Combicontrol PIC432B
pH-controller with data acquisition

Combicontrol PIC432B

7.00

pH | Limit A
mV | Limit B
°C | Parameter
Lock | Auto Set
Zero | Relay A
Slope | Relay B

Mode

Set

pH/mV Controller

Ideal for Process control, Fermentation, Neutralization, Registration and Control.

Overview

* Measurement of pH and temperature
* Measurement of Redox (mV)
* Automatic temperature compensation
* Dual slope system
* 3 point auto calibration
* Control of pH/mV and temperature
* On/Off or PI-control (Frequency/time)
* Analogue proportional control APC
* 2 independent limits
* 3 Analogue outputs, 0(4)-20mA or 0-5V
* Max/Min detectors for measurements

* Setup via 4 keys on the unit or via PC software
* PC connection via RS232
* Internal data acquisition for pH/mV, temp.
* Built-in clock and calender
* 2 years data at 1 sampling/min.
* Export of data for spreadsheet
* Supply: 80-250V AC/DC, 3VA
* Option: External pH-transmitter
* Dimensions: 116x87x50 mm
* IP 65 housing for wall mounting
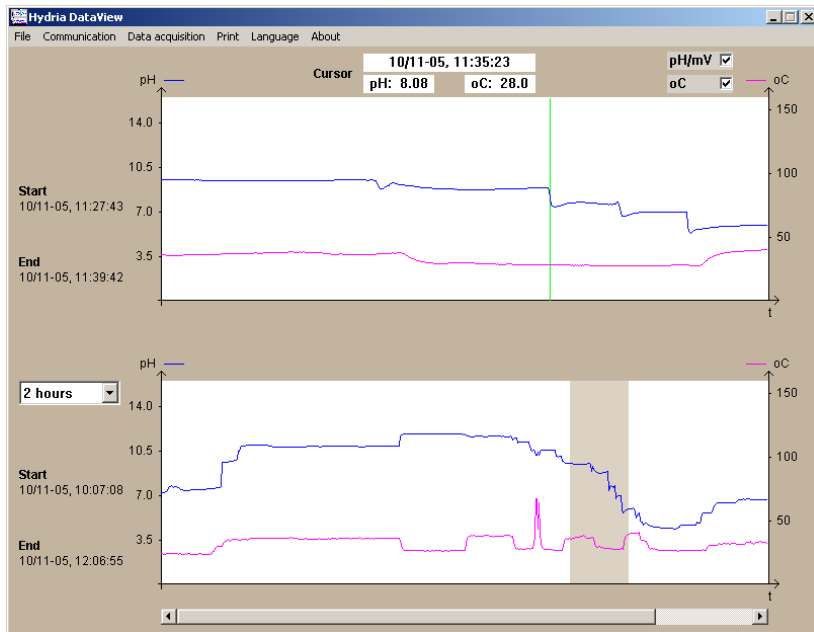
General description

Combicontrol PIC432B is an overall usable unit for measurement and control of pH/mV and temperature. PIC432B has 2 independent control machines with individual output relays. The implemented control modes are On/Off control via hysteresis and time- or frequency based proportional control. 2 of the 3 analogue outputs may be programmed for analogue proportional control (APC) for control of frequency inverters or proportional valves. Setup of parameters may be done via the four keys on the unit or via the included PC software PICSetup.

The unit has galvanic isolation between the pH/mV input circuit and the other circuits.
If the controller must be placed far from the measurement, a transmitter is available, which transmits the pH- and temperature measurements on a 2-wire connection.
For analysis and documentation an internal data logger with a capacity of 2Mbyte has been included. The sampling rate may be set to 1, 10, 60 or 600 seconds. The PC-software DataView makes analysis easy (Graphical presentation and printouts) and includes also an export in spreadsheet format.

Data acquisition

After opening DataView, the time span of which measurements should be transferred may be selected and also which measurements are wanted (pH/mV and/or Temperature). After completion of the transfer, the data for the selected period are shown in the lower part of the screen. A section, represented by the grey area, is shown in the upper part of the screen (10 x Zoom). This along with the other zoom capabilities result in an exact readout of every measurement.
This graphic as well as the time information may be printed on paper or stored as a BMP-file. All or a selected amount of data may be exported in spreadsheet format. Data may be stored on disc or loaded from disc for further analysis. The software supports Danish, English or German.

Installation

When mounting the unit the two covers must be opened as shown. This gives access to the mounting holes. For access to the electrical terminals please loosen the four screws and the top of the unit may be tipped or removed completely. After connecting the cables to the terminals the top is refitted.

The specially designed cable supplied with the unit must be mounted as shown when connecting the unit to a PC for setup and transfer of data from the data logger. A permanent connection to a PC is also possible via the terminals inside the unit

Technical data

Mechanical

Housing:	Wall mounting
Material:	ABS UL94V-0
IP Class:	IP65
pH/mV input:	BNC connector
Com. connector:	3,5 mm Jack bush
Cable inputs:	4 x PG7
Terminals:	Max 10A, max 1,5 mm
Temperature:	-15 to 55 $^{\circ}$C
Dimensions:	120x90x50 mm
Weight:	app. 350g
CE mark:	EN 61326-1

Electrical

Supply:	80-250VAC/DC, 3VA
Relay outputs:	Max 5A,250VAC AC1
pH Range:	0,00 to 14,00
mV Range:	$\pm$ 1000mV
pH/mV input:	Max. 0,1 pA, 10TΩ
Accuracy:	$\pm$ 0,2% for pH and mV
Temp. Range:	0 to 150 $^{\circ}$C
Accuracy:	$\pm$ 0.3 $^{\circ}$C
Analogue outputs:	(0)4-20mA, 0-5V
RTC backup:	Li. battery, typical 10 years
Serial port:	RS232C, 57.6 kbaud