

# On-line Monitors/Analysers A-Z

# Ammonium

#### Swan Monitor FAM Ammonium

An electrode based system designed for the continuous measurement of Ammonium in potable and effluent waters. The unit includes the transmitter and measuring cell supplied on a PVC back panel.

#### Options

- RS485 interface with PROFIBUS DP, MODBUS ASCII/RTU or SWANBUS protocol.
- Potassium sensor for automatic compensation of ion interference (potassium).



# SPECIFICATIONS

Parameter	
Measuring range	0.1 to 1000ppm
Resolution	0.01ppm in the 0.00 to 9.99 range, 0.1ppm 10.0 to 99.9 and 1ppm 100 to 1000.
Accuracy	10% of measured value.
Automatic temperature compensation	
Temperature measurement range	-10 to +50°C, resolution 0.1°C.

#### Unit

Transmitter housin	ng IP66
Large backlit LCD o	display for the indication of measuring values and operating status.
wo signal outputs	s galvanically separated from sensor input, for process value and temperature 0 – 20mA.
wo potential-free	e contacts, programmable as limit switches or PID controllers.
wo inputs for pot	tential free switches with programmable functions.
ligh voltage prote	ection for signal outputs and RS485
Aounting panel 28	80 x 850mm.
ample flow 20 to	9 40l/h.
Sample pressure 0	0.15 to 2bar

### **ORDERING INFORMATION**

Swan Monitor FAM Ammonium system complete with sensor Re

Reference: SN/A-27.111.011 £

£2230.00

For prices of alternative system configurations please contact our Technical Support on 01954 233120.



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# Chlorine



#### Camlab Colorimetric Chlorine Analyser A continuous chlorine monitor based on the DPD colorimetric chemistry. The unit is specifically

colorimetric chemistry. The unit is specifically designed to be economical and reduce running costs for measurements in the potable water and leisure industries

#### Options

• Available with pH and pH/ORP measurement.

### SPECIFICATIONS

Parameter	
Measuring range	0.00 to 5.00mg/l free or total chlorine
Resolution	0.01mg/l
Accuracy	+/-8% or +/-0.05mg/l whichever is greater.
Unit	
Graphical backlit display	
Keyboard for all parameter settings	
LED indicator for different modes	
Peristaltic pump for accurate reagent dosing	
External enclosure to NEMA4X	
Sample flow 100 to 300ml/min	
Sample inlet pressure 0.07 to 4 bar	
Sample temperature range 5 to 40°C	
Data logging for up to 3500 points	
Dimensions of casing 318 x 267 x 159mm	

### **ORDERING INFORMATION**

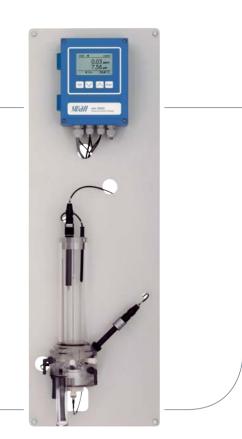
Camlab Colorimetric Chlorine Analyser complete	with	
reagents, tubing and instructions.	Reference: HI/PCA310-2	£1700.00
Camlab Colorimetric Chlorine and pH Analyser co	mplete	
with reagents, tubing and instructions.	Reference: HI/PCA320-2	£1800.00
Camlab Colorimetric Chlorine, pH and ORP Analys	er	
complete with reagents, tubing and instructions.	Reference: HI/PCA330-2	£1900.00
The above unit can be used with it own reagents of	זכ	
most popular brands. The Camlab reagents can als	o be	
used with other colorimetric analysers.		
Reagents available from Camlab.		
Camlab free chlorine reagent set	Reference: HI/70480	£25.00
Camlab total chlorine reagent set	Reference: HI/70481	£25.00
Hach free chlorine reagent set	Reference: HH/25569-00	£37.70
Hach total chlorine reagent set	Reference: HH/25570-00	£37.70

# Chlorine

Swan Chlorine Monitor AMI Trides Microprocessor controlled system for the automatic and continuous measurement of chlorine and other disinfectants in potable and leisure water. The electrode based measuring process is reagent free and therefore reduces running and maintenance costs.

#### Options

- Third signal output
- RS485 interface with PROFIBUS DP, MODBUS ASCII/RTU, SWANBUS or
- Download kit.
- Integral flow sensor



### SPECIFICATIONS

#### Parameter

Measuring range for chlorine	0.00 to 5.00ppm
Resolution	0.01ppm in the 0.00 to 1.00 range
Measuring range for pH	pH 2 to 12 in steps of 0.01
Other parameters measured erene chloring diavide jodi	and bromine

Other parameters measured ozone, chlorine dioxide, iodine and bromine

#### Unit

Transmitter, sensor, temperature sensor, flow sensor and flow cell panel mounted ready for installation Real time pH compensation of chlorine measurement with integrated pH meter (optional pH electrode) Transmitter housing IP66

Easy programming from keypad

Self cleaning sensor

Automatic temperature compensation

Sample flow and sensor cleaning monitoring

Two 4 - 20mA outputs

Sample flow required approximately 40 l/h

Water inlet pressure 0.15 to 2 bar

#### **ORDERING INFORMATION**

Swan Chlorine Monitor AMI Trides standard.

Reference: SN/A-26.111.000

£2670.00

For prices of alternative system configurations please contact our Technical Support on 01954 233120.



