

# EM-DLC\*

# AD-4212C

## Series

\* The EM-DLC is a high precision electromagnetic weighing sensor with an integrated analog-to-digital converter.



Remote controller (optional)



**To those who wish to double  
the production efficiency**



**AND** ...Clearly a Better Value  
A&D Company, Limited

# Learn Exactly How to Improve Your Production-line Weighing System!

Do you struggle with any of the following problems...?

- Weighing is slow.
- Instruments take up space.
- Weighing sensors do not last long.
- Display units are redundant.
- Cabling is complex and expensive.

If your answer is “yes,” the AD-4212C Series of electromagnetic digital load cells (EM-DLC) are definitely worth trying. Because of...

## Fast Stabilization of 0.5 Seconds

Using our field-proven, Compact Super Hybrid Sensor (C-SHS)<sup>i</sup> technology, the AD-4212C realizes a weighing speed of 0.5 seconds or less for 1 mg resolution<sup>ii</sup> (1.3 seconds for 0.1 mg resolution).

\*i Patent pending

\*ii For weighing of up to 30 g excluding the tare

Please visit our video library at [www.aandd.jp](http://www.aandd.jp) to see a demonstration.

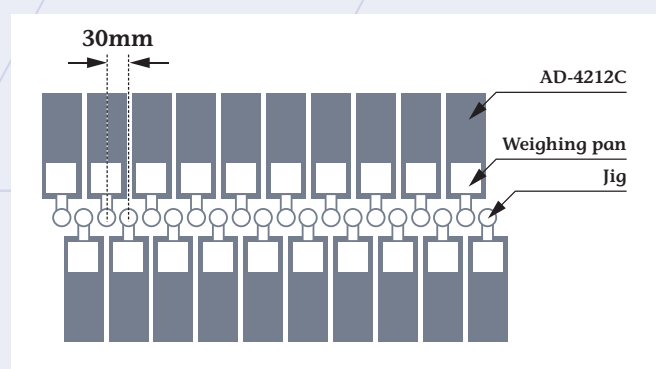


## Compact Size with a 59 mm Width

Again, thanks to the C-SHS, the width of the AD-4212C is just 59 mm, making it ideal for installation in narrow spaces.



### Installation images



## High Durability and Protection

Our tests have shown that the AD-4212C can easily withstand 10 million repeated loadings or more. In addition, the AD-4212C incorporates our patented shock absorber under the weighing pan. It copes with movement in all directions so that the sensor is protected from actuator malfunctions.

## IP65 Dust and Water-proof Construction

The AD-4212C is well suited for powder or liquid weighing. The IP65 construction protects it from any accidental spilling in measurement.

## Direct Connection to a Panel Computer, PC, or PLC

The AD-4212C has a sophisticated analog-to-digital converter inside. It can therefore output digital data directly to an external device via its standard RS-232C interface. Whether to add a display unit, such as the AD-8923-CC/BCD or AD-8922A (both sold separately), is completely up to you.



## CC-Link Connection through the AD-8923-CC

The optional remote controller, the AD-8923-CC,<sup>iii</sup> is equipped with a CC-Link interface.<sup>iv</sup> It can transmit the data received from the AD-4212C to a PLC using CC-Link, in addition to displaying the weighing results, changing response speed, and performing calibration.

\*iii The AD-8923-CC and AD-4212C can share the same power supply.

\*iv If you prefer a BCD output, the AD-8923-BCD is also available.



AD-8923-CC (sold separately)

## Other Features

- ✓ **Securable to a base by replacing leveling feet with screws**
- ✓ **High-speed data transmission of up to 50 times/second**
- ✓ **Easy calibration and response speed adjustment using the provided WinCT-AD4212C software**
- ✓ **Also comes with a free calibration mass (200 g, OIML class E2 equivalent)**
- ✓ **LAN communication using the AD-8526 serial/Ethernet converter (sold separately)**

*Possible applications include the management of filling amounts (e.g. electrolyte in batteries or medicines in capsules), management of coating amounts (e.g. liquid resin on LEDs, resist ink on FPDs, grease on bearings, or solder paste on electronic parts), control of dispensed amounts (e.g. ink from ink-jet printers), and many more!*



