▶ Safety in the railway sector

Railway industry

Safety is the top priority in the railway industry. If this is to be guaranteed, it is essential to have precise and rapid processes that are monitored and observed closely. We offer the benefit of our experience and the use of proven automation technology of the very highest standards. Pilz is the partner you need for safety in the railway station, on the platform and at the level crossing as well as in the shunting yard and in rail vehicles. You can rely on us for safely and economically designed infrastructure facilities and the expansion and optimisation of rail transport.

Our solution for you

- ▶ The automation system PSS 4000-R – enhanced and railway approved specifically for your requirements
- ▶ Decentralised, expandable I/O modules deliver the greatest possible flexibility in the automation system – to suit requirements or the project size
- ▶ SIL-4-capable control systems compliant with CENELEC standards EN 50121, EN 50126, EN 50128, EN 50129, EN 50155 and EN 45455
- ▶ Safe network connection over long distances with SafetyNET p, the real-time Ethernet-based protocol
- ▶ Realisation of a wide variety of network architectures
- ▶ Interface modules for 24 V and 60 V
- ▶ PASvisu for rapid visualisation and troubleshooting

PILZ
THE SPIRIT OF SAFETY

▶ Safety for sensitive areas in rail technology

You can rely on the proven automation system PSS 4000-R and the visualisation software PASvisu –
the perfect symbiosis of control and visualisation!

Automation system PSS 4000-R

PSS 4000-R is your solution for safe control and communication tasks and for linking up infrastructure facilities with autonomous systems. The ability to connect, combine, extend and replicate the various facilities as well as ease of configuration are all key advantages of the system. This reduces the engineering and wiring input needed for your application. Rapid commissioning and maintenance along with user-friendly remote diagnostics and remote maintenance simplify the handling of the automation system PSS 4000-R.

Visualisation software PASvisu

The web-based visualisation software PASvisu allows you to keep a close eye on your vehicles and systems.

It is optimally tailored to the automation system PSS 4000-R. Your benefit: acceleration of your projects from engineering through runtime to maintenance thanks to the ability to identify and localise faults and errors rapidly.

Keep up-to-date on rail technology with Pilz:

Webcode:
web8485

Online information at www.pilz.com

Automation system PSS 4000 – Head modules with railway approval

Technical features	Type	Order number
	PSSu H PLC1 FS SN SD-R ▸ PLC head module with 2 x SafetyNET p interface ▸ SD card for storing the device project and configuration data ▸ Application range: failsafe, standard	315 070
	PSSu H FS SN SD-R ▸ I/O head module ▸ SD card for storing the configuration data ▸ Application range: failsafe, standard	315 085

PSSu PLC

Automation system PSS 4000 – I/O modules

Technical features	Type	Order number
	PSSu E F PS-P-R ▸ Power supply, periphery 24 V DC	315 185
	PSSu E F PS2-R ▸ Power supply system and periphery, additionally buffered, 24 V DC	315 192
	PSSu E F 4DI-R ▸ 4 digital inputs, 24 V	315 200
	PSSu E F 4DO 0.5-R ▸ 4 digital semiconductor outputs, 0.5 A	315 210
	PSSu E F 2DO 2-R ▸ 2 digital semiconductor outputs, 2 A	315 215
	PSSu E F DI OZ 2-R ▸ 1 digital input ▸ 2 digital semiconductor outputs, 2-pole	315 220
	PSSu E F 2DOR 8-R ▸ 2 relay outputs, volt-free 8 A, e.g. for volt-free connection of signal box signals	315 225
	PSSu E F AI I-R ▸ Analogue input, passive 0 … 25 mA, e.g. for current monitoring, lamp current on signal lights	315 260
	PSSu E F AI U-R ▸ Analogue input, passive –10 … +10 V, e.g. for voltage monitoring, status of signal lights	315 265
	PSSu E F 2DI 60-R ▸ 2 digital inputs, 60 V [1]	315 201
	PSSu E AI SHT1-T ▸ Shunt module for expanding the measuring range of analogue values, e.g. lamp current monitoring	314 261

PSSu E F 4DI-R

PSSu E F 2DOR 8-R

[1] Like other standard market PLCs, PSSuniversal operates with the usual 24 V power supply. An input module for 60 V switching level is available for the railway industry.

