

The Watermark

The Newsletter From

Automated Water & Effluent Ltd

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Universal Instrument.



The CMC-99 is new panel mounting 96 din format universal instrument with a 320x240 pixels, colour TFT touch panel screen. The CMC-99 is designed to work with external sensors or transmitters which provide the signal inputs to a number of channels. The precise number of channels depends upon the input modules fitted at manufacture. The basic input module offers 3 universal inputs which may be 4 - 20mA current signal from either 2 wire transmitters with 24 VDC loop power supplied or from instruments with a powered 4 -20mA current output. Examples are our P3630 two wire pH transmitter and C3630 two wire conductivity transmitter. Powered instruments could be the P7635 pH controller or C7635 conductivity

controller. The universal inputs also include temperature inputs from either RTD Pt100 sensors or a wide range of thermocouples for higher temperature use. For a greater number of inputs a module with 6x 4 - 20mA current inputs is available plus many other options including 4 RTD inputs, 8 thermocouple inputs or 4 flow inputs.

The TFT touch screen may be user configured to display data in groups if a large number of inputs are employed. Options of displaying the data include: analog meter movement displays; bar graphs, which work well for tank level displays, or simple numerical value displays. The screen is also able to display graphical information as an electronic chart recorder with the display either going vertically or

horizontally with white or black backgrounds. The data may be data logged to the 1.5 Gb internal memory and down loaded by basic communication interfaces (USB and RS485).

Being a truly universal instrument we are also able to offer control output modules which include 8 SPST relays for on/off control rated at 1amp or 4 SPDT relays rated at 5amps and 2 or 4 off 4 - 20 mA outputs with the option for PID control.

Mains power supply is by a switch mode power supply which accepts 85 to 264 VAC 50 / 60 Hz. This is ideal for both the home and export markets with the option of low voltage AC or DC power supplies being requested when ordering.

Technical Tips

Hypochlorite Dosing

In the watermark winter 2011 we wrote about the merits of the auto degassing head, which at the time was manufactured from a solid PVC bar. We are pleased to reintroduce the degassing head moulded in PVDF making this optional extra product lighter, with more chemical resistance to the chemical reagents being dosed.

Dosing chemicals with a low vapour pressure

which include sodium hypochlorite and hydrogen peroxide are always difficult especially when installed with a suction lift from a chemical drum or dosing tank. The best solution is to install the pumps on a flooded suction so that the chemical reagent flows by gravity which is free of charge into the pump head.

We manufacture an all polypropylene and PVC kit for this purpose, where the



dosing tank is raised off the ground and the dosing pump mounted at low level so the chemical enters the pump under gravity.

There can be problems when sucking the chemical reagent from the drum up to the dosing pump due to the low vapour as the gas is drawn out of the liquid in the suction tubing causing air (gas) locks in the dosing tubing.

By using the degassing head, liquid is taken

from the head at a lower level and the vapour at a higher level being returned to the chemical drum below the liquid level so it can re-dissolve into the chemical. Please note when using any degassing head, the pump output is reduced to 80% of the pumps rated output due to the liquid being taken off at a lower level in the pump head.

Flooded Suction Kit

Combine the Flooded Suction Kit with a polypropylene stand to lift the dosing tank so that the chemical feed to the red dosing pumps is by gravity. In this installation a stainless steel piston pump is used for dosing a viscous polymer. We are able to supply and fit to the dosing tank, either PVC or PVDF low level float switches which can be connected directly to the dosing pump if it is fitted with a low level cutout input. This stops the dosing pump running dry.



Simple pH Dosing Station

We recently helped a customer who had a pH problem with the discharge of his running rinse water from his phosphating process.

The flow rate was small but could go above or below his pH discharge limits with the local water authority. As the existing pH adjustment tank was outside, the equipment needed to be mounted close by. So we supplied one of our double confinement dosing stations to hold the acid and alkali reagents and their dosing pumps. Also

mounted inside the dosing station was our MO5-PH surface mounting IP65 pH controller. This was supplied mounted and ready wired for easy site installation. Mounted on the side of the polypropylene housing was the starter for his neutralising mixer. Remember you heard it on the AWE Watermark grapevine.



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