

## MOD. KFC HEAD

## KONTAX FLOW CONTROLLER



THE INSTRUMENT DESCRIBED IN THIS MANUAL COMPLIES WITH STANDARDS  
EMC LIKE ESTABLISHED FROM DIRECTIVE THE EEC AND THE 89/336 DIRECTIVE LOW TENSION THE EEC 73/23


13/11/2008 VERSION 2.0

## INTRODUCTORY NOTES:

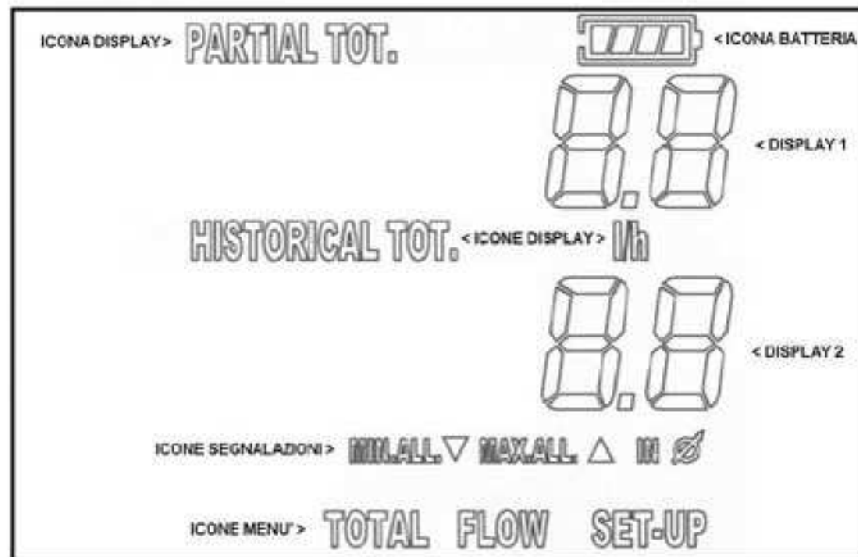
The word CRAININD appears on the screen for 1 second when the instrument is switched on.

The values are only given as an example in the following descriptions

Powered via batteries and stand by:  
the instrument display switches itself off when there have been no incoming pulses or actions on the keys for about 5 minutes. Press the **STOP** key to return to displaying data.

Replace the batteries with others of the same kind when the  icon flashes (note: if the instrument is powered by 24 Vca, the battery icon is not displayed)

## INSTRUMENT DISPLAY



## KEYBOARD:



STOP (display reinstate from stand by)



START (NOT USED)



INCREASE BY ONE VALUE



DIGIT (OR MENU) CHANGE



ZERO SETTING OF A VALUE  
(OR OF THE PARTIAL TOTALISATOR)

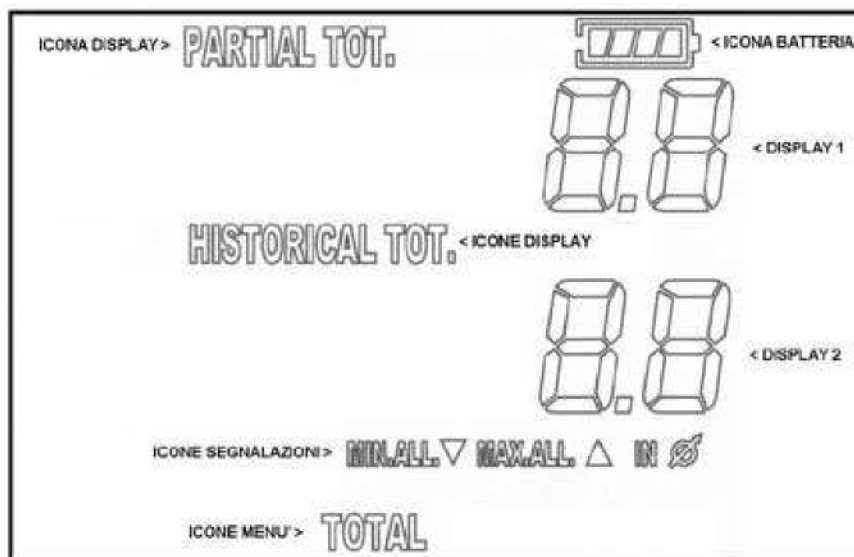


CONFIRM THE ENTERED VALUE

## FUNCTIONS MENU:

You can scroll through the menus by pressing the ◀▶ key. The **menu icon** relating to the selection made lights up.

