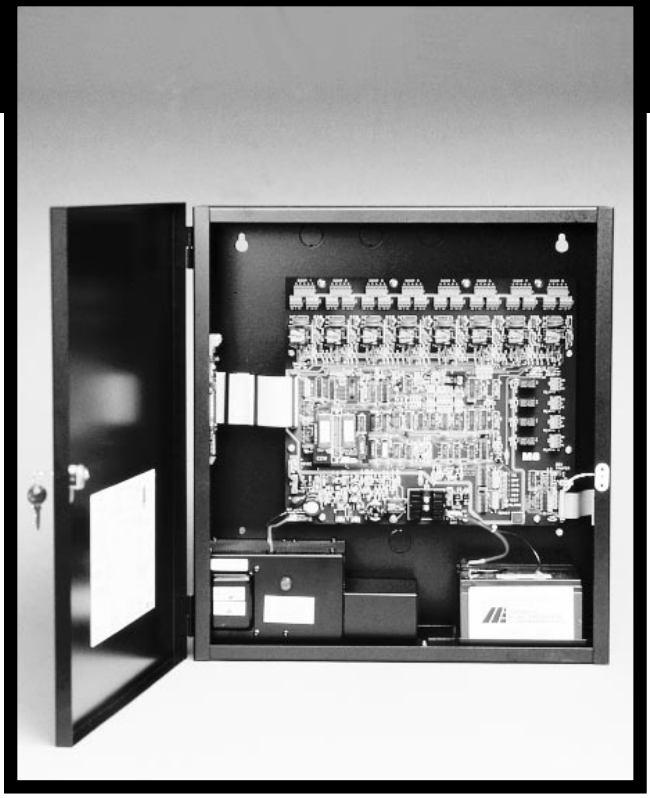
HIRSCH ELECTRONICS

Product Data Sheet



DIGI*TRAC™ Model 8 Controller

*Hirsch DIGI*TRAC Controllers are "stand-alone" access control systems that support:*
— ScramblePad® secure keypads
— MATCH™ intelligent reader interfaces
— High security alarm monitoring
— Relay control outputs
*When connected locally 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 and/or Reader Channel
- Digital Transmission
  - – Long Wiring Runs
  - – Multi-drop Connections
- Encryption Algorithm
  - – Eliminates Facility Codes
  - – High Security Transmission
- Local Operator Programming Options
  - – ScramblePad
  - – PC Port
  - – Modem Port, including Dial-Up
- Printer Port for Events & Transactions (Standalone Use)
  - – Multiple Languages in Firmware
- Multiple Reader Technologies in One System
- Resident Application Library
- UL Listed: 294, 1076, Grade AA

