

# AD-4404

## Check Weighing Indicator

*Fast Sampling Speed for Check Weighing Application  
User Programmable Check-Weighing Mode for Many  
Specific Requirements - Manual Check-Weighing System  
and Fully Automatic Check-Weighing System*



**AND**  
A&D Company, Limited  
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# More Choices from New Advanced Weighing Indicator for Numerous Weighing System Applications

## Features

- Easy to get judgment by Hi/OK/Lo or HiHi/Hi/OK/Lo/LoLo Comparator lights with buzzer
- Foreign Material Detection input function is newly added
- Bar graph shows where the weight of an object falls within the OK range
- Built-in timer controls weighing process by signal from an external photoelectric switch or by programmable weight recognition function that is beneficial for transparent objects
- Weight, Accepted Piece, Accumulated Piece count, name of the object weighed, and standard deviation can be displayed at the touch of button
- Up to 100 sets of target (OK weight), Hi, Lo and tare can be stored by individual code number
- 5 digits of Target and 4 digits of Upper and Lower Limit can be set by the front key operation and number of digit and its location can be customized
- Bright and large 13mm (0.52 inch) fluorescent display
- 1/16000 display resolution capability, precise enough for any application
- Sealed keys keep out dust in industrial environments
- 100 times/second fast sampling
- Standard Current Loop output and Standard RS-485
- Full Digital Calibration makes Zero and Span calibration a breeze
- Complete RFI/EMI protection

## Many Features Simplify Operation

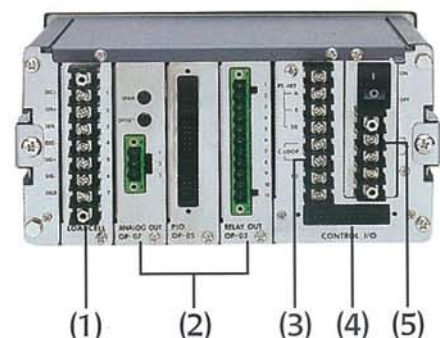
- Display (Default) — Stores and recalls up to 100 sets of pre-set items by individual code number
  - Total number of pieces checked
  - Total number of pieces accepted
  - Target Weight
  - Bar graph indicates deviation from target weight
- Heavy-duty construction
- Easy installation
- Simple calibration
- 11 inputs and 11 open collector output standard
  - Optional Dry contact relay
- Auto Zero Maintenance with adjustable parameters
- Comparator Buzzer
- Front panel key lock out prevents operator tampering
- Fully selectable decimal point positioning
- Programmable Gravity Compensation
- Selectable units of measuring: None, g, kg, t, lbs (USA)



## Rear Panel Descriptions

There are many features, like selectable I/O control terminals, standard RS-485 I/F.

- (1) Load cell input 350Ω L/C up to 8 units Replacement A/D board available  
Accuracy guaranteed to 1/500
- (2) 3 Options slots – Up to 3 options installed
- (3) External control RS-485 standard, up to 32 units controlled simultaneously
- (4) Programmable Control I/O – Input 11/Output 11
- (5) AC Power 85~250V



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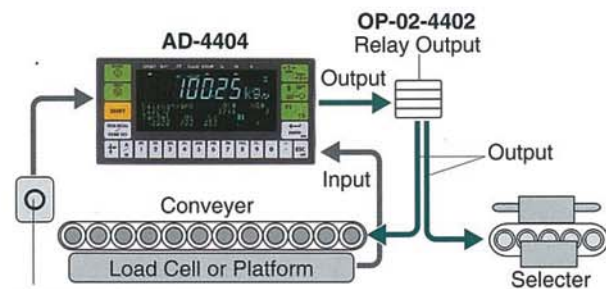
## Check Weighing Indicator

### Set-up Example



## User Programmable Check-Weighing Modes

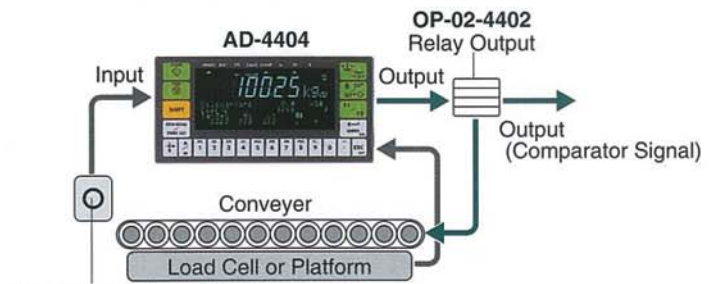
Because check-weighing requirements are not the same for everyone, we designed the AD-4404 to be programmable to your specific requirements.



