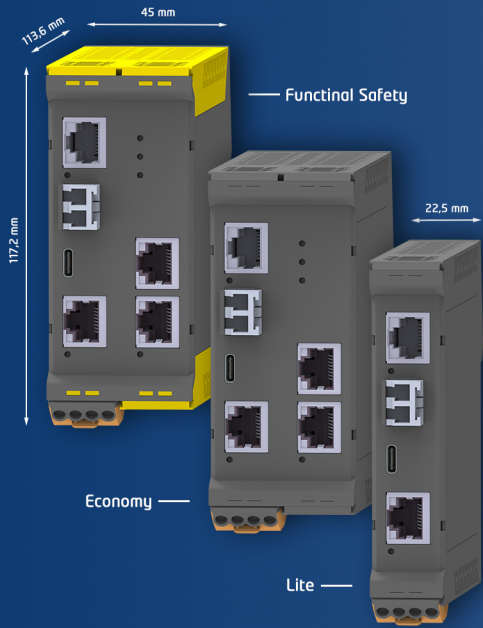


HydraSafe

TECHNICAL DATA SHEET



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OBSERVER - Evaluation unit

The OBSERVER is designed for receiving, monitoring, and exporting cell voltages. Its monitoring functions are fully configurable, allowing adaptation to specific requirements. The OBSERVER supports the most common communication protocols, including ProfiNET (SAFETY), Modbus TCP, and OPC UA. The CORE modules are connected via HydraLink, either wired with a CAT5 cable or optically via fiber optics.

The OBSERVER module is available in three variants: LITE, ECONOMY, and SAFETY (with functional safety).

www.mueteceinstruments.de

Information

Name
HydraSafe OBSERVER

Function
Data acquisition and logging from the HydraSafe CORE measurement modules

Variants

- LITE
- ECONOMY
- SAFETY

- ✓ Receiving, monitoring and exporting cell voltages
- ✓ Monitoring functions fully configurable
- ✓ Supports ProfiNET (SAFETY), Modbus TCP and OPC UA
- ✓ USB-C for uploading user configuration
- ✓ Optical connectivity for harsh environments and long distances
- ✓ Easy connectivity and compact wiring via CAT5 cable

Technical data

HydraSafe OBSERVER Lite / OBSERVER Economy / OBSERVER Safety

Article No. HYS-OBSV-LIT / HYS-OBSV-ECO / HYS-OBSV-SAF

General Information

Main Control unit of the HydraSafe system
Data acquisition and logging of cell voltages
Statistical calculations and user-configurable data analyses

Connectivity and protocols	
RJ45 (upper-left):	HydraLink: Serial bus and 24V supply
SFP (mid-left)	HydraLink Fiber: (optical serial bus for HydraSafe-Core)
RJ45 (lower-left)	Ethernet 100Mbit/s (Modbus TCP server, OPC UA planned)
RJ45 2x (lower-right) (ECONOMY and SAFETY only)	Ethernet 100Mbit/s (Profinet, Profinet SAFE planned)
Terminal block	Supply 24 V (0,1 ... 2,5 mm²)
Cybersecurity	
Data integrity	Yes
Software modification	CRC protected
Power supply	
Supply voltage	18 ... 32 V
Input current	250 mA (typical)
Total current (System)	2300 mA
Supply voltage HydraLink	21,6 ... 26,4 V
Total current HydraLink	820 mA
Diagnostic and signaling	
Status-LED System	Inactive (red), operating (green)
Status-LED HydraLink	Inactive (red), operating (green)
Status-LED System (ECONOMY and SAFETY only)	Inactive (red), operating (green)
User-LED 1 (ECONOMY and SAFETY only)	Software configurable
User-LED 2 (ECONOMY and SAFETY only)	Software configurable
User-LED 3 (ECONOMY and SAFETY only)	Software configurable
Environmental conditions	
Ambient temperature (operating)	0 ... +60°C
Ambient temperature (storage)	-25 ... +85°C
Protection type	IP20
Pollution degree	2 per IEC 61131-2
Operating altitude without temperature reduction	0 ... 2000 m; with temperature reduction: 2000 ... 5000 m (0.5 K/100 m); 5000 m (max.)
Relative humidity	80% (without condensation)
Approvals / Certifications	
CE	Yes
Safety Integrity Level	For OBSERVER Safety only (up to SIL 2, from 2026)
Ex	(planned)
Mechanical	
Width	22,5 mm 45 mm (LITE ECONOMY, SAFETY)
Length	113,6 mm
Height	117,2 mm
Weight	134 g / 202 g (LITE / ECONOMY, SAFETY)

Status: March 2025 – Subject to change