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# Chlorine



#### Swan Chlorine Monitor AMI Codes

Complete monitoring system for the automatic, continuous measurement and dosing of chlorine and other disinfectants in potable water, swimming pools, cooling water and effluent. Based on the DPD colorimetric method.

#### **Options**

- pH option including sensor, temperature sensor, cables and electronics board.
- Third signal output selectable as current output, RS485 interface (PROFIBUS DP) or data download kit.

## SPECIFICATIONS

	Parameter	
	Measuring range for free chlorine	0.00 to 5.00ppm
	Resolution	0.01ppm in the range 0.00 to 1.00ppm
	pH measuring range	2 to 12 in steps of 0.01
	Other parameters measured	ozone, chlorine dioxide, iodine and bromine
	Unit	
Complete system including measurement and control electrodes, photometer, flow indicator, reaction chamber, reagent dosing system and reagent containers on mounting board		
Two selectable outputs 4 – 20mA		
Continuous automatic monitoring of main instrument functions (sample flow and reagent supply)		
Large back lit display showing all measured values and status information simultaneously		
	Intuitive user interface with text menus. Simple input of all parameters with keypad	
	Sample flow required minimum approximately 10 l/h	

Water pressure 0.5 to 2 bar

Sample temperature up to 50°C

#### **ORDERING INFORMATION**

Swan Chlorine Monitor AMI Codes with integrated pH measurement.

Reference: SN/A-25.441.010.0

£2810.00

# Conductivity

#### Swan Monitor AMI Solicon 4

A complete monitoring system for the automatic, continuous measurement of the specific conductivity in surface water, potable water and cooling water.



### SPECIFICATIONS

Parameter	
Measuring ranges	0.05 to 9.99uS/cm, 10 to 99.9uS/cm, 100 to 999uS/cm, 1.0 to 9.99mS/cm, 10 to 29.9mS/cm, 30 to 100mS/cm,
Resolution	0.01uS/cm, 0.1uS/cm, 1uS/cm, 0.01ms/cm, 0.1ms/cm, 1ms/cm respectively
Precision	+/- 0.5% of measured volume or 0.01uS/cm
Temperature input	-30 to +250°C. with a resolution of 0.1°C

#### System

Complete system mounted on a PVC backboard includes transmitter, conductivity sensor and flow cell Transmitter housing IP66

Conductivity sensor Swansensor Shurecon P 4 electrode platinum design with built in Pt1000 temperature sensor Built in sample flow monitor.

Large backlit display for the reading of the measured value, sample temperature, sample flow and operating status

Two current signal outputs for measuring values (conductivity, temperature, flow). Third output optional Sample flow 4 to 15 l/h

Temperature up to 50°C

Inlet pressure 0.5 to 10 bar

System calibration automatic with 1.413mS/cm standard

Back panel dimensions 850 x 280 x 180mm

### **ORDERING INFORMATION**

Swan Monitor AMI Solicon 4 standard unit

Reference: SN/A-23.421.000

£1350.00

For prices of alternative system configurations please contact our Technical Support on 01954 233120.

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# Conductivity

#### Swan Conductivity Monitor FAM Powercon+

Monitor for the measurement of conductivity before (specific conductivity) and after a cation exchanger (acid respectively cationic conductivity)

#### **Options**

- RS485 interface with PROFIBUS DP or MODBUS ASCII or MODBUS RTU.
- Built in back pressure controller for constant sample flow.

### **SPECIFICATIONS**

Parameter	
Measuring range	0.055 to 1000uS/cm
Accuracy	+/- 1% of measured value.
Temperature measurement	-30 to +130°C in steps of 0.1°C
Flow measurement 0 to 25 l/h	
System	
System includes the transmitter FAM Powercon+, flow cell for two conductivity sensors and two conductivity sensors mounted on a PVC back plate	
Large back lit display for reading of measured va	lue and operating status
Temperature compensations for specific conductivity. Non linear temperature compensation for high purity water, neutral salts, strong acids strong bases, NH <sub>3</sub> , ethenolamine, morpholine or linear temperature compensation with coefficient	
Temperature compensation for acid (cationic) conductivity. Non-linear for strong acids	
Two signal outputs 0/4 – 20 mA for specific, acid conductivity or temperature, galvanically separated from sensor inputs	
Potential free alarm contacts as a summary alarm indication for instrument faults	
Two potential free contacts as limit switches	
One signal input for potential free contact, function programmable	
High/ low alarm for sample flow	
Needle valve adjustment of sample flow	
Cation exchanger resin sufficient at 1mg/l ammo	onia (pH 9.4)
Sample flow 5 to 20 l/h, pressure 0.2 to 2 bar, temperature 50°C max	

### **ORDERING INFORMATION**

Swan Conductivity Monitor FAM Powercon+ standard unit. Swan Conductivity Monitor FAM Powercon+ with RS485

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Reference: SN/A-23.131.045	£2230.00
Reference: SN/A-23.131.245	£2420.00

# Conductivity

Myron Conductivity/TDS Monitor/Controller 750 Series II *Reliable Field Proven design* 

Reliable Field Proven design The unique circuitry of the 750 series II Conductivity Monitors/Controllers guarantees accurate and reliable measurement. Drift free performance is assured by 'field proven' electronics including automatic DC offset compensation and highly accurate drive voltage.

