



CRAIND[®]
I M P I A N T I

CRAIND IMPIANTI srl

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MICROPROCESSOR TOTALISATOR

DOSAX 8001-8008 SERIES



THE APPLIANCE DESCRIBED HEREIN CONFORMS TO STANDARDS EN55011, EN61000-3-2, IEC 1000-4-2, IEC1000-4-4

19/04/2005 VERSION 2.0

INTRODUCTORY NOTE

The operations described in this manual are applicable to both panels supplied ready wired and panel fronts wired by the client, however slight differences may occur according to the applications required.

CAUTION

Before switching the panel on, ensure that the power supply conforms to that indicated on the terminal board diagram or on the rear of the appliance, a variation in voltage of $\pm 10\%$ is permitted, operating temperature: $-10^{\circ} +45^{\circ} \text{ C}$.

POWERING UP

Use the master switch to switch the panel on, the appliance's display or the line pilot light will indicate that it has been switched on.

ASSEMBLY

The panel has been designed to be wall-mounted.

In order for the appliance to function properly, the operating temperature must be -10° to $+45^{\circ}\text{C}$ and the surrounding atmosphere must not be corrosive or excessively damp.

Do not install in areas subject to intense vibrations.

When the appliance is switched on, the following page will appear on the display for approximately 5 seconds.

CRAIND IMPIANTI
MILAN - ITALY

The following page will then appear for approximately 2 seconds:

CUSTOMER SERVICE
TEL.02-5462113

CAUTION:

1) IN THE FOLLOWING DRAWINGS, THE VALUES GIVEN ARE FOR EXAMPLE USE ONLY.

2) THE OPERATION OF A SINGLE CHANNEL IS DESCRIBED, HOWEVER THE PROCEDURE IS IDENTICAL FOR MULTI-CHANNEL INSTRUMENTS

3) DOSAX 8001 = 1 CHANNEL, DOSAX 8002 = 2 CHANNELS,.....DOSAX 8008 = 8 CHANNELS

4) USE THE ESC KEY TO QUIT THE VARIOUS MENUS

STARTING PAGE:

1=TOT.P	2=TOT.S
3=FLOW	4=SETUP

DESCRIPTION OF FUNCTIONS

Press the number key associated to the visualisation option preferred:

1 = Partial totalisators (can be RESET by the operator using the CLEAR key)

2 = Historical totalisators (cannot be RESET by the operator)

3 = Flow (flow indicators)

4 = Setup (monitoring and adjustment parameters)

PARTIAL TOTALISATORS:

TOT. 1	00000450
CL=RESET	ENTER

In the example above, the totalised value in channel 1 is 450 litres

Press **ENTER** to change page

Press **ESC** to quit menu

Press **CLEAR** to reset totalisator

HISTORICAL TOTALISATORS:

HISTORICAL1	← QUIT I
0000000450	

In the example above, the totalised value in the channel 1 is 450 litres

Press **ENTER** to change page

Press **ESC** to quit menu

FLOW

FLOW 1	
lit/h	000220

In the example above the flow detected inside channel 1 is 220 litres/hour

Press **ENTER** to change page

Press **ESC** to quit menu

SETUP

The following page appears when the SETUP menu is selected:

1 = TOT. PARAMETERS
2 = FLOW PARAMETERS

DESCRIPTION OF FUNCTIONS

Press the key associated to the desired visualisation option:

1 = Totalisator parameters (error % correction, factorisers, pulse output, no. decimals)

2 = Flow parameters (no. decimals, flow scale, reading means, alarms)

TOTALISATOR PARAMETERS

The ERROR PERCENTAGE COEFFICIENT is displayed:

% ERROR 1	00.00
ESC F1^	ENTER

It is possible to introduce corrections to any dosage errors in this page:

Perform three identical and consecutive dosage trials (with line full)

Set the mean value of the error detected by typing it in using the keypad:

to obtain a minus sign press **F2**,

to select the decimal point, press ↑

Press **F1** to return to previous parameter

Press **ESC** to quit page visualisation and return to the main menu

By pressing **ENTER** it is possible to access the following menu page:

K1	0.000001
ESC	F1^ ENTER

Litre-counter factorisation coefficient: this value is normally set in the CRAIND workshops.

Should it require modifying, take note of the litre-counter (mounted on dosage line) registration number and contact CRAIND staff, who will inform you of the original calibration value.

