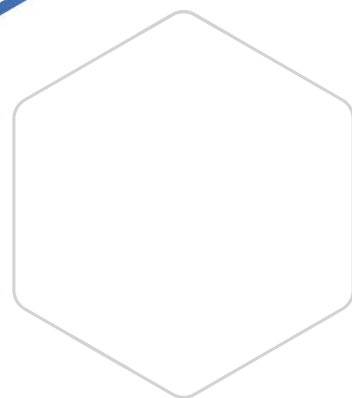


High Precision Weighing Modules

AD-4212 Series



ABOUT A&D

Who We Are

At A&D Weighing, precision is our passion.

As part of A&D Company, Japan, we've spent over four decades shaping the future of measurement and control technology. Our mission is simple: to empower industries to measure what matters most with unmatched accuracy, reliability, and innovation.

From R&D labs to production floors, A&D solutions combine Japanese engineering excellence with global reach, delivering trusted performance and local support wherever you operate.

Our Heritage

Founded in 1977 by a team of visionary engineers, A&D was built on the fusion of Analog and Digital innovation. From our first electronic balances to today's advanced weighing modules, we've remained true to our roots: precision, reliability, and progress.

Today, A&D is a global network spanning Asia, Europe, and America. United by one purpose: to make precision accessible, scalable, and enduring.

Our Services

We do more than build instruments, we deliver complete weighing solutions.

From concept to calibration, our specialists provide:

- Expert integration into production systems
- On-site installation, service, and training
- Fast, reliable calibration and support

With A&D, you gain more than equipment, you gain a partner committed to your performance.

The AD-4212 Series

The AD-4212 Series is the embodiment of A&D's precision heritage. Compact, durable, and built for high-speed accuracy.

Engineered for automated production lines, these modules deliver micro gram precision, rapid stabilisation, and unrivaled repeatability over millions of cycles.

Whether in pharma, food, or high-tech manufacturing, the AD-4212 helps you achieve consistency, compliance, and confidence in every measurement.

AD-4212A/B

High Precision & Quick Stabilisation

The AD-4212A/B series of A&D's production-line balances is not only suitable for building extremely sensitive weighing systems, but it is also fast and surprising affordable.

AD-4212A

Display unit



2 m
(removable)

Weighing unit

Quick reference sheet

80 mm

AD-4212B

Display unit



2 m
(removable)

Weighing unit

Quick reference sheet

80 mm



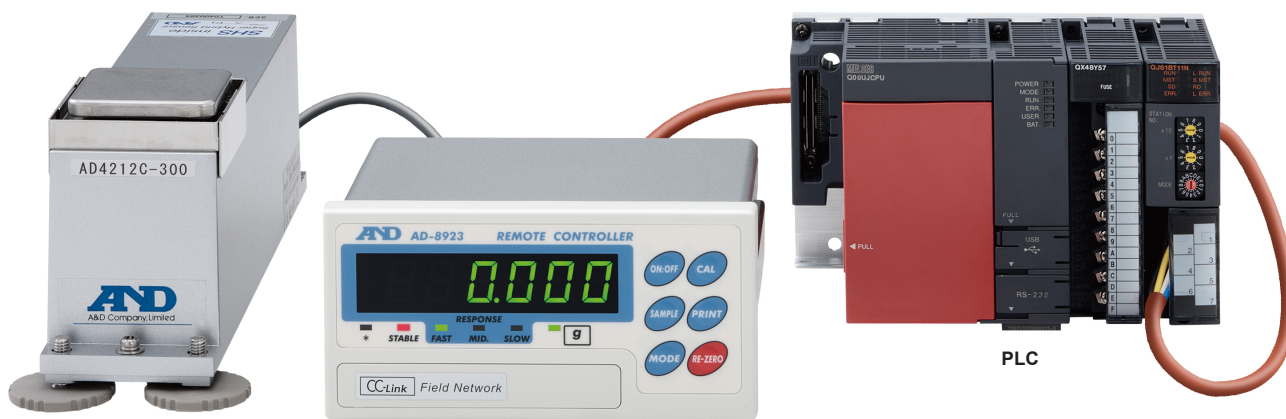
Wall/panel mounting

AD-4212C

Precision Made Simple

Compact, durable, and fast, the AD-4212C delivers reliable results while fitting effortlessly into your workflow. Perfect for modern production where accuracy and speed matter most.

