

VA262-17-B-1255

ATTACHMENT 6

# ***DIGI\*TRAC™***

## ***Model 8 Controller***



*Hirsch DIGI\*TRAC controllers are “standalone” access control systems that support:*

- ScramblePad® & ScrambleProx® secure keypads*
- MATCH™ intelligent reader interfaces*
- High security alarm monitoring*
- Relay control outputs*

*When connected locally, by a LAN, or by telephone lines to a Hirsch Host PC or server, DIGI\*TRAC controllers provide a high-integrity, enterprise-wide access control and security management solution.*

### **Features**

- Controls 8 Fully Supervised Doors
  - Both Entry & Exit
  - Keypads And/Or Readers
- Modular: Uses Expansion Boards
- Standalone or Networked
  - Microprocessor Based
  - High Security Supervised Alarm Inputs (2% Supervision)
  - Door Relay Outputs
  - General Purpose Relay Outputs
  - Dedicated Alarm Relay Outputs
  - Digital Keypad/Reader Channel
- Digital Transmission
  - Long Wiring Runs
  - Multi-drop Connections
  - LAN Interface Options
  - Modem Options
- Encryption Algorithm
  - High Security Transmission
- Local or Remote Programming
  - ScramblePad, ScrambleProx or PC

- Downloadable Firmware

- Flash Memory
- Printer Port
- Multiple Reader Technologies
- Resident Application Library
- UL Listed: 294, 1076, Grade AA

### **Description**

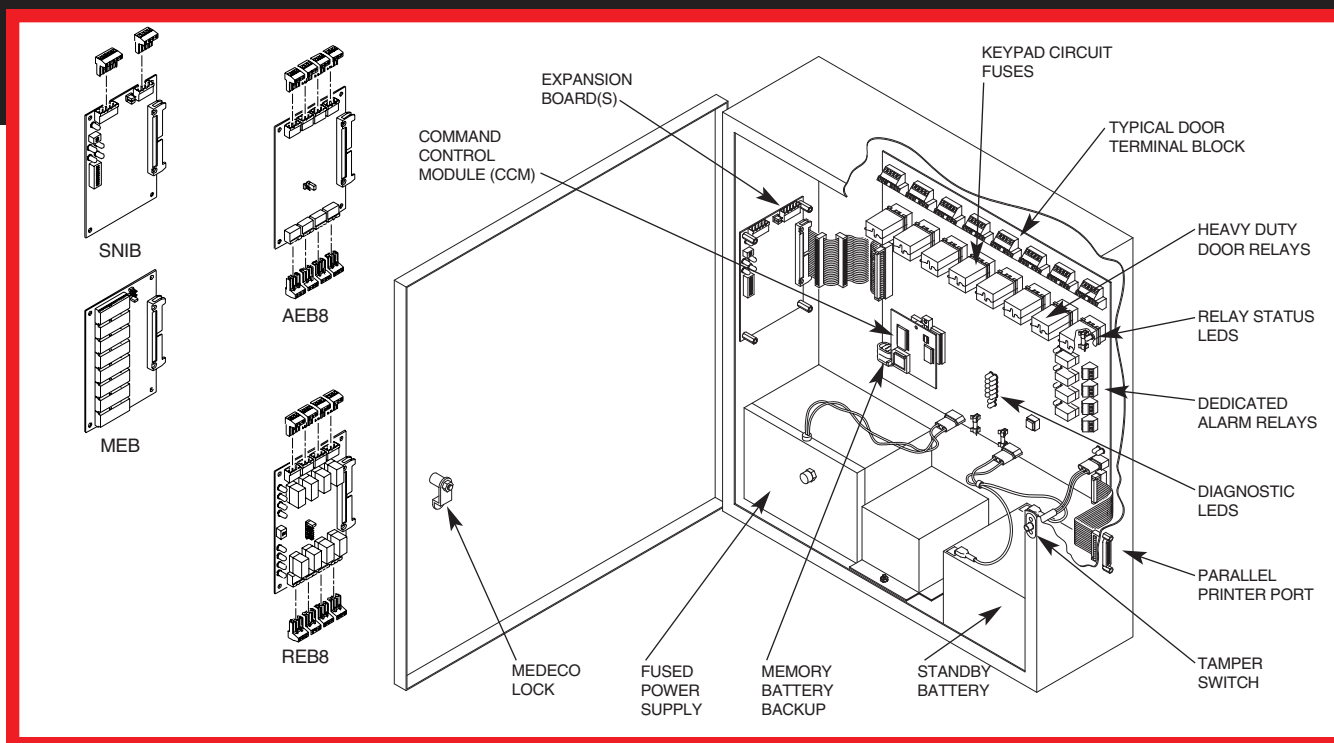
All DIGI\*TRAC controllers have the same firmware functionality. A range of models and expansion options provides a variety of access control, high security alarm monitoring, relay control outputs, and programmable logic configurations to fit most applications. Each unit can be a complete standalone system or a distributed controller in a larger, multi-site enterprise system. This modular design and “scalable” architecture allows a system to start small and grow large.

