

**axicon**

THE BARCODE EXPERTS



# Axicon Checkrite 5 barcode validator user guide



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Partner

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# Introduction

The Axicon Checkrite 5 Barcode Validator is a mid-range validator - it uses the intelligence that is built into the scanner to decode a barcode and to check whether this is the same decoded number as previously read. It can also check whether a successful read was made during a pre-determined period.

If there is a product with an unreadable or a mis-matched barcode then the validator can be set to illuminate a light display on the front panel - it also has a spare relay contact available to the user than can be used to, for example, activate an ejection arm, or trigger the production line to stop.

## What is in the case

Please ensure that the following items are present:

- Axicon Checkrite 5 validator control box.
- Barcode scanner.
- Broken-beam sensor and reflector or a reflective sensor (as ordered).
- Wallet containing user guide.

## Optional extras

The following accessories are also available:

- Mounting arm.
- Mounting brackets.
- Mounting cradle.



# Overview

The Checkrite 5 is a PLC (programmable logic controller) based control unit with a barcode scanner which enables the checking of product barcodes on a production line.

## The control unit

This is a wall- or machine-mounted box with a key-operated switch (three positions) and three lights, which are red, amber and green. The key may be removed when the switch is in the 'Run' or 'Reset' positions; it is spring-loaded to return to the 'Run' position from the 'Learn' position.

## Operation summary

Before starting a production batch, a correct barcode is scanned and all subsequent barcodes must match this first one. A constant green light means that all the barcodes scanned match the stored barcode. If a different barcode is scanned, a red warning light will show, and the system can trigger an audible warning or line-stop. Missing or unscannable barcodes will prompt an amber warning light.

The normal functions are set by the key-operated three-way switch which means that only key holders can operate the system. The system can be switched off for non-barcoded products.



# Overview

## Simple programming

Recording the barcode to be matched is very simple. The three-way switch is set to 'Reset' to clear the system memory. It is then set to 'Learn' and the correct barcode is passed in front of the scanner. The barcode data is recorded automatically, and the amber light will switch on.



## Matching

The switch is set to 'Run', and if subsequent barcodes are identical to the first one, the green light will switch on and stay on until the next product passes the scanner.

## Mis-match

If the barcode being scanned does not match the stored barcode, the red light will switch on, and stay on until the switch is set to 'Reset'. A relay with isolated contacts will also be activated, and this may be used to stop the conveyor or activate an ejector arm.

## No-read

If a barcode is missing or unreadable (for whatever reason) the amber light will switch on and stay on until the next read cycle. After a programmable number of consecutive no-reads (usually five) both the amber and red lights will switch on and stay on until the switch is set to 'Reset'. The relay, as with mis-match, will also be activated.

The number of consecutive no-reads before both amber and red lights are illuminated can be modified in the PLC settings.



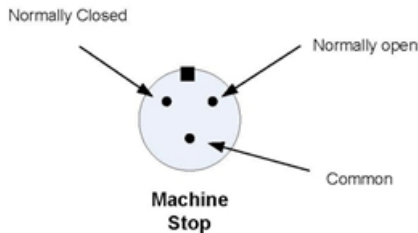
# Machine stop

The validator includes an extra relay output that may be connected to a line stop input. This is a volt-free relay contact (which can carry a 24V DC or 110-240V AC signal) and is configured with both normally-closed and normally-open contacts on the connector.

The connector for the relay output is underneath the Checkrite 5, as shown below:



The connector contacts are shown below. They allow the user to select the appropriate contacts to meet either a “normally open” or “normally closed” requirement .





# Install

## **WARNING**

The Checkrite 5 Validator requires a mains voltage power supply (100 - 240v AC) with the consequent risk of injury. It should only be installed by suitably qualified personnel.

Neither Axicon Auto ID Ltd nor the vendor of the validator can accept any liability arising from the incorrect installation or operation of this equipment.

## **Mounting the control box**

If the optional mounting cradle is used, this is fitted to the machine or nearby wall. The control box simply fits into this cradle and can be connected to the scanner and machine stop. The control box may also be mounted direct to the machine or wall using the mounting positions shown below.

Care must be taken by the installer to ensure that no components inside the control box are damaged during this fitting process, and that no dust enters the box.

## **Installing the trigger sensor**

The trigger sensor must be mounted such that it should start the scanning process just before the bar code moves in front of the scanner and after the previous barcode has cleared the scanning path.

