Thermo Scientific APEX 300 Metal Detector

Flexible metal detection for drop through, pipeline and checkweigher combination systems

The Thermo Scientific™ APEX 300 Metal Detector offers high sensitivity in a compact, easy-to-install package. It brings the technical advantages of the APEX family to a wide range of applications, enabling you to protect your brand, comply with retailer codes of practice and meet legal requirements. Metal detector head designs are available for gravity, pipeline and conveyor applications integral to the Thermo Scientific™ Versa family of checkweighers.

APEX 300 and Thermo Scientific™ VersaWeigh™ combination system

Features

- Multi-coil design with high sensitivity and low false rejects
- Two head widths: narrow to save space and wide for highest sensitivity
- Dual-frequency/dual-gain operation for application flexibility
- Intellitrack XR (IXR) advanced signal processing software
- Available in a wide range of aperture sizes to optimize performance
- Standard epoxy-lined aperture and stainless steel case
- IP69K washdown rated to minimize the cost of ownership
- All construction materials FDA approved
- Standard remote control panel operation
- Easy to install with all electronics integral to the metal detector or control panel
- Unique icon-driven interface with multilingual Help and Auto Learn functions

Options:

- Automatic performance verification with AuditCheck
- Mounting conversion kits to make installation easy
- Field compression flanges to minimize the metal-free zone
- Modbus serial and Ethernet communications
- Alarm and fault output packages and reject indicators/reset switches
- Washdown isolation transformers to shield the metal detector from power line problems
- Pivot locking frame for easy use and cleaning in gravity systems
- Complete drop though (Thermo Scientific™ APEX 300D) and pipeline (Thermo Scientific™ APEX 300P) systems

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Thermo Scientific APEX 300 Specifications

Application and metal detection specifications	
Frequency Range	50 to 460 kHz, one or two configured in the factory or by service in the field
Foot Pattern and Aperture Placement	Refer to layout drawings, varies by aperture size and orientation
Aperture Sizes*	Width: 75 to 550 mm, Height: 50 to 400 mm
Construction	Stainless steel 304 straightlined case and ABS plastic front panel
Human Machine Interface (HMI)	Backlit display and touch panel with icons/help text
Product Speed	0.5 m/min (1.7 ft/min) to 1000 m/min (3,300 ft/min)
Output Types	6 Relay outputs; Relays: 250 volt AC 2 amp max. 50 volt DC 1 amp max
Output Allocation (Software Selectable)	Reject 1, Reject 2, Auditcheck, Fault, Alarm, Warning, QA Lamp
Input Types	6 Inputs - Active low with auxilary supply for input sensors , NPN sinking
Input Allocation (Software Selectable)	Speed Sensor, Keylock, Product Select 1, Product Select 2, Infeed PE, Reject Confirmation 1 and Bin Full, External Supression, External Alarm, External Reset
Communications Options	ModBus serial or Ethernet modules
Help-Text Languages	English, Spanish, French, German, Italian, Chinese, Czech, Russian, Polish, Thai, Korean and Brazilian Portuguese

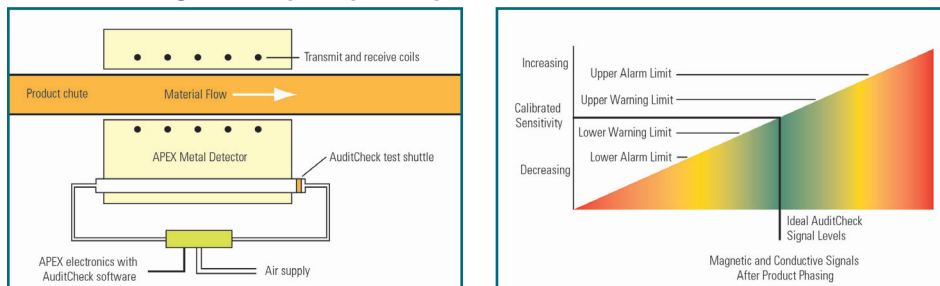*Not all combinations possible; contact Thermo Fisher for details.

Environment, electrical and operational specifications	
Ambient Temperature	-10° to 40°C (14° to 104°F)
Product Temperature in Aperture	-10° to 55°C (14° to 131°F), Kynar® liner option -10° to 120° C (14° to 248° F)
Maximum Washdown Temperature	80° C (176° F), optional Kynar liner cannot be washed down
Relative Humidity	20% to 80% non-condensing
Electrical Supply	85 volts to 260 volts AC single phase plus earth ground; 47 Hz to 65 Hz, 100 watts maximum

Conformance tests and certifications	
Protection Ratings	IP69K
Export and Safety	cCSAus, CE, ATEX zone 22
Manufacturing Quality	ISO9001 certified

AuditCheck Performance Verification System

In bulk applications where material is moving rapidly, it's difficult to periodically test a metal detector by inserting test pieces in the product flow. This is where the AuditCheck option comes in. AuditCheck automatically passes an air-driven test shuttle through the metal detector and compares both the magnetic and conductive signals to calibrated levels. This operation goes far beyond a simple go/no-go test. Because signal levels are measured and compared to acceptable levels, problems can be identified before they happen. Since the AuditCheck is integral to the APEX software, it is failsafe and a complete record of all tests is available for full traceability.

APEX 300D Drop Through with System

APEX 300 P Pipeline System

Auditcheck diagram and principle of operation

Find out more at **thermofisher.com/APEX300**

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