



4. Installation and start-up

1. Open the instrument (see section 3)
2. Connect the signal, the power and the rear controls (see section 6)
3. Configure the instrument from the 'Configuration menu' (see section 12)
4. If you need additional information, see section 8.



7. How to operate the menu

Key 'SQ' (■) - press the 'SQ' (■) key for 1 second to access the 'configuration menu'. Inside the menu, the 'SQ' (■) key functions as a 'ENTER' key. It selects and accesses the menu option currently displayed. At menus with numerical value entries, it validates the number displayed.

Key 'UP' (▲) - the 'UP' (▲) key gives access to the 'fast access' menu. Inside the menus, it moves vertically through the different menu options. At menus with numerical value entries, it modifies the digit selected by increasing its value to 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

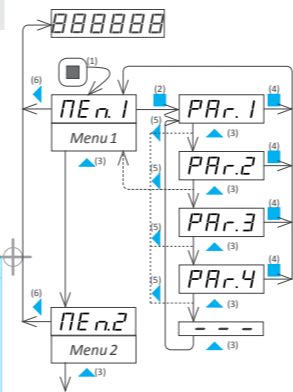
Key 'LE' (◀) - inside the menus, the 'LE' (◀) key functions as the 'ESCAPE' key. It leaves the selected menu, and eventually, will leave the whole menu. When leaving the 'configuration menu' with the 'LE' (◀) key, the changed parameters are activated. At menus with numerical value entries, the 'LE' (◀) key allows to select the active digit. To modify the value of the selected digit use the 'UP' (▲) key.

Menu 'Rollback'

After 30 seconds without interaction from the operator, the instrument will rollback and leave the 'configuration menu' or the 'fast access' menu. All changes will be discarded.

Example

The menu example indicated below is for information purposes only, and may not match the actual menu of the instrument.



Example of operation inside the 'configuration menu'.

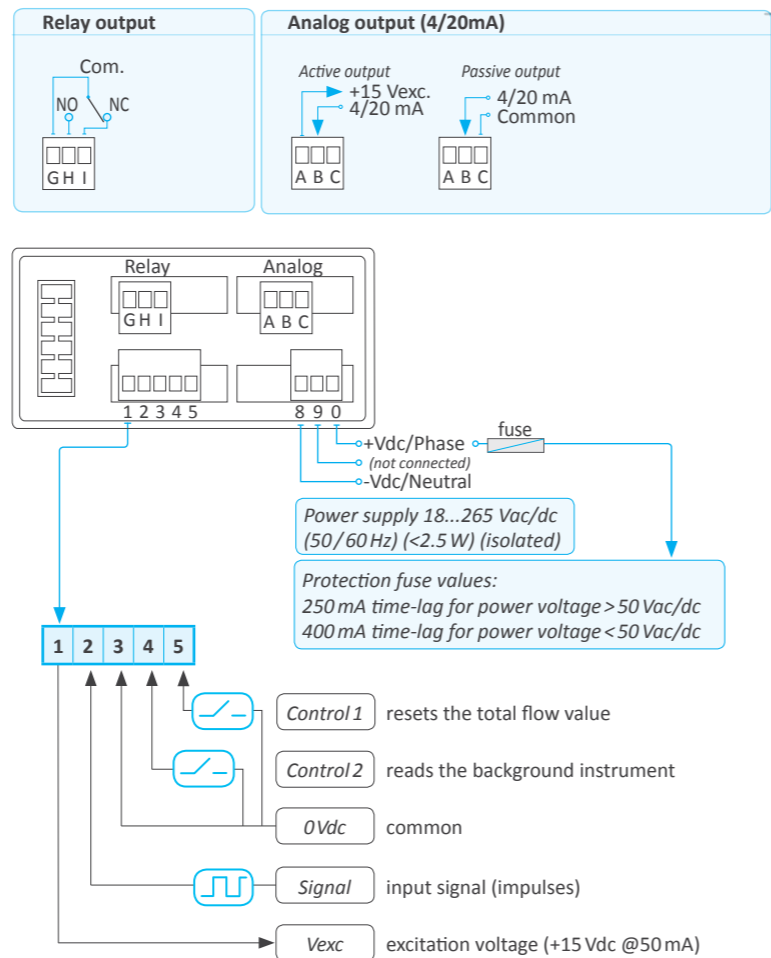
1. The 'SQ' (■) key enters into the 'configuration menu'.
2. The 'SQ' (■) key enters into the 'Menu 1' option menu.
3. The 'UP' (▲) key moves through the menu parameters.
4. The 'SQ' (■) key selects the desired range and returns to the 'Menu 1' menu.
5. The 'LE' (◀) key leaves the actual menu level and moves to the previous menu level.
6. The 'LE' (◀) key leaves the 'configuration menu'. Changes are applied and saved at this moment.

