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**E-Z TEC®
METAL
DETECTORS**



The E-Z Tec® Metal Detector is an extremely sensitive instrument used to detect the presence of ferrous and nonferrous metals.

All industries which need product purity need metal detectors. The list of examples is almost endless, and includes food, textile, rubber, plastic, wood products, chemical, cosmetic, pharmaceutical and many other industries.

Besides the obvious benefit of product purity, the metal detector will also protect downstream equipment from damage caused by metal in the product stream.

Metal can enter the production process with the raw material or can get into the product due to wear or failure of processing equipment components. Detecting pieces of broken machinery can help resolve equipment problems before major damage occurs. Thus, equipment downtime is reduced and productivity is increased.



Metal Detector Overview

PRINCIPLE OF OPERATION

The E-Z Tec® Metal Detector uses a balanced three-coil arrangement wound around the aperture to sense metal moving through it. The center (oscillator) coil emits an electromagnetic field throughout the space within the metal detector housing. Two receiver coils (placed equidistant on either side of the oscillator coil) are connected in series so that the energy coupled from the oscillator coil to either of the receiver coils exactly cancels the energy coupled to the other receiver coil; the net output of this pair is essentially zero. Metal passing through this set of coils creates an imbalance which, if the signal's amplitude is great enough, will result in a detection.

SENSITIVITY

The sensitivity of a metal detector is usually defined as the diameter of the smallest sphere which is always detected. Many factors influence the sensitivity that can be attained. These include: product characteristics, type and shape of metal to be detected, aperture dimensions, and the position of the metal particle within the aperture. Actual production line sensitivities can be estimated more accurately when installation conditions and the customer's product are considered.

FEATURES

- **Stainless Steel Design** – The oscillator and receiving coils are wound on a rigid frame and encapsulated in a stainless steel shell (USDA/FDA and CSA approved).
- **NEMA 4X Controls** – The controls are housed in a water-tight, dust-tight and corrosion resistant stainless steel enclosure. Other NEMA ratings are available upon request.
- **Remote Cable** (up to 100 ft)(30m) is supplied for connecting the remote electronics to the sensing head.
- **Extremely Sensitive** – Detection capabilities as small as 0.3 mm.
- **Crystal Oscillator** provides stable, drift-free frequency reference.
- **Status Lights (E-Z Tec V Only)** are located behind the transparent NEMA 4 door. Bright green “ready” and red “detect” lights let you determine status instantly.
- **Electronics (E-Z Tec V Only)** – E-Z Tec digital circuitry is a high-quality system with easily removable printed circuit boards. An LED bar graph provides a continuous display of sensitivity and phase effect, invaluable for optimizing performance.

APERTURE MODELS



SINGLE SURFACE MODELS



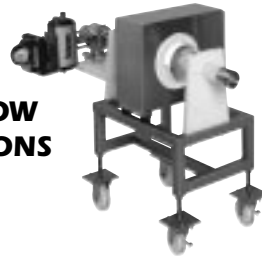
PHARMACEUTICAL MODEL



VERTICAL DROP APPLICATIONS



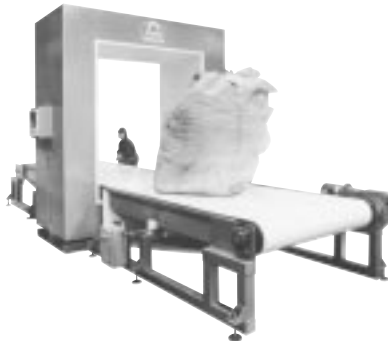
LIQUID FLOW APPLICATIONS



CONTROL SYSTEMS



MECHANICAL CONVEYOR MODELS



Aperture Models

E-Z Tec DSP



Erietz New E-Z Tec® DSP Metal Detectors are extremely sensitive instruments used to detect ferrous, non-ferrous and stainless steel metal contaminants. The advanced digital signal processing provides customers in the food, textile, pharmaceutical, rubber, chemical, and many other industries, with a unit designed for optimum performance and improved product purity.

Another highlight of E-Z Tec DSP Metal Detectors is the easy-to-use Touch Screen (1/4 VGA) Interface. The 4-inch (101 mm) high x 5-inch (127 mm) wide angled control, with a backlit screen, allows the user to quickly make changes to the metal detector without having to scroll through different menus. Product set-up, monitoring and operating the metal detector is simple with the Touch Screen Interface. Numeric data and value entries are made through the on-screen keypad.

