ASMAG ET 200SP AS Interface Master Simatic User Manual

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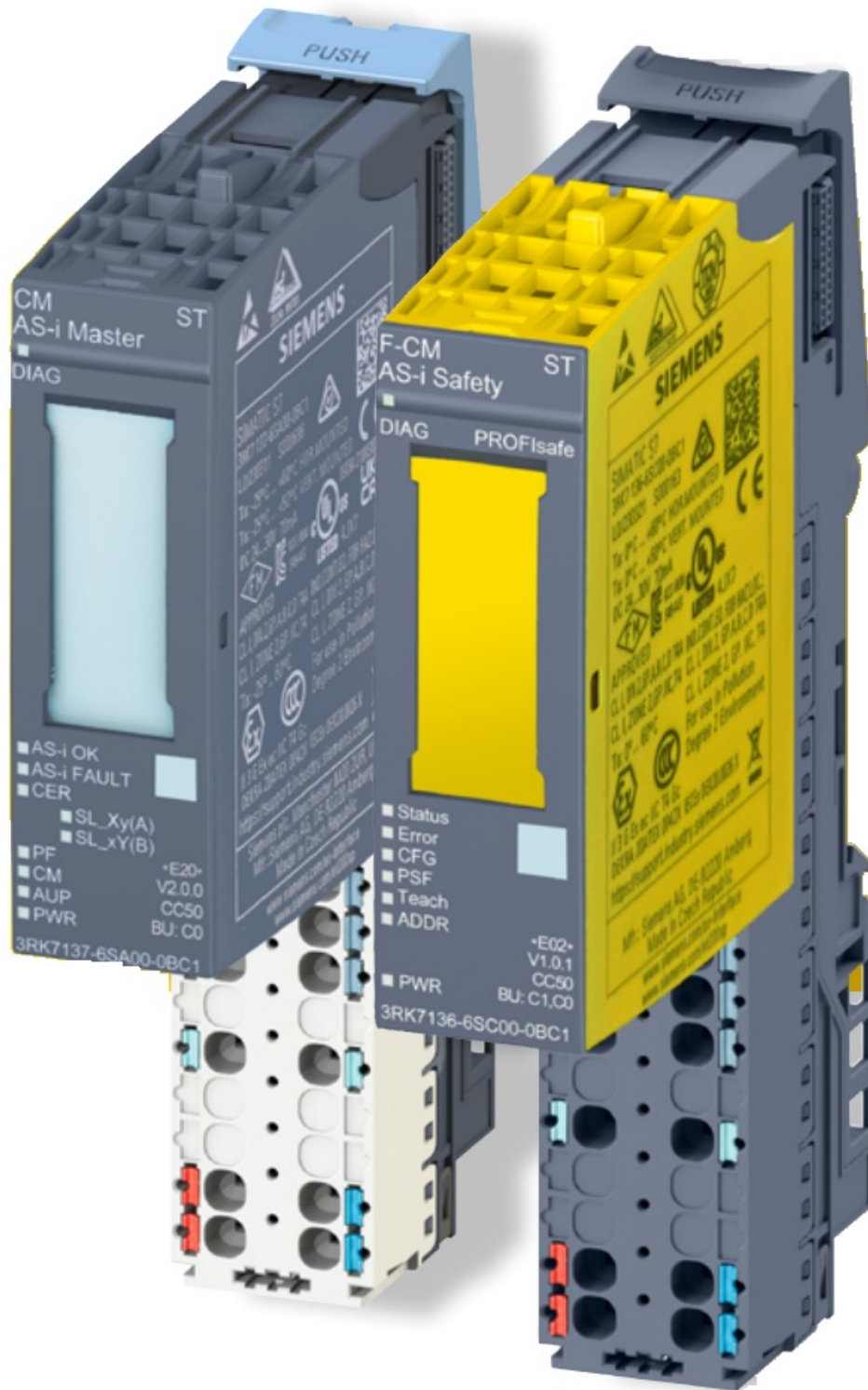
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The modular AS-i Master from Siemens