To modify the value:

Use the keypad to type in the desired value

In the event of errors, use **CLEAR** to erase any incorrect figures

Press **ENTER** to confirm the value typed in

Press **F1** to return to the previous parameter

Press **ESC** to quit page visualisation and return to main menu

By pressing **ENTER** it is possible to access the following menu page:

ON OUT 1	00.00"
ESC	F1^ ENTER

By enabling this function, it is possible to have a factorised pulse output on the terminal board corresponding to the quantity of product measured:

00.00" = output disabled

00.10" = output enabled with activation time of output pulse = 1 tenth of a second (max. settable time 99 sec.)

To modify the value:

Use the keypad to type in the desired value

In the event of errors, use **CLEAR** to erase any incorrect numbers

Press **ENTER** to confirm the value typed in

Press **F1** to return to the previous parameter

Press **ESC** to quit page visualisation and return to main menu

By pressing **ENTER** the following menu page will appear:

N° DECIMALS	0
← ESC	F1^ ENTER

In this page it is possible to enable a decimal point in the totalisation visualisation according to the following order:

0 = decimal point disabled

1 = 1 decimal number enabled

2 = 2 decimal numbers enabled

To modify the value:

Use the keypad to type in the desired value

In the event of errors, use **CLEAR** to erase any incorrect numbers

Press **ENTER** to confirm the value typed in

Press **F1** to return to the previous parameter

By pressing **ENTER** or **ESC** one quits page visualisation and returns to the SETUP menu, press **ESC** again to return to the main menu

FLOW PARAMETERS

FLOW SCALE 1	0
ESC	F1^ ENTER

In this page it is possible to define the flow scale visualised according to the following order:

0 = litres/second

1 = litres/minute

2 = litres/hour

To modify the value:

Use the keypad to type in the desired value

In the event of errors, use **CLEAR** to erase any incorrect numbers

Press **ENTER** to confirm the value typed in

Press **F1** to return to the previous parameter

Press **ESC** to quit page visualisation and return to main menu

By pressing **ENTER** the following menu page will appear:

NO. MEANS: 1		
001		
ESC	F1^	ENTER

In this page it is possible to introduce a value (from 1 to 100) of flow reading means; this parameter can be used when the flow reading is particularly unstable. Consider that:

001 = reading fast in increasing or decreasing, but less stable
 100 = reading slow in increasing or decreasing, but more stable

To modify the value:

Use the keypad to type in the desired value

In the event of errors, use **CLEAR** to erase any incorrect numbers

Press **ENTER** to confirm the value typed in

Press **F1** to return to the previous parameter

Press **ESC** to quit page visualisation

and return to main menu

By pressing **ENTER** the following

MIN. AL 1 000000		
ESC	F1^	ENTER

menu page will appear:

In this page it is possible to introduce a minimum flow alarm (the alarm output is shown on the terminal board). The minimum alarm is used to signal any malfunctions (such as lack of product, tube ruptures, etc.), when it is triggered, the display shows the following message at regular intervals

MINIMUM FLOW ALARM 1		
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To modify the value:

Use the keypad to type in the desired value

In the event of errors, use **CLEAR** to erase any incorrect numbers

Press **ENTER** to confirm the value typed in

Press **F1** to return to the previous parameter

Press **ESC** to quit page visualisation and return to main menu

By pressing **ENTER** the following menu page will appear:

MAX. AL 1	000000
ESC	F1^ ENTER

In this page it is possible to introduce the maximum flow alarm (the alarm output is shown on the terminal board). The maximum alarm serves to prevent excessive flow from damaging the dosage system. When the alarm triggers, the display shows the following message at regular intervals.

MAXIMUM ALARM 1 HIGH FLOW

Reduce flow to conserve the dosage system's measurement elements.

To modify the value:

Use the keypad to type in the desired value

In the event of errors, use **CLEAR** to erase any incorrect numbers

Press **ENTER** to confirm the value typed in

Press **F1** to return to the previous parameter

Press **ESC** to quit page visualisation and return to main menu

By pressing **ENTER** the following menu page will appear:

MIN. AL. DELAY	000"
ESC	F1^ ENTER

In this page it is possible to introduce a minimum alarm enabling delay time. This delay is used to favour tube filling when the plant is switched on.

000" = timer excluded

127" = max. time (127 sec.)

