


I'm not robot  reCAPTCHA

I'm not robot!

Lenel 1320 series 3 manual

Lenel 1320 series 3 installation manual. How to program lenel 3300.

Home / Access Control / Proximity Readers / Lenel LNL-1320-S3 \$1,287.09 Dual Reader Interface Module Series 3 Availability: Estimated 5 - 7 Business Days Description Specifications Features Resources Resources LenelS2™ offers a Dual Reader Interface (DRI) module for access control solutions. Most access control card readers, keypads, or readers with keypads that use standard Wiegand Data1/Data0 or Clock/Data communication are supported, as are those that support the bidirectional RS-485 Open Supervised Device Protocol (OSDP™). Lock, unlock, and facility code offline access modes are supported on all readers connected to the DRI. Each DRI supports up to 16 different card formats as well as issue codes for both magnetic and Wiegand card formats. The DRI provides a vital link between the Intelligent System Controller (ISC) and the card reader attached to the interface.



hbzhan.com



As many as 32 DRI modules can be multi-dropped using RS485 2-wire or 4-wire communication up to 4,000 feet per port away from the ISC. Each DRI module is individually addressed for increased reporting capabilities with OnGuard® access control software applications. The DRI includes eight inputs that support normally open, normally closed, supervised, and non-supervised circuits. In addition, six output relays support fail-safe or fail-secure operation. 12 or 24 VDC power supply Supports Data1/Data0, Clock/Data, Supervised and Unsupervised F2F and OSDP-compatible RS-485 readers and keypads Supports Open Supervised Device Protocol (OSDP) readers, including biometric template Dedicated and Secure Channel encryption Downloadable firmware Six Form-C 5 A at 28 VDC relay outputs Up to 16 different formats Issue code support for magnetic and Wiegand formats Door contact supervision (open/closed) REX push-button monitor Strike control output Bicolor reader status LED support and 2-wire LED support Beeper control



Both the LNL-1320 series 1 (serial numbers 20,000 or less) and series 2 (serial numbers greater than 20,000, labeled revision C) are supported. The series 2 board differs slightly from the series 1 boards. Where series 2 is indicated, the information only applies to series 2 boards.

LNL-1320
Lenel Dual Reader Interface Module

Overview

Lenel Systems International offers a Dual Reader Interface (DRI) module for business access control solutions. Most access control card readers, keypads, or readers with keypads that use standard Wiegand Data1/Data0 or Clock/Data communications are supported. Lock, unlock, and facility code offline access modes are supported on all readers connected to the DRI. Each DRI supports up to eight different card formats as well as issue codes for both magnetic and Wiegand card formats.

The DRI provides a vital link between the Intelligent System Controller (ISC) and the card reader attached to the interface. As many as 32 DRI modules can be multi-dropped using RS-485 2-wire or 4-wire communication up to 4000 feet per port away from the ISC. Each DRI module is individually addressed for increased reporting capabilities with Lenel OnGuard Access Control software applications. The DRI includes eight inputs that support normally open, normally closed, supervised, and non-supervised circuits. In addition, six output relays support fail-safe or fail-secure operation.

Features and Functionality

- 12 VAC or 12 VDC power supply
- Reader communication (Clock/Data or Wiegand Data1/Data0) - more than 100 different readers approved for use
- Downloadable firmware
- Six Form-C 5 A at 28 VDC relay outputs
- Up to 16 different formats (B card and 8 asset)
- Issue code support for Magnetic and Wiegand formats
- Door contact supervision (Open/Closed)
- REX push-button monitor
- Strike Control output
- Bi-color status LED support and 2-wire LED support
- Beeper control
- Dedicated tamper and power failure circuits
- Support for offline reader access mode
- Onboard jumpers for termination
- Onboard jumpers for 5 VDC or 12 VDC reader support
- DIP switch selectable addressing
- UL 294 listed and CE approved

UL LISTED
UL 294
CE

LEVEL
Lenel Systems International, Inc.

TOTAL SECURITY KNOWLEDGE MANAGEMENT SOLUTIONS.

