ScramblePad
Scrambling Keypad Family

HIRSCH™

ScramblePad® • ScrambleProx® • ScrambleSmartProx™

Identiv's HIRSCH ScramblePad® family of keypads and keypad+reader devices prevent access codes from being stolen by using a key scrambling technique that is combined with unique viewing angle restrictors. An integrated contactless prox/smart card reader enables a variety of card+code applications. The integrated MATCH™ allows for direct connection of a variety of devices (standard readers, biometrics, etc.). The keypad also gives operators remote system control of DIGI*TRAC™ Controllers.

Trusted, Versatile, Secure

The HIRSCH ScramblePad range is a family of access control devices that provide high security keypad functionality with optional reader technologies, can be combined and configured to meet the most demanding applications. The ScramblePad design is specified in many of the world's most secure locations due to high security scramble feature that randomly orders the digits every time 'START' is pressed. This prevents the acquisition of a user code via pattern recognition, and also prevents keypad wear from leaving a tell-tale as to the numbers used in a valid PIN. This feature is further enhanced by the use of viewing restrictors that narrow the field of vision to the point where only the person directly facing the ScramblePad can see the presented digits.

The use of a memorized credential (PIN—personal identification number) as a single technology access method reduces disruption caused when credentials (e.g. cards) are lost, loaned or left at home, and security is enhanced since the PIN cannot be stolen or copied. The PIN is linked to the specific user so their accountability is ensured.

All ScramblePad devices provide a universal reader interface for analog or pulsed signal readers along with 5VDC power for such devices. The ScramblePad onboard MATCH (the security code used by a HIRSCH DIGI*TRAC™ controller) converts the card's payload into a MATCH code — without a need to decipher. This allows existing card access systems to be upgraded and made more secure without replacing existing cards and readers.

Using dual technology (keypad and reader) further enhances security requiring both 'something you know' and 'something you have' to gain access. In many applications off-hours access is controlled with dual technology while during normal operating hours either PIN or card only are used. A DIGI*TRAC controller and Velocity™ software installation provides an industry leading range of options and custom features, that can be tailored to the requirements of the assets being controlled.

FEATURES

- **HIGH SECURITY** - Scrambling Display, Unique Horizontal & Vertical Viewing Restrictors, High Security Data, Transmission, 3 to 16 Digit Codes, No need for Facility Codes
- **MULTI-FUNCTION INTERFACE** - Access Control, Programmer's Terminal, Alarm & Relay Control, Override HVAC, Lighting, Custom control sequences
- **AUDIBLE FEEDBACK** - On Scramble, On Access/Denial, Silent Operation Option
- **IMMEDIATE AVAILABILITY OF CODES** - No Waiting for Cards, Instant Authorizations/Deauthorization
- **DUAL TECHNOLOGY** - Support 1 or 2 Readers, AutoSTART Scrambling Display
- **DIGITAL TRANSMISSION** - Long Wiring Runs, Multi-Drop Connections, Secure Communication

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A Multitude of Options
The standard ScramblePad does not include an integrated credential reader. The ScrambleProx (SPX) includes an integrated 125kHz proximity reader) and antenna in the same form factor. And the ScrambleSmartProx (SSP) includes a 125kHz proximity reader and a 13.56MHz contactless smartcard interface (see ordering information for format detail). These powerful combinations provide a myriad of access control configuration options including the use of multiple technologies on a single system (e.g. 26-bit Proximity cards and 200-bit PIV compliant Smartcards). 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 or group.

For high ambient light conditions high intensity versions are available for all of the ScramblePad keypad/reader configurations. These units are available with 'aerospace' White Incandescent lamps or low power consumption Orange LEDs. Due to the higher light output the viewing restriction is slightly relaxed compared to the standard model.

