



LE4050M

Cellular Alarm Communicator

Installation and Operation Manual

Doc. No. 06002 V 1.3 02/2024

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About this document

This document was developed and wholly owned by M2M Services. It is intended to facilitate trained personnel with the installation of LE4050M. M2M Services reserves the right to modify and revise this manual without notice.

Agency Listings and Approvals

These listings and approvals apply only to the module specified in this document. In some cases, listing may be in process.

- **FCC Statement**
This equipment complies with FCC rules Part 15, FCC registration No. **RI7ME310G1WW** and operation is subject to the following conditions:
 - (1) This device may not cause harmful interference, and
 - (2) This device must accept any interference received.
- **ETL Standards for United States**
 - UL 2610:2021 Commercial Premises Security Alarm Units and Systems
 - UL 985:2015 Household Fire Warning System Units
 - UL 1023:2017 Household Burglar-Alarm System Units
- **ETL Standards for Canada**
 - **ULC S304:2016 Control Units, Accessories and Receiving Equipment for Intrusion Alarm Systems**
 - **ULC S545:2002 Residential Fire Warning System Control Units**

Limited Liability

The user agrees that despite the Device could reduce the risk of fire, theft, burglary or other dangers, it does not guarantee against such events. M2M Services will not take any responsibility regarding personal, property or revenue loss while using the Device. M2M Services responsibility according to local laws does not exceed the value of the purchased system. M2M Services is not affiliated with GSM operators providing cellular services, therefore is not responsible for network services, coverage or its operation.

Manufacturer Warranty

The Device carries a non-transferable hardware limited warranty by the manufacturer M2M Services. This warranty does not cover any postal or labor costs for the removal and reinstallation of the Device. This warranty does not cover any subscriber agreements or failure of services provided under the terms of such subscriber agreements, or failure of cellular or other related networks functions and services. The warranty does not apply to any Device that has been modified or used in a manner contrary to its intended purpose and does not cover damage to the Device caused by installation or removal of the Device or any of its components. This warranty is voided if the Device has been damaged by improper maintenance, SIM card removal, accident or unreasonable use, negligence, acts of God, neglect, improper service or other causes not arising out of defect in materials or construction. This warranty does not cover the elimination of externally generated static or noise, or the correction of antenna problems or weak signal reception, damage to software, accessories or alarm system external components, cosmetic damage or damage due to negligence,

misuse, abuse, failure to follow operating instructions, accidental spills or customer applied cleaners, damage due to environmental causes such as floods, airborne fallout, chemicals, salt, hail, windstorms, moisture, lightning or extreme temperatures, damage due to fire, theft, loss or vandalism, damage due to improper storage and connection to equipment of another manufacturer, modification of existing equipment, faulty installation or short circuit.

In no event will M2M Services be liable for any incidental, special or consequential damages (including loss of profits), and the Client shall have no claim against M2M Services for termination of contracts, indemnification, compensation for loss of customers, loss of profits, prospective profits, distribution rights, market share, goodwill, investments made or any similar losses that may result from any faults in the operation of the Device and the services provided by M2M Services.

Safety Instructions

- ✓ This unit must be checked by a qualified technician once a year.
- ✓ The LE4050M device contains a radio transceiver operating in LTE CAT-M1 band.
- ✓ Do not use the Device with medical devices, or where it can interfere with other devices and cause any potential danger.
- ✓ Do not expose the Device to high humidity, chemical environment, or mechanical impacts.
- ✓ Do not use the Device in hazardous environment. Don't store or install the Device in overheated, dusty, wet or overcooled places.
- ✓ The Device is mounted in limited access areas. Any system repairs must be done only by qualified, safety aware personnel. Don't disassemble or refit the Device. Do not attempt to personally repair it.
- ✓ Mains power must be disconnected before any installation or tuning work starts. The device installation or maintenance must not be done during stormy conditions.
- ✓ The device must be powered by DC 12-15V power supply of the alarm panel.
- ✓ Blown fuses or any other components of the Device must not be replaced by the user.
- ✓ Keep the Device dry. Any liquid, i.e. rain, moisture, may destroy or damage the inside circuitry.
- ✓ Handle carefully. Don't vibrate or shake it violently.
- ✓ Don't clean it with chemicals, detergent.
- ✓ Please read the user manual carefully before installation and operation of the Device. Otherwise, it may not work properly or be destroyed.