Otherwise, the information applies to both series 1 and 2 boards. 43.1 Interfaces The Dual Reader Interface Module interfaces upstream with the Intelligent System Controller, and downstream with two (2) card readers (with or without keypads communicating in either data1/data0 or clock and data). Intelligent System Controller Communications Overview Access Control System 32 Downstream Devices Total Communications from Host to Controller RS-232, RS-485, Ethernet Dial-up, Fiber, etc... Intelligent System Controller RS-485 Multi-drop 2 or 4 wire Single Reader Interface Module 0 2 4 6 8 * 1 3 5 7 9 # Up to 32 Single Reader Interface Modules (32 readers) Dual Reader Interface Module 0 2 4 6 8 * 1 3 5 7 9 # 0 2 4 6 8 * 1 3 5 7 9 # Up to 32 Dual Reader Interface Modules (64 readers) Downstream Communications • Four 2-wire ports • Two 4-wire ports • Combination 2 and 4 wire ports Input/Output Control Module(s) Up to 16 Output Control Modules Up to 16 Alarm Input Control Modules revision 1 — 247 LNL-1320 Dual Reader Interface Module 43.2 The Dual Reader Interface Module (Series 2) The series 2 Dual Reader Interface Module board contains the following components: eight (8) supervised/ non-supervised alarm inputs, one (1) RS-485 interface, two (2) reader interfaces, six (6) relay outputs, one (1) power input, one (1) cabinet tamper, jumpers and eight (8) DIP switches. It also contains several status LEDs and six (6) relay LEDs. Dual Reader Interface Module 6.00 (152.4) 5.50 (139.7) 0.25 (6.4) A B 1 2 3 4 5 6 7 8 TMP P FL R1 R2 STATUS LEDs 8 76 5 4 3 21 J 10 DIP SWITCHES OFF ON S1 U1 J 14 J 13 TB10 C NC RLY 1 NO PT13 K1 K2 K3 K4 K5 NC 1 2V K6 NO C RLY 2 J15 2W 4W J3 R S-485 TB 11 TR - K2 K4 K6 NO C RLY 4 K3 J6 K5 S G NC TB6 R+ NO AC C NC RLY 5 A C OC GN O OUTPUTS NO J5 TB7 RS-485 2.00 (50.8) K1 TR + RELAY STATUS LEDs C NC RLY 3 J5 - J 6 TE R MIN A TOR R - READER 2 VO TB4 TB9 TB5 3.00 (76.2) IN 7 IN 8 8.00 (203.2) G ND D AT CLK BZA LEO D0 D1 IN 6 J9 J 11 COMMUNICATION PORT, RS-485 READER INTERFACE J8 TB3 IN 5 TM P GND PFL GND READER 1 J7 TB1 T B2 IN 4 2.00 (50.8) IN 3 INPUTS IN 1 IN 2 INPUTS (1-8) GND DAT CL K BZA L EO VO D0 D1 TB 8 NO C RLY 6 NC POWER IN J 12 0.50 (12.7) TB 1 2 For UL installations, the relays on the LNL-1100, LNL-1300, and LNL-1320 can only be used for access control applications. 248 — revision 1 Hardware Installation Guide 43.2.1 Status LEDs The series 2 Dual Reader Interface Module board contains LEDs that can be used to verify correct installation after power up. The A LED is turned on at the beginning of initialization. If the application program cannot be run, the A LED will flash at a rapid rate. The dual reader interface module is waiting for firmware to be downloaded. When initialization is completed, LEDs A through R2 are briefly sequenced ON then OFF. After the above sequence, the LEDs have the following meanings: LED Purpose A This LED is the heartbeat and online status. Offline: 1 second rate, 20% ON Online: 1 second rate, 80% ON B Indicates communication activity on the SIO communication port. 1 IN1 input status 2 IN2 input status 3 IN3 input status 4 IN4 input status 5 IN5 input status 6 IN6 input status 7 IN7 input status 8 IN8 input status TMP Cabinet tamper PFL Power fault Input in the inactive state: OFF (briefly flashes ON every 3 seconds). Input in the active state: ON (briefly flashes OFF every 3 seconds).

