

LE4020/LE4020CF V5.0

LTE / 3G CELLULAR ALARM COMMUNICATOR

INSTALLATION GUIDE

DRAFT



For the full installation manual, visit www.dsc.com

Warning: This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer. The entire manual should be carefully read.

Safety Information

IMPORTANT

- The equipment is fixed, wall-mounted and shall be installed in the position specified in these instructions (see Figure 1: Parts). The equipment enclosure must be fully assembled and closed, with all the necessary screws/tabs and secured to a wall before operation. Internal wiring must be routed in a manner that prevents:
- Excessive strain on wire and on terminal connections
 - Loosening of terminal connections
 - Damage of conductor insulation

WARNING: Never install this equipment during a lightning storm!

Instruct the end-user to:

- Not attempt to service this product. Opening or removing covers may expose the user to dangerous voltages or other risks. Any servicing shall be referred to trained service persons only.
 - Use authorized accessories only with this equipment.
- Do not dispose of the battery in fire or water. Disposing of the battery in a fire will cause rupture and explosion.

Do not dispose of the waste battery as unsorted municipal waste. Consult your local regulations and /or laws regarding recycling with regard to this lead-acid battery. Doing so will help protect the environment. Some of the materials that are found within the battery could become toxic if not disposed of properly and may affect the environment.

This equipment, LE4020/LE4020CF, is fixed and shall be installed by Service Persons only (Service Person is defined as a person having the appropriate technical training and experience necessary to be aware of hazards to which that person may be exposed in performing a task, and of measures available to minimize the risks to that person or other persons). It shall be installed and used within an environment that provides the pollution degree max 2, over voltages category II, in non-hazardous, indoor locations only. This manual shall be used with the Installation Manual of the relevant alarm control panel. All instructions specified within that manual must be observed.

The performance of the LE4020/LE4020CF depends greatly on cellular network coverage. Therefore, it should not be mounted without first performing placement tests to determine the best location for reception (minimum of one green LED ON). Optional antenna kits – LTE-8ANT, LTE-15ANT, LTE-25ANT, LTE-50ANT (8ft/2.4m, 15ft/4.6m, 25ft/7.6m or 50ft/15.2m) – are available.

Approvals Information

NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION AND OTHER INVOLVED PARTIES

This product incorporates field-programmable software. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, certain programming features or options must be limited to the specific values or not used at all as indicated below.

Program Feature or Option	Permitted in UL 864 (Y/N?)	Possible Settings	Settings Permitted in UL 864
Supervision	Yes	5 minutes /60 minutes	5 minutes (see note below)
Inputs/Outputs	Yes	Fire/Burg signals	Fire related signals only
SMS Remote Control	No	Enable/Disable	Disable

NOTE: This product has been tested in accordance with UL 864 9th edition. According to this edition of the standard, the supervision window for reporting single-technology communicator trouble shall be set to five minutes. However, the product can be installed in accordance with the requirements of NFPA72 2013 edition, which allows for a 60-minute supervision window.

NOTE: Encryption shall be enabled for active communications.

Notes for using Private, Corporate and High Speed Data Networks: Network access and domain access policies shall be set to restrict unauthorized network access, and "spoofing" or "denial of service" attacks. Select the internet service providers that have redundant servers/systems, back-up power, routers with firewalls enabled and methods to identify and protect against "denial of service" attacks (i.e., "spoofing"). For UL Residential Fire and Burglary installations, the 3G4010/LE4010 is listed as a sole means of communication or as a back up when used in conjunction with a POTS line (dialer).

For ULC Residential Fire and Burglary installations, the 3G4010/LE4010 is listed as a sole means of communication or as a back up when used in conjunction with a POTS line (dialer).

Introduction

This manual covers two communicator models, the LE4020 and the LE4020(CF). They are referred to throughout this manual as LE4020/LE4020CF unless otherwise indicated.

This LE4020/LE4020CF manages transmissions to a central station and can simulate the landline in the event of trouble (e.g., landline down) or even substitute the landline completely in areas where the 3G or 2G cellular service is provided and a landline is not available.

By connecting a to a control panel's standard PSTN interface, telephone-based Contact ID or SIA signals are decoded and seamlessly routed through the LTE or 3G network to any of the compatible receiver options.

The LE4020/LE4020CF are wireless communicators for UL commercial fire and/or burglary applications.