Technical Support

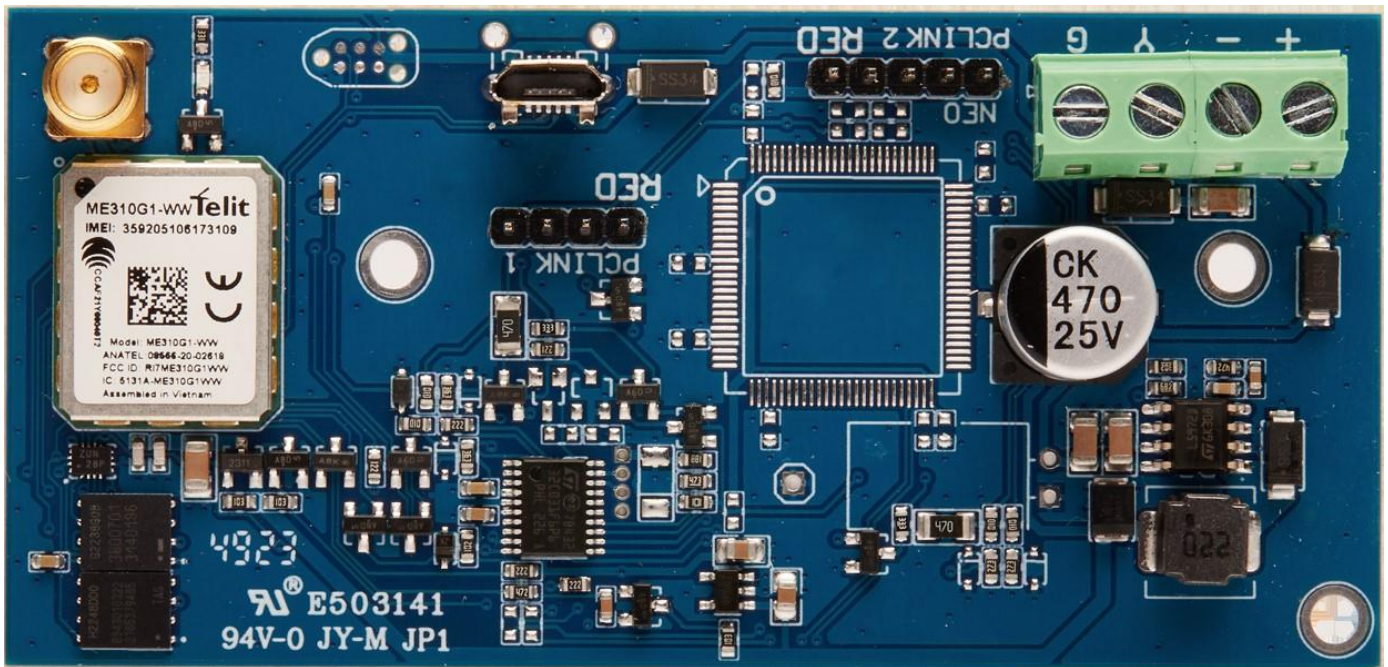
For support in the USA and Canada, contact M2M Services Technical Support at:

- Telephone: 1-800-403-7029
- Email: support@m2mservices.com
- Website: support.m2mservices.com

Product Description

The LE4050M is a digital serial port alarm communicator. It represents the latest communication technology for the security industry. The communicator is equipped with dual-SIM supporting multiple carriers per country.

This communication solution is a complete communication platform for data transfer from alarm systems at remote sites to Central Monitoring Stations (CMS). The platform allows bi-directional data transmission by using LTE CAT-M1 network.



Main Features

- ✓ Direct RS232 Serial Port connection – supporting event reporting from DSC PowerSeries and DSC PowerSeries NEO alarm panels.
- ✓ Exceptional Redundancy – Dual-SIM device
- ✓ High reliability due to the new LTE CAT-M1 network and redundant servers.
- ✓ Web-based software and smartphone app for devices configuration and administration.
- ✓ Remote firmware updates.
- ✓ End-user smartphone app for remote alarm panel control and live push and email notifications.
- ✓ Remote panel upload/download

Specifications

Characteristics	Technical Specifications
Supply Voltage	+12 to +15 VDC
Consumption	Standby 20 mA Peak 200mA
Frequency	LTE CAT-M1 700/850/1700/1900/2100 MHz
Dimensions	1,73"x3.58"
Interface	RS232 Serial Port
Weight	1.5oz without antenna
Environmental	Operating temperature: 0°C to 49°C (32°F to 120°F) Humidity: 0 to 85% relative humidity, non-condensing

Wiring the communicator to the DSC Power Series Neo alarm panels

- Recommended location and wiring methods must be in accordance with the National Electrical code, ANSI/NFPA 70.
- The communicator must be powered by a control panel.
- The system should be tested once per week.
- The wiring should be done only when the panel is powered down.
- For Dry/Indoor use only.