Input in a trouble state (default): Rapid Flash.
R1: reader port 1: • Clock/Data Mode: Flashes when data is received, either input. • Data 0/Data 1 Mode: Flashes when data is received, either input. • RS-485 Mode : Flashes when transmitting data. R2: reader port 2: • Clock/Data Mode: Flashes when data is received, either input. revision 1 — 249 LNL-1320 Dual Reader Interface Module • Data 0/Data 1 Mode: Flashes when data is received, either input. • RS-485 Mode : Flashes when transmitting data. LED K1 through K6: Illuminates when output relay RLY 1 (K1) through RLY 6 (K6) is energized.



250 — revision 1 Hardware Installation Guide 44 Installation To install the Dual Reader Interface Module, perform the installation procedures described in the following sections, in the order in which they are presented. 1. Wire the supervised alarm inputs. 2. Wire the upstream host communication. 3. Wire the Power Fault and Cabinet Tamper Monitors. 4. Wire the power input. 5. Wire the relay outputs. 6. Wire the downstream TTL interface for the keypads and/or card readers. 44.1 Wiring 44.1.1 Supervised Alarm Inputs The Dual Reader Interface Module contains eight (8) supervised inputs that can be used for door position monitoring, REX exit push button monitoring, and alarm control. These inputs are connected using the IN1, IN2, IN3, IN4, IN5, IN6, IN7, and IN8 inputs. The standard wiring configuration is as follows: revision 1 — 251 LNL-1320 Dual Reader Interface Module Inputs 1-4 are for Door #1, Inputs 5-8 for Door #2 DRI Alarm Input Contact Wiring Door 1 Door Contact In 1 Door 1 REX In 2 Door 1 Aux 1 In 3 Door 1 Aux 2 In 4 Door 2 Door Contact In 5 Door 2 REX In 6 Door 2 Aux 1 In 7 Door 2 Aux 2 In 8 TMP Cabinet Tamper Power Failure GND PFL GND Door Contact Selectable through software (default - normally closed) REX Selectable through software (default - normally open) Aux. Selectable through software Wire the IN1 - IN8 inputs using twisted pair cable, 30 ohms maximum. Terminate each of these inputs with two (2) 1000-ohm resistors (1% tolerance - 0.25 watt) for supervised inputs. 252 — revision 1 Hardware Installation Guide Alarm Contact Wiring Supervised NC 1K, 1% 1K, 1% 1K, 1% NO 1K, 1% NO 1K, 1% NO Unsupervised 44.1.2 Upstream Communication The Dual Reader Interface Module uses Port 1 to communicate to the Intelligent System Controller. Port 1 is a 2-wire RS-485 interface that requires the following type of RS-485 cable: 24 AWG (minimum) twisted pair (with shields). The main run RS-485 cable should be no longer than 4000 feet (1219 m), 100 ohms maximum (Belden 9842 for 4-wire or Belden 9841 for 2-wire, plenum cabling Belden 88102, West Penn, or equivalent). The drop cables

to downstream devices) should be kept as possible, no longer than 10 feet. Upstream Controller Wiring (2-wire) RS-485 2-WIRE COMMUNICATIONS 2W TR + SG T+ T- SG Earth ground revision 1 — 253 LNL-1320 Dual Reader Interface Module The RS-485 interface is asynchronous, half-duplex, and using 1 start bit, 8 data bits, 1 stop bit, 44.1.3 Unsupervised Alarm Inputs: Power Fault and Cabinet Tamper Monitors The Output Control Module features two unsupervised alarm inputs that can be used for power fault and cabinet tamper monitoring. These inputs are connected using the BA (power fault) and CT (cabinet tamper) contact terminals located on the Output Control Module. The BA and CT inputs are simple N/C (normally closed) contact closure monitors. Wire the BA and CT inputs using twisted pair cable, 30 ohms maximum (No EOL resistors are required).



IN 9 CABINET TAMPER GND POWER FAULT IN 10 The (EIA) Electronic Industries Association standard defines RS-485 as an electrical interface for multi-port communications on a bus transmission line. It allows for high-speed data transfer over extended distances (4000 feet/1219 m). The RS-485 interface uses a balance of differential transmitter/receiver to reject common mode noise. For increased reliability over the extended distances, End-Of-Line (EOL) termination is required. RS-485 (2-wire or 4-wire) must be terminated at both ends of the RS-485 line (bus). Terminating the line provides a more reliable communication by minimizing the signal reflection and external noise coupling. Each component provided has an on-board terminator.

