Camera Vision System for Fisnar ADVANCE Series Dispensing Robots

Description

The **FISF4000AKIT-VISION Camera Vision System for Fisnar ADVANCE Series Dispensing Robots** is a modular, plug and play add-on to any of the [ADVANCE series liquid dispensing robots](#).

This robot vision system provides a powerful and intelligent CCD vision-based **programming and fiducial auto-adjustment system** for creating both simple and complex dispense routines/programs. This results in improved quality due to precise dispense positioning alongside improved production yield and reduced processing time and costs.

Dispense programs are created quickly and easily in the Fisnar proprietary vision-controlled *Fluid-In-Motion (FIM)* software. By using the displayed camera image to move the robot to the exact required dispense location, and then selecting the operation wished to be carried out (dispense, dot, line, start, etc), the system can limit programming inconsistency between operators.

The **FISF4000AKIT-VISION** robot vision system software is supplied with an **auto-part alignment function** to guarantee fluid is being dispensed at the exact required location. This is achieved by the system capturing an image of two separate fiducial locations on the component and using pattern recognition software to compare the live image against a stored image. Any difference found in X or Y position results in the dispense coordinates being automatically adjusted to suit.

Dispense positional accuracy and repeatability is further optimised by the **simple auto-calibration routine** and **part alignment function**.

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The Robot Vision System comprises two cameras, including one for live dispensing images

Features & Benefits

- Quick to set up and straightforward to program
- Auto 3-axis dispensing tip calibration function

Camera Vision System for Fisnar ADVANCE Series Dispensing Robots

■ Auxiliary camera to monitor dispense process live

■ High-resolution CCD camera

■ LED light with adjustable brightness

■ Simple & fast transfer of CAD data (.DXF/Gerber) into software

■ Industrial Windows-based PC system included (with monitor, keyboard and mouse)

■ Can be easily installed at any time onto a F4000 ADVANCE 3-axis robot using plug and play system design

■ Peripheral hardware is mounted directly onto the robot, reducing space requirements

■ Images can be captured and stored for quality and process control purposes

■ Programs can be automatically selected from scanned QR codes

Other Information

Camera Vision System for Fisnar ADVANCE Series Dispensing Robots

1) F4000 ADVANCE Desktop Dispensing Robot

Highly robust and durable based on cast aluminium base and heavy duty extruded aluminium twin vertical side pillars supporting the horizontal X-axis. This rigid design concept allows for long term

precision dispensing and dependable repeatability.

2) Computer

Industrial specification PC installed with Windows 10 and supplied with *Fluid-In-Motion (FIM)* software ready to use. Mounted directly onto robot to reduce overall envelope. TFT LCD monitor, keyboard & mouse also included.

3) CCD Camera

For high resolution colour & greyscale image capturing. Displays an 8x6mm real time image on *Fluid-In-Motion (FIM)* software. Alternative focus lenses available for special application requirements.

4) LED Ring Light & Controller

For optimising image contrast and definition. Adjustable light brightness controller is mounted directly onto robot to reduce overall envelope.
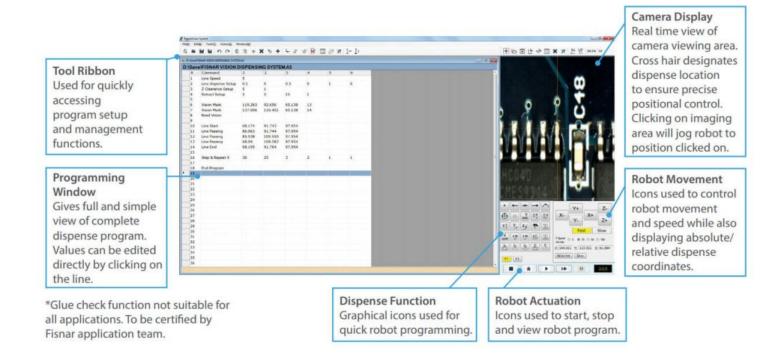
5) Tip Calibration Module

Works by the camera capturing an image of the purged fluid and uses pattern recognition to compare it against a pre-defined datum image. Any difference found between the centre positions, result in the X & Y co-ordinate values being automatically adjusted and dispense program re-aligning to suit. The Z-axis is automatically calibrated by dispense tip contacting a touch pad.

6) Auxiliary Camera

When robot is running a dispense cycle, a live full screen image is displayed on the TFT LCD monitor, allowing the user to clearly and easily monitor the fluid is being dispensed correctly onto the component part. This ensures any errors can be quickly identified.

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Tool Ribbon
Used for quickly accessing program setup and management functions.

Programming Window
Gives full and simple view of complete dispense program. Values can be edited directly by clicking on the line.

Camera Display
Real time view of camera viewing area. Cross hair designates dispense location to ensure precise positional control. Clicking on imaging area will jog robot to position clicked on.

Robot Movement
Icons used to control robot movement and speed while also displaying absolute/relative dispense coordinates.

Dispense Function
Graphical icons used for quick robot programming.

Robot Actuation
Icons used to start, stop and view robot program.

*Glue check function not suitable for all applications. To be certified by Fisnar application team.

Fluid-In-Motion (FIM) software

Ordering Information

Camera Vision System for Fisnar ADVANCE Series Dispensing Robots

Part number	Description
FISF4000AKIT-VISION-WIN10	Camera Vision System for Fisnar ADVANCE Series Dispensing Robots

Let's start by talking about your application

Camera Vision System for Fisnar
ADVANCE Series Dispensing Robots

FISNAR®
The Art of Dispensing

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