



DIGI*TRAC™ Model SP 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 Up to 32 or 64 Outputs
 - 2 Models
 - Programmable Logic
- Modular: Uses Expansion Boards
 - Via Expansion Boards
- High Security Supervised Alarm Inputs (2% Supervision)
 - Via Expansion Boards
- Standalone or Networked
 - Microprocessor Based
 - 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
 - Eliminates Facility Codes
 - High Security Transmission
- Local or Remote Programming
 - ScramblePad or PC

- Downloadable Firmware
 - Flash Memory
- Printer Port
- Multiple Reader Technologies
- Resident Application Library

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.

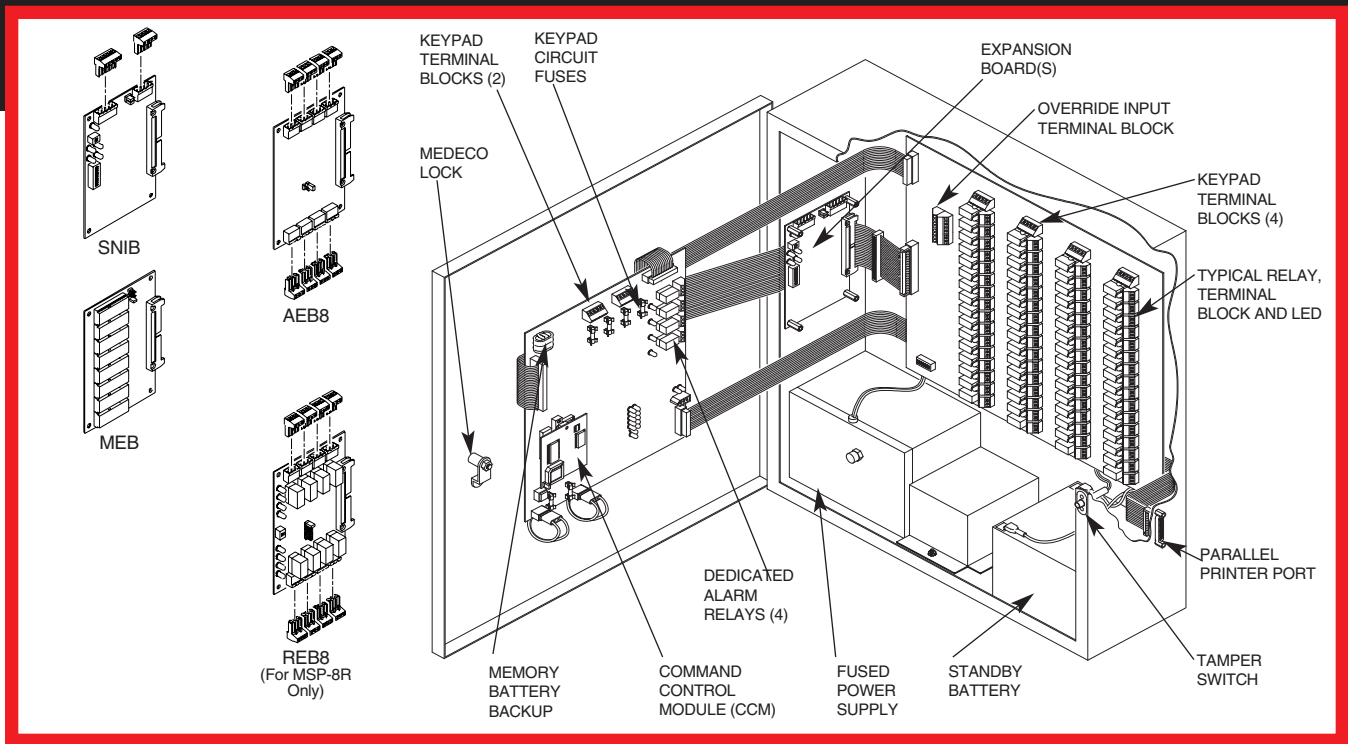
Readers may be used to initiate control actions such as mask alarm inputs, activate a group of equipment

control relays, or energize specific elevator call buttons. 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 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 keypads or dual technology applications.

User codes are digitized for transmission between a Hirsch ScramblePad or MATCH and the DIGI*TRAC



Model M64N

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 con-

trol, 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.

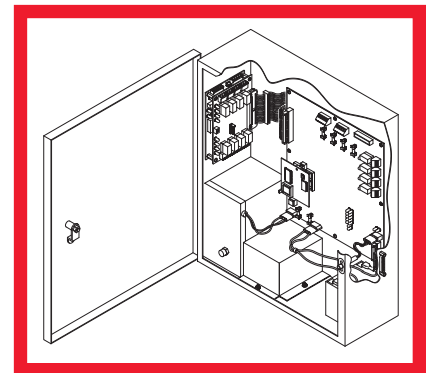
When used with a ScramblePad, DIGI*TRAC controllers are ideal for after-hours tenant override systems. A history of who issued the override command is available for tenant billing or audit trails.

