Australian Government
National Measurement Institute
Bradfield Road, West Lindfield NSW 2070

# Supplementary Certificate of Approval

# No S550

Issued by the Chief Metrologist under Regulation 60
of the
*National Measurement Regulations 1999*

This is to certify that an approval for use for trade has been granted in respect of the

Flintec Model FT-12 Digital Indicator

submitted by Ultrahawke Pty Ltd
Unit 2, 9 Production Drive
Campbellfield VIC 3061.

**NOTE:** This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 76, *Non-automatic Weighing Instruments, Parts 1 and 2*, dated July 2004.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 July 2016, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI S550' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S550' in addition to the approval number of the instrument.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

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The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0/A.

DESCRIPTIVE ADVICE

**Pattern:** approved 1 June 2011

- A Flintec model FT-12 digital indicator.

**Variants:** approved 1 June 2011

1. Model FT-12T indicator.
2. Models FT-11 and FT-11T indicators.
3. Model FT-16 indicator.

Technical Schedule No S550 describes the pattern and variants 1 to 3.

FILING ADVICE

The documentation for this approval comprises:

Supplementary Certificate of Approval No S550 dated 2 June 2011
Technical Schedule No S550 dated 2 June 2011 (incl. Table 1 and Test Procedure)
Figures 1 to 6 dated 2 June 2011

Signed by a person authorised by the Chief Metrologist to exercise his powers under Regulation 60 of the *National Measurement Regulations 1999*.

TECHNICAL SCHEDULE No S550

**Pattern:** Flintec Model FT-12 Digital Indicator

**Submittor:** Ultrahawke Pty Ltd
Unit 2, 9 Production Drive
Campbellfield VIC 3061

## 1. Description of Pattern

A Flintec model FT-12 digital mass indicator (Figure 1 and Table 1) which may be configured to form part of:

- A weighing instrument with a single weighing range of up to 10 000 verification scale intervals; or
- A multiple range weighing instrument with up to two weighing ranges, in which case it is approved for use with up to 6000 verification scale intervals per weighing range.

The changeover between weighing ranges is automatic.

The instrument has an LED for display of the weight value and may be in any of the enclosures shown in Figure 1, including one in stainless steel.

This approval does not include the use of the indicator as an automatic weighing instrument, unless specifically mentioned in a certificate of approval for such an instrument.

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices.

TABLE 1 — Specifications

| | |
|---|---|
| Maximum number of verification | 10 000 (class (II)) |
| scale intervals | 1000 (class (III)) |
| Minimum sensitivity | 0.5 µV/scale interval |
| Excitation voltage | 5 V DC |
| Maximum excitation current | 86 mA |
| Minimum load cell impedance | 58 Ω |
| Maximum load cell impedance | 1200 Ω |
| Measuring range minimum voltage | 0 mV |
| Measuring range maximum voltage | 20 mV |
| Fraction of maximum permissible error (aka portioning factor) | 0.5 |
| Temperature range | -10°C to +40°C |
| Load cell connection | 4-wire or 6-wire shielded |

### 1.1 Zero

A zero-tracking device may be fitted.

The initial zero-setting device has a nominal range of not more than 20% of the maximum capacity of the instrument.

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

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### 1.2 Tare

The indicator may be fitted with a semi-automatic subtractive tare device and/or a pre-set subtractive tare device, each having a capacity of up to the maximum capacity of the instrument to which the indicator is fitted.

### 1.3 Display Check

A display check is initiated whenever power is applied.

### 1.4 Power Supply

The indicator operates from 230 V mains AC power.

### 1.5 Additional Features

The indicator also has certain additional functions (e.g. peak hold, dynamic weighing, filling and set-point facility). The additional functions are not approved for trade use.

### 1.6 Interfaces

The indicator may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. Any interfaces shall comply with clause 5.3.6 of document NMI R76 (the basic intent of which is that it shall not be possible to alter weighing results via the interfaces).

Any measurement data output from the instrument or its interfaces shall only be used for trade in compliance with NMI General Supplementary Certificate No S1/0/A (in particular in regard to the data and its format).