- IP65 Dust and Water-proof Construction
- Fast Stabilization of 0.5 Seconds
- Compact Size with a 59 mm Width
- High Durability and Protection
- IP65 Dust and Water-proof Construction
- Direct Connection to a Panel Computer, PC, or PLC
- CC-Link Connection through the AD-8923-CC
- 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
- Comes with a free calibration mass (200 g, OIML class E2 equivalent)
- LAN communication using the AD-8526 serial/Ethernet converter (sold separately)



AD-8923-CC (sold separately)

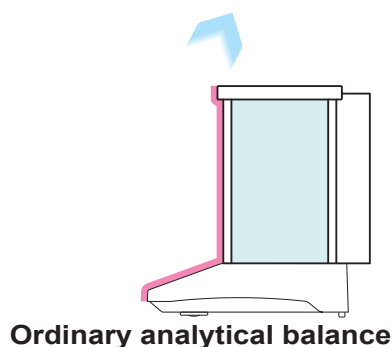
AD-4212D

Compact Power, Maximum Precision

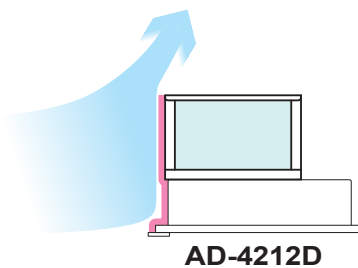
The AD-4212D series brings the precision of high-end laboratory analytical balances to production lines/ systems, glove boxes and fume cupboards with unprecedented flexibility and utility. High Resolution, High Stability & Space saving.



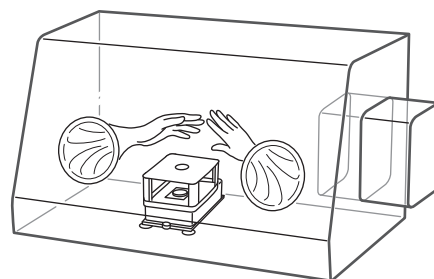
- IP65 dust and waterproof
- Minimum weighing value from 1 μ g
- EM-DLC*1 technology for direct connection to a PC or PLC
- Internal calibration function
- Guarded against vertical and transverse overloading
- Adaptable to a special weighing pan
- Removable leveling feet



Ordinary analytical balance



AD-4212D



AD-8922A, AD-8923-BCD and AD-8923-CC Remote Controllers (all sold separately)



AD-8922A



AD-8923-BCD



AD-8923-CC

AD-8526 Serial/Ethernet Converter (sold separately)



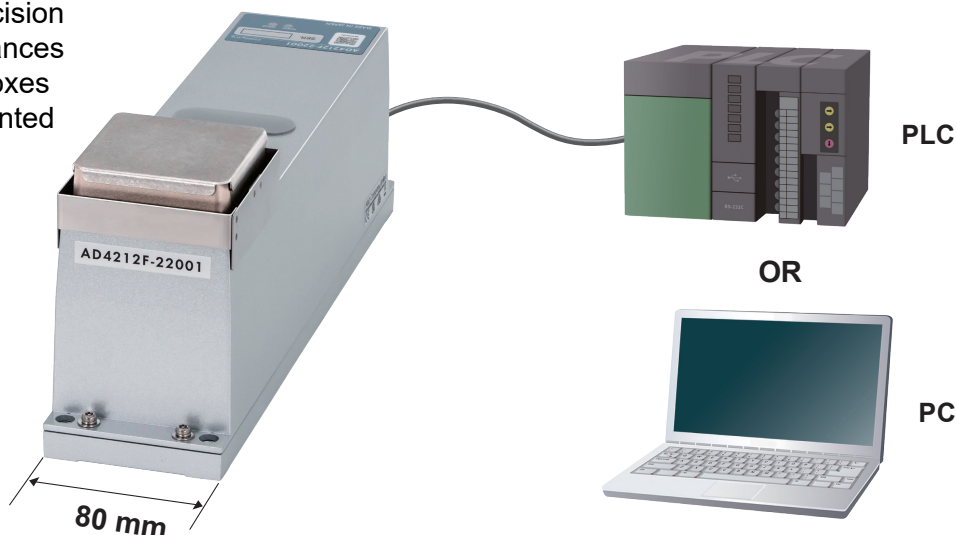
Via the AD-8526, the RS-232C output from the AD-4212D can be converted and connected to LAN-Ethernet.

