

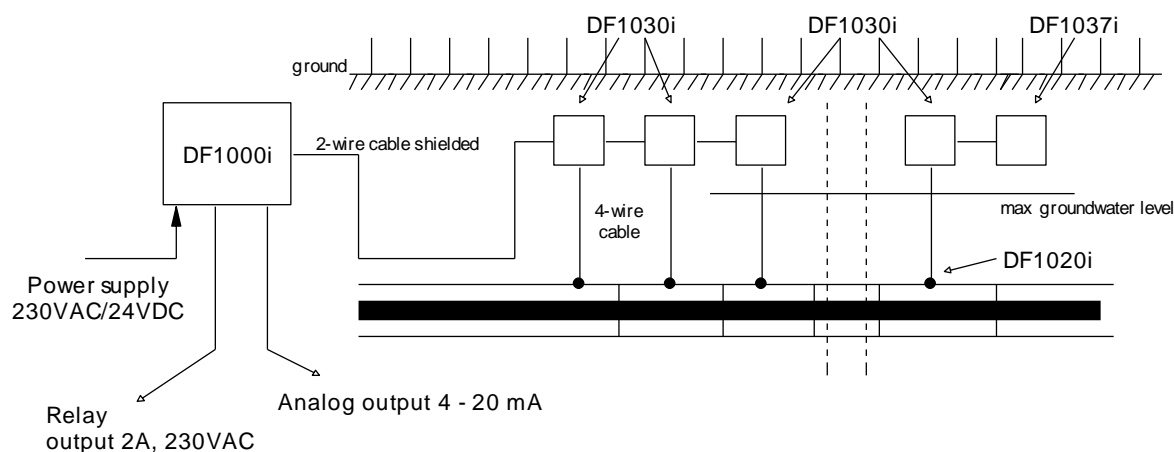
Manual DF1000i

Programmable Leakage detection system

Introduction

| | | |
|----------|-----------|---|
| Products | - DF1000i | Monitor and location system (V6, R10.4) |
| | - DF1030i | Programmable sensor with detection point DF1020i + 5m cable |
| | - DF1037i | End unit |
| | - DF/OG | 2-wire cable with shield and ground |

Schematic principle



The DF1000i leakage monitoring system is an intellectual system for double pipe systems, divided in compartments.

After correct installation and initialization the system will control it selves.

This control consists of:

- Number DF1030i
- Alarmcode of the DF1030i
- Corrosion of the electrodes of the DF1020i
- State of the DF1020i

and possible the condition of the cable.

The DF1000i has to be located on a controlled "place", out of the weather conditions (IP54).

The standard power supply is 230 VAC/50Hz or 24 VDC.

The 24 VDC is an emergency power supply, in case the 230 VAC has broken down.

The 2-wire shielded cable is the connection between the DF1000i, the DF1030i's up to the DF1037i endunit. (through cable)

Take care that the cable is not positioned in the closeness of a frequency cable

The connection for the DF1020i (4-wire green cable with shield) is located on the side of the DF1030i.

It is very important, that the installation is grounded and correctly is connected to the earth.

If the installation of the system has been done correctly and time, cable length and number of the DF1030i are programmed in the installation mode, the Init log can be made.

The Init log is the check that all connections, cable length and number of DF1030i are correctly. Take care that there are no double numbers.

If the Init log is accepted you can go to the User Mode and the system can be started (Active mode).

The Init log will not be accepted if the parameters are not correctly.

If nothing has been done, the system will start by it selves after 5 minutes (only in the User mode)

The self control will be done every two days. (standard)

This control is a comparison between the Init Log and the Active Mode; they have to be the same.

If you want to start directly, you can give E in the User mode "on standby".

The system will give alarm when there is:

1. Leakage
2. Short Circuit
3. Open circuit
4. Corrosion on the electrodes
5. Power supply more than 50 times off
6. Leakage and corrosion DF1020i

1. Leakage

By leakage the LED display will show during 10 seconds the number of the compartment which is activated.

At the same time the LED (red) leakage and alarm on the right side will burn and the relay will be activated. The green LED goes out and stays out (Fail safe)

After the 10 seconds the system will go back to the Active mode and the guarding of the compartments is active again, without the activated compartment.

