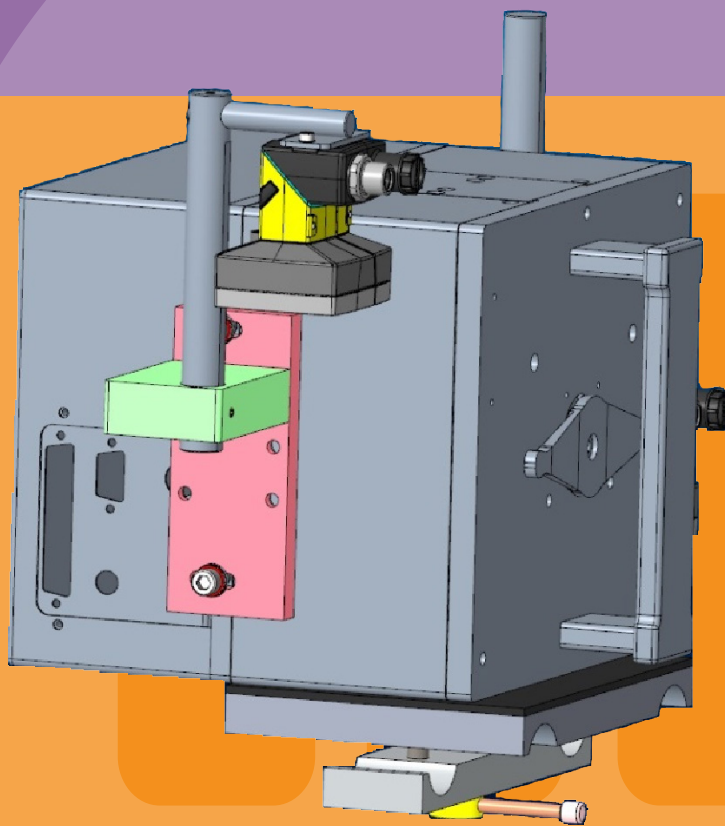


# User Manual

## Detect-Plus for SmartDate X40/X60



markem·image

a **DOVER** company



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# Detect-Plus for SmartDate X40/X60

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## ■ Introduction

Detect-Plus is an accessory to compliment the SmartDate X40 & X60 range of products designed for customers manufacturing goods in flexible film applications and are interested in compliance and code security on their products.

Detect-Plus checks the printed image meets a pre-defined quality and position and is configured at the time of installation by a trained engineer.

This user manual covers the Detect-Plus related settings, diagnostics and counters within the SmartDate X40 & X60 and is to be used in conjunction with the SmartDate X40 & X60 user manuals.

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## ■ Key Features

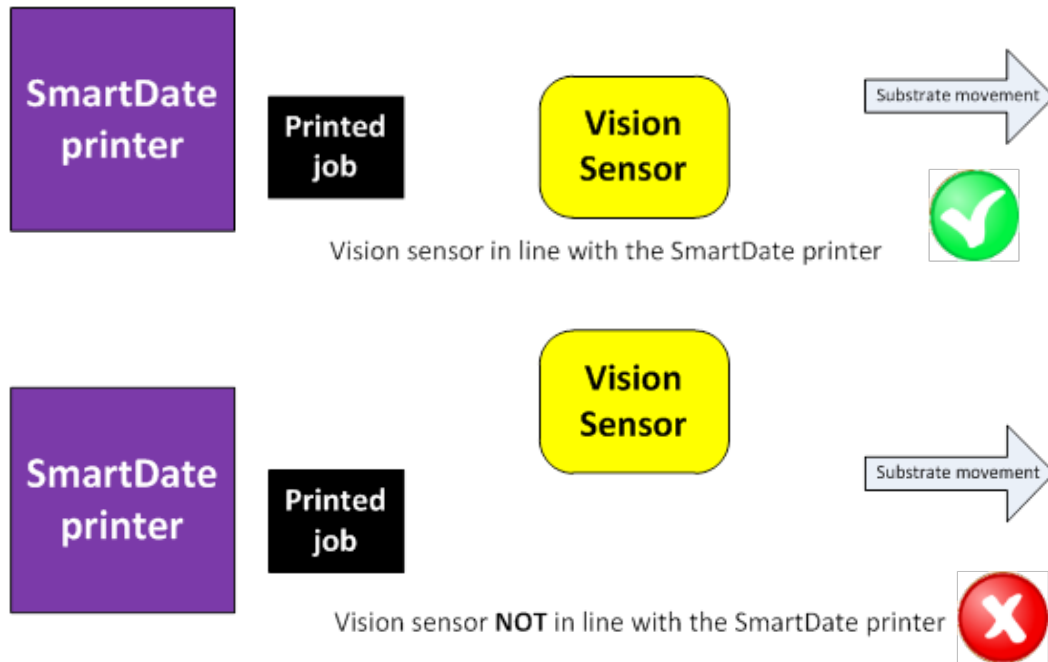
- Checks the printed code directly on the pack
- Checks print quality, position and presence
- Throughput speeds up to 350ppm
- Can be configured with ribbon save modes
- Powered from the SmartDate
- IP65 rated housing