### **Access Control System**

As an access control system, the DIGI\*TRAC controller includes extensive local firmware for control sequences as basic as “who goes where when” to sophisticated functions like 2-person rule, occupancy counting, individual user tagging, door interlocking, and anti-passback.

Access may be restricted based on: Time of Day, Day of Week, and Door. Access may be granted when the user presents the correct code, card, or both. The user may be granted “temporary” access based on: Use Count Limits, Temporary Day Limits, and Absentee Rule Limits, with Auto-Disable or Auto-Delete on expiration of Temporary Users.

Additional functions include: Unlock/Relock, Alarm Mask/Unmask, and Lock Down/Lock Down Release.



The associated door may be monitored for: Door Forced Open and Door Open Too Long, while providing Auto Relock control.

Readers supported include ScramblePad, ScrambleProx and, via the MATCH intelligent reader interface, these technologies: Magnetic Stripe, Proximity, Wiegand, Bar Code, Smart Card, RF, IR, and Biometric. Technologies may be combined on the same controller or the same door in any combination.

### High Security Reader Channel

The DIGI\*TRAC controller supports electrically isolated terminal blocks that provide communications and power to the ScramblePad, ScrambleProx and MATCH interfaces. The communication path allows multi-drop connections for entrance and exit keypads, and dual technology applications.

User codes are digitized for transmission between a Hirsch ScramblePad, ScrambleProx or MATCH and the DIGI\*TRAC controller. Digital transmission allows longer wiring runs than are normally available with conventional access control reader technologies.

### High Security Alarm Monitoring

Hirsch uses very stable digitally processed analog inputs with 2% line supervision for high security alarm monitoring. A line supervision module (DTLM, MELM, or SBMS) is located at the door contact, alarm sensor, request to exit (RQE), or similar device to establish this supervision.

In lieu of "shunting," which turns off supervision, Hirsch uses "alarm masking" for full-time supervision and reporting of line status — even during hours of authorized access. Conditions reported include: Alarm, Secure, RQE, Mask, Tamper Alarm, Tamper Secure, Short, Open, Noisy and Input-Out-of-Spec.

### Relay Control System

Relay outputs on DIGI\*TRAC controllers can be used for: electric door locks and strikes, arming/disarming security systems, alarm annunciation, elevator floor control, HVAC control, lighting control, storage locker control, and many other equipment control applications. These relays may be activated by codes (via ScramblePad), cards (via MATCH and reader), time zones, alarms, or logic sequences linked to other relays.

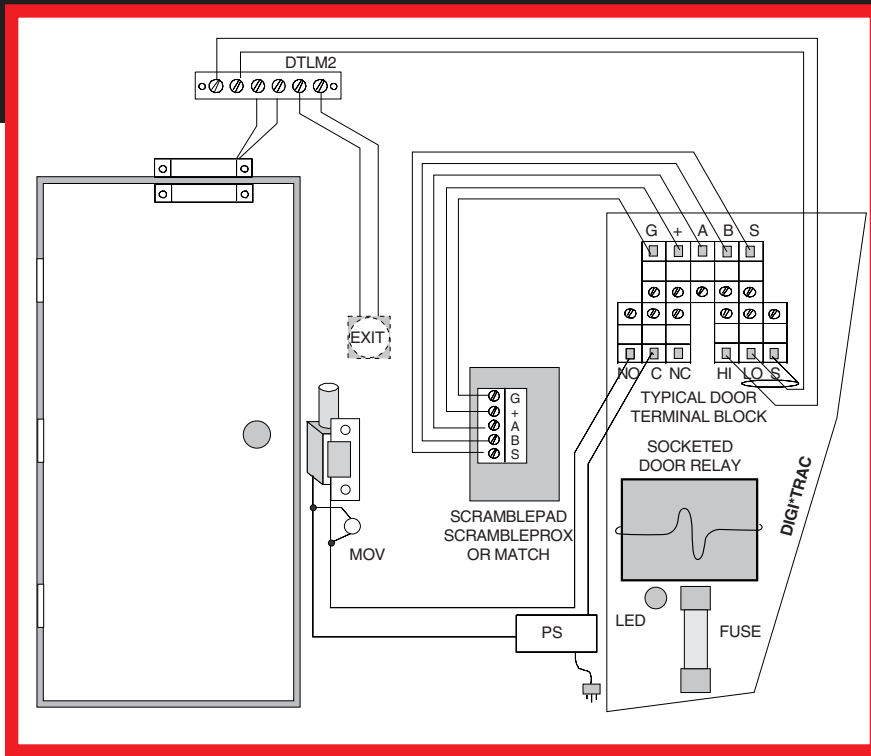
When used with a ScramblePad, DIGI\*TRAC controllers are ideal for after-hours tenant override systems. A history of who issued the override command is available for tenant billing or audit trails. The same ScramblePad used for access control can be used for tenant override and remote operator command functions.