With AS-Interface from Siemens, the configuration and installation of the inputs and outputs of a project in factory automation or process technology is cost-effective and convenient. Especially in intralogistics, machine tools, process industry and production, the advantages of the quick and easy assembly of the AS-i modules are often used.
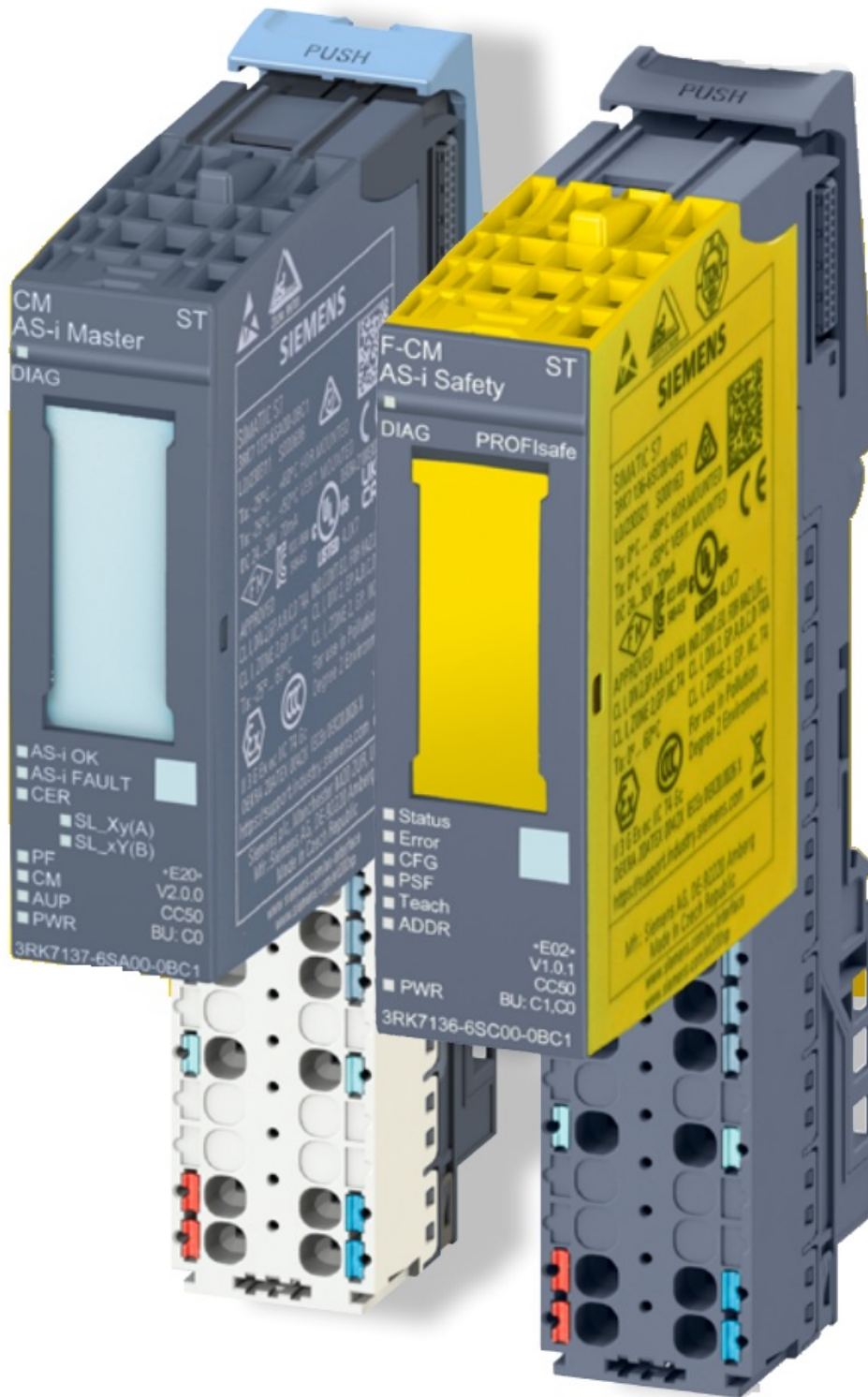
The AS-i Master module for SIMATIC ET 200SP is the future-oriented link between the AS-Interface network and the controller.

SIMATIC and SINUMERIK controllers are preferably connected to the AS-i network via PROFINET. The connection via PROFIBUS is also available.

A compact controller is realized with an ET 200SP CPU in combination with the AS-i Master module, no higher-level bus system is required here.

When using the SIMATIC ET 200SP IM 155-6 MF Multi Fieldbus interface, other control systems can also be connected via Ethernet/IP or Modbus TCP.