Indications other than the indications of measured mass (i.e. gross, tare, net, totals) displayed either on the indicator or on an auxiliary or peripheral device, are not for trade use.

Instruments may be fitted with RS-232C/485 serial data interfaces, Ethernet, Profibus, Profinet, binary output and analogue output (4 – 20 mA, 0 – 10V), and may also have digital inputs/outputs associated with the set-point facility.

### 1.7 Verification Provision

Provision is made for the application of a verification mark.

### 1.8 Sealing Provision

The indicator is sealed by preventing access within the indicator housing.

This may be achieved by applying destructible adhesive labels or using lead and wire type seals shown in Figures 3 to 5.

### 1.9 Markings and Notices

Instruments carry the following markings, in the form shown at right:

| | |
|---|---|
| Manufacturer's mark, or name written in full | Flintec GmbH |
| Name or mark of manufacturer's agent | Ultrahawke Pty Ltd |
| Indication of accuracy class | Ⓘ |
| Maximum capacity (for each range) | *Max* ..... kg #1 |
| Minimum capacity (for each range) | *Min* ..... kg #1 |
| Verification scale interval (for each range) | *e* = ..... kg #1 |
| Maximum subtractive tare | *T* = - ..... kg #2 |
| Serial number of the instrument | ……. |
| Pattern approval mark for the indicator | NMI S550 |
| Pattern approval mark for other components | ..... #3 |

#1 These markings are also shown near the display of the result if they are not already located there.

#2 This marking is required if *T* is not equal to *Max*.

#3 May be located separately from the other markings.

In addition, instruments not greater than 100 kg capacity carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

For multiple range instruments, the maximum capacity, minimum capacity and verification scale interval for each range shall be marked, with an indication of the range to which they apply, e.g.

| Range | \|←1→\| | \|←2→\| |
|---|---|---|
| *Max* | …. kg | …. kg |
| *Min* | …. kg | …. kg |
| *e* = | …. kg | …. kg |

## 2. Description of Variants

### 2.1 Variant 1

The Flintec model FT-12T indicator which is similar to the pattern (Figure 1) but has less features than the model FT-12.

### 2.2 Variant 2

The Flintec models FT-11 and FT-11T indicators (Figure 2a) which are similar to the pattern and variant 1 but without the numeric keypad and pre-set tare function.

### 2.3 Variant 3

The Flintec model FT-16 indicator (Figure 2b) which is similar to the pattern but in a different style enclosure and without the numeric keypad and pre-set tare function.

The instrument has a standard PC board inside the enclosure and uses an external keyboard and monitor.

This model indicator is typically sealed as shown in Figure 6.

## TEST PROCEDURE

Instruments shall be tested in accordance with any relevant tests specified in the national inspection test procedures.