ELECTRONICS

The E-Z Tec DSP Metal Detector's electronics have been consolidated and placed in a NEMA 4X enclosure that can be an integral part of the metal detector or mounted up to 100-feet from the coils. Only four circuit boards are used for improved function and reliability.

The compact cabinet design allows for shorter conveyor lengths and for installation in those areas where space is a premium.

- **Stainless Steel Cabinet** – The oscillator and receiving coils are wound on a rigid frame and encapsulated in a rectangular stainless steel shell.
- **Angled Controls** – are either an integral part of the metal detector sensing head or installed at a remote location. The enclosures are NEMA 4X rated. A NEMA 7 or 9 enclosure is available.
- **Remote Control** – The control can be located up to 100 ft (30 m) away from the sensing head.
- **Unique Electronic Design** eliminates the need for an auto-balancing circuit.

- **1/4 VGA Touch Screen Interface Display** to monitor and input all operating functions on the metal detector.
- **Electronics** – The E-Z Tec digital control is a high-quality design with easily removable printed circuit boards.

FEATURES

- Highly sensitive
- Touch-Screen Interface
- Easy to use
- Stainless steel construction
- Consolidated electronics
- NEMA 4X rated
- Auto-Setup
- Self-checking
- Calibration verification
- Quick recovery after detection of large tramp metal
- Reject Confirmation



Aperture Models

SlimTec



The SlimTec Aperture Model provides the same highly sensitive detecting capabilities as the E-Z Tec Aperture Model, in a design better suited to certain products and factory situations.

It is particularly effective for detecting metallic contaminants in wide, thin products, such as plastics, rubber, wood, woven materials and particle board. The narrow profile and reduced metal-free area of the unit permit it to be installed in areas with limited space and with little isolation of any surrounding equipment.

The oscillator and receiving coils are wound on a rigid frame and encapsulated within a painted aluminum shell. Surge-protection electronics permit the detector to withstand high levels of static discharge.

Eriez can provide either analog electronics with manual adjustment for sensitivity, gain, phase and reject output timing or a micro processor version (MPC) that provides a 99 product memory with individual settings for each product. In addition, the micro processor version provides a

visual reject report on the LCD screen, or a permanent record can be retrieved from a printer via the RS232 and RS485 communications ports or a separate direct printer output port.

