

## Wieland gives maintenance a lift

Working with Jenkinson Electrical Engineering and their end customer for the maintenance of rail rolling stock, control was needed for a number of emergency stop devices over a long distance as both standalone operation and as a system, whilst also allowing it to be a piece part of a modular process.

Using Samos Compact, along with power supplies & termination components, ensured that the versatility of the system that was required could be achieved. Using programmable safety gave the versatility to monitor each device individually, in addition to select within the program capabilities of how many modular units were in the system, up to 12 controllers communicating within a redundant ring. All of the above was achieved with the use of a Wieland package solution enabling the design to maintain the safety integrity and the machinery performance level for the total system requirements.



## NEW Machinery Directive Harmonised Standards list, 13th May 2016

The latest list of **Machinery Directive Harmonised Standards** was published in the Official Journal of the European Union on 13 May 2016 (reference 2016/C 173/01). These Harmonised standards provide a presumption of conformity with the essential health and safety requirements (EHSRs) of the Machinery Directive 2006/42/EC. The latest complete list of standards harmonised to the Machinery Directive can be downloaded from the **European Commission Website** [http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/machinery/index\\_en.htm](http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/machinery/index_en.htm) and although the latest list contains a small number of new and updated standards compared to the previous list published 15th January 2016, there are some important changes and it should be noted that several take effect imminently or have done so already therefore it supersedes all previous versions.

## Podis® CON Remote Automation Technology for machines & plants.

For remote power distribution and automation, economy and high flexibility are the key factors in modern system planning. For power distribution, innovative approaches and solutions are imperative as intelligent installation systems replace the classical star distribution.

**Podis® CON** is a modular power bus system for decentralised power distribution, which simplifies the planning, procurement, installation and maintenance of the power distribution systems. Remote automation allows the installation of switching and control functions near the consumer device in the field, thus avoiding costly central cabling. In this way, you follow the trend set by fieldbuses. Energy and auxiliary power or the ASi bus signal are distributed in the field by a 5+2 pole flat cable. Compact remote motor starters, fieldbus interfaces or I/O modules can be connected in an easy and error free manner or close to the consumers, without stripping, at any point desired by means of insulation piercing termination. This insulating (penetrating contact without stripping the wire) creates flexibility during installation and upgrades with increased options for system expansions or later planning changes.

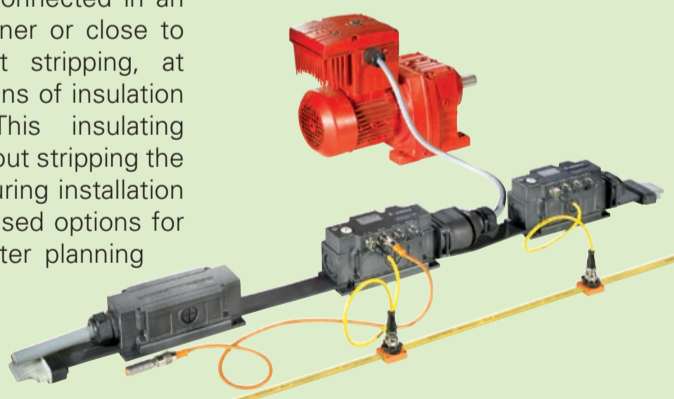
The uncut flat cable powerbus is designed for installations in harsh

industrial environments and even damp ambient conditions do not restrict the application. To connect the field devices, fixed or pluggable power branches, preassembled cable sets and onsite maintenance switches are available.

### APPLICATION AREAS

- Roller conveyors
- Pallet conveyors
- Carrying chain conveyors
- Belt conveyors
- Container transportation
- Package conveyance

The **Podis® PLAN** planning tool supports you in configuring the power requirements for your specific power bus system. You can graphically configure your systems including the assignment of components. Protective devices cable and load parameters can be selected and entered conveniently in the input templates, therefore system failures often caused by incorrectly specified protection devices are also prevented.



## Introduction to Programmable Safety FREE WORKSHOPS



Wieland Electric is launching a series of workshops designed to help you make the most of **samos® PRO COMPACT** and **samos® PLAN 5+** software and assist electrical engineers in meeting the latest safety legislation, whilst providing an invaluable source of information for machine builders, end users and those involved in factory automation. The 4 hour workshops include an introduction to safety programming and hardwiring and workshops are currently planned for Birmingham, Manchester, Newcastle, Leeds and Northampton. **Alternatively, we can bring the workshop to you – if you have a minimum of three**

**engineers to sign up we can come to your premises or a venue near you.**

Workshops will include

**Introduction**  
Safety Principles  
Legislation Overview

**2 channel E-stop**  
Wiring  
Logic  
Manual reset  
Test pulses

**Magnetic Switch**  
Wiring  
Logic  
Auto reset  
Test pulses

**Demo Case**  
Program logic  
Zoning

For more information on the 'Introduction to Programmable Safety' workshops please visit our dedicated safety website [www.wielandsafety.net](http://www.wielandsafety.net) or call +44 (0) 1483 456262



## OUR **samos®** PRO COMPACT INTRODUCTORY STARTER PACK OFFER IS BACK!

Our popular starter pack includes:

- Samos Pro Compact module with Ethernet interface**
- SD Memory card**
- USB Cable**
- Ethernet cable**
- samos® PLAN 5+ software**



**samos®** PRO COMPACT is a compact Safety solution that offers all of the benefits associated with much larger and much more complex units. Measuring only 45mm in width, **samos®** PRO COMPACT provides up to 20 safe inputs and 8 safe outputs utilising 4 switchable safe in-/outputs, the system can be extended with additional modules to as many as 116 secure inputs and 56 secure outputs and any number in between.