### **SPECIFICATIONS**

34 Con	iductivity/TDS ranges – 0-1µS/cm to 0-200µS/cm
Choice	of analogue or digital display
Autom	atic temperature compensation to 25°C
Isolate	d 0-10VDC recorder output
IP65/N	VEMA4x water resistant and corrosion proof enclosure (not analogue version)
Single	set point/alarm
Push to	o test set point check
Selecta	able 115/230V
СЕ арр	roved
Unique	e easy installed sensor
Option	is include:
Second	l alarm/control module
4-20m	A isolated output
Tempe	rature module
24VDC	power supply option
Backlit	display

### **ORDERING INFORMATION**

Conductivity/TDS Digital Monitor/controller Model 758II completewith second alarm module backlit display measuring in the range0-2000µS complete with appropriate probe and 25M cable.£883.30Condutivity/TDS Analogue Monitor/controller Model 757II completewith 4-20mA output to measure in the range 0-2000µS completewith appropriate probe and 100M cable.£808.00

To discuss your requirements and other options available in full detail please contact our Technical Support department on 01954 233120.

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# Hydrazine



#### Swan Monitor FAM Hydrazine

Microprocessor controlled system for the determination and control of hydrazine in boiler feed water and other applications.

#### Options

• RS485 interface with PROFIBUS DP, MODBUS ASCII, MODBUS RTU or SWANBUS.

### **SPECIFICATIONS**

Parameter		
Measuring range	0.1 to 600ppb	
Accuracy	+/-5% of reading up to 200ppb, +/-15% of reading up to 600ppb or +/-2ppb.	
Stability	+/- 5% of reading per month or +/-2ppb per month	
Response time	90% of change in 60 seconds after sample entered flow cell.	
Temperature measurement	0 to 60°C in steps of 0.1°C	
System		
System includes monitor, disinfectant sensor, tempera	ture sensor, and flow cell mounted on a back panel	
Large display of the measured value, temperature and operating status		
Self cleaning TRIDES three electrode system for determining hydrazine concentration		
Alkalinization with highly efficient Diisopropylamine		
Automatic monitoring of the sample flow		
Galvanically separated connections for sensors		
Two signal outputs, galvanically separated from sensor, 0/4 – 20mA for hydrazine, temperature or as continual control outputs		
Signal outputs freely scaleable and with simulation mode		
Three potential free contacts. One for system alarm and two contacts as limit switches		
Sample flow approximately 15 l/h		
Sample flow approximately 15 l/h		
Sample flow approximately 15 l/h Sample inlet pressure 0.15 to 2 bar		

### **ORDERING INFORMATION**

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Swan Monitor FAM Hydrazine standard unit Reference: SN/A-26.511.000

£4450.00

For prices of alternative system configurations please contact our Technical Support on 01954 233120.

FOR DISSOLVED OXYGEN ANALYSIS GO TO PAGES 147 TO 148

# Nitrate

#### Swan Monitor FAM Nitrate

Microprocessor controlled monitor for the measurement of nitrate in potable water or effluent based on an electrode system.

#### **Options**

• RS485 interface with PROFIBUS DP, MODBUS ASC/II or SWANBUS protocol.



# **SPECIFICATIONS**

Parameter	
Measuring range	0.1 to 1000ppm
Resolution	0.01ppm in the range 0.00 to 9.99, 0.1ppm in the range 10.0 to 99.9 and 1ppm in the range 100 to 1000
Accuracy	10% of measured value
Measurement of temperature	-10 to +50°C in steps of 0.1°C

#### **System**

System includes transmitter, Swansensor nitrate in combination with reference electrode RefTemp for measurement of nitrate and flow cell on a PVC back plate

Large back lit display indicating measuring values and operating status

Galvanically separated input for sensors

Automatic temperature compensation

Two signal outputs for process values and temperature, 0/4 -20mA

Potential free alarm contacts as summary indication of programmable alarm values and instrument faults

For prices of alternative system configurations please contact our Technical Support on 01954 233120.

Two potential free contacts, programmable as limit switches or PID controllers

Two inputs for potential free switches with programmable functions

High voltage protection for signal outputs and RS485

Sample flow 20 to 40l/h

Sample pressure 0.15 to 2 bar

Ambient temperature -15 to +50°C

Transmitter rating IP66

### **ORDERING INFORMATION**

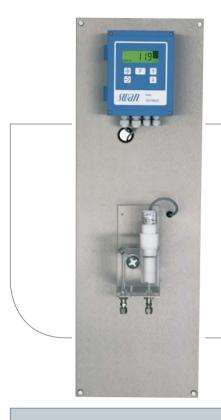
Swan Monitor FAM Nitrate standard unit with nitrate electrode

Reference: SN/A-27.121.01

£2230.00

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# Oxygen (dissolved)

#### Swan Monitor FAM Oxytrace

Microprocessor controlled monitor for the continuous measurement of dissolved oxygen in high purity water. Can also be used for grab sample analysis.