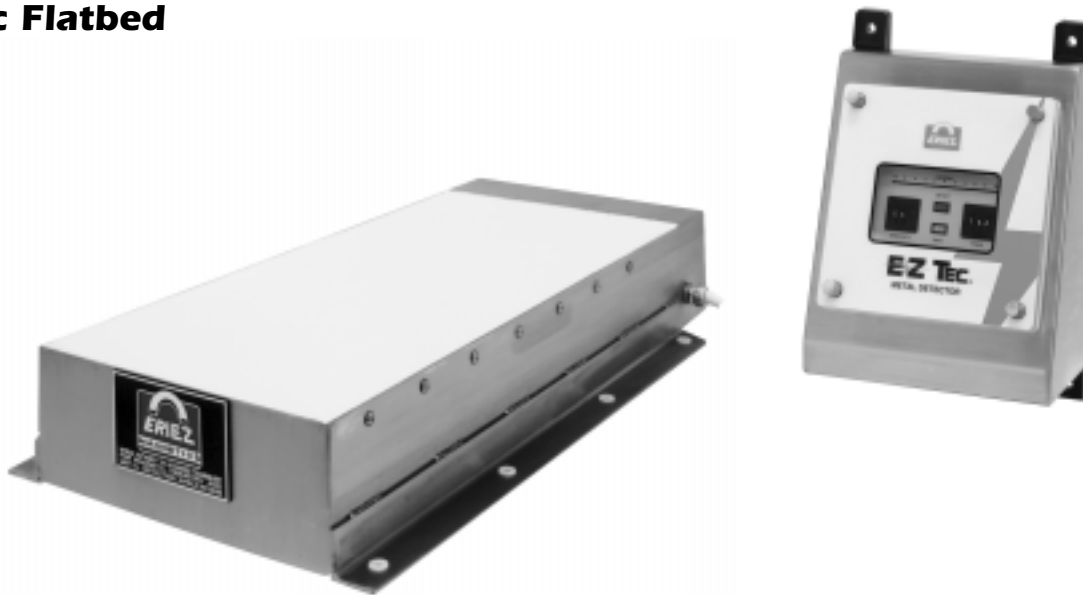
FEATURES

- Angled 8-inch x 8-inch (200 mm x 200 mm) control panel (NEMA 4X) for easy viewing and accessibility to sensitivity and phase adjustments.
- Narrower cabinet design allows for space-limited applications and shorter conveyor design.
- High sensitivity capabilities via 1000-point phase adjustment.
- Instantaneous electronic recovery from phase adjustments.
- Quick recovery after the detection of large tramp metal.
- Field-switchable narrow zone/wide zone detection capabilities.
- 100-foot (30m) remote electronic capability reduces need for expensive NEMA-7 and NEMA-9 enclosures.
- User-selectable manual or automatic reject reset capability.
- Quick, field switchable power adjustments.
- Reject confirmation capabilities.
- Internal shift register for variable speed applications and multiple detections.
- Easily serviceable boards with electrical diagnostics.
- Self-check and calibration verification (MPC only).
- Static resistant aperture liner and electronics.
- Accommodates conveyor speeds from 2 fpm to 4400 fpm (0.01 mps to 22 mps).



Single Surface Models

E-Z Tec Flatbed



Eriez' standard Flat Bed Single Surface E-Z Tec III Metal Detector is ideal for a number of applications, products and working environments.

It is particularly effective for detecting metallic contaminants in large or oversized applications. The flat-surfaced detection area is positioned beneath the (user-supplied) belt or conveyor. This design can accommodate materials such as sheet plastics, wood, rubber, woven materials, particle board, and liquids in metal-capped bottles.

The unit's oscillator and receiving coils are wound on a rigid frame and encapsulated within a rectangular stainless steel shell.

Eriez can provide either analog electronics with manual adjustment for sensitivity, gain, phase and reject output timing or a micro processor version (MPC) that provides a 99 product memory with individual settings for each product. In addition, the micro processor version provides a visual reject report on the LCD screen, or a permanent record can be retrieved from a printer via RS232 and RS485 communications ports or a separate direct printer output port.

FEATURES

- High sensitivity capabilities via 1000-point phase adjustment.
- Field-switchable narrow zone/wide zone detection capabilities.
- 100-foot (30m) remote electronic capability reduces need for expensive NEMA-7 and NEMA-9 enclosures.
- User-selectable manual or automatic reject reset capability.
- Quick, field switchable power adjustments.
- Reject confirmation capabilities.
- Internal shift register for variable speed applications and multiple detections.
- Easily replaceable boards.
- Easily installed without cutting the belt.

Single Surface Models

SlimTec



The SlimTec Single Surface Model provides highly sensitive detecting capabilities in a design effective for detecting metallic contaminants in wide, thin products. The flat-surfaced detection area is positioned beneath the product or conveyor belt. This design can accommodate materials such as sheet plastics, wood, rubber, woven materials and particle board. The SlimTec is also ideal for inspecting liquids in metal-capped bottles.

The unit's oscillator and receiving coils are wound on a rigid frame and encapsulated within a painted, rectangular aluminum shell.

Eriez can provide either analog electronics with manual adjustment for sensitivity, gain, phase and reject output timing or a micro processor version (MPC) that provides a 99 product memory with individual

settings for each product. In addition, the microprocessor version provides a visual reject report on the LCD screen, or a permanent record can be retrieved from a printer via RS232 and RS485 communications ports and a separate direct printer output port.

FEATURES

- Angled 8-inch x 8-inch (200 mm x 200 mm) control panel (NEMA 4X) for easy viewing and accessibility to sensitivity and phase adjustments.
- High sensitivity capabilities via 1000-point phase adjustment.
- Instantaneous electronic recovery from phase adjustments.
- Quick recovery after the detection of large tramp metal.
- Field-switchable narrow zone/wide zone detection capabilities.
- 100-foot (30m) remote electronic capability reduces need for expensive NEMA-7 and NEMA-9 enclosures.
- User-selectable manual or automatic reject reset capability.
- Quick, field switchable power adjustments.
- Reject confirmation capabilities.
- Internal shift register for variable speed applications and multiple detections.
- Easily replaceable boards.
- Self-check and calibration verification (MPC only).
- Easily installed without cutting the belt.
- Accommodates conveyor speeds from 2 fpm to 4400 fpm (0.01 mps to 22 mps).
- Solid state relays for arc-free switching.

