# SPECTRUM™ FAMILY
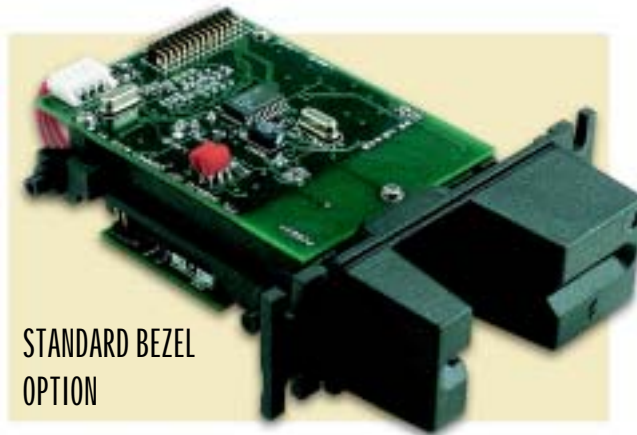# HYBRID INSERT READER

**Intelligent OEM Module**
for Magnetic Stripes and/or Smart Cards
RS-232 and USB/RS-232 Interface

**USB**

STANDARD BEZEL
OPTION

## Reads magnetic stripes.

ID TECH's Hybrid Insert Reader is designed to read and decode up to three tracks of magnetically-encoded information. It reliably reads media conforming to ISO 7810 and 7811 standards. An optional tri-colored LED guides the user through the reading process, indicates when data is being processed, and signals successful and unsuccessful reads.

## Reads smart cards.

The ID TECH Hybrid Insert Reader can also be configured to read and write to Integrated Circuit Cards (ICC or "smart" cards), memory or microprocessor cards conforming to ISO 7816 standards. Programming the USB/RS-232 version is accomplished with a USB Serial Driver that enables serial data to be input via a USB port on the host computer.

* LED not available with metal bezel.

## Selects and formats data.

The ID TECH Hybrid Insert Reader is a fully-intelligent unit that can be programmed to read all tracks or only selected tracks from a magnetic stripe. It can also output data with terminating characters and up to nine preamble or postamble characters to match a data format expected by the host. In addition, the reader offers gate, latch, and Security Access Module (SAM) options.

## Compatible with a wide range of footprints and applications.

The reader's chassis is molded from a glass and lubricant-filled engineering plastic that supports the magnetic head as well as a PCB with a landing-style smart card connector. Separate molded bezels (choice of standard, compact, flush mount, or metal) attach to the chassis to guide the card and serve as mount for the LED indicator.* The magnetic head is spring-loaded to ensure good contact with warped or bowed cards. The smart card connector has gold-plated contacts that create a .02 inch "wiping" action to ensure dependable connection and long life.

## IDTECH™
Value through Innovation

# Spectrum™ Intelligent Hybrid Insert Reader Specifications

## Electrical

| | |
|---|---|
| RS-232: | +5 VDC/70mA (power adapter regulated 5 VDC/350mA or equivalent). |
| USB/RS-232: | Power supplied by the host computer. |
| Operating Current: | 70 mA maximum for three tracks of magnetic data. |
| Chassis Ground: | Connected to GND and magnetic head case. |

## Environmental

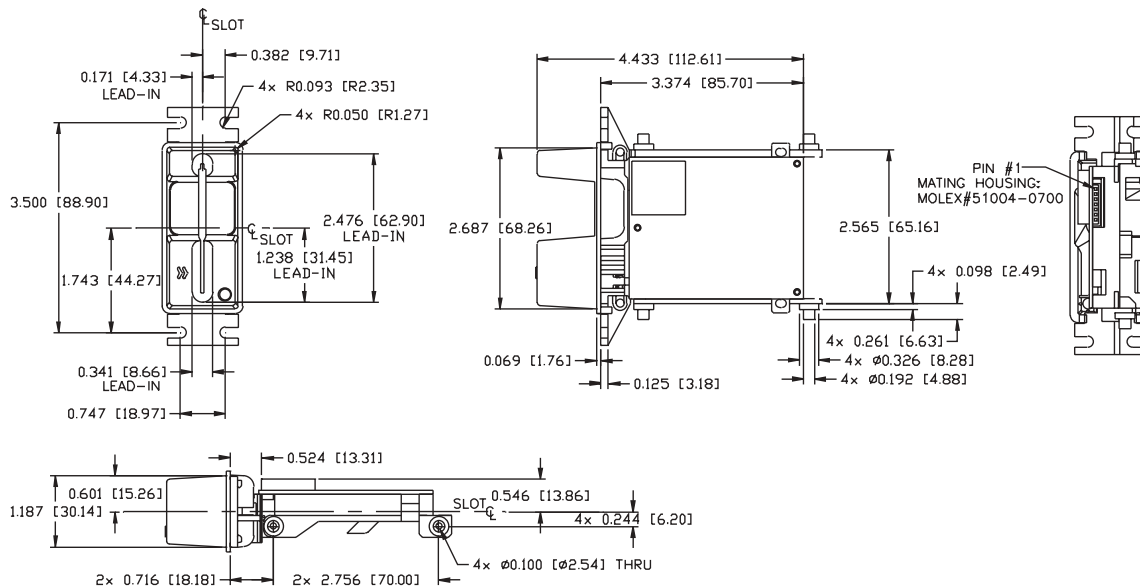| | |
|---|---|
| Operating Temperature: | 32° F to 131° F (0° C to 55° C). |
| Storage Temperature: | -40° F to 158° F (-40° C to 70° C). |
| Humidity: | Maximum 95% non-condensing. |

## Reliability

| | |
|---|---|
| Magnetic Head Life: | 1,000,000 passes minimum.* |
| IC Card Connector: | 500,000 cycles minimum (equivalent to 1,000,000 passes).* |
| Chassis and Bezel: | 1,000,000 card cycles minimum.* |
| Magnetic Read Rate: | Less than one error in 100,000 bits on cards conforming to ISO 7811-1/6 (not induced by operator error).** |
| Warranty: | One year, parts and labor. |

*All wear reliability numbers are based on operation in a laboratory environment.
**Based upon reading on withdrawal.

## Mechanical

| | |
|---|---|
| Magnetic Stripe Formats: | ISO 7811, F2F. Media with magnetic coercivity of 300 through 4,000 Oersted can be read. |
| Reading Speed: | 5 to 60 inches per second. |
| Media Thickness: | .025 to .035 inches. Maximum card thickness .035 inches. |
| Dimensions: | Standard Bezel  Length: 4.64 inches (117 mm). Width: 3.97 inches (101 mm). Height: .389 inches (9.88 mm). |
| | Compact Bezel  Length: 4.2 inches (107.3 mm). Width: 2.5 inches (63 mm). Height: .87 inches (22.2 mm). |
| | Flush-Mount Bezel  Length: 4.3 inches (109.2 mm). Width: 2.75 inches (69.9 mm). Height: 2.75 inches (69.9 mm). |
| Options: | Latch, Gate, Security Access Module (SAM), LED Indicator, "Card Seated" Signal (optional for magnetic stripe, standard for ICC), "Card Present" Signal, Metal Bezel. |

Insert Reader Footprints:



1047 S. Placentia Avenue
Fullerton, California 92831
(714) 680-5868   Fax: (714) 680-3379
Visit us at www.idt-net.com

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