

Memcom Lift Emergency GSM Unit

Part No. 452 000



Installation Manual Sheet Number 452 851

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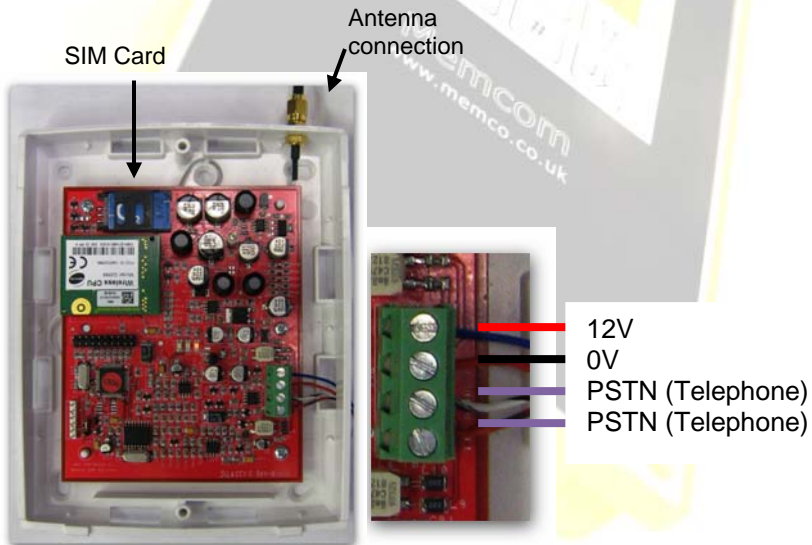
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1. Introduction

This product is designed to provide a permanent telephone connection wherever it is not practical or economic to use a landline. The GSM Terminal has been designed to work specifically with the Memcom Autodialler. The standard installation sees the GSM unit installed in a static position, usually the motor room where a consistent good signal can be achieved. Mounting the GSM on a lift is not recommended. This guide should be read in conjunction with the Memcom quick start installation guide.

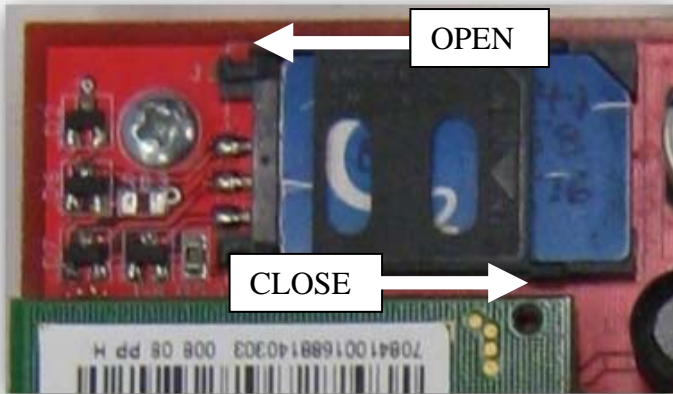
2. Getting Started

To install the terminal, you will need a suitable SIM and a Memcom Autodialler. If the distance between the Memcom and the GSM unit is greater than 30 Meters it is recommended that the GSM unit is powered by its own 24V DC supply rather than via the Memcom. If this is the case the 24VDC power supply should be backed up via an UPS (Uninterruptible Power Supply).



Step 1 - Take the front cover of the GSM unit by removing the two retaining screws to expose the PCB.

Step 2 - Install the SIM



1. Open the SIM tray by pushing the sim card holder the left. The holder should then hinge up vertically.
2. Slide the sim card into the vertical holder matching the chamfered edge to the corresponding shape in the holder. The sim card gold contacts will be face down.
3. Push the holder horizontally and slide the cover back to the right..

Step 3 - Connecting the antenna

Attach the supplied antenna, note that the connector nut only requires to be finger tight, do not apply excessive force.
Place the antenna in a strong signal location, like on a window sill.