Both models send alarm system information to a Sur-Gard System I-IP, II, III, IV or 5 receiver. The LE4020/LE4020CF uses the LTE or 3G wireless network. The LE4020/LE4020CF can be used with UL/ULC Listed compatible control units, as indicated in the manufacturer's installation instructions.

NOTE: These communicators are designed to work with the Contact ID communication format as described in the SIA DC-05 standard and the SIA DC-03 standard for 300 baud. Before completing the field installation of the alarm monitoring system please ensure communication with the supervising central station is successful by sending several events and getting confirmation that they have been received.

Features

- Dual-band UMTS/HSPA; Penta-Band LTE (LE4020)
- Advanced Carrier Selection
- Bi-color Wireless Signal Strength Indicator
- LTE or 3G Internet communication with Sur-Gard SG-System I-IP / II / III / IV / 5
- Compatible with listed alarm control panels that have an integrated DACT and support a 4-digit or 10-digit Contact ID communication format as described in SIA DC-05 Standard and the SIA DC-03 standard for 300 baud. Example of suitable compatible alarm panels: DSC Models PC1864, PC1832, PC1616, PC4020. For LE4010, the following alarm panels are also compatible: HS2128, HS2064, HS2032, HS2016
- Panel Transmission Monitoring for up to four phone numbers
- Simulates landline
- Switches automatically to the LTE or 3G (LE4020CF) network in the event of landline trouble (e.g., line down)
- Four Programmable (NO/NC/SEOL) Inputs
- Contains one 12V - 7 Ah battery
- 12V 1.2/4/7Ah battery (optional, not included)
- Case Tamper Input
- Landline overvoltage protection
- Four Programmable Outputs
- DLS support for status, firmware updates and remote debug enable
- Remote Firmware Upgrade
- Remote Diagnostics
- Panel Format Detection
- SMS Command and Control
- Phone number call direction
- Easy enrollment with C24 Communications via web or mobile interface

Technical Specifications

The input voltage to the LE4020/LE4020CF can be drawn from the UL/ULC Listed control panel or provided by an external UL/ULC Listed power supply rated for the application (external power-limited source).

NOTE: The power supply must be Class 2, Power Limited. For residential applications a suitable power adaptor is model DSC ADP1310(W)-NAU or DSC ADP1320-NAU (for USA) and model DSC ADP1310(W)-NA (for Canada).

Table 1: Ratings

Power Supply Ratings	
Input Voltage:	9 Vdc to 28Vdc (use separately listed control panel or power supply) or use DSC ADP1310(W)-NAX or ADP1320-NAX power adapter with battery 12V 1.2/4/7Ah
Current Consumption	
Average Current (standby with PSTN connected):	40 mA*
Average Current (standby without PSTN connected):	55 mA*
Transmission Current (no battery):	225 mA*
* Plus any current drawn from the LE4020/LE4020CF AUX+ terminal. Each of the four PGM outputs can be loaded up to 50 mA (max)	

Working Voltage Range	
With Battery:	(when power is provided by the external power adapter) 11 Vdc to 14 Vdc
Without Battery:	9 Vdc to 24 Vdc
Battery Type:	sealed, rechargeable type, rated 12 V / 1.2 Ah, 12 V / 4 Ah, 12 V / 7 Ah (for 24 hr standby time)
Battery charging voltage:	13.75 Vdc
Battery charge current limit:	360 mA
NOTE: Battery must be replaced every 3 to 5 years. NOTE: When using the battery, use DSC ADP 1310-NAU(W) or ADP 1320-NAU power adapter	
Operating frequency - 3G (UMTS/HSPA):	850 MHz / 1900 MHz
For LE4020 operating frequencies, see table below.	
Antenna gain:	2.0 dBi
Environmental Specifications	
Operating temperature:	0°C-49°C (32°F-120°F)
Humidity:	93%RH Maximum (non-condensing)
Mechanical Specifications	
White cabinet dimensions:	257.2 mm x 161.9 mm x 76.6 mm / 10.125" x 6.375" x 3.0"
Weight (without battery):	1.28 kg / 2.8 lb
Red cabinet dimensions:	295.3 mm x 258.4 mm x 77.0 mm / 11.625" x 10.175" x 3.03"
Weight (without battery):	2.52 kg / 5.5 lb
Simulated Telco Loop specifications (TIP/RING)	
On-Hook Voltage:	12 Vdc
Off-Hook Voltage (Maximum):	35 Vdc
Loop Current:	25 mA
Loop Resistance:	600 Ohms

