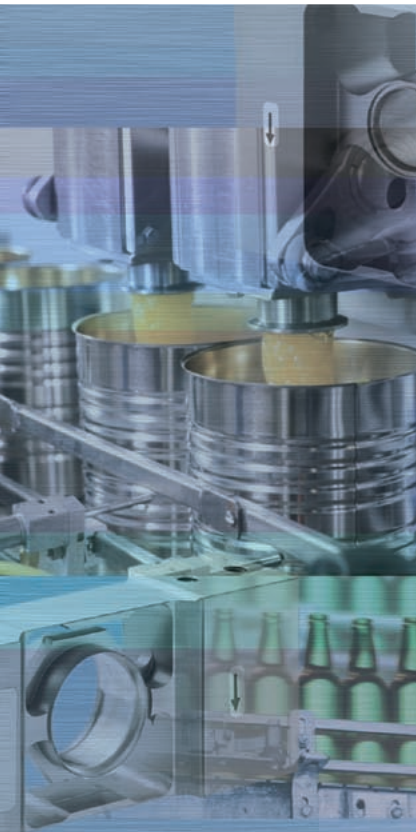


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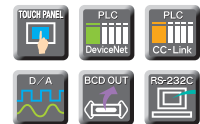
Graphic Display
Weighing Controller

F600A

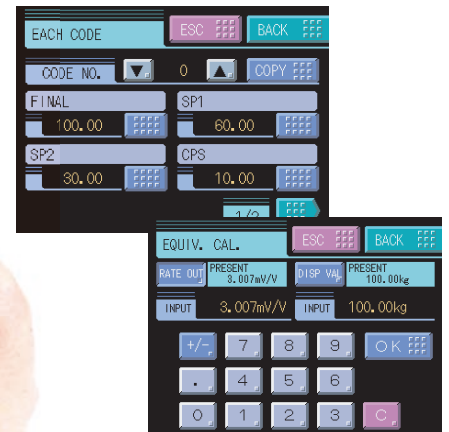


Real Size

DIN 96 **RoHS**

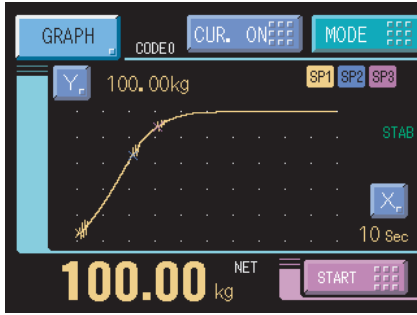


F600A is a general-purpose weighing controller for loadcells. It is a practical device excellent in cost effectiveness, which is equipped with a final discharge function allowing high-accuracy feeding and discharging weighing control and a weighing sequence function essential to hopper and packing scales.



Waveform display function

The input signal from the loadcell is displayed as a waveform. Adjustment of the discharge speed relative to Full feed (SP1) or Dribble feed (SP3) can be set on the spot while viewing the waveform.



8 types of CODE memory

It is able to selectively weigh and record up to 8 types of setting values such as its final weight by touch panel operation or external signal.

Substantial functions convenient for weighing

■ Weighing sequence function

Since feeding and discharging gates can be directly controlled, a high-speed weighing and control line can be set up without it being affected by command timing from PLC.

■ Equivalent input calibration

Calibration is possible only by inputting an indicated value corresponding to the rated output value of the loadcell on the touch panel.

■ Automatic free fall compensation

Fluctuations in actual free fall are automatically compensated.

■ Zero tracking

The zero point shift due to temperature fluctuations is automatically compensated.

Powerful filter for characteristics selection

Installed is the Bessel low-pass filter to eliminate mechanical vibrations as well as the moving average-type digital filter to prevent weight value drift.

High reliability

A special circuit that monitors CPU malfunctions and the self-check function provide high reliability.

Free power supply

100V to 240V AC can be used without switching-over.