# Detect-Plus for SmartDate X40/X60

## Vision Sensor Alignment

It is important that the vision sensor is kept in line with the printer so that the printed image is captured correctly by the vision sensor.

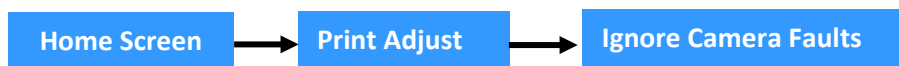
If the printer position is moved and the vision sensor is mounted independently to the printer, the vision sensor will need to be repositioned.



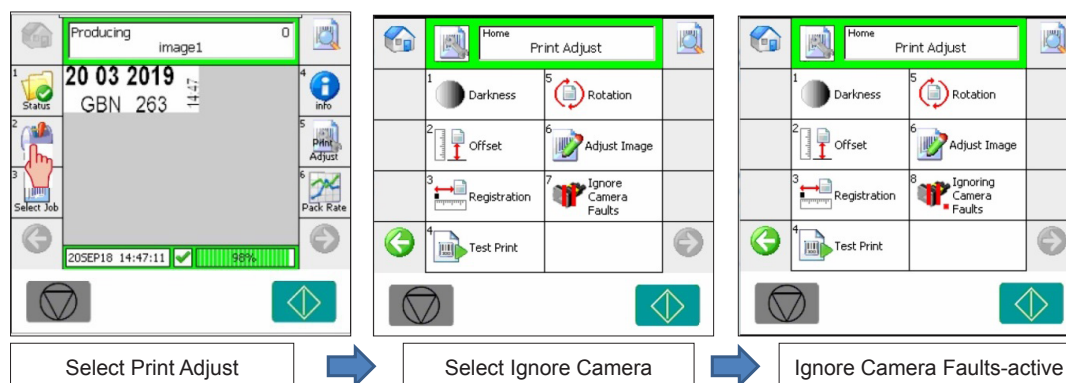
## Product change

When changing the product and/or substrate it is feasible that the vision sensor will enter a fault condition (fault 1600 'vision sensor fault') while the new job is being setup (e.g. print position adjusted).

This can be avoided by using the "Ignore Camera Faults" option. When selecting this option the SmartDate will ignore a pre-defined number consecutive failed verifications before the 'Vision Sensor Fault' is activated (the number of consecutive fails is defined by the "Temporary Ignore Count" setting).



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If fault 1600 'vision sensor fault' is activated during a production change the fault can be ignored by placing the printer back into a producing state and if required reselecting the "Ignore Camera Faults" option, or the vision system can be disabled via the settings menu (see 'enabling and disabling the vision sensor'). If disabling the vision sensor, remember to enable it before starting production.

## Maintenance

To remove dust from the vision sensor, use a pressurized air duster (the air must be free of oil, moisture and other contaminants). If further cleaning is required use an iso-propanol wipe.

