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INSTALLATION PROCEDURE

FOR THE INNOVEC CO6WP

POWERED

TOTALISOR

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CO6WP POWERED TOTALISOR CALIBRATION PROCEDURE

Thank you for purchasing an Innovec product. The CO6 totalises flow in increments of one litre and 0.1 litres. It displays the total on a 6 digit 57mm LED display in a weatherproof enclosure measuring 380mm wide x 190mm high x 130mm deep. The displayed total can be brought to zero by a remote reset button. The count values are stored in non volatile eeprom memory for a minimum period of 10 years. The instrument incorporates two counters, a 6 digit foreground totalisor which is normally displayed and a background totalisor which can be brought onto the display by holding down the mode button **(when the instrument is in run mode).** The K factor is an eight digit number [00.000000] and is entered as two four digit numbers as cal 1 being the most significant [00.00] and cal 2 [0000] the lease significant.

Step 1 - Panel Installation

The instruments are supplied in 380 x 190mm x 130mm deep plastic enclosure with sealed weatherproof front and are designed to be surface mount mounted with fixing centres of 155mm high by 365mm wide. To mount, the instruments lid should be removed giving access to the four screw holes allowing the instrument to be fixed to a flat surface.

Step 2 - Electrical Connection

The instrument has been supplied with a two part screw terminal for easier installation which has a ten (10) way plug for signal and a six (6) way plug for power connection. **Before connecting power to the instrument always check the label** for the supply the instrument has been configured for:

For a nominal 240VAC operation connect AC power to:

(a)Terminal 18 is 240VAC supply
(b)Terminal 19 is neutral supply
(c) Terminal 20 is ground supply

For a nominal 24VDC (18-36VDC) operation, connect **DC** power to:

(a)Terminal 18 is 24VDC supply
(b)Terminal 19 is 0VDC supply
(c) Terminal 20 is ground supply

Step 3 - Reset Button Connection

The instrument accepts a reset from a clean contact (contact closure).
The fore ground total can be reset by a normally open push button connected across terminal (7) reset input and terminal (1) internal 0VDC. Holding this switch closed for a minimum of 5 seconds will also reset the background total.

Step 4 - Using the 24VDC loop supply

The 24VDC loop supply is available on terminal eight (8) but is limited to a current capacity of approximately 30mA. It is available in this application.

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- The instrument has an eight way dip switch for input selection. The signal should be connected across terminal three (3) input (positive) and terminal (2) input negative.

Input Signal used		Input Connection		Switch settings used for this function							
		Channel one									
	Switch number	+	-	1	2	3	4	5	6	7	8
A	CMOS Logic signal	3	2	off	off	off	off	on	off	off	Off
B	Open Collector or Reed switch	3	2	off	off	off	off	on	off	on	Off
C	Namur Proximity (set loop supply out to 8 volts)	8	3	off	off	on	on	on	off	off	Off
D	Switch or Reed Switch with debounce circuit (200Hz max)	3	2	off	off	off	off	on	off	on	On
E	Coil (20mv P-P minimum)	3	2	off	on	off	off	off	off	off	Off
F	Coil (low impedance 22mv pp minimum)	3	2	on	on	off	off	off	off	off	Off

Switch #	1	2	3	4	5	6	7	8
OFF								
ON								

- CMOS Logic signal – for vortex or magnetic flow meters
- Open Collector or Reed switch – hall effect sensors or positive displacement flow meters with reed switch output
- Namur Proximity - positive displacement flow meters with 2 wire proximity output
- Coil (20mv P-P minimum) – millivolts signal from turbine meter

Step 5 - Instrument Calibration

All functions of the instrument are programmable from the four touch buttons mounted on the circuit board.

▲	▼	Mode	prog/run

To enter the programming mode press:

▼ (down)

Then press:

P/R

The display shows:

ACCS

It is necessary to push in sequence:

UP BUTTON then DOWN BUTTON then UP BUTTON again.

▲	▼	▲

You are now in the programming mode. The instrument displays:

DP

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This is the **decimal point position**. The decimal point can be adjusted for NO decimal (000000) point for the display of litres or one decimal point position (00000.0), two decimal point positions (0000.00) or three decimal point positions (000.000). Pushing the up button will cause the number to increment. If the up button is being pushed the DP increments. If no changes are required or when you have selected the required display decimal point position, please press:

Mode

To show:

CAL 1

PLEASE NOTE: The K factor is an eight digit number [00.000000] and is entered as two four digit numbers as cal 1 being the most significant [00.00] and cal 2 [0000] the lease significant.

This is the **Kfactor** that the instrument uses to calculate the flow in litres. This is displayed for approximately 3 seconds before displaying the actual Kfactor one value. To enter the Kfactor it is first necessary to calculate this value. Divide 1 (for one litre) by the calibration factor of your flow sensor. If your flow sensor has a factor of 7, then divide 1 by 7 = 00.142867. You will have to enter into cal1, 00.14 and into cal2, 2867

Enter the value 00.14
This can be ***changed by using the up button to enter the value*** and ***the display button◄ to select the digit to be changed***. ***The selected digit is flashing on and off***. Pressing the up button causes the flashing digit to increment. If the up button is kept pressed it will increment from 0 to 9. When you have selected the number you want for that digit then please press the ◄ button. This will cause the digit you have been incrementing to stop flashing and the digit immediately to the left to start flashing and the up button will then cause that digit to increment. This is the method used to program in your K factor value into the four available digits.
If no changes are required, or when you have selected the required kfactor, please press.

Mode

To show

CAL 2

This is the **Kfactor** that the instrument uses to calculate the flow in litres. This is displayed for approximately 3 seconds before displaying the actual Kfactor two values. To enter the Kfactor it is first necessary to calculate this value. Following our example,

Enter the value 2867

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This can be ***changed by using the up button to enter the value*** and ***the display button◄ to select the digit to be changed***. ***The selected digit is flashing on and off***. Pressing the up button causes the flashing digit to increment. If the up button is kept pressed it will increment from 0 to 9. When you have selected the number you want for that digit then please press the ◄ button. This will cause the digit you have been incrementing to stop flashing and the digit immediately to the left to start flashing and the up button will then cause that digit to increment. This is the method used to program in your K factor value into the four available digits. If no changes are required, or when you have selected the required kfactor, please press.

Mode

And you have returned to the beginning of the menu.

If you have finished configuring the instrument then press:

Prog/Run

The instrument returns to run mode and all variables are written to non volatile memory.
[It should be noted that if none of the buttons are pressed in a twelve (12) second period the instrument will revert back to run mode without saving any variables to the non volatile memory.] If a mistake has been made you can cycle through the variables using the button marked:

Mode

Or **if no buttons have been pressed for 12 seconds the instrument will automatically revert back to run mode.**

RUN MODE FUNCTIONS

When the instrument is in run mode by pressing:

Mode

The instrument will display the background total but only while the mode button is pressed. The background total displays whole litres only.

By pressing:

▲ (up button)

The instrument will reset to zero the current running total.

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Top view of instrument screw terminal arrangement

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Terminal 1	Input common
Terminal 2	Count input minus
Terminal 3	Count input positive
Terminal 4	not used
Terminal 5	not used
Terminal 6	not used
Terminal 7	Reset input
Terminal 8	8 to 20VDC loop supply
Terminal 9	not used
Terminal 10	not used
Terminal 11	not used
Terminal 12	not used
Terminal 13	not used
Terminal 14	not used
Terminal 15	not used
Terminal 16	not used
Terminal 17	not used
Terminal 18	85 to 265VAC supply
Terminal 19	Neutral supply
Terminal 20	Ground supply