The red leakage and alarm LED still burns. The system is in the User mode and active.

The user has to stop the system by pushing on the M button for two seconds and the system goes from active to standby.

With the down button you can go to the View alarm data. Here the LCD display shows the location of the alarm, date and time.

The LED display is the counter of the alarms (up to 99)

The user can not remove the alarm data. By going back to standby and pressing E (enter) he goes back to the active mode.

In the User mode the system automatically goes back to the Active mode after 5 minutes.

2. Short circuit

By a short circuit the system will close the guarding activity.

The situation by a short circuit can be dangerous (fire)

In this case the user has to act directly.

The Short Circuit red LED + Alarm LED are burning

The green LED of relay is out.

3. Open circuit

By an open loop the system stops too. There is no guarding function anymore.

It is unknown where the cable is open.

The Open Circuit red LED + Alarm LED are burning

The green LED of relay is out.

4. Corrosion on the electrodes

A corrosion of an electrode of the DF1020i will be shown after the self check. (red alarm LED will burn)

The user has to go to View alarm data and the LCD display shows corrosion nr. XX and time and date.

This alarm can not be removed by the user.

5. Power supply more than 50 times off

If the power supply of the system has been taken off and turned on for more than 50 times, there will be an alarm.

If this happens in a short period of time, there is a possibility that the memory will be full.

6. Leakage and corrosion DF1020i

If there has been a leakage the electrodes can be corroded by the liquid. This will be detected in the self check.

To remove the alarm you have to be authorized .

In the Authorized Mode you can reset and remove the alarms.

But first of all the reparation of what caused the alarm has to be done correctly.

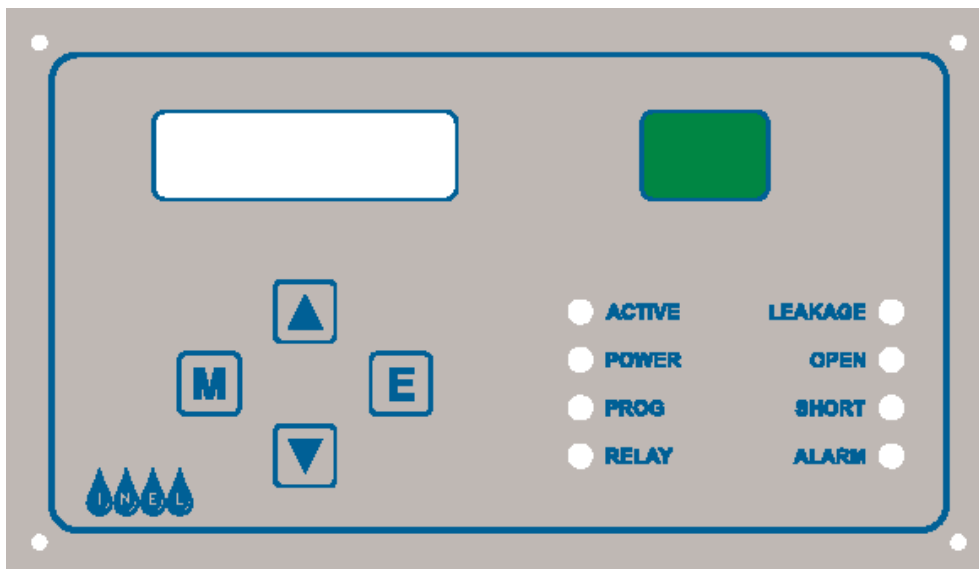
If not the same alarm will appear after the restart in the Active Mode.

