



Thermo Scientific APEX 300
Metal Detector

- Small overall size
- Gravity and pipeline software
- AuditCheck verification option

flexible metal protection

gravity, pipe and checkweigher
combo applications

The Thermo Scientific APEX 300 offers outstanding performance in a compact, easy to install and use form factor. It protects your brand in a wide range of applications.

Thermo Scientific APEX 300

Compact Metal Detector for Many Applications

Features & Benefits

- High sensitivity in a compact, easy-to-install system
- Styles for horizontal and vertical product flows
- Software optimized for gravity-fed and pipeline applications
- Unique, icon-driven interface with multilingual Help and Autocalibrate functions
- Quality Assurance Test (QAT) and AuditCheck™ features to verify detector performance
- Dual frequency /dual gain operation for application flexibility
- Available with Thermo Scientific™ reject systems designed to your specifications

APEX 300D Drop Through with Reject System



APEX 300 P Pipeline System



A Metal Detector for Any Purpose

To meet HACCP requirements, a metal detector such as the APEX 500 or APEX 100 is typically installed at the end of the line on a conveyor immediately prior to packing and shipment of product. In some cases though, a foreign object detection approach like this isn't possible due to the type of product being produced, the style of packaging used or the physical space available. This is why we developed the APEX 300. Its small size and multitude of form factors make it ideal for gravity-fed applications, VFFS (Vertical Form Fill and Seal) machines, pipeline metal detection and combination systems with checkweighers.

The Thermo Scientific APEX 300 metal detector brings all the technological advantages of the state-of-the-art APEX 500 to a wide range of new applications. Available in many sizes and several mounting arrangements, the 300 model is the most flexible member of the APEX family of products. By utilizing a unique, multi-coil design to make magnetic flux more consistent in the aperture, all APEX 300 models have improved metal signal levels, resulting in the highest level of detection available today. For gravity-fed and pipeline installations, new filtering algorithms are used making the APEX 300 ideally suited in these applications. AuditCheck, a unique, patented device that automatically validates performance, is available as an option on any APEX 300 metal detector. This option is particularly valuable in bulk applications because it is often impossible to insert test pieces in the product flow.

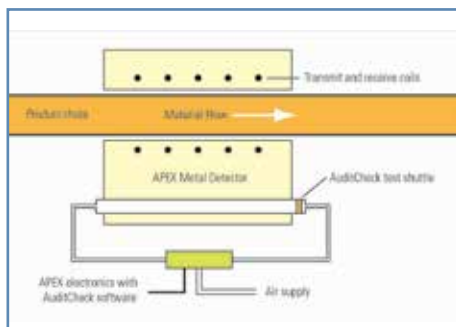
Thermo Scientific VersaWeigh Combination System



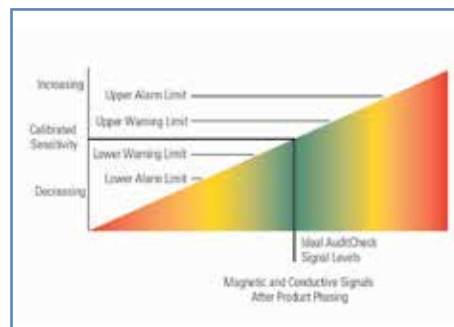
AuditCheck — A Patented Performance Verification System

In bulk applications where material is moving rapidly in tubes or pipes, it's difficult to periodically test a metal detector by inserting test pieces in the product flow. This is where our proprietary AuditCheck option comes in. Available on the APEX 300 (and APEX 500), 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.

AuditCheck diagram



AuditCheck principle of operation



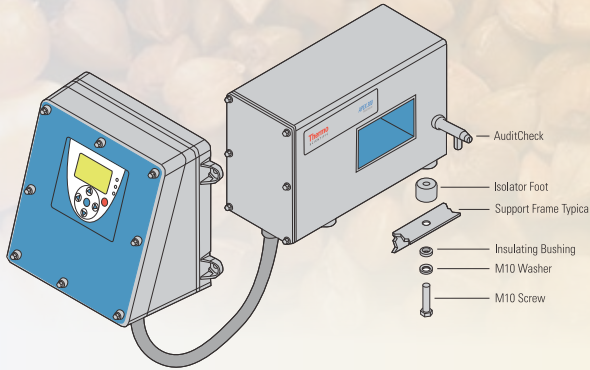
metal detector system

Aftermarket Services

A full range of aftermarket services is available worldwide to support the APEX 300 throughout its lifetime. This includes application evaluation, installation, training and preventive maintenance. To ensure maximum operational efficiency, we also offer on-site maintenance contracts and a full spare-parts service.