### Maximum Permissible Errors

The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

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FIGURE S550 – 1

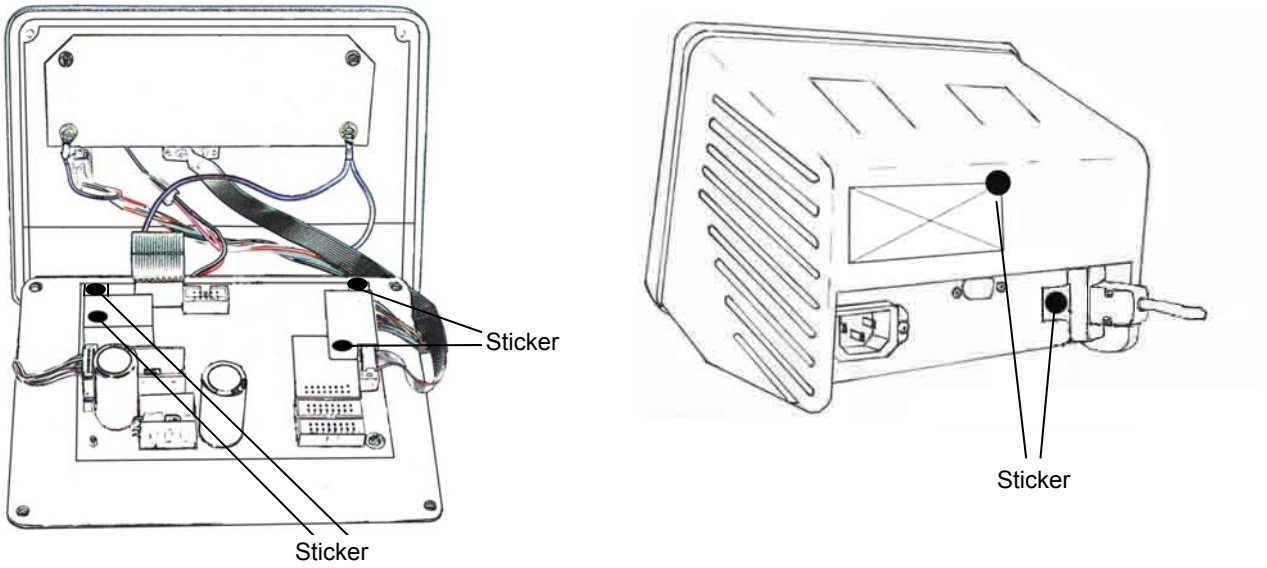
Flintec Model FT-12 (and FT-12T) Digital Indicators
(Alternative Enclosures)

FIGURE S550 – 2

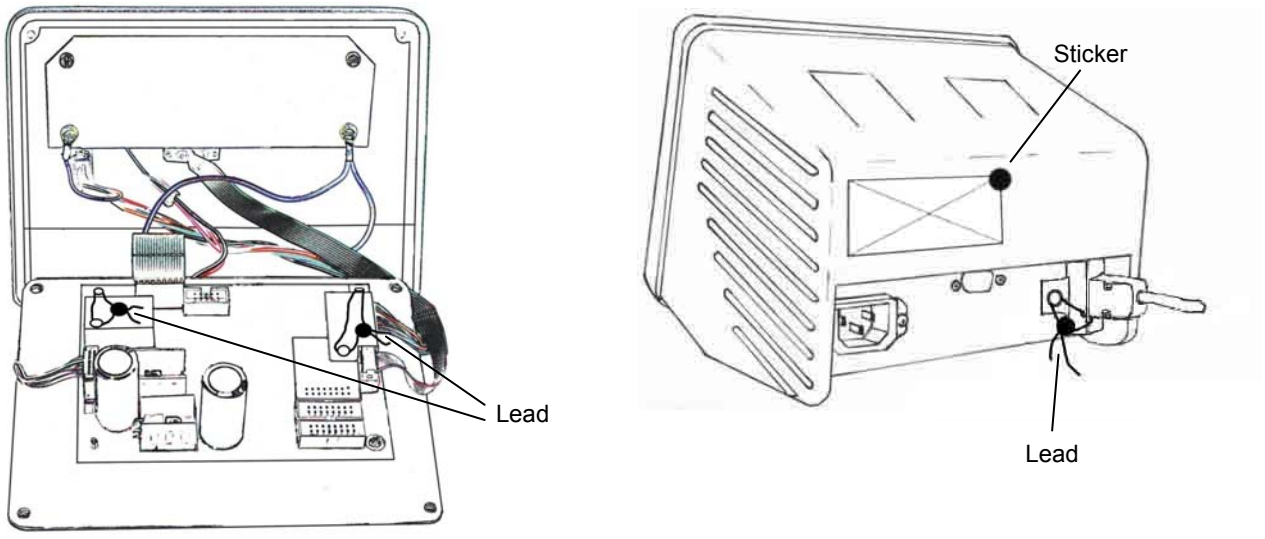

(a) Flintec Model FT-11 Digital Indicator (Alternative Enclosures)


