

 **KYOWA**



INSTRUMENTS
**TECHNO
TEST**

HS-A Series "Handy Scale" Portable Weighing Systems



KYOWA handy scales are easier and more comfortable to use

HS-A Series vehicle weighing systems are portable.

After taking this system to the measurement site, measuring weight is as easy as setting the detection unit on the ground and then riding the vehicle over the detection unit.



Safe design to help prevent hand pinching

The case uses torque hinges. The lid closes slowly to help prevent injury.

Cables with excellent wear resistance

The new cables are easy to lay and less prone to damage by friction. Environmental resistance, such as against oil adhesion, has also been enhanced for outdoor use.

Jam-free printer

The paper cutter and paper output area have been integrated to prevent paper from jamming. It is also easier to set rolled paper.

“Remote sensing” compatible

The new design prevents voltage drops in the sensor power supply caused by the wire resistance of the cable length, increasing measurement accuracy.



50% lighter, 46% smaller

363 W x 284 D x 121 H mm*

The indicator was designed with portability in mind. The battery is built into the device and the weight has been reduced, resulting in roughly half the weight of the previous model. (The new model is approx. 3.3 kg.)

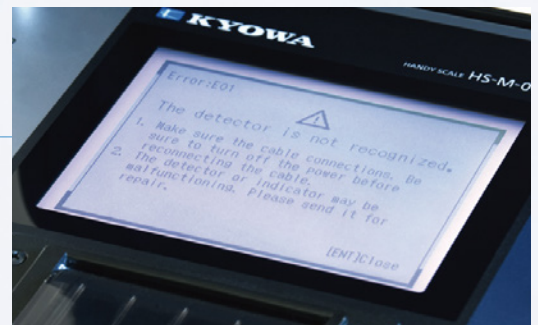
It is compact and can be used without a power supply for increased versatility.

(It can run continuously for approx. 7 hours.)

*Not including protrusions

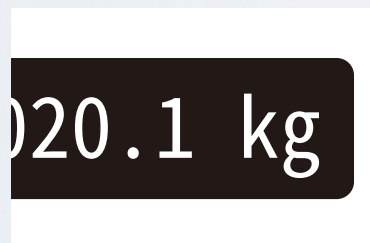
Simply follow the instructions if an error occurs to resolve problems worry-free at the site

If an error occurs, the cause and solution are displayed on the screen, making the device easy to use even for beginners. Enhanced on-screen support helps to recover quickly and resume working.



Used even in areas of poor visibility, to help prevent accidents and avoid trouble

The indicator buttons are backlit to enhance visibility in dark locations. This makes it easier to know what to do and helps prevent mistakes.



Optional one-digit display after the decimal point

The display can be modified to display more detailed readings. Simply mention this to the salesperson when placing your order.



Collect data on a USB flash drive

A USB flash drive can be used to collect measurement results stored in the built-in memory, or to update the firmware.



Measure four-wheeled vehicles and more

We can also make an eight-channel indicator for measuring six-wheeled and eight-wheeled vehicles, or a wide detection unit (rated capacity 5000 kg only) for large vehicles.

HS-A Series Enhancements

POINT
01

Easier to move

Light

Easy



Lighter and more compact

The design has been revised to significantly reduce the weight and size of the indicator.

It is easier to carry, making it ideal for narrow spaces or moving around sites.

