

F820 HIGH-SPEC WEIGHING INDICATOR



Weighing process can be visualized.
Weighing system can be configured in shorter time while keeping the top-class accuracy.

- RoHS-compliant product
- High-performance filters to attenuate vibration
- Store 100 sets (codes) of settings
- High-speed sampling & high-resolution

It is equipped with A/D converter with sampling rate of 1200 times/sec. and high-speed digital processor (sampling speed can be changed to 300 times/sec. as well). Also, high display resolution of 1/10000 is guaranteed in all input range.

Measurement sequence function

Sequential control is possible without PLC and other external devices. By setting various parameters and using various timers, you can configure sophisticated weighing system.

■ Feed and discharge gate control

F820 has sequence control functions useful for direct control of feed or discharge gate like auto feed adjustment in case the total weight is under the target weight.

■ Twin net weigher mode

F820 is equipped with functions useful for twin net weigher (bagging machines) such as "clamp" signal output, alternative discharge and so on.

Special software

■ Visualization of weighing process

Fluctuation of weight can be displayed and monitored in curves.

Since waveform and I/O status can be monitored at the same time, you can find out the cycle time and check weight fluctuations when SP1, 2, CMP. signal turns ON/OFF.

Indicated value (readings)
Readings indicated on F820 controller is displayed.

Curve display
Fluctuation of readings can be displayed in curves.

I/O timing chart
Timing chart for I/Os is displayed.

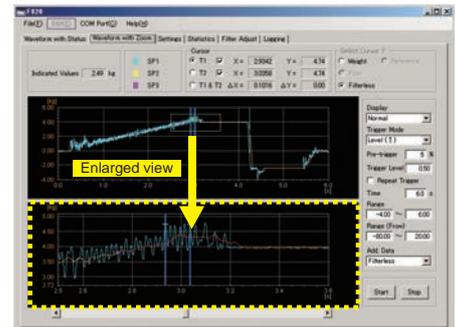
Set points
Weighing set points are displayed (SP1, SP2...).

Cursors
Display cursors and select the type of cursors (X and Y-axis readings are displayed).

Start conditions
You can set start conditions for drawing curves.

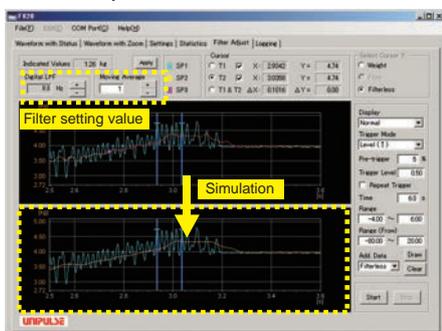
■ Enlarged waveform display

You can select and zoom a section to check in zoom. With the enlarged view, you can check if the weight reading is stable enough and if Set Points and the sampling rate are set properly.



■ Filter effect

Filter settings can be changed, and the effect of filters can be simulated on PC to check if noise and vibration are effectively attenuated.



■ Statistics

Cumulative weight is calculated. Statistic like maximum, minimum, average (mean) weights are also calculated and displayed in this mode.

Codes/readings

Status

Measurement result

Setting value

Statistical data

Conditions for capturing waveforms

Read-out / Writing

■ Edit/save settings

Settings of F820 can be edited and saved on PC (saved in CSV format). It is convenient to save the settings for backup and export it to other units.

■ Logging

Waveform display to monitor weight fluctuations over a long period of time. A maximum of 72 hours data recording.

Specifications

Analog section	Excitation voltage	5 Vdc±5% Output current: within 90mA Ratiometric method (Up to 6 load cells at 350 can be connected in parallel.)
	Signal input range	-0.5 to 3.0mV/V
	Zero adjustment range	-0.2 to 2.0mV/V (automatic adjustment by digital computation)
	Gain adjustment range	0.3 ~ 3.0mV/V (automatic adjustment by digital computation)
	Minimum input sensitivity	0.15µV/count
	Accuracy	Non-linearity: within 0.01%/FS Zero drift: 0.025µV/°C/RTI Typ Gain drift: 1ppm/°C Typ
	A/D converter	Speed: 1200, 300 times/sec. (selectable) Resolution: 24bit (binary)
	Min. display resolution	1/10000
	Theoretical calibration	equivalent input calibration (accuracy when theoretical calibration is performed at ambient: 1/1,000)
	Filter	Low-pass filter: When A/D conversion rate is 1200 times/sec: 6, 8, 10, 12, 16, or 20Hz (selectable) When A/D conversion rate is 300 times/sec: 1.5, 2, 2.5, 3, 4, 5Hz (selectable) Moving average filter : 1 to 512 times
Display section	Display unit	Main display: numerical display (7-digit) with a character height of 18 mm by fluorescent display tube Code (blend): Character height 8mm, numerical display by 7-segment green LED (2-digit)
	Weight display	5-digits (signs: minus sign on the highest numerical digit)
	Display frequency	1, 2, 5, 10 and 20 times/sec (selectable)
	Scale capacity	5-digit numerical values
	Minimum scale division/increment	1 to 50(selectable)
	Unit of measurement	NONE, g, kg, t, or lb (selectable)
	Decimal place	0, 0.0, 0.00, or 0.000 (selectable)
	Over scale display	LOAD (A/D converter input over), OFL1: (Net weight > Net over set value), OFL2: (Gross weight > Capacity +9 scale divisions), OFL3: (Gross weight > Gross over set value)
	Center zero	display true zero point or the center of each value
	Status display	CLAMP, SP3, SP2, SP1, HOLD, COMPL., ZT, ZALM, STAB, TARE, NET, GROSS, NZ, D.CHG, HI, GO, LO, HI LIM, LO LIM, LOCK
Setting section	Setting method :	Can be edited with using membrane switches. Setting can be performed by external devices as well via USB, RS-232C and RS-485 interface and so on.
	Setting value memory :	Parameter, calibration and part of other settings are stored on NOV.RAM (non-volatile memory), and all other settings are stored on F.RAM (another non-volatile memory).
	Setting value protection :	Overwrite protection by "LOCK" switch
External signal	External output (16 points)	Transistor open collector output. Isolation : photo coupler, Rated voltage : 30V, Maximum current : 120mA
	External input (24 points)	The signal can be outputted by making short-circuit between input and common terminal. Isolation : photo coupler
Interface	<ul style="list-style-type: none"> •USB: USB interface •SIF: 2-wire serial interface •232: RS-232C communication interface (option) •BCO: BCD parallel data output interface (option) •DAC: D/A converter interface (option) •485: RS-485 communication interface (Option) <small>※There is a option board slot only for RS-232C. Another option interface (only one option) can be installed as well.</small>	
General performance	Operating voltage	100 to 240 Vac +10 -15% (50/60Hz)
	Rush current	2A, 1msec:AC100V average load condition (cold start at room temperature) 4A, 1msec:AC200V average load condition (cold start at room temperature)
	Power consumption	6W typ
	Operating conditions	Operation temperature range: -10 to 40°C Storage temperature range: -20 to +85°C Humidity: 85%RH or less (non-condensing)