#### **Options**

• RS485 interface with PROFIBUS DP, MODBUS ASCII and MODBUS RTU

### SPECIFICATIONS

Parameter	
Measuring ranges	0.0 to 200ppb, 0 to 2000ppb, 0 to 20ppm and 0 to 200% saturation
Resolution	0.1ppb, 1ppb, 0.01ppm and 0.1% respectively
Accuracy	+/-2% of reading or +/-0.2ppb
Temperature measurement	-30 to +130°C in steps of 0.1°C
System	
System consists of transmitter, Swansensor Oxytrace SC a	nd flow cell mounted on a PVC back panel
Large back lit display showing measured value, temperat	ure and operating status
Automatic temperature and air temperature compensation	n
Automatic calibration procedure	

Two signal outputs 0/4 - 20mA for oxygen and temperature

Potential free alarm contact as summary alarm indication for instrument faults

Two potential free contact as limit switches or alarm indication for flow/temperature

Input for potential free contact, function programmable

Alarm if sample temperature to high Measurement of sample flow with alarm

Needle valve adjustment of sample flow

Sample flow 6 to 14 l/h

Sample pressure 0.2 to 3 bar

Transmitter rating IP66

Ambient temperature -10 to +50°C

### **ORDERING INFORMATION**

Swan Monitor FAM Oxytrace standard Reference: SN/A-22.251.045 Swan Monitor FAM Oxytrace with RS485 interface. Reference: SN/A-22.251.245

£2600.00 £2190.00

# Oxygen (dissolved)

Swan SOLO Oxytrace FC Monitor Compact analyser for the continuous measurement of dissolved oxygen in the ppb range.

Options

• RS485 interface with PROFIBUS DP, MODBUS ASCII , MODBUS RTU or SWANBUS protocols instead of second output 0/4 – 20mA

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# **SPECIFICATIONS**

Measuring ranges	0.0 to 200ppb, 0 to 2000ppb, 0 to 20ppm and 0 to 200% saturation
Resolution	0.1ppb, 1ppb, 0.01ppm and 0.1% respectively
Accuracy	+/- 2% of reading or +/-0.2ppb
Temperature measuring range	-10 to +100°C in steps of 0.1°C
System	
Compact analyser in instrument case for wal	II installation
Four digit LED display and eight LEDs indicati	ing the operating status
Galvanically separated connection for oxyge	n electrode
Automatic temperature compensation	
Galvanically separated signal outputs 0/4-20	)mA for oxygen or temperature
Potential free relay contact as system alarm high temperature	for instrument fault, insufficient or high sample flow and low or
Automatic self diagnostics	
Automatic verification with Faraday calibrato	r
Sample flow 6 to 14 l/h	
Sample pressure 0.3 to 3 bar	
Ambient temperature 5 to 50°C	
Dimensions 380 x 390x 180mm	
Rating splash proof	

### **ORDERING INFORMATION**

Swan SOLO Oxytrace FC Monitor complete with	
single outputs	Reference: SN/A-22
Swan SOLO Oxytrace FC Monitor complete with	
RS485 interface	Reference: SN/A-22



camlab

On-line Monitors/Analysers A-Z



# Oxygen (dissolved)

#### Swan Monitor FAM Oxysafe

Microprocessor controlled analyser for the continuous measurement of dissolved oxygen in potable water and effluents.

#### Options

• RS485 Interface with PROFIBUS DP, MODBUS ASCII, MODBUS RTU or SWANBUS protocols.

### SPECIFICATIONS

Parameter	
Measuring ranges	0 to 20ppm 02 and 0 to 200% saturation
Resolution	0.01 ppm
Temperature measuring range	-30 to +130°C in steps of 0.1°C
System	
System includes transmitter, Swansensor Oxy	vsafe and flow cell all mounted on a PVC backboard
Large backlit display showing measured value	e, temperature and operating status
Automatic air pressure compensation	
Automatic calibration procedure	
Two signal outputs, galvanically separated fr	om sensor input for oxygen and temperature 0/4 – 20mA
Potential free alarm contact as summary alarm indication for programmable alarm values and instrument faults	
Two potential free contacts programmable a	s limit switch or PID control
High voltage protection for signal outputs an	d R\$485
Sample flow 20 to 40 l/h	
Sample pressure 0.15 to 2bar	
Monitor casing rating to IP66	
Ambient temperature –15 to +50°C	

### **ORDERING INFORMATION**

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Swan Monitor FAM Oxysafe standard unit

Reference: SN/A-22.311.000

£1780.00

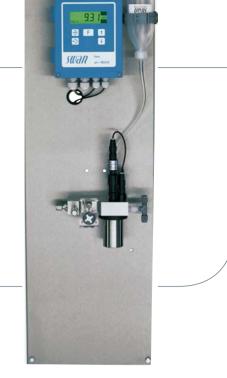
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#### Swan FAM pH/ORP/Temperature Controller

On line transmitter/controller for the measurement of pH, redox (ORP) and temperature in water treatment, industrial and steam cycle of power plants applications.

#### Options

• RS485 interface with PROFIBUS DP, MODBUS ASCII/RTU or SWANBUS protocols.



## **SPECIFICATIONS**

Parameter	
Measuring range	2.00 to 14.00pH
Resolution	0.01pH
Redox measuring range	–500 to +1500mV
Resolution	1mV
Temperature measuring range	-30 to +130°C

#### **System**

Measuring transmitter 180 x140x 70mm rated to IP66 Large backlit display of the reading, temperature and operating status Galvanically separated connection for pH or redox (ORP) sensor with or without impedance converter Buffer and redox calibration standards programmable Automatic temperature compensation according to Nernst Over voltage compensation for in- and outputs Two signal outputs galvanically separated from sensor input for pH, redox and temperature Both signal outputs freely scaleable and with simulation mode Two potential free contacts programmable as limit switch or PID control High voltage protection for signal outputs and RS485

Ambient temperature -15 to +50°C

### **ORDERING INFORMATION**

Swan FAM pH/ORP/Temperature Controller standard unit	Reference: SN/A-11.111.000	£650.00
Swan FAM pH/ORP/Temperature Controller with RS485 interface.	Reference: SN/A-11.111.200	£840.00



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#### Swan Monitor FAM pH/Redox

A specially designed unit for on line measurement of pH and redox in water with low ion concentration.