(b) Flintec Model FT-16 Digital Indicator

FIGURE S550 – 3

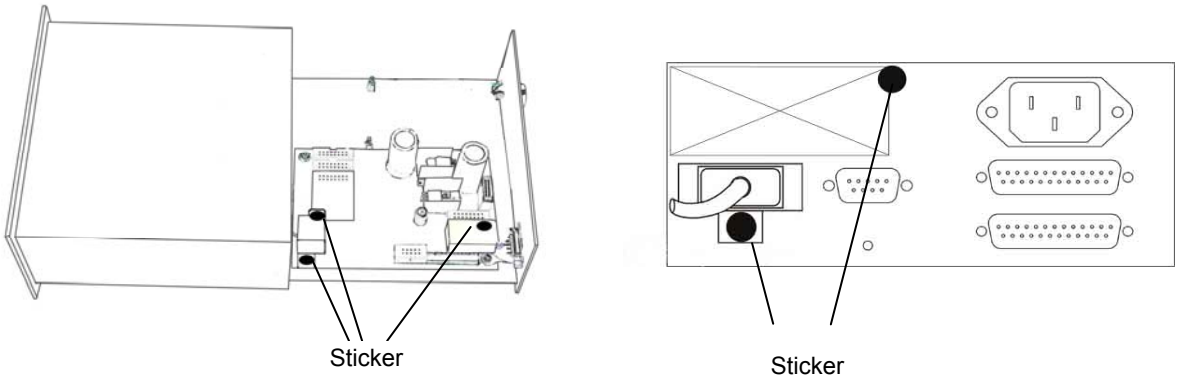



(a) Desk Type Housing – Typical Sealing Using Destructible Adhesive Labels

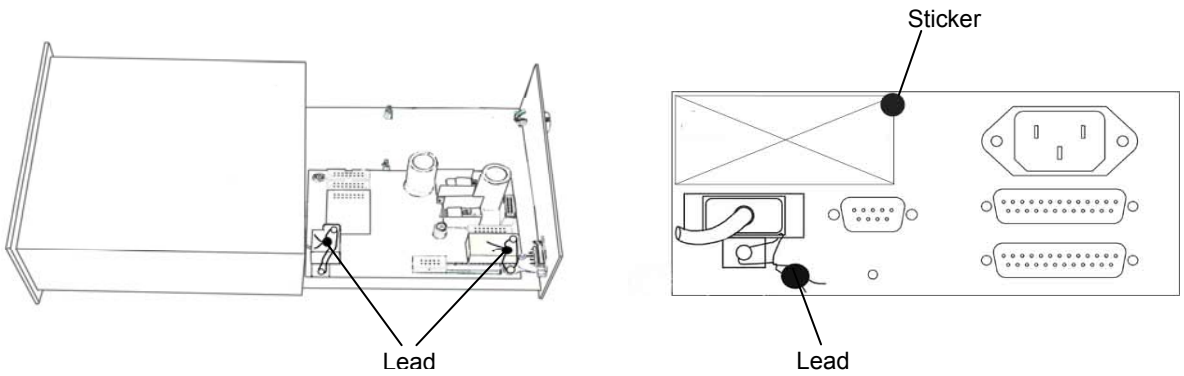



(b) Desk Type Housing – Typical Sealing Using Wire and Lead Type

FIGURE S550 – 4

