

Weighing & Inspection

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Thermo Scientific Oretronic IV Tramp Metal Detector





Features and Benefits

- **Simple Installation**
The detector can be installed without cutting the belt and without utilizing special tools or instruments.
- **Microprocessor based**
Advanced electronics with LCD graphic display with status indicator lights for easy reading, continuous backlit for ease of viewing indoor and outdoor.
- **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 coils with the push of a key.
- **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.
- **Coast Count**
When system alarm or trip occurs the control will continue counting pieces of tramp detected until system stops.
- **Offset Swing Arm**
This protects the coils and reduces the likelihood that they will break due to over-height burden.
- **Single Coil (optional)**
The combination of the transmitter 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 display will show the distance from the coil to the tramp metal in tenths of feet.
- **Serial Communications (optional)**
Plug in RS-485 communications board.
- **Heater for Control (optional)**
115 or 230V heater for cold temperature applications, only applicable with steel enclosure.

The Oretronic IV prevents your profits from turning into scrap

The Thermo Scientific Ramsey Oretronic IV 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.

Tramp metal can stop your operation and the damage it causes to equipment can be expensive. That is why proactive operators and owners consider tramp metal detectors to be an essential part of their operation.

The Thermo Scientific Oretronic IV tramp metal detector is designed for belt conveyors moving coal, iron pellets, minerals, cement, aggregates and other bulk materials. It can detect all types of metallic scrap, including bucket teeth, manganese steel mantles, bore crowns, bar scrap, chains, wear plates 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 a soft touch keypad designed to simplify setup and system maintenance, accompanied by a front cover reset button.

Installation

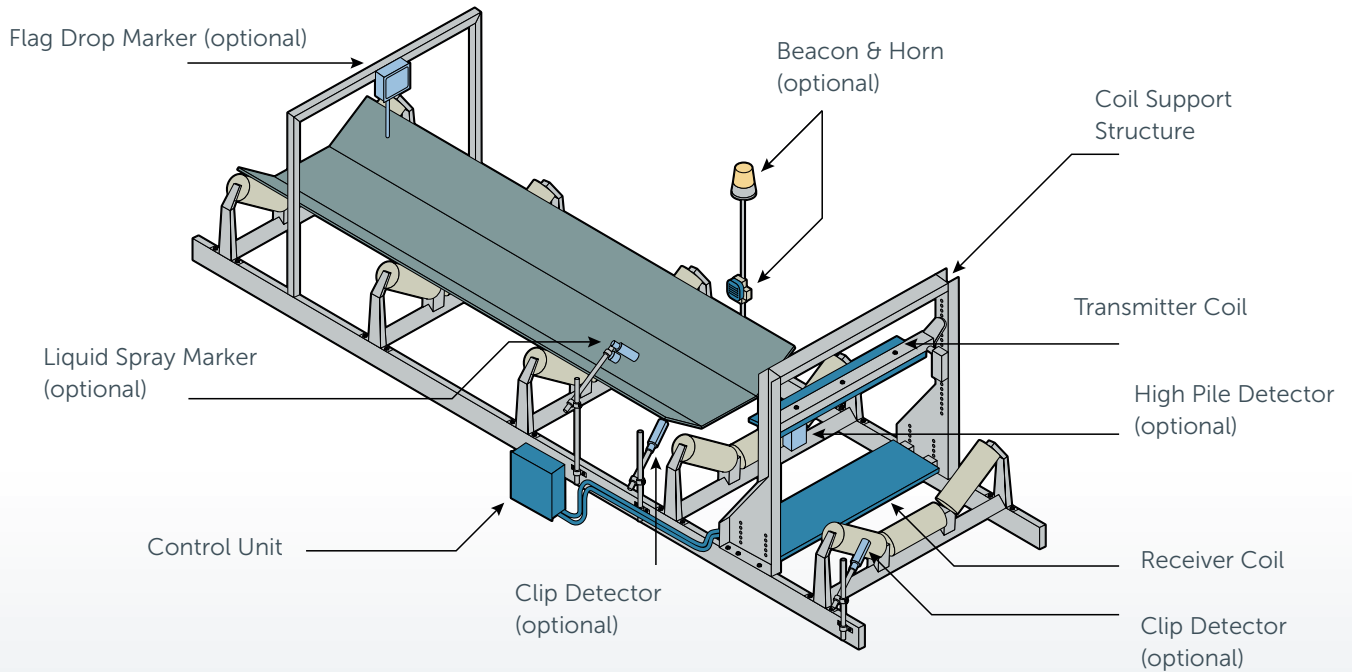
The systems coils are made of impact-resistant polyvinyl chloride and designed to withstand stresses of up to ten times the force of gravity. The transmitter coil and dual-wound receiver coils mount on a support made of non-conductive materials. The transmitter coil is swing-mounted to protect the coil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