The installer should determine which device is at the end of the communication line. 32 Downstream Devices Total Intelligent System Controller EOL Termination Required Single Reader Interface Module 0 2 4 6 8 * 1 3 5 7 9 # RS-485 Multi-drop 2 or 4 wire Dual Reader Interface Module 0 2 4 6 8 * 1 3 5 7 9 # 0 2 4 6 8 * 254 — revision 1 1 3 5 7 9 # Downstream Communications • Four 2-wire ports • Two 4-wire ports • Combination 2 and 4 wire ports EOL Termination Required Input/Output Control Module(s) Hardware Installation Guide 44.1.4 Power The DRI accepts 12 to 24 VDC for power. Locate the power source as close to the DRI as possible. Observe POLARITY on VIN! Wire the power input with 18 AWG (minimum) twisted pair cable. Supply Power to the Interface + 12 to 24 VDC - 44.1.5 VIN GND Control Output Wiring Six form-C contact relays are provided for controlling door strikes or other devices. Load switching can cause abnormal contact wear and premature contact failure. Switching of inductive loads (strike) also causes EMI (electromagnetic interference) which may interfere with normal operation of other equipment. To minimize premature contact failure and to increase system reliability, contact protection circuit must be used. The following two circuits are recommended. Locate the protection circuit as close to the load as possible (within 12 inches [30cm]), as the effectiveness of the circuit will decrease if it is located further away. Use sufficiently large gauge of wires for the load current as to avoid voltage loss. revision 1 — 255 LNL-1320 Dual Reader Interface Module Control Output Wiring 12 VDC + DC STRIKE - NC - C NO NO + NC C D IOD E CU R REN T R ATIN G > 1 X STRIKE C UR R ENT D IOD E BR EAK D OW N VOLTAGE > 4X STRIKE VOLTAGE FOR 12 OR 24 VDC STRIKE, D IODE 1N4002 (100 V/1A) TYPICAL AC XFMR AC STRIKE NC C NO NO NC C CLAMP VOLTAGE > 1.5 X VAC RMS FOR 24 VAC STRIKE. PANASONIC ERZ-C07DK470 TYPICAL 256 — revision 1 Hardware Installation Guide Relay Outputs DRI Alarm Output Contact Wiring NC C RLY 1 Door 1 Strike Relay RLY 2 Door 1 Aux 1 RLY 3 Door 1 Aux 2 RLY 4 Door 2 Strike Relay RLY 5 Door 2 Aux 1 RLY 6 Door 2 Aux 2 NO NC C NO NC C NO NC C NO NC C NO NC C NO 44.1.6 Downstream Reader Communication Each reader port supports a reader with TTL or RS-485 interface. Power to the reader is selectable: 12 VDC, or input voltage passed through (PT), 125mA maximum per reader port. This selection is made via jumper J2 and is made for both reader ports. For the selection of 12Vdc, the LNL-1320 must be powered by a 20Vdc minimum source. For readers requiring a different voltage or current capability, they must be powered separately. To fully utilize each reader port, a 6-conductor cable (18AWG) is required when TTL signaling is used. RS485 signaling requires two 2-conductor cables. One cable for power (18AWG) and one cable for communication (24AWG). Reader port configuration is set via host software. revision 1 — 257 LNL-1320 Dual Reader Interface Module Typical Reader Wiring RED (1) VO BRN (4) ORG (5) WHT (3) LED BZR D1/CLK GRN (2) D0/DAT BLK (6) GND 0 1 2 3 4 5 6 7 8 9 * # All readers that have a buzzer will beeping during pre-alarm when in extended held open mode. This includes primary and alternate readers. If the reader has two-wire LED control, this feature is disabled. The reader starts beeping at pre-alarm time and continues to do so until the door is closed or the held open time is hit. 44.1.7 Open Supervised Device Protocol Open Supervised Device Protocol (OSDP) uses bi-directional