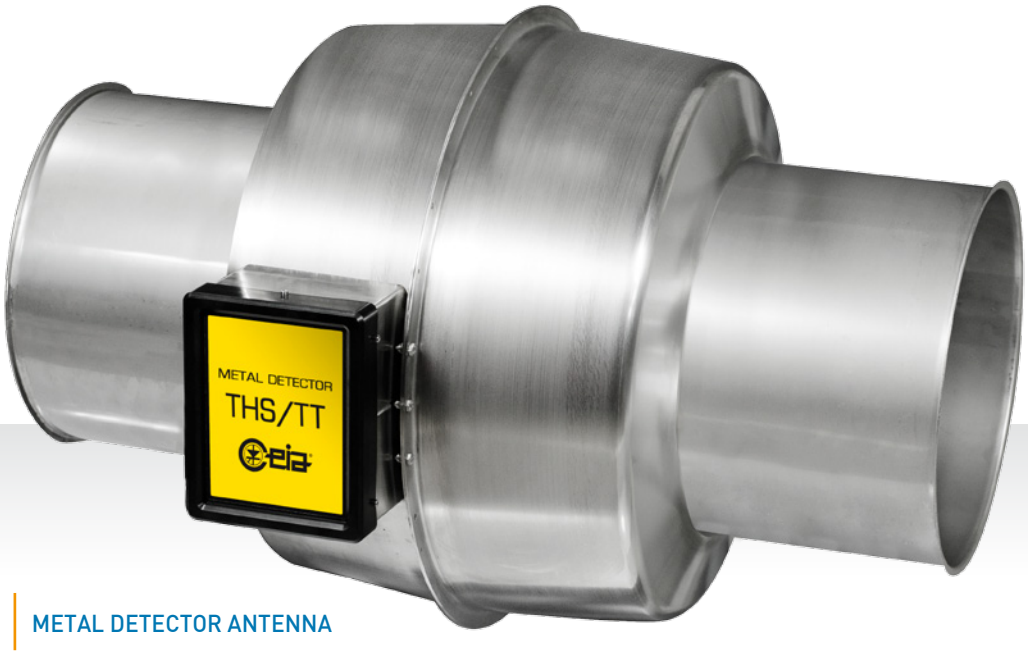
THS/TT

Very high sensitivity Metal Detector for industrial use



METAL DETECTOR ANTENNA

DIGITAL CONTROL PANEL

- Very high Sensitivity to all magnetic and non-magnetic metals, including stainless steel
- High Immunity to environmental Interference
- Wide Detection Speed range, from 1 m/s up to 50 m/s
- Metal object speed and mass sensing
- Compact and robust full AISI 304 stainless steel construction
- IP65 high degree of protection
- Easy installation and setting
- Fully Digital Programming
- High contrast graphic OLED display
- Password protected with separate user
- Bluetooth communication for setting and maintenance through external PC
- Autolearn function for automatic setting of the maximum sensitivity in dry and wet conditions
- High level of electronic and mechanical Reliability

Ceia S.p.A. An ISO 9001 Company CERTIFIED

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45+ years of experience

THS/TT

High sensitivity Metal Detector for industrial use

The CEIA THS/TT Metal Detector detects metal contaminants accidentally present in pipelines (i.e. in pneumatic lines), with levels of sensitivity, immunity to interference and response speeds designed to satisfy the strictest Quality Control requirements

CEIA THS/TT Metal Detectors, designed for operation in high speed production lines, allow interception of all magnetic and non-magnetic metals, including high-resistivity stainless steel. **The system is composed of an electronic control unit and an antenna** which is positioned in the path of the product to be inspected.

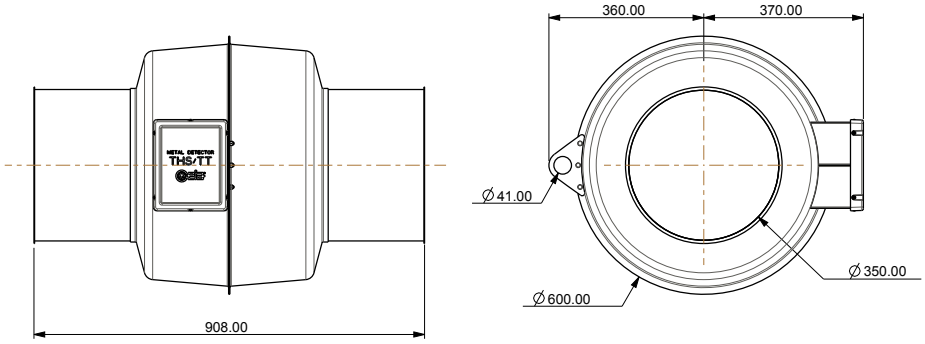
The advanced antenna design, completely manufactured in AISI 304 Stainless Steel, ensures high stability, high immunity and exceptional reliability.

