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Monitor FAM Ammonium

Data sheet no. DenA2711XXXX

Monitor for continuous measurement of Ammonium in potable water and effluents

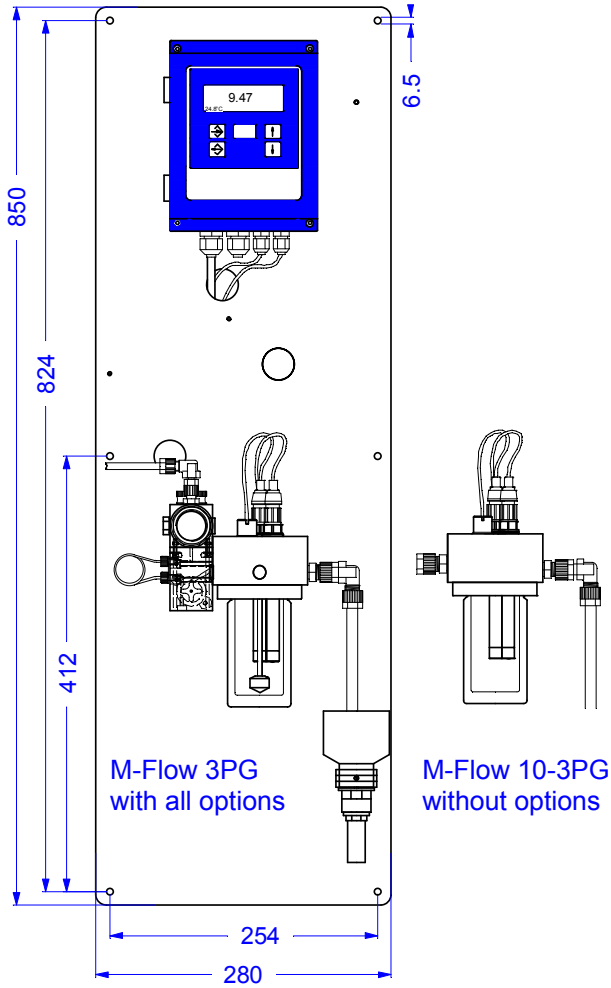
Monitor FAM Ammonium

Complete system mounted on panel:

- **Transmitter FAM Ammonium** in a tough aluminum enclosure (IP66).
- **Swansensor Ammonium** in combination with reference electrode RefTemp.
- **Flow cell M-Flow 10-3PG** for effluent applications **or M-Flow 3PG** with needle valve and digital flow meter for potable water applications. Optional sensor cleaning for both types.
- Factory tested, ready for installation and operation.

Specifications:

- Measuring range: 0.1 to 1000 ppm (= mg/l)
- Simultaneous measurement of ammonium, sample temperature and sample flow.
- Automatic temperature compensation.
- Large backlit LCD-display for the indication of measuring values and operating status.
- 2 Signal outputs 0/4 - 20 mA, for process value, temperature and flow, galvanically separated from sensor input.
- Potential-free alarm contact as summary indication for programmable alarm values and for instrument faults.
- 2 Potential-free contacts, programmable as limit switches or PID-controllers.
- 2 Inputs for potential-free switches with programable functions.
- High-voltage protection for signal outputs and RS485 interface.



Option:

- Swansensor Potassium for automatic compensation of K^+ ion interference.

Order scheme	Monitor FAM Ammonium	A – 27 . 11	X .	X	X	X
Power supply	230 VAC, 50/60 Hz		1			
	115 VAC, 50/60 Hz		2			
	24 VAC, 50/60 Hz		3			
	24 VDC, direct current (isolated)		4			
	200 VAC, 50/60 Hz		5			
	100 VAC, 50/60 Hz		6			
Transmitter interface	None			0		
	Interface RS485 (Profibus DP, Modbus ASCII/RTU, Swanbus)			2		
Flow cell	M-Flow 10-3PG				1	
	M-Flow 10-3PG with spray nozzle for sensor cleaning				2	
	M-Flow 3PG with digital sample flow meter and sample pressure controller				3	
	M-Flow 3PG with digital sample flow meter and sample pressure controller and spray nozzle for sensor cleaning with cleaning water pressure controller				4	
Sensors	3 x Ammonium (for total 3 months operating time)					1
	3 x Ammonium + 3 x Potassium (for total 3 months operating time)					5

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Ammonium Measurement

Measuring range: 0.1 - 1000 ppm

Display range	Resolution
0.00 - 9.99	0.01 ppm
10.0 - 99.9	0.1 ppm
100 - 1000	1 ppm

Automatic range switching

Accuracy: 10% of measured value
Automatic temperature compensation.
Galvanic separation of measuring inputs and signal outputs.

Temperature measurement
Swansensor RefTemp with integrated NTC temperature sensor.
Measuring range: -10 to 50°C
Resolution: 0.1°C

Sample conditions
Flow rate: 4 to 15 l/h
Temperature: up to 50°C
Inlet pressure:
up to 1 bar for M-Flow 10-3PG and
0.5 to 10 bar for M-Flow 3PG
Outlet pressure: pressure free

Flow cell and connections
Flow cell made of PVC and acrylic glass
Process connections: Serto PA
Ø 6 mm for M-Flow 3PG
Ø 10 mm for M-Flow 10-3PG
Sample outlet: flexible tube Ø 25 mm

Flow cell **M-Flow 10-3PG** only without flow adjustment valve and digital flow meter.

Flow cell **M-Flow 3PG** with flow adjustment valve and digital flow meter.

Transmitter Data

Electronics case: Aluminum
Protection degree: IP 66 / NEMA 4X
Data display: backlit LCD, height 15 mm
Connections: Strippable terminal blocks
Ambient temperature: -15 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: 24, 115, 230, 200, 100 VAC (±15%) / 50/60 Hz
or direct current 24 VDC (isolated)
Power consumption: max. 7 VA
Parameter storage without battery.

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

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

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

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

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

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

Input 2
For potential-free switches, programmable as hold or remote-off, or for digital flow sensor (with M-Flow 3PG only).

1 Communication interface (option)
RS485 with Fieldbus protocol Profibus DP or Modbus or RS485 with Swanbus.

Monitor Data

Panel dimensions: 850 x 280 x 150 mm
Panel material: white PVC
Total panel weight: 6.5 kg

Electrical Connection Scheme