## TOTAL MENU



The display shows:

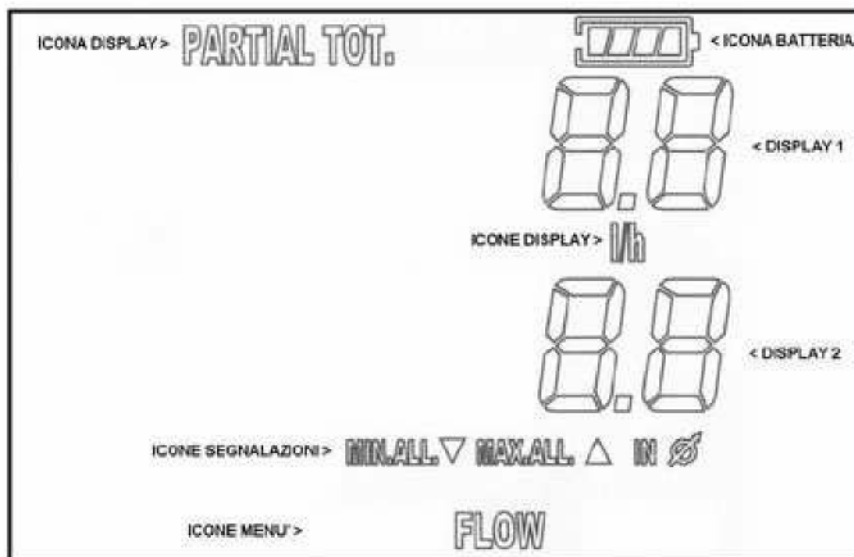
the partial totalisator that can be zeroised using the **CLEAR///** (display 1) key the

historical totalisator that cannot be zeroised (display 2)

any alarm signals (warnings icon)

incoming count pulses (warnings icon)

## FLOW MENU



The display shows:

the partial totalisator that can be zeroised via the **CLEAR**/// (display 1) key

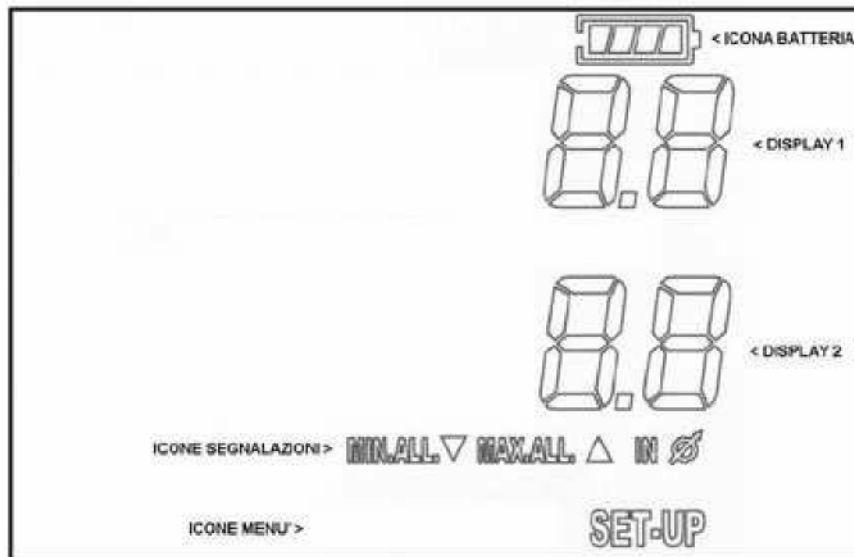
instantaneous flow rate in litres / hour (display 2)

any alarm signals (warnings icon)

incoming count pulses (warnings icon)

Note: the instantaneous flow rate value is updated about every 10 sec.