Description

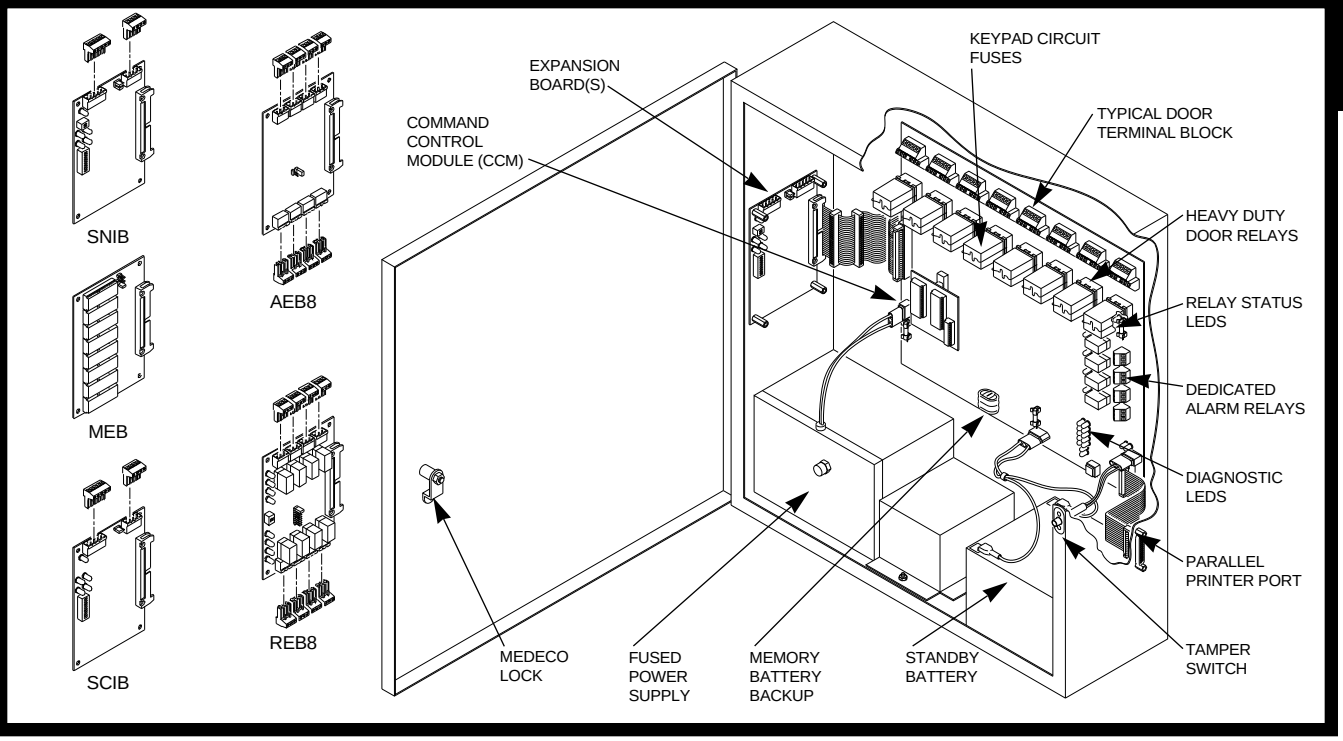
All DIGI*TRAC Controllers have the same firmware functionality. A range of models and expansion options provides a variety of access control, high security alarm monitoring, relay control outputs, and programmable logic configurations to fit most applications. Each unit can be a complete standalone system or a distributed controller in a larger multi-unit, 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 available to the user 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 and, via the MATCH intelligent reader interface, these technologies: Magnetic Stripe, Proximity, Wiegand, Bar Code, Barium Ferrite, 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 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 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.

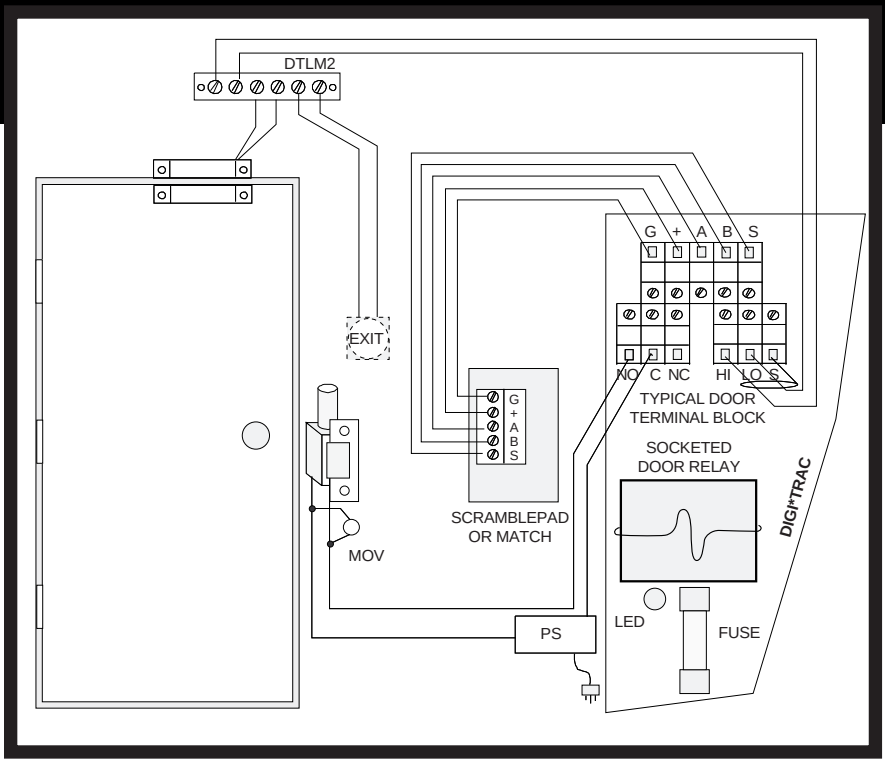
When used with a ScramblePad, DIGI*TRAC controllers are ideal for after-hours tenant override systems. A history of who issued the override command is available for tenant billing or audit trails. The same ScramblePad used for access control can be used for tenant override and remote operator command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