To modify the value:

Use the keypad to type in the desired value

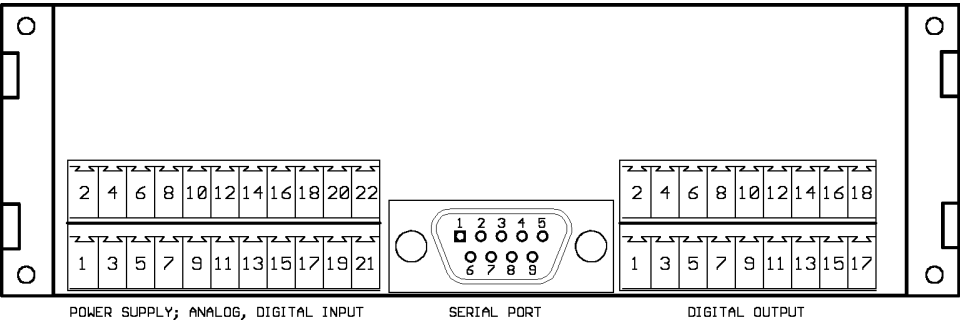
In the event of errors, use **CLEAR** to erase any incorrect numbers

Press **ENTER** to confirm the value typed in

Press **F1** to return to the previous parameter

Press **ENTER** or **ESC** to quit page visualisation and return to SETUP menu, press **ESC** again to return to main menu.

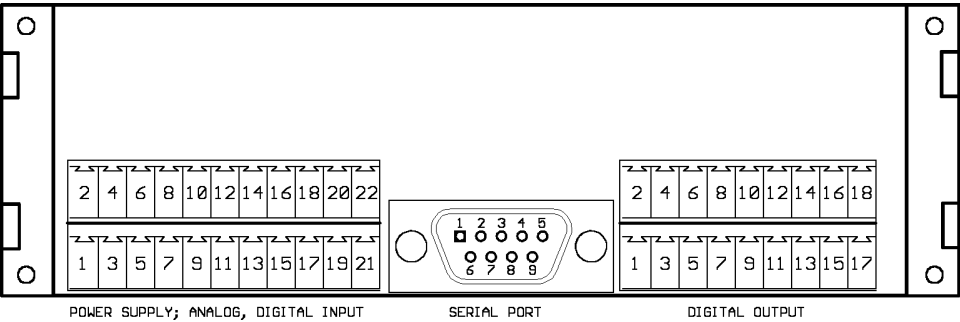
Power supply description:



Pin N.	Description
1	24 V ac
3	0 V ac

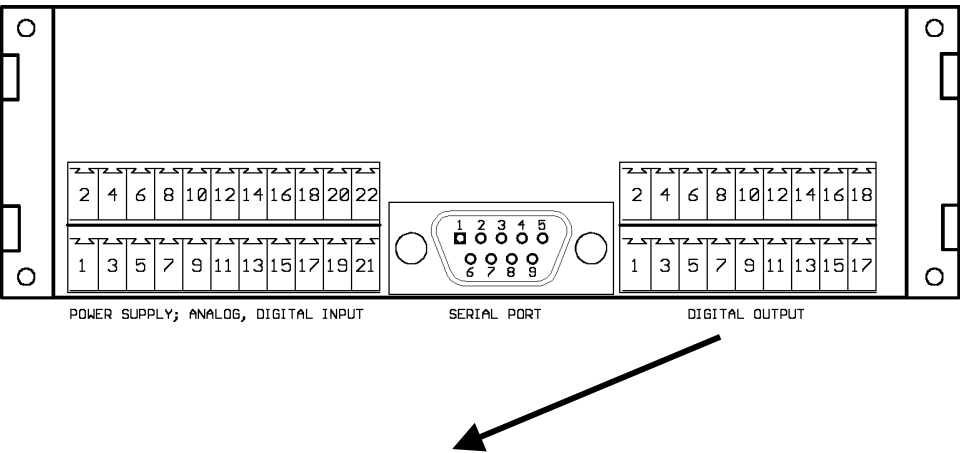
Description of digital input connections:

N.B.: use shielded cables in the presence of strong electromagnetic disturbance or the passage of conductors close to the power lines. Shielding must be earthed on one side only and must not be used as a return for signals.



