



AUTOMATED ENVIRONMENTAL SYSTEMS



MADE IN ITALY

ENGLISH



INTEGRATE  
MODUL  
FUNCTION

Installation  
ad use  
manual

# 1 INTRODUCTION

## 1.1 PRESENTATION

This manual provides the essential information for the installation, use and maintenance of the PUMPS CONTROL MODULE FOR ELECTROMECHANICAL PANELS. It is important that the user read this manual before using the form. **Improper use can cause damage to the device and cause the loss of the warranty.** Always specify the exact identification code of the model, together with the construction number, should technical information or spare parts be requested from our Sales Service. The following instructions and prescriptions concern the standard execution; for instructions, situations and events not covered by this manual or by the sales documentation, contact our assistance service. Our systems must be installed in closed, ventilated, non-hazardous environments and used with maximum temperatures of + 40 ° C and minimum temperatures of -5 ° C (relative humidity 50% at 40 ° C not condensed).

## 2 WARNINGS

### 2.1 SAFETY INFORMATIONS



#### RISK OF ELECTRIC SHOCK

Failure to follow the instructions in this manual poses a risk of electric shock.



#### RISK FOR PEOPLE AND PROPERTY

Failure to observe the instructions in this manual entails a risk of damage to people and / or things.



#### WARNING

Failure to comply with the instructions in this manual entails a risk of damage to the pump, the group or the system.

### 2.2 CAUTION



#### ATTENTION: PUMPS

- Make sure that each pump is perfectly primed before starting.
- Check the correct direction of rotation of the pump.
- The electric pump can start automatically.



#### ATTENTION: ELECTRICAL CONNECTIONS

- The connection of the electrical panel must be carried out by a qualified electrician in compliance with current electrical regulations.
- The electric pump and the switchboard must be connected to an efficient earth system according to the local electrical regulations in force.
- Make the earth connection as a first step.



#### ATTENTION: SERVICE

Any intervention on electrical or mechanical parts of the system must be preceded by the interruption of the mains power supply. If you need to operate inside the panel, you must also disconnect any internal battery (if present).

### 2.3 LINE OF SUPPLY CURRENT

**Make the ground connection before any other connections.**

Make sure that the power supply voltage corresponds to that indicated on the plate of the electrical panel and of the pump. Check that the power cable is able to withstand the rated current. If exposed, the cables must be protected. The line must be protected with a differential magnetothermic switch sized in accordance with current regulations.



**ATLANTIC POWER CONTROL S.r.l.s is not liable for damages caused by the module or on the module itself caused by its improper use.**

### 3 USE

#### 3.1 DESCRIPTION

INTEGRATE MODUL FUNCTION FUNCTION is an electronic device for starting one or two three-phase or single-phase pumps. The main features are listed below:

##### FUNCTIONS:

- Automatic pump alternation (2 pumps only)
- Clean water or waste water mode (self-holding)
- Phase sequence control (three-phase only)
- Phase failure control (three-phase only)
- Over and under voltage control
- Pump anomaly check
- Minimum level control with CLC probes

##### INPUTS:

- Power input (three-phase or single-phase depending on the model)
- Up to 4 CLC probes
- Up to 4 floating NO contact floats
- Up to 2 Clixon dry contact inputs N.C. (motor thermal control)
- Up to 2 3-position changeover inputs dry contact N.O. (AUT-0-MAN)
- Up to 2 inputs dry contacts thermal relay pumps dry contact N.C.
- 24Vac input

##### OUTPUTS:

- Up to 2 N.O. contact outputs live for pump contactors
- Dry contact alarm output N.O.
- N.O. voltage contact output (24Vac)

##### ALARMS AND PROTECTIONS:

- Pump thermal relay intervention alarm \*
- Wrong phase sequence alarm (three-phase only) \*
- Phase failure alarm (three-phase only) \*
- Over and under voltage alarm \*
- Minimum level alarm \*
- Maximum level alarm
- Clixon alarm \* (motor thermal control)

\* Alarms blocking the pumps



**The maximum level alarm activates all the pumps that may be available.**

To reset the alarms it is necessary to move the switch to position 0. Alarms are generated only if the module is in automatic (AUT) or manual (MAN) mode.

