



VISIONS

INTRALOGISTICS | NO. 1

HIGHLIGHTS

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WHERE INNOVATION BECOMES REALITY!

Dear readers,

Since 1912, VAHLE stands for pioneering spirit, industry knowledge and technological competence, driven by a deep fascination for innovation and groundbreaking solutions. Wherever energy and data flow, our name guarantees safety.

Welcome to VAHLE Visions – your exclusive insight into the world of our latest products and application solutions. In this issue we bundle current application trends and product developments that reflect the pulse of the VAHLE world.

This time, the focus is on innovative product solutions for intralogistics systems, especially in the area of predictive maintenance for conductor system applications. Our unique tool ensures smooth processes in modern logistics centers, without any unplanned surprises. The Smart Collector turns

your system operation into a trouble-free operation: It detects anomalies and informs you of potential problems before they can even occur. Let us show you how VAHLE sets standards in this segment.

In addition to the focus topic, we will present many other exclusive new products and applications: The latest generation of the CPS®140 inductive technology and related upgrades, a product extension in the conductor system area that opens up a completely new application segment, a new option for testing conductor rail wear and the latest cleaning system for conductor systems, as well as many other exciting innovations.

Enjoy the electrifying reading time!

PREDICTIVE MAINTENANCE TOOL FOR CONDUCTOR SYSTEMS

State-of-the-art sensors, multiple testing techniques and a learning analysis process, combined with intuitive user software, leave nothing to chance.

With the Smart Collector, we are setting a unique milestone in the efficient and predictable maintenance of conductor systems. Our predictive maintenance tool makes unplanned downtime in conveyor systems and intralogistics applications a thing of the past. Using our intelligent current collector, various sensor modules can be integrated to precisely monitor the movement and temperature parameters of your systems.

Our innovative solution consists of a smart current collector and a learning and intelligent main unit that detects anomalies and potential faults in real time and reports their exact location. The system can be monitored using intuitive software. This means your system

is always 100% transparent to you, allowing you to easily schedule maintenance and optimize resource management.

The Smart Collector is under constant development. This is driven by close collaboration with various universities, but more importantly by a partnership with our customers. The new sensors and analysis methods are continuously integrated into the predictive maintenance tool to make each of your applications more efficient.

Features

- State-of-the-art sensors and testing technologies
- Learning analysis methods
- User-friendly dashboard
- Continuous improvement and innovation

Application areas



SORTER



ELECTRIC PALLET SYSTEMS



SKIDDER LINES



INNOVATIVE SENSOR TECHNOLOGY FOR HIGH PERFORMANCE

THE SMART COLLECTOR IN DETAIL

Not only does the Smart Collector revolutionize the maintenance of conductor systems, it also relies on state-of-the-art sensor technology that takes your systems to a new level of operation. The Smart Collector gives your systems the security they need - no more incidents, just knowing what will happen tomorrow. With the focus on reliability and safety of every system, the VAHLE Group sets new standards for quality and system safety with the predictive maintenance tool for conductor systems.

These system integrators and plant manufacturers are already taking advantage of the Smart Collector and are integrating our unique predictive maintenance tool into their conveyor systems:

UNIVERSELLE
FÖRDERTECHNIK


Current collector with sensors

- Collection of stroke and deflection data of the current collector during operation using 3D motion sensors and temperature parameters using thermal sensors
- Does not affect the function of the current collector
- Transfer data to main unit for analysis



