## Safe packaging

### **Packaging machines**

Efficient, economical packaging processes require a high level of automation. At the same time, the Machinery Directive places basic demands on functional safety. In practice it's a matter of reconciling safety and automation. With our experience in the packaging technology industry, we can certainly provide support.

#### Safe automation technology - from the expert:

- Increase the availability of your plant.
- ▶ Put your trust in tailor-made solutions for small packaging machines through to large, networked plants.
- Benefit from customised services such as one-stop consulting and professional engineering through to specific user training.
- With Pilz you are putting your trust in technologies that are established and certified worldwide.

#### Pilz solutions offer:

- ▶ Economical maintenance and diagnostics
- Time and cost savings due to simple configuration and programming software for small, medium and large control systems
- Communication networks and decentralised system architectures
- Intelligent dovetailing of safety and automation tasks
- Complete safety analysis and solutions through to axis synchronisation in motion control applications
- ▶ Flexible, modern solutions for new designs and upgrades of existing plants, up to PL e of EN ISO 13849-1 and up to SIL CL 3 of EN/IEC 62061





## ▶ Safe automation for packaging technology

Pilz provides a comprehensive portfolio of automation components and systems: from safe sensor technology to control systems, operator and visualisation systems, through to drive technology and the appropriate cabling accessories.

PSS 4000: the Industry 4.0-compatible automation system!

#### 1 Automation system PSS 4000

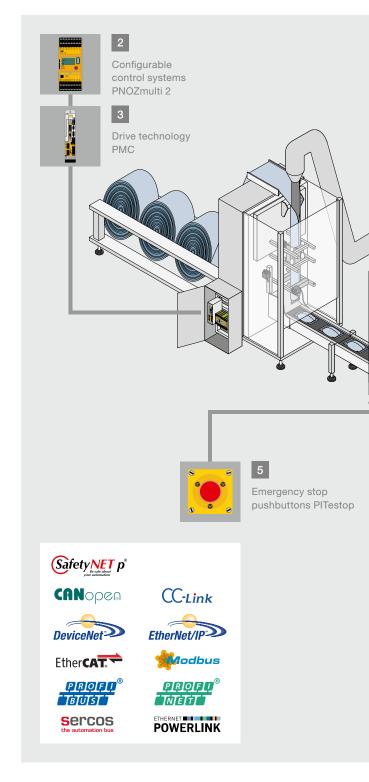
- ▶ Safety and automation in hardware and software
- ➤ Consistent distribution of control functions in accordance with the mechatronic approach (a distributed user program within a centralised project); "classic automation" (Master-Slave principle) can also be implemented
- Partial commissioning and partial operation of individual machine parts are possible
- ▶ The control systems PSSuniversal in the automation system PSS 4000 are configurable and programmable, so more complex functions are possible

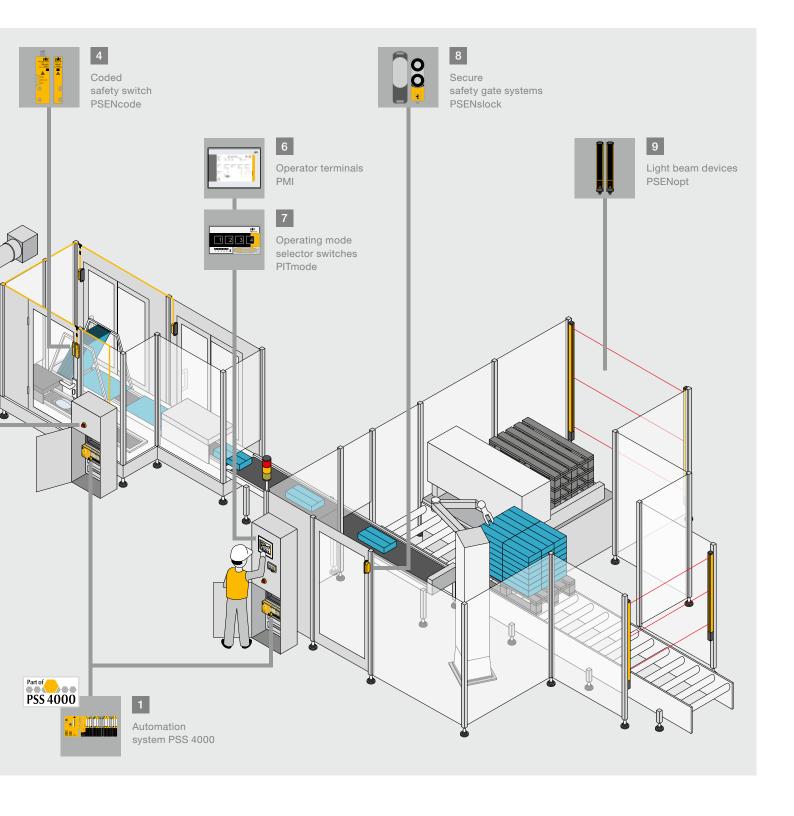
#### 2 Configurable control systems PNOZmulti 2