#### Options

• RS485 interface with PROFIBUS DP or MODBUS ASCII/RTU protocol.

**SPECIFICATIONS** 

Parameter	
Measuring range	2.00 to 14.00 pH
Resolution	0.01рН
Redox measuring range	-500 to +1500mV
Resolution	1mV
Temperature range	-30 to +130°C
System	
System consists of transmitter, flow cell and electrode m	ounted on a stainless steel backplate
Large backlit display of value and system status	
Automatic temperature compensation according to Nerns	st
Alarm if sample temperature is too high	
Two signal outputs for pH and redox galvanically separat	ed from inputs
Measurement of sample flow with high/low alarm	
Needle valve adjustment of the sample flow	
Sample flow 5 to 10 l/h	
Sample pressure 0.2 to 2 bar	
Ambient temperature 5 to 50°C	
Backplate dimensions 280 x 850mm	

#### **ORDERING INFORMATION**

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Swan Monitor FAM pH/Redox with standard pH electrode.

Reference: SN/A-21.111.041

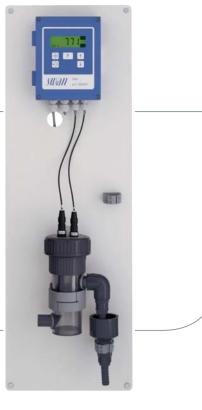
£1470.00

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#### Swan Monitor FAM pH/Redox PVC Monitor for the continuous measurement of pH or redox in potable water and effluents.

#### **Options**

• RS485 interface with PROFIBUS DP or MODBUS ASCII/RTU protocol.



# SPECIFICATIONS

Parameter	
pH measuring range	2.00 to 14.00
Resolution	0.01pH
Redox measuring range	-500 to + 1500mV
Resolution	1mV
Temperature measurement	-30 to +130°C in steps of 0.1°C

#### System

System
System consists of transmitter, flow cell and electrode mounted on a PVC backplate
Large backlit display of measured value and operating status
Two signal outputs 0/4 – 20mA for pH, redox or temperature, galvanically separated from sensor inputs
Potential free alarm contact as a summary alarm indication for instrument faults
Two potential free contacts as limit switches
High voltage protection for signal outputs and RS485
Temperature sensor for case temperature with alarm
Sample flow 20 to 40 l/h
Sample pressure 0.15 to 2 bar
Ambient temperature 5 to 50°C
Transmitter rating IP66

### **ORDERING INFORMATION**

Swan Monitor FAM pH/Redox PVC standard unitwith electrode.Reference: SN/A21.121.020£1030.00

For prices of alternative system configurations please contact our Technical Support on 01954 233120.



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 $p \parallel 0.14 \text{ or } \pm 2000 \text{ m}$ 

#### Myron pH and ORP Monitor/Controllers 720II Series

Reliable Field Proven design The advanced 'isolated' circuitry of the 720 Series II pH/ORP Monitors/controllers guarantees accurate and reliable measurements completely eliminating ground loop and noise issues. The unique sensor pre-amp allows for longer distances between the sensor and the monitor without the loss of accuracy or reliability.

### **SPECIFICATIONS**

Ranges pH 0-14 or ±2000mV
Choice of analogue or digital meters
Advance 'isolated' circuitry
Automatic temperature compensation
Isolated 0-10 VDC recorder output
IP65/NEMA4X water resistant and corrosion proof enclosure
Push to test set point check
Selectable 115/230VAC
CE approved
Unique easy install sensors
Built-in electronic calibration
Single set point/alarm, Adjustable set point hysteresis
Internal set point discourages unauthorized adjustment
Options include:
Second alarm/control module
4-20mA isolated output
Temperature module
Backlit display

### **ORDERING INFORMATION**

Myron pH and ORP Monitor/Controllers 720II Series



Details and prices are available on request.

# Phosphate

#### Swan COPRA Phosphate Analyser

Precision colorimetric based on line analyser for the measurement of phosphate in potable and boiler waters. Also features grab sample function.

#### Options

- 4 channel instrument.
- Communication board for BUS (PROFIBUS DP, MODBUS).



# SPECIFICATIONS

Parameter	
Measuring range	0.01 to 50 ppm
Accuracy	+/-0.05ppm or 5% of value
Reproducibility	+/-0.05ppm or 2% of value
Response time	6 minutes

#### System

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System consists of a transmitter, colorimeter chamber pump mounted on a backplate
2 channels
Full text display
Programmable automatic calibration
Constant temperature reaction chamber and colorimeter
Automatic check of sample flow and reagent addition
Four signal outputs freely scaleable, 0/4 – 20 mA and RS232 as standard
Data logging of approximately 8000 data points
Sample flow minimum 10ml per min
Sample pressure 0.3 to 3.0 bar
Sample/ ambient temperature 5 to 45°C
Protection IP65

### **ORDERING INFORMATION**

Swan COPRA Phosphate Analyser standard unit Swan COPRA Phosphate Analyser standard unit with	Reference: SN/A-25.210.000	£7680.00
communication board	Reference: SN/A-25.210.010	£8330.00
Swan COPRA Phosphate Analyser up to 4 channels	Reference: SN/A-25.211.000	£8420.00





#### Swan Monitor AMI Phosphate

Complete system for the automatic measurement of phosphate in low concentrations. Suitable for potable, effluent and cooling waters without the problems of interference from silica.

