MATelec FPC-30120 SMS Alarm/Status Communicator User Guide

MATelec AUSTRALIA

ME-Link IoT/SMS MODULE

QUICK START GUIDE
SMS Alarm/Status Communicator
Single/Dual Pump Interface – FPC-30120

Contents

Introduction

MATelec Australia's SMS Alarm/Status Communicator features the newly designed ME-Link Module, which is a cellular CAT-M1 remote monitoring and control device utilizing the 700Mhz frequency for 'best in class' signal strength. The Single/Dual Pump Interface Version of the Communicator reports status information and alarms from the BMS/remote output on MATelec Australia Standard Single and Dual Pump Controllers. The ME-Link Module can also be utilized to control external devices with the two onboard relay outputs and uses easy to set up SMS commands to configure the operation and alarms without the need for any additional software.

Safety 

This SMS alarm sender panel has been designed and built for applications that are Commercial and/or Industrial in nature, operation, function and location. If the control panel is to be used in Domestic/Residential applications, where specific Wiring Rules in respect of 'electrical supply' protection may apply, it is the responsibility of the installing electrician to ensure compliance with relevant standards.

- Prior to installation, ensure power supply is isolated.
- Electrical connection to the panel must be carried out in accordance with the following pages.
- Additions or modifications to the control panel are not permitted and will void the warranty.
- The controller is not intended for use by children or infirm persons without supervision.
- Repairs to the controller must only be carried out by a suitably qualified electrician.

This quick start guide makes use of the following symbols to indicate warnings that must be paid specific attention to:

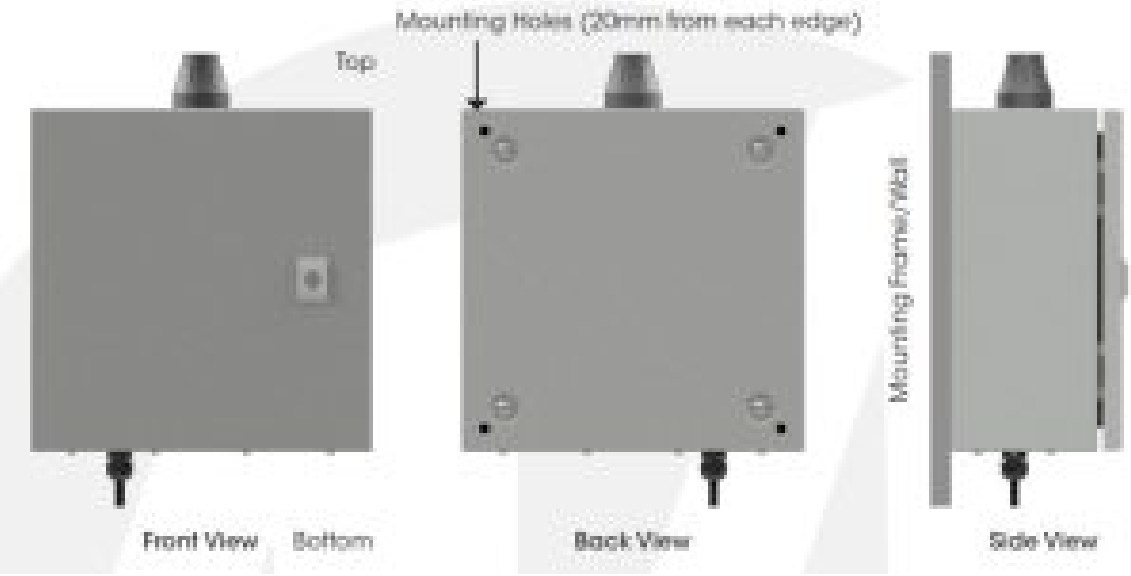
 Damage to equipment or personal harm may occur if this instruction is not followed

 Electrical risk (electrocution hazard) may occur if this instruction is not followed

Step 1 – Installation 

- SMS alarm sender must be installed in a position where mobile reception is available.
- SMS alarm sender enclosure must be mounted in a vertical position.
- Ensure mounting method does not compromise enclosure weatherproof rating.

