

# THS/3F

## MULTI-FREQUENCY METAL DETECTOR FOR QUALITY CONTROL



THE THS/3F METAL DETECTOR IS RECOMMENDED FOR USE ON MULTI-PRODUCT LINES, WHERE THE INDIVIDUAL PRODUCTS HAVE VERY DIFFERENT CONDUCTIVITY CHARACTERISTICS

**Very High Sensitivity** to all magnetic and non-magnetic metals, including stainless steel

**Multi-frequency Technology** for maximum sensitivity to Product Effect variations

**Autolearn and automatic tracking** of the Product Effect

Full compliance with **HACCP** criteria

250 Product Data Memories, selectable by local programming, bar-code reader or network software

Completely housed in **AISI 316L** Stainless Steel

High level of electronic and mechanical **reliability**

# THS/3F MULTI-FREQUENCY METAL DETECTOR



**The THS/3F Metal Detector is recommended for use on multi-product lines, where the individual products have very different conductivity characteristics. Under these circumstances, the THS/3F allows maximum sensitivity for detection of contaminating metals, both magnetic and non-magnetic and including high-resistivity stainless steels, to be maintained.**

The automatic frequency selection function allows the THS/3F to choose the **optimum frequency for the product in transit during the autolearn phase.**

The automatic tracking function eliminates any further variations due to the "Product Effect". The wide pass band of the THS/3F detector allows operation at maximum sensitivity at both slow and fast speeds. The digital analysis of the signal provided by the antenna (**D.S.P.**) allows the user to achieve extremely **high sensitivity, immunity to interference and operational stability.**

The THS Report management software (optional) provides statistical data on the actions carried out by the detector, on the periodic tests and on variations in the parameters, in line with **ISO 9001** specifications on traceability data.

## TECHNICAL CHARACTERISTICS



- Very high sensitivity to all magnetic and non-magnetic metals, including stainless steel
- Extremely high immunity to environmental interference
- Automatic balance
- Digital signal processing (**D.S.P.**) with automatic compensation for the "product effect"
- Quartz-controlled operating frequencies
- Local or remote programming of operating parameters (product type, transit speed, signal analysis, external activator commands etc.)
- Easy-to-read alphanumeric display
- Memory holds 250 different products
- Autolearn of product effect
- Programming access protected by 5 local and 1 remote password levels
- Audible and visual alarms
- Bar-graph indication of signal level
- Internal self-diagnosis
- Stainless steel construction to IP65 protection level.

## STATISTICAL ANALYSIS

- Contaminated product count
- Count of total number of objects inspected (with photocell)
- Product Quality Control complies with ISO 9001 standards.

## OPERATING MODES

- Basic mode with manual reset
- Delay mode, with immediate activation of alarm relay and delayed activation of ejection relay
- Synchronised mode, with immediate activation of alarm and ejection relays synchronised by photocell

## INSTALLATION DATA

- Power supply: 115/230 Vac, -22 %/+10%, 48-62 Hz; 60 VA
- Operating temperature: -10 ÷ +55 °C
- Relative humidity: 0 -95% (without condensation)
- RS232 serial interface
- Possibility of connection to a computer or other control system, e.g. check-weigher
- Input for connection to encoder on conveyor belt for automatic measurement of product speed
- Inputs for alarm signalling of *bin full* and/or *confirm ejection*
- Auxiliary inputs and outputs available for slave devices and external controls.

## ACCESSORIES / OPTIONALS

- Input for connection to an optional bar-code reader. Up to 23 decoding standards for automatic selection of the product
- RS485 network interface
- Possibility of including an inverter to control the motor (**Conveyor Control System**) in the power supply box
- Test reference samples: ferrous, non-ferrous and stainless steel
- MD-CAD: computer aided design for the Metal Detector Installation
- THS Report: software for management of statistical data, periodic tests and variations in the parameters
- MD Scope: software for oscilloscope simulation and terminal operations on CEIA Metal Detectors

## CERTIFICATION AND CONFORMITY

- Conforms to current Requirements for Metal Detection Systems
- Complies with EC Regulations and International Standards relating to Electrical Safety and Electromagnetic Compatibility.

## APPLICATIONS

- Food and Chemical Industries, Pharmaceutical.



CONTROL PANEL ON CONVEYOR CONTROL SYSTEM



MD-CAD, COMPUTER AIDED DESIGN FOR THE METAL DETECTOR INSTALLATION

[www.ceia.net](http://www.ceia.net)



Zona Ind.le 54/G, 52040 Vicinaggio - Arezzo (ITALY)  
Tel.: +39 0575 4181 Fax: +39 0575 418296  
E-mail: [qa-detectors@ceia-spa.com](mailto:qa-detectors@ceia-spa.com) Web: [www.ceia.net](http://www.ceia.net)