### SPECIFICATIONS

Measuring range	0.01 to 10.00 ppm PO4
Reproducibility	+/-0.01ppm or 2.5%
No interference from silica	
System	
Complete system including controller, me	easuring cell and reagents mounted on a PVC back panel
Automated chemical cleaning module tp	extend the maintenance free operating time (optional)
Long term stability by automatic zero po	int adjustment of the process-photometer before every reading
Constant sample flow due to special flow	v cell design
High operating stability through a consta	nt control of sample flow and level of reagents
Easy to use specific operating menus	
Clear instrument status information	
Aluminium housing of transmitter rated	to IP66/NEMA4X
Large LCD display	
Two programmable signal outputs	
One programmable input	
Separate relay contact as summary alarr	n indication
Instrumentation communication via optic	onal Rs485 interface with Fieldbus protocol MODBUS or PROFIBUS DP

### **ORDERING INFORMATION**

Swan Monitor AMI Phosphate

Reference: SN/A-25.421.000

£5040.00

# Samplers

- Fixed site refrigerated sampler
- Vacuum sampling
- Single and multi-bottle formats
- Time, event and flow proportional sampling programmes available
- Maximum sample lift 7 metres (higher lifts require external pump)
- E32 compliant.



### **ORDERING INFORMATION**

#### **Example Prices UK list**

4010 with 1 x 25litre composite sample bottle		
110V AC operation	part No HH/4011.53.21112	£3430
4010 with 24 x 1 litre sample bottles		
110V Ac operation	part No HH/4011.53.21612	£3834

We also offer the American Sigma range of samplers which operate using a peristaltic pump rather than a vacuum pump to draw the sample up , however these are more difficult to configure and approx 9 part numbers have to be ordered to make one sampler.



# Samplers



### **ORDERING INFORMATION**

<b>Example Prices UK list</b>	Examp	le	Prices	UK	list
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Xian 1000 with $1 \ge 24$ litre composite sample bottle	part No HH/1000A1X12	£2995
Xian 1000 with 24 x 500ml sample bottles	part No HH/1000A24X05	£3280
Xian 1000 with 24 x 1 litre sample bottles	part No HH/1000A24X1	£3690

There are other versions of sampler available these being refrigerated fixed site versions

# Silica

#### Swan COPRA Silitrace

Precision photometric analyser for the measurement of trace silica in ultra pure water. The unit is designed to measure trace amounts of silica in ultra pure applications using a reversed osmosis system to concentrate the sample.

#### **Options**

• Communication port for field bus applications or connection of a modem.



## **SPECIFICATIONS**

Parameter	
Measuring range	0.005 to 20 ppb
Accuracy	+/-0.005 ppb or +/-5% of value
Reproducibility	+/-0.002 ppb or 2% of value
Response time	10 min

#### System

System consists of transmitter, pump, colorimetric chamber and concentrator mounted on backboard
Full text display
Menu driven programming
Automatic check of sample flow and reagent addition
Constant temperature reaction chamber and photometer
Four signal outputs freely scaleable $0/4 - 20$ mA and RS232 as standard
Data logging for approximately 800 records
Sample flow minimum 100 l/h
Sample pressure 2.0 to 10.0 bar
Sample/ambient temperature 5 to 45°C
Protection IP65

For prices of alternative system configurations please contact our Technical Support on 01954 233120.

### **ORDERING INFORMATION**

Swan COPRA Silitrace standard unit

Reference: SN/A-25.120.000 £13,5

£13,500.00

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camlab



# Silica

#### Swan COPRA Silica Analyser

Precision photometric analyser for the measurement of silica in high purity water applications such as steam generation or demineralisation plants. Can also be used for grab samples.

#### Options

- 4 channel instrument
- Ion exchanger for blank.
- Communication board for BUS and connection of modem.

### SPECIFICATIONS

Parameter	
Measuring range	0.5 to 1000 ppb
Accuracy	for 0.5 to 500 ppb = +/-0.5 ppb or 5% of measured value
Reproducibility	for 0.5 to 500 ppb = +/-0.5 ppb or 2% of measured value
Response time	6 min
System	
System consists of transmitter, pump photometer	block and ion exchanger (optional) all mounted on a backboard
2 channels	
Full text display	
Menu driven programming	
Programmable automatic calibration (zero point g	ain)
Automatic check of sample flow and reagent addi	ition
Constant temperature reaction chamber and photo	ometer
Four signal outputs freely scaleable, 0/4 – 20mA	
Data logging for approximately 8000 data points	
Sample flow minimum 10 ml/min	
Sample pressure 0.3 to 3.0 bar	
Sample/ambient temperature 5 to 45°C	
Protection IP65	

### **ORDERING INFORMATION**

Swan COPRA Silica Analyser standard unit Swan COPRA Silica Analyser with blank function and	Reference: SN/A-25.110.000	£8160.00
communication board Swan COPRA Silica Analyser with 4 channels Swan COPRA Silica Analyser with 4 channels, blank	Reference: SN/A-25.110.110 Reference: SN/A-25.111.000	£9260.00 £8900.00
function and communication board	Reference: SN/A-25.111.110	£10,000.00

Five and six channel models also available please contact our technical sales for full details

# Sludge Level

Lovibond Sludge Level Detector ET640 The ET640is a portable unit designed for measuring the solid content and sedimentation characteristics of wastewater in pools an tanks. The probe is lowered in to the tank and the LED display changes depending on the solid matter content. Once the probe reaches the separation layer in the sludge sediment the LED display changes to the red zone. An acoustic alarm is also emitted.