5. How to order

Series Model Version

C60 - FL - RA

6. Connections



8. Additional documentation

User's manual C60-FL-RA	www.fema.es/docs/5069_C60-FL-RA_manual_en.pdf
Quick installation guide C60-FL-RA	www.fema.es/docs/5067_C60-FL-RA_QIG.pdf
Warranty	www.fema.es/docs/4153_Warranty1_en.pdf

9. User's manual

If you need additional information, see section 8 to download the full User's Manual or check the QR code for a direct download.



10. Configuration example

A flow sensor provides 'NPN' impulses, with a frequency proportional to the instant flow, with a 'K factor' value of '1.241804' [impulses/liter].

Configure the instrument to read the instant flow in [liters/second] without decimal point, and the total flow accumulated in [liters] with 2 decimal points.

By default instant flow must be on display, and access to the total flow value will be done by activating the rear connector terminal.

Reset of the total flow will be performed by pressing the front key left 'LE' (◀).

1. Instrument main configuration

At the 'Instrument configuration' ('c.InS') section :

- at 'Main instrument' ('MAIn') select 'rAtE'
- at 'Sensor' ('SnSr') select 'NPN'
- at 'K' Decimal point for total flow' ('K.dP.t') select 'X.xxxxx'
- at 'K' Factor for total flow' ('K.Fc.t') configure '1.24180' (the last digit '4' of the 'K factor' can not be introduced)
- at 'K' Decimal point for instant flow' ('K.dP.r') select 'X.xxxxx'
- at 'K' Factor for instant flow' ('K.Fc.r') configure '1.24180' (the last digit '4' of the 'K factor' can not be introduced)

Validate changes and exit the 'configuration menu'. At this moment, the instrument is configured and reads instant flow meter, in [liters/second].

- at 'Rate decimal point' ('dP.r') select 'XXXXXX'
- at 'Total flow decimal point' ('dP.t') select 'XXXX.xx'

Validate changes and exit the 'configuration menu'. At this moment, the instrument is configured and reads instant flow in [liters/second] without decimal points, and total flow in [liters], with 2 decimals. To read the total accumulated flow on display, close the rear contact 'contact 1'.

2. Configure 'Key Left' (◀) to reset the total flow value

At the 'Key Left' ('K.LE') section :

- at 'Reset "total"' ('rSt.t') select 'on'

Validate changes and exit the configuration menu. At this moment, the total flow value will reset to '0' when the key 'LE' (◀) is pressed.

11. Regulations

This instrument conforms to the actual CE regulations. For a copy of the 'CE declaration of conformity' see section 8. Applicable regulations are :

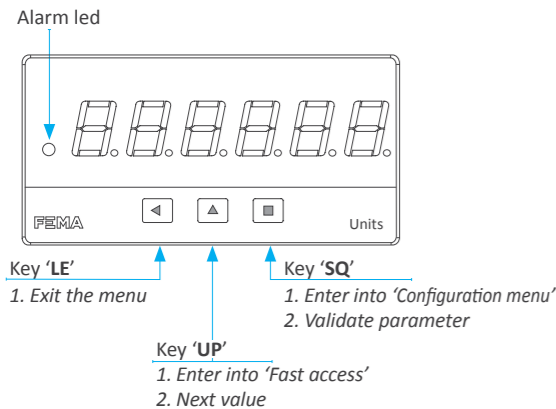
Security regulations EN-61010-1 ('Fixed' equipment, 'Permanently connected'. 'Double' isolation.)

Electromagnetic compatibility regulations EN-61326-1

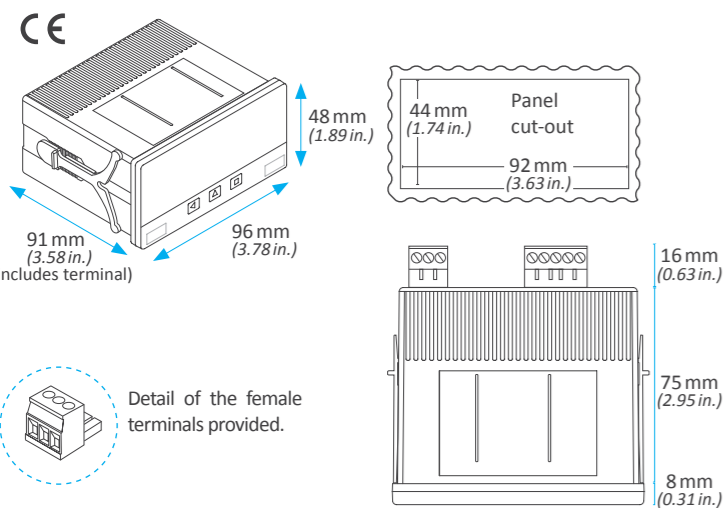
This instrument does not provide a general mains switch and will start operation as soon as power is connected. The instrument does not provide protection fuse, and the fuse must be added during installation.