The scanner will have a pre-set time-out period. The time-out period must be sufficiently long to ensure that the barcode has completely moved past the scanner before it expires (and automatically switches off). The amount of time required depends upon the line speed and the position of the barcode on the packaging.





### Positioning the scanner

The scanner should be installed so that the distance to the barcodes being read is between 100 mm and 200 mm. Larger barcodes will need to read at the greater distance, and tests will determine the optimum distance for each application.

| Code    | Media/Print                     | Magnification | % Scan | Distance (mm) |
|---------|---------------------------------|---------------|--------|---------------|
| EAN-13  | Thermal label                   | 150%          | 100%   | 100mm         |
| EAN-13  | Litho on white                  | 100%          | 100%   | 100mm         |
| GS1-128 | Thermal label                   | 60%           | 100%   | 220mm         |
| ITF-14  | Thermal label                   | 60%           | 100%   | 220mm         |
| ITF-14  | Ink-jet                         | 75%           | 75%    | 220mm         |
| ITF-14  | Flexo on white board            | 100%          | 100%   | 220mm         |
| ITF-14  | Flexo brown code on white board | 100%          | 75%    | 220mm         |
| ITF-14  | Thermal label on green          | 80%           | 70%    | 200mm         |
| ITF-14  | Thermal on pink                 | 80%           | 100%   | 200mm         |
| ITF-14  | Thermal label                   | 80%           | 100%   | 200mm         |
| ITF-14  | Flexo on brown board            | 65%           | 90%    | 200mm         |
| ITF-14  | Flexo on brown board            | 100%          | 95%    | 220mm         |

These examples based on test performed by Axicon

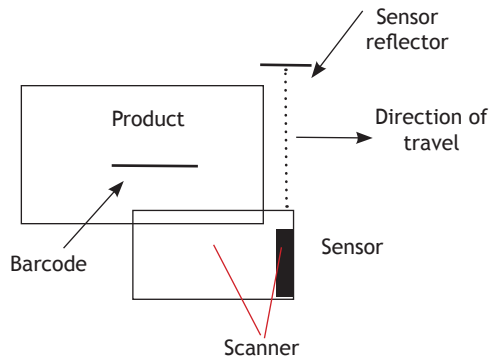
### Mounting the scanner

When mounting the scanner to a bracket, M4 x 6mm screws should be used. Screws that are longer may damage the scanner.

Mount the scanner at an angle of approximately 80° between the laser beam and the barcode. This is recommended to avoid specular reflections from the surface of the code.

### Lamp summary

- Green only.  
Last scan was a GOOD READ
- Amber only.  
Last scan was a NO READ
- Red only.  
Last scan was a MISMATCH
- Amber and Red.  
Last scan was a fifth consecutive NO READ





# Disclaimer

In the following the expression “Validator” means the validator hardware and the associated software.

We have taken care to ensure that this validator is free from defects. However since we have no control over the circumstances in which you might use the validator, you must satisfy yourself that the performance of the validator is suitable for your needs.

Neither Axicon Auto ID Limited nor the vendor of this validator can accept any liability for any loss or damage (consequential or otherwise) which may be caused by its use. If the validator or any part of it is defective in any way, or in some other way does not meet your expectations, the liability of Axicon Auto ID Limited is limited to the cost of the product. You should bear this limitation in mind if you use this validator in any situations where the acceptance or rejection of shipments of goods or your reputation may depend upon the quality of a barcode.

Under no circumstances is this validator licensed or authorised for use in any situation whatsoever where the health or safety of humans or animals might be put at risk.

## **Laser Safety**

The Checkrite 5 barcode validator is supplied with a Datalogic scanner. Please see Datalogic’s product datasheet for the laser safety declaration and certification.



# Warranty

The Axicon Checkrite 5 validator is sold with a one year parts and labour warranty against manufacturing defects. This is a return to bench warranty with shipping costs in one direction being borne by the customer or distributor.

The Checkrite 5 contains no user-serviceable parts and should only be opened by suitably qualified personnel.

Axicon reserves the right to charge an inspection fee for any equipment returned under warranty for which no fault is found. Please contact Axicon to obtain an RMA number before returning any equipment. This number must be quoted on all documentation. Axicon cannot accept responsibility for equipment returned without a RMA number.

If a Checkrite 5 validator has been damaged through incorrect installation or operation then Axicon reserve the right to charge an inspection and quotation fee.



# Contact us

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