### Programmer's Terminal

DIGI\*TRAC controllers can be programmed by either a ScramblePad or a PC using Hirsch Host software. The PC can be local or connected by LAN or modem. A ScramblePad used for access control can also be used as a programmer's terminal. Programming functions supported include: add & delete user access codes, assign unlock/relock codes, assign alarm codes, and assign elevator control codes.

### SCRAMBLE\*NET™

DIGI\*TRAC controllers communicate with a Hirsch Host PC using SCRAMBLE\*NET protocol which uses an encryption algorithm for high security. The SCRAMBLE\*NET command/packet structure is ideal for LAN and hardwired paths, including RS-485 multi-drop and RS-232 via direct connect or dial-up modem.



*Typical Controller-to-Door Wiring Diagram*

## Reliability By Design

DIGI\*TRAC controllers are designed for "high availability" as complete systems solutions for global markets. Standby batteries for both memory and system operation are standard. The controller ships with an internal international power supply. All door relays are socketed. All Keypad/Reader terminals and power circuits are fused. Each unit is configured in a heavy duty, NEMA style enclosure, with a high security lock and tamper alarm.

## Specifications

### Communications

- Serial Interface Ports:
  - SCRAMBLE\*NET: Requires SNIB. Encrypted message structure.
  - RS-485 multi-drop or RS-232 protocol
  - Optically isolated serial port
  - Baud Rate: 9600 or 19,200
  - RS-485: 4000 ft. (1220m) with 22 gauge. 2 pair, stranded, twisted, overall shield
  - RS232: 50 ft (15m) @9600 baud
- Parallel Printer Port: Standard
- Keypad/Reader Port: 16 device addresses
  - Address 1-8 for door relay 1-8 entry.
  - Address 9-16 for door relay 1-8 exit. Any address for command and programming

- Wiring: 750 ft (160m) with 22 gauge, 1800 ft (550m) with 18 gauge. 2 pair, stranded, twisted, overall shield

### Firmware

- Command & Control Module (CCM):
  - Removable & Upgradable
  - Time Zones: 150
  - Access Zones: 128
  - Control Zones: 256
  - Holidays: Four 366 Day x 2 Years
  - Daylight Savings Time Adjustment
- Dial-Up to Remote Host:
  - Phone Numbers: 4, with roll over
  - User selectable retry attempts
  - Call-back mode for security
  - Initiation by alarm, buffer % full, and/or time

### Memory

- Buffers: 1500 events, 1500 alarms standard
  - 20,000 events, 2,000 alarms with MEB/BE
  - 20,000 events, 2,000 alarms with MEB/CB (reduces users by 20%)
  - Oldest discarded first, if full
- Users: 4000 standard
  - 8,000 with MEB/CE16
  - 20,000 with MEB/CE32
  - 68,000 with MEB/CB64
  - 132,000 with MEB/CB128

- Battery Backup: 30 day for code, setups, clock and buffer

### Electrical

- Keypad/Reader Power: 8 terminals
  - 1.0 Amp @24VDC each, fused
  - 2.90 Amp @24VDC, total
  - Powers ScramblePad, ScrambleProx and MATCH
- Primary and Standby Power:
  - 90-130VAC, 50/60 Hz., fused
  - 180-260VAC, 50/60 Hz, fused
- Uninterruptible Power Supply
- Standby Batteries: 7 AH Included
- Door Relays: 10 Amp, Form C
- Control Relays: 2 Amp, Form C (requires REB8)
- Alarm Relays: 2 Amp, Form C
- LEDs:
  - Individual Relay Status
  - Battery (OK, Low, Fail)
  - AC (OK, Fail)
  - System (OK, Fail)
  - Keypad/MATCH (Poll, Response)
  - SCRAMBLE\*NET (Poll, Response)
  - Test Mode
  - Alarm Events in Buffer
  - Box Tamper Alarm

### Physical

- Door Tamper Switch
- Medeco High Security Key Lock
- Enclosure: NEMA type, with conduit knockouts & removable door
- Dimensions: 22" H x 20" W x 6.25D" (55.9 cm x 51cm x 15.9cm)
- Expansion Boards: 6" H x 4.25"W x .75"D (15.2cm x 10.8cm x 1.9cm)
- Shipping Weight: 60lbs (27.2kg)
- Expansion Boards: 1 lb (.05kg)
- Operating Temperature Range: 32°F to 140° F (0° to 60° C)
- Relative Humidity: 0 to 90%, non-condensing

### Listings & Approvals

- UL 294 Access Control Systems Units
- UL 1076 Proprietary Burglar Alarm Systems, Grade AA
- CE

# Systems With Integrity

## Ordering Information — Controllers

| Model # | Description                             | Comments  |
|---------|---|---|
| M8N     | DIGI*TRAC MODEL 8N -<br>8 Door - 115VAC | Controls 8 Supervised Doors. 4000 Users. Includes 8 door relays, 8 Alarm Inputs (requires Line Modules), enclosure, power supply, battery, tamper switch, Medeco lock and SNIB. Supports Expansion Boards. CE. UL Listed. 115VAC. |

Note: Add “-230” to model number for 230 VAC.

