

 All lined up

Modular ,top hat' rail-mounting system for use in process control applications

*rail line*



# Save time and costs with distributed automation

Decentralized installations with field bus systems are finding increasing use in process and machine automation. In order to ensure reliable control in these allocations – also involving complex processes – modular components with additional functionality are required. With the flexible rail line system, WEST Control Solutions offers a comprehensive product portfolio for decentralized automation.

The combination of RL field bus couplers (for Profibus, CAN, Modbus TCP, and Modbus RTU) with radio module, I/O module RL 400, KS 45 universal controller, Uniflex CI 45 and SG 45 transmitters, and the TB 45 temperature limiter, permits modular systems with distributed intelligence to be created.

Thanks to the space-saving modules for ,top hat' rail mounting, and other universally applicable system components, rail line helps to save time and costs during system configuration, engineering, and commissioning.

### The features

- Range of intelligent devices for decentralized automation
- Cost-saving ,top hat' rail mounting technology
- Compact design
- Comprehensive stand-alone functionality
- Field bus coupler for Profibus, CAN, Modbus TCP, Modbus RTU, and Ethernet IP

# Controlling, measuring, converting, and monitoring: the rail line product family



## COMMUNICATION

### Field bus couplers RL DP / RL ETH-IP / RLCAN, and RTU radio module

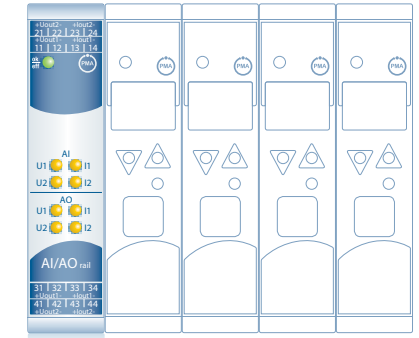
- RL DP for Profibus DP
- RL Ethernet IP
- Modbus/TCP protocol
- RL CAN for CANopen
- Modbus RTU
- Central power supply



## I/O MODULE

### RL 400 I/O system

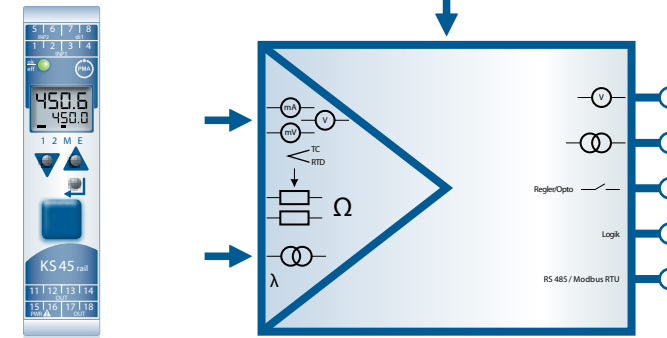
- Signal processing in the modules
- Online correction of measurement value
- Analog plus 16-bit technology
- Up to 32 function modules can be connected
- Digital and analog input & output modules
  - Pt 100 in 2 or 4-wire connection
  - Thermocouples
  - mA/V
  - Relays
  - potential-free digital inputs)
  - NPN/PNP inputs
- Galvanic isolation up to 300 V



## CONTROLLER

### KS 45

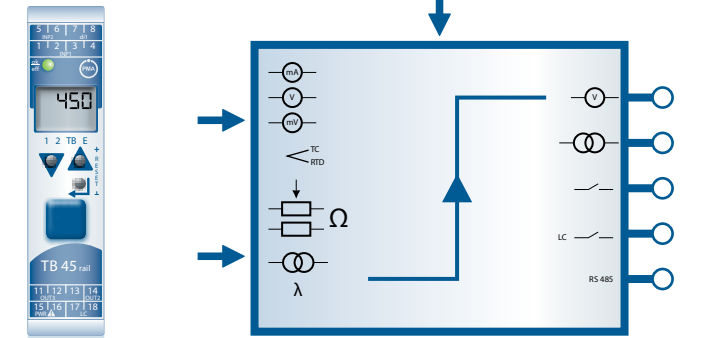
- Display- and operating functions
- 2-point, 3-point, motor valve, and continuous control
- Fast sampling rate
- Two universal inputs possible
- Universal output
- Timer and programmer
- Customized linearization profile
- Auto/manual switchover
- Direct connection of RS 485 Modbus RTU without bus coupler. Inter-module connections permit additional controllers, transmitters, and limiters to be fitted without wiring.