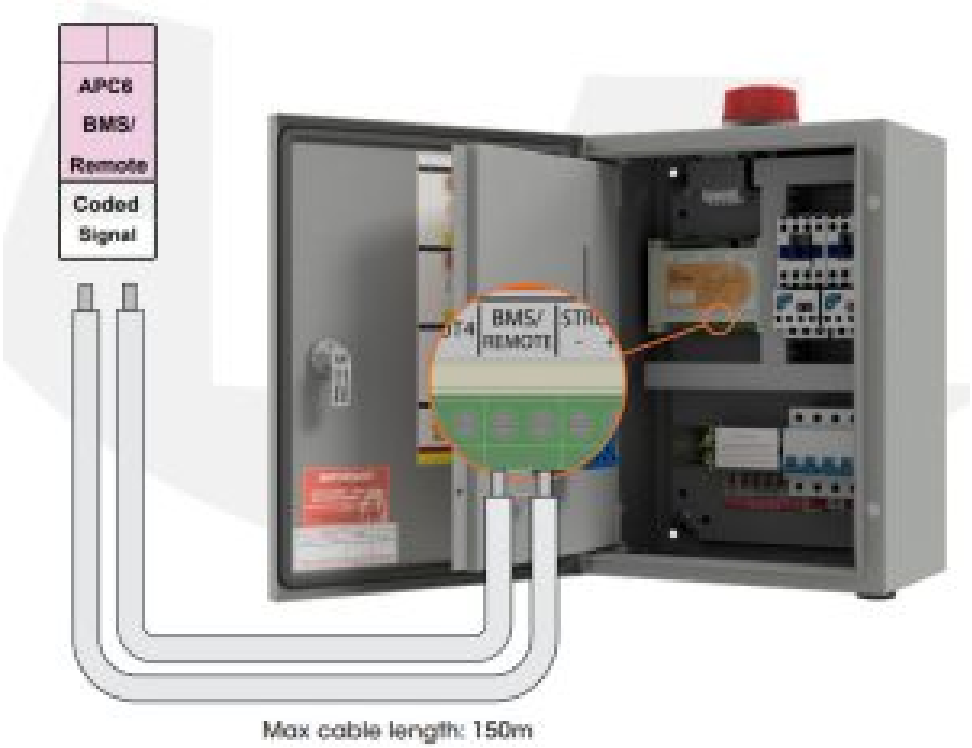
- Ensure cables/conduits entering the panel have mechanical protection and that the penetrations are sealed and do not compromise the weatherproof rating of the enclosure.



Step 2 – Connections

Warning: All electrical connections must be carried out by a suitably qualified and registered electrician

Terminal Connections
Connect to BMS/remote output found on MATelec Standard Single and Dual Pump Controller



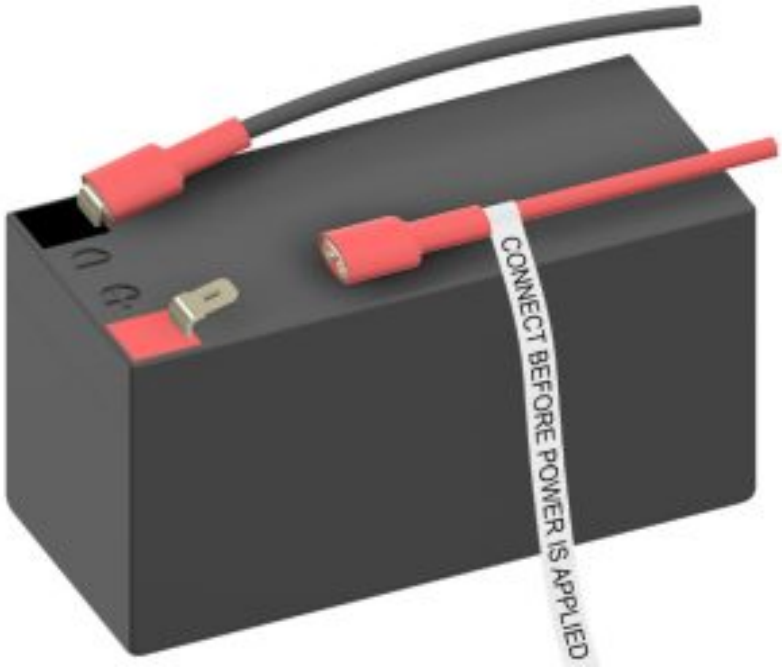
Step 3 – Setup

3.1 – SIM Card Installation

The SMS alarm sender takes a Micro SIM card which must be from a network operator who offers the CAT-M1 700Mhz frequency. At
the time of printing, all SIM cards that use the Telstra network will be compatible. Other network providers will be compatible when they support CAT-M1 modules.

