F701+

ENHANCED VERSION WEIGHING INDICATOR



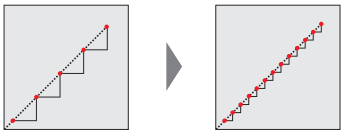
A weighing indicator F701 is functionally improved !!
Superb performance is achieved
with consideration for convenience at the site.

- High performance filter
- I/O board can be easily replaced on site

PROFIBUS DIN 192×96 RoHS2

High sampling rate & resolution

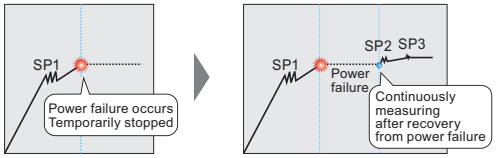
High-speed A/D conversion and powerful digital processing capability of 500 times/sec.
High resolution of 1/10000 in all input range.
* It can be changed to 100 times/sec.



Measurement can be performed quickly and precisely due to the high speed A/D conversion.

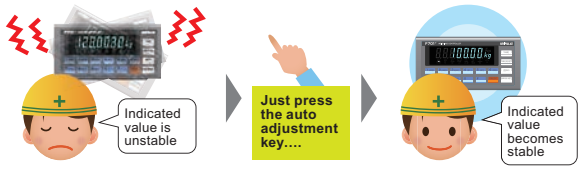
Recovery form temporary stop / power failure

Temporary measurement stop, and Operation restart mode are available. Measurement can be performed continuously from the middle .



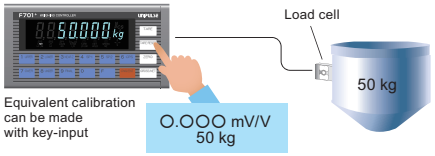
Auto filter adjustment

Capable of adjusting filter automatically according to an operating condition. Helpful for setting at the test operation.



Equivalent calibration

Equivalent calibration can be made easily by just inputting rated capacity and output of load cell to F701+ with key button.



Digital low pass filter

As it is resistant to vibration, measurement can be performed quickly and precisely.
* Conventional analog filter is also selectable

Connecting with printer by using RS-232C communication

Time data can be output for efficient data management.

Displaying accumulated value with one-touch

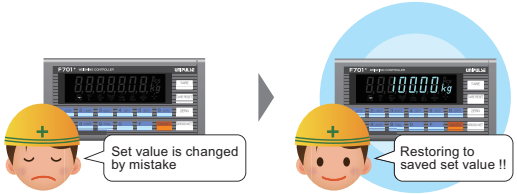
Accumulated value can be shown with one-touch

Various optional interface

D/A converter, BCD output, RS-232C, RS485(Selectable from Modbus-RTU and UNI format), PROFIBUS-DP are available.

Set value restoration

Set value can be restored, in case set value is changed by mistake.



Sink type / Source type are available

Type of I/O signal are selectable form Sink and Source.

