Integrated control software for F150-3

Vision Composer

"Vision Composer" control software makes it easy to achieve the optimum inspection in flowchart format

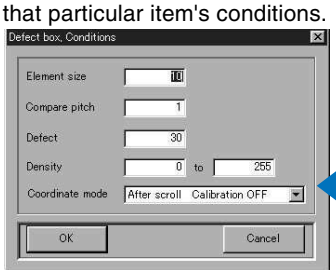
Features

Revolutionizing inspection based on image processing

Although visual sensors can be used based on simple menu settings, they have tended to lack functionality. On the other hand, full-featured advanced image processing devices are capable of a variety of functions, but special programming is necessary. The Vision Conposer makes it easy to achieve the optimum inspection in flowchart format.

a dialog box for item's conditions

Double-click on a box in the flow chart to bring up a dialog box for that particular item's conditions.

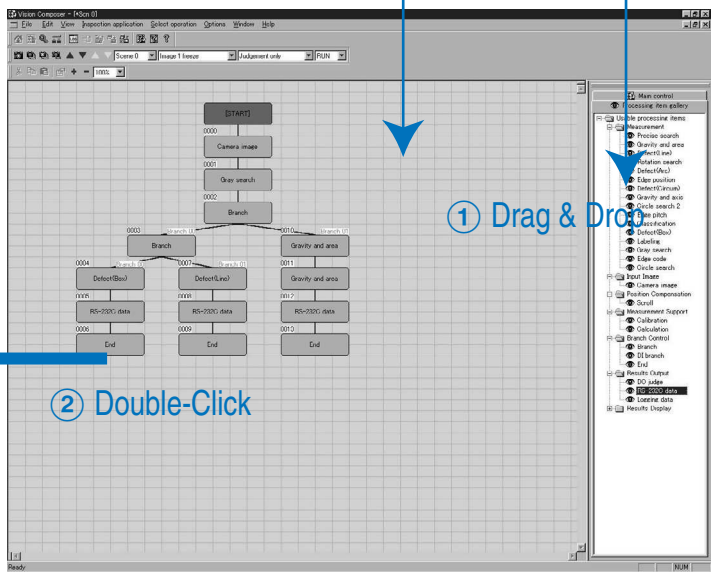


Inspection application edit window

The contents of inspection are displayed by the flow chart. The flow of processing is known at a glance.

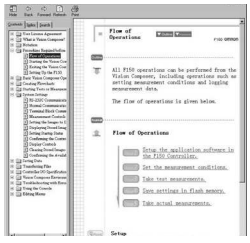
Processing item gallery

The list of processing items is displayed. Operators can create flow charts by dragging and dropping items from a library of process items.



Easy operation without a manual

Operation is guided by abundant help/guidance displays. It is not necessary to operate it in manual one hand.



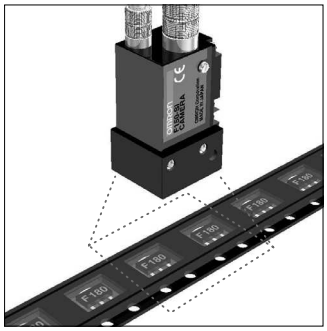
Features

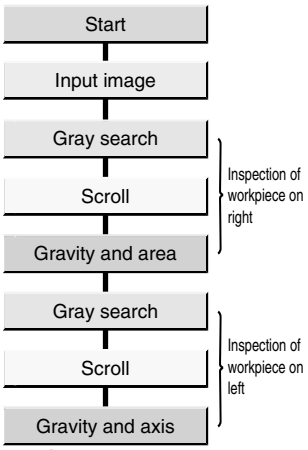
A flexible processing flow can be created in Windows.

Individual position corrections inside each area

Supports individual position corrections inside each inspection area.

● Inpection of chip components inside embossed taping

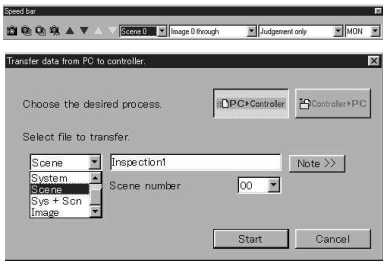




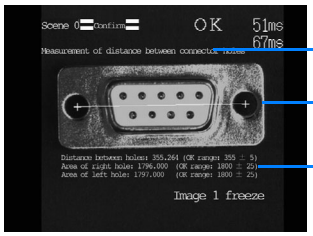
Enhanced screen editing functions increase ease of use.

Editing of scene names

Scene data can be saved using a name that describes the inspection for easy searching and management. Scene data, "no good" images, and other data can be exchanged between the F150 and a computer.



