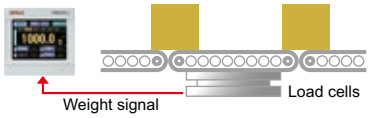
F650-CK

IN-MOTION CHECK WEIGHING INDICATOR

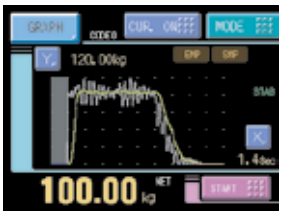
CC-Link V2 DeviceNet DIN 96 RoHS2

- With the high-performance filter to attenuate noise and vibration, stable and accurate weight measurement can be achieved.
- Check if the weight is over or under the target weight and/or sort products into preset grades or classes (sorting into 11 grades or classes at the most).
- Control signal is sent out for controlling conveyors.In-motion check weigher can be designed with only F650-CK.
- Useful weighing modes to improve efficiency and accuracy.
  Auto sorting mode is useful when conveyor speed, size, and weight are not constant.
  Reduction of processing capacity can be prevented as zero adjustment can be performed during operation.
- Detect the situation where two cartons are on the scale.
  Even if two cartons are on the scale,weight of each individual carton will be weighed and judged (OK/NG).



■ Waveform display

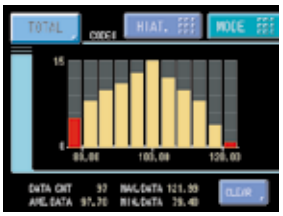
Waveform can be constantly monitored.



Display waveform before and after the filter setting is changed.

■ Real-time statistic

In order to process statistics in real time, you can constantly check and monitor the variation and distribution of data.



Histogram display

Specifications

Analog	Excitation voltage:	DC 5 V ±5% Output current: Within 90 mA Ratiometric method (Up to 6 350 Ω load cells can be connected in parallel.)
	Signal input range:	−0.3 to +3.0 mV/V
	Zero adjustment range:	−0.2 to +3.0 mV/V Automatic adjustment by digital computation
	Gain adjustment range:	Automatic adjustment by digital computation
	Accuracy	Non-linearity: Within 0.01% FS±1 digit (when 3.0 mV/V is input) Zero drift: 0.025 μV/℃ RTI typ. Gain drift: 1 ppm/℃ typ.
	A/D converter	Conversion rate: 1000 times/sec. Resolution: 24 bit (binary)
	Theoretical calibration	Equivalent input calibration: accuracy when theoretical calibration is performed: 1/1000
Filter	Digital filter Low-pass filter	Moving average (common for all modes): OFF, 2 to 999 times Variable: 2.0 to 10.0 Hz
Display	Display unit	TFT color LCD module 3.5 inch (320 × 240 dot) Display area: 71(W) × 53(H) mm
	Weight display	5-digits (signs: minus sign on the highest numerical digit)
	Unit	NONE, kg, t, g, N, lb
	Decimal place	0, 0.0, 0.00, 0.000
	Status display	BUSY, GO, EMP, SMP, COMP, NZ, STAB, RANK1 to 11
Total function	Histogram display: Numbers of data for each 9 weight ranges are displayed. Two set of data out of the range are displayed as well. Weighing results: Results are displayed for each code. Statistics: Display statistics data stored on F650-CK.Display average weight, maximum weight, minimum weight, number of data, population standard deviation, sample standard deviation, difference between maximum and minimum, latest data	
External signal	External output (10 points): Transistor open collector output. (Emitter = COM terminal) The output turns to LOW when the transistor turns ON. OVER or RANK1 or RANK2[0]/ GO or RANK2 or RANK2[1]/ UNDER or RANK3 or RANK2[2]/ NONE or RANK4 or RANK2[3]/ NONE or RANK5 or STROBE/ OUTPUT SEL. 0/ OUTPUT SEL. 1/ OUTPUT SEL. 2/ OUTPUT SEL. 3/ OUTPUT SEL. 4 External input (10 points): ON when shorted with COM terminals by contact (relay, switch, etc.) or non-contact (transistor, TTL open-collector output, etc.) CODE0/ CODE1/ CODE2 or KEY LOCK/ Graph drawing/ D/Z ON/ TARE ON/ TARE OFF/ Accumulation command/ Measurement start/ Measurement reset	
Interface	SIF: 2-wire serial interface 232: RS-232C communication interface CCL: CC-Link interface (option) ODN: DeviceNet interface (option) BCO: BCD parallel data output interface (Sink type) (option)	BSC: BCD parallel data output interface (Source type) (option) DAV: D/A converter (voltage output) (option) DAI: D/A converter (current output) (option) 485: RS-485 interface (option) * Only one option can be installed.
Option	ISC: I/O Source Board	
General performance	Operating voltage･Power consumption: AC 100 to 240 V (+10−15%) (50/60 Hz) 4 W typ. Operating conditions: Operation temperature: −10 to +40℃ Storage temperature: −20 to +60℃ Humidity: 80% RH or less (non-condensing) Dimension･Weight: 96(W) × 96(H) × 138(D) mm (Not including projections) Approx. 1.0 kg	
Attachments	AC power cable (voltage resistance: 125 V) (3 m)×1, Jumper wire×2, Operation manual×1, FCN series I/O connector (with cover)×1, Analog I/O connector terminal block (Already mounted on the main unit)×1, Mini driver (when D/A converter option is selected) ×1, BCD output connector (when BCO option is selected)×1, DeviceNet connector (when ODN option is selected)×1, CC-Link connector (when CCL option is selected)×1	
Optional accessories	CA372-I/O: CA600-BCDCNV: CA81-232X: CAAC2P-B3: CAAC3P-B3: CA325AC3P-B3: CAAC3P-CEE7/7-B2: CAA325AC3P-CEE7/7-B2: CN50: CN51: CN55: CN60: CN71: CN72: CN80:	Cable with FCN connector at one-end 3 m FCN connector 32p-57･36p cabtyre cable 0.3 m miniDIN-D-Sub9p cross cable 1.5 m AC input cord 3 m (Same as the attachment) AC input cord 3 m AC input cord 3 m AC power cable (Voltage resistance: 250 V) 2 m AC input cord (Voltage resistance: 250 V) 2 m FCN series I/O connector (with cover)(Same as the attachment) BCD output connector FCN series I/O connector (with diagonal cover) Circular DIN 8p connector for RS-232C CC-Link connector Double row connector for CC-Link Analog I/O connector terminal block (Same as the attachment)