- **AS-i Master and AS-i Safety module from Siemen**

See **www.siemens.com/et200sp** for more information about ET 200SP.

SIMATIC ET 200SP – the universal system

The AS-i Master module from Siemens is simply plugged into the distributed I/O system SIMATIC ET 200SP and is fully integrated into the Totally Integrated Auto mation concept. With a width of only 20 mm and extensive expansion options for multiple masters, AS-i safety applications and combinations with IO-Link master modules and other ET 200SP modules, Siemens offers the ideal solution for every project.

AS-i diagnostics on the web browser

For SIMATIC S7-1500 controllers, Siemens offers a comprehensive AS-i diagnostics package for free download.

The diagnostics data is displayed on your browser in graphical form via the integrated web server of the S7-1500 CPU and can be accessed via a tablet in the company network or, if enabled, on the internet. In normal operation, the diagnostics indicate that the AS-i network is working without errors. If an overload occurs on the connected sensors or actuators, or if the robust system is disturbed by an extraordinary event, the diagnostics can help to quickly find and fix the problem.
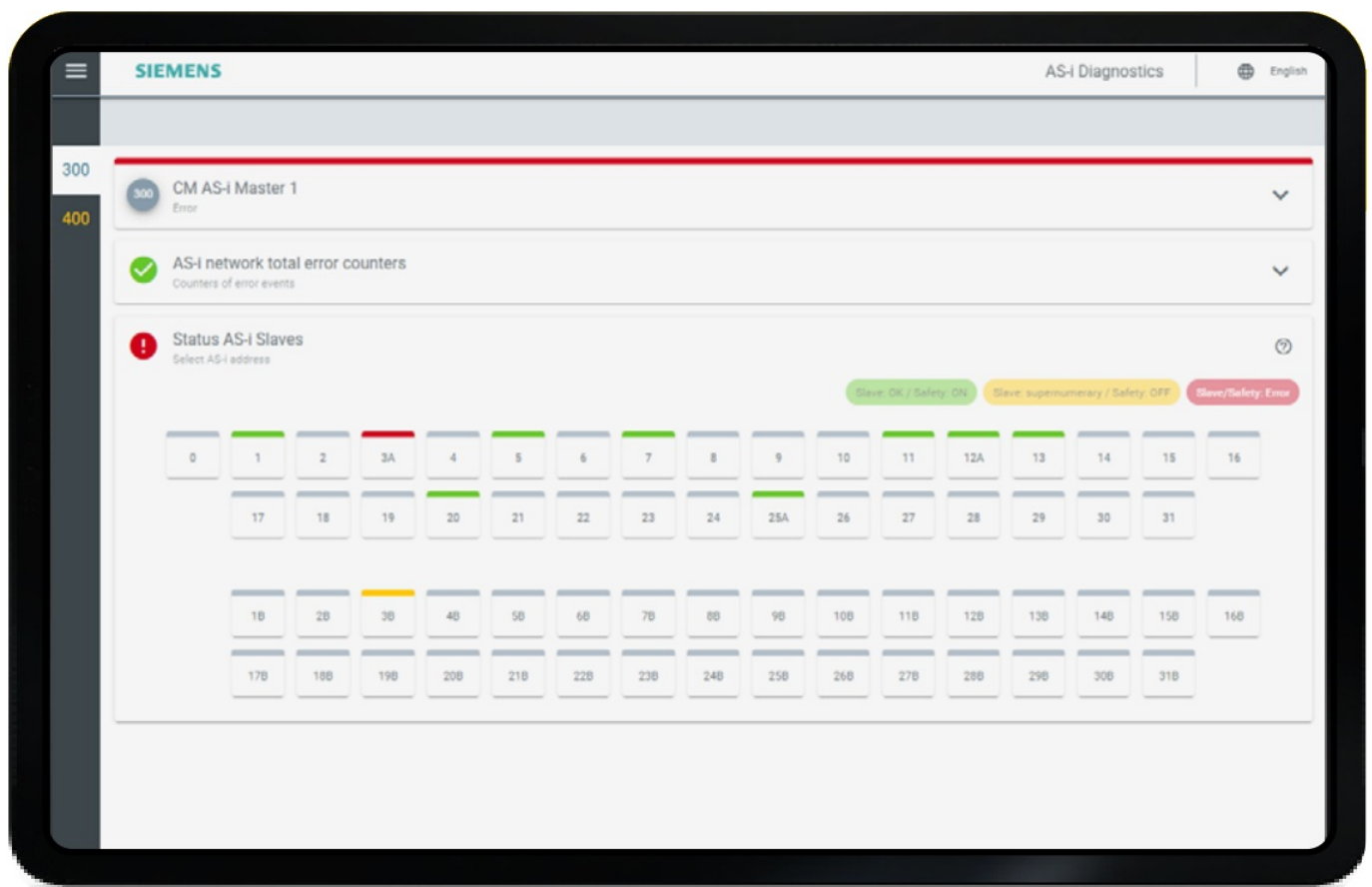
Access to multiple AS-i networks