## Ordering Information — Expansion Boards & Modem

| Model #    | Description   | Comments   |
|------------|---|--|
| AEB8       | Alarm Expansion Board - 8 Inputs                                      | Adds 8 additional high security alarm inputs. SNAP, SAM and MOMENTUM support up to 2 boards in M2, M8, MSP or M64. Velocity supports up to 4 boards in M2, M8, MSP, M64 and up to 2 boards in M16. Each input requires appropriate Line Module. Features removable connectors. UL Listed. CE.  |
| REB8       | Relay Expansion Board - 8 Relays                                      | Adds 8 additional 2 Amp Form C relays to an M2, M8, M16 or MSP-8R. May not be installed in an M64. A total of 5 (4 if networked) REB8 Boards may be installed in all other DIGI*TRAC controllers. Removable connectors & status LEDs. UL Listed. CE.   |
| MEB/BE     | Memory Expansion Board - Buffer Expansion                             | Expands standard buffer from 1500 events and 1500 alarms to 20,000 events and 2,000 alarms with CCM 7.X. Expands standard buffer from 37 events and 37 alarms (700 events and 700 alarms with CE boards) to 20,000 events and 2,000 alarms with CCM 6.6. Protected from data loss during power failures for up to 30 days by controller memory battery. UL Listed. CE. |
| MEB/CE16   | Memory Expansion Board - CODE Expansion 4,000/16,000                  | Expands CODE Memory from 4,000 to 8,000 on Velocity and MOMENTUM with CCM 7.X. Not recognized by SNAP or SAM with CCM 7.X. Expands CODE Memory from 1,000 to 16,000 maximum with CCM6.X. Protected from data loss during power failures for up to 30 days by controller memory battery. UL Listed. CE.   |
| MEB/CB64   | Memory Expansion Board - CODE Expansion of 64,000 with Buffer Option  | Expands CODE Memory by 64,000 (from 4,000 to 68,000) with CCM 7.X on Velocity and MOMENTUM. Not recognized by CCM 6.6 or earlier. A portion of the Code Memory may be allocated to alarm and event Buffers on Velocity only. Protected from data loss during power failures for up to 30 days by controller memory battery. CE. UL Listed.                             |
| MEB/CB128  | Memory Expansion Board - CODE Expansion of 128,000 with Buffer Option | Expands CODE Memory by 128,000 (from 4000 to 132,000) with CCM 7.X on Velocity and MOMENTUM. Not recognized by CCM 6.6 or earlier. A portion of the Code Memory may be allocated to alarm and event Buffers on Velocity only. Protected from data loss during power failures for up to 30 days by controller memory battery. CE. UL Listed.                            |
| DM9600A-DL | DIGI*TRAC 9600 BAUD MODEM ASSEMBLY (Factory Set: Dial-Up Line)        | A miniature 9600 Baud Modem Assembly that can be powered from & installed internally in the M1, M2, M8, M16 or MSP for remote site management via dial-up network. Includes cables, adaptor, & power supply harness. Do not use at Host PC or NET*MUX4 out port.   |

Note: The DIGI\*TRAC M8 controller can accommodate up to 5 expansion boards. Only one MEB/CE or MEB/CB is supported per controller. A maximum of 4 AEB8 expansion boards are supported per controller.



Specifications are subject to change without notice.

### Global Headquarters

1900 Carnegie Ave., Bldg. B, Santa Ana, CA 92705 USA  
949-250-8888 Fax 949-250-7372

[www.HirschElectronics.com](http://www.HirschElectronics.com)

PDS005-203





## ScramblePad® ScrambleProx® ScrambleSmart™ ScrambleSmartProx™

*Hirsch's patented ScramblePad family of keypads and keypad+reader devices prevents stolen access codes using a numeral scrambling technique and viewing restrictors. An integrated contactless prox/smart card reader enables a variety of card+code applications. The onboard MATCH™ allows for connected readers (biometrics, etc.). The keypad also gives operators remote system control.*

### Features

- Scrambling Display
- Horizontal & Vertical Viewing Restrictors
- Multi-function Operator Interface
  - Access Control
  - Programmer's Terminal
  - Alarm & Relay Control
  - Override HVAC, Lighting, etc.
- Immediate Availability of Codes
  - No Waiting for Cards
  - Instant Authorizations
- Codes Are Free, Cards Cost Money
- Dual Technology
  - Support 1 or 2 Readers
  - AutoSTART Scrambling Display
- High Security
- Microprocessor Based
- Mathematical Digitizing Algorithm
  - High Security Transmission
  - Eliminates Facility Codes
- 3 to 16 Digit Codes
- Digital Transmission
  - Long Wiring Runs
  - Multi-drop Connections
- Audible Feedback

### Description

The Hirsch ScramblePad is an access control reader delivering the additional benefits of remote operator control and tenant override functions. The ScramblePad provides a very high security approach to access because the digits are randomly scrambled each time the START button is pressed. A bystander cannot acquire the code by seeing which buttons were pressed (pattern recognition). No wear pattern develops on the buttons. Horizontal and vertical light guides narrow the viewing field so only one person directly in front of the keypad can see the display.