Table 2: LE4020 Operating Frequencies

Band	Transmit Band (Tx)	Receive Band (Rx)
LTE B2	1850 - 1910 MHz	1930 - 1990 MHz
LTE B4	1710 - 1755 MHz	2110 - 2155 MHz
LTE B5	824 - 849 MHz	869 - 894 MHz
LTE B12	698 - 716 MHz	728 - 746 MHz
LTE B13	777 - 787 MHz	746 - 756 MHz
UMTS B2	1850 - 1910 MHz	1930 - 1990 MHz
UMTS B5	824 - 840 MHz	869 - 894 MHz

Installing the LE4020/LE4020CF

C24 Communications Enrollment

The LE4020/LE4020CF requires enrollment with C24 Communications to operate. For more information, please visit www.connect24.com, contact C24 Communications customer service at 1-888-251-7458 (US) / 1-888-955-5583 (Canada) or contact the central station to inquire if they are a C24 Communications Master Reseller.

NOTE: Enrollment with C24 Communications should be performed before turning on the LE4020/LE4020CF unit.

Before inserting or removing the SIM card, please ensure the unit is turned off.

Step 1 - Initialize the LE4020/LE4020CF with C24 Communications

The LE4020/LE4020CF can be initialized with C24 Communications by:

web - www.connect24.com

mobile - m.connect24.com

To complete enrollment, a C24 profile, installer ID/PIN (or web credentials) and the 20-digit SIM number are required.

NOTE: The SIM activation process with the cellular carrier typically takes between five and ten minutes to complete.

Step 2 - Determine the Best Signal Location

1. Detach the front cover by removing the four screws.
2. Apply power (DC and/or battery). The LE4020/LE4020CF is now in Placement Test mode.

Step 2a – SIM Card Is Activated.

The red LED is on solid, the blue LED is off and the signal strength LEDs display the average signal strength. In this state, the LE4020/LE4020CF is registered to the network.

If the signal strength is too low (bottom signal LED off or flashing), the LE4020/LE4020CF will proceed to **Step 3**: scan for, and attach to, carriers with sufficient signal strength. If the LE4020/LE4020CF is connected to a carrier with sufficient signal strength (minimum of bottom signal strength LED on solid), it proceeds to **Step 4**.

Step 2b – SIM Card Is Not Activated

The red LED flashes, the blue LED is off and the signal strength LEDs display the average signal strength. In this state, the LE4020/LE4020CF is unable to register to the network because it is inactive. The signal strength indicated is from any nearby cell tower (including cellular towers belonging to non-roaming partners) and does not necessarily reflect the signal strength of the intended network. The LE4020/LE4020CF remains in this state until the SIM is activated. Once the SIM is activated, the LE4020/LE4020CF proceeds to **Step 2a**.

Step 3 – Carrier Scanning Due To Insufficient Signal Strength

The LE4020/LE4020CF scans the surrounding network and connects to the carrier to provide a signal strength of at least 7 CSQ. While this action is being performed, all four LEDs activate to show a scanning sequence in progress. The LEDs cycle from top to bottom and then bottom to top until the LE4020/LE4020CF connects to a carrier with a signal strength above 7 CSQ (minimum of bottom signal strength LED on solid).

Once this is completed, the LE4020/LE4020CF proceeds to **Step 4**.

Step 4 - Acquire C24 Communications Programming

The red LED is on solid and the blue LED flashes. The flashing blue LED indicates that the 3G4010/LE4010 has requested programming from C24 Communications and is waiting for a response.

Once remote programming is completed, the blue LED switches to solid and the LE4020/LE4020CF proceeds to **Step 5**.

Step 5 – Receiver Initialization

The red and blue LED's are both on solid and the signal strength LEDs are off.

When the LE4020/LE4020CF sends a request to communicate with the central station, the top signal strength LED begins flashing.

When the central station communicates back to the 3G4010/LE4010, the top signal strength LED turns on solid.

When the LE4020/LE4020CF sends a request to communicate to the next central station, the bottom signal strength LED begins flashing...

...and turns on solid when it receives a communication back from the central station.

If at least one of the central stations does not respond back to the communicator, the signal strength LED corresponding to that central station turns off. Once the initialization sequence is complete, the LE4020/LE4020CF switches to steady state operation.