* 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.

Structure of product code

F650-CK □ □
① ② ③

① Standard unit

② I/O output

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

③ Interface

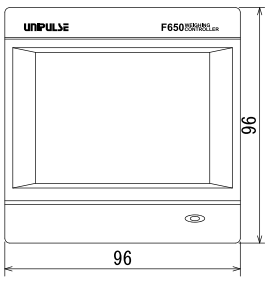
Sign	Interface
Standard	SI/F,RS-232C

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

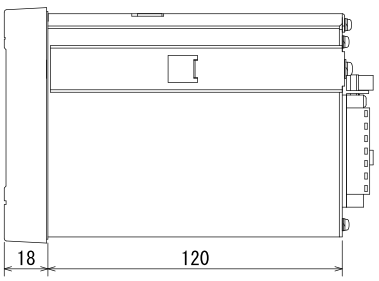
CCL	CC-Link
ODN	DeviceNet
BCO	BCD output (Sink type)
BSC	BCD output (Source type)
DAV	D/A converter (Voltage output)
DAI	D/A converter (Current output)
485	RS-485 (Modbus-RTU /UNI-format)

External dimension

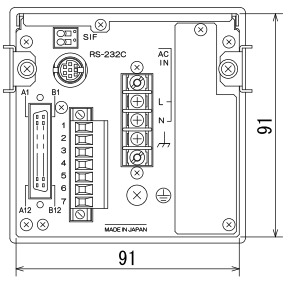
(Front)

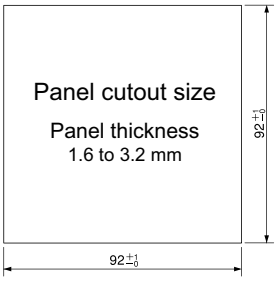


(Side)



(Rear)





Unit: mm