Photoelectric Switch

● **Fully Automatic (1):**  
Always in motion.  
Automatic reject.

● **Simple Check Weigher**  
In-motion only.  
Records total packages and total acceptable packages.

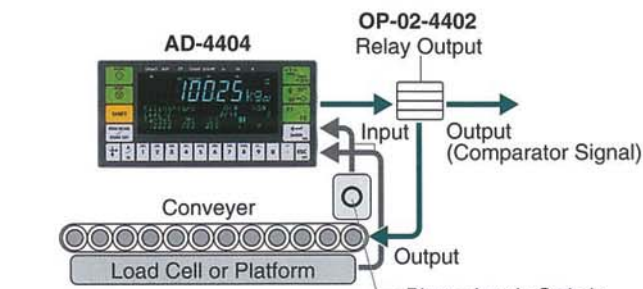


Photoelectric Switch

● **Semi-Automatic (1):**  
Stops conveyor when item is out of acceptable range.

● **Fully Automatic (2):**  
Conveyor stops during weighing for high accuracy.  
Automatic restart.  
Automatic reject.

● **Semi-Automatic (2):**  
Conveyor stops during weighing for higher accuracy.  
Conveyor stops and buzzer sounds for items out of acceptable range.



● **Packing Mode**

Fill container on in-motion scale while stationary.  
Press start button when complete.  
If container is within acceptable range, conveyors starts.



