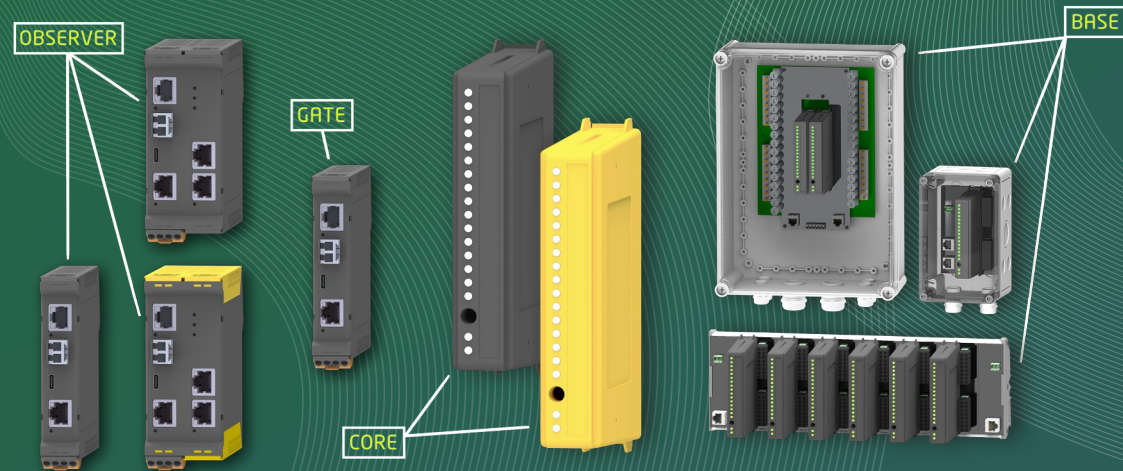


HydraSafe

Cell voltage monitoring for electrolyzers

ALL-IN: Maximum process safety through qualified system support.



ITP Tzschoppe GmbH



FULL SUPPORT THROUGHOUT THE ENTIRE LIFECYCLE

INTRONIK
ELEKTRONIK · AUTOMATION

mütec
Your safe choice

ITP Tzschoppe GmbH



1 DESIGN
CONSULTING & REQUIREMENT ANALYSIS

2 SETUP
GUIDED INTEGRATION & COMMISSIONING

3 OPERATION
SYSTEM MONITORING & TECHNICAL SUPPORT

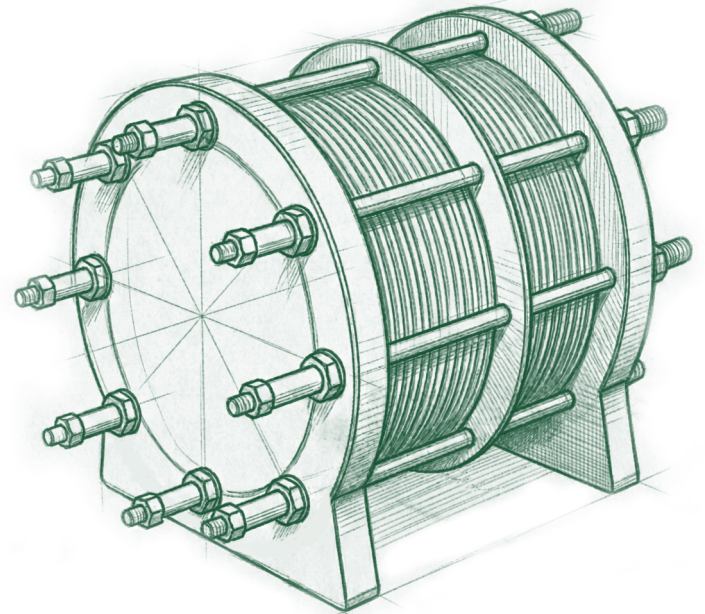
4 SAFETY
INSPECTION & SIL PROOF TESTING

5 EXTENSION
EXPANSION, RE-CERTIFICATION & UPGRADES

1. CONSULTING & REQUIREMENTS ANALYSIS

Joint definition of the measuring point topology and analysis of customer-specific requirements. We evaluate the insulation coordination and the interface architecture, incorporating these factors into the planning of your customized concept.

- **Application Engineering:**
A holistic assessment of your stack topology and operational strategy to define the optimal hardware configuration.
- **Safety Design & Concepts:**
Early-stage analysis of SIL requirements and insulation coordination to ensure a seamless approval and certification process.
- **Certificate Management:**
Provision of all necessary declarations of conformity and technical documentation.



2. GUIDED INTEGRATION & COMMISSIONING

Through guided integration and digital validation, we shorten the path from hardware assembly to the first reliable measurement value.