The ScramblePad uses a Personal Identification Number (PIN code) of 3 to 16 digits. The system administrator can assign the digits or let the system randomly generate them. A different number of digits (code length) may be concurrently assigned to different groups for access control or other custom control functions.

Use of a memorized credential means that an individual cannot leave the credential at home, as often happens with cards. Nor can another person copy the credential without the owner's knowledge. Since the credential is so secure and traceable to its owner, it is not likely to be loaned out, a constant risk with card technologies. Thus each user is held accountable for his/her individual code use.

The ScramblePad provides a universal reader interface for analog or pulsed signal readers.

The on-board 5VDC power source powers most readers. Used with a conventional reader, the ScramblePad converts the card's raw code into a MATCH code, the security code used by a Hirsch DIGI\*TRAC™ controller — without a need to decipher. This allows existing card access systems to be upgraded and made more intelligent without replacing existing cards and readers. Hirsch recommends existing cards be sent to Hirsch for evaluation.

The dual technology feature protects against lost or stolen cards by requiring a user to enter a code after presenting a card. When dual technology is used, the ScramblePad may be configured to operate card only, code only or card plus code based on time of day or a specific individual.

### Remote Control by Extension Digits

The use of “extension digits” allows authorized users to issue dozens of unique command functions. Examples include:

- Door Unlock/Relock
- Mask/Unmask Alarms
- Arm/Disarm Security Systems
- After-Hours HVAC or Lighting Activation
- Remote Control of Mechanical or Electrical systems
- Elevator Floor Requests
- Other Custom Control Sequences

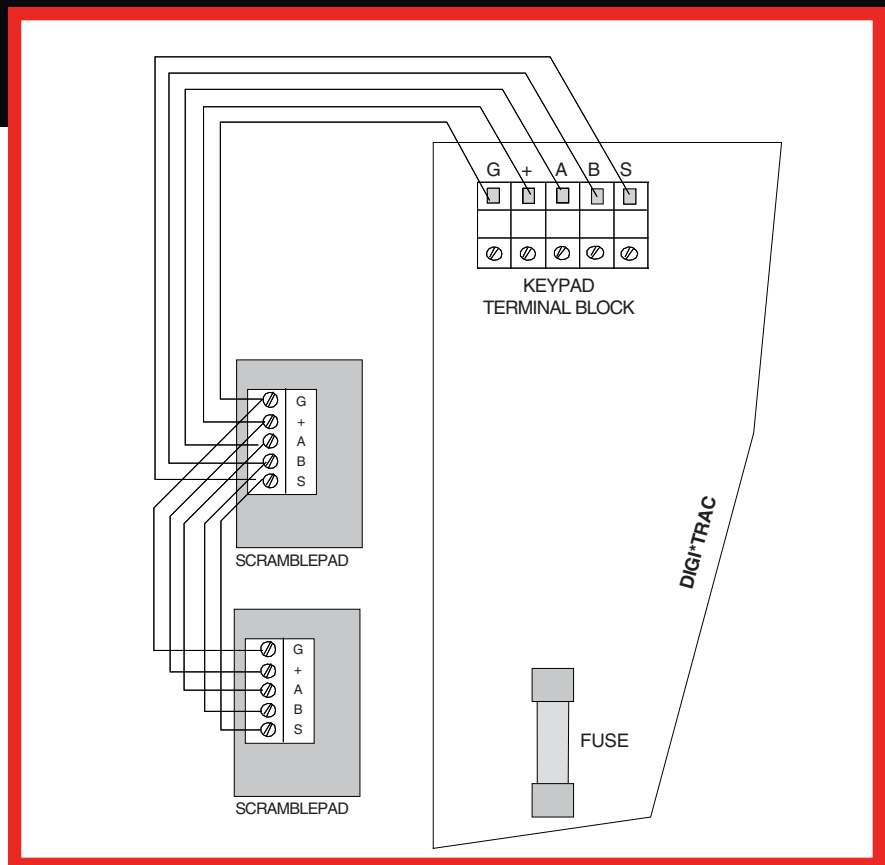
Any code use provides an audit trail, identifying who issued each command. The same ScramblePad used for access control can also issue function commands.

### High Security Communication Path

The ScramblePad uses its own micro-processor intelligence to digitize the code for transmission to a Hirsch DIGI\*TRAC controller. Digital transmission permits longer wiring runs between ScramblePad and controller than are normally available with conventional technologies. The communication path also allows for multi-drop connections. This enables entrance and exit keypads, as well as dual technology applications, on the same cable.