Vertical Drop Models

Vertical Form, Fill and Seal (VFS)



Eriez' new E-Z Tec® Vertical Form, Fill and Seal (VFS) Metal Detectors are excellent for detection and removal of ferrous, nonferrous and stainless metal contaminants.

The E-Z Tec® VFS Metal Detector will help improve product purity for products processed in Form Fill Seal Equipment and other applications where vertical heights are extremely restricted.

Its control circuitry allows for instantaneous electronic recovery from phase adjustments, as well as field switchable narrow zone/wide zone detection capabilities.

Eriez VFS units can be supplied with either analog or microprocessor (MPC) based electronics. Standard sizes for 4, 6 and 8-inch (102, 152 and 203 mm) pipes are available.

FEATURES

- Narrow cabinet design for space-limited locations.
- 1000-point phase adjustment for precise setup.
- Instantaneous electronic recovery from phase adjustments.

- Quick recovery after the detection of large tramp metal.
- Field-switchable narrow zone/wide zone detection capabilities.
- 100-foot (30 m) remote electronic capability reduces need for expensive NEMA-7 and NEMA-9 enclosures.
- User-selectable manual or automatic reject reset capability.
- Quick, field switchable power adjustments.
- Self-check and calibration verification (MPC only).



Vertical Drop Models

Vertical Reject Systems



Eriez' E-Z Tec® Low Profile Vertical Drop Metal Detectors are excellent for detection and removal of ferrous, nonferrous and stainless metal contaminants in gravity fed powder or granulated products.

These low profile units accommodate many applications with restrictive height requirements. The combination of negligible metal-free area and quick acting chute reject valve design provides a minimal height system.

Upon detection, the E-Z Tec Low Profile Metal Detector will activate a specially designed chute-type reject valve to remove the contaminant from the product flow.

Each system is manufactured from 304 stainless steel and includes an E-Z Tec Low Profile Metal Detector with a remote control that can be mounted up to 100 feet (30 m) from the detection head. Also included is an antistatic non-metallic pipe with a grounding strap which prevents static build up, reducing false detections.

Eriez can provide either analog electronics with manual adjustment for sensitivity, gain, phase and reject output timing or a microprocessor version (MPC) that provides a 99 product memory with individual settings for each product. In addition, the micro processor version provides a visual reject report on the LCD screen, or a permanent record can be retrieved from a printer via the RS232 and RS485 communications ports or a separate direct printer output port.

Liquid Flow Model



Eriez' E-Z Tec Narrow Profile Liquid Line Metal Detectors are used to detect the presence of ferrous, nonferrous and stainless metal contaminants in viscous products such as liquids, slurries, syrups, pastes and many other pumped products.

When metal is detected in the product flow, a reject signal is channeled to one of the available output relays. The output relay can be used to activate a ball valve, control a visual or audio alarm, or send a signal to a PLC.

In addition to enhancing product purity, Eriez Liquid Line Systems can protect vital downstream equipment from metal in the product stream. Complete

systems can be provided in pipe sizes ranging from one-inch (25 mm) to six-inch (150 mm) diameter.

Eriez can provide either analog electronics with manual adjustment for sensitivity, gain, phase and reject output timing or a micro processor version (MPC) that provides a 99 product memory with individual settings for each product. In addition, the micro processor version provides a visual reject report on the LCD screen, or a permanent record can be retrieved from a printer via the RS232 and RS485 communications ports and a separate direct printer output port.

FEATURES

- Stainless steel sensing head, USDA/FDA/Dairy and CSA approved
- Remote electronics in a NEMA-4X stainless steel enclosure with up to 100 feet (30 meters) of cable.
- "Kynar" nonmetallic pipe with transitions to suit customer's requirements.
- Stainless steel reject valve, full port, ball type, air activated (90 psi/6.2 bar).
- Stainless steel square tubular continuous welded support frame.
- Air combo consisting of filter, gauge and solenoid.

Pharmaceutical Model



Eriez' E-Z Tec® Pharmaceutical Gravity-Fed Metal Detector has been designed for the detection and removal of minute pieces of ferrous, nonferrous and stainless steel contaminants.

This highly sensitive, compact designed metal detector system meets stringent FDA standards and accommodates space-restricted areas within tablet and encapsulation rooms.

