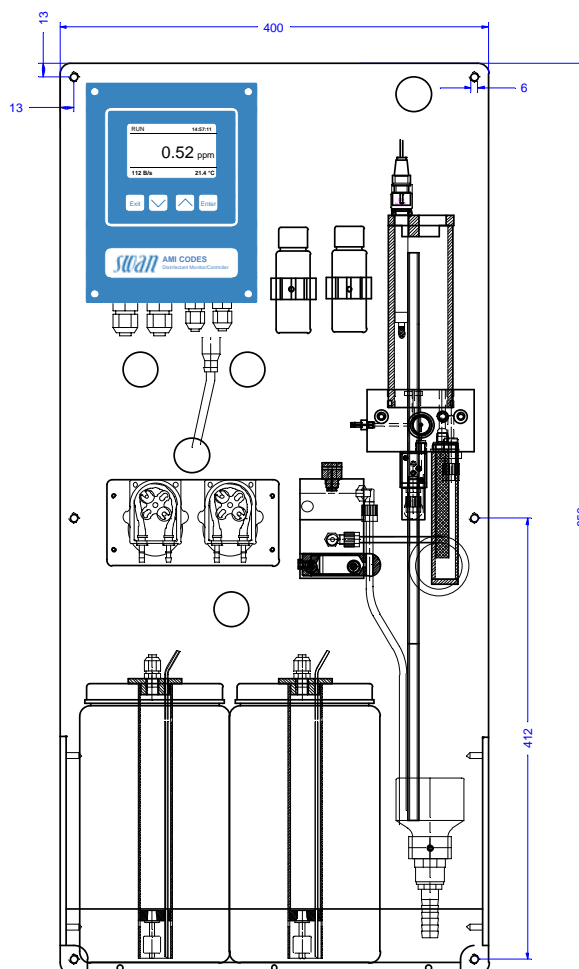


Complete monitoring system for the automatic, continuous measurement and dosing control of total residual chlorine in pool and sanitary water, cooling water, waste water and effluents.

**Monitor AMI Codes TC**

- Based on colorimetric measurement principle.
- Total residual chlorine is determined using the DPD method (EN ISO 7393-2; ASTM).
- Applicable for water containing additives like corrosion inhibitors, cyanuric acid and anti-scalants.
- Complete system including measurement and control electronics, photometer, flow indicator, reaction chamber, reagent dosing system and reagent containers.
- All usual dosing devices for disinfectants and pH control can be connected either through relays or analog output signals. Two independent controllers can operate simultaneously.
- Dosing of disinfectant can be interrupted automatically with an external signal, e.g. during sample flow interrupt or filter backwashing.
- Two (optionally three) selectable measurement values (total chlorine and if installed pH or temperature) are available as analog output signals.
- Alarm display and activation of alarm relay when user defined, critical limits for total chlorine, pH or temperature are reached.
- Continuous, automatic monitoring of main instrument functions (sample flow, reagents).
- Large back-lit LCD display showing all measured values and status information simultaneously.
- Factory tested, ready for installation and operation.



**Options:**

- Integrated pH measurement with temperature compensation.
- Chemical cleaning module. For details please see separate data sheet no. DenA82311000.

| Order scheme                      | Monitor AMI Codes TC   | A | 2 | 5 | 4 | 4 | . | 5 | . | . |
|-----------------------------------|--|---|---|---|---|---|---|---|---|---|
| <b>Power supply:</b>              | 85-265 VAC, 47-63 Hz .....   |   |   | 1 |   |   |   |   |   |   |
|                                   | 24 VDC, direct current .....   |   |   | 2 |   |   |   |   |   |   |
| <b>pH measurement:</b>            | None .....   |   |   |   |   |   |   | 0 |   |   |
|                                   | pH- and integrated temperature measurement .....   |   |   |   |   |   |   | 1 |   |   |
| <b>Electrical output options:</b> | None .....   |   |   |   |   |   |   |   |   | 0 |
|                                   | Third current signal output 0/4 - 20 mA .....  |   |   |   |   |   |   |   |   | 1 |
|                                   | Profibus DP interface .....  |   |   |   |   |   |   |   |   | 2 |
|                                   | HyperTerminal interface (for logger download).....   |   |   |   |   |   |   |   |   | 3 |
|                                   | Modbus interface (for Webserver connection).....   |   |   |   |   |   |   |   |   | 4 |
| <b>Reagents:</b>                  | None .....   |   |   |   |   |   |   |   |   | 0 |
|                                   | Reagent set for total residual chlorine determination (for approx. 8 months of operation) .... |   |   |   |   |   |   |   |   | 1 |
|                                   | <i>Transport restrictions for dangerous goods apply</i>  |   |   |   |   |   |   |   |   |   |