Freely create the measurement screen.



Screen example

Display any character string (measurement description, etc.) in any position

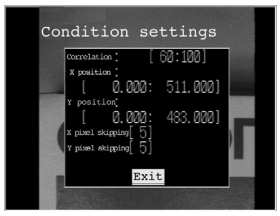
Display a line segment linking holes

Reduced display of measurement results

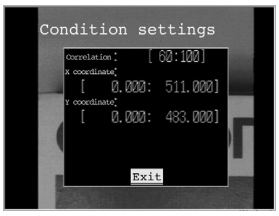
The menu screen can also be edited.

A text editor can be used to change the names and show/hide of menu items.

Before editing



After editing



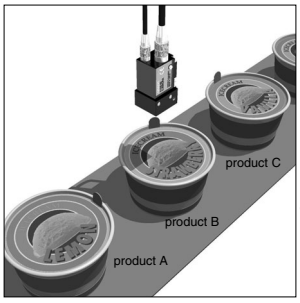
Speed bar

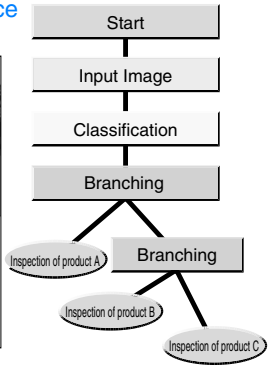
Frequently used processing tasks can be displayed as icons on the toolbar.
Smoother operation.

Branch processing

The type of inspection can be changed by model based on the results of model sorting.

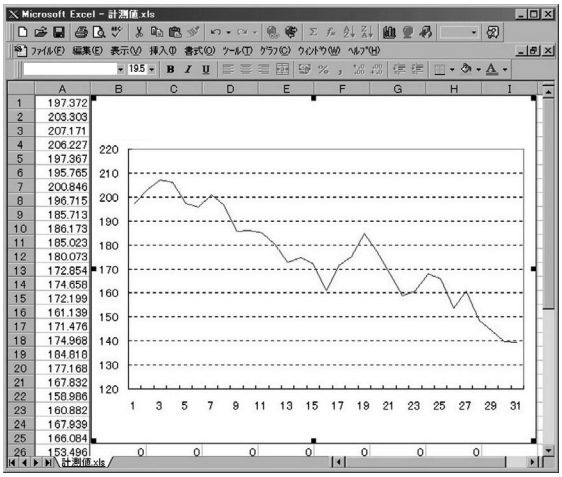
● Inspection of printing on ice cream lids





Manage measurement results on a computer.

Measurement results can be transferred to a computer, making it possible to manage and process data using a spreadsheet or other software program.



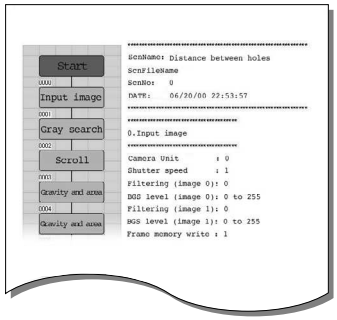
Example: Recording daily inspection totals

Record the date and time of defect occurrences.
Print out each day's inspection data.
Transfer inspection data over a network
Use a spreadsheet or other tool for statistical processing.

Print and output files of flowcharts and processing setting lists.

Settings can be verified at a glance.

Import data into a word processor program for easy creation of reports.



Operation procedure

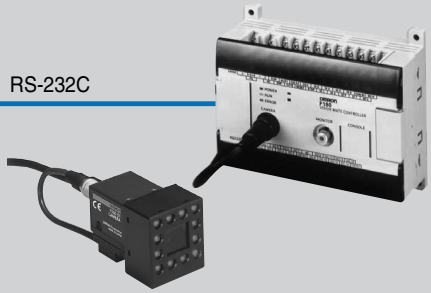
1 Preparation

① Insert CD-ROM and install the Software (Vision Composer Ver.2).

Installation

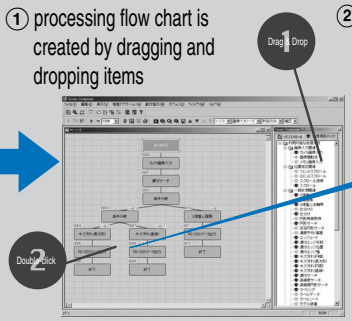
RS-232C

② Please connect F150-3 with a personal computer by the RS-232C cable.