Eriez' pharmaceutical unit has been engineered with an adjustable sensing head and has one of the largest and easiest to clean product chutes in the industry to optimize efficiency. The adjustable support stand comes standard with castors and is manufactured from 304 stainless steel.

FEATURES

- 5-minute quick-start operation
- High speed reject device
- Simplified equipment validation

SPECIFICATIONS

Sensing Head

- NEMA 4X/IP 66
- Glass bead or polished 304 stainless steel with an ABS liner

Weight (stand and sensing head)

- 250 lbs (114 kgs)

Aperture

- 0.8 in. (20 mm) high x 3 in. (76 mm) wide or 1.5 in. (38 mm) high x 4 in. (100 mm) wide

Power Supply

- 120V/240V, 48-62 Hz

Electronics

- Crystal oscillator for drift-free frequency
- User-friendly phase and sensitivity adjustments
- Easily accessible and replaceable circuit boards

- Instantaneous recovery
- Unique electronics that eliminate auto balancing circuitry
- Self-check circuitry and calibration verification compatibility
- Operating temperature range from 0°C (32°F) to 45°C (113°F)
- Field-switchable narrow and wide zones for static environments

Reject Device Options

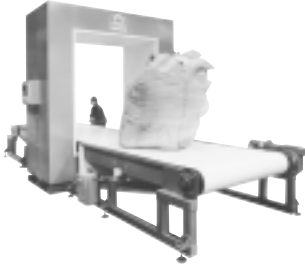
- Reject Gate with a high-speed solenoid

ADDITIONAL OPTIONS

- Micro Processor Control (MPC)
- Interface ports (MPC only): RS232 and 485
- PC software for remote monitoring and control



Metal Detector Conveyor Systems

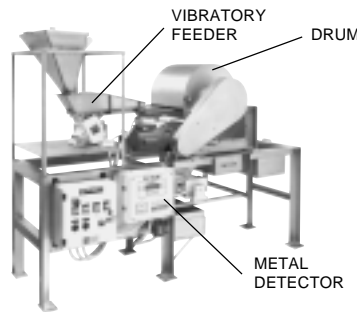


Eriez offers technical expertise when combining metal detection and customized conveying systems. Engineering experience has enabled Eriez to manufacture the largest Metal Detection Conveyor System ever built (see photo above). The 80-inch high by 66-inch wide (2032 x 1676 mm) aperture unit provides excellent sensitivity down to 0.480 inch (12 mm) steel. The stainless steel framed 30' (9 m) long conveyor can easily convey up to 2600 pounds (1200 kg) of material.



Eriez Metal Detector Conveyors may be equipped with microsized pulleys, 1/2-inch (12 mm) in diameter, to transfer small products to and from adjoining conveyors. Variable speed motors can also be provided to compensate for differing production rates and product sizes. Locking casters are also available for all conveying systems to provide easy portability.

Only Eriez can provide highly specialized conveying systems combining high speed vibratory feeders and magnetic drum separators for the separation of ferrous contamination, and metal detectors to monitor the final product for the presence of nonferrous metals.



Eriez Metal Detector Systems can be provided with supports for ceiling or wall suspension. Our conveyor design provides swivel turnbuckle connections to accommodate horizontal or slightly angled installations. Controls for the systems can be remote to enable floor level adjustability of the conveyor and metal detector functions.

CONTROL, MOTOR AND POWER OPTIONS

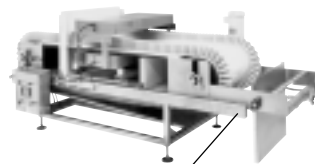
- Central control NEMA 7 and 9
- Control with start/stop switches for both the metal detector and conveyor.
- Variable speed motor
- 120/240V
- Various HP and special motors

ALARM AND REJECT DEVICE OPTIONS

- Air blow off
- Pusher arm
- Diverter arm
- Flip gates (standard and adjustable)
- Belt reversing
- Retractable head pulley
- Horn and/or beacon
- Stoppage of belt
- Reject Confirmation



Larger aperture E-Z Tec Metal Detectors can be provided on shortened conveyors to accommodate areas with limited space. For some applications, specialized electronics can be supplied, reducing the metal-free area of the unit and permitting the employment of short conveyors.