The access code of the installer can only be changed by the authorized person

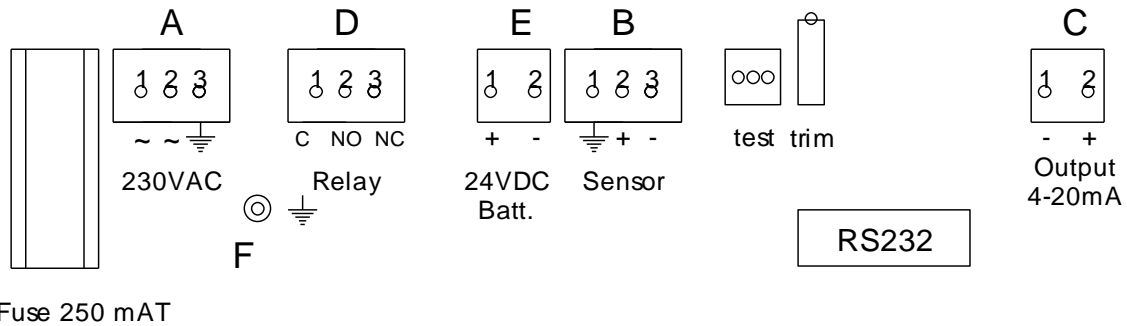
The person has to take care, that he goes out of the Authorized mode, because only in the User mode the system goes automatically back to the Active mode

The DF1000i is equipped with a LED green display and a LCD display with 4x green LED's and 1x red LED and 4 buttons:

- 1x M Menu
- 1x E Enter
- 1x ▲ Up
- 1x ▼ Down



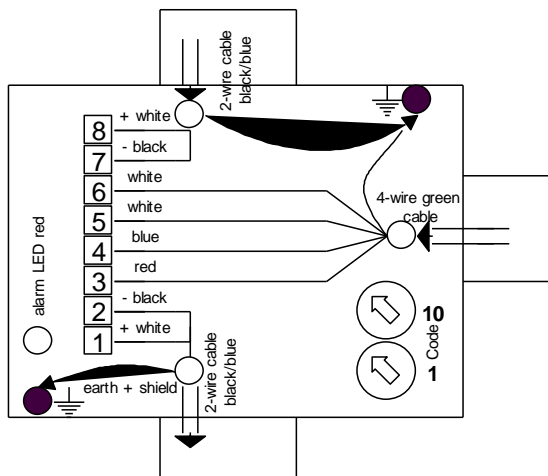
Electrical connection



- A.
 - 1 Power supply 230 VAC / 50 Hz
 - 2 Power supply 230 VAC / 50 Hz
 - 3 Connection to ground
- B.
 - 1 Ground / shield connection
 - 2 + white
 - 3 - black
- C.
 - 1 - Analog output
 - 2 + Analog output
- D.
 - 1 C of the relays function
 - 2 NO of the relays function (Normally Open)
 - 3 NC of the relays function (Normally Closed)
- E.
 - 1 + 24 VDC emergency supply
 - 2 - 24 VDC emergency supply
- F. Extra connection for grounding
You have to be 100% sure, that this is correctly

**Test and trim are for internal use.
Do not connect or change the trim, it will damage the system.**

DF1030i



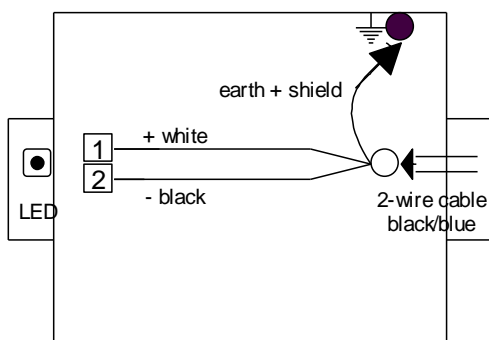
- | | | | | |
|---|---|---|---|---|
| 8 | = | + | white of 2-wire shielded cable line in | |
| 7 | = | - | black of 2-wire shielded cable line in | |
| 6 | = | | white of DF1020i | } |
| 5 | = | | white of DF1020i | |
| 4 | = | | blue of DF1020i | |
| 3 | = | | red of DF1020i | } |
| 2 | = | - | black of 2-wire shielded cable line out | |
| 1 | = | + | white of 2-wire shielded cable line out | |

Attention

The earth + shield has to be connected like above.

The code has to be unique (not twice the same number)

DF1037i Endunit



- | | | |
|---|---|-----------------------------|
| + | = | white 2-wire shielded cable |
| - | = | black 2-wire shielded cable |

Attention

The earth + shield has to be connected like above.