- Risk of electrical shock. Instrument terminals can be connected to dangerous voltage.
- Instrument protected with double isolation. No earth connection required.
- Instrument conforms to CE rules and regulations.
- According to directive 2012/19/EU, electronic equipment must be recycled in a selective and controlled way at the end of its useful life.
- Standard warranty of 2 years according to actual european legislation. Free of cost warranty extension of 5 years, available at: <http://www.fema.es/garantia.asp>

1. Front view



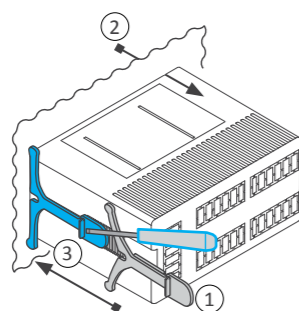
2. Dimensions and panel cut-out 'mm' (in.)



3. Panel mount

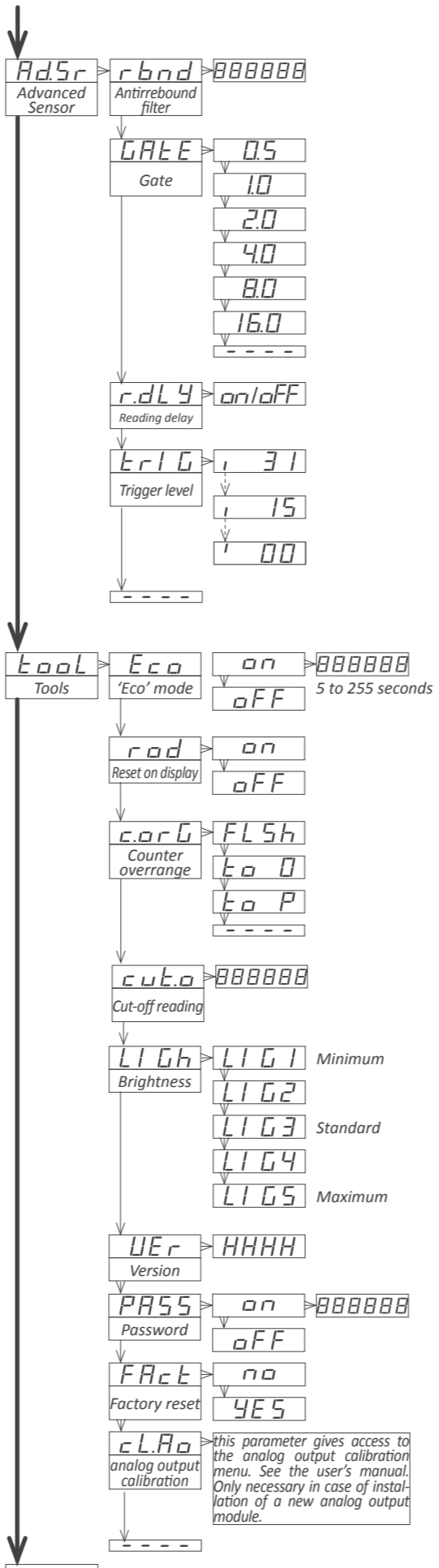
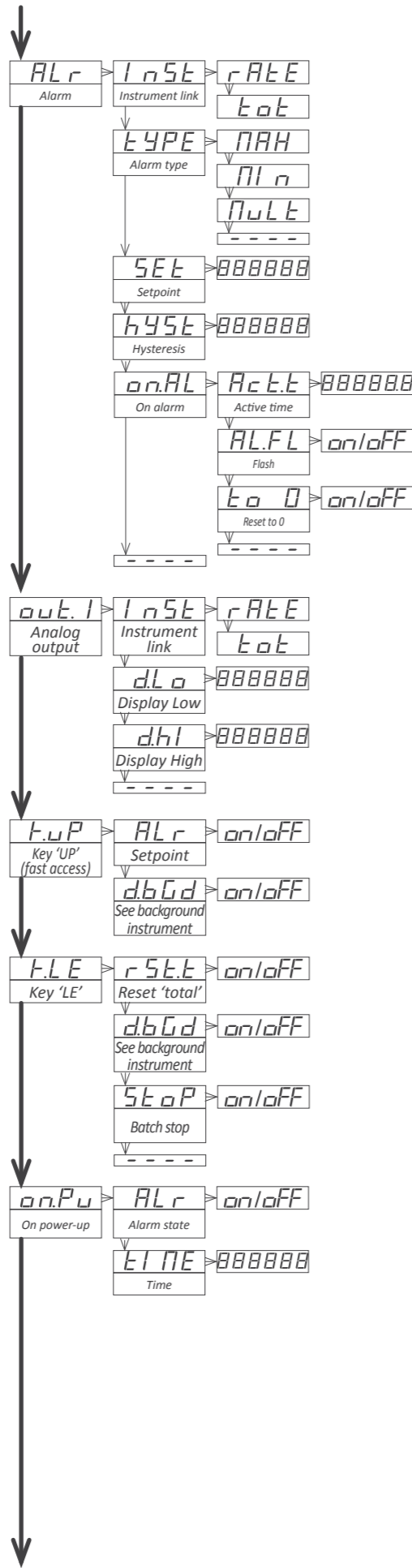
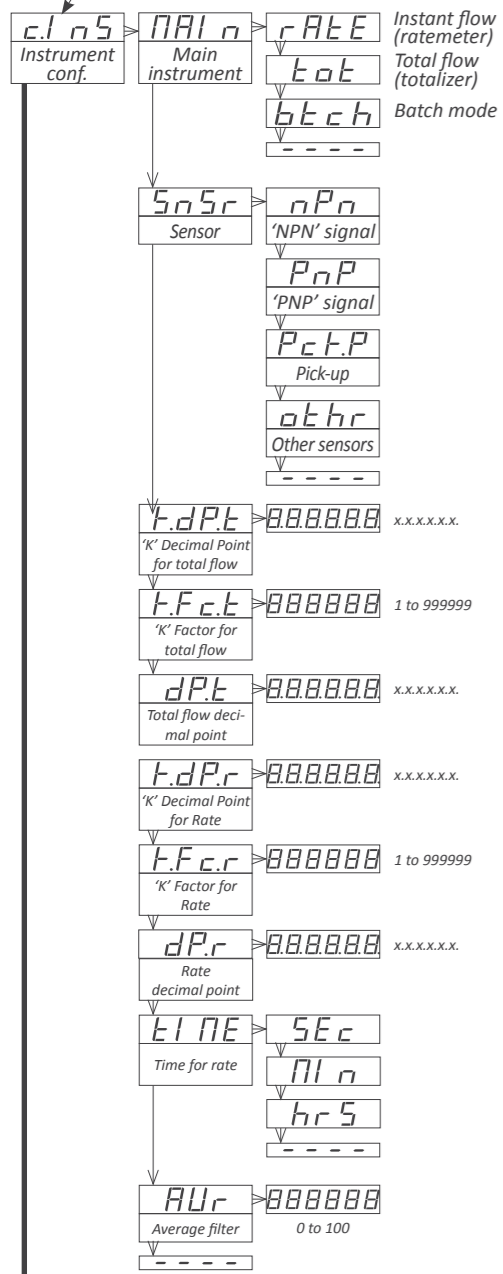
How to install the meter in a panel

