

Microprocessor controlled system for the determination and control of hydrazine or carbohydrazide used as boiler feedwater oxygen scavengers

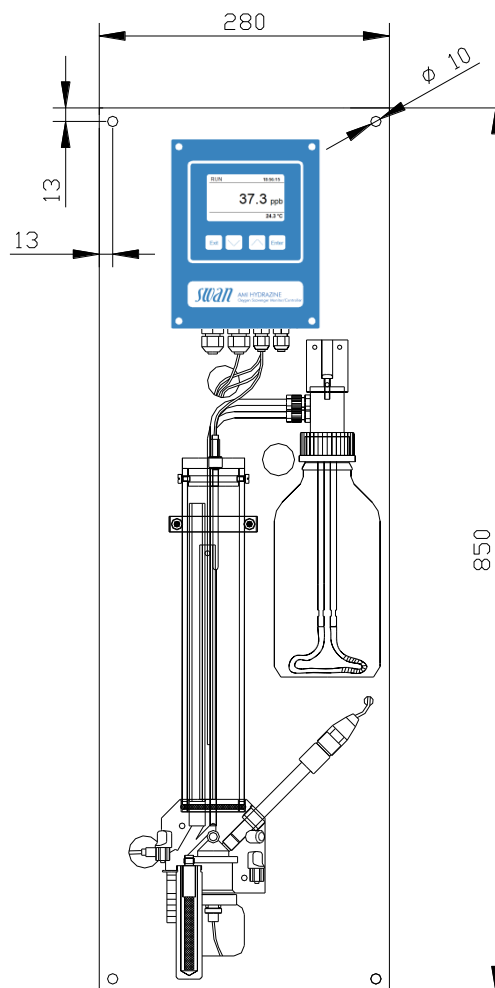
## Monitor AMI Hydrazine

Complete system on stainless steel mounting panel:

- **Transmitter AMI Hydrazine**  
in a rugged aluminum enclosure (IP 66).
- **Sensor system**  
Self-cleaning three-electrode system for determination of hydrazine or carbohydrazide.
- **Flow cell**  
made of acrylic glass with flow adjustment valve, digital sample flow monitor and integrated temperature probe. Sample alkalization with highly efficient diisopropylamine
- Factory tested, ready for installation and operation.

### Specifications:

- Measurement range for hydrazine or carbohydrazide: 0.1 to 600 ppb
- Automatic temperature compensation.
- Automatic, continuous monitoring of sample flow and sensor cleanliness.
- Big backlit LC display for the reading of measuring value, sample temperature, sample flow and operating status.
- Easy user menus in English, German, French and Spanish. Simple programming of all parameters by keypad.
- Electronic record of major process events and calibration data.
- Data logger for 1'500 data records stored at a selectable interval. (Data download to PC requires optional HyperTerminal interface).
- Two current signal outputs (0/4 - 20 mA), galvanically separated from sensor input, for hydrazine or carbohydrazide concentration and temperature or as continuous control outputs.



Order Nr.	Monitor AMI Hydrazine	A-26.541.000
Option:	<input type="checkbox"/> 3 <sup>rd</sup> current signal output (0/4 – 20mA)	A-81.420.050
	<input type="checkbox"/> Profibus DP & Modbus RTU interface (RS-485)	A-81.420.020
	<input type="checkbox"/> USB interface	A-81.420.042

**Hydrazine / Carbohydrazide Measurement**

Self-cleaning three-electrode system with automatic temperature compensation. Maintenance-free reference electrode.

Range: 0.1 - 600 ppb

Accuracy: 5% of reading up to 200 ppb  
± 15% up to 600 ppb  
or ± 2 ppb (whichever is greater).

Stability: ± 5% of reading per month  
or ± 2 ppb per month  
(whichever is greater).

Response time: 90 % of change  
60 sec after sample entered flow cell

**Temperature measurement NT5K**

Measuring range: up to 60 °C  
Resolution: 0.1 °C

**Sample flow measurement**

With digital SWAN sample flow meter and alarm in case of insufficient sample flow.