Remote Control by Extension Digits
The use of "extension digits" allows authorized users to issue dozens of unique command functions. By appending a code to the end of the user PIN an operator can Unlock/Relock doors, Mask/Unmask Alarms, Arm/Disarm Security Systems, Activate After-Hours HVAC or Lighting, Control Mechanical/Electrical systems, Initiate Elevator Floor Requests, and many other custom control sequences. All code transactions are registered in Velocity providing a complete audit trail.

High Security Communication Path
The ScramblePad uses its own microprocessor 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 host PC. Programming functions supported include Add/Delete User Access Codes, Assign Unlock/Relock Codes, Assign Mask/Unmask Codes, Add/Delete Relay Control Codes, Add/Delete Time Schedules and Holidays.

Technical Features

Keypad Note: the ScramblePad family of products is designed to operate exclusively with a HIRSCH controller.	
PIN Code Length	3-16 digits, user defined or randomly generated
Duress Digit	Yes
Code Tamper Alarm	Yes
Display	Default is scrambled on wake. Program mode locks in traditional keypad layout.
7-Segment Display Color/Type	Standard=Red (LED), 'HL'=Orange (LED), 'HI'=White (Incandescent)
Annunciation (Audible)	7-tone 'START' prompt, 1-tone each key press
Annunciation (Visual)	4 LEDs (Green x 2, Amber and Red)
Viewing Restriction	Standard= +/-4 deg horizontal: +/-26 deg vertical. High Intensity= +/20 deg Horiz.; +/-26 deg Vertical
(Physical) Tamper	Yes. Standard. Optical.
Embedded Readers	
125kHz Support	Yes. Standard Prox. (HID compatible, Indala versions available)
13.56MHz Support	Yes. Depending on model. Compatible credential include: FIPS 201 PIV II, TWIC, CAC-EP, PIV-I/C, DESFire/MIFARE CSN, iCLASS™ (CSN only some models), NFC UID.

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Technical Features (continued)

Supported External Devices	
Biometric	Yes. See price list for available options.
Mag Stripe	Yes. See price list for available options.
LF/HF Readers	Yes. See price list for available options.
Electrical	
Wiring Type	2 pair, stranded, twisted, overall shield
Wiring Maximum Distance	Refer to DIGI*TRAC controller documentation
Typical Operating Current	215mA DS47L, 250mA DS47L-SPX-HI - (Illuminated)
Reader Power	250mA @ 5VDC (2 terminals)
Key Particulars	
Face plate (front)	5.75" x 4.37" x 0.375" (146mm x 111mm x 10mm)
Main Unit (from mounting surface)	4.5" x 3.5" x 1.5"* (114mm x 89mm x 38mm) *DS47L & SPX, SSP is 2" (50mm)
Standard Mounting Height	58" (1.47m) *Refer to local AHJ/Code
ADA Mounting Height	48" (1.2m) *Refer to local AHJ/Code
Operating Temperature Range	0 to 140 deg F (-20 to 60 deg C)
Relative Humidity	0-90% (non-condensing)
Shipping Weight	2-lb (0.90-kg) nominal

Mounting Accessories Table

Supported External Devices	
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
MB9	Heavy Duty Flush 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, Semiflush 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