Input N.	Pin N.	Description
Com-in	21	Common inputs: litre-counter (+12 V dc)
0 Vdc	13	0 Vdc (normally unused)
1	2	Digital input 1 (litre-counter 1)
2	4	Digital input 2 (litre-counter 2)
3	5	Digital input 3 (litre-counter 3)
4	6	Digital input 4 (litre-counter 4)
5	7	Digital input 5 (litre-counter 5)
6	8	Digital input 6 (litre-counter 6)
7	9	Digital input 3 (litre-counter 7)
8	10	Digital input 8 (litre-counter 8)
10	12	Partial totalisators reset

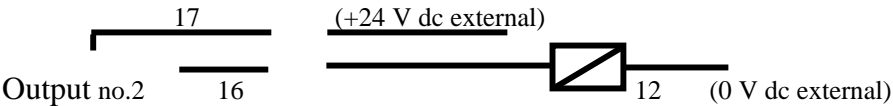
Description of digital output connections:



Connection with Mos-fet outputs and relays:

Output no.	Pin N.	Description
Com-out +	17	Common outputs +24 V dc
Com-out -	12	Common outputs 0Vdc
1	18	Out 1Ampere (factorised pulses output 1)
2	16	Out 1Ampere (factorised pulses output 2)
3	14	Out 1Ampere (factorised pulses output 3)
4	1	Out 1Ampere (factorised pulses output 4)
5	9	Out 1Ampere (factorised pulses output 5)
6	13	Out 1Ampere (factorised pulses output 6)
7	4	Out 1Ampere (factorised pulses output 7)
8	6	Out 1Ampere (factorised pulses output 8)
9	10	Out 1Ampere (minimum and maximum alarm output)

Digital outputs :



CUTTING FREQUENCY

(Note: only for instruments DOSAX 8001-8002-8003-8004-8005)

The CUTTING FREQUENCY parameter has been included in the set-up menu. Using this function it is possible to filter any recoils of mechanical contacts or disturbed signals. All signals that exceed the cutting frequency are not considered.

To set the parameter correctly, enter a value (expressed in Hz) that is 10-20% higher than the incoming signal at maximum capacity.

CUT. F.	013.0
←EXIT	ENTER: YES

Example:

pulses coming from a meter that issues 20 pulses/litre

maximum meter capacity = 2000 litres/hour

$$\frac{20 \times 2000}{3600} = 11.11 \text{ Hz (frequency at maximum capacity)}$$

enter a minimum value of 13 Hz and confirm with the ENTER key

PRINTER

Using the menus described, it is possible to print out the following data:

1. time and date
2. 2 lines of text (for example, company name or production department)
3. the product name
4. the product quantity
5. the instantaneous load value

NOTE:

2 and 3 can only be memorized in CRAIND laboratories

The “SET UP” page, described in the MICROPROCESSOR TOTALIZATOR DOSAX 8001-8808 SERIES manual (page 3), is replaced by the following:

1=TOT.	2=FLOW
3=DATE	4=PRINT

Options 1 (totalizators) and 2 (flow) are the same as those described in the TOTALIZATOR manual.

It is possible to exit the pages (i.e. in the case of an error) by using the **ESC** key.

Incorrect data can be cancelled by pressing the **CLEAR** button

PRINTING MENU

Option 3 = DATE

Pressing key **3** displays the following page, where it is possible to enter the time and date using the numerical keyboard

HOUR 00	MIN 00
D 00	M 00 Y 00

After having introduced that last piece of information (year), press the **ENTER** key to return to the main menu

Each time this page is displayed, the data is reset to 0 (as in the figure above)

Option 4 = PRINTING

Pressing key **4** displays the following page:

PRINT CAPACITY	1
PRINT TEXT	0

PRINT CAPACITY

By typing 1 and pressing the **ENTER** key to confirm, the capacity will be printed along with the other values

By typing 0 and pressing the **ENTER** key to confirm, the capacity will not be printed

Note: the capacity value is the one measured in the moment preceding the print-out.

PRINT TEXT

If the instrument has any memorized text (for example company name or production department), it is possible to choose whether to print this information.

by typing 1 and pressing the **ENTER** key to confirm, the text will be printed along with the other values

by typing 0 and pressing the **ENTER** key to confirm, the text will not be printed

Press the **ESC** key to exit the printing menu

The printing is activated by input No. 9 – terminal 11 in the input terminal board. For connections, consult the MICROPROCESSOR TOTALIZATOR DOSAX 8001-8008 SERIES manual (page 8)

PASSWORD SETUP

The user is asked to enter a 4-digit password to protect access to SETUP parameters.

PASSWORD

— — — —

the password can be entered using the numeric keys: **8008** (not modifiable)

To confirm press the **ENTER** key

If you enter the wrong password you can enter the correct one again

to exit this page press the **ESC** key