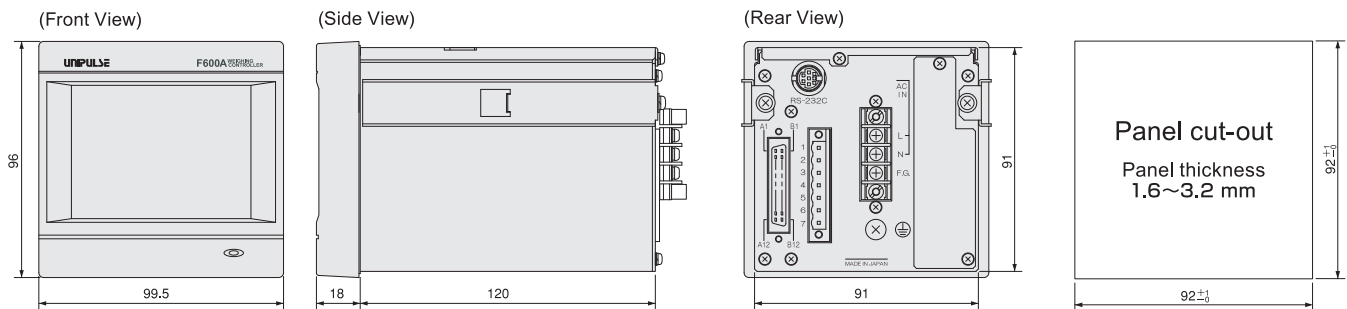
The DC power supply can be specified when ordering.