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Ordering Information

Standard Models		
DS47L	ScramblePad	Scrambling display & viewing restriction. Audible annunciator, 4 status LEDs & physical tamper switch. MATCH function for 1 or 2 readers. 2MATCH connectors with 6" pigtails. Installs in HIRSCH mounting boxes.
DS47L-HL	ScramblePad - High Intensity 'Orange'	As above but with an energy efficient orange LED high intensity display. For use in high ambient light conditions. Use MB5 to protect from contamination and to shield unit from direct lighting.
DS47L-SPX	ScrambleProx - HID	DS47L ScramblePad with embedded HID compatible 125kHz reader. 1 MATCH connector with 6" pigtail included. Installs in HIRSCH mounting boxes.
DS47L-SPX-HL	ScrambleProx - HID - High Int. 'Orange	As DS47L-SPX but with an energy efficient orange LED high intensity display. For use in high ambient light conditions. Use MB5 to protect from contamination and to shield unit from direct lighting.
DS47L-SPX-I	ScrambleProx - Indala	As DS47L-SPX except embedded low frequency reader, designed for use with 26-bit Indala credentials.
DS47L-SSP-HE	ScrambleSmartProx - HE Standard	DS47L Scramble Pad with embedded Identive 125kHz reader and 13.56MHz contactless smart card reader. 1 MATCH connector with 6" pigtail included. Installs in HIRSCH mounting boxes (MB2 and deeper).
DS47L-SSP-HE-HL	ScrambleSmartProx - HE High Int. 'Orange'	As DS47L-SSP-HE but with an energy efficient orange LED high intensity display. For use in high ambient light conditions. Use MB5 to protect from contamination and to shield unit from direct lighting.
Also Available		
DS47L-HI	ScramblePad - High Intensity 'White'	As DS47L but with high performance white incandescent high intensity display. For use in high ambient light conditions. Use MB5 to protect from contamination and to shield unit from direct lighting.
DS47L-SPX-HI	ScrambleProx - HID - High Int. ' White'	As DS47L-SPX but with high performance white incandescent high intensity display. For use in high ambient light conditions. Use MB5 to protect from contamination and to shield unit from direct lighting.
DS47L-SPX-I-HI	ScrambleProx - Indala - High Int. 'White'	As above but with high performance white incandescent high intensity display. For use in high ambient light conditions. Use MB5 to protect from contamination and to shield unit from direct lighting.
DS47L-SSP-HID	ScrambleSmartProx - HID Standard	DS47L Scramble Pad with embedded HID compatible 125kHz reader and 13.56MHz contactless smart card reader. 1 MATCH connector with 6" pigtail included. Installs in HIRSCH mounting boxes (MB2 and deeper).
DS47L-SSP-HID-HI	ScrambleSmartProx - HID High Int. 'White'	As above but with high performance white incandescent high intensity display. For use in high ambient light conditions. Use MB5 to protect from contamination and to shield unit from direct lighting.
DS47L-SSP-HID-I	ScrambleSmartProx - HID -Indala	As DS47L-SSP-HID except embedded low frequency reader, designed for use with Indala credentials.
DS47L-SSP-HID-I-HI	ScrambleSP - HID Indala - High Int. 'White'	As above but with high performance white incandescent high intensity display. For use in high ambient light conditions. Use MB5 to protect from contamination and to shield unit from direct lighting.
DS47L-SSP-HID-SN	ScrambleSmartProx - HID - Serial Number	DS47L-SSP-HID with firmware to provide MIFARE/DESFire Serial Numbers
DS47L-SSP-HID-SN-HI	ScrambleSP - HID - Serial No. - High Int.	As above but with high performance incandescent high intensity display
DS47L-SSP-HID-64	ScrambleSP - HID - 64-bit FASC-N/PIV	DS47L-SSP-HID with firmware to provide 64bit Weigand output from encoded FASC-N
DS47L-SSP-HID-64-HI	ScrambleSP - HID - 64-bit -High Int.	As above but with high performance incandescent high intensity display
DS47L-SSP-HID-64-I	ScrambleSP - HID - 64-bit -Indala	DS47L-SSP-HID-64 with Indala low frequency reader
DS47L-SSP-HID-64-I-HI	ScrambleSP - HID - 64-bit -Indala -High Int.	As above but with high performance incandescent high intensity display
DS47L-SSP-HID-SN-I	ScrambleSP - HID - Serial No. - Indala	DS47L-SSP-HID-SN with Indala low frequency reader
DS47L-SSP-HID-SN-I-HI	ScrambleSP - HID - SN -Indala -High Int.	As above but with high performance incandescent high intensity display

Contact Inside Sales for full details of compatible credentials

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