DO NOT pour isopropyl directly onto the vision sensor

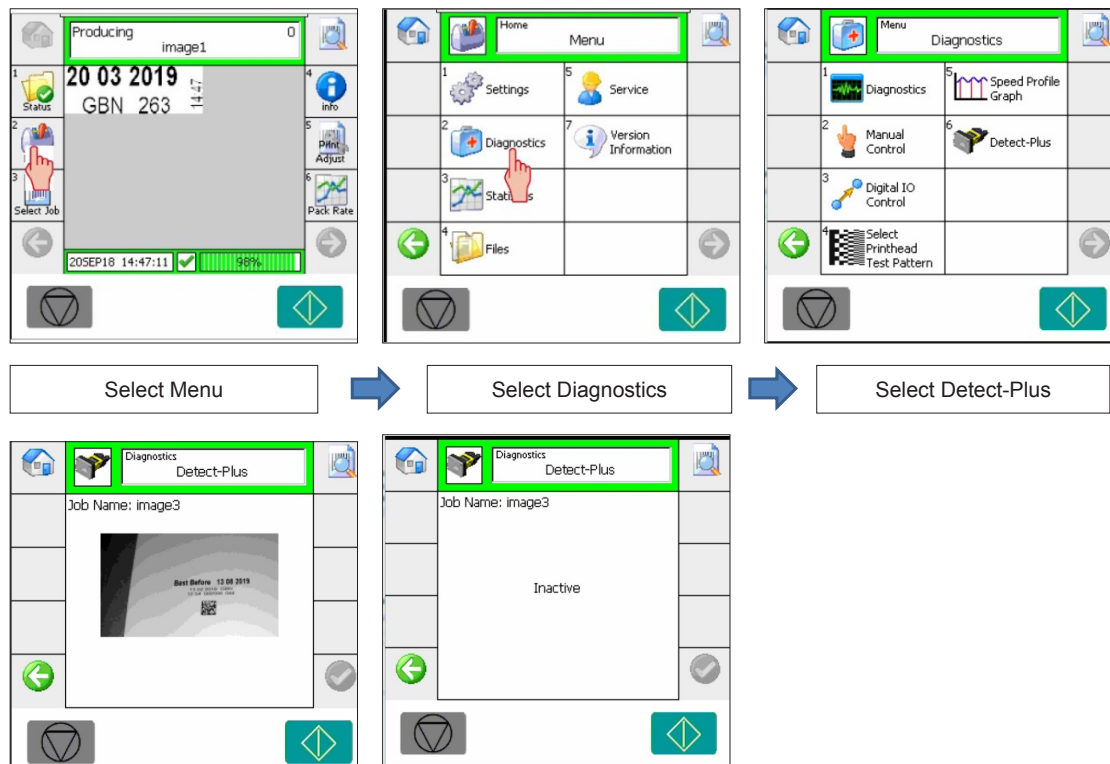
## Diagnostics

If using the SmartDate color user interface and the vision sensor is enabled, you can preview the last captured image via the diagnostic menu.

If there is no image stored in the Vision sensor, an 'Inactive' message will be displayed



# Detect-Plus for SmartDate X40/X60



## Counters

There are two counters related to the vision sensor:

