

Analyzer for the measurement of sodium ions in trace amounts

Soditrace

Analyzer for the continuous measurement of sodium ions in trace amounts in high purity water applications and steam generation.

Lowest available detection limit for sodium ion concentrations 0.001 ppb.

Automatic 3 point known-addition calibration in the ppb range.

Automatic control of sample pH conditioning.

Continuous monitoring of undervoltage, reagent exhaustion, sample flow, sample temperature and electrode performance.

Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell.

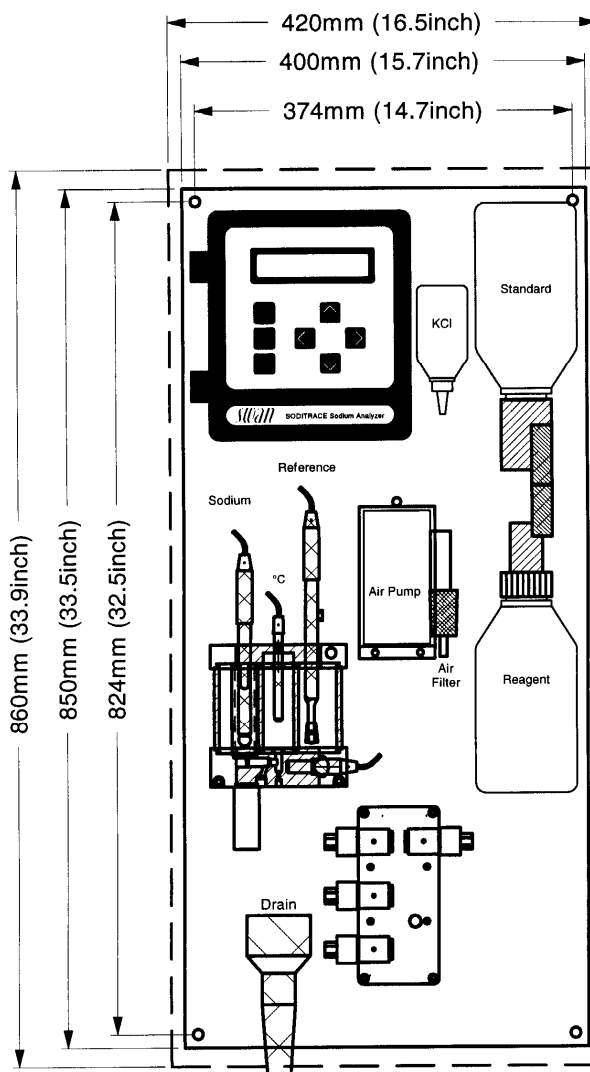
4 potential free contacts: 2 contacts as limit switches, 1 contact as cal status, and 1 alarm contact.

4 galvanically separated signal outputs (0/4 - 20 mA) with freely scaleable linear or logarithmic output.

Interface RS232 for printer or firmware download.

Full-text display 2 x 20 characters.

Menu driven print programs with configurable print parameters (interval, time, header, etc.).



Order scheme	Soditrace	A-24.5	0	1	0
Power supply:	230 VAC, 50/60 Hz		↑ 1		
	115 VAC, 50/60 Hz		2		
	200 VAC, 50/60 Hz		5		
	100 VAC, 50/60 Hz _____		6		
Optional interface:	none				0
	RS485 PROFIBUS DP / MODBUS ASCII or RTU / RS232 Modem _____				↑ 1

Technical data:

Dimensions: 850 x 400 x 140 mm
Weight: 18 kg
Panel: stainless steel
Electronic housing: injection-molded aluminium
Protection: NEMA 4x, IP65
Ambient temperature: 5 to 45 °C
Relative humidity: 30 to 95% non-condensing
Storage and transport: 0 to 50 °C
Display: full-text display, 2 x 20 characters, green, for measuring values (sodium, temperature), date and time

Power:

100 / 115 / 200 / 230 VAC (±15%),
50 ... 60 Hz
Power consumption: 35 VA
Parameter storage without battery.

Software:

Menu driven input of calibration parameters, limits and alarm values, printer and communication parameters. Programming of intervals for automatic 3 point known-addition calibration. Password protection for all programs.