## SET-UP MENU



The display shows:



The SETUP menu is protected by a **PASSWORD** (that cannot be changed) = **2004**

Display 1 shows the abbreviated name of the parameter

Display 2 shows the parameter value

To go on to the next parameter use the ◀▶ key

To exit from the SETUP menu, press **CLEAR///** and then the ◀▶ key

## INTRODUCTION AND MODIFICATION OF PARAMETERS

1. Press the **ENTER** key
2. the **SET** icon (in top left-hand corner of the display) and the parameter value flash
3. you can enter or change a value by using ◀▶ and key ▲
4. if an error has been made, press the **CLEAR///** key
5. confirm the new value with the **ENTER** key



The display shows the COEFFICIENT K:

K -- FACTOR  
0.052236

Factorisation coefficient of the litre-meter: normally the value is entered in the CRAIND laboratories. If it should be necessary to reset the factory value:

1. copy the serial number of the litre-meter (mounted on the metering line)
2. contact CRAIND personnel. The original calibration value will be notified to you.

Press the ◀▶ key

The display shows the MINIMUM flow rate alarm:

MIN F. AL  
200

The MINIMUM flow rate alarm is expressed in litres/hour. If, during metering, the flow rate goes **below** this value, the warning icon **MIN.ALL ▼** lights and the relative exit is activated. Cancellation of the alarm takes place automatically when the correct flow rate is reinstated.

Press the ◀▶ key

The display shows the MAXIMUM flow rate alarm:

MAX F. AL 2200

The MAXIMUM flow rate alarm is expressed in litres/hour. If, during metering, the flow rate goes above this value, the warning icon **MAX.ALL ▲** lights and the relative exit is activated. Cancellation of the alarm takes place automatically when the correct flow rate is reinstated.

Press the ◀▶ key

The display shows the DECIMALS number:

DECIMALS 0

A decimal point can be enabled in totalisator displays according to the following order

- 0 = decimal point disabled
- 1 = 1 decimal digit enabled
- 2 = 2 decimal digits enabled
- 3 = 3 decimal digits enabled (note: the instantaneous flow rate is displayed without decimal point)

Press the ◀▶ key

The display shows the COUNT TYPE:

UP / DOWN 0

Function **NOT** enabled in this model: set 0

Press the ◀▶ key

The display shows the TOTALISATORS BLOCK:

T. BLOCK 0

Function **NOT** enabled in this model: set 0

Press the ◀▶ key

The display shows the MONOSTABLE:

MONOSTAB 0

Function **NOT** enabled in this model: set 0

Press the ◀▶ key

The display shows the FACTORISED PULSES OUTPUT:

PULS. OUT 0

By enabling this function it is possible to have a factorised pulses output corresponding to the quantity of product measured:

0 = disabled output

1 – 9999 (ms.) = enabled output, the entered value corresponds to the duration of the pulse expressed in ms.

Press the ◀▶ key

The display shows the AUTOMATIC END OF CYCLE RESET:

AUTO -- RES 0

Function **NOT** enabled in this model: set 0

Press the **ENTER** key

The display shows the OPERATOR PASSWORD:

PW -- OPER. 0

Function **NOT** enabled in this model: set 0

Press the **ENTER** key

The display shows the 4-20 mA OUTPUT (start of scale calibration - 4 mA):

4MA -- -- L/H 200

If the 4-20 mA output is used, enter a flow rate value (in litres/hour) that corresponds to the value of 4mA.

E.g.: by setting 200 the output will regulate the current value at 4 mA when the flow rate is 200 litres/hour

Press the **ENTER** key

The display shows the 4-20 mA OUTPUT (bottom of scale calibration - 20 mA):

20MA -- -- L/H  
2200

If the 4-20 mA output is used, enter a flow rate value (in litres/hour) that corresponds to the value of 20mA.