Even if there are several AS-Interface networks in the project, the diagnostics are always accessed centrally via the port of the web server in the CPU. From a list of existing AS-i networks, the desired part of the plant can be selected.

Diagnostics display of an error-free AS-i network
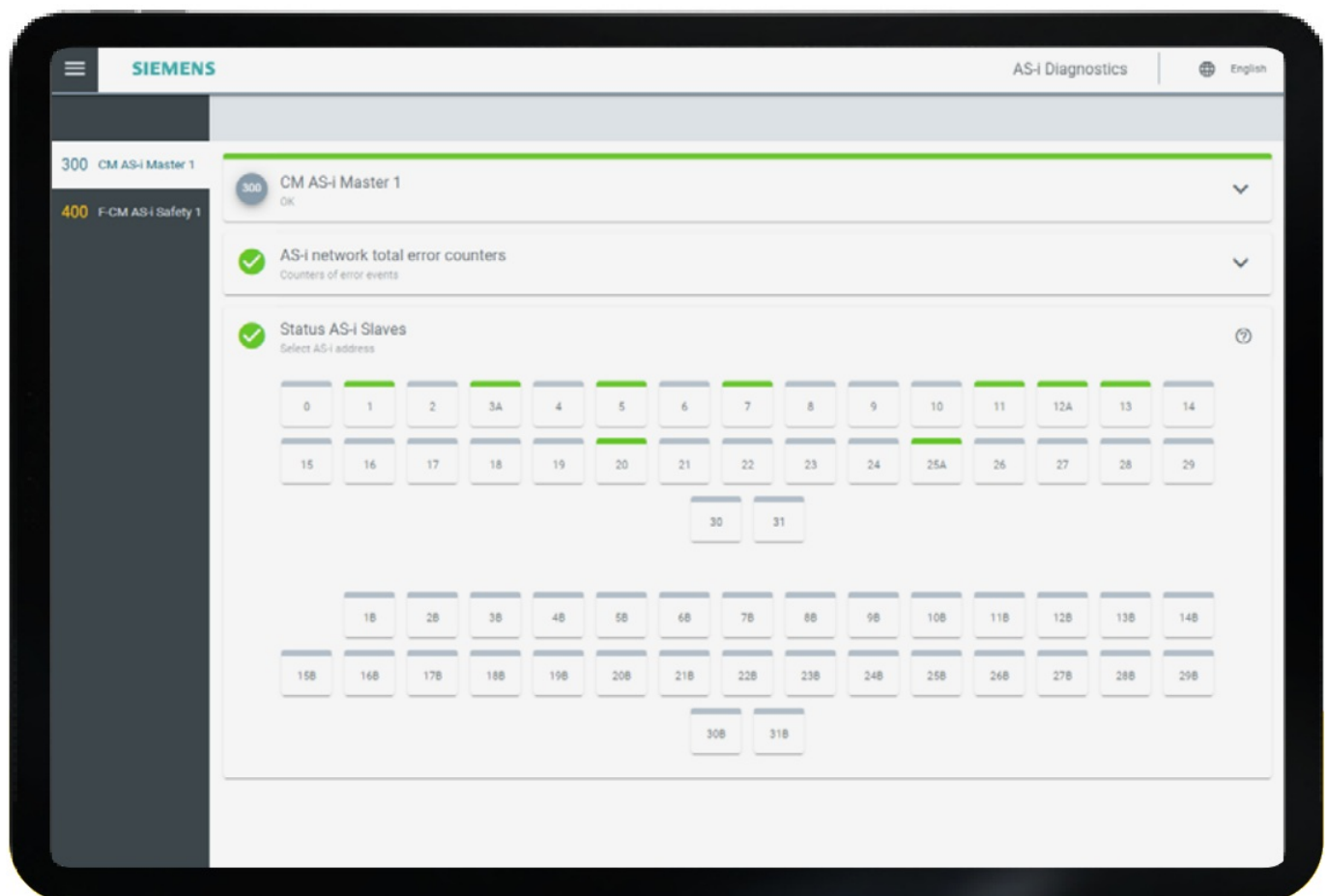
Clear presentation of existing errors

