

METAL DETECTOR

# Metal Detector AD-4971 Series



Capable of detecting metal contaminants in products, this system contributes to the delivery of safe products to customers.



*Metal Detection  
Simplified!*

*Provides high sensitivity detection with simple and easy operation.  
Contributes to the delivery of safe products to your customers.*



You can conduct high sensitivity detection with simple and easy operation. The optimal sensitivity setting can be set through the auto sensitivity settings. The phase tracking function enables minimization of product phase and allows constant high sensitivity inspection.



The display utilises a high visibility touch panel color LCD with user friendly Graphic User Interface (audio guidance support function included).



Product images can be quickly uploaded to the metal detector from USB memory, making product identification and uploading fast and simple.



Products can be divided into 10 different groups, with up to 100 products able to be recorded within each group.

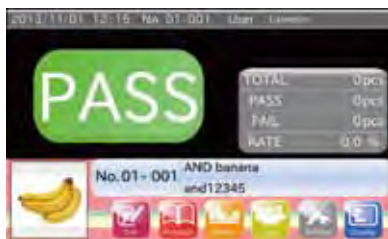


Protected from dust and water to IP65 standards. Hygienic design with the entire system washable.

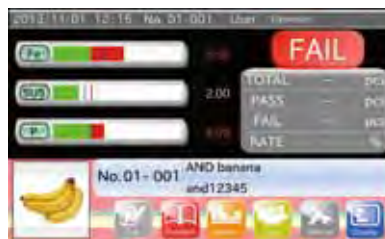


USB memory (sold separately)

## Display examples



Normal display



Bar graph display



Lissajous display



Equipped with Modbus RTU/Modbus TCP as standard. With Modbus communication, a seamless connection can be easily achieved.

Operations such as stopping and starting inspection, collecting data and changing product can all be set from an external device.



All inspection data (csv), operation history (csv), inspection summary data (PDF) and operation check results (PDF) can be outputted to USB memory.

\*USB Flash Drive not included.



Inspection results and operation check results can be outputted to a PostScript printer via Ethernet.



## ■ Operation history

The history of configuration changes can be recorded and displayed.  
Suitable for use in HACCP programs along with the inspection history function.

Users can be registered and their scope of permitted operations controlled according to 4 management levels.

**Operator**

**Supervisor**

**Quality Manager**

**Administrator**

By assigning each user to the appropriate level of access, inadvertent operations can be avoided. \*

\* "Operator" is set as the factory default setting.

Time	User	No.	Item
2013/10/20 12:19:32	Admin	1-001	Login
2013/10/20 12:19:33	Admin	1-001	Language
2013/10/20 12:14:43	Admin	1-001	Language
2013/10/20 16:21:29	Admin	1-001	FAIL.cou
2013/10/20 16:21:31	Admin	1-001	FAIL.cou
2013/10/20 16:21:33	Admin	1-001	FAIL.cou
2013/10/20 17:30:30	Admin	1-001	Logout
2013/10/20 17:30:33	Admin	1-001	Login
2013/10/20 17:40:16	Admin	1-002	Search
2013/10/20 17:41:21	Admin	1-002	Phase

## ■ Inspection history

Inspection results, such as date, time, product codes and inspection results can be recorded to USB memory during inspection.

Inspection history  
output example

2016/07/31	12:30:00	01-001	PASS
2016/07/31	12:30:05	01-001	PASS
2016/07/31	12:30:10	01-001	PASS
2016/07/31	12:30:15	01-001	PASS
2016/07/31	12:30:20	01-001	FAIL 1
2016/07/31	12:30:25	01-001	PASS
2016/07/31	12:30:30	01-001	FAIL 2
2016/07/31	12:30:35	01-001	PASS
2016/07/31	12:30:40	01-001	PASS
2016/07/31	12:30:45	01-001	PASS
2016/07/31	12:30:50	01-001	FAIL 1

Date      Time      Code      Detection result

## Specification

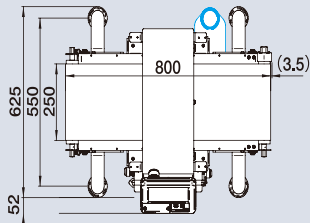
Model	AD-4971-3510	AD-4971-3517	AD-4971-3525	AD-4971-4517	AD-4971-4525
Aperture size	350(W)x100(H)mm	350(W)x170(H)mm	350(W)x250(H)mm	450(W)x170(H)mm	450(W)x250(H)mm
Pass height	80mm	150mm	230mm	150mm	230mm
Conveyor belt speed	10~60m/min				
Carrying capacity	3kg (10~30m/min)	2kg (30~60m/min)		6kg (10~30m/min)	3kg (30~60m/min)
Display	7inch touch panel color display				
Operation method	Touch panel (WVGA), Key switch				
Number of recorded items	1000 items including product data and image				
Communication interface	"Ethernet LAN : Modbus TCP / TCP / IP(PostScript printer) RS-485 / 232C : Modbus RTU / Serial communication USB : USB memory (for history storage, image import use)"				
External input	Non-voltage contact input 4 points				
External output	Relay output 8 points				
Dust/water resistance specifications	IP65 compliant				
Operation temperature/humidity range	0~40°C / Humidity below 85%(with no condensation)				
Power supply	Single phase AC100V~240V(+10%,-15%),50/60Hz,100VA				
Material	"Sensor head : Stainless Steel Display : ABS resin Control box : ABS resin Base unit : Stainless steel Conveyor unit : Phenolic resin, stainless steel, aluminum (alumite treatment)"				