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 local 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

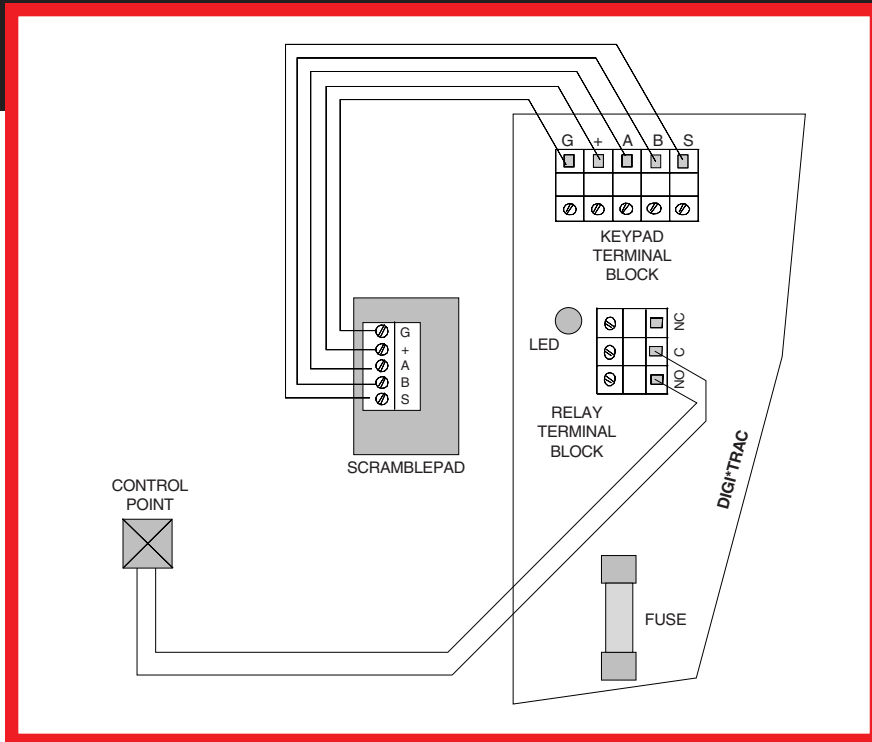


Model MSPN-8R

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.

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 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.



Typical Controller-to-Control Point Wiring Diagram.

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. (1220 m) with 22 gauge. 2 pair, stranded, twisted, overall shield
 - RS232: 50 ft (15 m) @9600 baud
- Parallel Printer Port: Standard
- Keypad/Reader Port: 16 device addresses
 - Any address for command and programming
 - Wiring: 750 ft (160 m) with 22 gauge, 1800 ft (550 m) 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%)
- Users: 4000 standard
 - 8,000 with MEB/CE16
 - 20,000 with MEB/CE32
 - 68,000 with MEB/CB64
 - 128,000 with MEB/CB128
- Battery Backup: 30 days for code, setups, clock and buffer

Electrical

- Keypad/Reader Power:
 - 1.0 Amp @24VDC each terminal, fused
 - (MSP-8R) 1.25 Amp @24VDC, total. 2 terminals
 - (MSP-64R) 2.15 Amp @24VDC, total. 6 terminals
- Powers ScramblePad and MATCH

- Primary and Standby Power:
 - 90-130VAC, 50/60 Hz, fused
 - 180-260VAC, 50/60 Hz, fused
- Uninterruptible Power Supply
- Standby Batteries:
 - MSP-8R: 1.3 AH Included
 - MSP-64R: 7 AH Included
- Control Relays: 2 Amp, Form C (MSP-8R 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:
 - MSP-8R: 18"H x 15.25"W x 5.5"D (45.7 cm x 38.7 cm x 14 cm)
 - MSP-64R: 22"H x 20"W x 6.25"D (55.9 cm x 51 cm x 15.9 cm)
- Expansion Boards:
 - 6"H x 4.25"W x .75"D (15.2 cm x 10.8 cm x 1.9 cm)
- Shipping Weight:
 - MSP-8R: 30lbs. (13.6 kg)
 - MSP-64R: 60lbs. (27.2 kg)
- Expansion Boards: 1 lb (.5kg)
- Operating Temperature Range: 32° to 140° F (0° to 60° C)
- Relative Humidity: 0 to 90%, non-condensing

Listing & Approvals

- CE

Systems With Integrity

Ordering Information — Controller

Model #	Description	Comments
M64N	DIGI*TRAC MODEL 64N - 64 Relay -115VAC	Modular Controller. 4000 Users. Includes 64 programmable relays, enclosure, power supply, battery, tamper switch, Medeco lock and SNIB. Supports Expansion Boards (except REB8). Controls elevators, equipment, cabinets, etc. CE. 115VAC.
MSPN-8R	DIGI*TRAC MODEL SPN - 8 Relay - 115VAC	Modular Controller. 4000 Users. Includes enclosure, power supply, battery, tamper switch, Medeco lock, REB8 and SNIB. Supports Expansion Boards. Controls elevators, equipment, cabinets, etc. CE. 115VAC.

Note: Add "-230" to model number for 230VAC.

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 MSP-8R Controller can accommodate up to 5 expansion boards while the M64N supports 4. Only one MEB/CE or MEB/CB is supported per controller. A maximum of 4 AEB8 expansion boards are supported per controller.

The MSP-8R includes an SP Controller Board and one REB8 Relay Expansion Board. The M64N includes an SP Controller Board (door mounted) and an MSP-64RB Relay Expansion Board (enclosure mounted).



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

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