**The £299 introductory offer will only be available for a short time.**

## Free Easy to use samos PLAN 5+ V1.4X programmable safety software.

In the planning and design of modern installations and equipment, the safety of persons who later work with these machines is also to be considered.

Wieland's project planning tool **samos** PLAN5+ is a graphics-oriented programming tool that works in conjunction with **samos** PRO COMPACT to provide a library of up to 300 reliable, certified function blocks both standard and safety. *Additionally*, since programming utilises graphic design, no special knowledge of PLC programming languages is required – *you don't have to be an expert to self-verify.*



Providing solutions to complex safety tasks, with the option to develop your own user defined function blocks, this saves both time and complexity within the project. This tool is free for users of **samos**PRO COMPACT, making programming tasks simpler, safer and more flexible.

With **samos** PLAN 5+ it is possible to maintain **samos** PRO COMPACT remotely with no additional effort. Thanks to integrated online diagnostics and the system logbook, expensive maintenance can be avoided. The programmed safety functions can already be monitored on the PC, saving time and money. This is made possible by the simulation function with integrated logic analyser which also guarantees improved functional safety in later operation. Integration in industrial networks is simple. Industrial Ethernet or Fieldbus protocols are very easy to use thanks to convenient support in the tool. The configurable documentation function allows the production of a report that conforms to guidelines at the touch of a button.

**samos** PLAN5+ does away with numerous interfaces and is compatible with all Windows operating systems, which makes the software incredibly flexible and also future-oriented. The functionality of **samos** PLAN5+ can be increased by specifying and administrating sensors and function blocks in the corresponding libraries. Even complex safety tasks can be programmed with ease as all inputs, outputs and up to 300 function blocks can be used without any restriction on any individual project. With **samos** PLAN5+, the user has access to a library of more than 40 certified and field tested function blocks, with no additional programming input.

## Compactor Control Solution increases Performance Levels ensuring Compliance.



Pearce Compaction is one of many waste compaction machine manufacturers that, at the start of the 2015, were faced with a new Harmonised EN Standard, **EN 16500:2014**. This was a new construction guide to the safety of vertical compactors and balers.

### Challenge.

This standard brought with it some challenges, with the electrical and mechanical safety of these press machines being outlined. With this in mind, Wieland worked closely to assist Pearce Compaction in understanding the standard in-line with the machinery Directive. Wieland also assessed the company's current machines in order to offer the best safety & interface solution package to ensure that their machines would comply, without heavily impacting financially on overall costs.

To be able to achieve this, not only were the safety systems assessed but also the total control, both electrically and mechanically, looking at where improvements and/or cost savings could be made, whilst assuring that everything adhered to the new standard.

### Solution.

The final design outcome resulted in replacing part of the original control system and, instead, using the **samosPRO** Compact programmable controller for all the safety control of their Two Hand Control, Emergency Stop circuit and mechanical safety. By doing this it therefore not only reduced the number of components within the system but, by also moving the relay control and safety to a software based programmable system, Pearce attained more flexibility and customisation to the type of systems that they could then offer their customers, including new features such as bale full counters, reordering of strap indicators, and number of hours used.

### Results.

Wieland's solution for Pearce has enabled full compliance with the new standard and an increase the machinery performance level of the system. It has also enabled a reduction in costs without any performance or safety compromise, along with additional functionality and reliability increasing sales for Pearce with their fully compliant systems.



**NEW None-contact RFID Switches - STS**  
Available in three coding requirements in accordance to **EN ISO 14119**: **Unique**, which exclusively accepts input signals from its factory-paired actuator; **Fully-Coded**, which can be programmed to accept input from a specific STS actuator; and **Coded**, which can accept input from any STS actuator.

- rated for IP69K (IP6K9K) protection and PLe / Category 4 safety ratings
- Serial wiring upto 30 sensors in Ple Cat 4 possible.
- 2 x Safety Inputs, 2 x 400mA Safety Outputs (OSSD), 1 x Diagnostic Output.
- EDM Input (Automatic or Manual Start)
- V Integrated Safety analysis Self-monitoring (Standalone operation possible)
- Temp range -25°C and +70°C (+60°C for UL)
- Intelligent Diagnostics LED (Tri-Coloured)



### NEW EtherCAT Gateway for **samos**PRO Compact - SP-EN-ETC

- Simple & Fast interface to PLC
- Serial Connection (Daisy Chain) possible.
- I/O Data, module status & diagnostic by fieldbus
- Transmission of project CRC code to PLC
- Protection against manipulation
- 50 bytes of data available for bi-directional exchange.
- Easy configurable via samos PLAN 5+ V1.3x
- Covers all safety functions of machines in combination with EtherCAT networks.



### NEW Standard I/O module for **samos**PRO Compact - SP-DIO84

- Normal, Non-safety-related automation tasks implemented effectively at reduced cost.
- 4x Inputs, 4x Outputs & 4x Configurable I/O
- Switching capacity 0.5A on every output.



### NEW Industrial VPN Router industry 4 – Wienet V3

- Temperature range -40 °C to +75 °C
- Input voltage range 10 DC to 60 V DC enables a PoE (Power over Ethernet) option.
- LTE chipset for max bandwidth for mobile operation.
- Internet access via LAN, WLAN, or Mobile
- Encrypted VPN security with automatic backup.
- Upto 5 Ethernet ports for 1-3 networks
- 3 antenna ports: Main, DIV, GPS & WIFI (optional).



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