### Programmer's Terminal

The ScramblePad also functions as a programming terminal for Hirsch DIGI\*TRAC controllers. This provides a complete, low-cost access control system with no need for a PC. Programming functions supported include:



Typical Controller-to-ScramblePad/Prox/Smart/SmartProx Wiring Diagram

- Add/Delete User Access Codes
- Assign Unlock/Relock Codes
- Assign Mask/Unmask Codes
- Add/Delete Relay Control Codes (e.g., for elevators, HVAC, lighting)
- Add/Delete Time Schedules & Holidays
- Proximity
- Bar Code
- Touch Memory
- Barium Ferrite
- RF (Radio Frequency)
- Biometric
- Smart Card

## Specifications

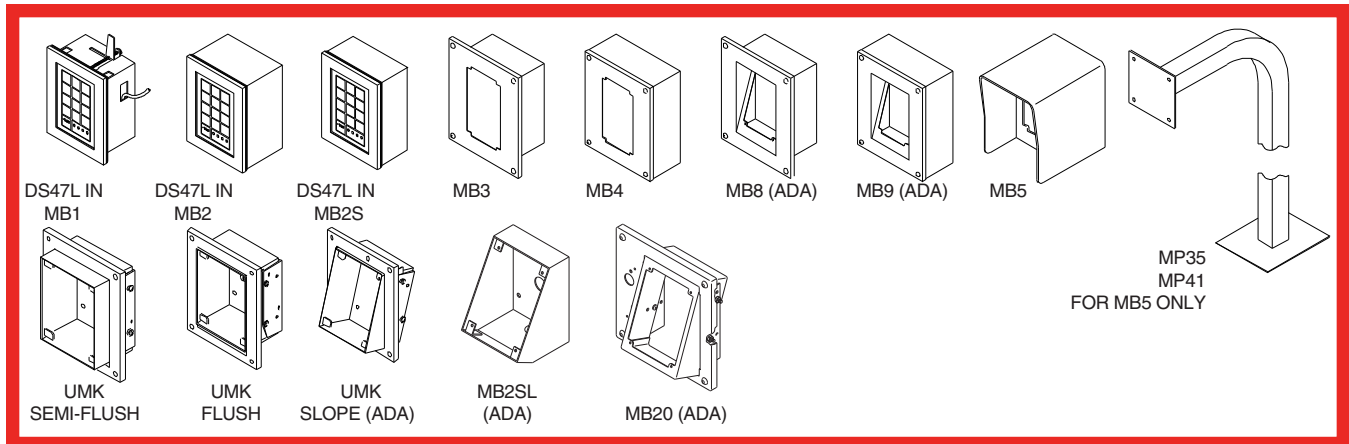
### Attributes

*Note: the ScramblePad family of products is designed to operate with a Hirsch controller.*

- User Codes: 3 to 16 digits (user definable or randomly generated) plus duress
- Code Tamper Alarm
- Display Pattern:
  - Secure Mode: Scrambled
  - Programming Mode: Normal, telephone keypad position
- Reader Types & Data Formats Accepted
  - ABA Magnetic Stripe
  - Wiegand (26 to 55 bit format)
  - Wiegand (24 to 90 bit pass-through with DESFire ScrambleSmart)

### Electrical

- Wiring Type: 2 pair, stranded, twisted, overall shield
- Wiring Distance: Refer to controller specifications
- Supervision: Digital From Controller
- Wiring To Reader: Refer to reader specifications
- Display: 7 segment
  - DS47L: Red LED
  - DS47L-HI: White incandescent
- Annunciation:
  - Audible: 7 tone prompt on pressing START, and 1 tone feedback for each button
  - Visual: 4 LEDs: Red, green, yellow, yellow



## Mounting Accessories

- Operating Power For DS47L:
  - 40 mA @ 24VDC when non-illuminated
  - 125 mA @ 24VDC when illuminated
  - 60 mA @ 12VDC when non-illuminated
  - 215 mA @ 12VDC when illuminated
- Operating Power For DS47L-HI
  - 40 mA @ 24VDC when non-illuminated
  - 250 mA @ 24VDC when illuminated
- Operating Power For DS47L-SPX
  - 50 mA @ 24VDC when non-illuminated
  - 135 mA @ 24VDC when illuminated
- Operating Power For DS47L-SPX-HI
  - 50 mA @ 24VDC when non-illuminated
  - 250 mA @ 24VDC when illuminated
- Reader Power: 2 terminals
  - 250mA @ 5VDC
- Operating Power For SPSH-1
  - 600 mA @ 24VDC
- ScrambleProx Card Read Range:
  - 1.4 to 2.0 in. (3.5 to 5.0 cm)
- ScrambleSmart Card Read Range:
  - 1.0 in. (2.5 cm)

## Physical

- Physical Tamper Alarm
- One-Piece Molded Keyface
- Recommended Mounting Height, AFF to centerline:
  - Standard mounting height: 58"
  - ADA mounting height: 48"
  - Requires appropriate Hirsch mounting box
  - Follow local codes
- Dimensions:
  - Face: 5.75"H x 4.37"W (14.6 cm x 11.11 cm)
  - Body: 4.5"H x 3.5"W x 1.75"D (11.43 cm x 8.89 cm x 4.28 cm)
- Shipping Weight: 2 lb. (.90 kg)
- Operating Temperature Range:
  - 0° to 140°F (-20° to 60°C)
- Relative Humidity: 0 to 90%, non-condensing
- Viewing Restriction (Display Angle):
  - DS47L ± 4° horizontal; ± 26° vertical
  - DS47L-HI ± 20° horizontal; ± 26° vertical