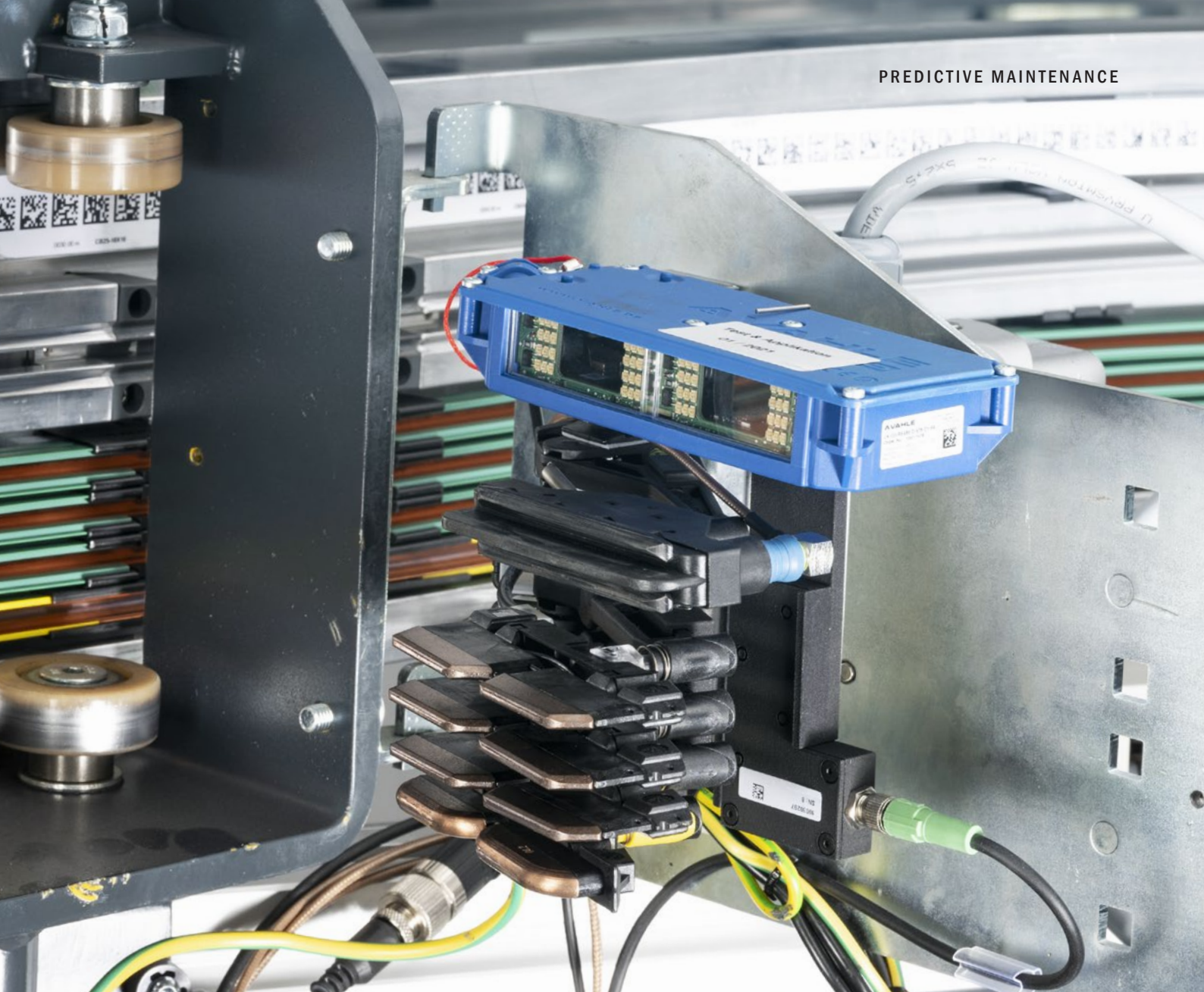
Data transmission

- Data transmission for reproducible anomalies, e.g. via WI-FI, LTE or SMGM
- Reporting to our certified data center
- No permanent data transmission or storage



Main Unit

- Processing and evaluation of data in real time on the main unit
- Detection of anomalies at absolute and relative limits
- Compatible with various positioning and data transmission systems through variable interfaces



Evaluation by software

- Precise specification of deviations
- Visualization of the analyzed measurement data with the VAHLE software solution
- Notification of anomalies in the traffic light system
- Continuous condition monitoring

INNOVATIONS

Thermal sensor improves process reliability

The Smart Collector can also be equipped with a thermal sensor that significantly improves process reliability. This analysis option is a useful complement to the existing motion data sensors.