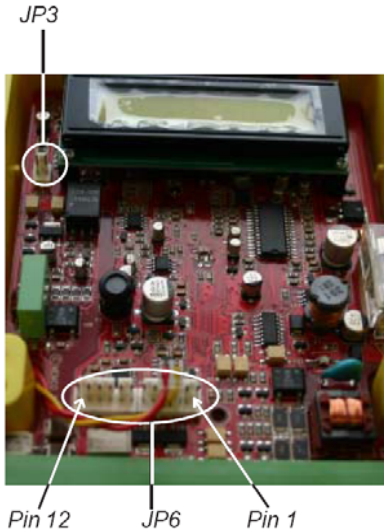
Step 4 - Connect the Memcom PSTN connection (Pins 1 & 2 on the main 20-way connector) to the GSM unit.

Step 5 - Connecting the power

Disconnect power from the Memcom Autodialler. If the distance between the Memcom and GSM units is less than 30 meters (based on 35.4 Ohms/KM cable) it can be plugged in directly to the Memcom connector JP6 (Pins 9 and 12). This can be done by removing the 4 screws from the Memcom Top Cover and the Earth Screw if fitted. Then connect the jumper loom supplied with the GSM to pins 9-12 of connector JP6.



Memcom Top Cover



PCB showing connectors JP3 & JP6

Accessory Connector

JP6	Function
1	Memcom Inductive loop +
2	Memcom Inductive loop -
3	External speaker +4-32 Ohm
4	External speaker -4-32 Ohm
5	
6	
7	
8	
9	GSM 0v DC
10	
11	
12	GSM +12v DC
JP3	Function
1	External microphone +
2	External microphone -

Memcom GSM Power Connections

Refer to the Memcom Quick Start Guide for further information. If the distance is greater than 30m, a separate 12V power supply should be used with an uninterruptible power supply to ensure that the Memcom can place emergency calls during a power cut.

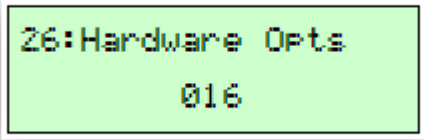
Note: The GSM unit itself does not contain a backup battery. When connected to the Memcom it uses the Memcom battery backup.

Step 6 - Memcom Setup

Apply Power to the Memcom Autodialler. Memcom needs to be configured correctly to work with the GSM.

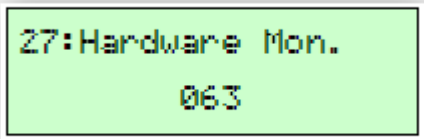
Enter the Memcom Programming Menu (*Password #)

Ensure that 16 is added to the default value for Hardware Options (Menu *26)



26:Hardware Opts
016

Ensure that Hardware monitor includes 8=GSM no signal and 16 = GSM low Signal.



27:Hardware Mon.
063

Exit the Memcom menu.

3. Basic Operation

3.1. GSM Diagnostics

- Green Led
 - Power On / Off / Flashing fault

- Red / Green bi-colour LED
 - Colour = Signal Strength
 - Red low; Amber OK; Green OK
 - Flash Rate = Network Status
 - Continuous – No Connection
 - Slow = Connected
 - Fast = Transmitting.

Note: The Memcom will also display the GSM signal strength on the bottom right hand corner of its display and provides the following fault messages.

GSM Signal Low – The GSM aerial should be repositioned to get a better signal.

GSM Signal Lost – Either the GSM has no signal and is not locked on to a network or communication between the GSM & Memcom has been lost.

3.2. GSM Status

The status of the GSM unit can be obtained by sending a text to the GSM with the following content:-

GSMStatus

To the GSM unit.

A text will be returned with the following information.

ID: Number of Memcom
Memcom Hardware/SW: Version
Mains Status
Battery Status
GSM_SW Version_01.02
GSM_Signal_(0-9):7

3.3. GSM Reset

The GSM unit can be remotely reset by sending a text containing.

GSMReset

This will take up to 2 minutes after the Memcom GSM has received the text to be actioned and to re-connect to the network.

4. Advanced features

4.1. Programming Memcom via SMS Commands

The Memcom Alarm & Background telephone numbers can be programmed by sending a SMS to the GSM unit. The SMS protocol has been written to closely follow what the user would enter on the keypad when programming the unit.

The SMS Message format is

AxAy₁Ay₂2Ay₃..

Ax (Lift network number 0-8) # to select the lift network number – This is required where more that 1 lift exists on a line. When only one autodialler is on a line this = 0.