POINT
02

Easier to use

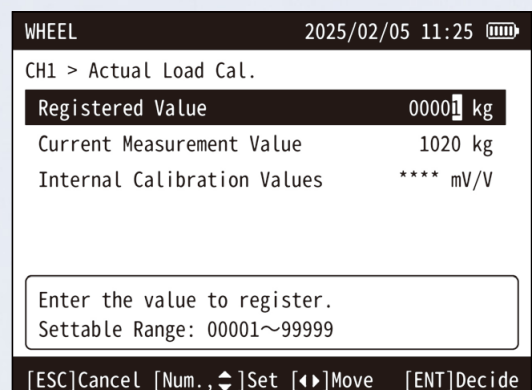
No
mistakes

Intuitive

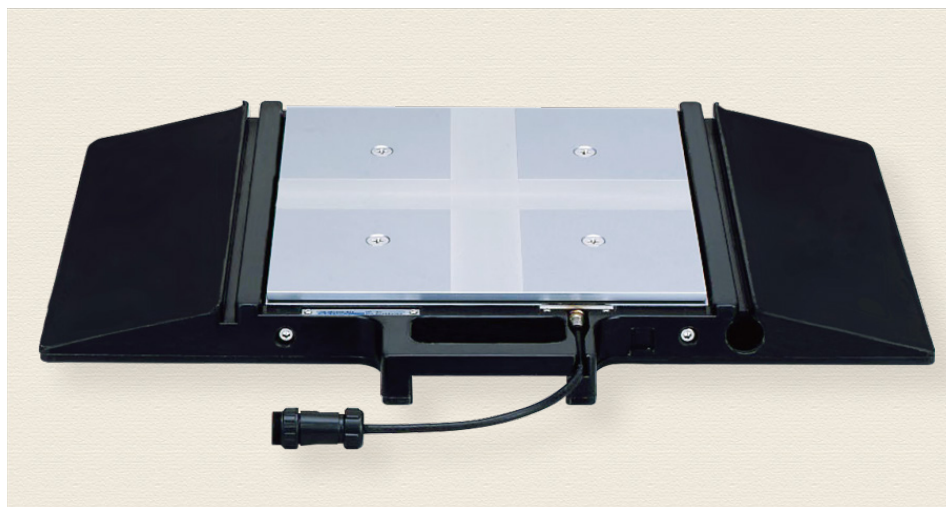
Intuitive for easy configuration

Additional explanations have been added to functions to make it easier for everyone to use, from experts who previously found teaching difficult, to beginners who previously found learning difficult.

On-screen instructions have also been added to prevent operators from skipping required steps during calibration.



Continue using your existing detection units.



If you are already using a previous HS Series device, you only need to purchase the new indicator.

*Your device will need to be combined and calibrated by KYOWA. Please contact us for details.

Detection unit features

- Rubber slope Easy and safe to ride over
- Lightweight design Easy to carry
- IP63 Can even be used in dusty environments

Example Applications

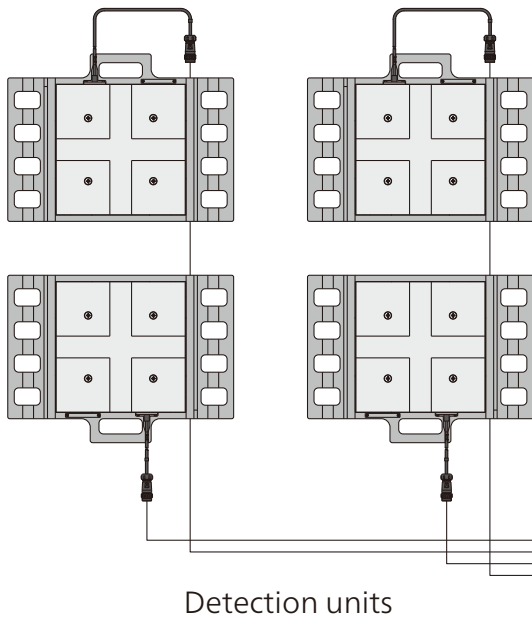


■ Test vehicles



■ Racing industry

System Configuration Example

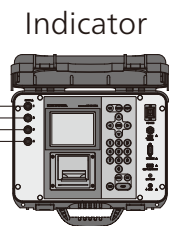


*We can also make models with 2, 3, 6, or 8 numbers of detection units.

*Indicators support English and Japanese languages.

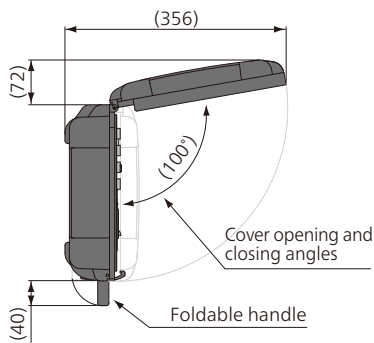
*NOT LEGAL FOR TRADE

This system cannot be used for business transactions where weight determines the price.

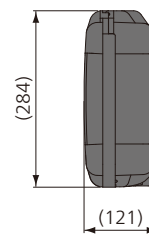
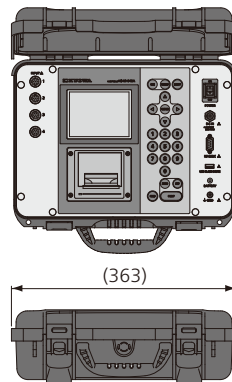