- **System-Integration:**

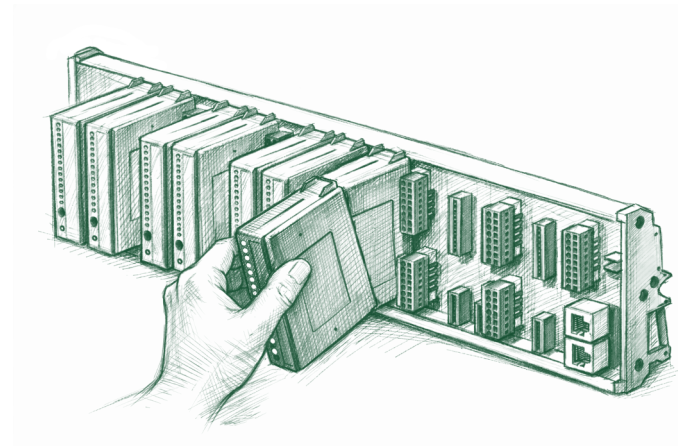
Professional support during the mechanical and electrical connection of the entire measurement chain. From the BASE on the stack, via the GATE with fiber-optic connection, all the way to the OBSERVER.

- **Intelligent Commissioning:**

The HydraSafe Config software automatically detects all connected devices in the network and displays all current measurement values live. Thanks to flexible Digital Cell Mapping, you can adapt the measurement channels to your actual wiring with just a single click.

- **Guaranteed Data Security:**

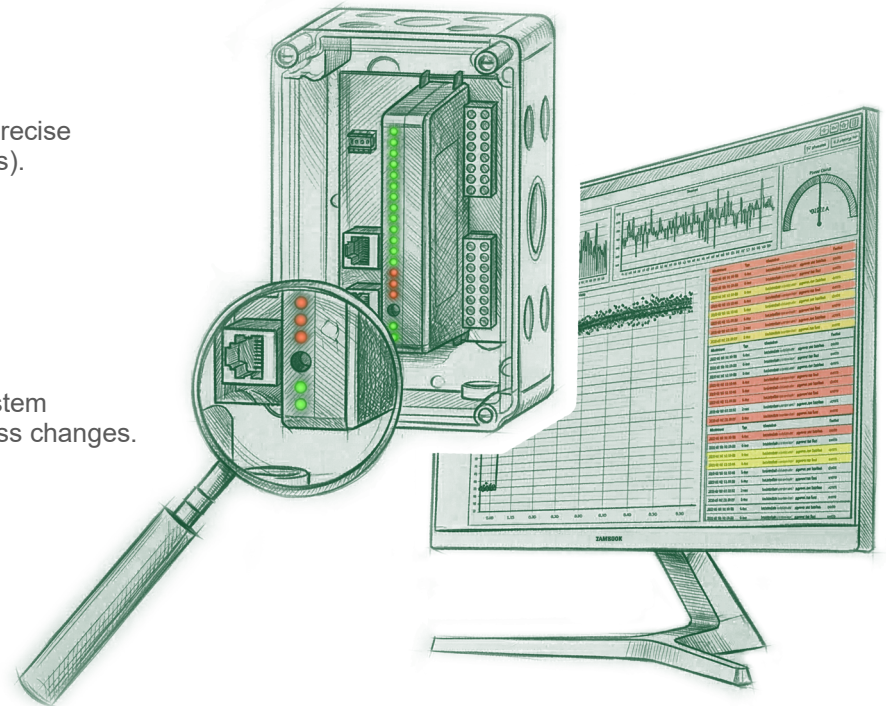
We perform a complete connection check prior to startup. Through automatic data synchronization (verification), we ensure that all parameters have been transmitted error-free and securely.



3. SYSTEM MONITORING & TECHNICAL SUPPORT

Confident plant operation through continuous support: We ensure the full functionality of your measurement chain across the entire operational lifecycle.

- **Ensuring System Integrity**
Permanent functional monitoring of the hardware. HydraSafe guarantees precise data and immediately reports technical irregularities (e.g., contacting issues).
- **Expert Technical Support**
Direct assistance with the diagnosis of system messages. Our team helps you quickly identify sources of error across the entire measurement infrastructure.
- **Continuous Optimization Dialogue**
We provide expert guidance to keep the performance of the HydraSafe system at peak levels throughout its entire operating life and to adapt to any process changes.



4. INSPECTION & SIL PROOF TESTING

Long-term legal compliance through certified testing processes:
We help you permanently verify and document the high safety standards of your plant.

- **Regular Safety Verification**
Professional execution of the required proof tests for your safety-related system.
We verify that all protective functions respond reliably.
- **Ensuring System Accuracy**
Regular inspections and on-site calibration checks.
We ensure that your system operates within the approved tolerances at all times.
- **Test Reports for Your Plant Documentation**
Provision of complete logs after every inspection. We supply you with the ready-to-use documentation for direct submission to authorities or auditing organizations (e.g., TÜV).



5. EXPANSION, RE-CERTIFICATION & UPGRADES

Long-term legal compliance through certified testing processes:

We help you permanently verify and document the high safety standards of your plant.

- **Scalable System Architecture**
Modular design for easy capacity expansions.
New measurement channels can be cost-effectively integrated into your existing system.
- **Sustainable Lifecycle Management**
Guaranteed backward compatibility for all upgrades.
New technological developments remain fully compatible with your existing components.
- **Re-Certification Service**
We manage your declarations of conformity long-term, even in the event of system adaptations or shifting regulatory requirements.