Step 6 - Mount the LE4020/LE4020CF

1. Power down the LE4020/LE4020CF by removing the DC power source and battery leads.
2. Using the cabinet, mark the four screw locations. Drill the anchor screw holes.

NOTE: Check for cable conduits and water pipes before drilling.

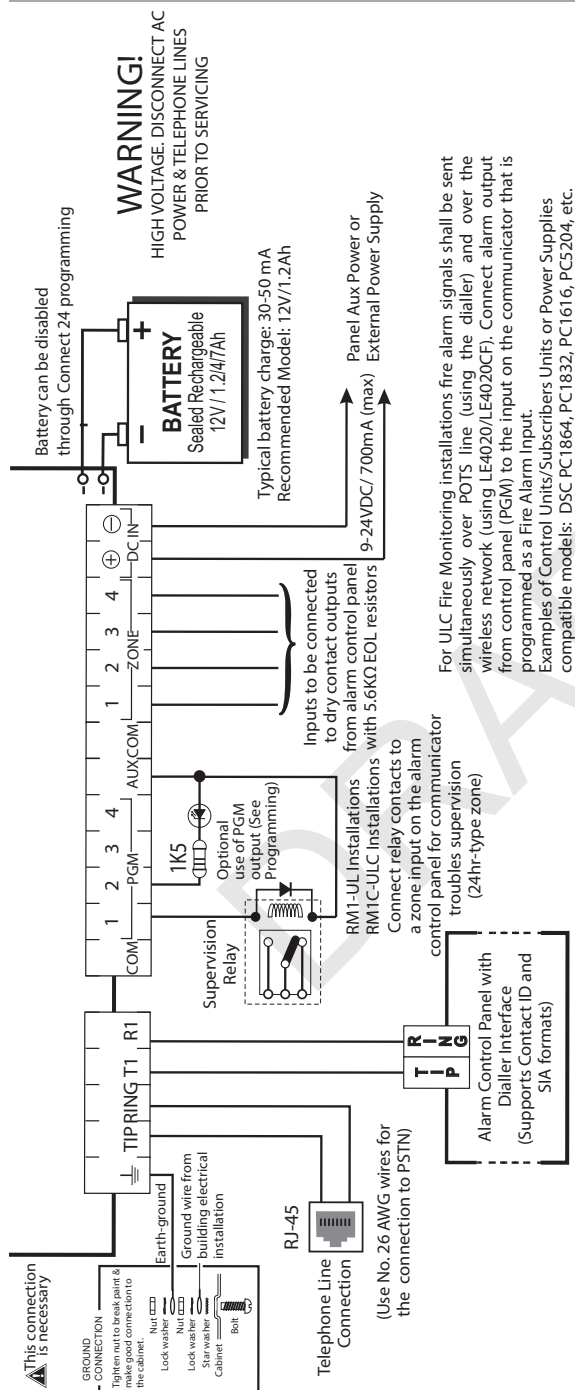
3. Using anchor screws (not provided), mount the cabinet to the wall.
4. Run the cables through the cable entry [13] or through the cabinet knockouts.
5. Complete the connections on the terminal blocks [11].

NOTE: Ensure that power and Telco circuit connections are made only after the cabinet has been secured to the building or structure, and has been connected to the protective earth ground. Descriptions of the terminals can be found in the 'Connecting the LE4020/LE4020CF' section.

6. Reattach the front cover [1] securely to the cabinet.

NOTE: Please refer to the end of this manual for wiring diagrams.

3G4010/LE4010 Wiring Diagram



WARNING: Incorrect connections may result in PTC failure or improper operation. Inspect wiring and ensure connections are correct before turning on. All circuits are classified for UL Installations as Power Limited/Class II Power Limited except for the battery leads which are not Power Limited. Do not route any wiring over circuit boards. Maintain at least 1" (25.4mm) separation. A minimum 1/4" (6.4mm) separation must be maintained at all points between Power Limited wiring and all other Non-Power Limited wiring. Route wires as indicated in the diagram.

For UL Installations, the system shall be installed in accordance with chapter 2 of the ANSI/NFPA 72 and ANSI/NFPA 70. Recommended locations and wiring methods shall be in accordance with the National Electrical Code, ANSI/NFPA 70, the Standard for Installation and Classification of Burglar and Holdup Alarm Systems, UL 681, and the Standard for Central-Station Alarm Services, UL 827.