**DISPLAYS:**

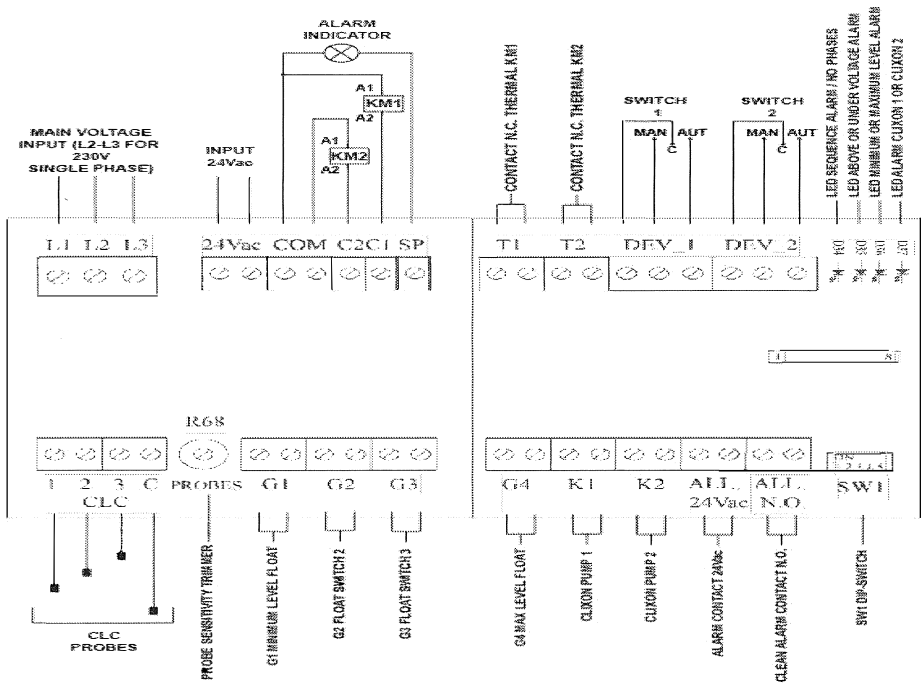
- LED displaying wrong phase sequence alarm or missing phase (if **OFF** incorrect sequence or missing phase)
- LED displaying over or under voltage alarm (if **ON** over or under current active alarm)
- LED displaying minimum or maximum level alarm (if **ON** minimum or maximum level active alarm)
- Clixon alarm display LED (motor thermal control) (if **ON** pump 1 or 2 Clixon active alarm)

**PREDISPOSITIONS:**

- Predisposition for BMS additional module for remote management

**4 INSTALLATION**

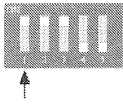
**4.1 ELECTRIC CONNECTIONS**



**LED D34 (SEQUENCE ALARM / NO PHASE) MUST BE ON TO INDICATE THE CORRECT POWER SUPPLY OF THE MODULE. IF THE LED WAS OFF, CHECK THE PRESENCE OR SEQUENCE OF THE PHASES. FOR SINGLE-PHASE MODULES THE LED INDICATES THE CORRECT POWER SUPPLY OF THE BOARD (NETWORK PRESENCE LED)**

**3. 3 DIP SWITCH SETTING**

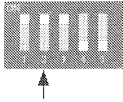
To activate or deactivate the various functions or alarms it is necessary to act on the dip-switch located on the module



**DIP-SWITCH 1 - ALTERNATION OF PUMPS \***

DIP-SWITCH in ON position: PUMPS ALTERNATION ACTIVATED (DEFAULT)  
 DIP-SWITCH in OFF position: PUMPS ALTERNATION DEACTIVATED

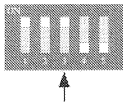
\* Available only for 2 pump control version



**DIP-SWITCH 2 - SEQUENCE ALARM / NO PHASES\***

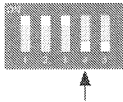
DIP-SWITCH in ON position: SEQUENCE ALARM / NO PHASE ACTIVATED  
 DIP SWITCH in OFF position: SEQUENCE / PHASE FAILURE ALARM DEACTIVATED (DEFAULT)

\*Available only for three-phase version. LEAVE OFF ON SINGLE-PHASE VERSIONS



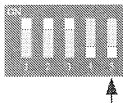
**DIP-SWITCH 3 - CLEAN WATER / WASTE WATER MODE (SELF-HOLDING)**

DIP-SWITCH in ON position: CLEAN WATER MODE (DEFAULT)  
 DIP-SWITCH in OFF position: WASTEWATER MODE (SELF-HOLDING)



**DIP-SWITCH 4 - MINIMUM LEVEL ALARM WITH CLC PROBES**

DIP-SWITCH 4 in ON position: MINIMUM LEVEL ALARM WITH CLC PROBES ACTIVATED  
 DIP-SWITCH in OFF position: MINIMUM LEVEL ALARM WITH CLC PROBES OFF (DEFAULT)



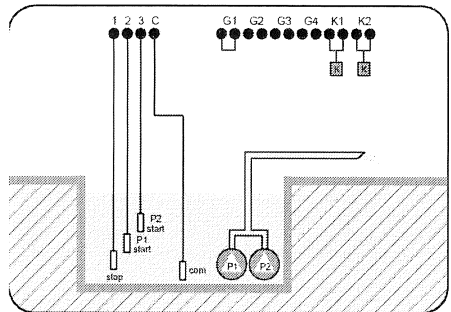
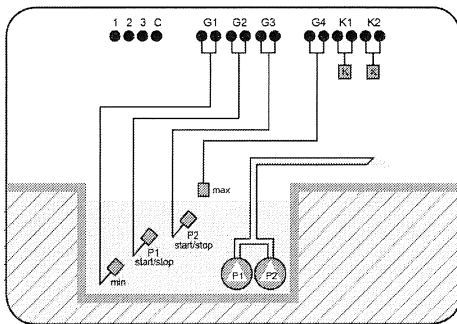
**DIP-SWITCH 5 - OVER AND UNDER VOLTAGE ALARM \***