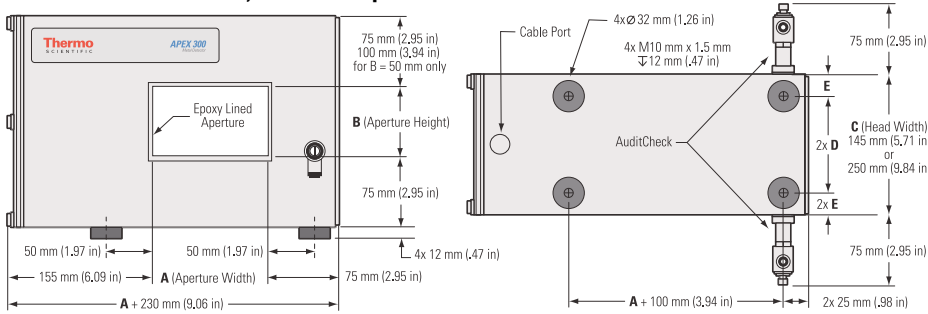
Available Options

- AuditCheck performance verification system
- Field compression flanges
- On-head control panel mounting plate
- Locking pivot mount frames for drop-throughs
- Mounting kits to convert from DSP 1/2/3, Metal Eliminator and Metal Scout to APEX 300
- Certified test spheres
- Reject verification/bin full sensors
- Modbus serial or Ethernet communications



APEX 300 Control Panel Mounting
(Remote or Integral with Optional Mounting Bracket)

APEX 300 Horizontal Flow, Horizontal Aperture Metal Detector



Foot dimension

C mm (in)	D mm (in)	E mm (in)
145 (5.71)	100 (3.94)	22.5 (0.89)
250 (9.84)	200 (7.87)	25 (0.98)

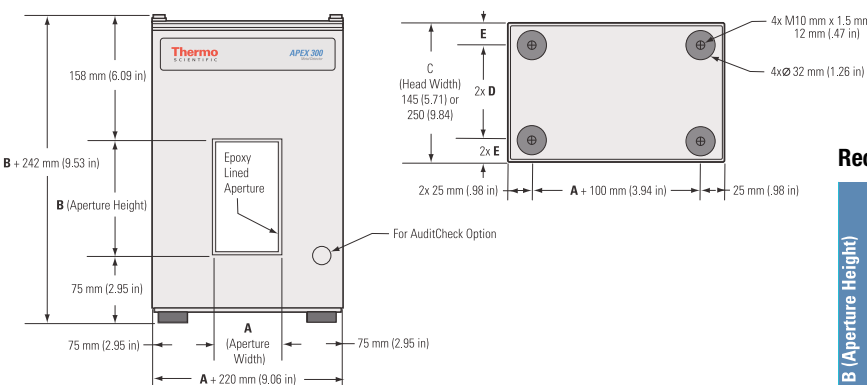
Square aperture case width (C) dimension in millimeters

A & B (mm)	C (mm)
75 (2.9)	145 or 250
100 (3.9)	145 or 250
125 (4.9)	145 or 250
150 (5.9)	145 or 250
175 (6.9)	145 or 250
200 (7.9)	145 or 250
225 (8.9)	145 or 250
250 (9.8)	145 or 250
275 (10.8)	250
300 (11.8)	250
325 (12.8)	250
350 (13.8)	250

Rectangular aperture case width (C) dimension in millimeters

B (Aperture Height)	A (Aperture Width)										
	mm (in)	100 (3.9)	150 (5.9)	200 (7.9)	250 (9.8)	300 (11.8)	350 (13.8)	400 (15.7)	450 (17.7)	500 (19.7)	550 (21.6)
50 (1.9)	145	145	145	145	145	145	145	145	145	145	145
75 (2.9)	145	145	145	145	145	145	145	145	145	145	145
100 (3.9)		145	145	145	145	145	145	145	145	145	145
125 (4.9)			145	145	145	145	145	145	145	145	145
150 (5.9)				145 or 250	145 or 250	145 or 250	145 or 250	145 or 250	145 or 250	145 or 250	145 or 250
175 (6.9)				145 or 250	145 or 250	145 or 250	145 or 250	145 or 250	145 or 250	145 or 250	145 or 250
200 (7.9)					145 or 250	145 or 250	145 or 250	145 or 250	145 or 250	145 or 250	145 or 250
225 (8.9)						145 or 250	145 or 250	145 or 250	145 or 250	145 or 250	145 or 250
250 (9.8)							145 or 250	145 or 250	145 or 250	145 or 250	145 or 250

APEX 300 Horizontal Flow, Vertical Aperture Metal Detector



Foot dimension

C mm (in)	D mm (in)	E mm (in)
145 (5.71)	100 (3.94)	22.5 (0.89)
250 (9.84)	200 (7.87)	25 (0.98)