As well as the failsafe I/O modules, standard modules of the -T series can also be used for standard functions.

Keep up-to-date on the controllers in the automation system PSS 4000:

Webcode: web150420

and communication modules:

Webcode: web84782

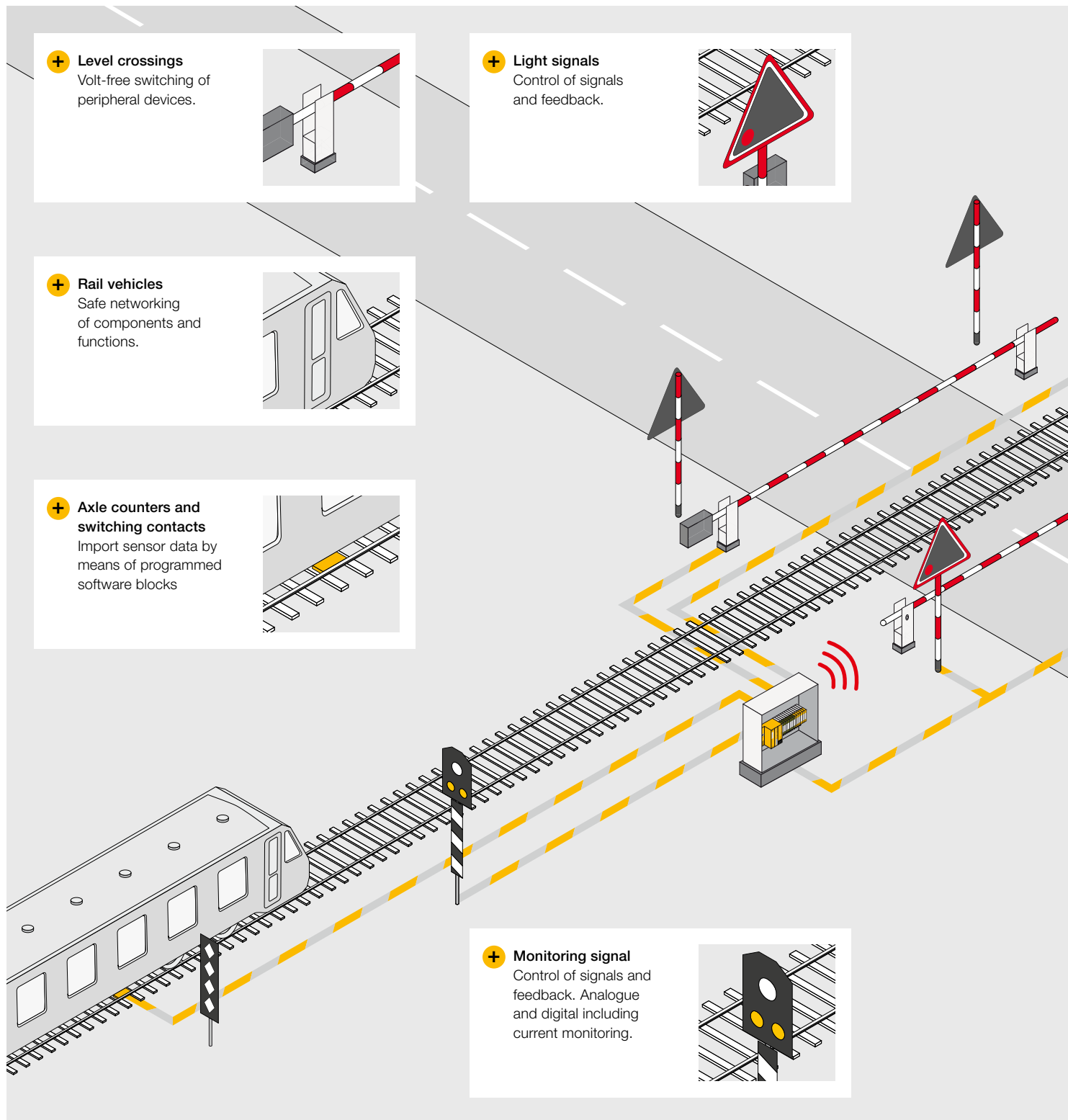Online information at www.pilz.com

▶ Safety and automation in rail vehicles and infrastructure fa

PSS 4000-R – the core component for digital networking regulates complex processes

+ Level crossings
Volt-free switching of peripheral devices.