**Analytical System**

**Total residual chlorine measurement**

|                   |                 |
|-------------------|-----------------|
| Accuracy          | Measuring range |
| ± 0.01 ppm        | 0.00 - 1.00 ppm |
| ± 0.06 ppm        | 1.00 - 3.00 ppm |
| ± 0.2 ppm         | 3.00 - 5.00 ppm |
| Measurement time: | 2 min.          |
| Cycle time:       | 5-15 min.       |

**pH measurement (option)**

|                  |           |
|------------------|-----------|
| Measuring range: | pH 2 - 12 |
| Resolution:      | 0.01 pH   |

**Transmitter Specifications and Functionality**

|                           |                                     |
|---------------------------|-------------------------------------|
| Electronics case:         | Aluminum                            |
| Protection degree:        | IP 66 / NEMA 4X                     |
| Display:                  | backlit LCD, 75 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 to 90 % relative, non condensing |

**Power supply**

|          |   |
|----------|---|
| Voltage: | 85 - 265 VAC, 47 - 63 Hz<br>or 24 VDC, ± 15 % |
|----------|---|

Power consumption: max. 20 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, alarm status and time during operation.

Storage of event log, and 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.

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

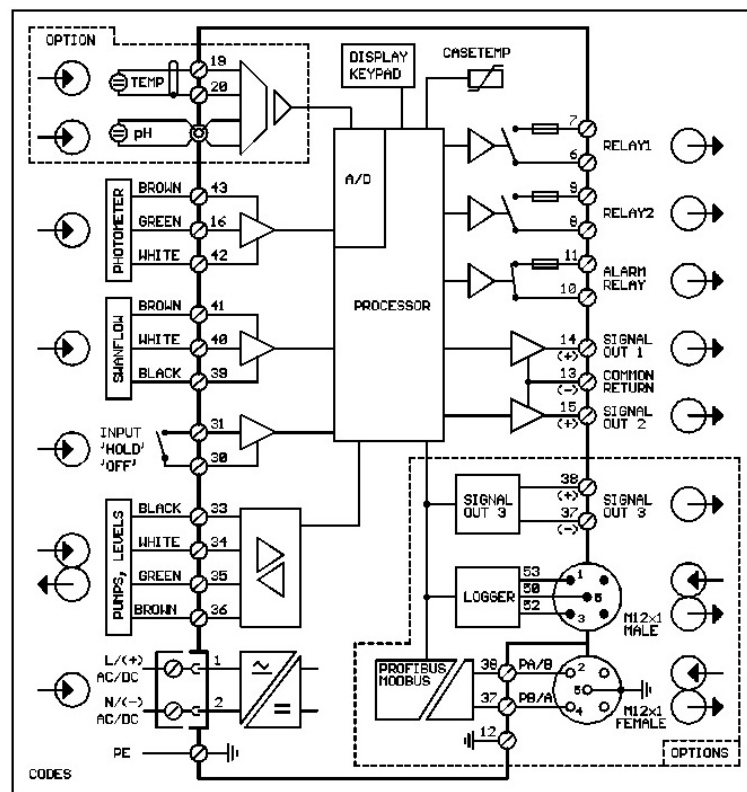
**Real-time clock with calendar**

For action time stamp and preprogrammed actions.

**1 Alarm relay**

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

**Electrical Connection Scheme**



**1 Input**

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

**2 Relay outputs**

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

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

Two programmable signal outputs for measured values (freely scaleable, linear or bilinear) or as continuous control outputs (control parameters program-able).  
Current loop: 0/4 - 20 mA  
Maximum burden: 510 Ω

**Control functions**

Relays or current outputs program-able 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)**

RS232 interface for logger download to PC with Microsoft HyperTerminal or RS485 interface (galvanically separated) with Fieldbus protocol Modbus or Profibus DP.

Remote instrument access with PC requires Modbus interface and optional Webserver.

**Monitor Data**

**Sample conditions**

|                       |  |
|-----------------------|--|
| Water consumption:    | min. 10 l/h                                    |
| Water inlet pressure: | 0.15 to 2 bar                                  |
| Sample temperature:   | 5 to 50 °C<br>with simultaneous pH measurement |

**Flow cell and connections**

Made of acrylic glass with water inlet filter and needle valve. Openings for pH and temperature sensors.  
Inlet tubing: 6 x 8 mm Outlet pressure: atmospheric drain  
Outlet tubing: 15 x 20 mm (1/2")

**Panel**

|                   |                    |
|-------------------|--------------------|
| Panel dimensions: | 850 x 400 x 200 mm |
| Panel material:   | PVC                |
| Weight:           | 9.0 kg             |