communications between readers and the reader interface, providing constant monitoring of reader health, improved control of reader operation and configuration in real-time, and additional communications capabilities over a single connection, including biometric template download and LCD reader display control. Wiring for OSDP readers VO Pwr + (150mA Max) LED - not connected BZR - not connected CLK/D1 DAT/D0 GND READER PORT 258 — revision 1 TR+ TRSIGNAL GROUND OSDP DEVICE Hardware Installation Guide 44.2 Elevator Control Currently, elevator control is supported for up to six floors on the Dual Reader Interface Module. Access Control System Intelligent System Controller Maximum: 500 feet 6 conductors Dual Reader Interface Module 6 Inputs 6 Outputs 2 Aux. Inputs for Reader 1 only Elevator Control Room Elevator Reader (inside cab) Up to 6 floors can be supported In order to use Elevator Control, your software must be configured for it. This can be done in System Administration on the Readers window. On the Dual Reader Interface card. Reader 2 is not used. Only Reader 1 is used. The six aux outputs are used to control the six corresponding floor buttons. revision 1 — 259 LNL-1320 Dual Reader Interface Module Contact Wiring for Elevator Control DRI Alarm Input Contact Wiring Reader Aux 1 In 1 Reader Aux 2 In 2 DRI Alarm Output Contact Wiring NC C RLY 1 Floor Output 1 NO NC C Reserved for Future Use In 3 RLY 2 Floor Output 2 RLY 3 Floor Output 3 RLY 4 Floor Output 4 RLY 5 Floor Output 5 RLY 6 Floor Output 6 NO NC Reserved for Future Use In 4 C NO NC Reserved for Future Use In 5 C NO Reserved for Future Use In 6 NC C Reserved for Future Use In 7 NO NC C Reserved for Future Use In 8 In 9 GND In 10 260 — revision 1 NO Hardware Installation Guide 45 Configuration The Dual Reader Interface Module board contains 8 DIP switches and 3 jumpers that must be configured for your system. 45.1 Setting DIP Switches DIP Switches (shown in factory default position: Address 00; 38400 bps) 1 2 3 4 5 ON ON ON 6 7 8 The following chart describes the use of each DIP switch. DIP SWITCH(ES) USED TO CONFIGURE: 1, 2, 3, 4, 5 Device communication address (0 - 31) 6, 7 Communication baud rate (38400, 19200, 9600, or 2400 bps) 8 Not used 45.1.1 Device Address To configure the device communication address, set DIP switches 1, 2, 3, 4, and 5 according to the following table. ADDRESS DIP SWITCH 1: 2: 3: 4: 5: 0 off off off off off 1 ON off off off off 2 off off off off 3 ON ON off off off 4 off off off off 5 ON ON off off off 6 ON ON off off off 7 ON ON ON off off 8 ON ON ON off off 9 revision 1 — 261 LNL-1320 Dual Reader Interface Module ADDRESS DIP SWITCH 1: 2: 3: 4: 5: 9 ON off off ON off 10 off ON off ON off 11 ON ON off ON off 12 off off ON ON off 13 ON off ON ON off 14 off ON ON ON off 15 ON ON ON ON off 16 off off ON ON 17 ON off off ON 18 off ON off ON 19 ON ON off ON 20 off ON off ON 21 ON off ON off ON 22 off ON ON off ON 23 ON ON ON off ON 24 off off ON ON 25 ON off off ON 26 off ON off ON 27 ON ON off ON 28 off ON ON ON 29 off ON ON ON 30 off ON ON ON 31 ON ON ON ON 262 — revision 1 Hardware Installation Guide 45.1.2 Communication Baud Rate To configure the communication baud rate, set DIP switches 6 and 7 according to the following table. BAUD RATE: DIP SWITCH 6: 7: 38400 bps ON ON 19200 bps ON off 2400 bps off off Currently, OnGuard only supports a baud rate of 38400 bps, so be sure to set both dip switches 6 and 7 to the ON position. revision 1 — 263 LNL-1320 Dual Reader Interface Module 45.2 Installing Jumpers