

Zet@Micro

Eddy Current Instrument

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APPLICATION

Compact and economical, Zet@Micro is a single-channel device.

Thanks to its USB port, it gets connected to a standard computer.

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MAIN ADVANTAGES

- Economical and easy to use
- Compact design for industrial applications
- Suitable for flaw detection and Material Sorting applications
- In accordance with international standards such as ASTM, API, BS, AF, DIN, EN, SEP... and certified EN ISO 15548-1, EN ISO 15549
- Simple I/O interface to communicate with the production line
- Runs on windows

ASSOCIATED SYSTEMS

- Eddy Current systems such as Sectorial Magnetizing Units, Coils support...
- Eddy Current probes and single channel coils
- Remote assistance



USED FOR

- Defects detection on a wide range of products
- Material Sorting version available, dedicated to material grade sorting and heat treatment verification

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PRODUCTS RANGE

- Blind version with USB ports
- Rackable version with USB ports

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STANDARD EQUIPMENT

- Single channel equipment
- Zet@Setting configuration software

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OTHER CONFIGURATIONS AVAILABLE

- One additional channel for a control in absolute mode
- Can be connected to a USB hub to manage several devices on a single computer
- Customized software adapted to match your needs (long or short product inspection, Material Sorting...)

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Products Range

Blind version with USB port

- 255 x 110 x 260 mm (HxWxD)
- IP 20
- 100-240 Vac / 50-60 Hz
- 3.5 kg
- Permitted ambient temperature : 0-45° C
- 85% max of humidity - no condensation
- Balancing without being connected to a computer
- 1 differential channel + 1 absolute channel (optional)

Rackable version with USB port

- 86x428x282 mm (HxWxD)
- IP 20
- 100-240 Vac / 50-60 Hz
- 3.5 kg
- Permitted ambient temperature : 0-45° C
- 85% max of humidity - no condensation
- Balancing without being connected to a computer
- 1 differential channel + 1 absolute channel (optional)

Operating Principle

The instrument is controlled by configuration software, which defines the Eddy Current parameters for the application, including measurement settings, alarm thresholds for defect detection, and sorting thresholds for classification purposes.

Signal analysis is fully performed by the instrument's electronics, providing real-time display of inspection results.

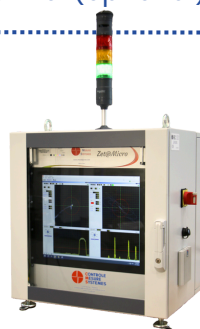
The device's opto-isolated inputs and outputs enable quick and seamless integration with the production line.



Blind



Rackable



Mini Cabinet



TECHNICAL INFORMATION

OPERATION	
Through PC regarding version – soft provided on USB key	
Communication	<ul style="list-style-type: none"> • USB 2.0 or Ethernet 100/1000 MBPS – Windows 10/11
EVALUATION AND LINE	
Signal Evaluation	<ul style="list-style-type: none"> • Full circle evaluation and/or X/Y components
Defect Trigger Threshold	<ul style="list-style-type: none"> • 2 adjustable in continue
Tests Procedure	<ul style="list-style-type: none"> • Testing with control on/off and continuous testing
Line Speed/Sampling Frequency	<ul style="list-style-type: none"> • Static to 5 m/s, depend on the coil geometry 5 KHz max
Line Signals	<ul style="list-style-type: none"> • Digital : 2 inputs, 6 outputs and 1 encoder • 4 analog outputs
Marking	<ul style="list-style-type: none"> • 4 free outputs for marking, buzzer, cutter...
Sorting	<ul style="list-style-type: none"> • 3 sorting levels and outputs
Adjustable Pre-Amplifier	<ul style="list-style-type: none"> • 0; 20; 40 dB

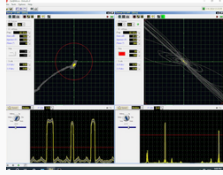
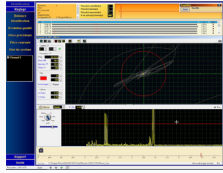
SENSOR CONNECTION	
Coil Monitoring	<ul style="list-style-type: none"> • Sensor auto-check – Voltage and failure indicated in the screen
Excitation Voltage	<ul style="list-style-type: none"> • 0.1 to 15V – 0.1 V tuning resolution
Test Channel	<ul style="list-style-type: none"> • One differential channel or Absolute channel
Test Frequency	<ul style="list-style-type: none"> • 10 Hz to 2 MHz – 1 Hz tuning resolution
Filters	<ul style="list-style-type: none"> • Continuous filters High pass, low pass, band pass with adjustable severity and auto-filtering • 1 Hz tuning resolution
Gain	<ul style="list-style-type: none"> • Increments of 0.5 dB / 80 dB dynamic
Phase	<ul style="list-style-type: none"> • 0 to 360°, 1° increment

USER INTERFACE

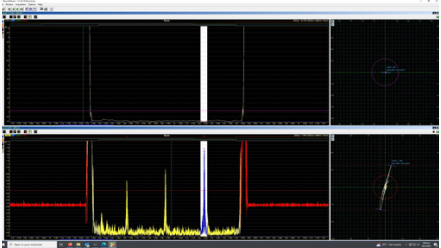
OPERATION	
Operation Protection	<ul style="list-style-type: none"> • 3 user levels, protected by password
Dialogue Language	<ul style="list-style-type: none"> • French, English, Italian, Russian, Portuguese and more...
Status Display	<ul style="list-style-type: none"> • Displayed in production software
Message Windows	<ul style="list-style-type: none"> • In real time on the screen
Tests Setting Display	<ul style="list-style-type: none"> • Unlimited
Setting	<ul style="list-style-type: none"> • Unlimited – configuration files saved on host computer
Multi-Line Support	<ul style="list-style-type: none"> • Yes, multiple Zet@Micro driven by only one computer

SIGNAL DISPLAY	
Display	<ul style="list-style-type: none"> • Lissajou and/or time base • Signal is given in less than 0.5 ms
Position	<ul style="list-style-type: none"> • Second channel operation is displayed beside the first one
Displayed Length	<ul style="list-style-type: none"> • Adjustable
Event Display	<ul style="list-style-type: none"> • Position of defects are displayed for each channel

PRODUCTION SOFTWARE (OPTIONAL)

OPTIONS	
Second Independent Test Channel: <ul style="list-style-type: none"> • Absolute channel: For longitudinal defects detection 	
Production Software / Remote Interface <ul style="list-style-type: none"> • Allow the creation of complete inspection files (PV) – Possibility to store them in hard disk under different format (Excel, PDF...) • ReportViewer application with possibility to recall, display and print stored PV files 	
Remote Assistance	<ul style="list-style-type: none"> • Worldwide support, over Internet or dedicated modem • Visualization of the instrument's screen from CMS company • Assistance to adjust or verify a setting • Assistance to upload and update software • Assistance to backup the system
Input	<ul style="list-style-type: none"> • Encoder input/pulse input
Filter	<ul style="list-style-type: none"> • Automatic filter adjustment (dynamic filter optional)

RECORD VIEWER SOFTWARE (OPTIONAL)

Acquisition: <ul style="list-style-type: none"> • Allows recording inspection measures for later printing • Measures are stored on hard disk • Storage and recall signals when alarms Recordviewer : <ul style="list-style-type: none"> • Signal processing • Signal analysis • Possibility to adjust Eddy Current settings and see real-time changes in Eddy Current signals 	
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