Thermo Scientific Oretronic IV Coil System

- Impact resistant PVC and fiberglass design
- Non-conductive to eliminate interference with detection
- Top coil swing-arm to prevent damage from material impact
- Single coil option

System Components

- Microprocessor based control unit
- Receiver Coil
- Transmitter Coil
- Support Frame



Available Options

- Single coil option
- Clip detector
- High pile detector
- Spray marker
- Flag drop marker
- Beacon Light
- Alarm Horn
- RS-485 Communication Card
- 115V or 230V Heater for steel enclosure



Thermo Scientific Oretronic IV 4 Control

- Improved sensitivity
- NEMA-4X fiberglass enclosure
- External reset button
- Optional RS-485 comm card



Thermo Scientific Oretronic IV 6 Control

- Highest available sensitivity on the market
- Painted NEMA-4 steel enclosure
- External reset button
- Optional RS-485 comm card
- Optional heater for low temp applications, 115V or 230V

Oretronic IV Specifications

Control Unit Enclosure	
Oretronic IV-4 Control:	Reinforced fiberglass conforms to NEMA-4X, IP66 dust and water tight 432 mm (17 in) x 360 mm (14.2 in) x 184 mm (7.2 in)
Oretronic IV-6 Control:	Painted mild steel conforms to NEMA-4, IP66 dust and water tight 687 mm (27 in) x 524 mm (20.6 in) x 230 mm (9.1 in)
Display	77 mm x 58 mm viewable LCD graphic display for easy reading, continuous backlit for ease of viewing indoors and outdoors
Input Power Requirements	98-253 (fiberglass enclosure) or 115-230 VAC (steel enclosure) VAC, +10%, -15% 50/60 Hz Single phase, 0.9A (fiberglass enclosure) or 2.8A (steel enclosure)
Environmental	Storage Temperature: -30°C to +70°C (-22°F to +158°F) Operating Temperature: -40°C to +58°C (-40°F to +136°F) Operating Temperature with Optional Heater: -50°C to +58°C (-58°F to +136°F) Humidity: 10% up to 95%, non-condensing
Rating	User supplied 5A max, 250 VAC or 30 VDC NO and NC Contacts: Alarm Indicator, Alarm, Marker Output NC Contacts: Bypass, Power OK
Communication	Optional RS-485 serial communication
Coils and Support Assembly	FRP reinforced support assembly; coils sealed in PVC construction
Belt Speed	1.5 m/min to 550 m/min (5 ft/min to 1800 ft/min)
Software Languages	English, Spanish, German, Italian, French and Chinese Simplified
Manufacturing Quality	ISO-9001 Certified



OUR SOLUTIONS

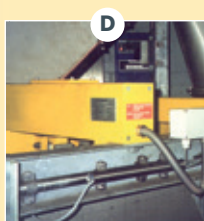
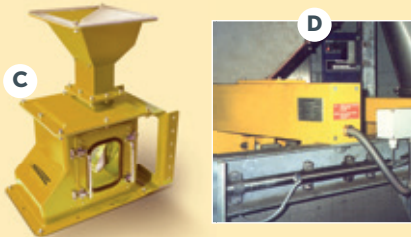
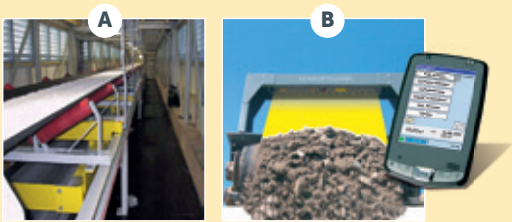
Product inspection

- A** Checkweighers
- B** Metal detection
- C** X-ray inspection
- D** Testers for metal detection/ X-ray inspection



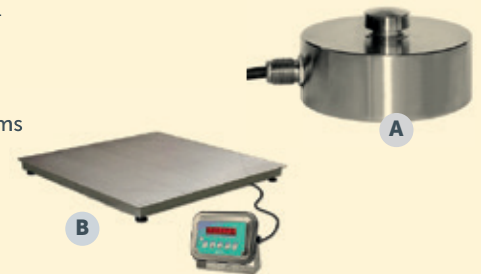
Dynamic weighing

- A** Belt weighing
- B** Volume measurement - belt weighing
- C** Impact flow measurement
- D** Screw weighing



Static weighing

- A** Load cells
- B** Weighing platforms

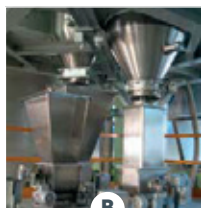


On-board weighing



Dosing

- A** Batch weighing
- B** Loss in Weight



Level switches, flow detection and flow measurement



Moisture measurement



Conveyor safety switches



Weighing & Inspection

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