

The New Diagnostic Tools

bus✓check is a new family of diagnostic tools from Softing for industrial communication technology. The protocol analyzer for PROFIBUS networks (DP and PA) is the newest member of the family. This solution effectively supports system start-up technicians and maintenance personnel, helping them to prevent plant failures due to communication problems and to quickly analyze and correct such errors if they arise. The protocol analyzer is another milestone for Softing, the clear market leader for high-quality PROFIBUS diagnostic products.

Along with "traditional" protocol logging, quick mode allows users without extensive protocol knowledge to precisely evaluate the status of a PROFIBUS network. All PROFIBUS telegrams are continually analyzed in this mode, and a clear overview is provided of the status of all stations on the PROFIBUS network. Users can therefore see at a glance whether PROFIBUS is running smoothly or whether there are problems in the network. All bus stations are displayed in a tree structure together with their operational status in the form of a "traffic light" status indicator. When a bus segment or bus station is selected, a new window appears with additional information, including extensive error statistics on the segment level and the length of the DP cycle on the master level. More than 50 different pieces of information are displayed for each DP slave. The actual bus parameters of a PROFIBUS network are registered and displayed in this way. The statistical analyses make it possible to detect latent errors long before they affect plant functions. All of the diagnoses sent by the slave are recorded and stored in a circular buffer. Of course, the protocol analyzer also offers "traditional" telegram logging and analysis in two different modes of operation. With "immediate logging", the logged telegrams are managed in the memory as a circular buffer so it is possible to interact with them rapidly. With "long-term logging", the telegrams are continuously stored in files to be analyzed later.



The connection to the PROFIBUS network is established via a USB interface, so laptops can be used for convenient PROFIBUS diagnosis. In order to acquire much more detailed error information and precise results, a logic developed by Softing especially for PROFIBUS diagnosis is used for receiving telegrams instead of a PROFIBUS ASIC. For direct connections to PROFIBUS PA networks, a second interface is available for the MBP bus physics used in PA. This means that bus traffic can be recorded and compared on both sides of a PA segment coupler.