## **Effluent Monitoring Solutions** Avoid Unnecessary Fines





## Effluent Monitoring Solution Overview

Our effluent monitoring solution consists of a base package with a redundant pH system. Three pH measurements are analyzed in our CM44P transmitter to output the average of the two closest values, with an alarm being sent if any one drifts out of tolerance. Includes commissioning, remote monitoring and reactive service support.

- QTY 1 Complete panel with UPS
- QTY 1 CM44P panel mount transmitter with data logging, and Chemoclean Plus software
- QTY 3 CPS11D pH sensors, 225 mm version with ion trap for long service life and fouling resistance
- QTY 1 CYC25 Cleanfit controller with CYR10 cleaning fluid injector
- QTY 3 CPA871 retractable assemblies
- Remote monitoring and email/SMS alarming with FXA42 Fieldgate
- On-site commissioning and reactive service support

### Options

- Total suspended solids monitoring with optical sensor
- Product loss detection with absorption sensor
- CSF34 fixed or CSP44 portable sampler



## The pH drift challenge

Ensuring that your pH probes are reading accurately and have not drifted is the most common effluent monitoring challenge. To help you meet your challenge we have developed a system with built-in redundancy. Three separate pH measurements are constantly read and analyzed in our CM44P transmitter. The output is the average of the two closest values. An alarm is sent if any one of the sensors drift out of tolerance.

Three Orbisint CPS11D digital Memosens sensors are used with the optional ion trap technology which extends sensor life by reducing the effects of fouling. The extended sensor length design is employed as they carry more electrolyte in reserve which also extends sensor life. The system is equipped with an automated cleaning system CYC25, which controls the retraction of the probes for cleaning with water and cleaning solution.

The system also includes our innovative Fieldgate FXA42, which seamlessly pushes your critical information to a host of web based interfaces including SMS and email alarming.

Remote access to the system will allow our technicians to assess and decide on an appropriate course of action, whether that may be to initiate a cleaning process remotely or to dispatch a technician to site.









### CPS11D Orbisint Memosens Digital pH Sensors

- Robust electrode with long poison diffusion path
- Low maintenance due to large, dirt-repellent PTFE ring diaphragm
- Corrosion and moisture resistant inductive design
- Digital memory allows pre-calibration
- 225 mm length for longer service life
- Ion trap for resistance to fouling

### CM44P Liquiline Transmitter

- Connection of up to 2 optical sensors
- Up to 4 Memosens Sensors with data storage and automated recognition
- Digital communications HART, Profibus, Modbus, Ethernet I/P and web server
- Data logging 8 x 150,000 points, fully configurable
- Automatic sensor cleaning, PID controllers x 2 and full diagnostics

### CYC25 Cleanfit Control

- Automated cleaning eliminates downtime (measurement on hold)
- Automated restart after shutdown or maintenance
- Direct control of CPA871 for sensor retraction and cleaning
- With CYR10 Injector to inject cleaning fluid
- Direct link to CM44P

### CPA871 Pneumatic Retractable Assemblies

- Robust assembly designed for long maintenance free operation
- Highest operational safety with intelligent functions that prevent any leakage of medium during operation, cleaning or calibration.

# Know what's happening at all times

A simple interface allows all data to be securely communicated with an FXA42 Fieldgate. It enables visualization of all measured values via an integrated web server and allows specified emails or SMS messages to be sent to key personnel when measurements are out of tolerance.







### FXA42 Remote Monitoring Fieldgate

- Limit value monitoring with alarming by email or SMS web server
- Simple configuration and easy visualization of measured values via its integrated web server
- Supporting communication interfaces Ethernet, WLAN as well as 3G
- Ethernet system link to CM44P
- Four 4...20mA input channels, four digital input and output channels

### Add other functions to your remote monitoring solution

**Product loss detection and suspended solids measurements made simple** In many effluent streams an optical absorption sensor can be correlated to detect high product concentrations. This combined with total suspended solids measurement can give important insight into your effluent over time. We will aid you in determining the best optical absorption or turbidity sensor to use for your particular effluent requirements.

### TSS – Total Suspended Solids Measurement – CUS51D

The addition of a turbidity sensor allows continuous monitoring of the total suspended solids in your effluent stream.

- Pre-calibrated and pre-configured from the factory
- Highly reliable and accurate four beam alternating light sensor
- Robust, low-maintenance design with self-cleaning functionality

### Product Loss Detection – OUSAF11

An optical absorption sensor can be added for detection of product loss incidents in the effluent stream.

- Low-maintenance long-life sensor offering stable operation
- Robust sensor resistant to aggressive chemicals and fouling





### Easy to maintain sampling systems

# Automate your effluent sampling with an easy to maintain solution.

The CSF34/ CSP44 offers the widest range of programmable sampling techniques and is based on the modular Liquiline / Memosens architecture. It is the only sampler on the market with digital communications and integrated online sensors. Integrated sensors enable the sampler to move from being just a collector to operating as a full monitoring station and a state of the art instrument. The integrated sensors facilitate alarm based sampling to draw extra samples when out of range conditions are detected.

- Vacuum pump for accurate and highly repeatable sample volumes
- Peristaltic pump for short intake hoses, and variable sample volumes
- Accepts up to 4 Memosens analytical sensors
- Digital communications HART, Profibus, Modbus , Ethernet I/P
- Web server communications
- Data logging 8 x 150,000 points, fully configurable

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