Ruggedized conveyors can be supplied for tramp metal detection for products located in extremely wet, acidic areas and other applications in the wood, ore and glass industries. Heavy duty belts can be incorporated to convey difficult products.

BELT AND FRAME OPTIONS

- Sided and/or cleated belts
- Plastic or 2-ply FDA USDA cloth belts
- Widths up to 84 inches (2134 mm)
- Lengths 3 to 26 feet (1 to 8 m)
- Stainless steel (304 and 316) or painted carbon steel
- Locking casters or ceiling mount self-adjusting blocks



E-Z Tec DSP Control



Eriez' state-of-the-art Digital Control System provides a user-friendly interface through a menu-driven digital hierarchy. The digital screen offers alphanumeric displays of all preset functions or reject occurrences as they take place and also records the date and time of product changes.

Digital processing and controls on all E-Z Tec DSP Metal Detectors allow fast product changes. The active (present) product can be changed via the Touch-Screen Interface or remotely through RS-485 computer interface connections.

50 different product selections can be stored with each product selection defining such parameters as sensitivity, gain, phase, product description and relay states. Unauthorized changes are eliminated by a four level security code. Data memory retention prevents memory loss. The control provides user-specified self-checking and periodic calibration procedures.

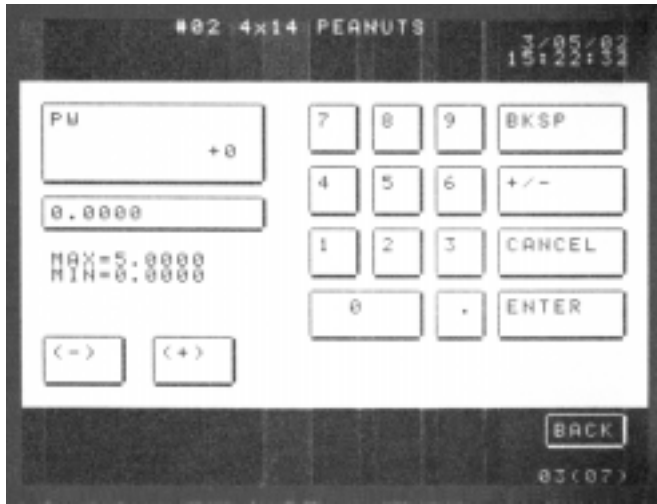
The report menu displays report number, product, date, time and magnitude of the reject signal. The internal memory holds full details of the last 100 rejects for visual review, counting up to 10,000 rejects. Reports may be uploaded to a computer via the RS-485 interface port. An unlimited record of reject reports can be stored on the computer.

- **Bar Graph** will provide a visual indication of the strength of the detection signal in relation to the metal size, and is also used to monitor the phasing-out procedure for products.
- **Threshold** adjustment allows for setting of the detection threshold for minimum and maximum metal sensitivities.

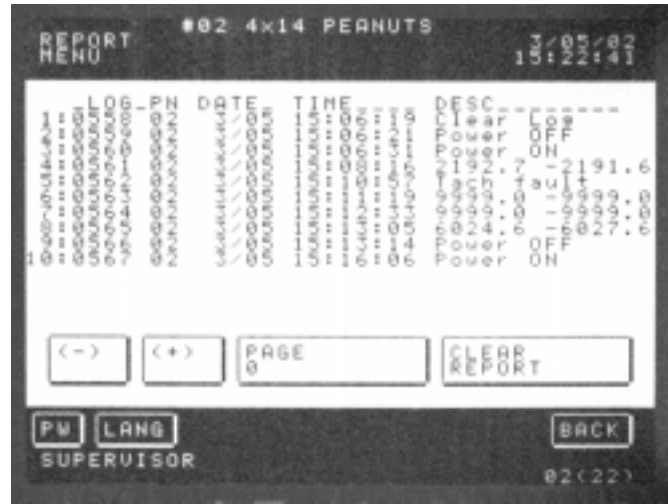
- **Phase** adjustment provides the user with the capability to adjust the metal detector to minimize product effect and the ability to peak a response to a particular metal.
- **Shift Register** stores multiple detections for precise rejection of metal. A tachometer input is provided for variable product speeds.
- **Travel Time** is an adjustment controlling delay of the detection signal output. This will allow time for the detected contaminant to be positioned at the downstream reject device (such as, air blow off, pusher arm, flip gate, etc.). It can be set from 0-60 seconds with a 0.05 second resolution.
- **Reject Time** is a variable adjustment for extending the reject output signal. This feature allows the user to adjust the reject output time from 0.05 to 60 seconds.
- **Output Relays** include two individually programmable relays, one with two form "C" contacts and the other with one form "C" contact.
- **Frequency** of operation is optimized for the aperture size and the product to be inspected.
- **Product Speed** ranges from 3 fpm to 8000 fpm (0.02mps to 40 mps) depending on aperture size.