### Total verification

This is the total number of failed verifications

### Batch verification

This is the number of failed verifications with the current selected job

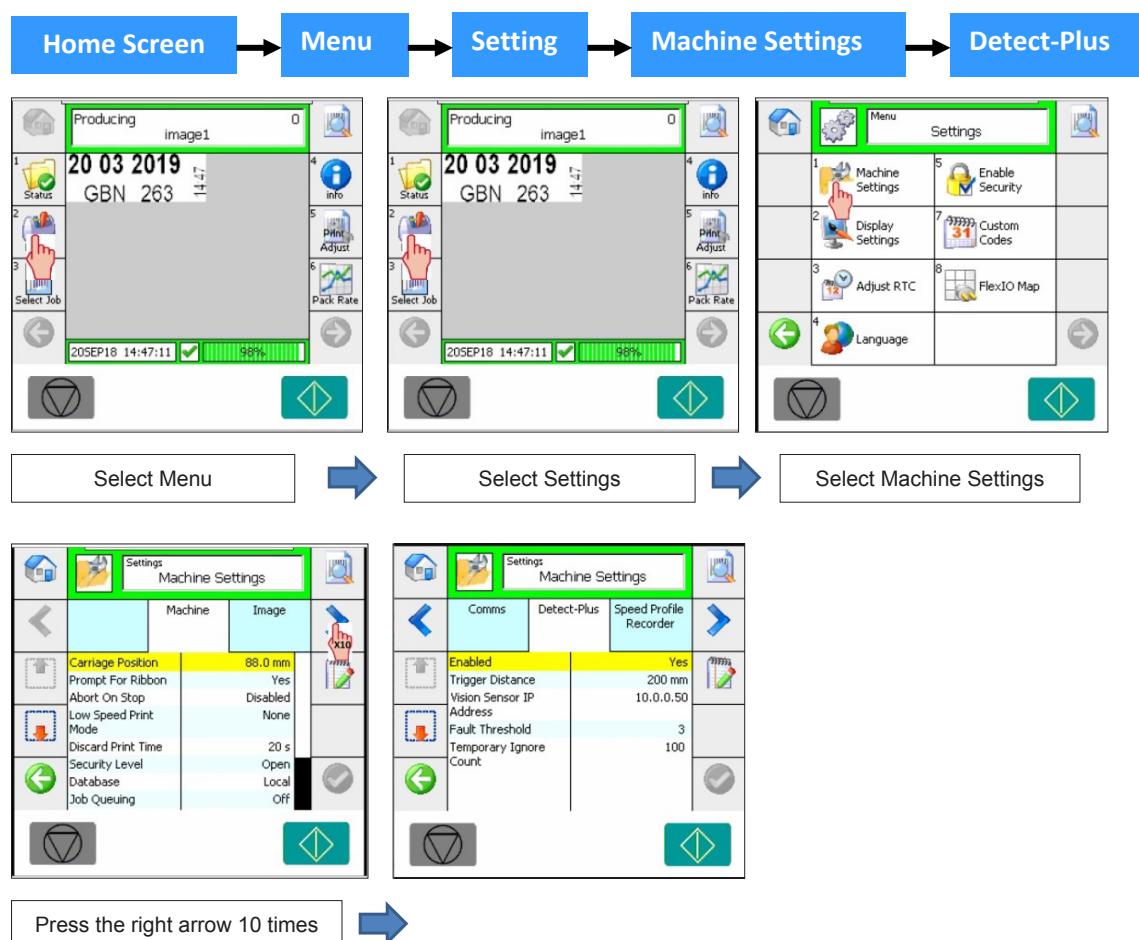
Counts	
Batch SmartPrints	0
Total Good	364856
Total Spoiled	49
Total Unexpected	213
Total Discarded	38
Total Low Speed	12
Total Failed	38
Total SmartPrints	0
Total Verification	0
Batch Verification	0
Total Flexible	0
Batch Flexible	0



# Detect-Plus for SmartDate X40/X60

## Printer configuration

Accessing the Detect-Plus Menu & settings



## Detect-Plus settings

Enabled	Used to enable / disable the Detect-Plus feature (Yes / No / Trigger Only)
Trigger Distance	The distance between a continuous printer and the vision sensor (1mm – 2000mm)
Vision Sensor IP Address	The IP address of the vision sensor
Fault Threshold	The number of consecutive failed verifications, before the 'Vision Sensor Fault' is activated (1 – 50)
Temporary Ignore Count	The number of consecutive failed verifications before the 'Vision Sensor Fault' is activated when the "Ignore Camera Faults" option has been activated (1 – 500)

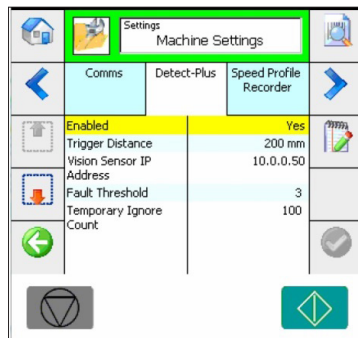
# Detect-Plus for SmartDate X40/X60

## ■ Enabling and disabling the vision sensor

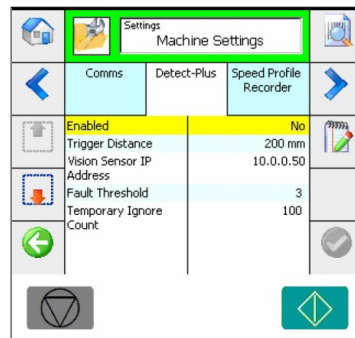
The vision sensor is enabled and disabled via the settings menu.

