# Competent troubleshooting in fieldbus technology



#### **Troubleshooting made easy**

We are your experienced partner and solve your problems in all aspects of fieldbus technology. Fieldbus systems have been used since the 1980s to reduce the number of wires needed in automation systems and to connect intelligent modules. Today, almost 100% of all new plants are equipped with fieldbuses.

The comprehensive fieldbus products and services of Leadec for existing systems ranges from troubleshooting through on-site testing and acceptance measurements to training courses for maintenance staff. Another focus is on initiating complementary diagnostic tools for Profinet, Profibus, CAN, Ethernet, AS-Interface and ESD, etc. For the installation of new fieldbus systems and networks we create specifications together with you and support you proactively in all processes of the entire machine

life cycle – from the construction through acceptance to on-site inspections for aging equipment. We always ensure a continuous improvement process for your system and stress-free tests during acceptance measurements.

#### Your benefits:

Over 25 years of experience with bus systems
Fast troubleshooting with 95% success rate\*
Profound know-how of our experts
Comprehensive checking of the bus systems
Manufacturer-neutral distribution of
measuring devices for all types of bus systems

\* In 95% of all cases we find the error within 8-10 hours.



#### **Systematic troubleshooting**

Many malfunctions are caused by installation faults. These are defects that arise during the installation or expansion of the bus system, e.g. due to faulty test jacks. Most of these faults can be detected by visual inspection for which we have designed a software-assisted procedure. The LeadecNetApp based on this provides you with a structured process to support systematic troubleshooting.

#### **Permanent condition monitoring**

Permanent condition monitoring has proven its worth in order to detect signs of wear and tear on a bus system or network caused by aging. Various testers are available for this purpose, which monitor the telegram traffic. The proven testers P-QT 17 for Profibus, PN-QT 20 for Profinet, C-QT 15 for CAN, A-QT 15 for AS-Interface and ESD-QT 16 for electrostatic discharge have been supplemented by the QT-Manager for automated troubleshooting.

### Our services at a glance

#### **Troubleshooting**

- Comprehensive troubleshooting for all fieldbus systems and networks
- Tablet-supported visual inspection for measurement data acquisition
- Testers for Profibus, Profinet, CAN, AS-Interface and EMC/ESD (electrostatics)
- IO-Link and Profinet solutions

## Acceptance measurements

- Measurements for all fieldbus systems and networks according to requirement specifications
- Basic inspections
- System rework to eliminate errors as part of corrective maintenance
- Free app providing a checklist for visual inspections

#### **Training courses**

- Troubleshooting fieldbuses and networks such as Ethernetbased bus systems, e.g., Profibus, Profinet, Profibus DP/PA, CAN, AS-Interface and EMC
- Design of fieldbus systems and networks
- Fieldbus and network maintenance
- Basics of preparing specifications
- Proactive process support

#### **Measuring systems**

- Sale of measuring instruments and analysis equipment to monitor fieldbus systems and networks of all manufacturers
- Independent expert advice across all makes
- Tester for long-term monitoring of fieldbus and network systems
- Tester for troubleshooting



#### Leadec BV & Co. KG

Hafenbahnstraße 20a 70329 Stuttgart, Germany

Email: Viki\_feldbustechnik@leadec-services.com

Phone: +49 711 459 848 10