1. Remove the 2 blue fixation tabs from each side of the unit.
2. Insert instrument from the front of the panel into panel cut-out.
3. Re-attached the 2 blue fixation tabs by sliding each one along its rail on each side and push until the tabs are tight onto the panel. If needed use a flat screwdriver to push the tabs strongly to the end.



12. Configuration menu

Press 'SQ' (■) for 1 second to access the 'Configuration menu'.



13. Factory configuration

Instrument configuration	
Main instrument	'rAtE' (rate meter)
Sensor	NPN
'K' Decimal point for total flow	XX.xxxx
'K' Factor for total flow	01.0000
Total flow decimal point	XXXXX.x
'K' Decimal point for rate	XX.xxxx
'K' Factor for rate	01.0000
Rate decimal point	XXXXX.x
Time for rate	flow per second ('SEc')
Average filter	0
Alarm	
Instrument link	'rAtE' (rate)
Type	'MAx' alarm as maximum
Setpoint	100.0
Hysteresis	0 counts
On alarm	
Active time	0.0 (seconds)
Alarm flash	off
Reset to 0	off
Analog output	
Instrument link	'rAtE' (rate)
Display low	0
Display high	100.0
Fast access ('Key UP')	
View alarm setpoint	on
Display background instr.	on
Key Left	
Reset	off
Display background instr.	on
Batch stop	off
Advanced Sensor	
Antirrebound filter	0
Gate	0.5 seconds
Reading delay	off
Trigger level	15
Tools	
'Eco' mode	off
Reset on display	off
Counter overrange	'to_0'
'cut-off' reading	0
Brightness	3
Password	off