For ULC Installations, the recommended locations and wiring methods shall be in accordance with CSA C22.1, Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations; CAN/ULC-S302, Installation and Classification of Burglar Alarm Systems for Financial and Commercial Premises, Safes and Vaults; and CAN/ULC-S301, Standard for Central and Monitoring Station Burglar Alarm Systems and the Standard for the Installation of Residential Fire Warning Systems, CAN/ULC-S540. Do not install the equipment in places where the signal strength does not meet the minimum recommended signal strength level. Do not run zone inputs and T1/R1 wiring along AC wires or other circuits with high frequency signals in order to reduce possibility of interference and false alarms.

EULA

IMPORTANT - READ CAREFULLY: DSC Software purchased with or without Products and Components is copyrighted and is purchased under the following license terms.

This End-User License Agreement ("EULA") is a legal agreement between You (the company, individual or entity who acquired the Software and any related Hardware) and Digital Security Controls, a division of Two Safety Products Canada Ltd. ("DSC"), the manufacturer of the integrated security systems and the developer of the software and any related products or components ("HARDWARE") which You acquired.

If the DSC software product ("SOFTWARE PRODUCT") is purchased as a "SOFTWARE" it is intended to be accompanied by HARDWARE, and is NOT accompanied by any HARDWARE. You may not use, copy or install the SOFTWARE PRODUCT. The SOFTWARE PRODUCT includes computer software, which may include associated media, printed materials, and/or electronic documentation.

Any software provided along with the SOFTWARE PRODUCT that is associated with a separate end-user license agreement is licensed to You under the terms of that license agreement.

By installing, copying, downloading, storing, accessing or otherwise using the SOFTWARE PRODUCT, You agree unconditionally to be bound by the terms of this EULA, even if this EULA is deemed to be a modification of any previous arrangement or contract. If You do not agree to the terms of this EULA, DSC is unwilling to license the SOFTWARE PRODUCT to You, and You have no right to use it.

SOFTWARE PRODUCT LICENSE

The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is licensed, not sold.

1. GRANT OF LICENSE: This EULA grants You the following rights:

Software Installation and Use - For each license You acquire, You may have only one copy of the SOFTWARE PRODUCT installed.

Storage/Network Use - The SOFTWARE PRODUCT may not be installed, accessed, displayed, run, shared or used concurrently on or from different computers, including a workstation, terminal or other digital electronic device ("Device"). In other words, if You have several workstations, You will have to acquire a license for each workstation where the SOFTWARE will be used.

Backup Copy - You may make back-up copies of the SOFTWARE PRODUCT, but You may only have one copy per license installed at any given time. You may use the back-up copy solely for archival purposes. Except as expressly provided in this EULA, You may not otherwise make copies of the SOFTWARE PRODUCT, including the printed materials accompanying the SOFTWARE.

2. DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS

Limitations on Reverse Engineering, Decompilation and Disassembly - You may not reverse engineer, decompile, or disassemble the SOFTWARE PRODUCT, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation. You may not make any changes or modifications to the Software, without the written permission of an officer of DSC. You may not remove any proprietary notices, marks or labels from the Software Product. You shall institute reasonable measures to ensure compliance with the terms and conditions of this EULA.

Separation of Components - The SOFTWARE PRODUCT is licensed as a single product. Its component parts may not be separated for use on more than one HARDWARE unit.

Single INTEGRATED PRODUCT - If You acquired this SOFTWARE PRODUCT as a HARDWARE, then the SOFTWARE PRODUCT is licensed with the HARDWARE as a single integrated product. In this case, the SOFTWARE PRODUCT may only be used with the HARDWARE as set forth in this EULA.

Rental - You may not rent, lease or lend the SOFTWARE PRODUCT. You may not make it available to others or post it on a server or web site.

Software Product Transfer - You may transfer all of Your rights under this EULA only as part of a permanent sale or transfer of the HARDWARE. Provided You retain no copies, You transfer all of the SOFTWARE PRODUCT (including all component parts, the media and printed materials, any upgrades and this EULA), and provided the recipient agrees to the terms of this EULA. If the SOFTWARE PRODUCT is an upgrade, any transfer must also include all prior versions of the SOFTWARE PRODUCT.