Specifications

Analog	Excitation voltage	DC 10 V±5% Output current: Within 120 mA Remote sense type (Up to four 350 Ω load cells can be connected in parallel)
	Signal input range	−0.5 to +3.0 mV/V
	Zero adjustment range	Automatic adjustment by digital processing −0.5 to +2.0 mV/V
	Gain adjustment range	Automatic adjustment by digital processing 0.3 to 3.0 mV/V
	Min. input sensitivity	0.3 μV/count
	Accuracy	Non-linearity: Within 0.01% FS Zero drift: Within 0.2 μV/℃ RTI Gain drift: Within 15 ppm/℃
	A/D converter	Speed: Selectable from 500 times/sec., 100 times/sec. Resolution: 24 bit (binary)
	Min. indicated resolution	1/10000
	Secondary calibration	Equivalent input calibration Accuracy when secondaryl calibration is performed: 1/1000 (room temperature)
Filter	Analog	Low-pass filter: Selectable from 2, 4, 6, 8 Hz (−12 dB/oct.)
	Digital	Low-pass filter: Selectable from OFF, 1, 1.5, 2, 2.5, 3, 4, 5 Hz
Display	Display unit	Character height 18.5 mm Numerical display (7 digits) by fluorescent display tube
	Display value	5 digits, Sign: Minus sign displayed on most significant digit
	Display frequency	Selectable from 3, 6, 13, and 25 times/sec.
	Capacity	5 digits
	Min. scale division	Can be set from 1 to 100
	Over scale display	LOAD: A/D converter input over, −LOAD: A/D converter input minus over, OFL1: Net weight over, OFL2: Capacity +9 scale division, OFL3: Gross weight over
	Center zero	A true zero point or the center of each value is displayed.
	Unit	Selectable from kg/ g/ t/ lb/ N/ None
	Status display	SP3/ SP2/ SP1/ LOCK/ ZT/ ZALM/ STAB/ TARE/ NET/ GROSS/ HI LIM/ HI/ GO/ LO/ LO LIM/ HOLD/ NZ/ CZ
Setting	Setting method	Settings are made by operating the membrane keys. Setting by RS-232C interface (option) and RS-485 interface (option) is also possible
	Memory of set value	Calibration value and a part of set value: NOV.RAM (nonvolatile RAM) Other set values: F-RAM (nonvolatile RAM)
	Protect of set value	Protect can be set by Lock switch and Lock parameter.
	Setting item	Upper limit, Lower limit, Near zero, Set point 1, Set point 2, Compensation, Over, Under, Final, Comparison inhibit time, Judging time, Complete output time, Compensation feeding time, Number of times for AZ, Number of times for judging, Auto free fall compensation regulation value, Tare setting, Weighing function 1, Weighing function 2, Weighing function 3, Sequence mode, Function key inhibited, Filter, Motion detect, Zero tracking, Setting value LOCK, Balance weight value, Capacity, Min. scale division, Net over, Gross over, DZ regulation value, Function selection, Compensation for gravitational acceleration, Zero calibration, Span calibration, Equivalent calibration, Input selection, Output selection, Moving average filter, Restart setting set point 1, Restart setting set point 2, Restart setting set point 3
External signal	You can specify whether PNP (Source) type or NPN (Sink) type when order the F701+.	
	Output signal (12 points)	NZ, SP1, SP2, SP3, Under, Over, Lower limit, Upper limit, Stable, Output selection 1, Output selection 2, Output selection 3 Output turns ON when transistor is ON. ∗ PNP (Source) type: External voltage must be prepared separately by customer.
	Input signal (8 points)	G/N, D/Z, One-touch tare subtraction, Input selection 1, Input selection 2, Input selection 3, Input selection 4, Input selection 5 Contact (relay, switch etc.) or non-contact (transistor, open collector etc.) can be connected. ∗ PNP (Source) type: External voltage must be prepared separately by customer.

* Please note that there are possibilities of individual differences in a color tone on display devices such as LEDs, fluorescent display tubes and LCDs due to manufacturing process or production lots.