The program is divided in three parts:

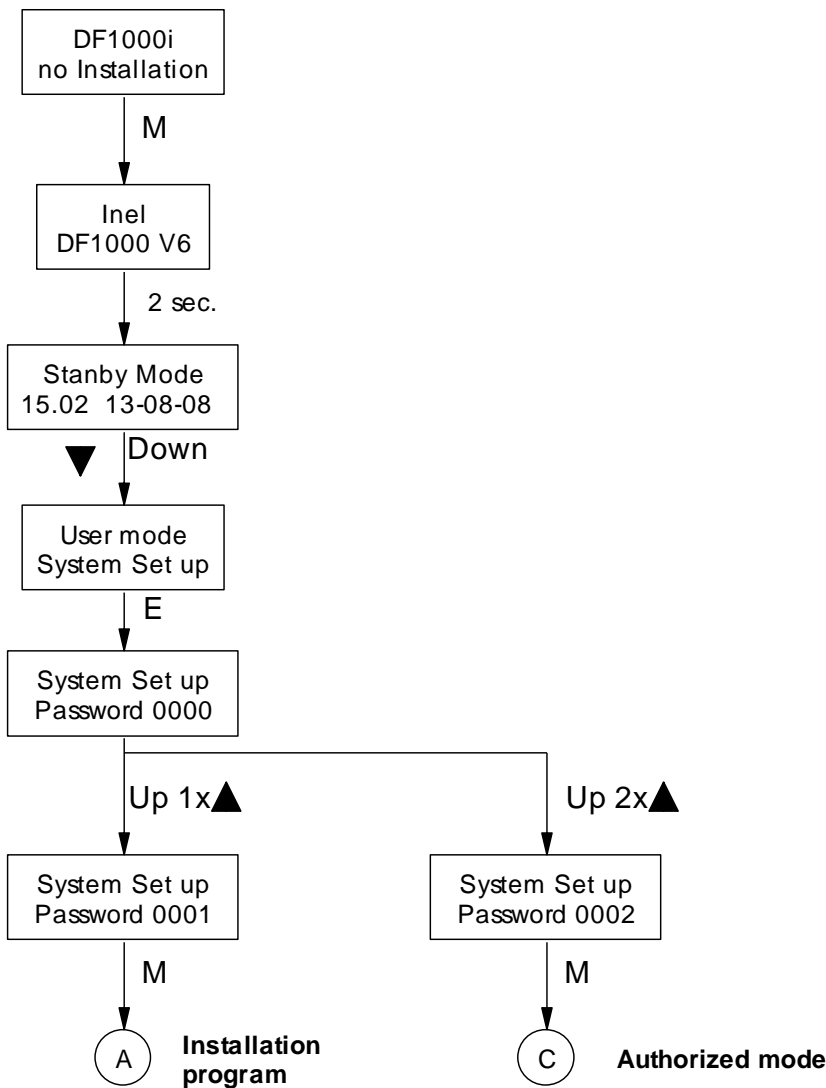
- A Installer (the person who installs the system)
- B User (the operator who checks the system, daily responsibility)
- C Authorized user (the person who is responsible for the system condition)