The LE4050M communicator mounted into the box of the DSC PowerSeries NEO alarm panel.

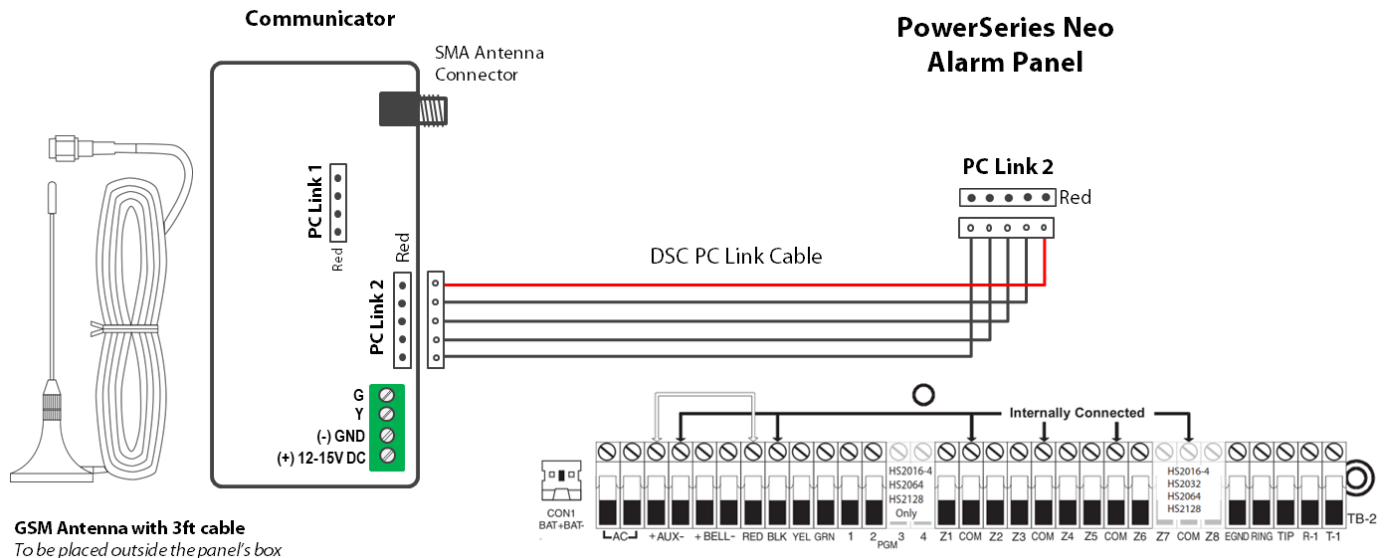


Figure 1: Wiring Diagram for DSC Power Series Neo Alarm Panels

PC Link	Connect this terminal to PC Link 2 of the DSC PowerSeries NEO Panel, using the provided 4-pin and 1-pin PC Link Cables
PC Link 1, G, Y, (-), (+)	NOT USED

IMPORTANT NOTES:

- ✓ **USE ONLY PC LINK CABLES PROVIDED WITH LE4050M COMMUNICATORS**
- ✓ Note the "Red" marking on the Communicator and the "Red" marking on the Panel.
- ✓ Always connect the device to a current limited power source. Never connect it to a battery directly.