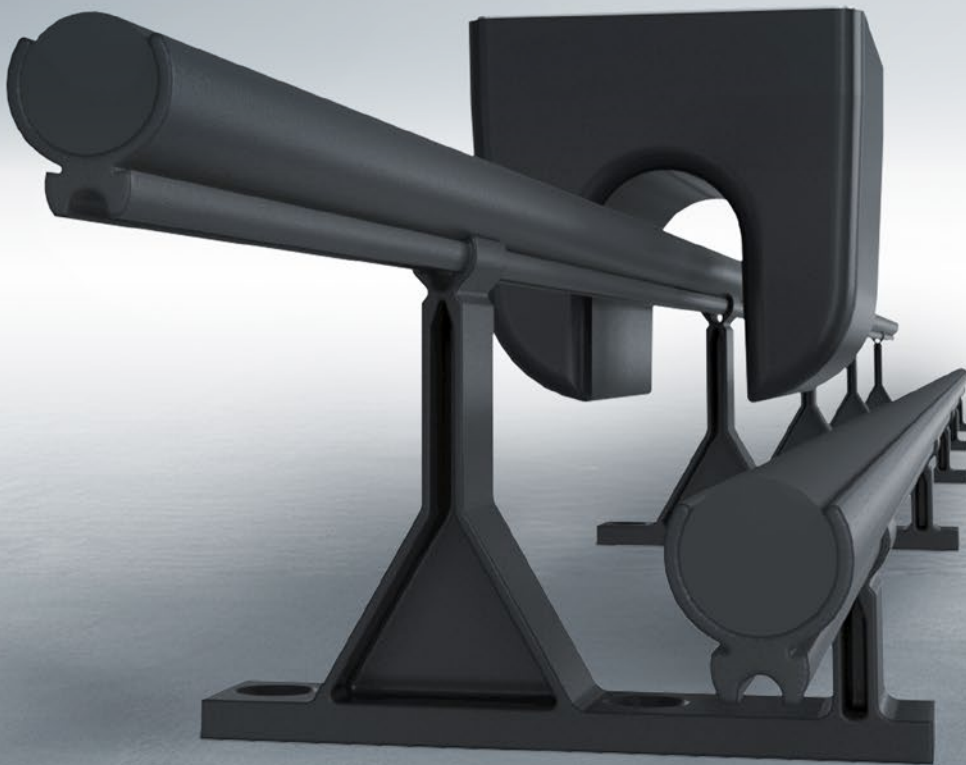
The thermal sensor has already proven itself in several systems by detecting temperature peaks early and, in the worst case, preventing fires.

Additional application areas

With the extension of the phase spacing, it is now possible not only to equip logistics applications with 14 and 18 mm phase spacing, but also to use it in systems with 26 mm phase spacing. This upgrade opens up a wide range of possible applications in various areas of intralogistics, including automatic storage systems, skilled systems, electric pallet systems, conveyor systems, in particular electric monorail systems and sorting applications.

THE WEAR-FREE FUTURE OF ENERGY TRANSMISSION

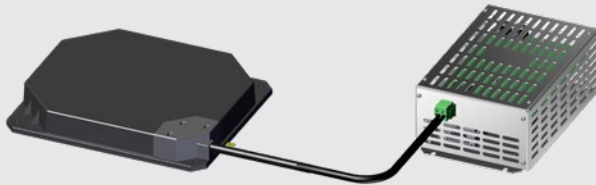
At VAHLE, CPS® stands for Contactless Power Supply. From the super-compact U007 pickup to the high-performance E400 pickup, VAHLE sets standards for safe and efficient solutions with its 140 kHz inductive technology. Our contactless energy transmission technology stands for outstanding safety and quality, especially in sensitive applications. Guaranteed wear-free and 100% abrasion-free, it offers a safe solution for industries that demand the highest standards.



Contactless means wear-free, which is synonymous with a unique promise of safety and quality. Our CPS® solutions are used in a wide range of industries. Whether in the food industry, medical technology or the semiconductor industry, our inductive technology ensures safe, abrasion-free and efficient processes that do not require maintenance slots - regardless of speed or location.