DIP-SWITCH in ON position: OVER AND UNDER VOLTAGE ALARM ON (DEFAULT)  
 DIP-SWITCH in OFF position: ABOVE AND UNDER VOLTAGE ALARM DISCONNECTED

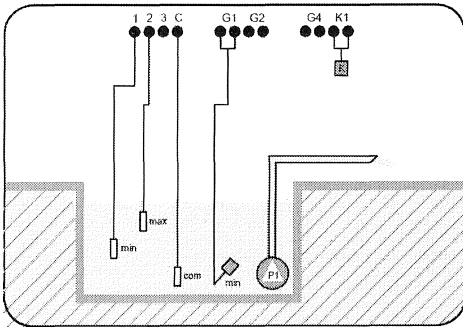
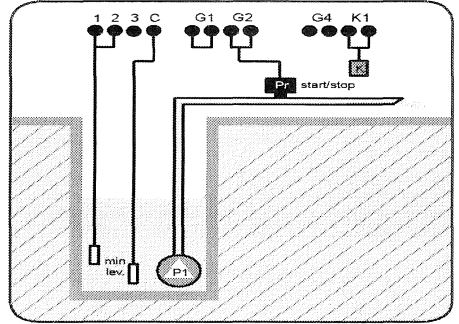
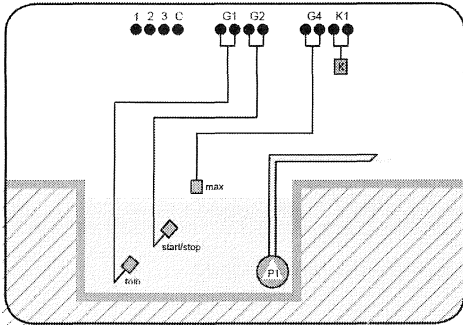
\* The protection for over and under voltage is +/- 15% of the rated voltage value and cannot be set.

**4 TYPICAL INSTALLATIONS**

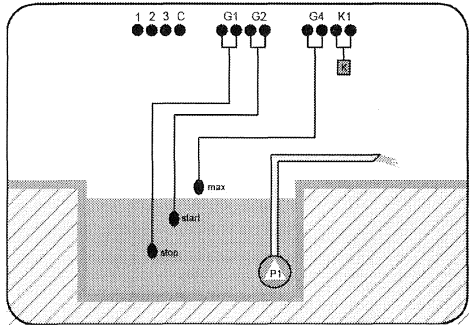
**4.1 CLEAN WATER 2 PUMPS**



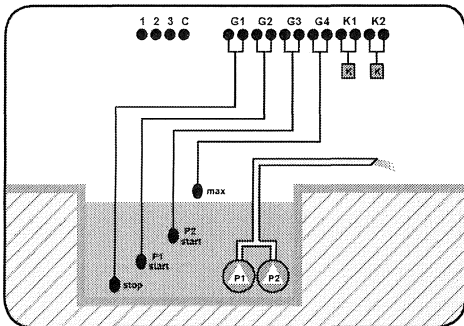
#### 4.2 CLEAN WATER 1 PUMP



#### 4.3 WASTE WATER (SELF-HOLDING) 1 PUMP



#### 4.4 WASTE WATER (SELF-HOLDING) 2 PUMPS



The images are intended to represent application examples, so the module can be used in different combinations besides the following images.

The float contacts are to be considered clean (not in current) normally open. If not used, inputs G1, K1 and K2 must remain short-circuited. If not used, the G4 contact must remain open.

# 5. Certifications

## 5.1 CERTIFICATE OF CONFORMITY

The Manufacturer:

**Atlantic Power Control S.r.l.s**  
Via E. Fermi, 10 - 35020 Polverara (PD) - ITALIA

DECLARES UNDER IS OWN RESPONSIBILITY  
THAT THE FOLLOWINGS CONTROL PANELS:

### **INTEGRATE MODUL FUNCTION**

ARE IN CONFORMITY  
WITH COMMUNITY DIRECTIVES REGARDING:

• European  
directive  
2014/35/UE

• Electromagnetic  
compatibility  
directive  
2014/30/UE



AND AS APPLICABLE TO HARMONIZED STANDARDS:

• EN 61439-1  
• EN 61439-2  
• EN 60204-1  
• EN 55014-1

• EN 55014-2  
• EN 61000-3-2  
• EN 61000-3-3

Moreover Mr. Giuseppe Franchin, as the legal representative of the company, is the person authorized to compile the technical documentation file.

Polverara - Italy, 10/01/2018

A handwritten signature in black ink, appearing to read 'Giuseppe Franchin'.

Technical Manager  
(Giuseppe Franchin)



**AUTOMATED ENVIRONMENTAL SYSTEMS**

**AUTOMATED ENVIRONMENTAL SYSTEMS LTD**  
1 WIMBLEDON AVENUE, BRANDON, SUFFOLK, IP27

●NZ

TEL: 0845 803 5582

[www.automatedenvironmentalsystems.co.uk](http://www.automatedenvironmentalsystems.co.uk)