DSP (Digital Signal Processing) of the Metal Detector Antenna signals allows a **very high degree of sensitivity to be achieved for all metals**.

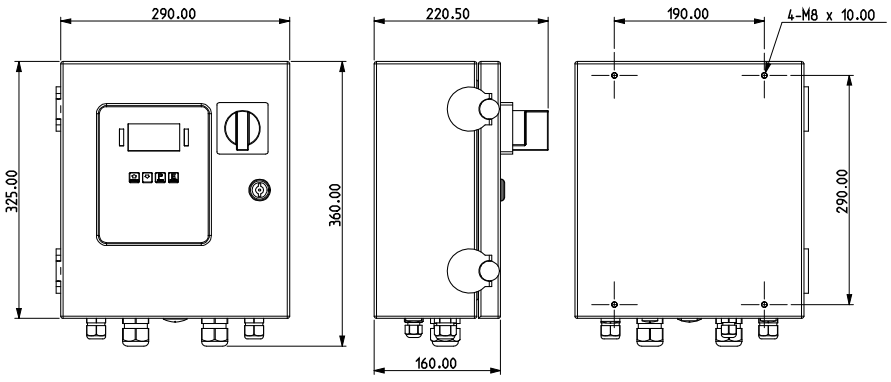
Microcomputer control and complete programmability simplify installation, and in certain applications can offer the capability of operating as production line controller using suitable sensors and actuators.

Overall dimensions (mm)

Metal Detector Antenna



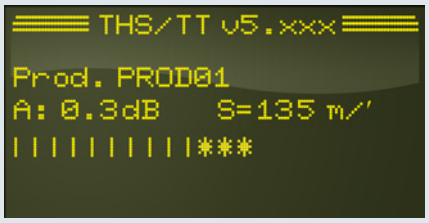
Digital Control Panel



Modern, rugged and user friendly Programming

- INDUSTRIAL RATED DESIGN
- RAPID DATA ENTRY
- EASY TO READ, HIGH-CONTRAST GRAPHIC DISPLAY
- RUGGED, ANTIVANDALIC STAINLESS STEEL KEYBOARD

DISPLAY OF THE STATUS OF THE METAL DETECTOR

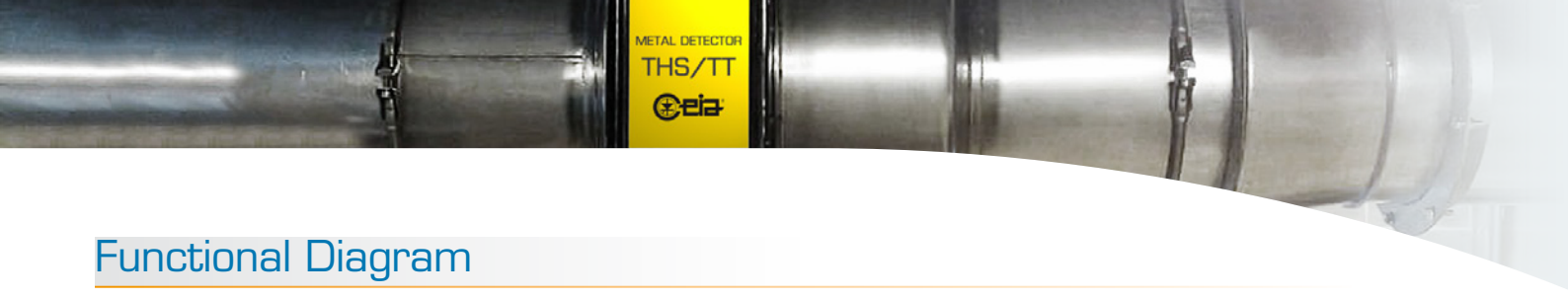


METALLIC MASS DETECTION

The indication A represents the amount of signal in dB; a value of OdB corresponds to a signal just above the alarm threshold; the measured speed (S) of the detected object is shown on the display. The value is expressed in meters per minute.