The user can directly read off the depth of the various layers (clear areas or sediment layer) on the cable in 0.5M steps. The probe consists of an impact resistant plastic housing and is equipped with an LED light source, the light from which is received and evaluated by a photodiode on the opposite side.



#### **Advantages**

- Measurement via LED
- Acoustic massage support
- · Solid measuring head
- Rechargeable battery operation
- Single key operation.

### SPECIFICATIONS

approx. 200 to 5000mg/l solids
LED multi-coloured
intermittent or continuous tone
7.2V rechargeable with charge indication.
0 - 50°C
ABS plastic, splash proof

#### **ORDERING INFORMATION**

**Lovibond Sludge Level Detector ET640** complete in carrying case with probe and 10 metres of cable, battery, battery charger and instructions

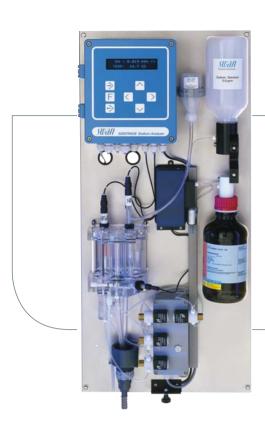
Reference: TT/41.98.06

£881.00





# Sodium



Swan Soditrace Sodium Analyser On line analyser for the measurements of sodium ions in trace amounts.

#### **Options**

• RS485 interface for PROFIBUS, MODBUS ASCII/RTU or modem

**SPECIFICATIONS** 

Accuracy +/-0.001 ppb or +/-10% of reading Reproducibility +/-0.001 ppb or +/-5% of reading Response time (90%) 120 seconds Temperature range -30 to +130°C in steps of 0.1°C System System consists of transmitter, measuring cells, air pump and reagent system mounted on a backplate Automatic 3 point known addition calibration in the ppb range Automatic control of sample pH conditioning Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar			
Accuracy +/-0.001 ppb or +/-10% of reading   Reproducibility +/-0.001 ppb or +/-5% of reading   Response time (90%) 120 seconds   Temperature range -30 to +130°C in steps of 0.1°C   System -30 to +130°C in steps of 0.1°C   System consists of transmitter, measuring cells, air pump and reagent system mounted on a backplate   Automatic 3 point known addition calibration in the ppb range   Automatic control of sample pH conditioning   Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance   Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell   Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm)   Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output   RS232 interface   Full text display   Sample flow 100 ml/min   Sample pressure 0.3 to 3 bar   Sample/ambient temperature 5 to 45°C	Parameter		
Reproducibility +/-0.001 ppb or +/-5% of reading   Response time (90%) 120 seconds   Temperature range -30 to +130°C in steps of 0.1°C   System System consists of transmitter, measuring cells, air pump and reagent system mounted on a backplate   Automatic 3 point known addition calibration in the ppb range Automatic control of sample pH conditioning   Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell   Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output   RS232 interface Full text display   Sample flow 100 ml/min Sample pressure 0.3 to 3 bar   Sample/ambient temperature 5 to 45°C Status	Measuring range	0.001 to 10 ppm	
Response time (90%) 120 seconds   Temperature range -30 to +130°C in steps of 0.1°C   System System consists of transmitter, measuring cells, air pump and reagent system mounted on a backplate   Automatic 3 point known addition calibration in the ppb range Automatic control of sample pH conditioning   Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell   Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output   RS232 interface Full text display   Sample flow 100 ml/min Sample pressure 0.3 to 3 bar   Sample/ambient temperature 5 to 45°C States	Accuracy	+/-0.001 ppb or +/-10% of reading	
Temperature range -30 to +130°C in steps of 0.1°C   System System consists of transmitter, measuring cells, air pump and reagent system mounted on a backplate   Automatic 3 point known addition calibration in the ppb range Automatic control of sample pH conditioning   Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell   Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output   RS232 interface Full text display   Sample flow 100 ml/min Sample pressure 0.3 to 3 bar   Sample/ambient temperature 5 to 45°C Sample/ambient temperature 5 to 45°C	Reproducibility	+/-0.001 ppb or +/-5% of reading	
System System consists of transmitter, measuring cells, air pump and reagent system mounted on a backplate Automatic 3 point known addition calibration in the ppb range Automatic control of sample pH conditioning Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output R\$232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	Response time	(90%) 120 seconds	
System consists of transmitter, measuring cells, air pump and reagent system mounted on a backplate Automatic 3 point known addition calibration in the ppb range Automatic control of sample pH conditioning Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	Temperature range	–30 to +130°C in steps of 0.1°C	
System consists of transmitter, measuring cells, air pump and reagent system mounted on a backplate Automatic 3 point known addition calibration in the ppb range Automatic control of sample pH conditioning Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C			
Automatic 3 point known addition calibration in the ppb range Automatic control of sample pH conditioning Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	System		
Automatic control of sample pH conditioning Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	System consists of transmitter, measuring cells, ai	r pump and reagent system mounted on a backplate	
Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	Automatic 3 point known addition calibration in the	he ppb range	
and electrode performance Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	Automatic control of sample pH conditioning		
Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm) Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	Continuous monitoring of under voltage, reagent levels, sample flow, sample temperature and electrode performance		
Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	Galvanically separated connection for sodium and reference electrodes, temperature probe and conductivity cell		
RS232 interface Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	Four potential free contacts (2 as limit switches, 1 as cal status and 1 alarm)		
Full text display Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	Four galvanically separated signal outputs 0/4 – 20mA with freely scaleable linear or logarithmic output		
Sample flow 100 ml/min Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	RS232 interface		
Sample pressure 0.3 to 3 bar Sample/ambient temperature 5 to 45°C	Full text display		
Sample/ambient temperature 5 to 45°C	Sample flow 100 ml/min		
	Sample pressure 0.3 to 3 bar		
Protection NEMA 4X/IP65	Sample/ambient temperature 5 to 45°C		
	Protection NEMA 4X/IP65		