Charging AGVs with maximum efficiency

The latest software update for the contactless energy supply in the F150 product segment and the control electronics (RE150) enables maximum energy efficiency in the inductive charging of driverless transport systems.



- **Flexible charge parameters** for optimal performance
- **Maximum energy** with the full performance of contactless energy transmission
- **Smooth charging** during operation possible, e.g. for hybrid AGVs

Technical data

Power	1,5 kW (up to 100% DC)
Voltage	10-80 VDC
Amperage	0-31,25 A
Control	CAN, Parameter, DIO
Parallelization of multiple units	

Facelift for the U150 pickup

The U150 pickup, with a peak power of up to 1.5 kW, has been redesigned. In particular, the revised cable routing and additional connection options ensure compatibility with future controller generations. Compatibility with previous versions is a matter of course.



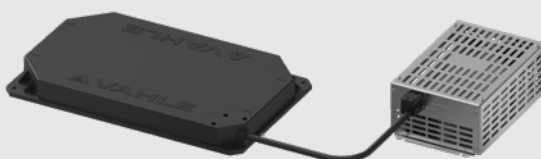
- **Improved product quality** for greater reliability and durability
- **Easier installation** with revised cable routing and additional connecting elements

Technical data

Power	1,5 kW (40% DC)
Voltage	10-80 VDC
Amperage	0-31,25 A
Control	CAN, Parameter, DIO
Parallelization of multiple units	

New level of performance for flat pickups

With up to 4 kW, the F400 pickup meets the specific requirements of production lines and conveyor systems. Together with the associated RE400 control electronics, it provides a safe and efficient energy supply for production units and conveyor systems.



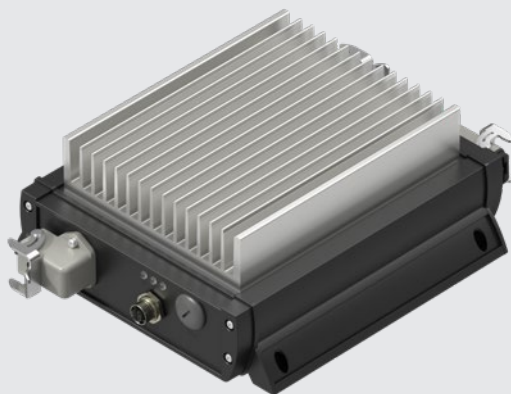
- **Direct DC feed** into frequency inverters for maximum efficiency
- **Maximum safety and process reliability** thanks to safety functions
- **Maximum positioning tolerances** and flexibility

Technical data

Power	4kW (30% DC)
Voltage	560VDC
Amperage	8 A
Control	Parameter, DIO
Parallelization of multiple units	

More intelligence in sorter applications

The RE080 regulator has been upgraded in the CPS®20 inductive product segment. CAN communication is now available. This product upgrade is already delivering tangible benefits to many sorter systems. Our CPS®140 solution is already equipped with this feature.



- **Optimized for use in sorter applications**, significantly increasing performance and efficiency
- **Intelligent control of the regulator** that can increase the output voltage or limit the current

Technical data

Power	800 W (30 % ED)
Voltage	10-60 VDC (adjustable)
Amperage	0-16 A (adjustable)
Control	CAN, Parameter, DIO
Parallelization of multiple units	

- **Space-saving compactness** enables more efficient use of space than conventional cabinet solutions
- **Fast and easy commissioning** with our software support
- **Smooth integration** with the components of the CPS®140 product family and control cabinets for maximum flexibility and interoperability