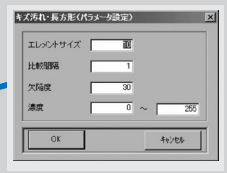


2 Set

① processing flow chart is created by dragging and dropping items



② Double-click on a box in the flow chart to bring up a dialog box for that particular item's conditions.



3 Operation and adjustment

Even if there is no PC, change/adjustment of conditions can be performed using a console.

Vision Composer Integrated Control Software for the F150-3

List of processing items

Image input related	Camera image input	Input images from the camera
	Memory image input	Input an image from the storage memory to the image memory
	Image transfer	Transfer an image between image memories. Enables multi-stage pre-processing and background cut-off.
Postion correction related	Scrolling	Image scrolling for position correction
	One-unit scrolling	Easy position correction (using one unit)
	Two-unit scrolling Scrolling reset	Easy position correction (using two units) Resets scrolled image memory to original position
General measurement related	Binary area	Obtains only binary area at high speed
	Binary center of gravity and area	Obtains binary center of gravity and area
	Bbinary center of gravity and main axis angle	Obtains binary center of gravity, area, and main axis angle
	Dark-light search	Searches stored model images
	High-precision search	Searches the stored model images and obtains the search coordinates in sub-pixel units.
	Damage and dirt (linear)	Inspects for damage and dirt on a straight line
	Damage and dirt (circular)	Inspects for damage and dirt on a circle
	Damage and dirt (circular arc)	Inspects for damage and dirt on a circular arc
	Damage and dirt (rectangular)	Inspects for damage and dirt inside a rectangular area
	Dark-light edge position	Obtains the edge position by dark-light processing
	Dark-light edge number	Obtains the number of objects by dark-light edge detection processing.
	Dark-light edge width	Obtains the distance between two edges
	Darkness average/deviation	Obtains the average darkness and deviation of a specified area
	Rotation search	Searches objects that are rotated.
	Obtains angle of circular object	Obtains the angle of a circular object at high speed
	Sorting	Sorts up to eight models
	Model dictionary	Used with "Sort 2"; up to 16 types are sorted

General measurement related	Sort 2	Used with "Model dictionary"; up to 16 types are sorted
	Labeling	Obtains the number of objects by label processing.
	Label sorting	Rearranging based on the label area and center of gravity of each object
	Label data	Obtains the area and center of gravity of each label
	Edge code	Generates an edge code image as a preprocessing step for execution of a circle search or high-precision circle search.
	Circle search	Searches for circular objects
	Stable circle search	Stable circle search without regard to the size of the circle.
	High-precision circle search	Searches for circular objects and obtains the search coordinates on the order of sub-pixels.
Measurement supplement related	Computation	Based on the selected computation equation, computations are carried out using the measurement results of each processing item.
	Calibration	Converts camera coordinates to actual coordinates
	Obtains processing unit data	References parameter settings of processing unit
	Processing unit data settings Elapsed time	The parameter settings of the processing unit can be changed as desired Obtains the elapsed time after input of the measurement trigger.
	Wait	Processing waits during the specified time
Branch control related	Condition-based branching	Processing is divided into branches based on the specified conditions
	DI input branching	Processing is divided into branches based on input from the terminal block
	End	Ends processing
Result output related	DO decision output	Outputs the measurement decision result to the terminal block.
	DO data output	Outputs measurement data to the terminal block
	RS-232C data output	Outputs measurement data to the RS-232C
	RS-232C data output 2	Outputs data in a free format to the RS-232C
	Higher link data output	Outputs data using the higher link protocol
	Data locking output	Outputs data for locking the measurement result in Vision Composer to the RS-232C
Result display related	Value display	Displays any value in any position on the screen (for customization of the measurement screen)
	Value display (small font)	Displays a value in a small font on the screen (for customization of the measurement screen)
	Line display	Displays a line of any length in any position on the screen (for customization of the measurement screen)
	Rectangle display	Displays a rectangle of any size in any position on the screen (for customization of the measurement screen)
	Circle display	Displays a circle of any size in any position on the screen (for customization of the measurement screen)
	Cross-hair cursor display	Displays a cross-hair cursor in any position on the screen (for customization of the measurement screen)

Operating environment

OS	Windows 95/98/NT 4.0 Japanese version (does not operate in Windows 3.1/NT3.5/2000)
WWW browser	Microsoft Internet Explorer 4.0 or higher
CPU	Pentium II 266 MHz or higher
Memory	64 MB or higher (recommended)
Free hard disk space	50 MB or higher
Display image	1024 x 768 dots 256 colors or higher
CD-ROM drive	4 x or higher

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. Q07E-EN-01

In the interest of product improvement, specifications are subject to change without notice.