- USB flash drive
- Printer paper
- RS-232C

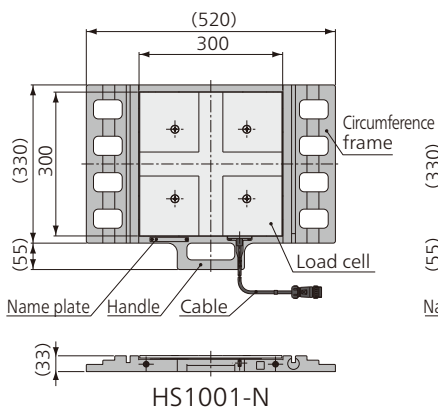
Dimensions



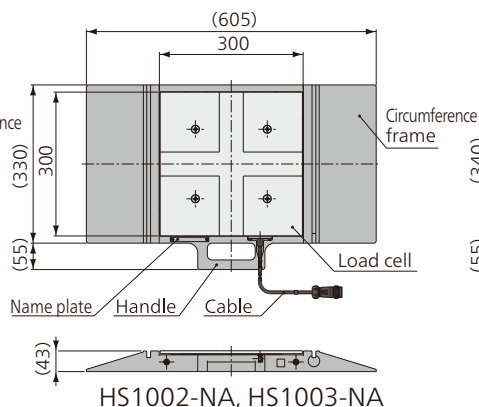
HS-M-040A



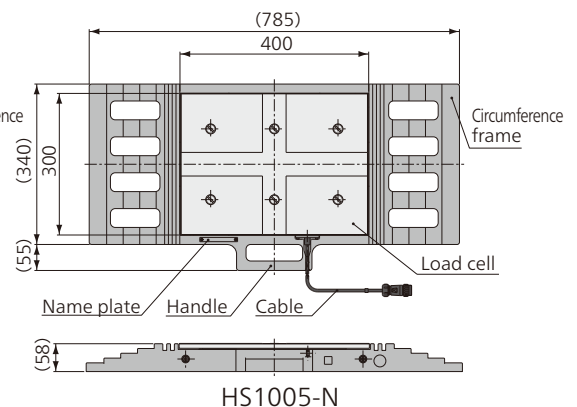
Unit: mm



HS1001-N



HS1002-NA, HS1003-NA



HS1005-N

Specifications of Standard System

	Maximum Weight	Maximum Wheel Load	Models (Note 1) (Note 2)	System Accuracy	Indicator	Detection Unit	No. of Detection Unit and No. of Connection Cable
2 detection units	2000 kg	1000 kg	HS-A-1001-2 Z5/Z10***	±0.25% FS	HS-M-040A	HS1001-N	2 each
	4000 kg	2000 kg	HS-A-1002-2 Z5/Z10***			HS1002-NA	
	6000 kg	3000 kg	HS-A-1003-2 Z5/Z10***			HS1003-NA	
3 detection units (Note 3)	10000 kg	5000 kg	HS-A-1005-2 Z5/Z10***	System accuracy is for use at 25 ±10°C.	HS-M-040A	HS1005-N	3 each
	3000 kg	1000 kg	HS-A-1001-3 Z5/Z10***			HS1001-N	
	6000 kg	2000 kg	HS-A-1002-3 Z5/Z10***			HS1002-NA	
	9000 kg	3000 kg	HS-A-1003-3 Z5/Z10***			HS1003-NA	
4 detection units	15000 kg	5000 kg	HS-A-1005-3 Z5/Z10***			HS1005-N	4 each
	4000 kg	1000 kg	HS-A-1001-4 Z5/Z10***			HS1001-N	
	8000 kg	2000 kg	HS-A-1002-4 Z5/Z10***			HS1002-NA	
	12000 kg	3000 kg	HS-A-1003-4 Z5/Z10***			HS1003-NA	
	20000 kg	5000 kg	HS-A-1005-4 Z5/Z10***			HS1005-N	

(Note 1) For Z5 and Z10, connection cable length. Z5 is 5 m. Z10 is 10 m. (Model of connection cable) Z5: HS-TT-01 Z5 Z10: HS-TT-01 Z10

(Note 2) The number of displayed digits can be changed by *** at the end of the model number.

Nothing: Integer (Standard shipping status) DP1: One decimal place indication

(Note 3) If using three detection units, attach the included dummy plug to channel 4 of the indicator.

Operating Temperature	Indicator: -10 to 40°C (However, charging is 0 to 40°C) Detection unit: -10 to 60°C (Note) Use in a not condensing environment. Avoid sudden temperature changes when storing and measuring.
Installation Location	The maximum display error is 1% because the acceleration of gravity differs depending on the location. Refer to the instruction manual and enter the gravitational acceleration at the location where the product will be used. If you know the gravitational acceleration of the location where the product will be used in advance, specify it when ordering.