Benefit for the user: He or she logs on to the CPU only once and can call up the diagnostics for all connected AS-i networks. And for the administration, this means that only the port of the CPU web server has to be secured against unauthorized access, but not every single AS-i master gateway.

Easy-to-understand color scheme

The presentation of the diagnostics of the AS-i network uses a green-yellow-red color scheme to allow an intuitive understanding:

- Green: Everything OK.
- Yellow: The AS-i network is working, but it contains an additional module beyond the configured number of modules and should be checked.
- Red: An AS-i module has failed or reports a problem, e.g. overload.

Every AS-i address visible

The individual AS-i modules are clearly displayed with their AS-i addresses, each as a block icon with color bar.

If a module with address 0 is detected, it is displayed with a red color bar.

The color grey indicates that the AS-i address is not used.

Diagnostics in detail

If a module icon is selected by touch or mouse click, additional diagnostics data for the module is displayed on the right side of the screen.

The configured and the detected values of the profile data of the AS-i module are displayed here. This makes it possible to check whether the correct type of module has been installed.

In addition, error counters can be called up for the selected AS-i address in order to be able to estimate the frequency of an error condition that has occurred.

Set AS-i address

After selecting a module, it is possible to change the AS-i address or the ID1 code of the module if this function has been enabled.

Status of the AS-i Master

When you open the tab of the AS-i master, diagnostics data is displayed that affects the entire network, such as power failure on the AS-i line, ground fault detection and the configuration mode of the master.

Diagnostics information for a selected AS-i module
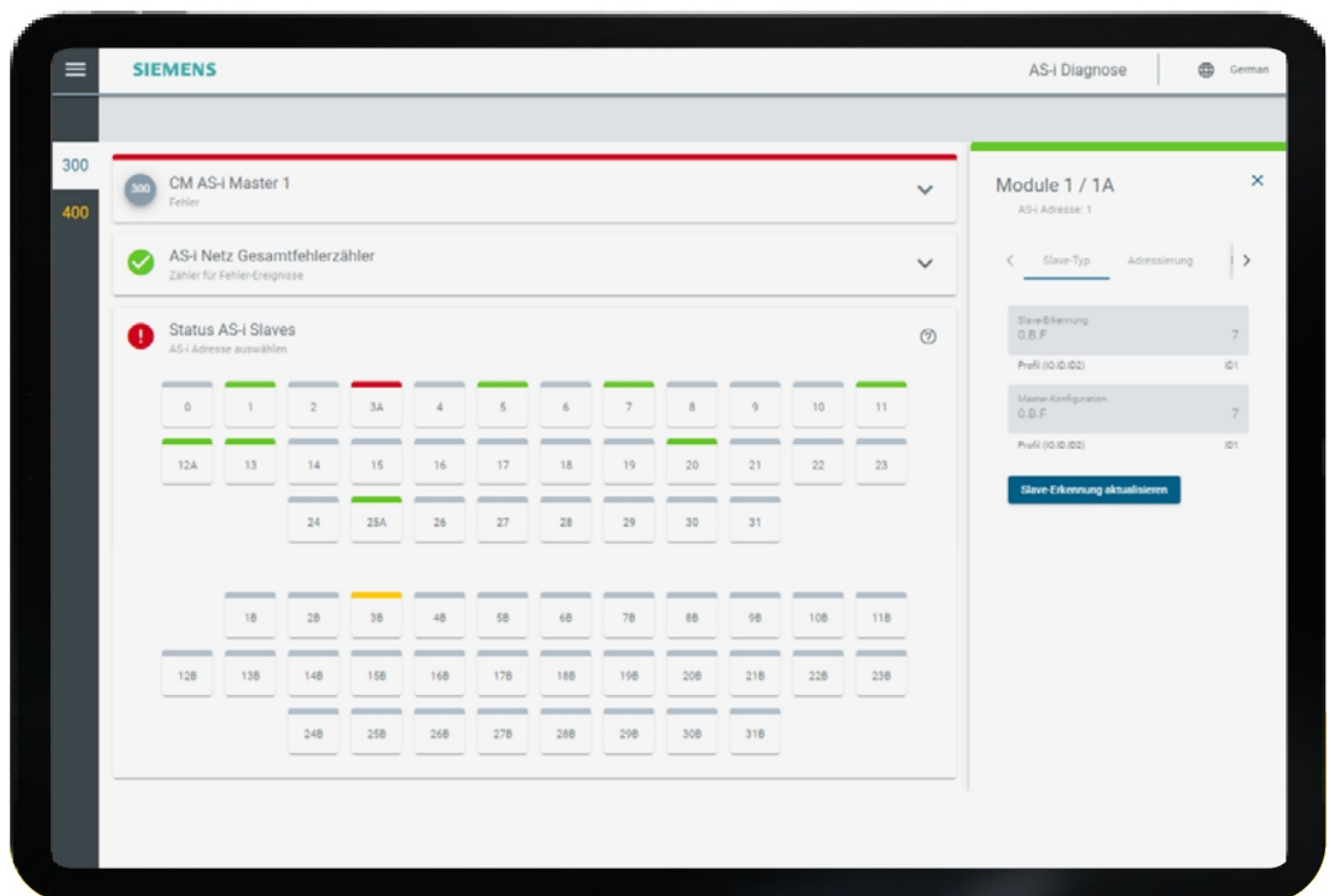
Responsive web design