+ Light signals
Control of signals and feedback.

+ Rail vehicles
Safe networking of components and functions.

+ Axle counters and switching contacts
Import sensor data by means of programmed software blocks

+ Monitoring signal
Control of signals and feedback. Analogue and digital including current monitoring.

cilities up to SIL 4

Axle counters and switching contacts
Recording and provision of sensor data.

Remote access
Remote access and diagnostics with the web-based visualisation software PASvisu.
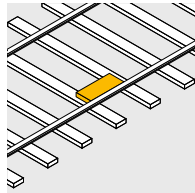
Your benefits at a glance
- Open, independent automation system instead of proprietary special solutions
- Standardised solutions for hardware and software in accordance with IEC 61131, plus communication in accordance with IEC 61784
- Standardised, individually adaptable software blocks possible
- Fast, simple programming with graphics program editor
- Reduced input in development process thanks to integrated security mechanisms in the control system
- Possibility of remote maintenance, diagnostics and visualisation with PASvisu
- Compliance with the tougher ambient conditions for railway applications such as greater operating temperature range –40 to +70 °C, electromagnetic compatibility and mechanical strength
- Reduced approval work thanks to certified base system in accordance with CENELEC/TÜV
- Investment and operating costs are reduced
- Use of standard products for solutions at the highest safety level up to SIL 4
- Forward-looking, expandable concepts
- Obsolescence management: rapid, flexible spare parts supply even for many years to come

▶ Support

Technical support is available from Pilz round the clock.

Americas

Brazil
+55 11 97569-2804
Canada
+1 888-315-PILZ (315-7459)
Mexico
+52 55 5572 1300
USA (toll-free)
+1 877-PILZUSA (745-9872)

Asia

China
+86 21 60880878-216
Japan
+81 45 471-2281
South Korea
+82 31 450 0680

Australia

+61 3 95600621

Europe

Austria
+43 1 7986263-0
Belgium, Luxembourg
+32 9 3217575
France
+33 3 88104000
Germany
+49 711 3409-444
Ireland
+353 21 4804983
Italy, Malta
+39 0362 1826711

Scandinavia

+45 74436332
Spain
+34 938497433
Switzerland
+41 62 88979-30
The Netherlands
+31 347 320477
Turkey
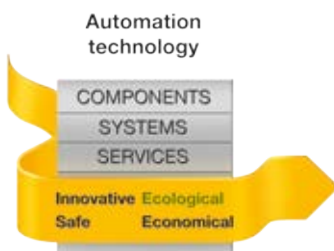+90 216 5775552
United Kingdom
+44 1536 462203

**You can reach our
international hotline on:**
+49 711 3409-444
support@pilz.com

Pilz develops environmentally-friendly products using ecological materials and energy-saving technologies. Offices and production facilities are ecologically designed, environmentally-aware and energy-saving. So Pilz offers sustainability, plus the security of using energy-efficient products and environmentally-friendly solutions.

Automation technology
COMPONENTS
SYSTEMS
SERVICES
Innovative Ecological
Safe Economical

Presented by:

energy saving by Pilz

BLUeCOMPETENCE
Alliance Member
Partner of the Engineering Industry
Sustainability Initiative

pilz
the spirit of safety
Partner of:
The Best of German Engineering

GLOBAL MARKET LEADER 2017
— CHAMPIONS —
Pilz GmbH & Co. KG
electronic & electrical engineering
Wirtschafts Woche

DIN EN ISO 9001
REG. NO. 2462

We are represented internationally. Please refer to our homepage www.pilz.com for further details or contact our headquarters.

Headquarters: Pilz GmbH & Co. KG, Felix-Wankel-Straße 2, 73760 Ostfildern, Germany
Telephone: +49 711 3409-0, Telefax: +49 711 3409-133, E-Mail: info@pilz.com, Internet: www.pilz.com

PILZ
THE SPIRIT OF SAFETY