



INSTALLATION AND OPERATING MANUAL

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FloMaster is a unit that has been developed to monitor the distribution of gases.

The FloMaster unit connects and monitors up to 30 FloAlarm units K4-M or K12-M with Modbus connection. The configuration can be made easily using the integrated Touch Screen. Any digital input of each Floalarm can be configured in all parameters (names, led, visual signal, sound signal repeating alarms, delay of alarms...).

The system can show the history of the last 108 alarm events. It memorizes the date, time and the type of alarm. The date and time of the clearance of the alarm will be shown as well.

The FloMaster is also designed to be integrated into a BMS (Building Management System) using an RJ45 Ethernet cable with MODBUS TCP/IP Protocol. A complete description of all registers is reported at the end of this manual.

The FloMaster includes two relays that can be activated and configured for each input of each Floalarm to report the alarm condition to a remote station conveniently prepared.



CONNECTION



Bottom side

CONNECTION LEGEND					
Clamps	Description	Clamps	Description		
ModBus		Relays			
1	ModBus +	1	Common Relay 1		
2	ModBus -	2	Normally Closed Relay 1		
3	Not Used	3	Normally Open Relay 1		
4	Not Used	4	Common Relay 2		
5	Not Used	5	Normally Closed Relay 2		
Power supply		6	Normally Open Relay 2		
1	Power supply	7	Not Used		
2		8	Not Used		
3	Power supply				



Normal Working of device:

At the power up, the device will appear as in Fig. 1:



When an alarm occurs or when an active Floalarm is no more reachable by the FloMaster through the MODBUS wire (offline condition) the main screen changes and displays the name of the Floalarm and its input as error or the name of the Floalarm in the offline condition (Fig. 2). In case of more than one alarm the name of the input and the device will slide in the main screen. At the same time the alarm correctly formatted will be reported over the MODBUS TCP/IP Protocol.





Configuration of the device:

To enter the configuration menu, press the corresponding button on the main screen and insert the password as shown below (Fig. 3).



Fig. 3

The default password is: "000000"

Once inserted the correct password, the Configuration menu is shown (Fig. 4).



Touching the "**General**" button, it is possible to configure the general parameters of the device (Fig. 5).

The symbol "<<<" in the upper left corner allows to go back to the previous screen.



In this screen, it is possible to configure:

- "Name": Name of the FloMaster.
- "Factory reset": To reset the FloMaster at Factory Default.
- "Date": Touch this button to set the date and time of the device (Fig. 6):



- "Password": To modify the login password.
- **"Language"**: Switch between languages; POR Portuguese, ENG: English, DEU: German.
- **"Keybourd QWERTY":** Touch this button to set the keyboard type:
 - AZERTY
 - QWERTY



Communication screen configuration (Fig. 7):



Each button can be used to modify the network parameter; remember to press "Save TCP/IP Settings" to apply changes.

By touching the "**Floalarm**" button (Fig. 4), you can enter each Floalarm to configure the inputs (Fig. 8):

<<<	FloAlarm					
1	2	3	4	5	6	
7	8	9	10	11	12	
13	14	15	16	17	18	
19	20	21	22	23	24	
25	26	27	28	29	30	



First Floalarm Configuration Screen, general configuration (Fig. 9):



Second Floalarm Configuration Screen, Input Configuration (Fig. 10):





History Event Screen (Fig. 11):



This screen shows the history of the alarm events, with the indication of the name of the Floalarm and its input in alarm state, date and time. The maximum number of events recorded is 108, after that the older alarm will be overwritten. There are 12 pages that can be scrolled using the two symbols "<" and ">" near the title. There are 3 colours, identifying 3 different events:

- Red: Alarm condition started
- Green: Alarm condition returned to the normal
- Yellow: Floalarm Offline. Not reachable over Modbus wire



MODBUS TCP/IP register

Register	16 bits Register
1	Floalarm 1 Register
2	Floalarm 2 Register
3	Floalarm 3 Register
29	Floalarm 29 Register
30	Floalarm 30 Register
31	Floalarm OffLine from 1 to 16
32	Floalarm OffLine from 17 to 30

Floalarm XX Register is a Binary Positional Register and its value is "0" when there are no alarms. When an alarm occurs the input number of the corresponding Floalarm is set. For example: if the register 2 has a value of 68 (Binary: 0000 0000 0100 0100) it means that the input 3 and 7 of the Floalarm 2 are in alarm.

Registers for reporting the "OffLine Condition" work in the same way. "0" means no connection problem.

When a Floalarm goes OffLine its corresponding Bit is set.

For example: if the register 31 has a value of 18 (Binary: 0000 0000 0001 0010) it means that the Floalarm 2 and 5 are enabled but not reachable by the FloMaster.