DSC PowerSeries NEO Panel Programming

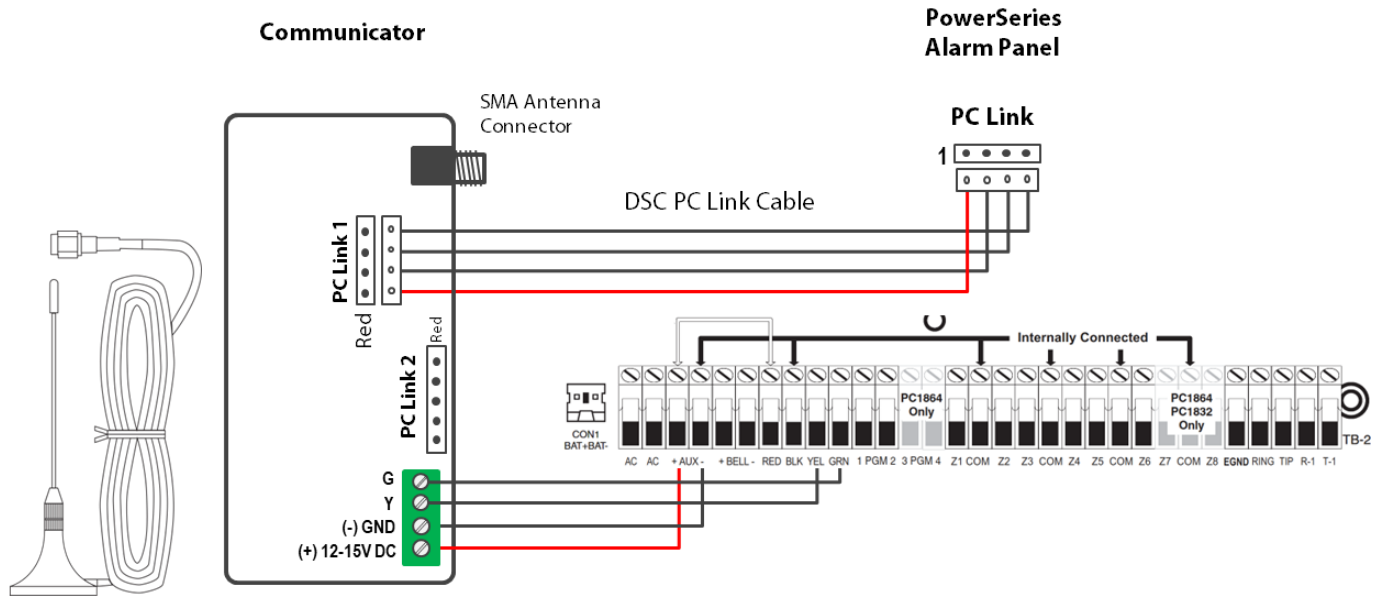
Configure the following sections on the alarm panel:

- ✓ Section 382 >> enable option 5 "Alternate Comm."
- ✓ Section 300 >> set Receiver 1 to Alt. Comm Auto"
- ✓ Section 015 >> Option 7 >> Disable TLM Monitoring
- ✓ Section 310 >> Set System Account Code

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The LE4050M communicator is equipped with 2 Terminals for power supply and a 5 PIN connector that should be wired and mounted into the box of the DSC Power Series alarm panel.



GSM Antenna with 3ft cable
To be placed outside the panel's box

Figure 2: Wiring Diagram for DSC Power Series Alarm Panels

(+)	Connect this terminal to AUX + of the DSC Power Series alarm panel.
(-)	Connect this terminal to AUX – (GND) of the DSC Power Series alarm panel.
PC Link 1	Connect this terminal to PC Link terminal of the DSC Power Series Panel via DSC PC Link Cable
PC Link 2	NOT USED

IMPORTANT NOTES:

- ✓ **USE ONLY PC LINK CABLES PROVIDED WITH LE4050M COMMUNICATORS**
- ✓ Note the "Red" marking on the Communicator and the "1" marking on the Panel.
- ✓ Always connect the device to a current limited power source. Never connect it to a battery directly.

DSC PowerSeries Panel Programming

Configure the following sections on the alarm panel:

- ✓ Section 301 >> Program HEX digits DCAA as a telephone number
Verify that the remaining digits to the end are "F".
Leading digit D is usually programmed by default and LED keyboards usually do not display it.
In this case, enter only the last three digits [CAA]
- ✓ Section 350 >> Program SIA or Contact ID communication format
- ✓ Section 380 >> Ensure Communications are enabled (Toggle 1 – ON)
- ✓ Section 381 >> Ensure AUTO-SIA is disabled (Toggle 3 – OFF)
- ✓ Section 382 >> Enable the PC-Link Active option (Toggle 5 – ON)
- ✓ Section 383 >> Toggle 7 – ON, Toggle 8 – ON
- ✓ Sections 351 to 376* >> Toggle 1 – ON, Toggle 5 – ON for all relevant sections in the range
- ✓ Section 015 >> Disable Telephone line monitoring (Toggle 7 – OFF)
- ✓ Section 406 >> Set number of rings to 001

*Make sure corresponding partitions are enabled.

Mounting the Communicators

This communicator comes together with 4-PIN and additional 1-PIN serial cable, external antenna, and mounting standoffs.

The device must be installed within a DSC Power Series/ Power Series NEO metal enclosure. The communicator has mounting openings matching the panel openings. The mounting is done via plastic standoffs, provided with the communicator. The antenna must be installed on top of the enclosure, removing one of the knockouts, as per the installation instructions listed below in this chapter.