*5 The AD-8923-BCD/CC only displays the last six digits (but outputs the complete data).

AD-4212F

Smart Weighing, Seamless Integration

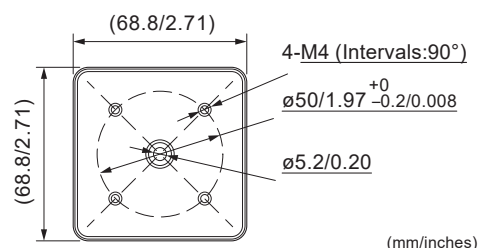
The AD-4212F series brings the precision of high-end laboratory analytical balances to production lines/systems, glove boxes and fume cupboards with unprecedented flexibility and utility. High Resolution, High Stability & Space saving.



*1 An RS-232C/USB converter, such as AX-USB-9P (sold separately), is required for a PC that has no RS-232C interface.

- Special weighing pan/jig
- Weighing data display/logging
- Response characteristics settings
- Weighing Data Simulator (WDS)
- Smart-range function (AD-4212F-6203D)
- IP65 dust and waterproof
- Impact Shock Detection (ISD)
- RS-232C/RS-485 output
- Embedded terminating resistor
- Configurable data transmission rate
- Super Hybrid Sensor (SHS) for fast stabilization and high resolution
- Self-check by using the Electronically Controlled Load (ECL)
- Diverse peripherals available to expand communication methods with PLCs

Pan support dimensions



The following devices can be used for conversion between RS-232C and a different interface/output to connect the AD-4212F series to a PLC:



AD-8922A
(Remote controller)

For BCD, comparator, or analog output*9



AD-8923-BCD/CC
(Remote controller)

For BCD (AD-8923-BCD) or CC-Link (AD-8923-CC)



AD-8551R
(RS-232C to Modbus-RTU converter)

For Modbus-RTU



AD-8552EIP
(RS-232C to EtherNet/IP converter)

For EtherNet/IP

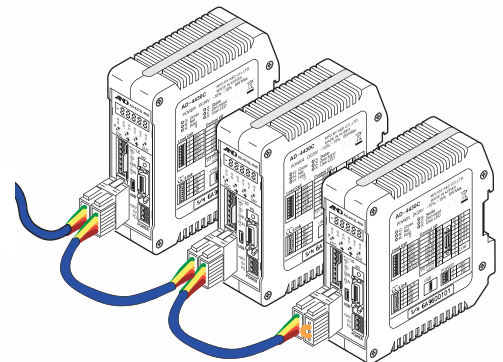
*9 One of AD-8922A optional interfaces needs to be installed.

AD-4212L

Precision in Motion

The AD4212L Weighing Module delivers high-speed, high-precision results with unmatched reliability. Built compact and tough, it combines vibration-resistant stability with seamless integration, making it the perfect choice for fast-paced production lines.

