E-Z TEC® METAL DETECTORS

DIGITAL SIGNAL PROCESSING (DSP)

Detects fine particle ferrous, non–ferrous and stainless steel metals.

ONLY FROM ERIEZ

Eriez 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 high x 5-inch 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.

For conductive products such as fresh meats, cheeses, fruits, etc., setting up the metal detector to achieve the best performance with these types of products is accomplished through the Auto-Setup Menu. Here minimal passes are required to determine the product settings.

With E-Z Tec DSP Metal Detectors, the user may select two secondary languages to make it even easier for the operator to use. The primary language is English.

NEMA 4X ENCLOSURE

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.

The E-Z Tec DSP Metal Detector is a balanced three–coil arrangement wound around the aperture to sense metal moving through it.

FEATURES

Stainless Steel Cabinet – The oscillator and receiving coils are wound on a rigid frame and encapsulated in a rectangular stainless steel shell.
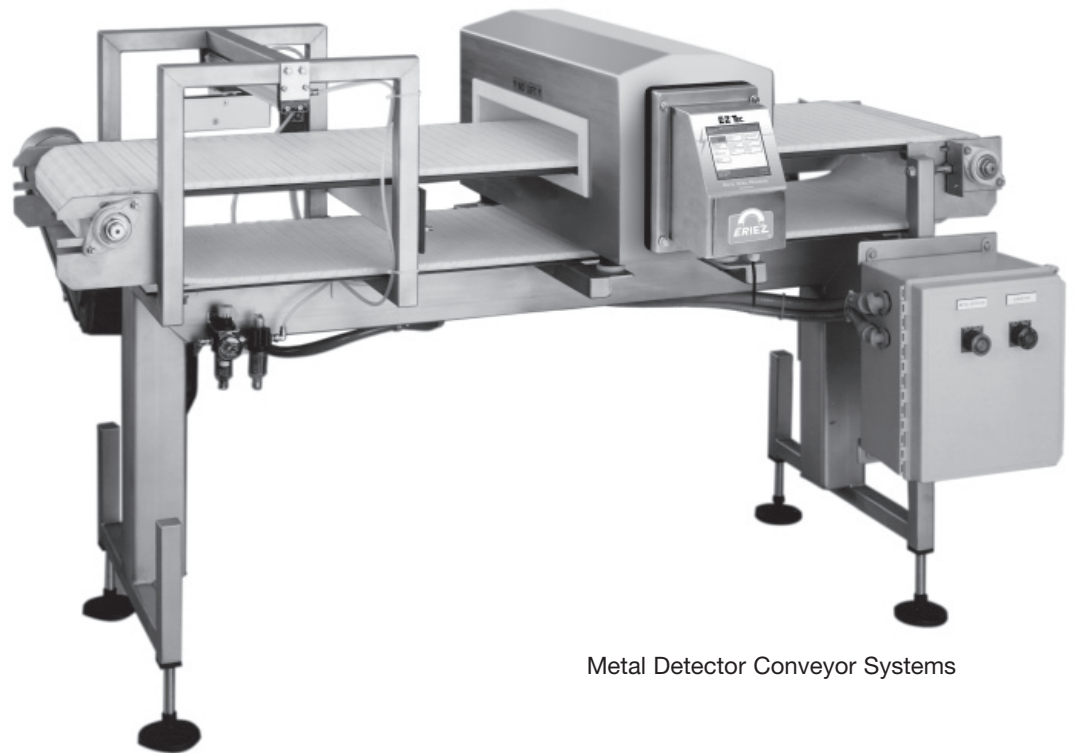
Angled Controls – are either an integral part of the metal detector sensing head or installed at a remote location. The enclosures are NEMA 4X rated.
A NEMA 7 or 9 enclosure is available.

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.

Metal Detector Conveyor Systems

ELECTRONICS

E-Z Tec DSP Metal Detectors are supplied with a state-of-the-art Digital Control System.

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 .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 .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 to 8000 FPM (.02 to 40 mps) depending on aperture size.

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.

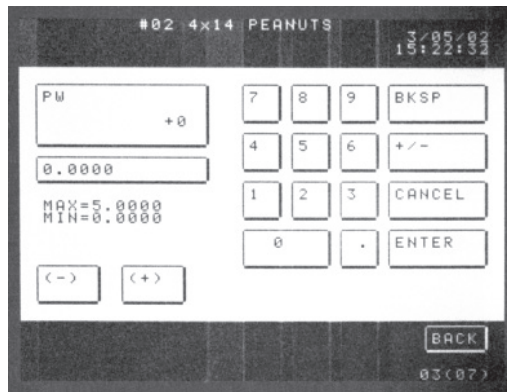Digital Control with Touch Screen Interface

DIGITAL CONTROL SYSTEM

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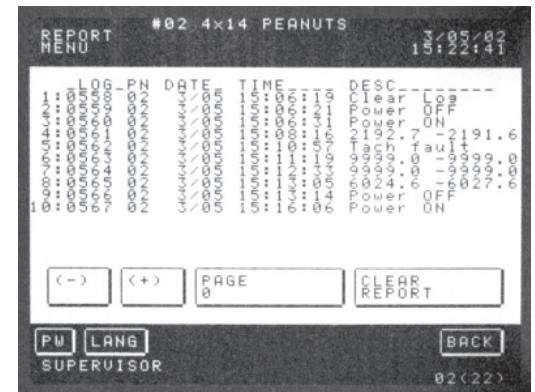
50 different product selections can be stored with each product selection defining such parameters as sensitivity, gain, phase, product description and relay states. Unauthorized changes are eliminated by a four level security code. Data memory retention prevents memory loss. The control provides user-specified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

Easy to Read Touch Screen

Reject Report Menu

Note: Some safety warning labels or guarding may have been removed before photographing this equipment