PROFINET Agent

Network disturbances during commissioning?
Agent Blond has the solution!

Indu-Sol GmbH
Blumenstrasse 3
04626 Schmoelln

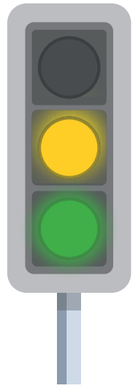
Phone: +49 (0) 34491 580-0
Fax: +49 (0) 34491 580-499

info@indu-sol.com
www.indu-sol.com

Certified according to DIN EN ISO 9001:2015

Version 2.0 | 02/2025

Network disturbances during commissioning? Agent Blond has the solution!



A successful commissioning of production systems requires not only extensive expertise from employees but also seamless and well-thought-out processes, along with the right equipment. The goal is to bring machines into operation without interruptions and ensure stability in production processes. In reality, however, disturbances often occur during commissioning (see Fig. 1), requiring immediate response. The challenge lies in quickly identifying the root cause and resolving it effectively.

Agent Blond provides a solution for mechanical engineering companies by capturing relevant information from the machine network and transmitting it to the PLC. This data serves as a critical foundation for better decision-making, especially during time-sensitive commissioning processes, enabling faster identification of the exact cause of errors.

Limited network visibility

When unexplained disturbances occur during commissioning, they are initially acknowledged. If these disturbances reappear repeatedly, an evaluation through the PLC diagnostic buffer is carried out (see Fig. 2). However, messages like „IO device failure“ in the PLC provide no precise indication of the actual cause of the error, complicating troubleshooting efforts.

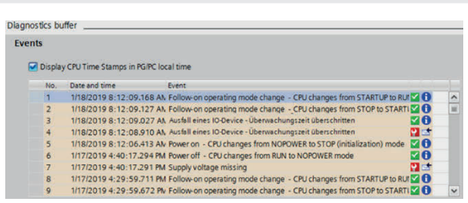


Fig. 2: PLC Diagnostic Buffer

Bathtub Effect (see Fig. 1)

At the very start, failures arise due to various issues (product, installation, and software errors), which require significant time to resolve.

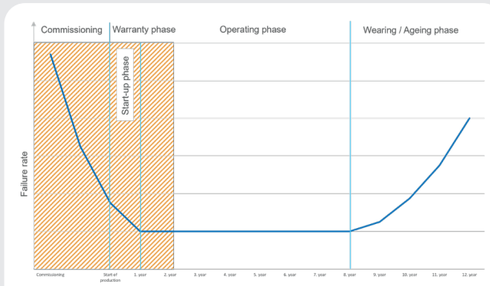


Fig. 1: Bathtub Effect

PLC Diagnostic Buffer (see Fig. 2)

Unexplained disturbances during commissioning are initially acknowledged. With recurring disturbances, the PLC diagnostic buffer is analyzed.

Inefficient troubleshooting

Frequent disturbances lead to time-consuming trial-and-error processes, during which devices and cables are replaced one by one in an attempt to eliminate suspected causes. Simple hand sketches (derived from hundreds of EPLAN pages) can quickly evolve into complex structures during prolonged troubleshooting, combining information from the PLC diagnostic buffer and implemented troubleshooting measures (see Fig. 3 - Hand Sketch).

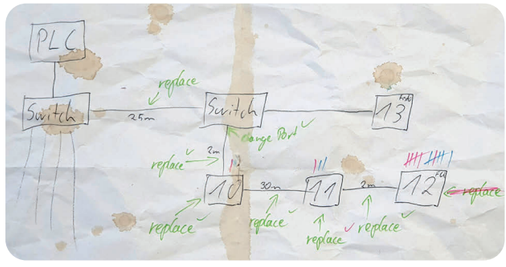


Fig. 3: Hand Sketch

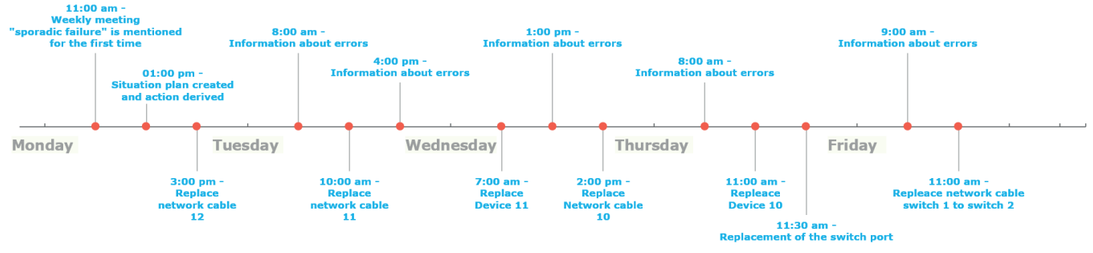
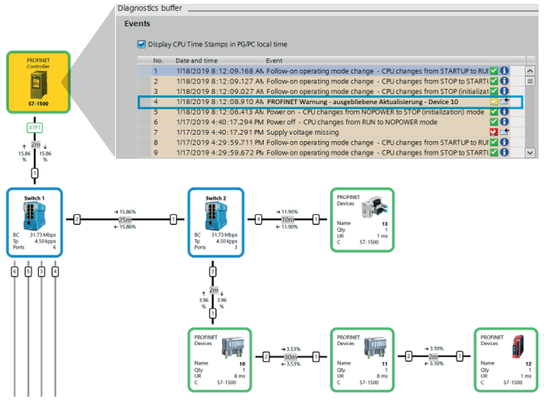


Fig. 4: Example of Actions Taken for Troubleshooting

Efficient troubleshooting with Agent Blond

By detecting even the smallest disturbances in the network, Agent Blond can relay all necessary information for rapid troubleshooting to the PLC. These „yellow“ messages (see Fig. 5) enable the commissioning engineer to access all relevant data during the first disturbance notification. This allows for better and more targeted troubleshooting decisions, significantly minimizing the usual troubleshooting efforts during commissioning.



Device	I/O data	PROFINET update rate	Missing updates
Switch 1	0 Byte	128 ms	0
Switch 2	0 Byte	128 ms	1
10 – ET200	340 Byte	8 ms	11
11 – ET200	34 Byte	2 ms	43
12 – FU	380 Byte	1 ms	310
13 - Festo	16 Byte	8 ms	5

Fig. 5: Alternative to Hand Sketch Including Agent Blond Notifications

Maximizing efficiency and system availability with Agent Blond

Agent Blond not only plays a vital role during the commissioning phase but also contributes to maintaining the network infrastructure during the operational phase. Incorporated into service-level agreements between installers and operators, Agent Blond serves as an exceptionally effective and complementary solution. By proactively identifying disturbances, it helps minimize unplanned downtimes, thereby increasing system availability. This approach not only makes commissioning more efficient but also reduces costs in the long term and enhances productivity—a significant benefit for both installers and operators alike.