1. Ensure power to the panel is OFF.
2. Firstly, ensure that the SIM card is activated with credit and ready to send text messages. Also, ensure that the SIM PIN is disabled.
3. Insert the SIM card with the chip gold plate facing down and the missing corner to be inserted in first. See pictures below.
4. The SIM needs to be pushed in firmly. Ensure that it fits properly in the SIM holder.

3.2 – Enable Battery Backup



To have the SMS alarm sender operating when power fails, the internal battery must be connected. With power isolated, connect the loose wire near the battery labeled ‘CONNECT BEFORE POWER IS APPLIED’. See the image to the right.
If power is to be isolated for more than 7 days ensure this wire is disconnected to prevent the battery from going flat.

3.3 – Testing Mobile Connection
The SMS alarm sender is tested and programmed by sending SMS messages to the SIM card’s phone number.

1. Check the SMS controller’s indicator lights to ensure that power is on and the sim card is connected to a

mobile network. If there is no reply, check the indicator lights status table below:

Link	Status	Description	Function	Cause
		Green Flashing, Red Off	Network connected	N/A
		Green Flashing, Red 1 Flash	Network connected, sending SMS	N/A
		Green Off, Red Solid	Hardware fault	Contact supplier for further assistance
		Green Off, Red 1 Flash	Connecting, searching for mobile network	Wait for network connection search to finish
		Green Off, Red 2 Flashes	Network connection failed	Check the SIM card is activated and has a credit
		Green Off, Red 3 Flashes	Network is not found/ Poor signal strength	Check the antenna connection and mobile signal at the device.
		Green Off, Red 4 Flashes	Network connection denied	Check SIM is Telstra compatible and SIM is active and has credit (Only Telstra networks are currently valid)
		Green Off, Red 5 Flashes	SMS failed to send	Check that SIM is still installed, active, and has credit
		Green Off, Red 6 Flashes	SIM card not detected	Install or reinstall Micro SIM card and check installation orientation
		Green Off, Red 7 Flashes	SIM Pin is enabled	Disable the SIM pin before retrying the connection

2. To test the system is operating correctly, send #title? to the phone number of the SIM card. This will send a reply from the SMS controller to show it is ready for programming. If there is no reply within 1 minute see the status lights above.

3.4 – Mains Powerup

Close and secure enclosure door, connect the power lead into RCD-protected GPO and switch on mains power.

Step 4 – SMS Programming 

User Commands
SMS commands are sent to the phone number of the SIM card installed. This phone number should be supplied with the SIM card. Commands sent ending with '?' are a query of the command set, commands sent without this are used to configure the setting. The symbols < > are used to reference user information to be sent in the commands, and should not be sent in the command message.

4.1 – Set the SMS alarm sender title
#title <new title>

Use this command to add the SMS alarm sender title (max 50 characters).
Example SMS command: #title ME-Link SMS Alarm Sender
The title will be set to 'ME-Link SMS Alarm Sender'. This will be sent with each alarm message sent from the SMS alarm sender.

#title?
Use this command to enquire about the current SMS alarm sender title.
4.2 – Set the numbers to receive alarm messages <slot> is the phone book slot from 1 to 10 which phone numbers can be added and deleted from. <number> is the phone number assigned to the phone book slot that will receive the alarm messages.

#num add <slot> <number>
Use this command to add the phone numbers.
Example SMS Command: #num add 3 0406446XXX
The phone number 0406446XXX will be added to phone number slot 3.

#num del <slot>
Use this command to delete a phone number
Example SMS command: #num del 3
The phone number 0406446XXX is deleted from slot 3.

#num?
Use this command to request the phone number list. Empty slots are reported as ———-.