- Compact size weighing unit with a width of 30mm
- Fast response time
- Din rail mounting type display unit
- Standard RS-485 interface for Modbus-RTU
- Modbus-RTU connection (max. 31 units)#
- Standard control I/O (6 input / 8 output points)
- Weighing sensor equipped with an overload protection mechanism for up, down, left, right, front and rear making it extremely durable
- Digital filter that can remove vibration without using a lot of mechanical devices to prevent vibration



Discover Precision

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SPECIFICATIONS

AD-4212A/B

Specifications

Models	AD-4212A-100	AD-4212A-200	AD-4212A-600	AD-4212A-1000
Capacity	110 g	210 g	610 g	1100 g
Readability	0.1 mg	1 mg		
Repeatability (standard deviation)	0.15 mg	1 mg		
Linearity	±0.3 mg	±2 mg	±3 mg	
Stabilisation time (typical when set to FAST)	0-30 g: 1.1 sec 30-110 g: 1.3 sec	0-30 g: 0.8 sec 30-210 g: 1.0 sec	0-30 g: 0.9 sec 30-610 g: 1.1 sec	0-30 g: 0.9 sec 30-1100 g: 1.1 sec

Models	AD-4212B-101	AD-4212B-102	AD-4212B-201	AD-4212B-301
Capacity	31 g / 110 g ^{*viii}	110 g	210 g	310 g
Readability	0.01 mg / 0.1 mg ^{*viii}	0.01 mg	0.1 mg	
Repeatability (standard deviation)	0.05 mg / 0.1 mg	30 g: 0.02 mg 100 g: 0.04 mg	0.1 mg	0.2 mg
Linearity	±0.05 mg / ±0.2 mg	±0.1 mg	±0.2 mg	±0.3 mg
Stabilisation time (typical when set to FAST)	4.0 sec / 2.5 sec	4.0 sec ^{*ix}	2.5 sec	

AD-4212C

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 ^v	320 g	620 g	510 g / 3200 g ^v	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
Stabilisation time (when set to FAST under a good environment)	d = 0.0001 g : 1.3 sec. ^{vi}	0 – 30 g : 0.5 sec.	0 – 30 g : 0.5 sec.	d = 0.001 g : 1.3 sec. ^{vi}	0 – 300 g : 0.5 sec.	0 – 300 g : 0.5 sec.
	d = 0.001 g : 1.0 sec.	30 – 320 g : 1.0 sec.	30 – 620 g : 1.0 sec.	d = 0.01 g : 1.0 sec.	300 – 3200 g : 1.0 sec.	300 – 6200 g : 1.0 sec.

AD-4212D

Specifications

Models	AD-4212D-33	AD-4212D-32	AD-4212D-302	AD-4212D-301
Weighing capacity	32 g	5.1 g / 32 g ^{*i}	320 g	320 g
Minimum weighing value	0.001 mg	0.001 mg / 0.01 mg	0.01 mg	0.1 mg
Repeatability (standard deviation)	0.002 mg ^{*ii}	0.004 mg ^{*ii} / 0.02 mg	0.02 mg ^{*iii}	0.07 mg ^{*iii}
Linearity	±0.02 mg	±0.03 mg	±0.15 mg	±0.25 mg
Stabilisation time (when set to FAST under a good environment)	Approx. 7 sec	Approx. 7 sec	Approx. 7 sec	Approx. 3 sec

AD-4212F

Specifications

Models	AD-4212F-6203D	AD-4212F-10202	AD-4212F-22001
Capacity	510 g / 6200 g ^{*i}	10200 g	22000 g
Readability (d)	0.001 g / 0.01 g ^{*i}	0.01 g	0.1 g
Repeatability (standard deviation)	0.002 g / 0.01 g	0.01 g	0.1 g
Linearity	±0.02 g	±0.03 g	±0.2 g
Stabilisation time ^{*ii}	d = 0.001 g : 1.3 secs	0 to 300 g : 0.5 secs	0 to 300 g : 0.5 secs
	d = 0.01 g : 1.0 sec	300 to 10200 g : 1.0 sec	300 to 22000 g : 1.0 sec

AD-4212L

Specifications

Models	AD-4212L-R50	AD-4212L-R100
Weighing capacity	51g	110 g
Minimum weighing value	0.001 g	0.001 g
Repeatability (standard deviation)	0.001 g	0.002 g
Weighing pan	20.5 mm	20.5mm
Stabilisation time (when set to FAST under a good environment)	0-5g - 0.3 second 5-51g - 1.0 second	0-5g - 0.3 second 5-110g - 1.3 second