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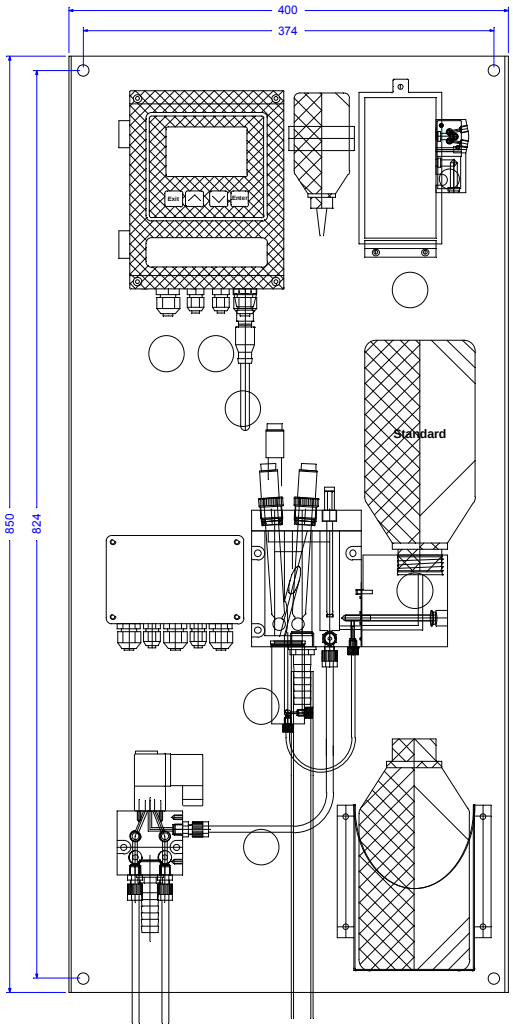
Analyzer AMI Sodium A

Data sheet No. DenA2445XXX0

Analyzer for the continuous determination of dissolved sodium in the ppb-range for steam, condensate and high purity water. For samples with low pH (e.g. sampling after cation exchangers).

Analyzer AMI Sodium A

- Complete Sodium analyzer panel-mounted for easy wall installation.
- Measuring range: 0.1 – 10'000 ppb Na (under reference conditions) with automatic range switching.
- pH controlled alkalization reagent addition allows to monitor samples with pH ≥ 2.
- Option for second sample stream with programmable stream switching.
- Simple two-point calibration. Calibration history is stored in transmitter.
- Easy to use grab sample capability.
- Continuous sample flow detection.
- Automatic temperature compensation.
- Large backlit LCD display showing all measured values and status information simultaneously.
- Intuitive user interface with text menus. Simple input of all parameters by keypad.
- Factory tested, ready for installation and operation.



Analyzer with optional second sample stream

Order scheme	Analyzer AMI Sodium A	A – 2 4 . 4 5	X .	X	X	0
Power supply:	85 – 265 VAC /47 – 63 Hz		1			
	24 VDC, direct current		2			
Number of sample streams:	One sample stream			1		
	Two sample streams with stream switching valve			2		
Electrical output options:	None				0	
	Third current signal output 0/4 - 20 mA				1	
	Profibus DP interface				2	
	HyperTerminal interface (for logger download)				3	
	Modbus interface				4	

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Analytical System

Sodium measurement
Galvanically separated inputs for sodium electrode and calomel reference electrode (liquid junction: ground glass sleeve).
pH-conditioning with diisopropylamine, consumption approx. 1 L / 30 d at pH 7.
Automatic temperature compensation.

Measuring ranges	**Resolution**
0 - 99.9 ppb	0.1 ppb
0 - 999 ppb	1 ppb
0 - 9.99 ppm	0.01 ppm

Automatic range switching.
Accuracy:
± 5% of reading after calibration
Repeatability: 5%
Response time: 180 s (95%)

Sodium calibration
Manual 1- or 2-point calibration with direct standard injection.

Sample specifications
pH value: ≥ pH 2.0
Ammonium concentration: < 50 ppm
Dissolved solids:
smaller than 10 ppm, no oil no grease
Flow rate: min. 100 ml/min.
Inlet pressure: 0.3 - 3 bar (4 - 43 PSI)
Outlet pressure: ambient pressure
Temperature: 5 - 45 °C (41 - 113 F)

Temperature measurement
Temperature sensor SWAN NT5K
Measuring range: -10 to +100 °C
Resolution: 0.1 °C

Flow cell
Made of acrylic glass with needle valve for flow adjustment.