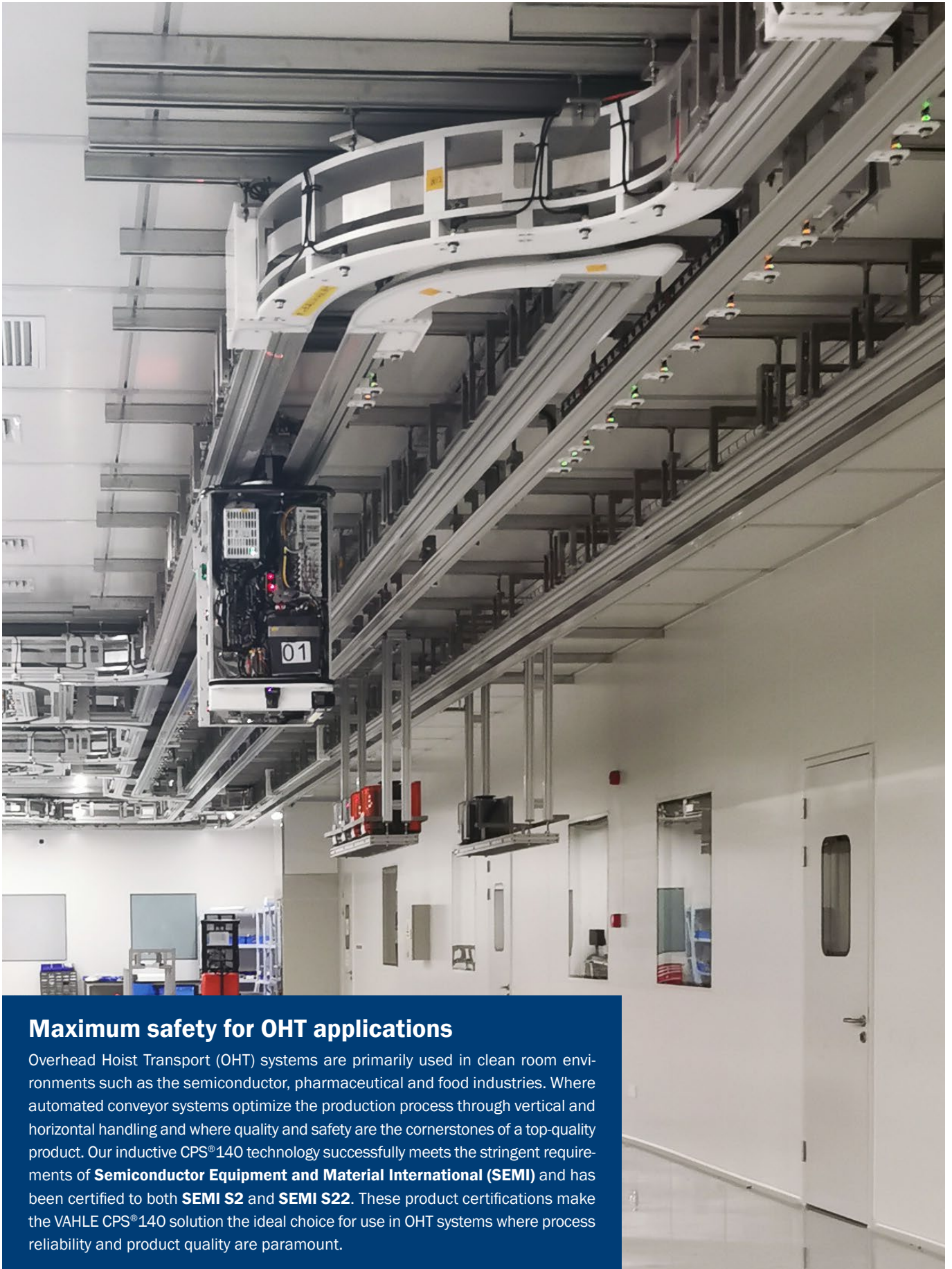
Technical data

Mains voltage	380-500 VAC @ 50-60 Hz
Amperage	45 A @ 140 kHz
Cont. power	10 kW
Communication	DIO, CAN, E/IP, PN IO
Protection class	IP54

New feed-in for the CPS®140 system

Discover our latest innovation for contactless energy transfer systems: a decentralized energy supply with IP54 protection class. This not only means size advantages due to the elimination of control cabinet installations, but also a significant increase in flexibility and efficiency of the entire system.