SPECIFICATIONS

Analog Section	Excitation voltage Signal input range Zero adjustment range Gain adjustment range Accuracy Analog filter A/D converter	DC10V ±5% Output current: Within 120mA Remote sense type (Up to 4 units of 350Ω load cells can be connected in parallel.) -0.2 to 3.0mV/V -0.2 to 3.0mV/V Automatic adjustment via digital processing Automatic adjustment via digital processing Non-linearity: Within 0.02%/FS ±1digit (When 3.0mV/V is input) Zero drift: Within 0.25μV/°C RTI Gain drift: Within 25ppm/°C Bessel type low-pass filter (-12dB/oct) Cut off frequency 2Hz, 4Hz, 6Hz, 8Hz (Selectable by setting) Speed: 100times/sec. Resolution: 24bit (binary)
Display Section	Display Weight value display Unit display Decimal Place Minimum scale division Status display	STN color LCD module (Display area: 71mm × 53mm) 320 × 240 dots 5-digit Sign: Minus sign display NONE, kg, t, g, N, lb is selectable. 8, 8, 8, 8 The display position can be set. Can be set in the range of 1 to 100. NET/GROSS/HOLD/STAB/ZT/ZALM/NZ/HH ¹ /HI ¹ 3/GO ¹ /LO ¹ 3/LL ¹ /SP1 ² 3/SP2 ² 3/SP3 ² 3/END ² 3/OVER ² /UNDER ² ¹ 1 Display at HI/LO limit comparison mode ² 2 Display at Final discharge-Over/Under comparison mode. ³ 3 Display at Final discharge-HI/LO limit comparison mode
Setting Section	Setting item	<ul style="list-style-type: none"> • EACH CODE (HI/LO limit comparison mode) : HH/HI/LO/LL • EACH CODE (Final discharge-Over/Under comparison mode) : Final/SP1/SP2/Compensation/Automatic Free Fall Compensation/Over/Under • EACH CODE (Final discharge-HI/LO limit comparison mode) : Final/SP1/SP2/Compensation/Automatic Free Fall Compensation/HI/LO • COMPARISON : Comparison Mode Selection/Comparison Inhibit Time/Judging Time/Complete Output Time/Automatic Free Fall Compensation/Compensation Coefficient/Average Count of Automatic Free Fall Compensation/Discharge Control Mode/Complete Signal Output/Over/Under Comparison/HI/LO Comparison Selection/Near Zero Comparison/Preset Tare Weight 1/Near Zero/Preset Tare Weight 2 • OPERATION : Digital Filter/Analog Filter/Motion Detect (Range)/Motion Detect (Range)/Display Frequency/Zero Tracking (Period)/Zero Tracking (Range)/Contrast/Indicate Color/Back Light/Display Select/HI/LO Output Selection/LOCK1/LOCK2 • GRAPH : Graphic Mode/Trigger Level/X End Point/Y Start Point/Y End Point/Drawing Weight • SYSTEM : Initialization/Self Check DSP1/Self Check MEM/Self Check KEY/Self Check EXT/Self Check DSP2/Self Check COM/Password/Language/[GROSS/NET] KEY/[DZ] KEY/[TARE] KEY/[CURSOR ON/OFF] KEY/[START/STOP] KEY/B4 Function Selection • CALIBRATION : Zero Calibration/Span Calibration/Equivalent Input Calibration/Balance Weight/Minimum Scale Division/Net Over/Gross Over/Unit Display/Decimal Place/Digital Zero Regulation Value • SEQUENCE MODE : Sequence Mode/Adjust Feeding/At Start Near Zero Confirmation/At Start Weight Confirmation/Adjust Feeding Time/Auto Zero Times/Judging Times • RS-232C : Communication Mode/Baud Rate/Length/Parity Bit/STOP Bit/Terminator/Flow Control • BCD OUTPUT(OPTION) : Data Update Rate/Output Weight • D/A OUTPUT(OPTION) : D/A Output Mode/Zero Output/Full Scale Output
External Signal	Output signal	<ul style="list-style-type: none"> • At HI/LO limit comparison mode : HH/HI/GO/LO/LL/NZ/ERR/STAB • At Final discharge-Over/Under comparison mode : SP1/SP2/SP3/END/OVER/UNDER/NZ/ERR/STAB • At Final discharge-HI/LO limit comparison mode : SP1/SP2/SP3/END/HI/LO/NZ/ERR/STAB Transistor open collector output, (Emitter = COM terminal) The output turns ON when the transistor turns ON.
	Input signal	<ul style="list-style-type: none"> • D/Z/TARE ON/TARE OFF/HOLD or JUDGE/Feed/Discharge/Gross/Net switching/Selected CODE/KEY LOCK/START/STOP ON when shorted with COM terminals by contact (relay, switch, etc.) or non-contact (transistor, TTL open-collector output, etc.)
Interface	SIF : 2-wire serial interface 232 : RS-232C communication interface BCO : BCD parallel data output interface (Option) DAV : D/A converter voltage output (Option) Only one option can be installed DAI : D/A converter current output (Option) ODN : DeviceNet interface (Option) CCL : CC-Link interface (Option)	
General Performance	Power supply	AC100V to AC240V (+10% -15%) [Free power supply 50/60Hz] DC24V (±15%) (Depending on the request at the time of order)
	Power consumption Operating conditions	20W max Temperature : Operating temperature range : 0 to +40°C Storage temperature range : -20 to +60°C Humidity : 80%RH or less (non-condensing)
	Dimensions Weight	99.5(W) × 96(H) × 18(D) mm (not including projections) Approx. 1.0kg
Attachments	AC Supply cord (Only at AC spec.) (Nominal rating 125V) 3m 1 Jumper wire 2 FCN series I/O connector (with cover) 1 Mini driver (when D/A converter option is installed) 1	BCD output connector (when BCD output option is installed) 1 DeviceNet connector (when DeviceNet option is installed) 1 CC-Link connector (when CC-Link option is installed) 1 Operation manual 1
Optional Accessories	CA600-I/O : Cable with FCN connector at one-end 3m CA81-232X : miniDIN-D-Sub9p cross cable 1.5m CAAC2P-B3 : AC Supply cord 3m CAAC3P-CEE7/7-B2 : AC Supply cord (Voltage resistance: 250V) 2m CN50 : FCN series I/O connector (with cover) CN51 : BCD output connector	CN55 : FCN series I/O connector (with diagonal cover) CN60 : Round DIN8p connector for RS-232C CN71 : CC-Link connector CN80 : Analog I/O connector terminal CND01 : DeviceNet connector GMP96 × 96 : Rubber packing

DIMENSIONS

Unit: mm



※ Please note that specifications or designs shown in this catalog may be changed without prior notice due to our continuous product improvement activities.

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