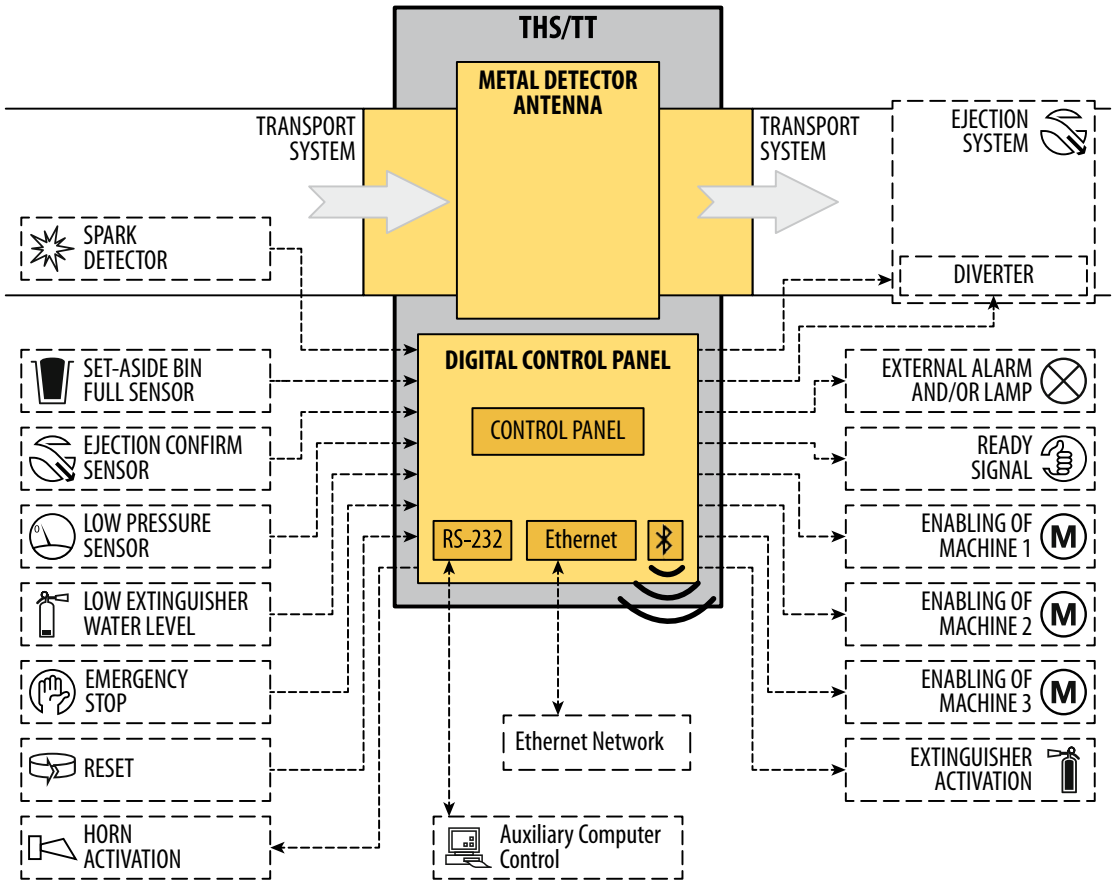
SELF DIAGNOSIS

The problem encountered is shown on the display and an alarm signal is uttered requiring the intervention of the operator.