E.g.: by setting 2200 the output will regulate the current value at 20 mA when the flow rate is 2200 litres/hour

Press the ◀▶ key

The display shows the INITIAL TIMER:

INIT -- TIM 0
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Function **NOT** enabled in this model: set 0

Press the **ENTER** key

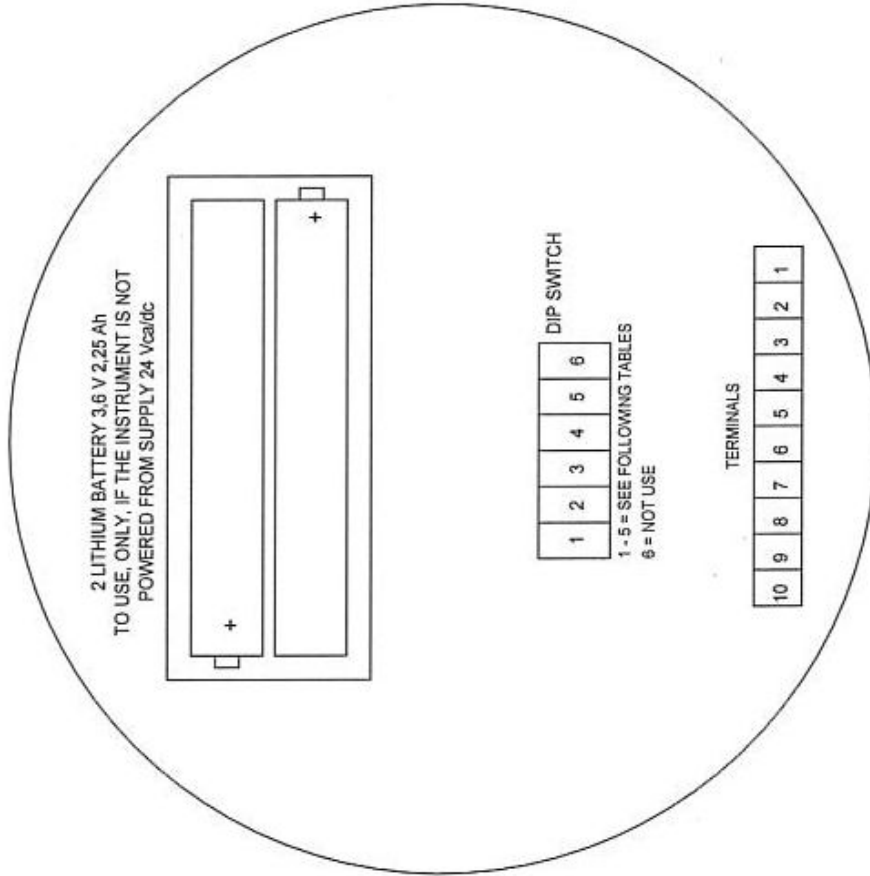
The display shows the STOP TIMER:

STOP -- TIM 0
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Function **NOT** enabled in this model: set 0

To exit the SETUP menu press **CLEAR///** and then the ◀▶ key

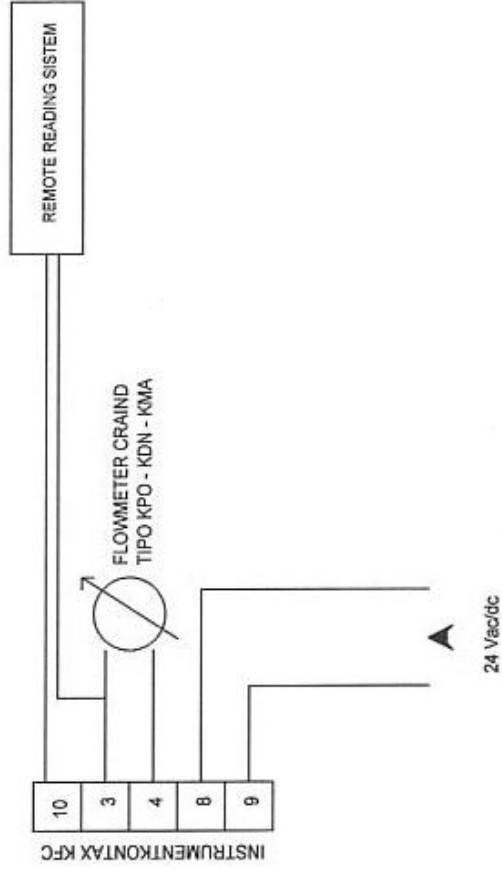
**TERMINAL BOARD INSTRUMENT KONTAX KFC**