The display automatically adjusts to the size of the screen. On a narrow display, the block icons slide down to make them more visible.

Diagnostics for safety modules

The ET 200SP F-CM AS-i Safety module from Siemens extends the AS-i network for convenient reading of

safety-related AS-i inputs such as EMERGENCY STOP or safety doors. Safe outputs can also be controlled.

The diagnostics of the safety-related inputs and outputs, which are evaluated via the F-CM AS-i Safety module, are included in the diagnostics package.

In addition to the display of error states, the operating status of the safe inputs and outputs is also displayed.

Again, an easy-to-understand green-yellow-red color scheme is used:

- Green: Everything OK, safety input/output state = ON (1).
- Yellow: Everything OK, safety input/ output state = OFF (0).
- Red: Fault at the safety input/output.

Diagnostics of safe inputs/outputs on the AS-i network
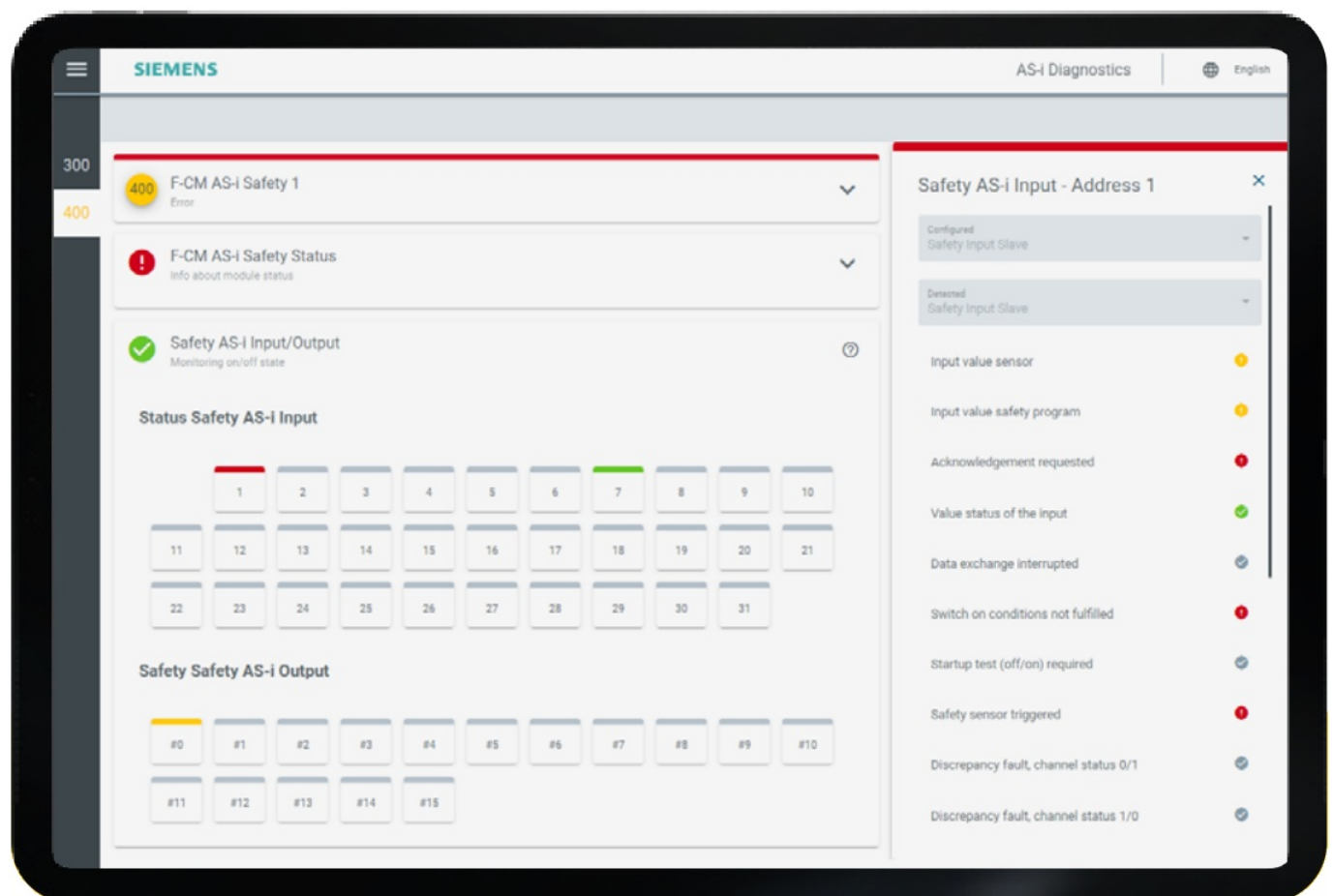
By touching or clicking on the block icon of a safe input/output, further diagnostics data for fault determination is displayed on the right side of the screen.