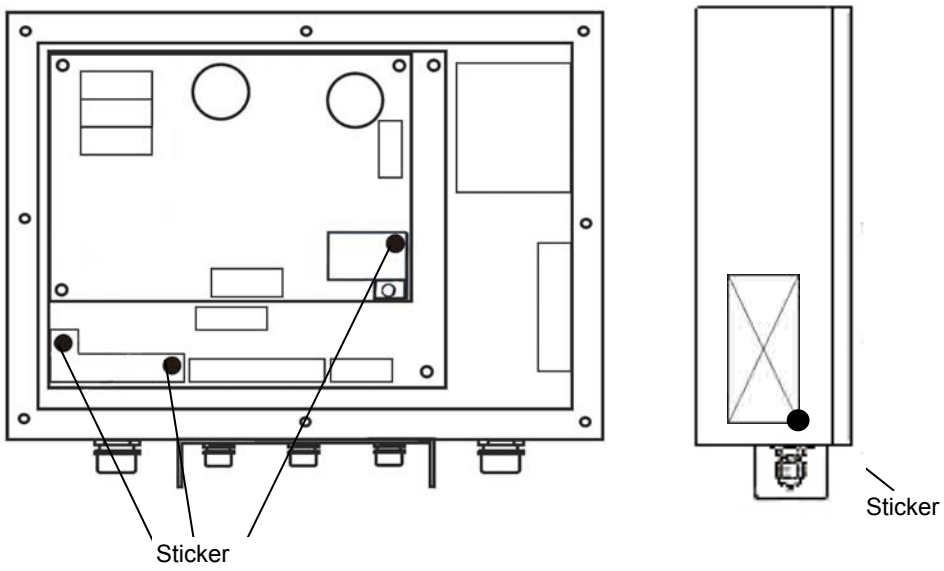



(a) Panel Type Housing – Typical Sealing Using Destructible Adhesive Labels

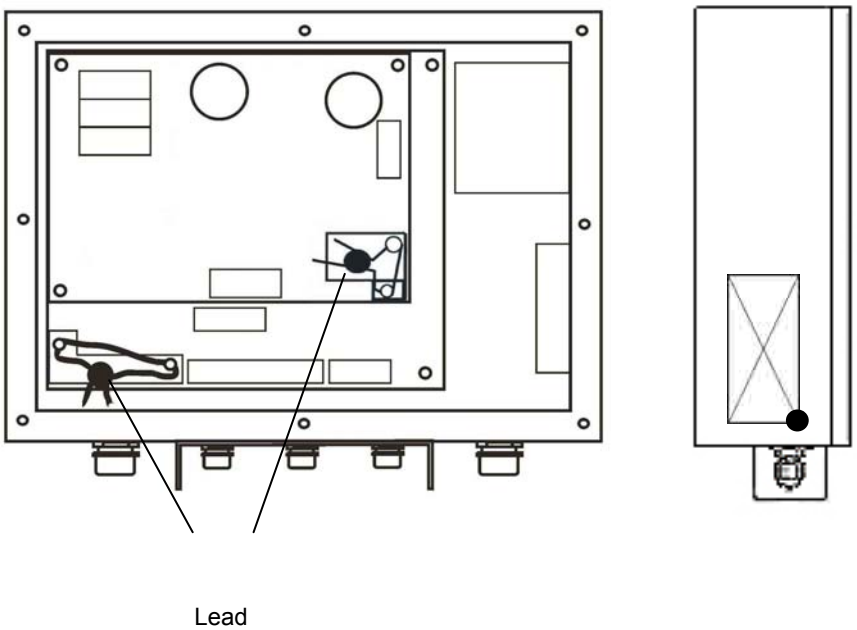



(b) Panel Type Housing – Typical Sealing Using Wire and Lead Type

FIGURE S550 – 5

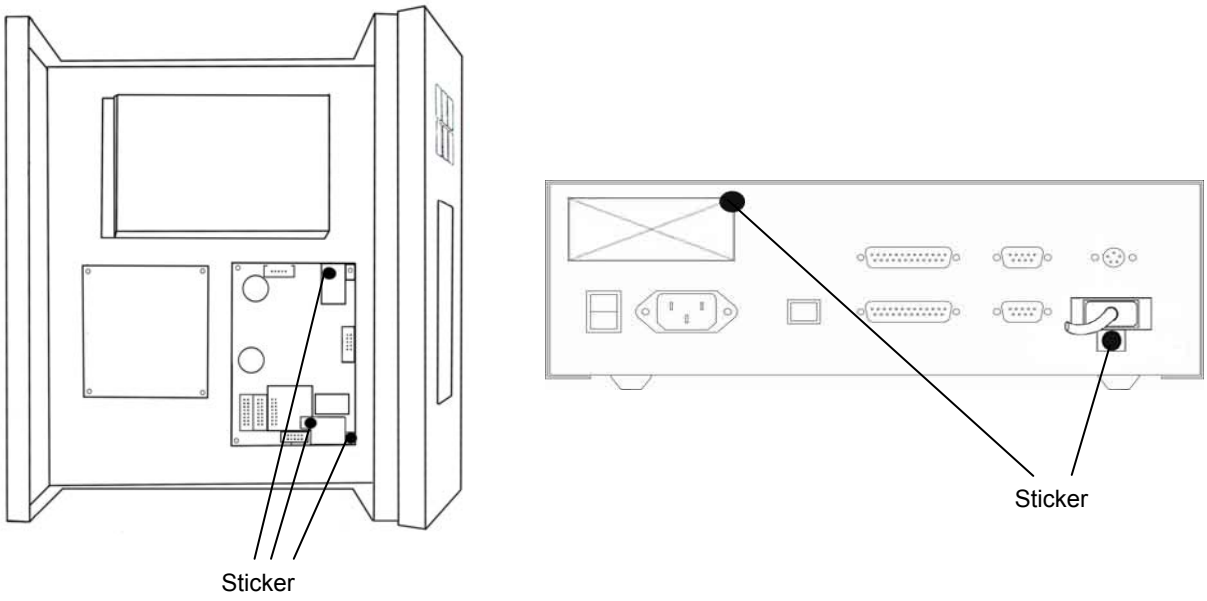



(a) Stainless Steel Housing– Typical Sealing Using Destructible Adhesive Labels