Interface	SIF : 2-wire type serial interface PRF : PROFIBUS interface (Option) PROFIBUS-DPV0 *2 BCO : BCD parallel data output interface (Option) *2 DAC : D/A converter (Option) *2 485 : RS-485 communication interface (Selectable from Modbus-RTU, UNI format) (Option) *1 232 : RS-232C communication interface (Option) *1 2 optional interface can be added in addition to the standard interface. With *1: only one option is avalable. With *2: only one option is avalable.	
General specification	Power supply voltage	AC 100 to 240 V (+10%-15%) (Free power source 50/60 Hz)
	Inrush current	1.5 A, 1 ms AC 100 V average load condition (cold start at room temperature) 2.5 A, 1 ms AC 200 V average load condition (cold start at room temperature)
	Power consumption	7 W typ.
	Operating conditions	Operation temperature: −10 to +40℃ Storage temperature: −20 to +85℃ Humidity: 85% RH or less (non-condensing)
	Dimension	192(W) × 96(H) × 160(D) mm (Not including projections)
	Weight	Approx. 1.5 kg
Attachments	AC input cord (Nominal rating 125 V) 2 m.....1 Mini screwdriver .....1 Operation manual .....1 Load cell connector .....1 D/A converter connector (with D/A converter option) 1	57 series 24 p connector for external input/output .....1 BCD output connector (with BCD output option) 1
Optional accessories	CAAC2P-P2: CAAC3P-CEE7/7-P1.5: CA4131: CA4230: CA4311: CN3P-2P: CN10: CN21: CN23: CN34:	AC input cord 2 m (Same as the attachment) AC input cord (Voltage resistance: 250 V) 1.5 m (6-wired) cable with connector at one end 3 m PRC (6-wired) conversion relay cable 0.3 m PRC (6-wired) conversion relay cable (4-wired to 6-wired) (for 520A use) 1 m 3P-2P converter plug for AC input cord Load cell connector (Same as the attachment) 57 series 36 p connector for BCD output 57 series 24 p connector for external input/output (Same as the attachment) D-Sub 9 p connector for RS-232C

Structure of product code

F701+ ① □ ② □□□ ③

① Standard unit

② I/O output

Sign	Output type
Standard	Sink type (NPN)
ISC	Source type (PNP)

③ Interface

Sign	Interface
Standard	SIF

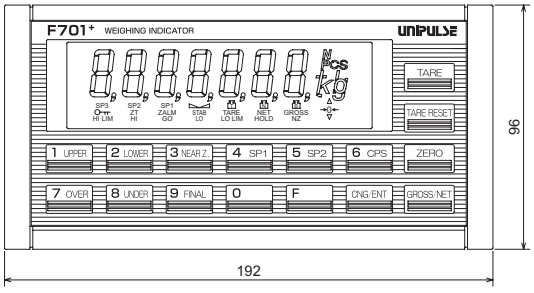
↓ 2 optional interface can be added in addition to the standard interface.

PRF	PROFIBUS	∗2
BCO	BCD output (Sink type)	∗2
DAC	D/A converter	∗2
485	RS-485 (Modbus-RTU / UNI-format)	∗1
232	RS-232C	∗1

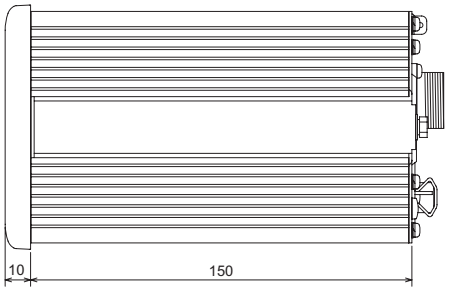
∗1 : only 1 option is available.
∗2 : only 1 option is available.

External dimension

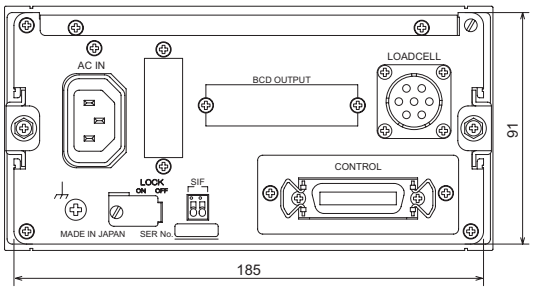
(Front)

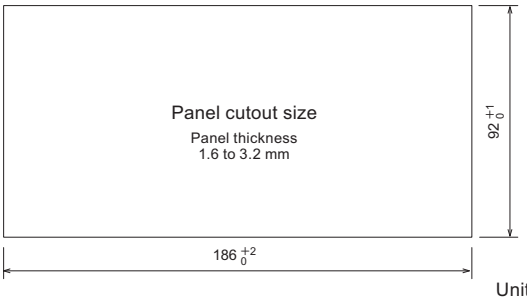


(Side)



(Rear)





Unit: mm