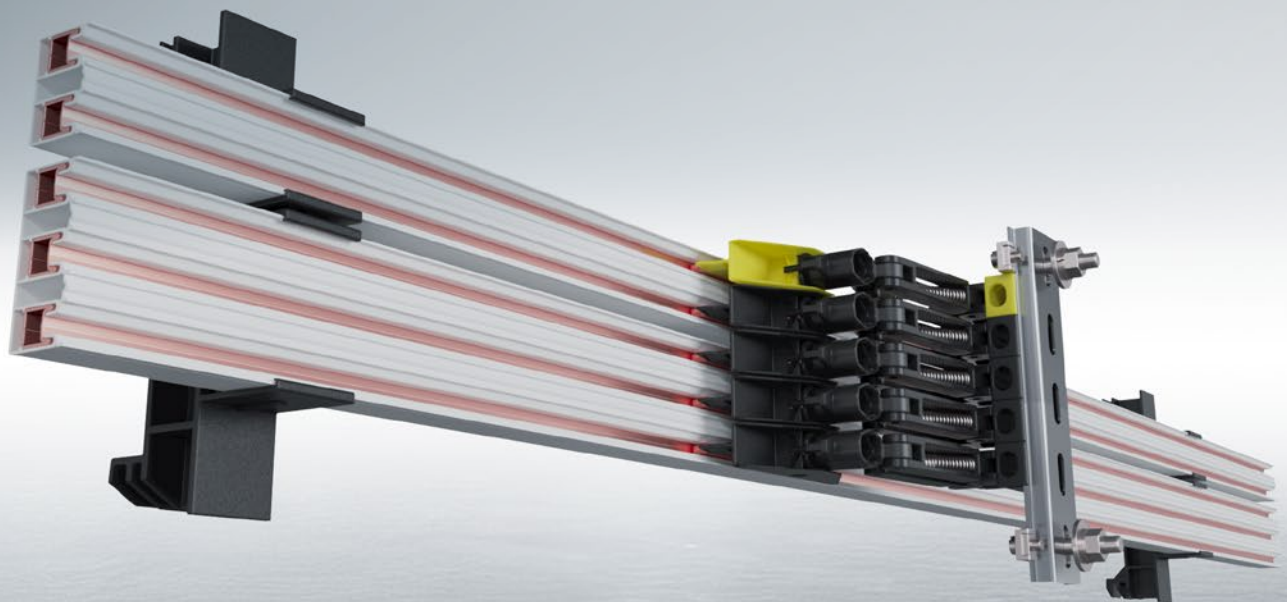


Maximum safety for OHT applications

Overhead Hoist Transport (OHT) systems are primarily used in clean room environments such as the semiconductor, pharmaceutical and food industries. Where automated conveyor systems optimize the production process through vertical and horizontal handling and where quality and safety are the cornerstones of a top-quality product. Our inductive CPS®140 technology successfully meets the stringent requirements of **Semiconductor Equipment and Material International (SEMI)** and has been certified to both **SEMI S2** and **SEMI S22**. These product certifications make the VAHLE CPS®140 solution the ideal choice for use in OHT systems where process reliability and product quality are paramount.

FOR SAFETY IN THE FLOW OF GOODS

Conductor systems are a key factor for reliable power supply in intralogistics applications. The VAHLE vPOWER portfolio offers a variety of conductor system solutions for a wide range of applications, whether application-specific or project-oriented – a VAHLE solution is available.

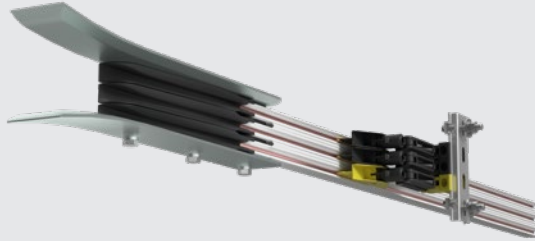


Our all-rounder, the compact conductor system VCL, is being further improved by technical upgrades:

The latest system modification of the VCL opens up completely new application possibilities. We will also be presenting new maintenance and service tools that not only ensure clean processes, but also guarantee smooth workflows.