Rectangular aperture case width (C) dimension in millimeters

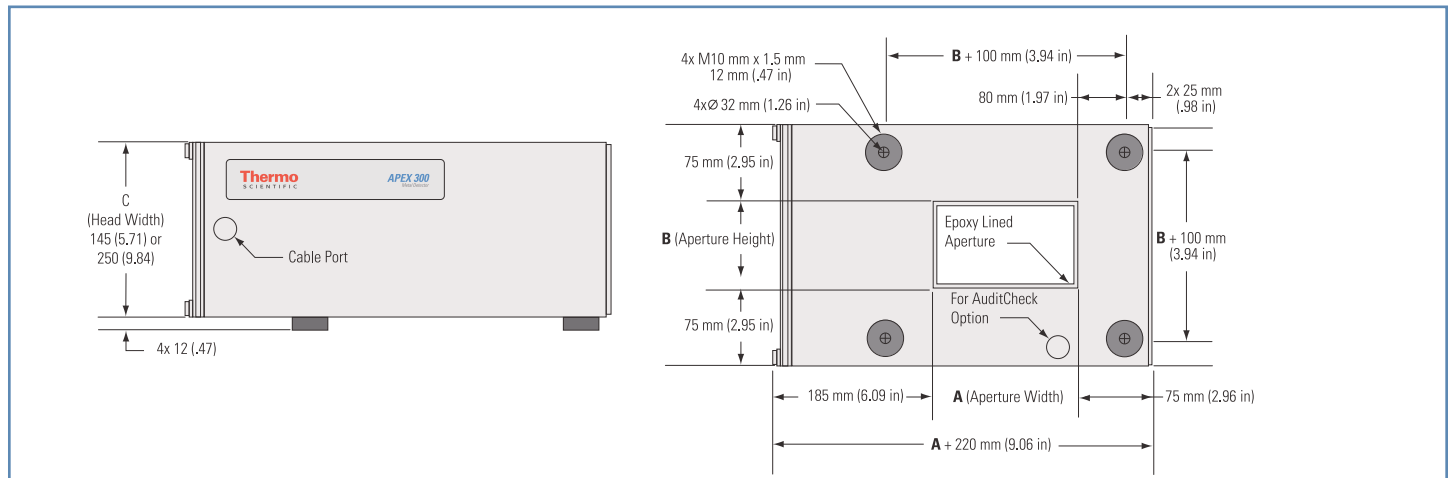
B (Aperture Height)	A (Aperture Width)						
	mm (in)	75 (2.9)	100 (3.9)	125 (4.9)	150 (5.9)	175 (6.9)	200 (7.9)
100 (3.9)	145						
150 (5.9)	145	145	145				
200 (7.9)	145	145	145	145 or 250	145 or 250		
250 (9.8)	145	145	145	145 or 250	145 or 250	145 or 250	
300 (11.8)	145	145	145	145 or 250	145 or 250	145 or 250	
350 (13.8)	145	145	145	145 or 250	145 or 250	145 or 250	
400 (15.7)	145	145	145	145 or 250	145 or 250	145 or 250	

Thermo Scientific APEX 300

General Specifications

Construction	Stainless steel 304 straightlined case, ABS plastic control panel
Protection Ratings	IP69K, Type 3 enclosure, ATEX zone 22, hazardous location Class II Division 2 Groups F&G
Operating Temperature	-10°C to +40°C (+14°F to +104°F)
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
Air Supply (for AuditCheck)	5.5 bar (80 psi)
Product Speed	0.5 m/min (1.7 ft/min) to 1000 m/min (3,300 ft/min)
Outputs	6 Relays outputs; Relays: 250 volt AC 2 amp max. 50 volt DC 1 amp max.
Output Allocation (selectable via menu)	Reject 1, Reject 2, AuditCheck, Fault, Alarm, Warning, QA Lamp
Inputs	6 Inputs - Active 12v DC+12 volt auxiliary supply for input sensors
Input Allocation (selectable via menu)	Speed Sensor, Keylock, Product Select 1, Product Select 2, Infeed PEC, Reject Confirmation 1 and Bin Full, External Suppression, External Alarm, External Reset
Communications	Optional ModBus serial or Ethernet modules
Safety and Export Approvals	cCSAus, CE, ATEX zone 22
Manufacturing Quality	ISO9001 certified
Help-Text, Users Manual Languages	English, Spanish, French, German, Italian, Dutch, Chinese, Czech, Russian, Polish, Thai, Koren and Brazilian Portuguese

APEX 300 Vertical Flow, Vertical Aperture Metal Detector



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