Ay = Programming commands

A6 to program the next background date and time

A7 to program local time offset

*11 – through to *16 to program telephone numbers (as per Memcom menu structure)

Examples

Select lift number 0 – Most installations only have 1 lift attached to a phone line so this would be “0”

Set date time – A5040908100500# - date 4th Sep 2008 and time 10:05:00 (now 9digit ID)

Set next background call – A6040910100# - next background call on 4th Sep at 10:10 with no caller id period set

Set local time offset – A726# - time offset set to GMT+1 (BST)

Program the background call number 01628540999

As one string this becomes.

A0#A5040908100500#A6040910100#A726#*1601628540999#

4.2. Pin code unlocking

If the SIM card has a PIN number it can be unlocked by programming menu *81 in the Memcom with the correct PIN number.



5. Specification

GSM

Dual Band (900/1800Mhz).

The GSM unit is compatible with standard 2G European GSM networks for voice calls. However, some networks modify the DTMF tones used by the Memcom to transmit data. As such it is not possible to use the GSM with Memco Emergency Telephone Receiver Software and Global Net Web Software over all network operators.

Currently tested UK networks:

Network	Voice Calls	Data Calls.
02	Yes	Yes
Orange	Yes	Yes
T Mobile	Yes	Yes
3G	No. The Memcom GSM is only compatible to 2g Networks.	

Inputs

5mm 4-way terminal block (similar to PIT)

- 1) Power Supply: 0V and +11 to +16V DC 500mA
Power can be supplied direct from Memcom where cable length < 30m (based on 35.4 Ohms / KM cable).
- 2) Tip and Rig connection to Memcom (either polarity)

Outputs

Connector SMA type. The Antenna is supplied with a 3m cable. Antenna)

Battery Life (of Memcom)

- Battery life * > 1 hour talk time.
 > 2 hour standby time.

Note: The Memcom battery should be replaced every 3 years,

* Based on a standard Memcom configuration.

Mechanical

- Size : GSM Enclosure 169x138x32mm
- GSM antenna – magnetic mount variety with cable.

Environmental

- *Operation 0-40C*
- *Storage -10-50C*
- *Humidity (0-80%)*
- *Vibration*

Random Vibration

BS EN 60068-2-64:1995 Test Fh

Frequency 20 – 500 Hz

ASD Level 0.002 g²/Hz

Duration 3 hours per mutually perpendicular axis.

Operational

Sinusoidal Vibration

BS EN 60068-2-6:1996 Test Fc

Frequency 30 Hz

Acceleration 3.6g rms (5.1g peak)

Duration 30 minutes per mutually perpendicular axis.

Operational

6. Important safety information

Installation

It is essential that the Memcom / GSM is fully tested during the installation. Where a pay-as-you-go SIM card is used appropriate controls should be put in place to ensure that there is always sufficient funds to place a call. The Memcom / GSM unit should be monitored regularly with a frequency greater than once every 3 days (EN81-28) to ensure integrity of the system. The Memcom should be powered continuously under normal conditions. It takes 24 hours to fully charge the Memcom battery and continual power supply interruptions can prevent operation from the back-up battery.

Operating environment

Make sure that no special regulations are in force that impose restrictions on the use of mobiles. Restrictions to mobiles would also apply to the terminal.

Electronic devices

Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone.

Pacemakers

Pacemaker manufacturers recommend that a minimum separation of 20 cm (6 inches) be maintained between a hand-held wireless phone and a pacemaker. The same restriction should apply to the external antenna of the terminal. If you have any reason to suspect that interference is taking place, switch off the terminal immediately.

Hearing aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider.

Other medical devices

Operation of any radio transmitting equipment, including cellular phones, may interfere with the functionality of inadequately protected medical devices. Consult a physician or the manufacturer of the medical device to determine if they are adequately shielded from external RF energy or if you have any questions.

Switch off your phone in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Potentially explosive atmospheres

Do not install the terminal or site the antenna in any area with a potentially explosive atmosphere and obey all signs and instructions.

Emergency calls

Important! This phone, like any wireless phone, operates using radio signals which cannot guarantee connection in all conditions. Remember, to make or receive any calls the phone must be a service area with adequate cellular signal strength and is network traffic dependent.



Memco Limited
Clyde House
Reform Road
Maidenhead
Berks SL6 8BY

Service Tel: 01628 540 105
Email: Service@memco.co.uk
Website: www.memco.co.uk