In addition, the general diagnostics status of the F-CM AS-i Safety module can be called up.

Additional information about the AS-i diagnostics

The user language of the diagnostics package can be switched between English and German at any time. Other languages are possible after integration of corresponding language texts during the project configuration.

The diagnostics package is available for download from Siemens Industry Online Support:
https://support.industry.siemens.com/cs/ww/en/view/109479103

Here you will also find the complete documentation for the configuration and operation of the AS-i diagnostics.

The package also includes the option of displaying the diagnostics data on an HMI panel. The operation corresponds to the procedure on the web browser.

TIA Portal and system diagnostics

The TIA Portal contains powerful diagnostics of the AS-i network, too. It is not necessary to download the diagnostics package for this. Simply select the desired AS-i network in the network view and switch the TIA Portal to the online mode.

The ET 200SP modules CM AS-i Master and F-CM AS-i Safety from Siemens automatically generate an alarm in the SIMATIC system diagnostics for every significant diagnostics event in the AS-i network.

The alarm is logged in the diagnostic buffer of the SIMATIC CPU as a text entry with a timestamp. The contents of the diagnostic buffer can be displayed in the TIA Portal, on an HMI panel, via the CPU's web server, or on the display of the SIMATIC CPU.

Expanding the possibilities

The presented diagnostics package complements the options offered by SIMATIC system diagnostics with a convenient graphical user interface that can be accessed from a web browser.

If required, the diagnostics information can be processed directly in the user program of the SIMATIC CPU. For example, it is possible to control an optical or acoustic signal.

And hence, the door to transfer the AS-i diagnostics data to an IT system via OPC UA or other communication channels is open.

The ideal AS-Interface solution for every plant concept: AS-i Master SIMATIC ET 200SP from Siemens.

More information: www.siemens.com/as-interface

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"AS-Interface from Siemens: Integration makes the difference"

http://www.as-interface.net/

ASMAG

Documents / Resources

	ASMAG ET 200SP AS Interface Master Simatic [pdf] User Manual ET 200SP AS Interface Master Simatic, ET 200SP, AS Interface Master Simatic, Interface Master Simatic, Master Simatic, Simatic

References

- **AS-Interface**
- **AS-Interface – the clever field bus standard - Industrial Communication - Siemens Global Website**
- **SIMATIC ET 200SP - Distributed IO - Siemens Global Website**
- **SIOS**
- **User Manual**