E-Z Tec DSP Control (continued)



Easy to Read Touch Screen



Reject Report Menu

FEATURES

- Angled control panel for easy viewing and accessibility to metal detector settings.
- Quick recovery after detection of large tramp metal.
- 100-foot (30 m) remote control capability.
- Automatic line voltage selection; 120/240 volts, 48-62 Hz
- Easily serviceable boards with electronic diagnostics.
- Various inputs and outputs for controlling reject devices.
- Auto-Setup
- User specified self checking and calibration verification.
- Remote monitoring via an RS-485 output.



E-Z Tec Analog Control (E-Z Tec V Only)



The E-Z Tec Analog Control utilizes a unique combination of digital circuitry and solid state amplifiers to process the received signal. A crystal oscillator provides a stable reference and drift free electronics and provides the user with manual selection of either WIDE ZONE detection or NARROW ZONE detection.

- **Wide Zone** detection should only be used where the incidence of static discharge from product is contained or antistatic pipes are used. Static electricity is a unipolar discharge. The polarity will either be positive or negative causing a disturbance on at least one of the two receiver coils. If the disturbance is large enough a false detection could occur.
- **Narrow Zone** detection will almost eliminate false detections caused by static electricity. Narrow Zone requires each receiver coil to be disturbed within a given time period, and if only one coil is affected a detection will not take place.

- **The LED display** will provide a visual indication of the strength of the detection signal in relation to the metal size, and is also used to monitor the phasing-out procedure used for products that cause false detection due to the presence of moisture, salts or additives.
- **Sensitivity** control allows adjustment of the detection threshold for minimum and maximum metal sensitivities.
- **Phase** provides the user with control for adjusting the metal detector for product effect.
- **Travel Time** is an adjustment for delay of the detection signal output. This will allow time for the detected contaminant to be positioned at the downstream reject device (such as, air blow off, pusher bar, flip gate, etc.).
- **Reject Time** is a variable adjustment for extending the reject output signal. This feature allows the user to adjust the reject output time from 0 to 10 seconds.

- **Mechanical Relays** include two individual fused (5 amp) relays with independent control for various output functions (reject devices, alarms, PLC's, etc.).

SPECIFICATIONS

Power Supply

120V/240V, 48-62 Hz

Fuses

One for the electronic circuitry and one for each solid state and mechanical relay.

Status Lamps

Yellow: fault

Red: detect

LED Bar Graph Display

Shows power-on status and metal signal level.

Reject Timing

Variable delay and duration shift register stores multiple detections for precise rejection of tramp metal. Clock pulse input provided for variable product speeds.

Frequency

Optimized for aperture size and product to be inspected.

Product Speed

3 fpm to 8000 fpm
(0.02mps to 40 mps)

Output Control

Two mechanical relays. AC or DC, solid state relays available as an option.

Sensitivity

Detector provides 100 levels at which metal will be detected.

Phase Control

Can be used to either peak the response to a particular metal or to suppress the response to the product under inspection (1,000 settings available).



Microprocessor Control (MPC) (E-Z Tec V Only)



Eriez' E-Z Tec Micro Processor Control (MPC) provides a user friendly transition from analog adjustments to digital settings through a menu-driven digital hierarchy. The digital screen offers alphanumeric displays of all preset functions or reject occurrences as they take place and also records the date and time of any changes to the preset settings.

Digital processing and controls on all E-Z Tec MPC Metal Detectors allow fast product changes. The active (present) product can be changed via the front panel 'touch' button or remotely through the RS-232 or RS-485 computer interface connection.

On-site adjustments and settings are initiated using a 9-button touch panel control. A backlit super twist 8-line x 40 character display allows up to 99 different product selections, and the computer interface allows unlimited product selections, with each product selection defining such parameters as

sensitivity, gain, phase, product description and relay states. Unauthorized changes are eliminated by a three level 4-digit security code. Battery backup provides memory loss protection caused by power outages.