### **ORDERING INFORMATION**

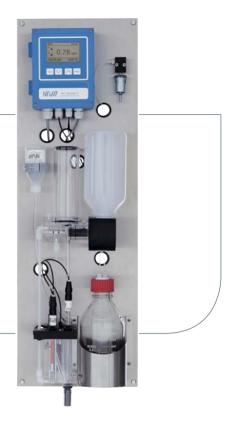
Swan Soditrace Sodium Analyser standard unit	Reference: SN/A-24.510.100	£7200.00
Swan Soditrace Sodium Analyser with RS485 interface	Reference: SN/A-24.510.110	£7252.00

# Sodium

Swan Analyser AMI Sodium P On line analyser for the continuous determination of sodium in the ppb range for steam, condensate and high purity water with a pH greater than or equal to 7. Includes grab sample capability.

#### Options

- Two sample streams
- Third signal output
- PROFIBUS DP interface



# **SPECIFICATIONS**

Parameter		
Measuring ranges	0 to 99.9 ppb, 0 to 999 ppb and 0 to 9.99 ppm	
Resolution	0.1 ppb, 1 ppb and 0.1 ppm respectively	
Accuracy	+/-10% of reading after calibration	
Repeatability	5%	
Response time	(90%) 180seconds	
Temperature measuring range	-10 to +100°C	
System		
Complete system mounted on stainless steel backplate		
Automatic range switching		
Reliable alkalisation reagent addition with continuous pH monitoring		
Simple two point calibration with calibration stored in transmitter		
Continuous sample flow detection		
Automatic temperature compensation		
Large backlit display showing values and status		
Two signal outputs 0/4 – 20mA		
Intuitive user interface with text menus		
Sample flow min 100m I/min		
Sample pressure 0.3 to 3 bar		
Sample temperature 5 to 45°C		
Protection NEMA4X/ IP66		

### **ORDERING INFORMATION**

Swan Analyser AMI Sodium P standard unit

Reference: SN/A-24.411.100

For prices of alternative system configurations please contact our Technical Support on 01954 233120.

£4450.00

&

**On-line** 

camlab

# Turbidity



#### Swan Monitor AMI Turbitrace

Nephelometric system for the continuous measurement of low level turbidity in pure and ultra pure water.

**Options** • PROFIBUS DP interface.

## SPECIFICATIONS

Parameter			
Measuring range	0.000 to 100.0 FNU		
Precision	+/- 0.001 FNU or 1% of reading		
System			
Complete system including transmitter, sensor, flow cell with sub-micron filter, flow controller and flow sensor mounted on a backplate			
Complies to ISO7027			
Automatic range switching			
Programmable automatic zero point measurement for drift compensation by integrated sub-micron particle filter			
Pressurised sample system up to 10 bar avoids outgassing of sample			
Large backlit display			
Two signal outputs			
Alarm contact as summary alarm indication for programmable alarm values and for instrument faults			
Input for potential free contact with programmable function			
Sample flow 5 to 20 l/h			
Sample pressure 1 to 10 bar			
Sample temperature 1 to 40°C			
Transmitter rating IP66			
Ambient temperature $-15$ to $+50^{\circ}$ C			

### **ORDERING INFORMATION**

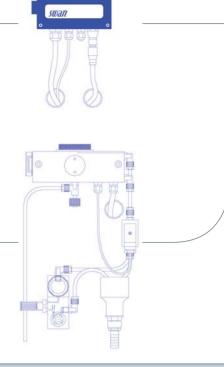
Swan Monitor AMI Turbitrace standard unit	Reference: SN/A25.411.500	£2920.00
Swan Monitor AMI Turbitrace with		
PROFIBUS DP interface	Reference: SN/A25.411.520	£1980.00

# Turbidity

Swan Monitor AMI Turbitrack Nephelometric system for the automatic and continuous measurement of low level turbidity in pure water.

#### Options

PROFIBUS DP interface



# SPECIFICATIONS

#### Parameter

Measuring range

Precision

#### 0.000 to 100.0 FNU

+/- 0.001 FNU or 1% of reading

#### System

Complete system including transmitter, sensor, flow cell with sub-micron filter, flow controller and flow sensor mounted on a backplate

Complies to ISO7027

Automatic range switching

Programmable automatic zero point measurement for drift compensation by integrated sub-micron particle filter Pressure tight sample system up to 10 bar avoids outgassing of sample

Large backlit display

Two signal outputs

Alarm contact as summary alarm indication for programmable alarm values and for instrument faults

Input for potential free contact with programmable function

Sample flow 5 to 20 l/h

Sample pressure 1 to 10 bar

Sample temperature 1 to 40°C

Transmitter rating IP66

Ambient temperature -15 to +50°C

### **ORDERING INFORMATION**

Swan Monitor AMI Turbitrack standard unit Swan Monitor AMI Turbitrack with PROFIBUS DP



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