【Standard Accessories】

- AC adapter UNI345-1238-P (Included with HS-M-040A)
- Printer paper TP-S245L-1 (Included with HS-M-040A)
- Dummy plug PRC03-12A10-7M-ZDP (1 piece included only with 3-detection-unit model)
- For detection unit soft case HC1001N1, HC1003N1, HC1005N1
- Cable bag HCWN

Specifications of Main Detection Units

Models	Rated Capacity	Rated Output (Approx.)	Weight* (Approx.)
HS1001-N	1000 kg	1.0 mV/V	8 kg
HS1002-NA	2000 kg	0.7 mV/V	11 kg
HS1003-NA	3000 kg	1.0 mV/V	
HS1005-N	5000 kg		

*Including cable

Specifications of Main Indicator

Indication Value	Integer (Standard shipping status) (Note) Inspection can also be performed and shipped with one decimal place.
Indication Content	·Wheel weight, Axle weight, Left-right weight and Total weight Wheel weight, Axle weight and Left-right weight can be switched between [kg] and [%]. ·Cross % display Cross % display means the ratio of the weight of the right front wheel + left rear wheel and the left front wheel + right rear wheel to the total weight.
Printer Paper	Thermal roll paper (Width: 58 mm, Diameter: 38 mm, Length: 19 m) Model: TP-S245L-1
Supply Voltage	10 to 30 VDC, 30 W MAX 100 to 240 VAC (When using accessory AC adapter for charging.)

Performance	
Rated Capacity	See table above.
Nonlinearity	Within ±0.1% RO
Hysteresis	Within ±0.1% RO
Repeatability	0.1% RO or less
Rated Output	See table above.
Environmental Characteristics	
Safe Temperature	-20 to 70°C (Non-condensing)
Compensated Temperature	-10 to 60°C (Non-condensing)
Temperature Effect on Zero	Within ±0.01% RO/°C
Temperature Effect on Output	Within ±0.01%/°C
Electrical Characteristics	
Safe Excitation	20 VDC
Recommended Excitation	1 to 10 VDC
Input Resistance	395 ±5 Ω
Output Resistance	350 ±5 Ω
Cable	4-conductor (0.3 mm ²) chloroprene shielded cable, 6 mm diameter by approx. 20 cm long (HS1005-N: approx. 25 cm long), terminated with a connector plug NJW-207-AdF6 (Shield wire is connected to the case.)
Mechanical Properties	
Safe Overloads	120%
Weight	See table above.
Degree of Protection	IP63 (JIS C 0920/IEC 60529) (Note) IP63 is not permanent. Waterproof performance could be decreased depending on the usage environment.

【Precautions】

- Measure on a level paved surface without any unevenness on the installation surface. Do not insert objects between the installation surface and the detection unit. Doing so may adversely affect the measurement accuracy. Check the installation surface carefully before use.
- If there is vibration during measurement, the measurement value may not be stable.
- The detection unit is drip-proof. Submersion in a puddle, exposure to water such as in rainy or snowy environments, or exposure to high-pressure water flow or spray from high-pressure washing may cause malfunction.
- The indicator has no protection class. Submersion in a puddle, exposure to water such as rain or snow, exposure to high-pressure water flow or spray such as high-pressure washing, or use in the hot sun or direct sunlight exceeding the operating temperature range may cause malfunction.



You can count on Kyowa.

Feel free to contact us if there is something you would like to know or do not understand about Kyowa products.

Sales Network



Other Countries or Regions

Please visit below URL.

Website: product.kyowa-ei.com/en/company/sales-network

KYOWA ELECTRONIC INSTRUMENTS CO., LTD.

Global Sales Division:
 3-5-1, Chofugaoka, Chofu, Tokyo 182-8520 Japan
 TEL: +81-42-489-7220 FAX: +81-42-488-1122
 E-mail: support-en@kyowa-ei.co.jp
 Website: www.kyowa-ei.com

Americas

KYOWA AMERICAS Inc.
 TEL: +1-248-348-0348
 E-mail: sales@kyowa-americas.com
 Website: www.kyowa-ei.com

China

KYOWA ELECTRONIC (SHANGHAI) TRADING CO.,LTD.
 TEL: +86-21-64477770
 E-mail: support-zh@d1.kyowa-ei.co.jp
 Website: product.kyowa-ei.com/zh

India

KYOWA ELECTRONIC INSTRUMENTS CO.,LTD.(India Branch)
 TEL: +91-124-427-7227
 E-mail: kyowaindia1@kyowa-ei.co.jp
 Website: www.kyowa-ei.com



Safety Precautions

Be sure to observe the safety precautions given in the instruction manual, in order to ensure correct and safe operation.

- Specifications and designs are subject to change without notice.
- Please contact us if using these products for special applications.
- Company and product names mentioned herein are the trademarks or registered trademarks of their respective owners.
- The warranty details can be found on the "Product Warranty" attached to the product and on our website.
- Unauthorized use or reproduction of contents of this catalog is prohibited.
- All dimensional drawings use "millimeters" as the standard unit. "mm" has been omitted for convenience.



JQA-0821
 JQA-EM4824