The following diagram describes the use of each jumper on the board. The jumper is indicated by brackets []. The default shipping position is shown below. [J2] Reader power: 12V = 24 VDC reduced to 12 VDC at reader ports . Do not use if VIN is less than 20 VDC PT = VIN passed through to reader ports A B 1 2 3 4 5 6 7 8 TMP P FL R1 R2 IN 6 TB4 IN 7 TB 9 TB5 8 7 6 5 4 3 21 IN 8 J 10 GND U1 PFL GND OFF ON S1 J 14 J 13 TB 10 12V PT J3 K1 K2 K3 K4 K5 NC NO C NC RLY Y 1 J 11 [J3] 2-wire select: Must install in 2W position. No jumper = no termination [J12] TB12 264 — revision 1 READER 2 GND DAT CL K BZ A L EO VO D0 D1 IN 5 TB3 IN 4 J8 TB 2 IN 3 INPUTS IN 2 J9 TMP READER 1 J7 G ND DAT CLK BZA LEO D0 D 1 TB1 IN 1 VO TB8 Hardware Installation Guide 46 Specifications **The DRI is for use in low voltage, class 2 circuits only. These specifications are subject to change without notice. • Power: 12 to 24 VDC + 10%, 550mA maximum (plus reader current) 12 VDC @ 450mA(plus reader current) nominal 24 VDC @ 270mA (plus reader current) nominal • Outputs: Six outputs, Form-C, 5A @ 28 VDC resistive Inputs: • - Eight (8) unsupervised/supervised, standard EOL, 1k/1k ohm, 1% 1/4 watt - Two (2) unsupervised, dedicated for cabinet tamper and UPS fault monitoring Reader interface: Reader power (jumper selectable): - 12 VDC + 10% regulated, 125mA maximum each reader or - 12 to 24Vdc ±10% (input voltage passed through) 125mA maximum each reader Reader LED output: TTL compatible, high > 3V, low < 0.5V, 5mA source/sink maximum Reader buzzer output: Open collector, 5 VDCopen circuit maximum, 10mA sink maximum Reader data inputs: TTL compatible inputs or 2-wire RS-485 • Communication: RS-485 two-wire, 2400 to 38400 bps • Cable requirements: Power: 18 AWG, 1 twisted pair RS-485: 24 AWG, 120 ohm impedance, twisted pair with shield, 4000 feet (1219 m) maximum Alarm inputs: 1 twisted pair per input, 30 ohms maximum Outputs: As required for the load Reader data (TTL): 6 conductors, 18 AWG, 500 feet (150 m) maximum Reader data (RS-485): 24AWG, 120 ohm impedance, twisted pair with shield, 4000 feet (1219 m) maximum • Mechanical: Dimension: 6 x 8 x 1 in. (152 x 203 x 25 mm) Weight: 11 oz. (312 g) nominal • Environmental: Temperature: 0 to +70° C operating, -55 to +85° C storage Humidity: 0 to 95% RHNC • UL 294 & UL 1076 Listed • CE marking • RoHS compliant revision 1 — 265 LNL-1320 Dual Reader Interface Module 266 — revision 1 Need to upgrade firmware on the new LNL-1320-S3B but no patch file exists for the version of OnGuard in use.ResolutionA manual method is required to upgrade the firmware.Download the latest version of the Accessory Add-On for Mercury Firmware from the Partner Center.Run the installer which will extract the firmware to the OnGuard folder. This needs to be done on all Communications Servers.Browse to the OnGuard folder and locate the file named LNL1320_2.bin to LNL1320_2.bin.org (signifying this is the original Series 2 firmware).Rename the LNL1320_3B.bin to LNL1320_2.bin.In Alarm Monitoring, locate the LNL-1320-S3B reader board and initiate the firmware download. Once completed, the firmware version should reflect the new update.Undo the naming performed in step 3 to avoid sending firmware for the LNL-1320-S3B to a series 2 reader board.Applies ToOnGuard versions 7.5 and earlierAdditional InformationThe reader will not show as as attached to an LNL-1320-S2B but as a LNL-1320 Series 2 in Alarm Monitoring, but the correct firmware version will be reported.Copyright © 2023 Carrier. All rights reserved.