3 contacts:

Max. load: 1 A / 250 VAC
2 relays as limit switches for Sodium
1 relay as cal status (closed if cal)

Alarm contact:

Max. load: 1 A / 250 VAC
alarm contact for temperature alarm, system faults and errors

Interfaces:

interface RS232 for printer
optional:
interface RS485 with PROFIBUS DP, MODBUS ASCII, MODBUS RTU protocol and modem connection (RS232)

Signal outputs:

4 signal outputs
Current loop: 0/4 - 20 mA
Max. burden: 510 Ω

Sodium measurement:

Sodium glass electrode, screw cap
Calomel reference electrode with screw cap
Measuring range: 0.001 ppb - 10 ppm
Accuracy: ±0.005 ppb or 10% of reading
Reproducibility: ±0.001 ppb or 5% of reading
Response time: (90%) 120 sec
Calibration: automatic 3 point
Automatic temperature compensation
Automatic pH control

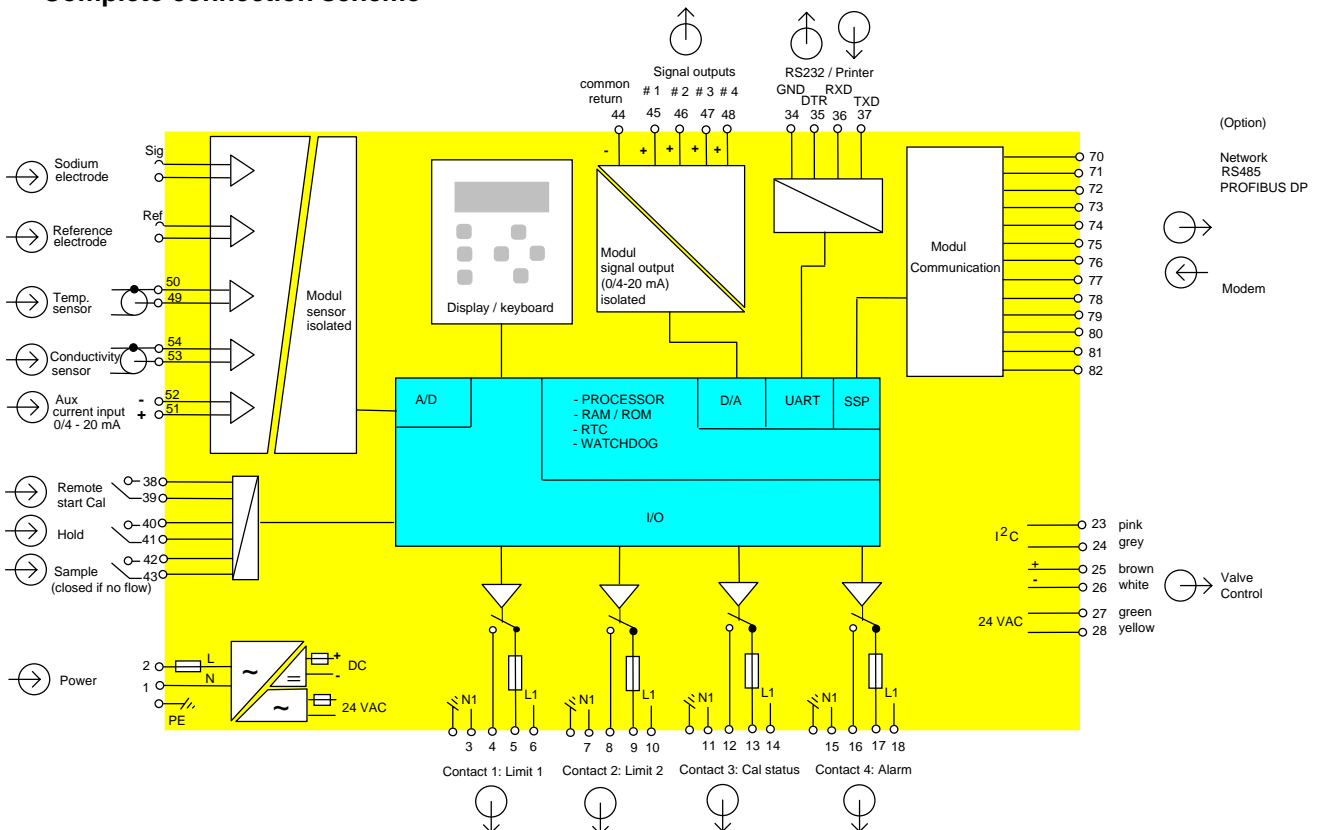
Temperature measuring:

2 temperature sensors SWAN NT5K
Measuring range: -30 to +130 °C
Resolution: 0.1 °C

Flow cell:

Acrylic glass, transparent, contains sodium electrode, reference electrode, conductivity cell, temperature sensor
Flow rate: 100 ml/min
Sample Pressure: 0.3 - 3 bar (4 - 43 PSI)
Temperature: 5 - 45 °C (41 - 113 °F)
Suspended soils: less than 10 ppm, no oil and no grease
pH value: equal or higher than 7.0 pH
Ammonium content: less than 10 ppm
Acidity: less than 50 ppm (CaCO₃)

Complete connection scheme



Please note:

Please correct the pH of the sample only with Diisopropylamine. However, Diisopropylamine is not included in delivery. Please buy it from your local chemical supplier. E. g. Merck (6x 1 l: 803646.1000) or Fluka (1x 1 l: 38300) or Riedel-de Haen (1x 1 l: 62580)