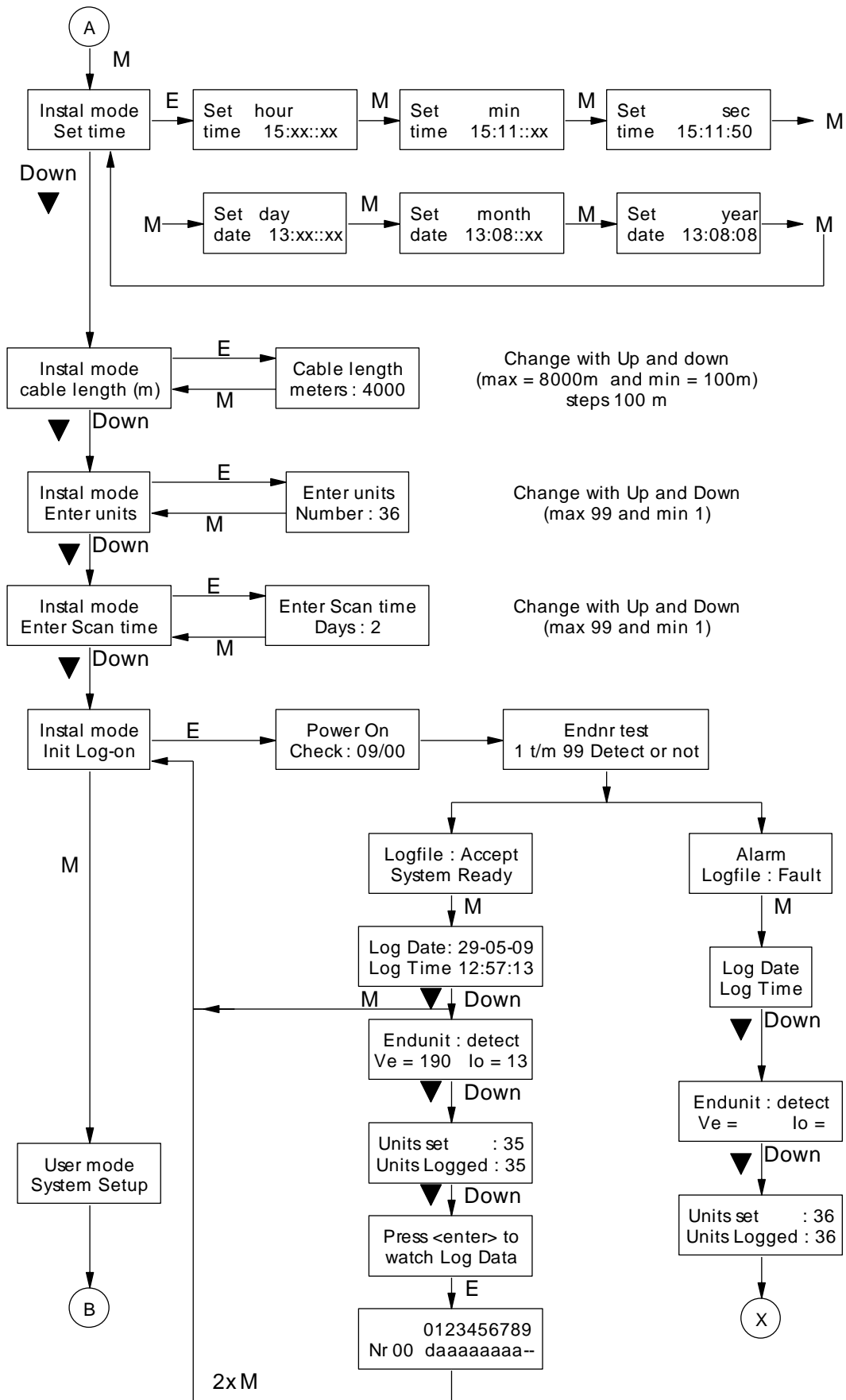
Most important is the User mode

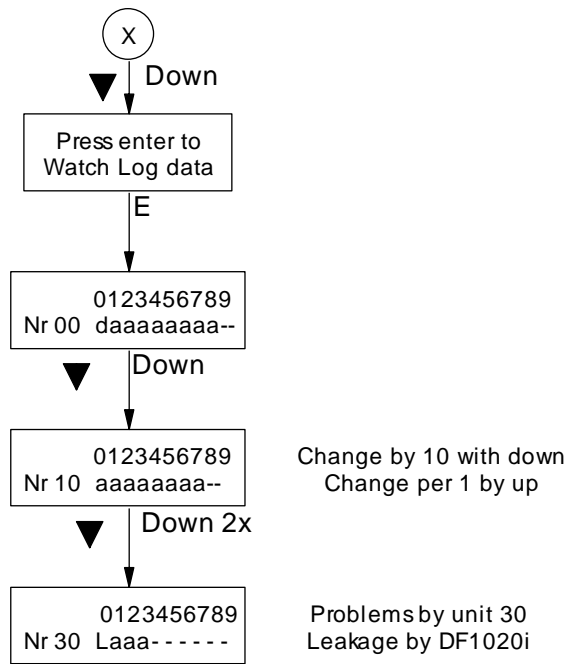
When the system is installed and every part is connected correctly, the system is ready for use.

The installer has to bring in the status of the system, which has to be checked by the user or the authorized person.