Termination - Without prejudice to any other rights, DSC may terminate this EULA if You fail to comply with the terms and conditions of this EULA. In such event, You must destroy all copies of the SOFTWARE PRODUCT and all of its component parts.

Trademarks - This EULA does not grant You any rights in connection with any trademarks or service marks of DSC or its suppliers.

3. COPYRIGHT

All title and intellectual property rights in and to the SOFTWARE PRODUCT (including but not limited to any images, photographs, and text incorporated into the SOFTWARE PRODUCT), the accompanying printed materials, and any copies of the SOFTWARE PRODUCT, are owned by DSC or its suppliers. You may not copy the printed materials accompanying the SOFTWARE PRODUCT. All title and intellectual property rights in and to the content which may be accessed through use of the SOFTWARE PRODUCT are the property of the respective content owner and may be protected by applicable copyright or other intellectual property laws and treaties. This EULA grants You no rights to use such content. All rights not expressly granted under this EULA are reserved by DSC and its suppliers.

EXPORT RESTRICTIONS - You agree that You will not export or re-export the SOFTWARE PRODUCT to any country, person, or entity subject to Canadian export restrictions.

GOVERNANCE OF LAW - This Software License Agreement is governed by the laws of the Province of Ontario, Canada.

ARBITRATION - All disputes arising in connection with this Agreement shall be determined by final and binding arbitration in accordance with the Arbitration Act, and the parties agree to waive the right to the court's decision. The place of arbitration shall be Toronto, Canada, and the language of the arbitration shall be English.

LIMITED WARRANTY

NO WARRANTY - DSC PROVIDES THE SOFTWARE "AS IS" WITHOUT WARRANTY. DSC DOES NOT WARRANT THAT THE SOFTWARE WILL MEET YOUR REQUIREMENTS OR THAT OPERATION OF THE SOFTWARE WILL BE UNINTERRUPTED OR ERROR-FREE.

CHANGES IN OPERATING ENVIRONMENT - DSC shall not be responsible for problems caused by changes in the operating characteristics of the HARDWARE, or for problems in the interaction of the SOFTWARE PRODUCT with non-DSC SOFTWARE or HARDWARE PRODUCTS.

LIMITATION OF LIABILITY; WARRANTY REFLECTS ALLOCATION OF RISK - IN ANY EVENT, IF ANY STATUTE IMPLIES WARRANTIES OR CONDITIONS NOT STATED IN THIS LICENSE AGREEMENT, DSC'S ENTIRE LIABILITY UNDER ANY PROVISION OF THIS LICENSE AGREEMENT SHALL BE LIMITED TO THE GREATER OF THE AMOUNT ACTUALLY PAID BY YOU TO LICENSE THE SOFTWARE PRODUCT AND FIVE CANADIAN DOLLARS (CAD\$5.00). BECAUSE SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR

CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

DISCLAIMER OF WARRANTIES - THIS WARRANTY CONTAINS THE ENTIRE WARRANTY AND SHALL BE IN LIEU OF ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED (INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF DSC. DSC MAKES NO OTHER WARRANTIES. DSC NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON PURPORTING TO ACT ON ITS BEHALF TO MODIFY OR TO CHANGE THIS WARRANTY, NOR TO ASSUME FOR IT ANY OTHER WARRANTY OR LIABILITY CONCERNING THIS SOFTWARE PRODUCT.

EXCLUSIVE REMEDY AND LIMITATION OF WARRANTY - UNDER NO CIRCUMSTANCES SHALL DSC BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR ANY OTHER LEGAL THEORY. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF THE SOFTWARE PRODUCT OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF SUBSTITUTED EQUIPMENT, LOSS OF DATA, FACILITIES OR SERVICES, DOWN TIME, PURCHASERS TIME, THE CLAIMS OF THIRD PARTIES, INCLUDING CUSTOMERS, AND INJURY TO PROPERTY.

DSC recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this SOFTWARE PRODUCT to fail to perform as expected.

Regulatory Information

Modification Statement

Digital Security Controls has not approved any changes or modifications to this device by the user. Any changes or modifications could void the user's authority to operate the equipment.

Digital Security Controls n'approuve aucune modification apportée à l'appareil par l'utilisateur, quelle qu'en soit la nature. Tout changement ou modification peut annuler le droit d'utilisation de l'appareil par l'utilisateur.