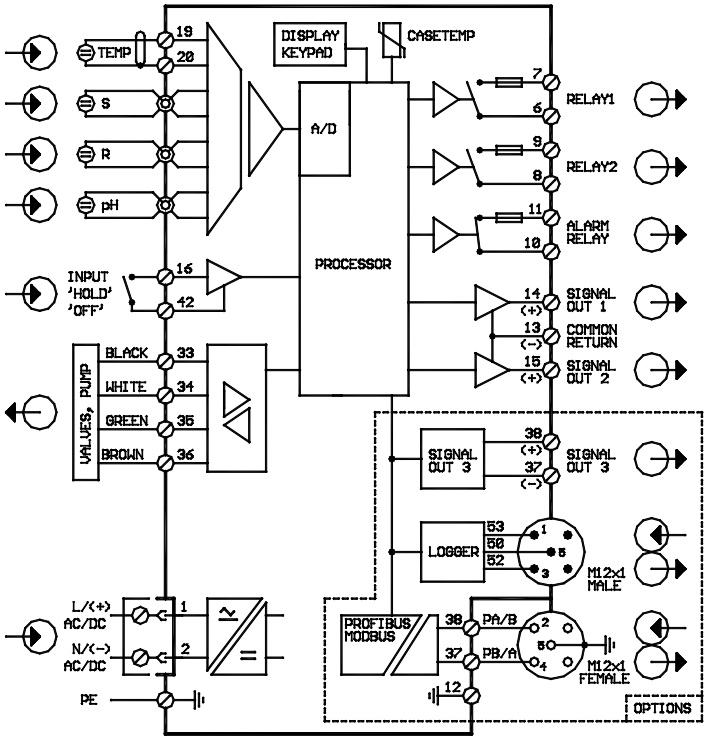
Process connections
Inlet connection: Serto PVDF 6 mm
Outlet connection: 1/2" for flexible tube
One or two (option) sample streams.
Stream switching time: ≥ 15 min.

AMI Transmitter

Electronic case: Aluminum
Protection degree: IP 66 / NEMA 4X
Display: backlit LCD, 75 mm x 45 mm
Electrical connectors: screw clamps
Ambient temperature: -10 to +50 °C
Limit range of operation: -25 to +65 °C
Storage and transport: -30 to +85 °C
Humidity: 10 - 90 % rel., non condensing

Power supply
Voltage: 85 - 265 VAC, 47 - 63 Hz
or 24 VDC, isolated, ± 15 %
Power consumption: max. 20 VA

Electrical Connections



Operation
Easy operation based on separate menus for “Messages”, “Diagnostics”, “Maintenance”, “Operation” and “Installation”.
Separate menu specific password protection possible.

Display of process value, sample flow, alarm status and time during operation.

Real-time clock with calendar for action time stamp and preprogrammed actions.
Storage of event log, alarm log and calibration history.
Storage of the last 1’500 data records in logger with selectable time interval.

Safety features
No data loss after power failure, all data is saved in non-volatile memory.
Over voltage protection of in- and outputs.
Galvanic separation of measuring inputs and signal outputs.

Monitoring of case temperature
Alarm if the temperature is higher than +65°C or lower than -25°C.

1 Alarm relay
One potential free contact for summary alarm indication for programmable alarm values and instrument faults.
Max. load: 1A / 250 VAC

2 Signal outputs
Two freely scaleable signal outputs for measuring values:
Sodium 0.1 - 10’000 ppb, linear or log
Temperature 0 to +100 °C
Current loop: 0/4 - 20 mA
Max. burden: 510 Ω
Third signal output with same specifications as option.

2 Relay outputs
Two potential free contacts programmable as limit switches for measuring values.
Max. load: 1A / 250 VAC
Alarm delay: 0 - 6’000 s

1 Input
One input for potential-free contact, programmable as hold or remote off.

Communication interface (option)
RS232 interface for logger download with HyperTerminal or RS485 interface with Fieldbus protocol Profibus DP or Modbus.

System Data

Panel dimensions: 850 x 400 x 200 mm
Panel material: Stainless steel V4A
Total weight: 12 kg