

NEW

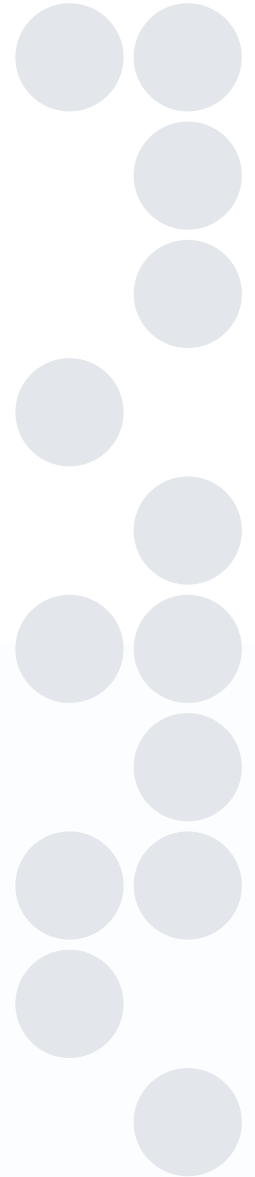
OMRON

Portable Solder Inspection Machine
VT-RNS-pt

Ultra Simple and Highly Precise



VT-RNS-portable



VT-RNS-pt



Ultra simple! Easy programming with automatic teaching. No restriction for operators!

Ultra-simple Automatic Teaching

Earlier Desktop Model

Manually creating parts libraries

Grouping/creation varied depending on the operator

Manually pasting component data

Redundant simple tasks

Programming with CAD/mounter data

Required data conversion expertise

Manually correcting inspection positions

Required significant debugging time

Using Automatic Teaching

RNS-pt (Portable)

Automatic grouping and creation of parts libraries

Automatic basic programming

Automatic image position correction

Less expertise required

Less stress

Less debugging time

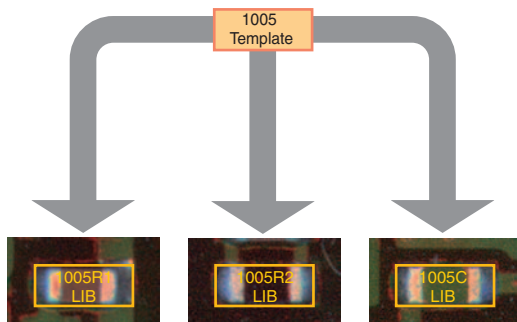
PORTABLE SOLDER INSPECTION MACHINE

Portable

Basic Flow of Automatic Teaching

1 First ...

- Parts libraries are created automatically.



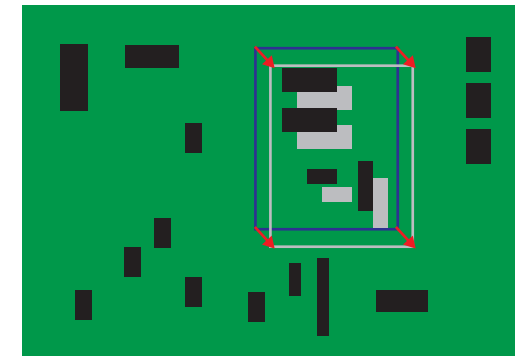
2 And...

- Inspection programs are created automatically.



3 Finally...

- Screen positions are corrected automatically during the inspection.

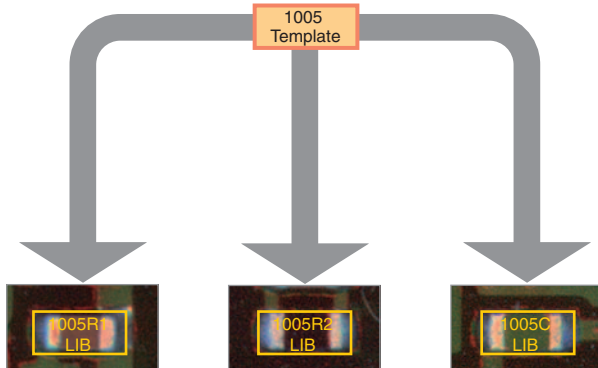


Start inspection

Innovation in Inspection Machine Usability with Automatic Teaching Functions

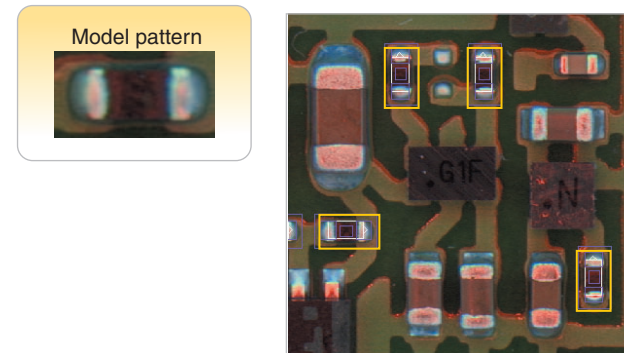
Automatically Creating Parts Libraries

The VT-RNS-pt uses templates to automatically group components into parts libraries. And it automatically creates new parts libraries for components with different features. This reduces reliance on special skills and knowledge for grouping components.



Automatically Writing Inspection Programs

The VT-RNS-pt automatically extracts components based on model pattern data and writes basic programs. This eliminates manual tasks, such as pasting parts libraries or converting CAD data.