Interference Statement

This device complies with Part 15 of the FCC Rules and IS/ED Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'IS/ED Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Wireless Notice

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. The antenna should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet appareil est conforme aux limites d'exposition aux rayonnements de la IC pour un environnement non contrôlé. L'antenne doit être installée de façon à garder une distance minimale de 20 centimètres entre la source de rayonnements et votre corps. L'émetteur ne doit pas être colocalisé ni fonctionner conjointement avec à autre antenne ou autre émetteur.

Antenna gain must be below/Gain de l'antenne doit être ci-dessous:

Frequency Band/Bande de fréquence	LE4020; LE4020CF
GSM 850 / FDD V	1.3 dBi
PCS 1900 / FDD II	6.8 dBi
LTEB2	6.8 dBi
LTEB4	4.6 dBi
LTEB5/B12/B13	1.3/1.2/2.2 dBi

FCC Class B Digital Device Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

LE4020:

FCC ID: XXXX

LE4020 Product Identifier US: XXXX

LE4020CF:

FCC ID: XXXX

LE4020CF Product Identifier US: XXXX

USOAC Jack: RJ-31X

WARNING: To satisfy FCC RF exposure requirements for mobile transmitting devices, a separation distance of 20cm or more must be maintained between the antenna of this device and persons during device operation.

Telephone Connection Requirements

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug are provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

Ringer Equivalence Number (REN)

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local Telephone Company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format, US/AACQ##TXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

Incidence of Harm

If this equipment LE4020/LE4020CFC causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the Telephone Company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

Changes in Telephone Company Equipment or Facilities

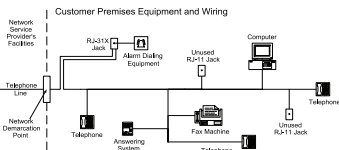
The Telephone Company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the Telephone Company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

Equipment Maintenance Facility

If trouble is experienced with this equipment for repair or warranty information, please contact the facility indicated below. If the equipment is causing harm to the telephone network, the Telephone Company may request that you disconnect the equipment until the problem is solved. This equipment is of a type that is not intended to be repaired by the customer. DSC c/o APL Logistics, 2600 West Pointe Dr., Lithia Springs, GA 30122

Additional Information

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information. Alarm dialling equipment must be able to seize the telephone line and place a call in an emergency situation. It must be able to do this even if other equipment (telephone, answering system, computer modem, etc.) already has the telephone line in use. To do so, alarm dialling equipment must be connected to a properly installed RJ-31X jack that is electrically in series with and ahead of all other equipment attached to the same telephone line. Proper installation is depicted in the figure below. If you have any questions concerning these instructions, you should consult your telephone company or a qualified installer about installing the RJ-31X jack and alarm dialling equipment for you.



Industry Canada Compliance Statement

This Equipment meets the applicable Industrial, Scientific and Economic Development (ISED) Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that ISED Canada technical specifications were met. It does not imply that ISED Canada approved the equipment. The Ringer Equivalence Number (REN) for this terminal equipment is 0.0. The REN assigned to each terminal equipment provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all devices does not exceed 5.0. IC:160A-LE4020

IC:160A-LE4020CFC Cet équipement est conforme aux spécifications techniques applicables aux équipements terminaux d'ISED Canada. Ceci est confirmé par le numéro d'enregistrement. L'abréviation IC précédant le numéro d'enregistrement signifie que l'enregistrement a été effectué sur la base de la Déclaration de conformité indiquant que le produit est conforme aux spécifications techniques d'ISED Canada. Ceci n'implique pas que le produit ait été approuvé par Industrie Canada.

Le nombre équivalent de sonneries (REN) de cet appareil terminal est 0.0. Le REN attribué à chaque équipement terminal fournit une indication sur le nombre maximum de terminaux pouvant être connectés sur une interface téléphonique. La terminaison sur une interface peut constituer en n'importe quelle combinaison d'appareils, à la condition seulement que la somme des Nombres équivalents de sonneries de tous les appareils ne soit pas supérieure à 5.

This Class B digital apparatus meets all requirements of the Canadian interference-causing equipment regulations. Cet appareil numérique de la classe B respecte toutes les exigences de règlement sur le matériel brouilleur du Canada.

CAN ICES-3 (B) / NMB-3 (B)

The term "IC:" before the radio certification number only signifies that ISED Canada technical specifications were met.