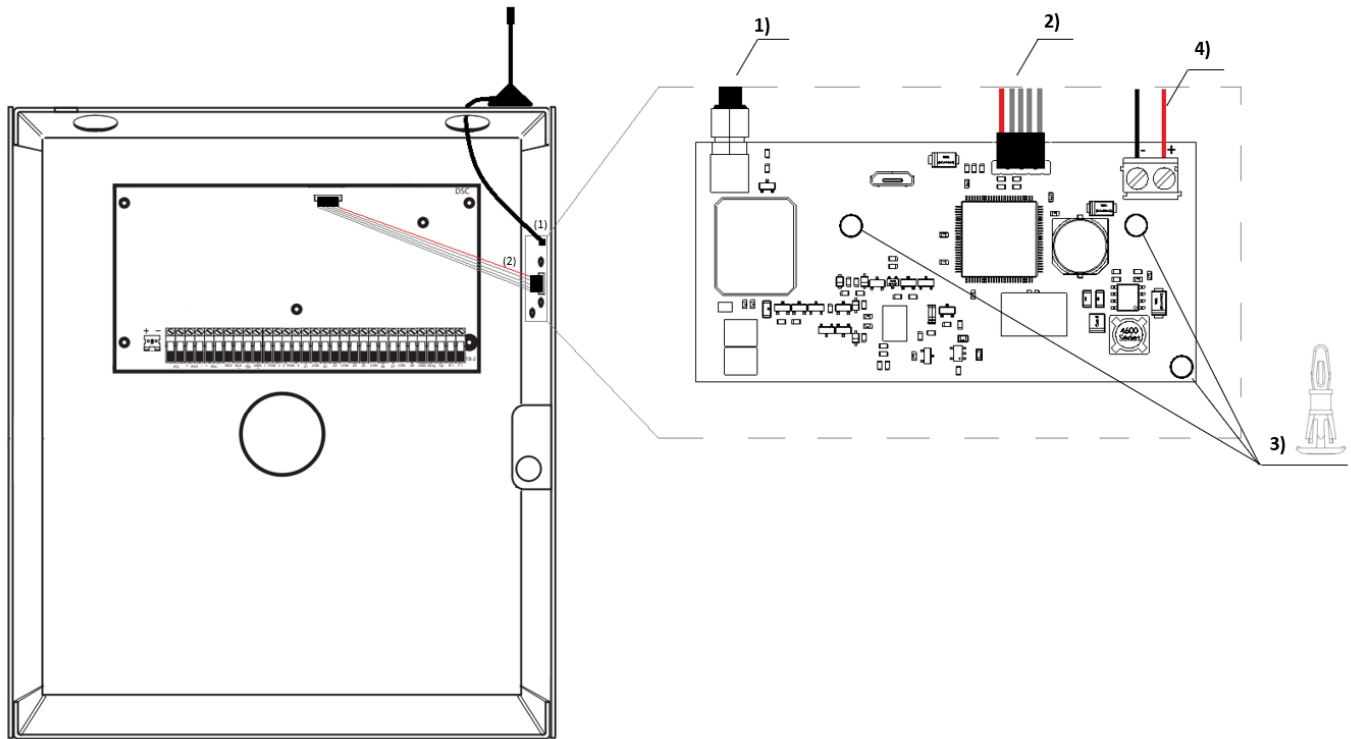


Figure 3: Mounting Diagram – 1) GSM Antenna connector, 2) PCLINK Cable, 3) Plastic Standoff for DSC metal Enclosure, 4) Power Supply Cable

1. Mount the communicator using the provided plastic standoffs as shown on Figure 3 above.
2. Connect the antenna to the communicator.
The antenna is supplied with SMA connector, that allows easy connection to the communicator. The body of the antenna has a magnet bottom and can be attached to the wall of the metal alarm panel box or use double sided adhesive type to securely attach the antenna to the box. The antenna should be positioned perpendicular to the ground, either right side up or upside down. Try to keep the antenna away from sources of RF interference or where metal objects can shield it or otherwise block the cellular radio RF signal.
3. Wire the communicator to the alarm panel - refer to the wiring sections of this manual..
4. Power up the panel.

Led Indicator Status

LED Status	Indication	Action
The LED is Off	The unit is not connected to the panel. The power from the panel is out. The unit is damaged	Verify the wiring, refer to the wiring diagram. Measure the AUX output of the panel. Replace the unit
Slow flashing	Trying to establish connection. There is no signal available	Reposition the antenna
Constantly On, blinking every 5 secs	Connection established at low signal level	Reposition the antenna
Constantly On	Connection established at good signal	
Fast flashing	Transferring data	
The LED is Blinking	Transferring data	

Troubleshooting

If you have issues receiving the events:

1. Verify the communicator is connected to the network.
2. Verify the PC Link cable is properly connected – refer to the communicator wiring sections..
3. Verify that the DSC Power Series/ Power Series Neo Alarm Panel is properly programmed.