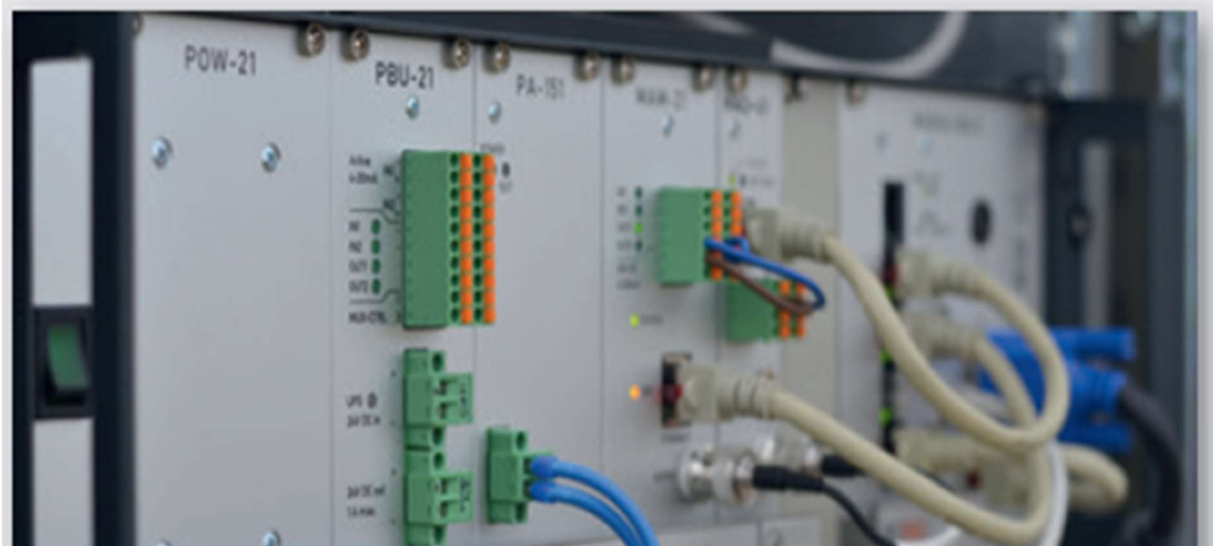


Front-End Processor Well Optimizer ECHO 1:



Graphic 1: Front-End Processor Well Optimizer ECHO 1 (Example Picture only)

Measuring mode:	Level detection
Measuring range:	80 m ... 6.000 m
Measuring accuracy:	+/- 3m
Measurement rate:	max. 1 measurement per minute min. 1 measurement per 28 days
Measuring output:	4 – 20 mA-current interface, galvanically isolated MODBUS over Ethernet
Optional:	4 – 20 mA- current interface for External Pressure Sensor Switching Input 24 V for Control Information Up to 2 MAD-41-Moduls for Condition Monitoring (via Transducer in Casing and via Airborne Sound Microphone on the surface)
Power Supply:	
Supply Voltage:	94 ... 264 V AC, 47 ... 66 Hz, 4 A max.
UPS-Voltage:	24 V DC, +/- 10%, 3 A max. Connector: Phoenix Contact MSTB 2.5/2-STF
Auxiliary Voltage (Output):	24 V DC, 1 A max. Connector: Phoenix Contact MSTB 2.5/2-STF
Connection:	
Transducer-Connection:	AC, max. 35 Veff. Connector: Phoenix Contact MSTB 2.5/2-STF
I/O-Signal MAM-21:	2 x Switching Input 24 V (max. 30 V, Active from 2 V, galvanically isolated) 2 x Switching Output (Passive, potential-free relay contact, max. 30 V, 0.5 A)

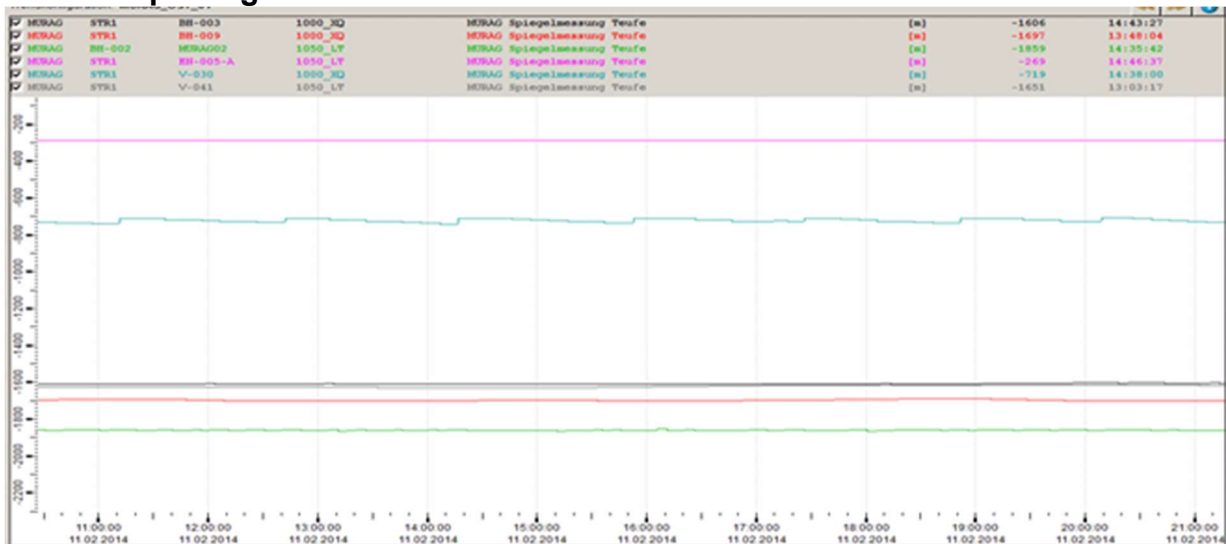
I/O-Signal MAD-41: Auxiliary Voltage 24 V DC, max 1 A
Current Interface 0 ... 24 mA,
isolated, Software-configurable
Connector: Phoenix Contact MSTB 2.5/2-STF
2 x Switching Input 24 V
(max. 30 V, Active from 2 V, galvanic isolated)
2 x Switching Output (Passive, potential-free relay contact,
max. 30 V, 0.5 A)
Connector: Phoenix Contact MSTB 2.5/2-STF

Network Connection: Ethernet 10/100 Mbit, RJ-45

Mechanical Data:
19" -Slot 3HE, 84 TE

Width: 448 mm (483 mm incl. Mounting Angle)
Height: 134 mm
Depth: 280 mm (344 mm incl. Handle and Base)
Weight: 7,9 kg
Humidity: 10% ... 95%, non-condensing
Ingress protection: IP 30

Software package 1: Down-hole fluid level measurement



Graphic 2: Fluid level over time used for performance control of individual wells (Example Picture only)