NIST Validation of encryption algorithm AES128 certificate No. xxxx

Warranty

Digital Security Controls warrants the original purchaser that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use. During the warranty period, Digital Security Controls shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labour and materials. Any replacement and/or repaired parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original purchaser must promptly notify Digital Security Controls in writing that there is defect in material or workmanship, such written notice to be received in all events prior to expiration of the warranty period. There is absolutely no warranty on software and all software products are sold as a user license under the terms of the software license agreement included with the product. The Customer assumes all responsibility for the proper selection, installation, operation and maintenance of any products purchased from DSC. Custom products are only warranted to the extent that they do not function upon delivery. In such cases, DSC can replace or credit at its option.

International Warranty

The warranty for international customers is the same as for any customer within Canada and the United States, with the exception that Digital Security Controls shall not be responsible for any customs fees, taxes, or VAT that may be due.

Warranty Procedure

To obtain service under this warranty, please return the item(s) in question to the point of purchase. All authorized distributors and dealers have a warranty program. Anyone returning goods to Digital Security Controls must first obtain an authorization number. Digital Security Controls will not accept any shipment whatsoever for which prior authorization has not been obtained.

Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage incurred in shipping or handling;
- damage caused by disaster such as fire, flood, wind, earthquake or lightning;
- damage due to causes beyond the control of Digital Security Controls such as excessive voltage, mechanical shock or water damage;
- damage caused by unauthorized attachment, alterations, modifications or foreign objects;
- damage caused by peripherals (unless such peripherals were supplied by Digital Security Controls);
- defects caused by failure to provide a suitable installation environment for the products;
- damage caused by use of the products for purposes other than those for which it was designed;
- damage from improper maintenance;
- damage arising out of any other abuse, mishandling or improper application of the products.

Items Not Covered by Warranty

In addition to the items which void the Warranty, the following items shall not be covered by Warranty: (i) freight cost to the repair centre; (ii) products which were not identified with DSC's product label and lot number or serial number; (iii) products disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection or testing to verify any warranty claim. Access cards or tags returned for replacement will be credited or replaced at DSC's option. Products not covered by this warranty, or otherwise out of warranty due to age, misuse, or damage shall be evaluated, and a repair estimate shall be provided. No repair work will be performed until a valid purchase order is received from the customer and a Return Merchandise Authorisation number (RMA) is issued by DSC's Customer Service. Digital Security Controls' liability for failure to repair the product under this warranty after a reasonable number of attempts will be limited to a replacement of the product, as the exclusive remedy for breach of warranty. Under no circumstances shall Digital Security Controls be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, downtime, purchaser's time, the claims of third parties, including customers, and injury to property. The law of the state where the purchaser resides shall be the law of the claimer of consequential damages. If the laws of such a jurisdiction apply to any claim by or against DSC, the limitations and disclaimers contained here shall be to the greatest extent permitted by law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so that the above may not apply to you.

Disclaimer of Warranties

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose) And of all other obligations or liabilities on the part of Digital Security Controls. Digital Security Controls neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

This disclaimer of warranties and limited warranty are governed by the laws of the province of Ontario, Canada.

Digital Security Controls recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Installer's Lockout

Any products returned to DSC which have the Installer's Lockout option enabled and exhibit no other problems will be subject to a service charge.

Out of Warranty Repairs

Digital Security Controls will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to Digital Security Controls must first obtain an authorization number. Digital Security Controls will not accept any shipment whatsoever for which prior authorization has not been obtained.

Products which Digital Security Controls determines to be repairable will be repaired and returned. A set fee which Digital Security Controls has predetermined and which may be revised from time to time, will be charged for each unit repaired.

Products which Digital Security Controls determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit.

© 2018 Tyco Security Products. All Rights Reserved.
Tech Support: 1-800-387-3630 (Canada & U.S.) or 905-760-3000
www.dsc.com

The trademarks, logos, and service marks displayed on this document are registered in the United States [or other countries]. Any misuse of the trademarks is strictly prohibited and Tyco will aggressively enforce its intellectual property rights to the fullest extent of the law, including pursuit of criminal prosecution wherever necessary. All trademarks not owned by Tyco are the property of their respective owners, and are used with permission or allowed under applicable laws. Product offerings and specifications are subject to change without notice. Actual products may vary from photos. Not all products include all features. Availability varies by region; contact your sales representative.



From Tyco Security Products

29010278R001