4.3 – View input alarm messages that will be received
Each digital input will send a message when the input turns on (goes high) and when it turns off (goes low). Inputs 7 and 8 are preprogrammed for power fail and battery voltage low alarms. Inputs 1-4 are pre-programmed to match the outputs provided by the BMS interface board, so no user programming is required. The default on and off messages for each input are shown below under the
#msg all on? and #msg all off? commands.
<input> is the digital input number from 1 to 8 that will trigger the SMS alarm messages. <message> This Is the text message you want to send to the phone number based on the input state.

#msg all on?
Use this command to request alarm messages for all inputs in
ON state.
Example response:
Input on messages:

1. Power On/Restored
2. High-Level Fault

3. Pump 1 Fault
4. Pump 2 Fault
5. ———-
6. ———-
7. ME-Link Mains Power Failure
8. ME-Link Battery Voltage Healthy

#msg all off?
Use this command to request alarm messages for all inputs in
OFF state.
Example response:
Input on messages:

1. Power Off/Failure
2. High-Level Fault Cleared
3. Pump 1 Fault Cleared
4. Pump 2 Fault Cleared
5. ———-
6. ———-
7. ME-Link Mains Power Restored
8. ME-Link Battery Voltage Low

If you would like to edit the default input on and off messages, use the below commands:
#msg <input> on <message>
Use this command to set an alarm on messages for specific inputs.
Example SMS command: #msg 3 on High-Pressure Fault
The Input 3 on message will be set to ‘High-Pressure Fault’.
#msg <input> off <message>
Use this command to set alarm off messages for specific inputs.
Example SMS command: #msg 3 off High Pressure Cleared
The Input 3 off message will be set to ‘High Pressure Cleared’.

4.4 – Additional Informative Commands
#info?
Use this command to request the status information of the device.
Example response:
<title>
Ver: <firmware revision>
RSSI: <signal strength>
Power: <supply voltage>
Time: <network current time>
Reminder: <on or off>
Test msg: <on or off>

#inputs?

Use this command to request the status of all inputs.
Example response (input 1 only):

Input 1 OFF: ALARM ACTIVE Input state as ON/OFF and corresponding alarm direction: ‘Alarm Active’ or ‘Alarm Inactive’

Activated: Alarm state: ‘Last Active’ if inactive or ‘Activated’ if active
Mon 07/12/2020 16:42 Time at which the alarm was last activated
Notified once Alarm notification state: ‘Notified Once’, ‘Not Recorded’, ‘Not Accepted Yet’ or ‘Accepted’

#reset
Use this command to reset all settings back to defaults, including the PIN.

Example SMS Command: #reset
Response: Are you sure you want to factory reset? Enter #reset again within 1 minute to confirm
SMS Command: #reset
Response: The device has been reset back to factory defaults.

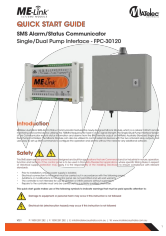
#help?
Use this command to request help on what commands are available and get more detailed information about different commands.
Refer to the ME-Link Operation Manual for more detailed information on all the SMS commands.

Quick Start Complete
The SMS alarm sender is now configured and has begun operation. Refer to ME-Link Operation Manual for more information on the operation of the ME-Link SMS module.

User Settings

SIM Card Phone Number	
Number:	
SMS Alarm Sender title	
Title:	
Phone Numbers	
Slot 1:	
Slot 2:	
Slot 3:	
Slot 4:	
Slot 5:	
Slot 6:	
Slot 7:	
Slot 8:	
Slot 9:	
Slot 10:	
Digital Input Alarm Messages	
Input 1 On	Power On/Restored
Input 1 Off	Power Off/Failure
Input 2 On	High-Level Fault
Input 2 Off	High-Level Fault Cleared
Input 3 On	Pump 1 Fault
Input 3 Off	Pump 1 Fault Cleared
Input 4 On	Pump 2 Fault
Input 4 Off	Pump 2 Fault Cleared
Input 5 On	Unused
Input 5 Off	Unused
Input 6 On	Unused
Input 6 Off	Unused
Input 7 On	ME-Link Mains Power Failure
Input 7 Off	ME-Link Mains Power Restored
Input 8 On	ME-Link Battery Voltage Healthy
Input 8 Off	ME-Link Battery Voltage Low

Documents / Resources

	MATelec FPC-30120 SMS Alarm/Status Communicator [pdf] User Guide FPC-30120, SMS Alarm Status Communicator, Status Communicator