To enable the vision sensor to validate the printed job, set the 'Enabled' setting to Yes

To disable the vision sensor and stop it from validating the printed job, set the 'Enabled' setting to No



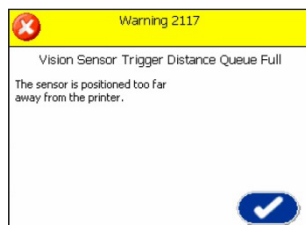
Vision sensor enabled



Vision sensor disenabled

## ■ Warning codes

There is one warning message relating to the vision sensor.



### **Warning 2117** Vision sensor Trigger Distance Queue Full

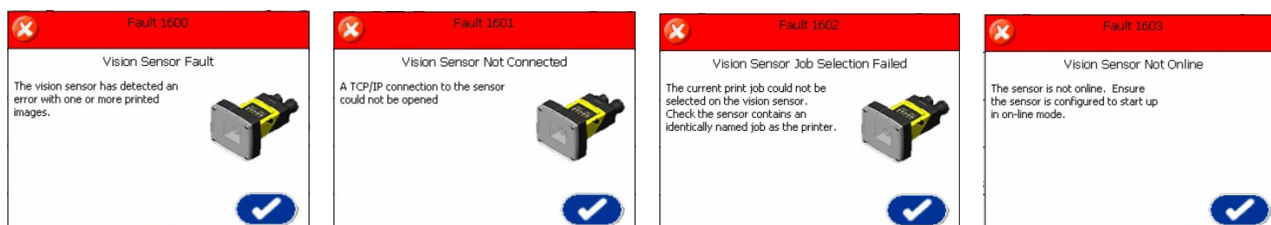
The vision sensor is positioned too far away from the printer

- Check the distance between the printer and vision sensor is set correctly (see 'Printer Configuration')
- Check that there are no more than 32 prints between the printer and vision sensor, if so the vision sensor will need moving closer to the printer or the vision sensor disabling (see 'Enabling and disabling the vision sensor').

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## Fault codes

There are four fault messages relating to the vision sensor. A description of the fault will be displayed on the screen.



### Fault 1600 Vision Sensor Fault

The vision sensor has detected an error with one or more printed images.

- Check the quality of the printed image, if required take corrective action to improve the print quality (refer to the X40 or X60 printer manual)
- Check that the 'Fault Threshold' is set to the required level (see 'Printer Configuration')
- Use the Diagnostics – Detect-Plus (colour user interfaces only) to view the last captured image and make sure the printed image can be viewed, if not
  - Check that the vision sensor is in line with the printer
  - Check the distance between the printer and vision sensor is set correctly (see 'Printer Configuration')
  - Check the encoder is working and tracking the film correctly

### Fault 1601 Vision Sensor Not Connected

A TCP/IP connection to the vision sensor could not be opened

- Check the network cable between the SmartDate and vision sensor is connected
  - If networked, check for possible network errors
- Check the IP address of the vision sensor is set correctly (see 'Printer Configuration')

### Fault 1602 Vision Sensor Job Selection Failed

The current print job could not be selected on the vision sensor.

- Check the vision sensor contains an identically named job as the printer.
- To continue printing without using the vision sensor to validate the printed image, disable the vision sensor via the settings menu option (see 'Printer Configuration')

### Fault 1603 Vision Sensor NOT Online

The vision sensor is not online.

- Re-select the required job
- Power cycle the printer

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## ■ User Manual - Revision

- . Revision AA is the first version of this manual
- . The Revision index changes with each update.

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03/2019	AA

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