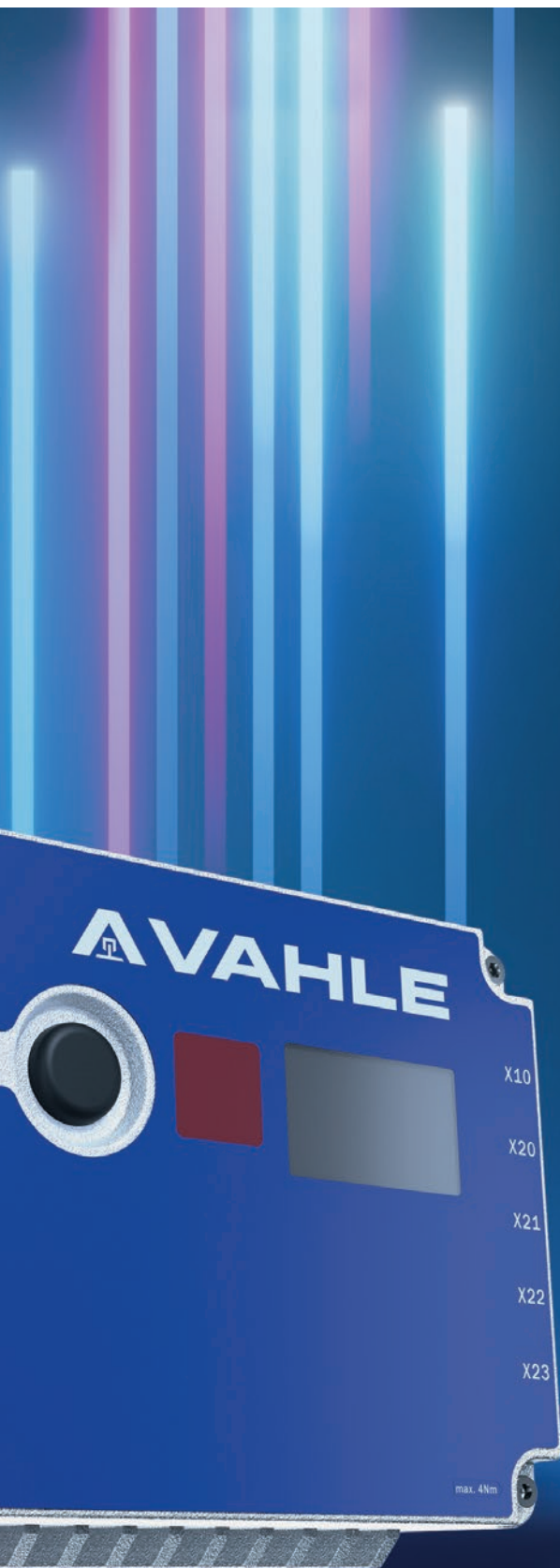


vDRIVE

CONTROL SYSTEMS

Modern production processes demand precise control of mobile conveyor systems. With VAHLE's scalable vDRIVE solutions, you can operate your equipment flexibly, reliably and with pinpoint accuracy. This allows you to maintain full control over your material flows and ensure smooth operations across your entire value chain. vDRIVE integrates seamlessly into existing systems, enabling performance-optimized control, even in complex applications.





CONTROL SYSTEMS

Control systems VCS1



Up to 1,5 kW | 0 °C to +50 °C | Data communication via Half-wave (HW), Pulse code modulation (PCM) or Rail bus (PCB)

- Compact design with integrated OLED display for plain text status display
- Control via Siemens PLC function block
- Data connector for fast device replacement in case of service
- Extensive configuration and diagnostic software
- Lean topology without head control

AREAS OF APPLICATION

Electric monorail systems,
Electric pallet systems



Safe application controls VCS-PCB-SAFE | VCS-SMG-SAFE



0 °C to +50 °C | Data communication via Rail bus (PCB) or Slotted Microwave Guide (SMGM) | PROFINET / PROFI-safe Communication profile

- TÜV certified
- Configuration via PLC function block
- Tailor-made to VCSX control system
- Easy device replacement due to integrated memory card
- Transparent communication based on established PCB or SMGM technology
- Supported safety functions: STO, SBC, SS1, SLS, SCA, SBT, SDI, SPOS, SD

AREAS OF APPLICATION

Skillet lines, Electric monorail
systems, Electric pallet systems



Modular controls VCSX



Up to 22 kW | 0 °C to +40 °C | Data communication via Rail bus (PCB) or Slotted Microwave Guide (SMGM)

- Modular construction system with an integrated display for status indication
- Control via Siemens PLC function block
- Standard versions for shorter delivery times
- Integrated safety functions for safe shutdown
- Provision of digital inputs and outputs and encoder interface