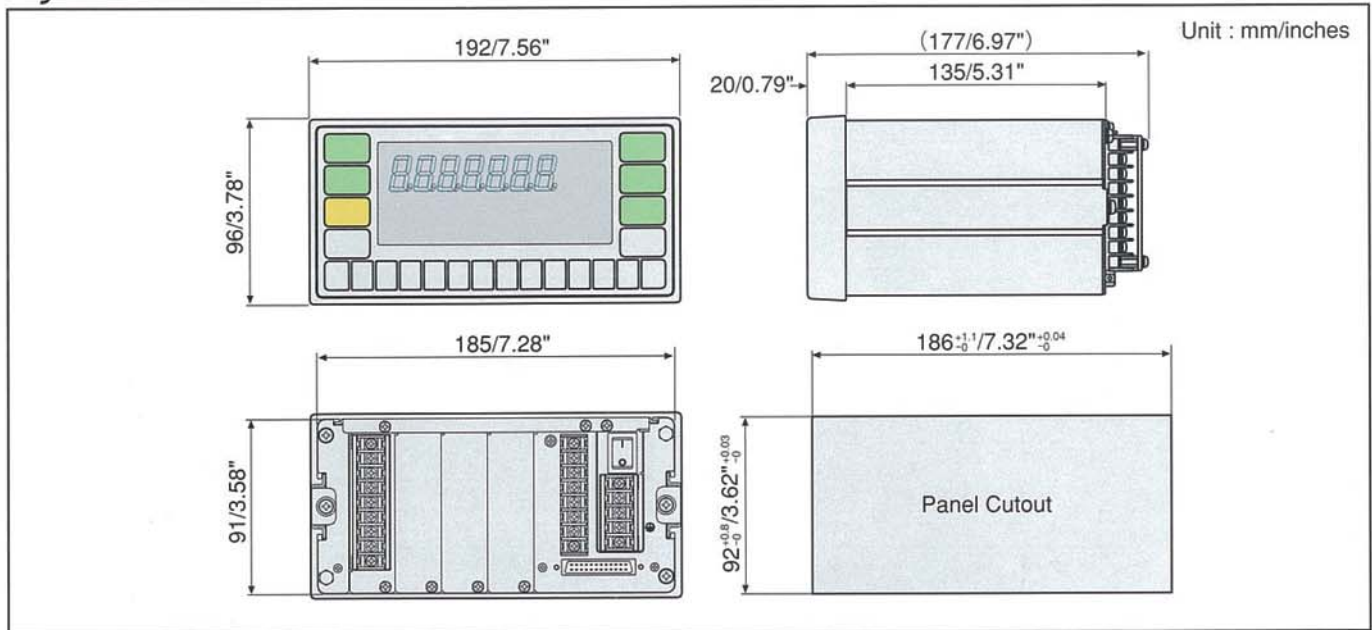
● **HI/OK/Lo**

Set the acceptable weight range and set the buzzer function to your HI/OK/Lo requirements.

# AD-4404

## Check Weighing Indicator

### Physical Dimensions



### Specifications

#### Analog Input and A/D Conversion

|                              |   |
|------------------------------|---|
| Input Sensitivity            | 0.3μV/d   |
| Zero Adjustment Range        | 0mV~20mV (0mV/V~2mV/V)  |
| Input Signal Range           | 0mV~32mV (0mV/V~3.2mV/V)  |
| Load Cell Excitation         | DC 10V±5% 230mA, Remote Sensing<br>(Up to 8 load cells at 350Ω/load cell) |
| Zero Temperature Coefficient | ±(0.2μV+8ppm of dead load)/°C (typically)                                 |
| Span Temperature Coefficient | ±8ppm/°C of reading (typically)   |
| Non-Linearity                | 0.01% of full scale   |
| Input Noise                  | Less than 0.6μVp-p  |
| Input Impedance              | 10MΩ or more  |
| A/D Conversion Method        | Delta Sigma   |
| A/D Resolution               | 1,000,000 counts  |
| Maximum Display Resolution   | 16,000 counts (This limitation can be bypassed)                           |
| A/D Conversion Rate          | 100 times/sec.  |

#### Digital Section

|                         |   |
|-------------------------|---|
| Main Display            | Blue Fluorescent, 7-segment, 7-digit<br>Character Height: 18mm                            |
| Subdisplay              | Blue Fluorescent, 7-segment (54 digits)<br>/5X7 dots (54 digits)<br>Character Height: 5mm |
| Status Displays/Symbols | 8 displays/10 symbols (5X7 dots)  |

#### External Input/Output Section

|                            |                         |
|----------------------------|-------------------------|
| Control I/O                | Inputs 11/Outputs 11    |
| Standard Serial I/F (Ch.1) | RS-485 (Terminal)       |
| Standard Serial I/F (Ch.2) | Current loop (Terminal) |

#### General

|                         |  |
|-------------------------|--|
| Power                   | AC 85V~250V (50/60Hz)  |
| Consumption             | Approximately 30VA   |
| Operating Temperature   | -5~+40°C (23°F~104°F)  |
| Operating Humidity      | Less than 85% RH (non-condensing)  |
| Physical Dimensions     | 192(W) × 135(D) × 96(H) mm<br>7.56(W) × 5.31(D) × 3.78(H) inches<br>With terminal posts:<br>192(W) × 177(D) × 96(H) mm<br>7.56(W) × 6.97(D) × 3.78(H) inches |
| Panel Cutout Dimensions | 186(W) × 92(H) mm<br>7.32(W) × 3.62(H) inches  |
| Net Weight              | Approximately 1.8 kg / 4.0 lb  |

#### Options

|            |                   |
|------------|-------------------|
| OP-01-4402 | BCD Output        |
| OP-02-4402 | Relay Output      |
| OP-03-4402 | RS-422/RS-485 I/O |
| OP-04-4402 | RS-232C I/O       |
| OP-05-4402 | Parallel I/O      |
| OP-07-4402 | Analog Output     |

#### Accessories

|         |                    |
|---------|--------------------|
| AD8118A | Journal Printer    |
| AD8118B | Universal Printer  |
| AD8121A | Dot matrix Printer |
| AD8917  | External Display   |
| AD8512  | Digital Comparator |
| AD8951  | Comparator Light   |

Specifications subject to change for improvement without notice.

# A&D

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