EPLAN

efficient engineering.

EPLAN
Smart Wiring

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FRIEDHELM *LOH* GROUP

The company

EPLAN Software & Service develops CAE solutions and advises companies in the optimisation of their engineering processes. Customers benefit from increased efficiency in product life-cycle management through standardised processes, automated procedures, and consistent workflows achieved using the EPLAN Experience programme.
EPLAN offers tailor-made concepts for system installation, setup and integration into IT-/PLM system environments based on standard engineering solutions. The range of services offered cover customisation, consulting and training. The development of specific and standardised interfaces to ERP, PDM and PLM systems ensures data consistency in product life-cycle management. Systematic, customer-based global support as well as innovative development and interface expertise are EPLAN's factors of success. As part of the Friedhelm Loh Group, EPLAN gives you continuity and security for your investment.

EPLAN Smart Wiring

Simply
smart wiring

The wiring of control cabinets is a costly manual process generally carried out by highly qualified specialists and based on schematic documentation. Correctly wiring components still accounts today for up to 40% of production time.

EPLAN Smart Wiring radically changes this situation. The browser-based software provides all the required data in digital format for wiring control cabinets. Wiring lists with information on all connections can be provided in Excel format or directly from EPLAN Pro Panel inclusive of 3D mounting layouts. EPLAN Smart Wiring visualises installation requirements and the wiring needed. The programme guides users step by step through installation of the required connections until wiring is correctly set up within the control cabinet.

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EPLAN Smart Wiring

Overview
of features

EPLAN Smart Wiring
user interface

- Source and connection point designation
- Routing direction at connecting point
- Wire and/or connection numbering
- Progress indicator
- Connecting point
- Visualisation of connecting point and routing track
- Traffic light system displaying installation status for all connections
- Source – target routing direction
- Blocking and commenting on connections
- Conductor termination processing
- Required wire lengths
- Installation status for each connecting point

EPLAN Smart Wiring enables even inexperienced personnel to quickly complete the complex task of correctly wiring a control cabinet at the required standard of quality. This makes production significantly more flexible and efficient with no drop in quality standards.
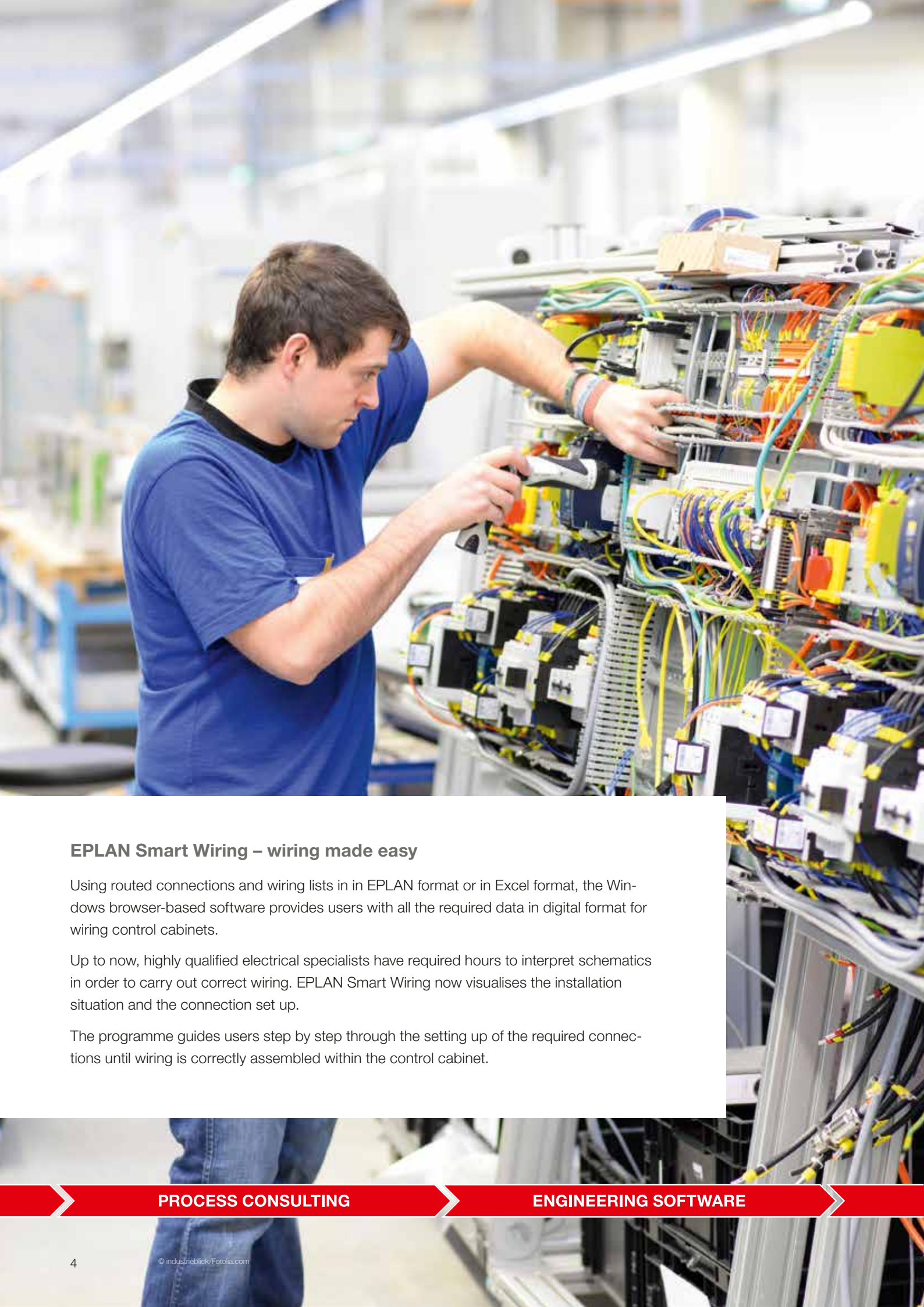
Wiring according to traffic lights