## Operating precautions

- Decide where in the production process to install the metal detector by assessing the risk of metal contamination.
  - For raw materials with excessive metal contaminants, install a metal detector before processing begins.
  - For products packed in aluminum foil packages, install a metal detector before the packaging process.
  - For frozen products, install a metal detector after freezing (make sure the product is frozen to the core and is below -18 degrees celsius).
- Production flow of horizontally long or oblique orientation is preferable.
- Keep inspected products as small as possible.
- Keep product temperature constant.
- Installing the metal detector in an area with little vibration is advised.
- Dedicated 100-240V wiring with low noise is advised.
- Make sure to ground the metal detector.
- Remove vibrating or shifting metals near the sensor head.
- Make sure that ground loops are not created by nearby equipment.
- Please prepare a  $\phi$ 4-7mm power cable.



# AD-4971 Series Specifications



## AD-4971-3510

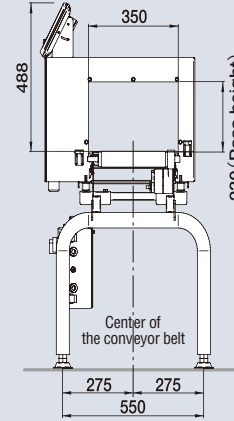
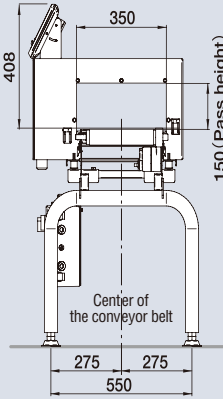
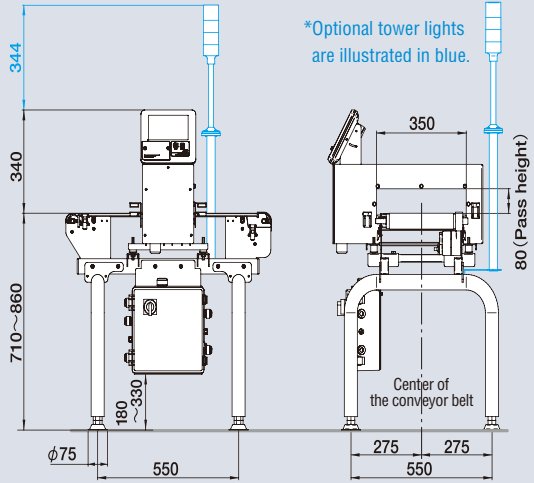
Aperture size:  
350 mm (W) x 100 mm (H)  
(Pass height 80 mm)

## AD-4971-3517

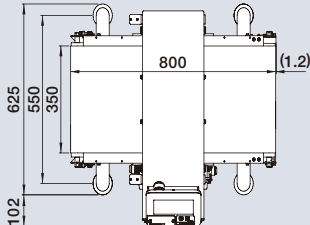
Aperture size:  
350 mm (W) x 170 mm (H)  
(Pass height 150 mm)

## AD-4971-3525

Aperture size:  
350 mm (W) x 250 mm (H)  
(Pass height 230 mm)



Unit : mm

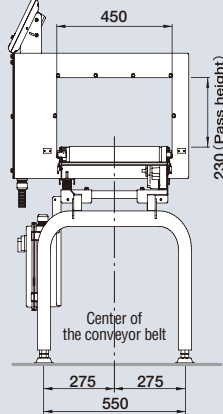
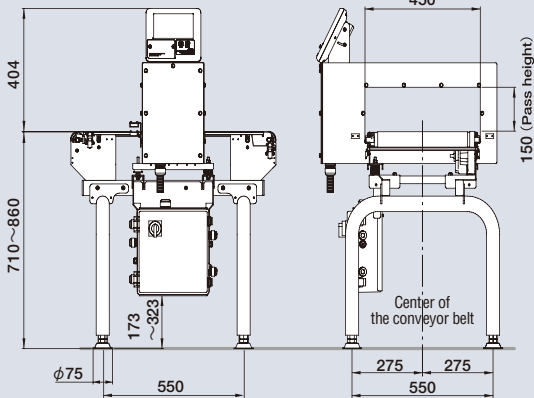


## AD-4971-4517

Aperture size:  
450 mm (W) x 170 mm (H)  
(Pass height 150 mm)

## AD-4971-4525

Aperture size:  
450 mm (W) x 250 mm (H)  
(Pass height 230 mm)

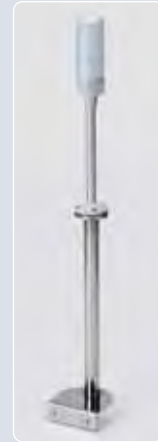


Unit : mm

## Accessories

### AD4971-02 Tower light

IP53 dust and water  
resistance levels



...Clearly a Better Value

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