**Transmitter Specifications and Functionality**

Electronics case: Cast aluminum  
Protection degree: IP 66 / NEMA 4X  
Display: backlit LCD, 75 x 45 mm  
Electrical connectors: screw clamps  
Dimensions: 180 x 140 x 70 mm  
Weight: 1.5 kg  
Ambient temperature: -10 to +50°C  
Humidity: 10 - 90% rel., non condensing

**Power supply**

Voltage: 100 - 240 VAC (± 10 %),  
50/60 Hz (± 5 %)  
or 24 VDC (± 10 %)  
Power consumption: max. 30 VA

**Operation**

Easy operation based on separate menus for "Messages", "Diagnostics", "Maintenance", "Operation" and "Installation". User menus in English, German, French and Spanish.

Separate menu specific password protection.

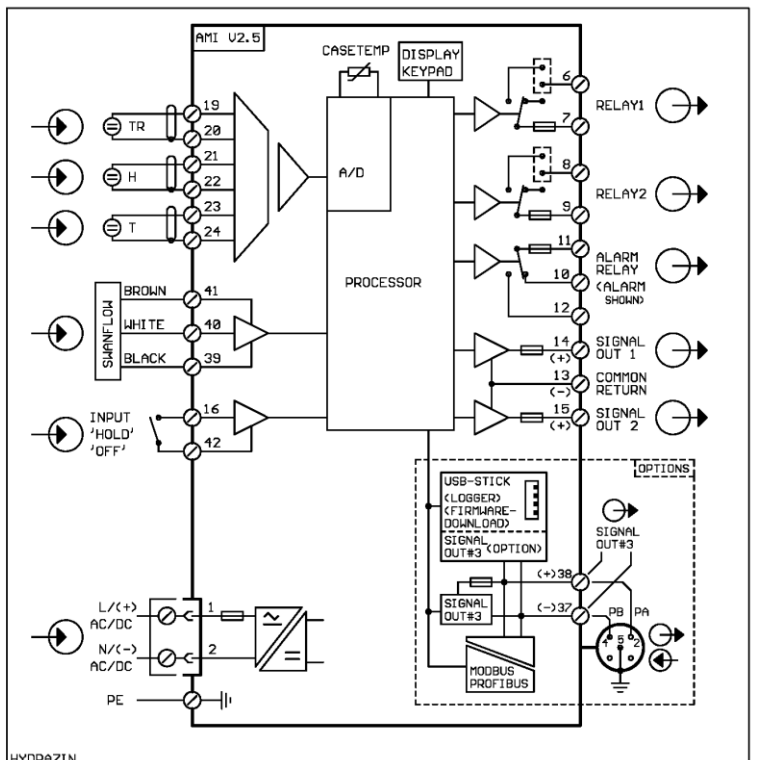
Display of process value, sample flow, alarm status and time during operation. Storage of event log, alarm log and calibration history.

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. Overvoltage protection of in- and outputs. Galvanic separation of measuring inputs and signal outputs.

**Electrical Connection Scheme**



**Transmitter temperature monitoring** with programmable high/low alarm limits.

**1 Alarm relay**

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

**1 Input**

One input for potential-free contact. Programmable hold or remote off function.

**2 Relay outputs**

Two potential-free contacts programmable as limit switches for measuring values, controllers or timer for system cleaning with automatic hold function. Rated load: 1A / 250 VAC

**2 Signal outputs (3<sup>rd</sup> as option)**

Two programmable signal outputs for measured values (freely scaleable, linear or bilinear) or as continuous control outputs (control parameters programmable) as current source. 3<sup>rd</sup> signal output selectable as current source or current sink. Current loop: 0/4 - 20 mA  
Maximum burden: 510 Ω

**Control functions**

Relays or current outputs programmable for 1 or 2 pulse dosing pumps, solenoid valves or for one motor valve. Programmable P, PI, PID or PD control parameters.

**1 Communication interface (option)**

- RS485 interface (galvanically separated) with Fieldbus protocol Modbus RTU or Profibus DP
- 3<sup>rd</sup> Signal output
- USB interface

**Monitor Data**

**Sample conditions**

Flow rate: approx. 15 L/h  
Temperature range: 15 - 45 °C  
Inlet pressure: 0.15 - 2 bar  
Outlet pressure: pressure free  
pH value: equal or higher than pH 7.0  
Reagent consumption (at 25°C): < 1L diisopropylamine per month

**Flow cell and connections**

Acrylic glass with safety filter, metering tap and sample tap, inserts for all sensors.

Sample inlet: tube adapter 4 x 6 mm  
Sample outlet: tube adapter 15 x 20 mm

**Panel**

Dimensions: 280 x 850 x 200 mm  
Material: stainless steel  
Total weight: 10.0 kg