Multiple DIGI*TRAC controllers may be linked to a Hirsch Host PC using SCRAMBLE*NET protocol. SCRAMBLE*NET protocol uses an encryption algorithm for high security and operates over an RS-485 multi-drop communication path or over an RS-232 communication path 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. Every 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. RS485 is multi-drop.
  - Printer: Requires SCIB. 8K printer buffer. RS485 requires SPA (serial printer adapter)
  - RS-485 or RS-232 protocol
  - Optically isolated serial port
  - Baud Rate: 9600
  - 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: 30 (Year independent)
  - Daylight Savings Time Adjustment
  - Languages for local printer: German, French, Spanish, English, Dutch, Italian
- Dial-Up to Remote Host:
  - Phone Numbers: 4, with roll over
  - Continuous retry until connection
  - Call-back mode for security
  - Initiation by alarm, buffer % full, and/or time

Memory

- Buffers: 100 events, 100 alarms standard
  - 20,000 Events, 2,000 alarms with MEB/BE
  - Oldest discarded first, if full
- Users: 1000 standard
  - 4000 with MEB/CE4
  - 16,000 with MEB/CE16
- 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 and MATCH
- Primary and Standby Power:
  - 90-130VAC, 50/60 Hz., fused
  - 180-260VAC, 50/60 Hz, fused
- Uninterruptable 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

Systems With Integrity

Ordering Information — Controllers

Model #	Description	Comments
M8	Model 8 - 8-Door Secure Access Control System	8 Heavy Duty Door Relays & 8 High Security supervised inputs (door alarms, RQE & Tamper Monitoring). 1000 users standard. 4 alarm relays. Powers ScramblePad or MATCH interfaces.

Ordering Information — Expansion Boards & Modem

Model #	Description	Comments
AEB8	Alarm Expansion Board - 8 Inputs	High Security Alarm Inputs. Up to 2 AEB8 may be installed per controller
REB8	Relay Expansion Board - 8 Relays	2-Amp, Form C Relays. Up to 5 REB8 may be installed per controller. Dual Mode Override Switch (All On/All Off)
SNIB	SCRAMBLE*NET Interface Board	Networks DIGI*TRAC to a PC with Hirsch Host PC software. Optically isolated RS-485 and RS-232 ports.
SCIB	Serial Communications Interface Board	RS-232 & RS-485 Ports for serial printer.
MEB/CE4	Memory Expansion Board - Code Expansion to 4000	Expands CODE memory from 1000 to 4000.
MEB/CE16	Memory Expansion Board - Code Expansion to 16,000	Expands CODE memory from 1000 to 16,000.
MEB/BE	Memory Expansion Board - Buffer Expansion	Expands standard buffer from 100 events and 100 alarms to 20,000 events and 2,000 alarms.
DM9600A-DL	DIGI•TRAC 9600Baud Modem Assembly For Dial-up	Installs internally in DIGI•TRAC Enclosure. For remote site management via dial-up network. Powered by controller and its UPS. Includes MPSH (Modem Power Supply Harness)

Note: The DIGI*TRAC M8 Controller can accommodate up to 5 expansion boards. Only one MEB/CE is supported per controller. A maximum of 2 AEB8 expansion boards are supported per controller. Factory configured controllers may be ordered by adding the following suffixes to the base controller model number: N (SNIB), B (MEB/BE), NB (SNIB & MEB/BE), M9600 (DM9600A-DL)(e.g., Model 8 with SNIB and DM9600A-DL=M8NM-9600)

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Specifications are subject to change without notice.

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