## TEMPERATURE LIMITER

### TB 45

- For all thermocouple types and resistive sensors
- Display and operating functions
- Two relay outputs
- Analog output
- Two universal inputs possible
- Reset via key combination or external contact
- Direct connection of RS 485 Modbus RTU without bus coupler. Inter-module connections permit additional controllers, transmitters, and limiters to be fitted without wiring.
- Type-tested to EN 14597 (replaces DIN 3440)



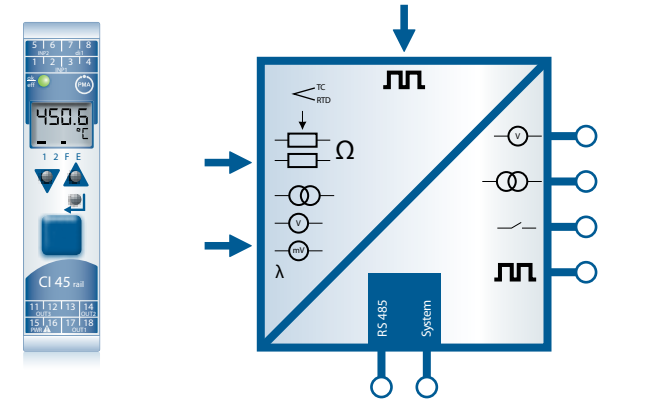
# rail line: The system at a glance

<p><b>COMMUNICATION</b></p> <p><b>Field bus coupler</b> Simple field bus integration of universal transmitters, universal controllers, and temperature limiters as well as I/O modules in superordinate systems (PLC/SCADA)</p> <p><b>Radio module</b> Central coupling module for wireless data transmission (HART protocol)</p>	<p><b>I/O MODULE</b></p> <p><b>RL 400 I/O system</b> Digital and analog inputs and outputs</p> <ul style="list-style-type: none"> <li>• Pt 100 in 2 or 4-wire connection</li> <li>• Thermocouples</li> <li>• mA/V</li> <li>• Relays</li> <li>• potential-free digital inputs</li> <li>• NPN/PNP inputs</li> </ul>	<p><b>CONTROLLER</b></p> <p><b>KS 45</b> Flexible universal controller with integral self-tuning</p>	<p><b>TRANSMITTERS</b></p> <p><b>UNIFLEX CI 45</b> Programmable universal transmitter with display</p> <p><b>UNIFLEX SG 45</b> Special-purpose transmitter for strain gauge input (e.g. load cells and melt pressure sensors)</p>
		<p><b>TEMPERATURE LIMITER</b></p> <p><b>TB 45</b> Reliable temperature limiter, monitor, and limit signaller</p>	

## TRANSMITTER

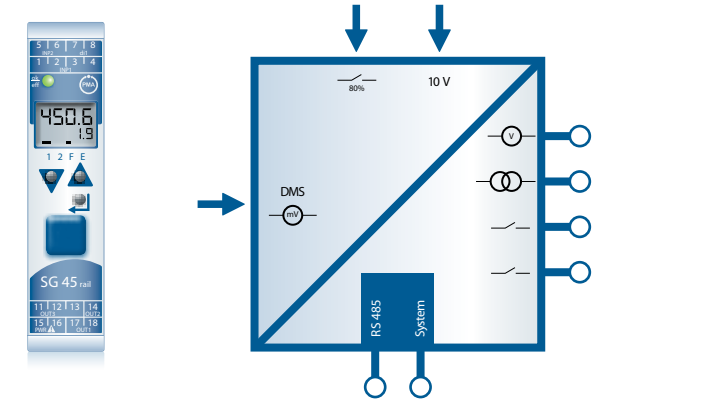
### CI 45

- High resolution
- Fast sampling rate
- Two universal inputs possible
- Universal output
- Two relay outputs
- Counter/frequency input, frequency output
- Customized linearization profile
- Correction of measurement value
- Slave pointer (min/max indicator)
- Direct connection of RS 485 Modbus RTU without bus coupler. Inter-module connections permit additional controllers, transmitters, and limiters to be fitted without wiring.