## Specifications

|   | AD-4212C-301   | AD-4212C-300                                 | AD-4212C-600   | AD-4212C-3100   | AD-4212C-3000   | AD-4212C-6000  |
|---|--|--|--|---|---|--|
| Weighing capacity   | 51 g / 320 g <sup>v</sup>  | 320 g  | 620 g  | 510 g / 3200 g <sup>v</sup>   | 3200 g  | 6200 g   |
| Minimum weighing value (d)  | 0.0001 g / 0.001 g   | 0.001 g                                      | 0.001 g  | 0.001 g / 0.01 g  | 0.01 g  | 0.01 g   |
| Repeatability (Standard Deviation)                                | 0.0002 g / 0.001 g   | 0.001 g                                      | 0.001 g  | 0.002 g / 0.01 g  | 0.01 g  | 0.01 g   |
| Linearity   | ±0.002 g   | ±0.002 g                                     | ±0.005 g   | ±0.02 g   | ±0.02 g   | ±0.04 g  |
| Stabilization time<br>(when set to FAST under a good environment) | d = 0.0001 g : 1.3 sec. <sup>vi</sup><br>d = 0.001 g : 1.0 sec.  | 0 – 30 g : 0.5 sec.<br>30 – 320 g : 1.0 sec. | 0 – 30 g : 0.5 sec.<br>30 – 620 g : 1.0 sec.                         | d = 0.001 g : 1.3 sec. <sup>vi</sup><br>d = 0.01 g : 1.0 sec.                           | 0 – 300 g : 0.5 sec.<br>300 – 3200 g : 1.0 sec.   | 0 – 300 g : 0.5 sec.<br>300 – 6200 g : 1.0 sec.                                    |
| Display refresh rate  | 10 <sup>vii</sup> - 50 times/second                              |  |  |   |   |  |
| I/O unit (RS-232C)  | Bi-directional, 2400 <sup>vii</sup> - 19200 bps                  |  |  |   |   |  |
| Sensitivity drift   | ±2 ppm/°C (10 °C to 30 °C / 50 °F to 86 °F)                      |  |  |   |   |  |
| Operating environment   | 5 °C to 40 °C (41 °F to 104 °F), 85%RH or less (no condensation) |  |  |   |   |  |
| Calibration mass provided   | 200 g (equivalent to OIML Class E2)                              |  |  |   |   |  |
| Applicable calibration mass value                                 | 50 g, 100 g<br>200 g <sup>vii</sup> , 300 g                      | 50 g, 100 g<br>200 g <sup>vii</sup> , 300 g  | 50 g, 100 g<br>200 g <sup>vii</sup> , 300 g<br>400 g, 500 g<br>600 g | 50 g, 100 g<br>200 g <sup>vii</sup> , 300 g<br>400 g, 500 g<br>1000 g, 2000 g<br>3000 g | 50 g, 100 g<br>200 g <sup>vii</sup> , 300 g<br>400 g, 500 g<br>1000 g, 2000 g<br>3000 g | 200 g <sup>vii</sup> , 500 g<br>1000 g, 2000 g<br>3000 g, 4000 g<br>5000 g, 6000 g |
| Weighing unit   | Dimensions   | 59(W) X 231(D) X 91(H) mm                    |  |   |   |  |
|   | Weighing pan   | 50 X 50 mm                                   |  |   |   |  |
|   | Net weight   | Approx. 1.6 kg                               |  |   |   |  |
| Connection cable  | Approx. 10 m   |  |  |   |   |  |
| Power supply  | AC adapter   |  |  |   |   |  |
| Power consumption   | Approx. 11VA (supplied to the AC adapter)                        |  |  |   |   |  |

\*v Smart range function: The display will switch to the standard range automatically when the value exceeds 51 g/510 g but return to the precision range by performing RE-ZERO (tare).

\*vi When the precision range is used

\*vii Factory setting

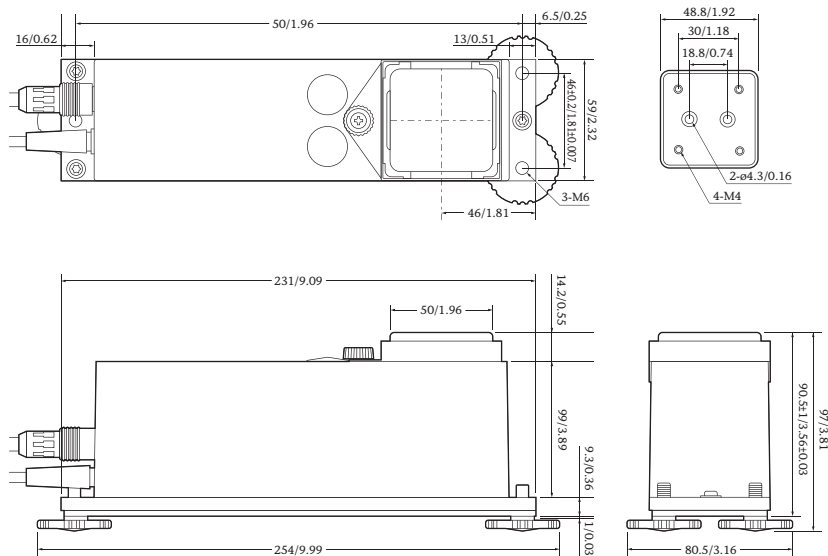
## Accessories

|                       |   |
|-----------------------|---|
| <b>AD-1683</b>        | Static eliminator                         |
| <b>AD-1684</b>        | Electrostatic fieldmeter                  |
| <b>AD-1689</b>        | Tweezers for calibration mass             |
| <b>AD-8121B</b>       | Compact printer                           |
| <b>AD-8922A</b>       | Remote controller                         |
| <b>AD-8922A-01</b>    | BCD output interface <sup>viii</sup>      |
| <b>AD-8923-BCD</b>    | Remote controller (BCD)                   |
| <b>AD-8923-CC</b>     | Remote controller (CC-Link)               |
| <b>AD-8526</b>        | Serial/Ethernet converter                 |
| <b>AX-USB-9P</b>      | Serial/USB converter                      |
| <b>AX-K03590-1000</b> | RS-232C output cable (10 m) <sup>ix</sup> |
| <b>AX-K03590-500</b>  | RS-232C output cable (5 m) <sup>ix</sup>  |
| <b>AX-K03590-200</b>  | RS-232C output cable (2 m) <sup>ix</sup>  |

\*viii Exclusively for the AD-8922A

\*ix Exclusively for the AD-4212C

## Dimensions (mm/inches)



## Materials

Weighing pan = SUS316

Breeze break = SUS304

Upper case = Zinc die-cast (acrylic coating on epoxy basecoating)



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