AREAS OF APPLICATION

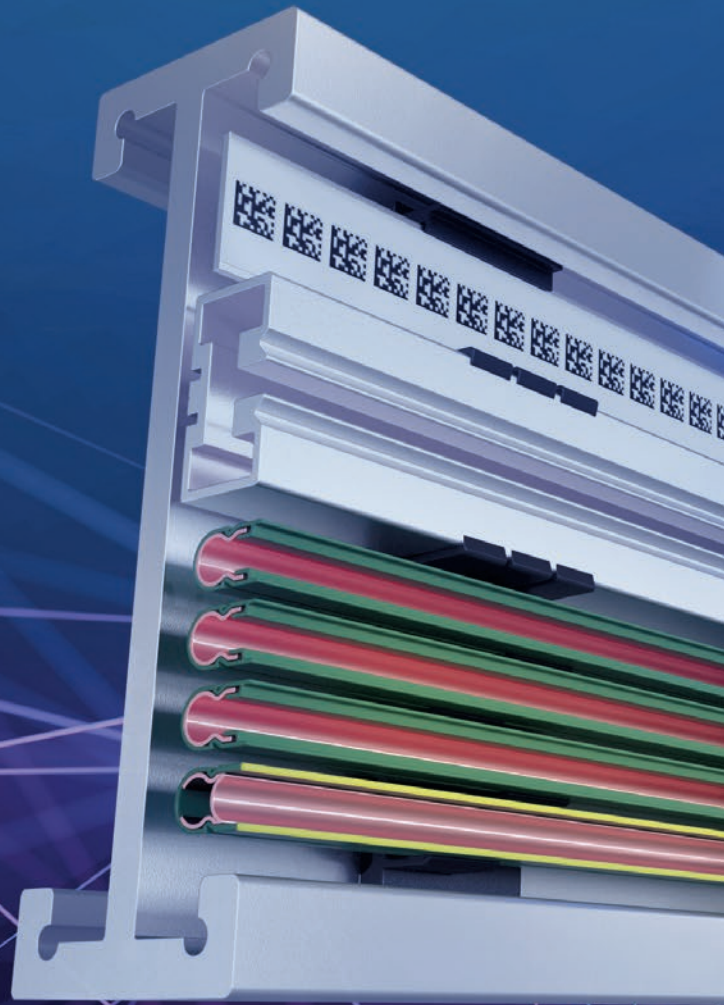
Skillet lines, Electric monorail systems, Electric pallet systems



vSYSTEM

SYSTEM SOLUTIONS

Modern industrial processes demand comprehensive solutions. With VAHLE technologies, you can integrate the disciplines of energy transmission, data communication, positioning and control into a tailored, end-to-end bundle – precisely aligned with your application and requirements. Whether it's a crane, conveyor system, or specialized application, you benefit from coordinated technologies from a single source, high process reliability and intelligent solutions that optimize your processes, monitor them continuously and make them future-proof.





SYSTEM SOLUTIONS



All-in-one solution EMS system

Up to 100 amps | Up to 180 m/min

- All components from a single source
- No additional superstructures on the EMS profile
- Simple and fast assembly
- High level of safety in accordance with required protection guidelines
- Flexible adaptation possible during installation

AREAS OF APPLICATION
Electric monorail systems





Seamless electric mobility eRTG system

Up to 1.000 amps | -15°C to $+50^{\circ}\text{C}$

- Automatic entry into and exit from the conductor system with seamless switchover to mains power
- Automatic control
- Easy installation and commissioning (plug and play)
- Can be combined with data and positioning systems
- Compatible with PROFINET and PROFIsafe
- Low wear and low maintenance
- Compact design

AREAS OF APPLICATION
eRTG cranes, RMG cranes



Early detection instead of late repair Smart Collector

Maximum travel speed identical to rail system | -30°C to $+55^{\circ}\text{C}$

- Early detection of anomalies to prevent unplanned downtime and increase plant availability
- Detects every lift and deflection movement of the current collectors during operation
- Positionally accurate determination of anomalies
- Quick and easy implementation without structural changes
- No intervention in the existing IT infrastructure

AREAS OF APPLICATION
Electric monorail systems,
Automated storage and retrieval
systems



MORE THAN JUST A PORTFOLIO

Four functions, one system

VAHLE specializes in comprehensive module, scalable and coordinated system solutions. Our systems combine four key functions – energy transmission, data communication, positioning and control – and our technologies work together seamlessly for maximum process reliability, efficiency and sustainability.



Systems in motion, worldwide

VAHLE systems are used worldwide in numerous industries. Wherever technology is in constant motion, VAHLE offers a safe, reliable solution. From the initial idea to implementation, we support you with integrated solutions featuring both our standard product portfolio and custom-designed solutions.