### SG 45

- Special-purpose transmitter for strain gauge input
- 24-bit universal input
- Voltage supply for the strain gauge bridge
- Simple scaling during commissioning
- 4 or 6-wire connection for force measurement
- 2 relay outputs
- Direct connection of RS 485 Modbus RTU without bus coupler. Inter-module connections permit additional controllers, transmitters, and limiters to be fitted without wiring.





# Compact, multi-functional and flexible

## System features

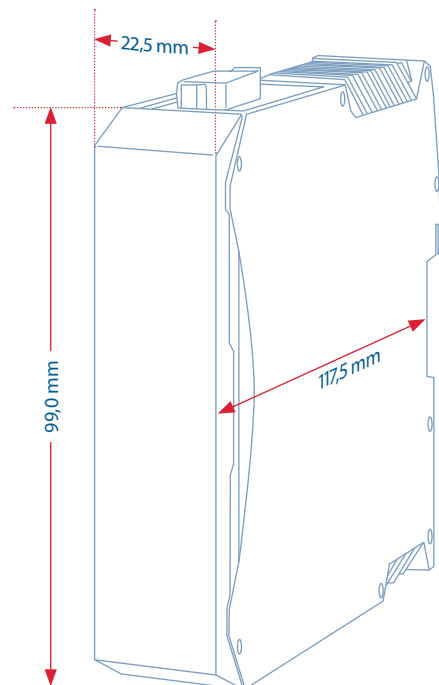


- Inter-module connections without wiring
- Space-saving rail mounting
- Communication via field bus coupler
- Hot swap facility



- Plug-in screw terminals or spring-clamp connectors

### MODULE FEATURES



### Technical details

- Field bus coupler for Profibus, CAN, Modbus TCP, Modbus RTU, and Ethernet IP – ensures cost-effective and convenient connections to PLC, IPC, and operating terminals
- Bus monitoring
- Pre-defined output states in case of communication failure
- Compact design – modules only 22,5 mm wide
- 3-key operation, and multi-line LC display
- Plug-in terminals – no wiring to disconnect in case of module replacement
- Module replacement during operation (hot swap)
- BluePort® front port
- PC configuration tool BlueControl®
- Cost advantages during projecting, implementation, and maintenance
- Local operation
- Freely configurable menu structure
- Freely selectable monitoring functions

# BlueControl®: The Engineering Tool

## On-site commissioning, and remote configuration



- Powerful tool for setting parameters, simulation, commissioning, and diagnosing
- Fast configuration and commissioning of the system via the BluePort® front interface on the field bus coupler
- Reliable copying of device parameters
- Settings are tested with the built-in device and process simulation
- Archiving and documentation

### Configuration



### Device simulation



### Trend recording



WEST Control Solutions your global partner for temperature and process control

**WEST**  
Control Solutions

**Austria**  
PMA Prozeß- und Maschinen-Automation GmbH  
Liebermannstraße F01 · A-2345 Brunn am Gebirge  
Tel: +43 (0)2236 691-121 · Fax: +43 (0)2236 691-102  
info@pma-online.at

**Germany**  
PMA Prozeß- und Maschinen-Automation GmbH  
Miramstraße 87 · D-34123 Kassel  
Tel: +49 (0)561 505-1307 · Fax: +49 (0)561 505-1710  
mailbox@pma-online.de

Brochures and datasheets are available for the complete range of West Control Solutions products, contact your local sales office for more information or visit our website at: [www.west-cs.com](http://www.west-cs.com)

**China**  
Setra-ICG  
Tianjin Co. · Ltd. No.28 Wei 5 Road  
The Micro-Electronic Industry Park TEDA  
Xiqing District · Tianjin 300385  
Tel: +86 22 8398 8098 · Fax: +86 22 8398 8099  
Sales Hotline: 400 666 1802  
china@West-CS.cn

**United Kingdom**  
West Control Solutions  
The Hyde Business Park  
Brighton · East Sussex · BN2 4JU  
Tel: +44 (0)1273 606271 · Fax: +44 (0)1273 609990  
info@westinstruments.com

**France**  
Hengstler Controle Numerique · 383 Rue de la Belle Etoile  
Bat T3 · Allée du Ponant · 95940 Roissy en France  
Tel: +33 (1) 77 80 90 40 · Fax: +33 (1) 77 80 90 50  
info@westinstruments.com

**USA**  
West Control Solutions  
1675 Delany Road · Gurnee · IL 60031-1282  
Tel: 800 866 6659 · Fax: 847 782 5223  
custserv.west@dancon.com