The reject menu displays report number, product, date, time and magnitude of the reject signal in millivolts. The internal memory holds up to 100 reject events for visual review, or reports can be sent to a local printer or to a computer via the RS232 and RS485 communications ports or a separate direct printer output port for an unlimited record of reject reports.

FEATURES

- Angled nine button touch panel control (NEMA 4X) for easy viewing and accessibility to sensitivity, phase and all other control features.
- Narrow cabinet design for space-limited locations and shorter conveyor design.

- Self check and calibration verification.
- 1000-point phase adjustment for precise setup.
- Instantaneous electronic recovery from phase adjustments.
- Quick recovery after detection of large metal.
- Automatic phase adjustments for wet/conductive products.
- Field-switchable narrow zone/wide zone detection capabilities.
- Three levels of password accessibility.
- 100-foot (30 m) remote electronic capability reduces need for expensive NEMA-7 and NEMA-9 enclosures.
- User-selectable manual or automatic reject reset capability.
- Quick, field switchable power adjustments.
- Reject confirmation and report generating capabilities.
- Software for computer interface is provided upon request. Additional upgrades to the MPC are not required.
- Internal shift register for variable speed applications and multiple detections.
- Easily replaceable boards.
- Computer interface allows automatic scanning of multiple detectors with alarm for abnormal reject rates.
- Unlimited storage of product settings and reject reports using computer connection.
- Available for all E-Z Tec Metal Detectors.

Microprocessor Control (MPC) (continued) (E-Z Tec V Only)

SPECIFICATIONS

Power Supply

120V/240V, 48-62 Hz

Fuses

One for the electronic circuitry and one for each solid state and mechanical relay.

Status Lamps

Green: ready

Red: detect

LED Bar Graph Display

Shows power-on status and metal signal level.

Reject Timing

Variable delay and duration shift register stores multiple detections for precise rejection of tramp metal. Clock pulse input provided for variable product speeds.

Frequency

Optimized for aperture size and product to be inspected.

Product Speed

3 fpm to 8000 fpm (0.02 mps to 40 mps)

Output Control

Two mechanical relays, AC or DC. Solid state relays available as an option.

Sensitivity

Detector provides 100 levels at which metal will be detected.

Phase Control

Can be used to either peak the response to a particular metal or to suppress the response to the product under inspection; 1,000 settings available.

Interface Ports

RS-232 for up to 50 feet (15.2 meters) and RS-485 for up to 4265 feet (1300 meters) and multiple unit networks.

MPCTerm



Eriez' has made its metal detection computer interface, MPCTerm, more powerful. It's packed with exciting new features.

MPCTerm makes remote access to metal detectors possible through a simple modem and phone line connection. One or more "master" computers can connect with an unlimited number of "slave" computers. Each slave can

directly control up to 99 metal detectors. So with MPCTerm, there is no limit to the number of metal detectors that can be monitored from a centralized location. And since the system uses standard phone lines, MPCTerm gives you worldwide connectivity for remote monitoring and control.

Real-time diagnostic functions have been added to the E-Z Tec IV and V MPC Metal Detector as well as to MPCTerm. You can view on your computer an oscilloscopic trace of a signal from any networked E-Z Tec IV or V MPC detector. This, along with the enhanced remote operation capability, means that operational problems of a metal detector anywhere in the world can be debugged by your central support group or by the Eriez metal detector experts in Erie, Pennsylvania, USA.

FEATURES

- MPCTerm is free with purchase of an E-Z Tec MPC Metal Detector.
- Worldwide connectivity.
- Master computer has access to all functions of all remote metal detectors in system.
- Unlimited number of master/slave connections.

- Remote connection can be initiated by master or slave.
- Feed worldwide reject data into central database.
- System PCs can function in master, slave or stand-alone mode — changeover is instantaneous.
- View oscilloscopic trace of metal detector signal directly on computer screen.
- Diagnostic trace can be viewed real-time or by remote access.
- Store unlimited oscilloscopic traces and recall within MPCTerm or in compatible spreadsheet programs (e.g., Excel).
- Diagnostic mode, monitor as little as one second or as much as one hour of operation.
- Zoom for signal resolution down to 0.1 mv or less and up to 5 volts.
- MPCTerm is compatible with Windows or DOS PCs.
- User-defined security precautions prevent inadvertent setting changes of metal detectors.