No speed limits

The VCL all-round conductor system has received an innovative upgrade: a modular funnel extends the use of the VCL to aisle and level change applications.



- **High speed** up to 4 m/s
- **Compact design** for mounting directly to the runner profile
- **Specialized for** multi-shuttle, high-speed vertical sorters, contact and charging lines, and vertical farming logistics

Technical data

Version	Funnel module with 1 m section
Tolerances	± 5 mm
Funnel length	300 mm

Efficient cleaning for maximum performance

The VCL custom cleaning system keeps high-traffic applications clean. The compact tool, which can be universally attached to any storage shuttle, keeps you prepared for any contamination problem.



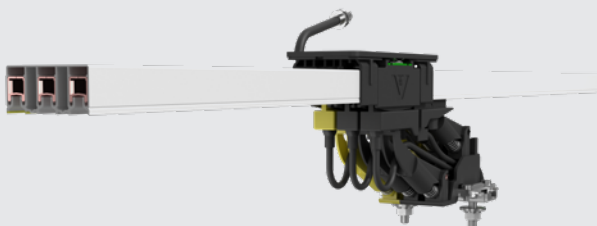
- **Effective cleaning** of carbon dust and environmental particles
- **Innovative design** ensures consistently good cleaning results
- **Flexible system integration** with 360° rotatable suction connections

Technical data

Versions	2- to 6-poles
Installation dim.	50 mm 80 mm
Lifting tolerances	± 15 mm
Lateral deflection	± 20 mm
Connection piece	DN 40 for vacuum cleaner

More security with condition monitoring

The new add-on keeps your system availability at virtually 100 %. Now you can detect carbon wear during operation and benefit from the ability to plan your maintenance and service work.



- **Maximize system uptime** and predictable maintenance
- **Easy integration** and implementation
- **Versatile installation options** due to compact design
- **Can be retrofitted** to existing systems

Technical data

Version	Sensor module with 1 m section
Input voltage	+ 24 VDC / 0VDC
Output signal	0/24 VDC for SPS Digital I/O

CUSTOMIZED SOLUTIONS FOR YOU

Our partners and customers trust us completely. With our customized solutions for intralogistics, we create joint success stories. These include proven VAHLE highlights as well as the latest product innovations. Our conductor systems – whether the U25, VKS10 or VKS – ensure the energy supply of entire systems and guarantee a smooth flow of goods. As a pioneer in the field of charging contacts, VAHLE offers the world's largest standard range.

And, of course, fully adapted to your needs and application requirements. Our system portfolio, consisting of energy transmission, positioning, secure data communication, control technology and predictive maintenance, is now being supplemented by the latest control series. This has been specially designed for intralogistics and is supported by innovative conductor system communication for crane technology.

New control system for intralogistics

The new function and performance-optimized VCSX rail bus communication solution completes the VAHLE vDRIVE control portfolio, especially in the field of logistics applications. The scalability of drive axes, sensors and safety functions can be implemented individually for each application.



- **Easy operation** with PLC function block and integrated rail bus module
- **Efficient functional transparency and topology** for optimal performance without intermediate head control
- **Flexibility** due to numerous digital inputs and outputs
- **Individual and customized enclosure sizes**
- **Standardized components** for efficient service

Technical data

Supply voltage	360...528 VAC @50/60 Hz
Auxiliary power supply	24 VDC, 5 A internally generated
Axis power	0,75-7,50 kW (expandable)
Protection class	IP54
Security technology	STO, SLS, SPOS, SBrake



VAHLE SERVICE – FOR A TROUBLE-FREE FUTURE

MAXIMUM AVAILABILITY, MINIMAL DOWNTIME

Whether sorter, shuttle, electric monorail systems, OHT, or narrow-aisle forklift – regular maintenance, professional cleaning, and precise inspection ensure reliable and future-proof intralogistics.

With preventative and predictive service, seamless spare parts supply, and our protect programs, we keep your systems efficient, safe, and consistently powerful.



Schedule a System Check Now!

Simply scan the QR code or visit vahle.com/globalservice



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