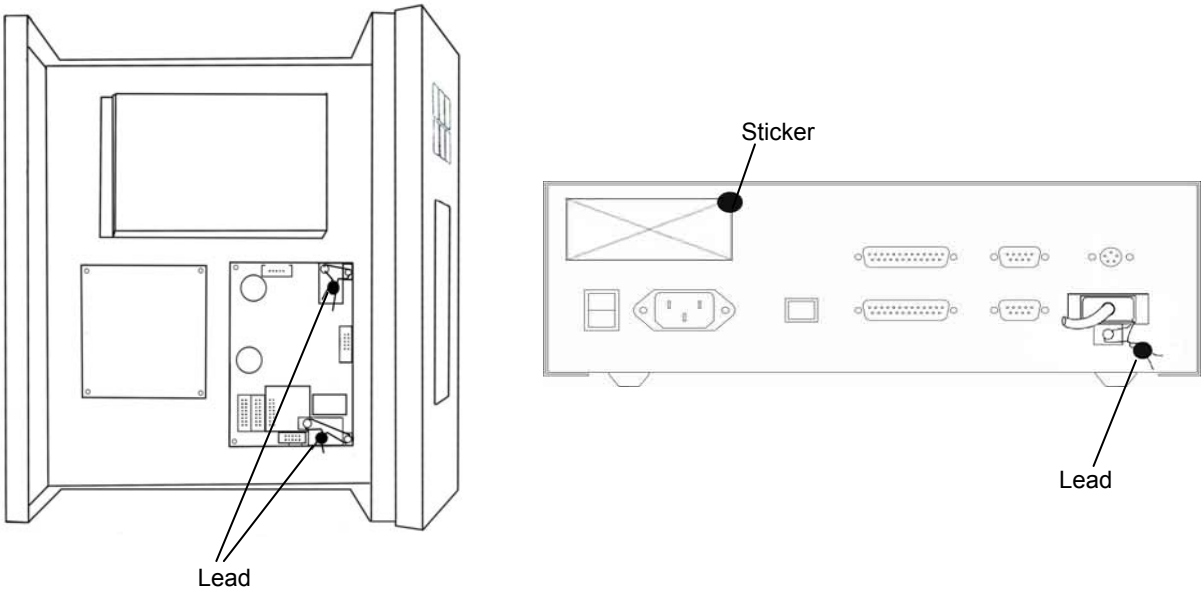



(b) Stainless Steel Housing – Typical Sealing Using Wire and Lead Type

FIGURE S550 – 6




(a) Flintec Model FT-16 Indicator – Typical Sealing Using Destructible Adhesive Labels




(b) Flintec Model FT-16 Indicator – Typical Sealing Using Wire and Lead Type