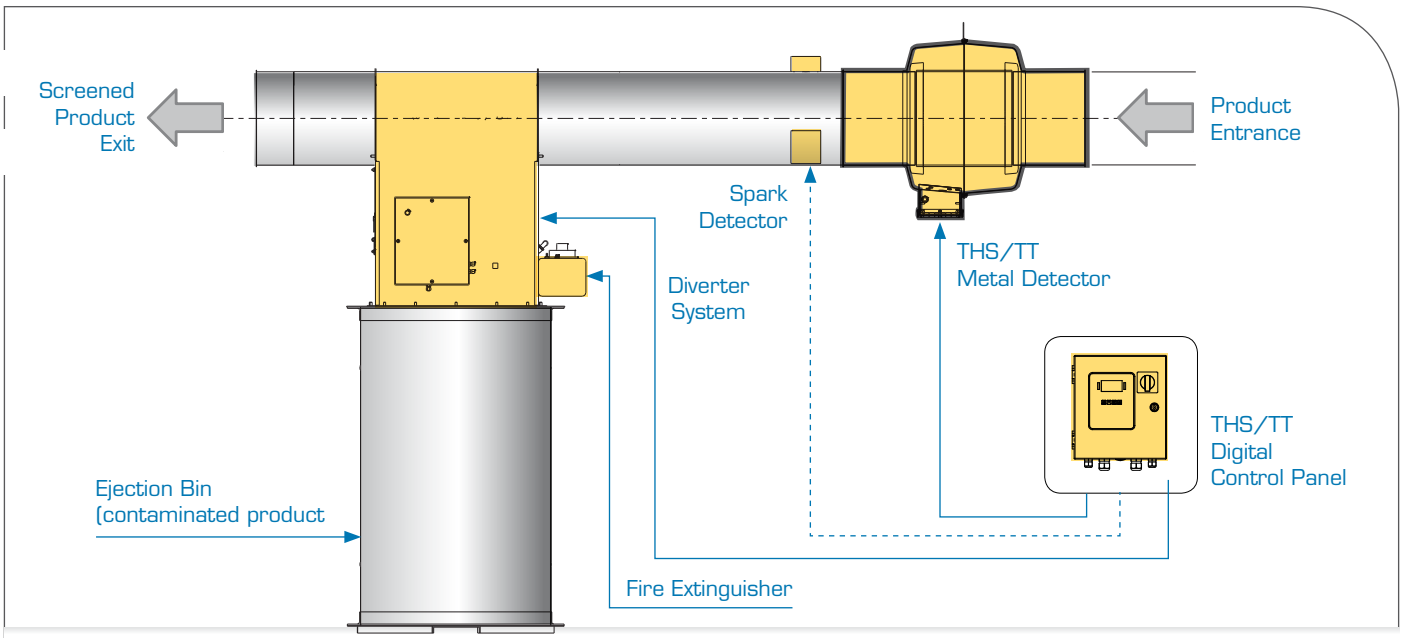


Functional Diagram

The functional diagram clearly shows **the capability of the new THS/TT to manage, in real time, all functions** needed for metal and spark detection, as well as the ejection management of the contaminant and the control of the extinguisher system. **All functions are carefully supervised by an auto diagnostic safety system** which ensures high reliability and detection of anomalies.



THS/TT principle of application



THS/TT

High sensitivity Metal Detector for industrial use

Specifications

General Features	Very High Detection sensitivity		
	Full AISI 304 Stainless Steel construction		
	Complete mamagement of detection and ejection functions		
	Immunity to environmental interference		
	Data display type	Alphanumeric OLED, 4x20 characters	
	Local programming	4 keys, 3 with double function	
	Control Power Box according to Standards UL 508A and CSA-C22.2 No. 14-05	on request	
	Maximum detection speed	50 m/s	
	Automatic metal contaminant speed measurement with automatic ejection time calculation		
	Transit speed measurement range	from 0.1 to 50 m/s	
	Audio and visual detection indicators		
	Display of the signal level by means of bar-graph		
	Automatic Balancing		
	ISO 9001 certificated manufacturer		
	Adjustable sensitivity with dynamic range		
	Quartz-controlled operating frequencies		
	Autolearn and automatic tracking of the product effect		
Events storage	Complete monitoring of occurred events	Ejections	
		Test results	
		Programming accesses	
		Programming operations	
		Faults	
I/O interfaces	RS232, Auxiliary RS232, Bluetooth, Ethernet (option)		
Signalling	Acoustic	Via internal buzzer	
	Optical	Graphic display with bar-graph indication	
		Light indicators on control unit	RED: Alarm or Fault
			GREEN: Power on
Programming	Local: Built-in keyboard and high-contrast display		
	Remote: through computer connected via Bluetooth or RS232 and managed with CEIA MDScope software		
Safety and Security	Protection degree	IP65 (Control Power box)	
		IP44 (Probe)	
	Electrical insulation	Galvanic isolation of the mains voltage	
		Compliant with international standards for safety and radio interference	
Self-diagnosis system	An internal self-diagnosis system continuously monitors Metal Detector functional efficiency. In the event of a fault, a message is shown on the control display and all alarm indicators are activated along with corresponding relays		
Supply	Control Power Box	Main voltage	100-240 Vac
		Frequency and phase	50/60 Hz - single phase
		Full load current (FLA)	2.2 A
Environmental data	Temperature	Operating: -10 to +55 °C	
		Storage: -25 to +55 °C (+70°C for 24h max)	
	Relative humidity	5 to 90 %, non-condensing	
Mechanical strength	Maximum pressure permitted in the product conveyor tube	0.05 Mpa	

I/O Interface

INPUTS

Detection
- Spark Detector
- Ejection confirmation

Safety
- Low extinguisher water level
- Low air pressure
- Bin full
- Emergency
- External emergency
- Emergency Reset

OUTPUTS

Detection
- Alarm relay
- Diverter
- Ejection relay
- Extinguisher

Signalling
- Horn

Auto diagnosis
- Machine Ready relay
- Machine enable 1 relay
- Machine enable 2 relay
- Machine enable 3 relay

Certification and Conformity

Electrical Safety Standards (Low Voltage Directive 2006/95/EC)

Electromagnetic Compatibility Standards (Directive EMC 2004/104/EC)

Applications

- Textile, paper and wood industries

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