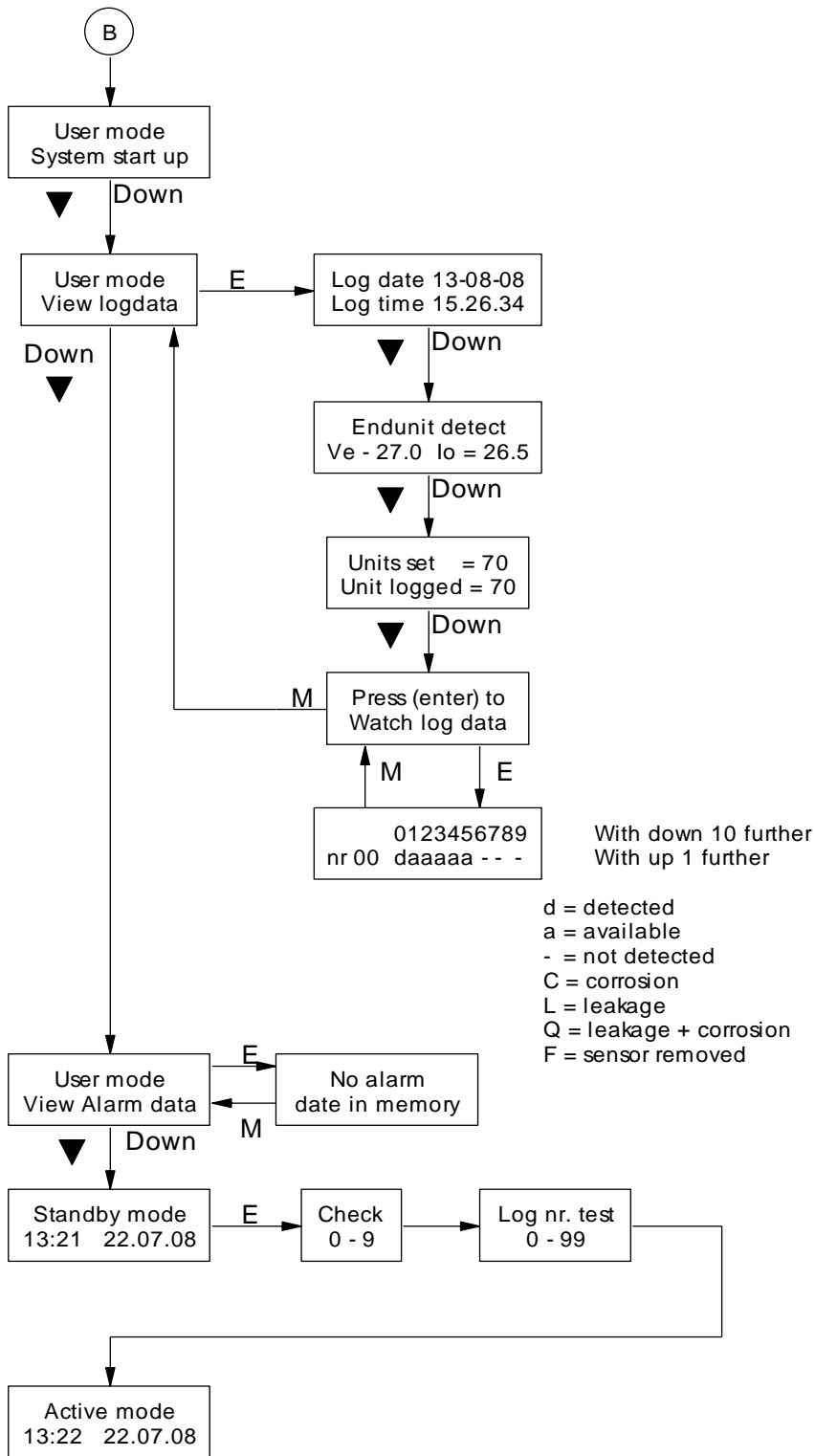
If the power supply is there for the first time, the LCD display shows:







The Init Log is very important.
 This is the check, that all components of the system have been installed correctly.
 Check in the User Mode the code (numbers) of the DF1030i.



When the user in the User mode stops without activating the system, the system always goes back to the Active mode after a time (inserted by the authorized person). Standard after 5 minutes.

Authorized user