## Accessories

- MB1 Flush Mounting Box
- MB2 Surface Mounting Box
- MB2S Shallow Version of MB2
- MB2SL Sloped Surface Mounting Box (ADA)
- MB3 Heavy Duty Flush Mounting Box

- MB4 Heavy Duty Surface Mounting Box
- MB5 Exterior, Heavy Duty Surface Mounting Box
- MB8 Heavy Duty Flush Mounting Box, Slope Front Face Plate (ADA)
- MB9 Heavy Duty Surface Mounting Box, Slope Front Face Plate (ADA)
- MB20 Heavy Duty Combo Surface Mounting Box (ADA)
- MB/FFP Flat Faceplate
- MB/SFP Slope Front Faceplate
- MB/SWS Shallow Wall, Semi-flush Spacer Ring
- MP35 Mounting Post, 35" (88.9 cm) for curb mounting
- MP41 Mounting Post, 41" (104.1 cm) for ground level mounting
- UMK Universal Mounting Kit (requires MB2) (ADA)
- SPSH-1 ScramblePad Space Heater Assembly, for use with MB5, where temperatures drop below freezing

## Listings & Approvals

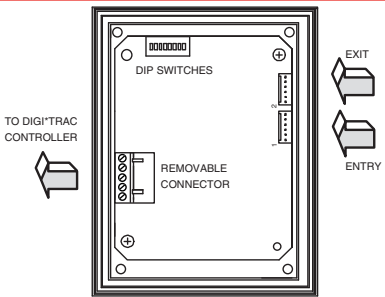
- UL 294 Access Control Systems Units
- C-UL Signal Appliances

# Systems With Integrity

## Ordering Information

| Model #             | Description                               | Comments   |
|---------------------|---|--|
| DS47L               | ScramblePad                               | Patented scrambling display & viewing restriction. Includes audible annunciator, 4 status LEDs & physical tamper switch. Moisture, dust, dirt and ESD resistant. Includes Standard (non-custom) MATCH function for 1 or 2 readers. 2 MATCH connectors with 6" pigtails. Installs in Hirsch mounting boxes. UL Listed. CE.  |
| DS47L-HI            | ScramblePad<br>- High Intensity           | Patented scrambling display & viewing restriction. High intensity display for installation in high ambient light environments. Includes audible annunciator, 4 status LEDs & physical tamper switch. Moisture, dust, dirt and ESD resistant. Includes Standard (non-custom) MATCH function for 1 or 2 readers. Installs in Hirsch mounting boxes. Use MB5, exterior mounting box for exterior applications. 2 MATCH connectors with 6" pigtails. UL Listed. CE.  |
| DS47L-SPX           | ScrambleProx - HID                        | DS47L ScramblePad with integral Proximity reader and antenna. 1 MATCH connector with 6" pigtail. Installs in Hirsch mounting boxes. Use HID 125 KHz proximity cards.   |
| DS47L-SPX-HI        | ScrambleProx - HID<br>- High Intensity    | High intensity display version of DS47L-SPX ScrambleProx. Install in high ambient light environments. Installs in Hirsch mounting boxes. Use MB5, exterior mounting box for exterior applications. 1 MATCH connector with 6" pigtail. Use HID 125 KHz proximity cards.   |
| DS47L-SPX-I         | ScrambleProx - Indala                     | DS47L ScramblePad with integral Proximity reader and antenna. 1 MATCH connector with 6" pigtail. Installs in Hirsch mounting boxes. Use Indala 26 bit cards.   |
| DS47L-SPX-I-HI      | ScrambleProx - Indala<br>- High Intensity | High intensity display version of DS47L-SPX-I ScrambleProx. Install in high ambient light environments. Installs in Hirsch mounting boxes. Use MB5, exterior mounting box for exterior applications. 1 MATCH connector with 6" pigtail. Use Indala 26 bit cards.   |
| DS47L-SSP-HID       | ScrambleSmartProx -<br>HID                | DS47L ScramblePad with embedded 125 KHz proximity and 13.56 MHz, ISO 14443A&B contactless smart card readers and antennae. Reads PIV II End Point, DESFire Transitional PIV, TWIC (PIV applet), FIPS 201-compliant CAC (NG, T, v2), MIFARE/DESFire card serial number (IE 56-bit CSN output), iCLASS, and HID 125KHz proximity. Includes MATCH2 functionality. 1 MATCH connector with 6" pigtail. Installs in Hirsch mounting boxes (MB2 or deeper). Use PIV II, DESFire Transitional PIV, TWIC, FIPS 201-compliant CAC, MIFARE (CSN), DESFire (CSN), iCLASS, and/or HID 125KHz cards. |
| DS47L-SSP-HID-HI    | ScrambleSmartProx -<br>HID - HI           | High intensity display version of DS47L-SSP-HID ScrambleSmartProx. Install in high ambient light environments. Installs in Hirsch mounting boxes (MB2 or deeper). Use MB5, exterior mounting box for exterior applications. 1 MATCH connector with 6" pigtail. Use PIV II, DESFire Transitional PIV, TWIC, FIPS 201-compliant CAC, MIFARE (CSN), DESFire (CSN), iCLASS, and/or HID 125 KHz cards.  |
| DS47L-SSP-HID-SN    | ScrambleSmartProx -<br>HID - SN           | DS47L ScramblePad with embedded 125 KHz proximity and 13.56 MHz, ISO 14443A&B contactless smart card readers and antennae. Reads MIFARE/DESFire card serial numbers (HID 32-bit CSN output), iCLASS, and HID 125 KHz proximity. Includes MATCH2 functionality. 1 MATCH connector with 6" pigtail. Installs in Hirsch mounting boxes (MB2 or deeper). Use MIFARE (CSN), DESFire (CSN), iCLASS, and/or HID 125 KHz cards.  |
| DS47L-SSP-HID-SN-HI | ScrambleSmartProx -<br>HID - SN - HI      | High intensity display version of DS47L-SSP-HID-SN ScrambleSmartProx. Install in high ambient light environments. Installs in Hirsch mounting boxes (MB2 or deeper). Use MB5, exterior mounting box for exterior applications. 1 MATCH connector with 6" pigtail. Use MIFARE (CSN), DESFire (CSN), iCLASS, and/or HID 125KHz cards.  |
| DS47L-SS-BT         | ScrambleSmart - BQT<br>Mifare             | DS47L ScramblePad with integral MIFARE smart card reader and antenna. 1 MATCH connector with 6" pigtail. Installs in Hirsch mounting boxes. Use BQT MIFARE cards.  |
| DS47L-SS-BT-DF      | ScrambleSmart - BQT<br>DESFire            | DS47L ScramblePad with integral DESFire smart card reader and antenna. 1 MATCH connector with 6" pigtail. Installs in Hirsch mounting boxes. Use BQT MIFARE DESFire cards.   |
| DS47L-SS-BT-HI      | ScrambleSmart - BQT<br>Mifare - HI        | High intensity display version of DS47L-SS-BT ScrambleSmart. Install in high ambient light environments. Installs in Hirsch mounting boxes. Use MB5, exterior mounting box for exterior applications. 1 MATCH connector with 6" pigtail. Use BQT MIFARE cards.   |
| DS47L-SS-BT-HI-DF   | ScrambleSmart - BQT<br>DESFire - HI       | High intensity display version of DS47L-SS-BT-DF ScrambleSmart. Install in high ambient light environments. Installs in Hirsch mounting boxes. Use MB5, exterior mounting box for exterior applications. 1 MATCH connector with 6" pigtail. Use BQT MIFARE DESFire cards.  |