**TERMINAL BOARD:**

- 1 = GROUND (IT ISN'T INDISPENSABLE)
- 2 = OUTPUT + 24 Vdc 100 mA max ONLY ACTIVE SENSORS
- 3 = SENSOR INPUT (PULSE FROM FLOW METER) AND GND COMMON INPUT- OUTPUT
- 4 = SENSOR INPUT (PULSE FROM FLOW METER)
- 5 = NOT USED
- 6 = NOT USED
- 7 = NOT USED
- 8 = POWER SUPPLY 24 Vca/dc
- 9 = POWER SUPPLY 24 Vca/dc
- 10 = SCALED PULSES OUTPUT (MOSFET)

**EXAMPLE OF WIRING KONTAX KFC**



## INPUT FREQUENCY AND SENSOR TYPE SETTINGS

The instrument is fitted with 5 micro-switches to calibrate the max. frequency of the incoming pulses and the sensor type. Wrong setting can be caused if the instrument does not function. The 5 micro-switches are on the stamped circuit inside the case.

LOW FREQUENCY SENSORS 0 - 200 Hz max.					
sensor type:	micro-switches:				
	1	2	3	4	5
NPN	ON	ON	OFF	ON	OFF
PNP	ON	ON	OFF	OFF	ON
electronic	ON	ON	OFF	OFF	OFF

Table 1

HIGH FREQUENCY SENSORS 0 - 2000 Hz max.					
sensor type:	micro-switches:				
	1	2	3	4	5
NPN	OFF	OFF	ON	OFF	OFF
PNP	OFF	OFF	OFF	OFF	ON
electronic	OFF	OFF	OFF	OFF	OFF

Table 2

**Example:**  
**Input from mechanical REED sensor and max. frequency 10 Hz (low frequency)**  
**micro-switches 1-2-4 = ON 3-5 = OFF (Table 1)**

## TECHNICAL DATA

Display:	LCD 68 x 50 mm height of digits 10 mm – 18 symbols
Data settings:	n° 6 keys – keyboard in scratch-proof polycarbonate
Power supply:	n° 2 LITHIUM 3.6V – 2.1 Ah type AA batteries (minimum life 4 years not to be used to power the sensor) or 24 Vca
Count inputs:	non insulated – mechanical REED sensors – electronic NPN – PNP sensors
Max. and min. flow rate alarms outputs:	non insulated – mosfet 24 Vdc 0.5 A max. (available on expansion board)
4 – 20 mA output:	non insulated - mosfet 24 Vdc 0.5 A max. (available on expansion board)
Factorised pulses output:	non insulated - mosfet 24 Vdc 0.5 A max. adjustable pulse duration (1 – 9999 ms.)
Instantaneous flow rate sampling time	approx. 1 0 sec.
Parameters storage:	via non-volatile EEPROM memory
Version:	with PVC case measurements Ø 130 x 52 mm –IP 65 protection level – wall-mounted or mounted on pipes using the special accessories kit
Operative temperature	-10 + 60° C ( to avoid direct contact with heat source , like pipeline, plate-type heat exchanger, etc. to high temperature)
Instructions of assembly	Don't expose to strong thermal changes, to avoid the direct exposure to sunlight to assemble instrument on a solid structure without vibration, if it isn't possible, minimize it by apposite devices.