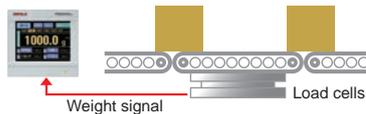


# F650-CK

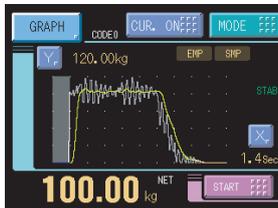
## IN-MOTION CHECK WEIGHING INDICATOR



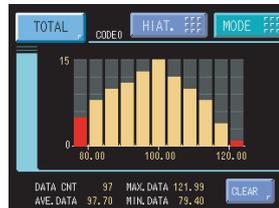
- With the high-performance filter to attenuate noise and vibration, stable and accurate weight measurement can be achieved.
- Check if the weight is over or under the target weight and/or sort products into preset grades or classes (sorting into 11 grades or classes at the most).
- Control signal is sent out for controlling conveyors. In-motion check weigher can be designed only with 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.
- **Real-time statistic**  
In order to process statistics in real time, you can constantly check and monitor the variation and distribution of data.



Display waveform before and after the filter setting is changed.

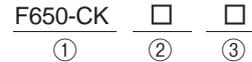


Histogram display

### Specifications

Analog	Excitation voltage : 5 Vdc $\pm$ 5% Output current: within 90mA Ratiometric method (Up to 6 350 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 (when $3.0$ mV/V is input) Zero drift : $0.025\mu$ V/CRTI Typ. Gain drift : $1$ ppm/C Typ
A/D converter	Conversion rate : 1000 times/sec Resolution : 24bit
Theoretical calibration	Equivalent input calibration : accuracy when theoretical calibration is performed : 1/1,000
Filter	Digital filter Moving average (common for all modes) : OFF, 2 to 999 times Low-pass filter Variable : 2.0 to 10.0Hz
Display	Display unit TFT color LCD module 3.5inch (320x240dot) Display area : 71(W) x 53(H) mm
	Weight display 5-digits (signs: minus sign on the highest numerical digit)
	Unit NONE, kg, t, g, N, or lb (selectable)
	Decimal place 0, 0.0, 0.00, or 0.000 (selectable)
	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) : OVER or RANK1 or RANK2 <sup>GO</sup> or RANK2 or RANK2 <sup>1</sup> /UNDER or RANK2 <sup>2</sup> / NONE or RANK4 or RANK2 <sup>3</sup> /NONE or RANK5 or STROBE/OUTPUT SEL. 0/OUTPUT SEL. 1/OUTPUT SEL. 2/OUTPUT SEL. 3/ OUTPUT SEL. 4 External input (10 points) : 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 •DAV: D/A converter(voltage output) (option) •232: RS-232C communication interface •DAI: D/A converter(current output) (option) •485: RS-232C communication interface(option) •CCL: CC-Link interface (option) •BCO: BCD parallel data output interface (Sink type)(option) •ODN: DeviceNet interface (option) •BSC: BCD parallel data output interface (Source type)(option) ※Only one option can be installed.
Option	•ISC: I/O Source Board
General performance	Operating voltage: Power consumption 100 to 240 Vac +10 -15% (50/60Hz) 4W typ Operating conditions: Operation temp. range: $-10$ to $+40^{\circ}$ C Storage temp. range: $-20$ to $+60^{\circ}$ C Humidity: 80%RH or less (non-condensing)
	Dimension -Weight 96(W)x96(H)x138(D)mm (Projections excluded) approx. 1.0kg
Attachments	AC power cable (voltage resistance: 125 Vac ) (3m) x1, Jumper cable x2, Mini screwdriver (when D/A converter option is installed) x1, FCN series I/O connector (with cover) x1, Operation manual x1, BCD output connector (when BCO option is installed) x1, DeviceNet connector (when ODN option is installed) x1, CC-Link connector (when CCL option is installed) x1
Optional accessories	CA372-I/O: cable with FCN connector at one-end 3m CA600-BCDCNV: FCN connector 32p-57-36p cabytre cable 0.3m CA81-232X: miniDIN-D-Sub9p cross cable 1.5m CA325AC3P-B3: AC power cable 3m CA325AC3P-CEE7/B2: AC power cable (voltage resistance: 250 Vac) 2m CN50: FCN series I/O connector (with cover) CN51: BCD output connector CN55: FCN series I/O connector (with diagonal cover) CN60: circular DIN 8p connector for RS-232C CN71: CC-Link connector CN72: Double row connector for CC-Link CN80: analog I/O connector terminal CND01: DeviceNet connector DTC2-PSL: case for F650 GMP96x96: rubber seal

### Structure of product code



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

### External dimension