WE SPEAK ENERGY AND DATA FLUENTLY

Tested quality at all levels

Quality you can count on – guaranteed by recognized standards: ISO 9001, ISO 14001, ISO 45001, TÜV, UL, SEMI and more. We live by these standards – from engineering to after-sales service.



More than products – partnership

Our customers rely not only on high-performance technology, but also on a partner who listens, thinks ahead and grows with them. VAHLE stands for reliability, transparency and service – for over 100 years. With technology from a single source. Expertise that inspires. Service that moves you.



FROM THE INITIAL IDEA



TO CONTINUOUS SUPPORT

High-quality systems designed to last

Technologically advanced solutions only reach their full potential when they are backed up by excellent service. That is why our commitment at VAHLE does not end with the delivery of a system – quite the contrary. That's when our partnership really begins.

You benefit from a comprehensive service portfolio that is consistently tailored to your applications, processes and challenges. Our claim is clear: Maximum availability, predictable maintenance and sustainable investment security for your systems.

Retrofit & Modernizations

Increase efficiency, adapt systems and leverage future potential.

Project Management & Consulting

From idea to implementation – structured and in partnership.

After-Sales & Spare Parts

Fast replacement and reliable support.

Installation & Commissioning

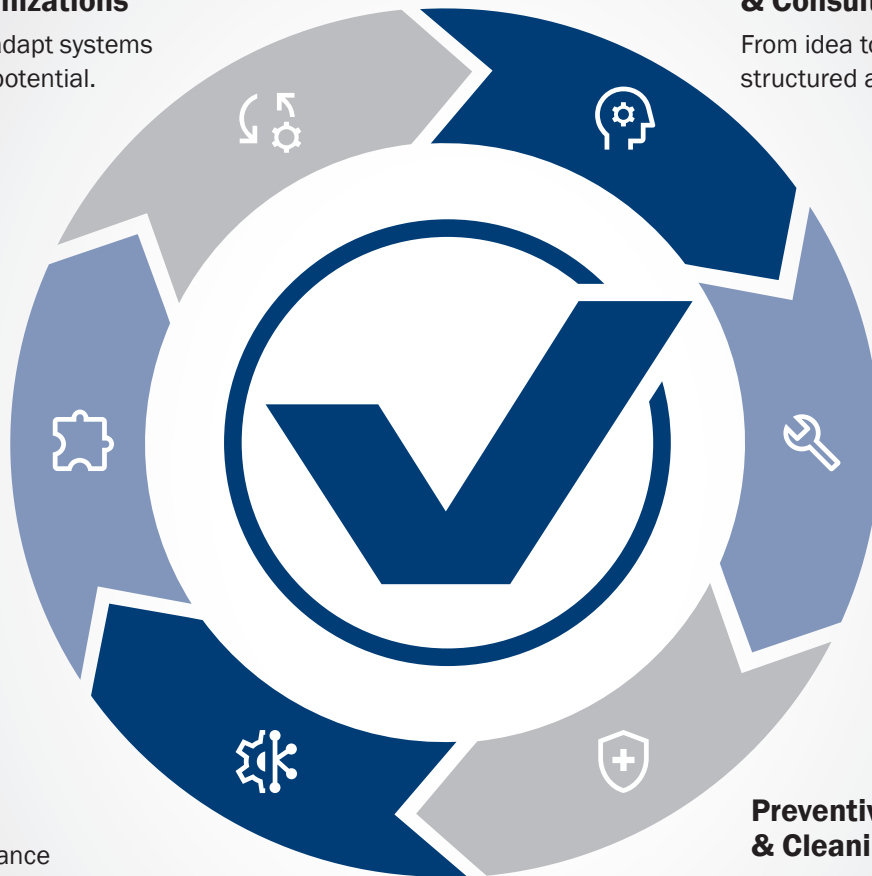
Smooth implementation right from the start.

Smart Services

Data-based maintenance instead of unexpected repairs – for maximum availability.

Preventive Maintenance & Cleaning

Safely into the future with services that prevent downtime.



**You take care of day-to-day business.
We'll take care of the rest.**

Your service solution is waiting – scan the QR code and inquire directly!

FROM CONCEPT TO REALITY – WE SUPPORT YOU EVERY STEP OF THE WAY

YOU HAVE A PROJECT OR A VISION?

Whether you need a comprehensive system solution or just one specific component, what counts in the end is what your application really needs. This is because every sector and industry has its own specific requirements for energy and data communication, positioning and control. What connects them is the demand for maximum availability, safety and efficiency.

It's good to have a partner at your side who understands your processes – technically, economically and in detail. VAHLE does not think in terms of products, but rather in terms of solutions that are precisely tailored to your challenges. Your Vision. Our Solution.



Get in touch with VAHLE now!

Simply scan the QR code or visit our website at **vahle.com**



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Only the technical data in the operating instructions and design drawings is binding.

Errors and technical changes excepted.