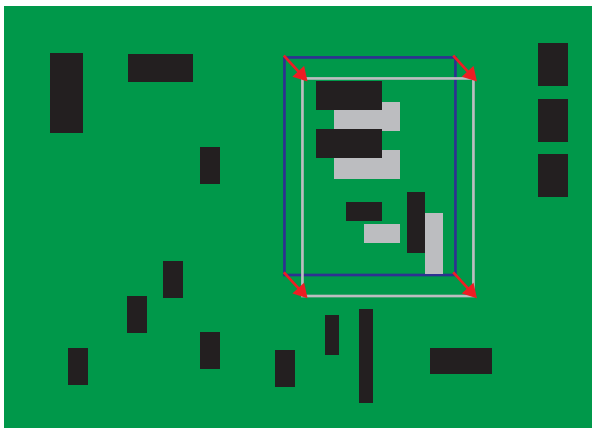


PORTABLE SOLDER INSPECTION MACHINE



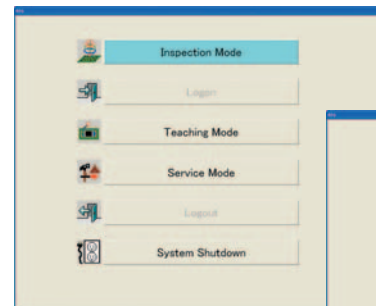
Automatically Correcting Screen Positions

There is no need to register or adjust correction windows. The VT-RNS-pt compares a captured image with a registered image and then automatically corrects the captured position right after PCBs are loaded. It also works on distorted PCBs.



Multi-language

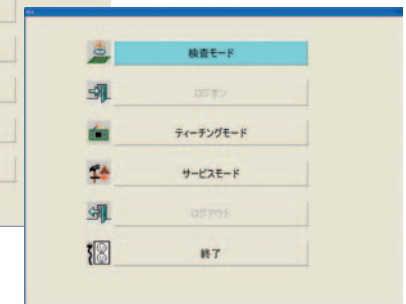
During any operation, the language displayed on the VT-RNS-pt can be switched to English, Chinese, or Japanese at the touch of a button.



English



Chinese



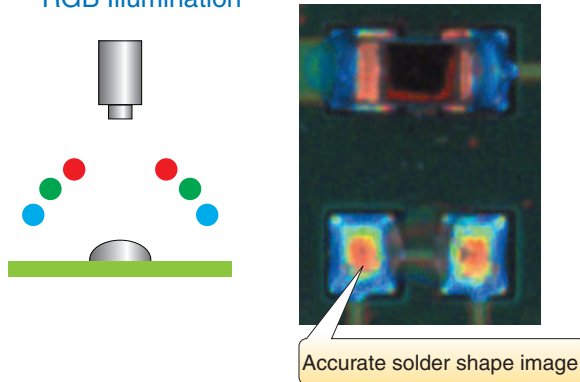
Japanese

Simple Processing and High Precision with Color Highlight System

Color Highlight System

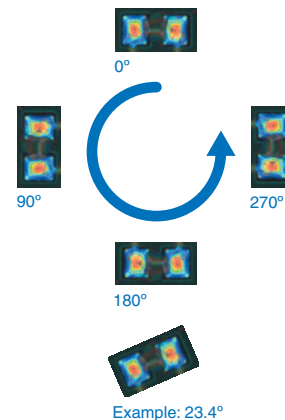
The VT-RNS-pt uses dome illumination to accurately assess solder shapes. LEDs emit colored light so that inspections are not affected easily by fluctuations, making it superior in assessing solder shapes.

RNS Inspection Principle: RGB Illumination



Dome Illumination

In particular, design considerations with PCBs for digital appliances include cases in which the placement angles for components are not a multiple of 90°. The shape of the illumination used in the color highlight system covers angles in all directions in a 360° dome (dome illumination), enabling stable performance of inspection regardless of placement directions or other angle designs.



High Resolution of 10 μm (Up to 20 μm)

PCBs for mobile phones exemplify the drive for increasingly smaller and lighter digital appliances, which is accompanied by a non-stop drive for downsizing of components. The VT-RNS-pt supports high resolution to 10 μm, to enable obtaining the information required for inspection even of extremely small components, such as 0402 (01005 in) chips, for highly precise inspection.



PORTABLE SOLDER INSPECTION MACHINE



Configuration and Specifications

Hardware Configuration

		VT-RNS-pt
Image signal input unit	Camera	C-MOS camera
	Illumination	Ring-shaped LEDs (R, G, B)
	Image resolution	10, 15, or 20 μ m
Main unit	Rail conveyor width adjustment	Manual
PCB fixturing method		Simple stopper
Power supply		100 to 230 VAC \pm 10%, single-phase
Ambient operating temperature		10 to 35 $^{\circ}$ C (50 to 90 $^{\circ}$ F)
Ambient operating humidity		35% to 80% (no condensation)
Weight		Under 100 kg (220 lbs)
Dimensions		685 W \times 915 D \times 580 H mm (26.96 W \times 37.34 D \times 22.84 H in)

Functional Specifications

		VT-RNS-pt
Inspectable PCBs	Type	Soldered
	Dimensions	50 \times 50 mm (1.96 \times 1.96 in) to 255 \times 333 mm (10.20 \times 13.08 in)
	PCB thickness	0.3 to 2.5 mm (0.01 to 0.1 in)
	Weight	1.0 kg max. (2.2 lbs)
Camera clearance		Above PCB: 20 mm (0.78 in) (standard) 40 mm (1.57 in) (optional) Below PCB: 60 mm (2.34 in)
Inspectable items		Missing components, component shifting, polarity, wrong components, presence/absence of solder
Number of inspection points		10,000 components/PCB max.
Data storage		Computer hard disk
Inspection results output		PCB name, PCB ID, component name, defect name, PCB graphics, etc.

OMRON has received ISO 14001 certification.
The Vision Systems Business Division of
OMRON Corporation has received ISO 9001 certification.

Patent Information
OMRON has many patents for PCB solder inspection systems.
Approved: 40, Pending: 200

This document provides information mainly for selecting suitable models. Please read the Instruction Sheet carefully for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.

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