

The Ramsey Oretronic III Tramp Metal Detector minimizes lost production time and helps you save money by providing an economical and reliable means to protect expensive crushers, conveyors and other process equipment from damage by tramp metal. It prevents your profit from turning into scrap.

## Ramsey Oretronic III Tramp Metal Detector

Reliable Detection of Tramp Metal in Bulk Materials



Tramp metal can stop your operation, and the damage it causes to equipment can be expensive. That's why conscientious operators and owners consider tramp metal detectors to be an essential part of their operation. The Ramsey Oretronic III Tramp Metal Detector from Thermo Electron Corporation provides an economical and reliable means to protect expensive crushers, conveyors and other process equipment from damage by tramp metal.

The Ramsey Oretronic III is designed especially for belt conveyors moving coal, iron pellets, minerals, aggregates and other bulk materials. It can detect all types of metallic scrap, including bucket teeth, manganese steel mantles, bore crowns, bar scrap, chains and tools. It can even detect tramp metal when buried in wet conductive materials. And, because it is insensitive to materials with high magnetic permeability and electrical conductivity, this tramp metal detector can be used in applications where conventional metal detectors produce an unacceptable false alarm rate.

It has a microprocessor-based control unit that automates system set-up and calibration. The operator interface provides easy-to-read indicators and has a touch panel keypad designed to simplify set-up and system maintenance. All operations of the detector are accessible from the front panel.

The Ramsey Oretronic III Tramp Metal Detector also features variable frequency to eliminate interference from other electrical equipment, password protection for security, and RS-485 serial communications.

### Installation

The system's coils are made of impact-resistant polyvinyl chloride and designed to withstand stresses of up to ten times the force of gravity. The generator coil and dual-wound receiver coils mount on a support made of non-conductive materials. The field generator coil is swing-mounted to protect the coil and support from being struck from oversized materials. A dual receiver coil is employed to counteract interference from external sources, such as electric motors, lightning and radio transmitters.

### Standard Equipment

- Microprocessor-Based Control Unit
- Receiver Coil
- Generator Coil
- Support Frame

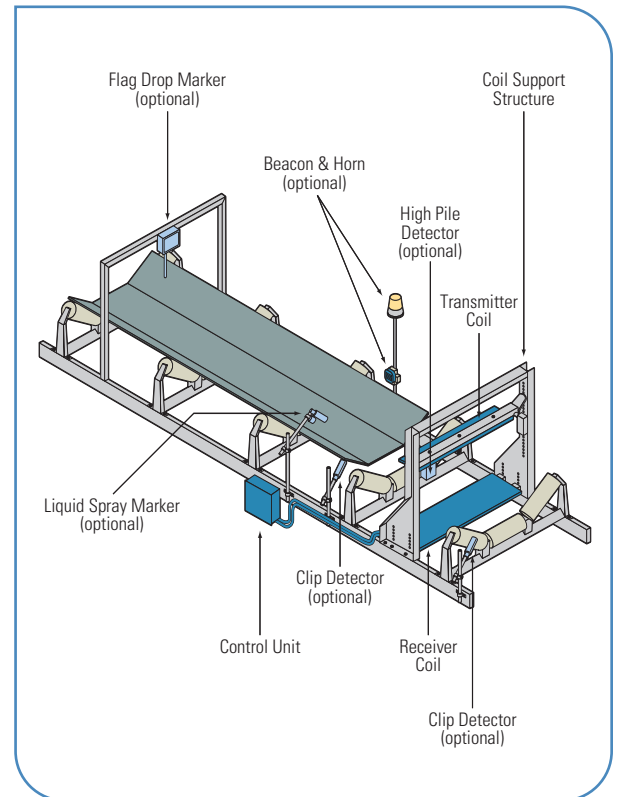
### Optional Equipment

- Belt Clip Detector
- High Pile Detector
- Tramp Metal Markers
- Remote Display
- Speed Sensor

**Features and Benefits**

- **Microprocessor-Based:** No adjustments are necessary inside the enclosure. All functions can be accessed from the front panel.
- **Variable Frequency:** You may set the operating frequency. Interference and false trips from motors, radios and other external devices are eliminated.
- **Quick Balance:** This allows you to electronically balance the coil with the push of a key.
- **New Coil Frame:** Coils are made of impact-resistant PVC and mounted on a fiberglass support structure. The coils and entire support structure are impervious to moisture.
- **Offset Swing Arm:** This protects the coils and reduces the likelihood that they will break due to high burden.
- **Simple Installation:** The detector can be installed without cutting the belt and without utilizing special tools or instruments.
- **Serial Communications:** RS-485 is a standard feature incorporated to permit communication between the metal detector and a remote front panel or PLC.
- **Password Protection:** Create a PIN to prevent unwanted access to the detector's controls.
- **Single Coil (optional):** The combination of the generator and receiver coils into a single, under-the-belt coil assembly eliminates damage from high burden depths and interference from overhead metal objects.
- **Distance Indication (optional):** When incorporating a speed sensor, the tramp metal detector's front panel display will show the distance from the coil to the tramp metal in tenths of feet.

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Specification	
<b>Belt Speed</b>	1.5 m/min to 366 m/min (5 ft/min to 1,200 ft/min)
<b>Power</b>	
Line Voltage	Switch selectable; 117 VAC - 15% + 10%; 234 VAC - 15% + 10%
Line Frequency	48-62 Hz
Maximum Power Required	30 VA
<b>Display</b>	
Type	Light Emitting Diode (LED)
Digits	7-segment upper display character; Alpha-numeric lower display
<b>Alarm Outputs</b>	
Type	Delay contacts; NO and NC contacts provided
Output Rating	Relay isolated; 700 Vrms max
<b>Environmental</b>	
Humidity	Up to 95% R.H. non-condensing
Temperature Ranges	Storage: -55°C to +100°C (-67°F to +212°F) ambient; Operating: -40°C to +50°C (-40°F to +122°F)
<b>Control Unit Enclosure</b>	
Construction	Reinforced fiberglass conforms to NEMA-4X; Optional NEMA-4/9 for hazardous areas
Size	38.7 cm x 33.7 cm x 19 cm (15.25 in x 13.25 in x 7.5 in)
<b>Serial Communication</b>	RS-485 serial communication configured in Modbus protocol
<b>Coils and Support Assembly</b>	
Construction	FRP reinforced support assembly; Coils sealed in PVC
<b>Manufacturing Quality</b>	ISO-9001 Certified

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**Process Instruments**