

## GENIE-M/UWWTR

The SIRCO™ GENIE-M/UWWTR Fixed Site Sampler is fully compliant to E32, the Environment Agency Specification for Automatic Sampling Equipment.

This Sampler has been evaluated by an independent testing authority. Copies of the relevant report are available on request.

The SIRCO™ GENIE-M/UWWTR Sampler is microprocessor based and features great flexibility in both the programming and operational function fields.

It is a mains powered, free-standing sampler and can be supplied to operate at a mains voltage to suit the available supply.

The Programming flexibility is enhanced by the use of a **REAL-TIME** clock, enabling the actual desired day, date and time to be entered (to the nearest minute), in parameters such as **DELAY**, **START** and **END TIME**. The interval between samples is selectable from 1 minute to 24 hours, in 1 minute increments with the time that the next sample is due to be taken being displayed.

### SAMPLING PROGRAMMES

A total of four sampling programmes are available – one factory set programme – and three programmes which the user may set. These may be set to regularly used sequences in order to facilitate rapid on site installation (particularly important on these portable units which may be required to operate in several different locations with varying sampling parameters).

An additional programme is available if required. This is the **STAND-BY** programme, i.e. the Sampler 'stands by' until it receives a contact closure signal at the EX-T input before taking a sample, and then takes samples on a timed interval basis until the signal is removed.

Also, a **REVIEW** facility is provided, so that the parameters set in any programme can easily be checked.

Included as standard are facilities for operating from external equipment, such as a Flow Monitor. These consist of an **EXTERNAL TRIGGER**, which will accept a contact closure or open collector transistor output, and a 4-20 mA signal input.

Programmed into the GENIE-M/UWWTR Sampler is a **RE-TRY** function. This means that should the Sampler fail to take a sample at the first attempt it will try again. On the second attempt, the sampler adds 50% of the set Purge Time to the purge and vacuum duration. Should this second attempt fail, the sampler will make a third attempt – adding a further 50% of the set Purge Time. If this third attempt fails, the sampler shuts down to await the next sample initiation signal.

### REMOTE CONTROL AND PROGRAMMING

GENIE Samplers are fitted with an RS232C interface, allowing communication between the Sampler Controller and a computer which has serial communications software (such as Windows Terminal) installed. The protocol used is simple two-wire and ground. The facility gives full remote control via the



computer keyboard, including program and interrogate functions.

A 7 way weatherproof auxiliary connector is provided on the side of the cabinet allowing connection to a computer.

### CONTROLLER OPERATION

The SIRCO™ GENIE Controller is a Microprocessor based unit with a 40 character x 4 line Liquid Crystal Display and 16 Tactile Keys with audible data entry.

The Controller is fitted with Lithium Batteries which are used to run the Real-Time clock and to retain programme data when the unit is off.

In the event of a 'DATA ERROR' display, the **STAND-BY** (if available) and three user programmes will be automatically set with the same parameters as the preset programme.

### EX-T INPUTS

When the controller is set in the EX-T mode it can receive negative going pulses from external equipment. This requires the EX-T input to be grounded by the external equipment, using either a volt free contact closure from a relay or by sinking the voltage on the input of the controller using a transistor. When the EX-T counter is set to 1, the controller will operate the sampler each times it receives a negative going pulse. When set to 2 or more the counter will decrement each time it receives a negative going pulse until it reaches zero, when the controller will operate the sampler.

### 4-20mA INPUTS

When the controller is set in the EX-T mode and the 4-20mA option switched on, it can also receive a 4-20mA analogue signal from external equipment. When a 4-20mA signal is received the EX-T counter will count down from the user set number to zero. The speed of the counter and therefore the sampling frequency will be proportional to the mA input signal.

### EX-T MODE DISPLAY

When the programmer is operating in the EX-T mode a typical display format would consist of the real time display and battery state indicator on the top line, as in the timer mode display. On the second line the display will show the number of the next sample to be taken and the EX-T pulse counter. This counter will count down from the EX-T counter number programmed in by the user, reset and initiate a sampling sequence upon reaching zero.

## DISPLAY LANGUAGE

The readout for the Liquid Crystal Display is available in six languages as standard; other languages can be programmed in at the factory, if required.

The Six Standard Languages are:

- ✓ ENGLISH
- ✓ FRANCAIS
- ✓ ITALIANO
- ✓ DEUTSCH
- ✓ ESPANOL
- ✓ NEDERLANDS

This will normally be factory set if requested at the time of order, but can be programmed by the user as and when required.

## SAMPLE CONTAINER OPTIONS

The GENIE-M/UWWTR is a Composite Sampler only, supplied with a 10 litre Polyethylene Container.

## OPTIONAL EXTRAS

The GENIE-M/UWWTR Sampler can also be fitted with several additional items depending on operational conditions. These include Refrigeration (for sample containers), Heater & Thermostat (frost protection/anti-condensation in the sampling unit), and Ball Valves (for sampling from a pressurised source).

## SPECIFICATION

### CONSTRUCTION

Enclosure	- GRP weatherproof cabinet with two separate compartments
Metering Chamber	- Plexiglass
Metering Chamber Top	- Moulded Nylon with built-in protective check valve
Suction Tubing	- Reinforced Black PVC 10mm ID x 16mm OD, 7.5 metres supplied
Electrode	- 316 Stainless Steel
Electrical	- 110 vac 2 amp max. 50-60Hz (3 amp max. with refrigerator) 230 vac 1 amp max. 50-60Hz (2 amp max. with refrigerator)
Solids – Max dia. Pump	- To inside diameter of the suction tube - Heavy-duty vacuum/pressure diaphragm pump
Vapour Shield	- Separate compartment
Weight	- 100 kgs approx
Dimensions	- 1610mm x 585mm x 585mm (height x width x depth of cabinet)
Biological Stamping	- Thermostatically controlled fan assisted refrigeration unit.

### OPERATIONAL

Sample Volume	- Adjustable from 25 to 500 ml
Sample Measuring	- Transparent metering chamber
Sampling Speed	- 0.52 metres per second @ 7 metre lift
Sampler Lift	- Up to 7.5 metres
Suspended Solids	- Up to 10mm diameter
Sample Volume Adjustment	- Single sliding metering tube
Pre-Sampling Purge	- High pressure 14 psig
De-Plugging Purge	- Automatic 'on-call' whenever plugging occurs
Suspended Solids Loss	- None
Language	- Alternatives available
Data Retention	- Operational status retained if power is interrupted
Interrogation	- Programming review facility
Sampling Programme Interval Timer	- 1 minute to 24 hours in 1 minute increments
Sampling Programme External Trigger	- Flowmeter (proportional) contact closure or 4-20mA signal
Sampling Programme Termination	- User programme or on completion of 24 jar cycle

Sample Programming	- Three standard user programmable and one preset
Sample Overflow Protection	- Mounted in metering chamber top
Internal Corrosion Protection	- Pump exhausts through bulkhead to the outside of enclosure
Servicing	- 2 wing nut assembly gives access to metering chamber
Warranty	- The Samplers carry a warranty of 1 year on materials and workmanship

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