General performance	Dimension	192(W)×96(H)×145(D)mm (Projections excluded) Panel cutout size: 186(W)×92(H)mm
	Weight	approx. 1.7kg
Attachments	AC power cable (voltage resistance:125 Vac) (2m) *1, Load cell connector (JR connector) *1, Connector rubber for load cells *1, 57 series connector for external input/output *1, Mini screwdriver *1, Operation manual *1, BCD output connector (when BCO option is installed) *1, D/A converter connector (when DAC option is installed) *1, RS-485 connector (when 485 option is installed) *1	
Optional accessories	CAAC3P-P2 : AC power cable 2m CAAC3P-CEE7/7-P1.5 : AC power cable (voltage resistance: 250 Vac) 1.5m CN3P-2P-3P-2P converter plug for AC input cord CA4131 : (6-wired)cable with JR connector at one end 3m CA4230 : JR-PRC (6-wired)conversion relay cable 0.3m CA4311:JR-PRC (6-wired)conversion relay cable (4-wired to 6-wired)(for 520A use)1m CN10: Loadcell connector (JR connector) CN21: BCD output connector CN22: 57 series 50p connector for external input/output CN34: D-Sub 9p connector for RS-232 CN70: D/A converter connector	

Model Constitution

F820 □

①

②

① Standard unit

② Interface

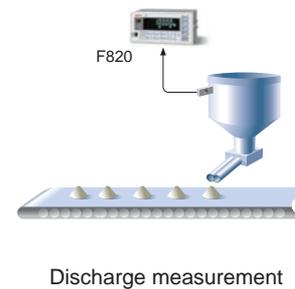
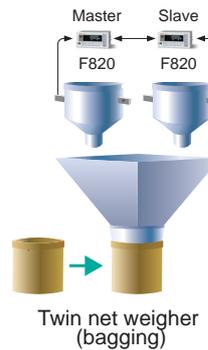
Sign	Interface
Standard	USB, SIF

Optional interface can be added in addition the standard interface.

232	RS-232C
BCO	BCD output (Sink type)
DAC	D/A converter(Current output)
485	RS-485

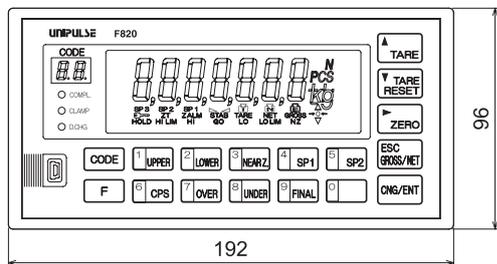
There is an option board slot only for RS-232C. 1 function can be carried in addition to a standard.

Example of application

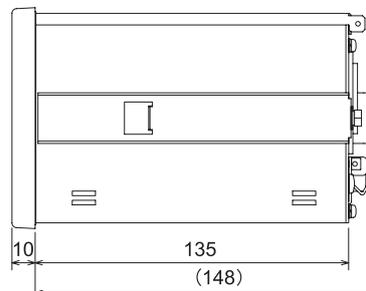


External dimensions

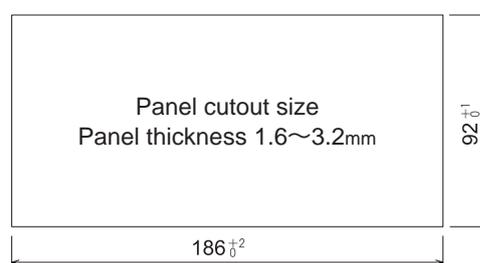
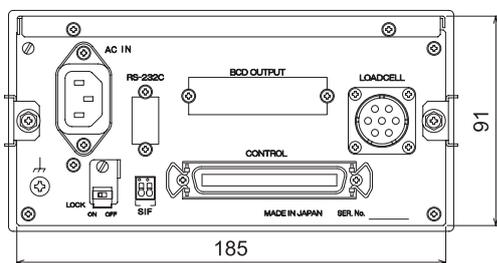
(Front)



(Side)



(Rear)



Unit: mm