NOTE: The DS47L supports dual technology entry, card reader exit. For dual technology entry and dual technology exit use two DS47L units.



TO DIGI\*TRAC CONTROLLER

DIP SWITCHES

REMOVABLE CONNECTOR

EXIT

ENTRY

### DIP SWITCH SETTINGS

|                     |  |
|---------------------|--|
| SW 1-4              | = ADDRESS  |
| SW 5 OFF, SW 6 OFF  | = MATCH DISABLED   |
| SW 5 OFF, SW 6 ON   | = MAG STRIPE (or 24-90 bit pass-through Wiegand for DESFire) |
| SW 5 ON, SW 6 OFF   | = WIEGAND (W/PARTY)  |
| SW 5 ON, SW 6 ON    | = WIEGAND (W/O PARTY)  |
| SW 7 ON             | = READER 2 ENABLED   |
| SW 8 ON             | = TAMPER ENABLE  |
| SW 9 OFF, SW 10 OFF | = AUTOSTART  |
| SW 9 ON, SW 10 OFF  | = MANUAL START   |
| SW 9 OFF, SW 10 ON  | = TEST 1   |
| SW 9 ON, SW 10 ON   | = TEST 2   |

| PIN | ABA   | WIEGAND | COLOR       |
|-----|-------|---------|-------------|
| 1   | DATA  | 1       | WHITE       |
| 2   | STRAP | STRAP   | BLACK/WHITE |
| 3   | CLOCK | 0       | GREEN       |
| 4   | LED   | LED     | BROWN       |
| 5   | +5V   | +5V     | RED         |
| 6   | GND   | GND     | BLACK       |

READER CONNECTOR - 12" FLYING LEADS



Specifications are subject to change without notice.  
© 2009 Hirsch Electronics Corp. All Rights Reserved.

### Global Headquarters

1900 Carnegie Ave., Bldg. B Santa Ana, CA 92705 USA  
949-250-8888 Fax 949-250-7372

[www.HirschElectronics.com](http://www.HirschElectronics.com)

PDS001-309