Faster connection – with or without EPLAN Pro Panel

The system's interface is based on fully intuitive operation. Every connection to be installed is explained on a clearly designed user interface. When data is transferred from EPLAN Pro Panel, routing tracks are portrayed based on a 3D layout of the virtual control cabinet. The 3D graphic automatically provides information about which devices are to be connected via which connection points as well as the correct wire routing track. When a connection has been correctly wired, it will be set to green according to the traffic light principle. When EPLAN Pro Panel is not being used, wiring takes place based on Excel connection lists.

EPLAN Smart Wiring guides users step-by-step through the assembly process. 3D-graphics enable users to follow the devices to be connected, the connecting points and the routing tracks planned.

The integrated EPLAN Experience concept and its Design Methods field of action is incorporated here.

EPLAN Smart Wiring makes it easy to achieve long-term optimisation of workflows in manual wiring and to increase installation quality. As part of the EPLAN Experience, we show you how to prepare standardised data in engineering and to process it in production planning to enable correct wiring to take place in production.

Design Methods

EPLAN Smart Wiring – wiring made easy

Using routed connections and wiring lists in in EPLAN format or in Excel format, the Windows browser-based software provides users with all the required data in digital format for wiring control cabinets.

Up to now, highly qualified electrical specialists have required hours to interpret schematics in order to carry out correct wiring. EPLAN Smart Wiring now visualises the installation situation and the connection set up.

The programme guides users step by step through the setting up of the required connections until wiring is correctly assembled within the control cabinet.

Wiring step-by-step: Transferable at any time

EPLAN Smart Wiring describes each connection line for line. If a connection cannot be installed, e.g., because of missing wires or wrongly sized cross-sections, the connection is blocked and given a comment. The comment can also be emailed instantly to the electrical engineer to enable the error to be rectified. In this way, each step in the entire process is clear and coherent. In the event of changes, the software automatically creates a project tab and the current status is displayed to all involved. An option to save the current processing status of a project allows, among other things, forwarding of project data from manufacturing station to manufacturing station in continuous production lines. This makes the production process significantly easier.
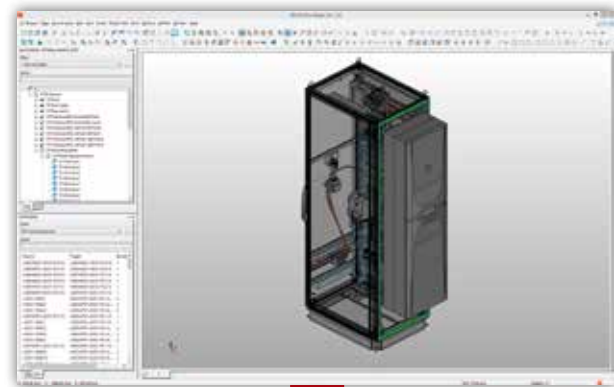
In the context of EPLAN Experience, we are able to demonstrate how you can get maximum profit from consistent workflows.

User guidance via traffic-light status

Workflow

Full flexibility for last-minute changes

EPLAN Smart Wiring reveals its strength also in the event of last-minute changes. Changes are simply carried out within EPLAN Pro Panel. The updated project is made available to EPLAN Smart Wiring for further processing. Synchronisation of the different editing stages takes place automatically within EPLAN Smart Wiring. The wiring technician thereby receives all the information of the changes to be performed. In such cases, the technician is also able to identify, via the traffic light principle, which connections have been removed and require de-installation as well as any new connections which have been added.

EPLAN Smart Wiring therefore provides even greater interlinking in the processes of design, modification and installation and helps to improve production processes and overall levels of quality over the long term. We support you in applying the required standardisation in engineering to benefit your production.

Process Integration

Permanent synchronisation: Changes to schematics in EPLAN Pro Panel are automatically updated in EPLAN Smart Wiring for further processing. You then always have the latest version of the schematic at no extra effort.

EPLAN Smart Wiring

Software-based wiring

Summary of benefits

- Touch-optimised, easy to operate user interface
- Suitable for use with Windows mobile devices
- EPLAN format, Excel format
- Wiring without circuit diagrams
- Detailed information on the fabrication, assembly and installation route, visual 3D graphics support
- Blocking/unblocking connections
- Creation, saving and sending of comments on connections
- Traffic light system to portray the installation status of every connection
- Identification of a connection via source/target designation or via a unique wire designation
- Support for continuous production lines by providing access to current project statuses from manufacturing station to manufacturing station
- Creation, saving and sending of manufacturing protocols
- Reductions in error sources and error rates
- Improved production capacity balance

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efficient engineering.

- Process consulting
- Engineering software
- Implementation
- Global support

12.2016

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