- ▶ Implementation of multiple safety functions
- ▶ Open system, connection to all network systems
- ➤ Safe motion monitoring functions in accordance with EN 61800-5-2 for safe monitoring of drives
- ▶ Easy to configure, simple software tool

#### 3 Drive technology PMC

- ▶ Synchronisation of various axes
- ▶ Short cycle times and high performance
- ▶ High process quality with low tolerances
- Drive-integrated safety functions up to PL e/SIL 3 with very short reaction times





#### 4 Coded safety switch PSENcode

Coded safety switches PSENcode are used to monitor the position of guards and also for general position monitoring.

#### 5 Emergency stop pushbutton PITestop

E-STOP pushbuttons are a safe solution in any plant environment thanks to the range of different types, such as illuminated pushbuttons or pushbuttons with key.

#### 6 Operator terminals PMI

With the operator terminals PMI you have modern touchscreen terminals in different sizes and with various feature options to operate and monitor your plant and machinery.

#### 7 Operating mode selector switch PITmode

The operating mode selector switch PITmode enables the operating mode to be switched safely and access authorisation to be controlled – all in one unit.

#### 8 Safety gate systems PSENslock

In just one system with a non-contact magnetic interlock, safety gate systems PSENslock provide safe monitoring of safety gates, covers or flaps with process guarding.

#### 9 Light beam devices PSENopt

Light beam devices PSENopt are ideally suitable on machines where intervention is required as part of each cycle, such as insertion work, or the infeed and outfeed of material, for example.

#### Your benefits at a glance

- ▶ High flexibility and extensive diagnostic options
- ▶ Efficient production with complete safety using the safe drive solution from Pilz
- Standard plug-in sensor cables provide fast, economical installation
- Simple project configuration thanks to the use of multifunctional and freely configurable safety relays
- Space-saving thanks to the use of IP67 housings, directly on the machine
- ▶ Good energy cost ratio due to savings potential on hardware, motion sequences and software parameter settings





Online information at www.pilz.com/ packaging

# Services to cover the entire machine lifecycle

As a solution supplier, Pilz can help you implement the relevant standards and directives and develop an optimum safety strategy for your packaging machines worldwide. The range of services encompasses the whole machine lifecycle and is complemented by a training package with practical, up-to-date content.





#### Risk assessment

We inspect your machinery in accordance with the applicable national and/or international standards and directives and assess the existing hazards.



#### Safety validation

In the safety validation, the risk assessment and safety concept are mirrored and inspected by competent, specialist staff.



#### Safety concept

We develop detailed technical solutions for the safety of your plant and machinery through mechanical, electronic and organisational measures.



#### CE marking

We control all activities and processes for the necessary conformity assessment procedure, including the technical documentation that is required.



#### System implementation

The results of the risk analysis and safety design are implemented to suit the particular requirements through selected safety measures.



#### **CMSE**

Training brings success:

CMSE – Certified Machinery

Safety Expert is the international qualification for machinery safety – exclusively at Pilz.

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## Support

Technical support is available from Pilz round the clock.

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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.







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