

UNIPULSE

GRAPHIC DISPLAY WEIGHING CONTROLLER

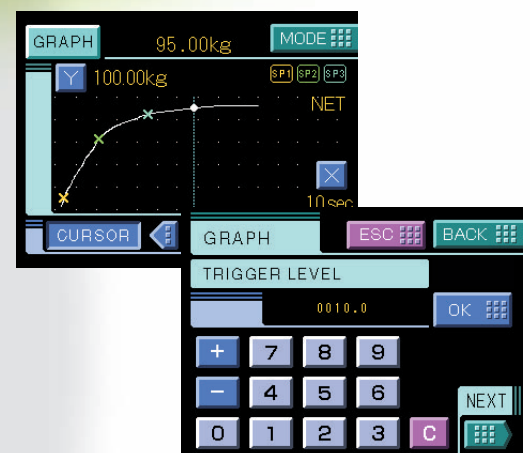
F600



REAL SIZE



A mini indicator installed with functions of superior machines and is adaptable to all types of weighing systems. It uses touch screen panel and color LCD for real time visualization of each setting and weighing waveform that allows intuitive setting without an Operation Manual. A compact unit packed with specifications such as Bessel low-pass filter that has powerful damping characteristics and a 100 times/sec high-speed A/D converter for high-speed digital processing.



F600

Graphic Display Weighing Controller

Color LCD & touch screen panel for easy and comfortable operation

Color LCD installed with backlight for excellent visibility of weight display and touch screen panel for easy and comfortable operation

Graphic Display Function

Graphic Display Function that displays weight fluctuation of indicated weight to waveform display in real time.

A variety of options and enhanced interfaces

BCD parallel data output, RS-232C, RS-485, D/A converter, DeviceNet, CC-Link

High-speed processing (High-speed operation)

100 times/sec A/D converter and digital processing capability

8 types of record memory

It is able to weigh and record up to 8 types of setting values such as its fixed value.

Powerful filter for characteristics selection

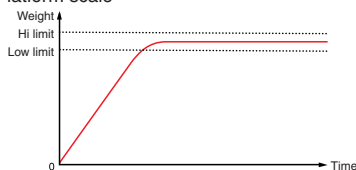
Installed with Bessel low-pass filter that eliminates mechanical vibrations as well as moving average-type digital filter.

High reliability

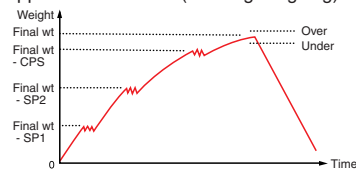
Special circuit that monitors its CPU miss-operations and Self-check Function provide superb reliability to this indicator.

Application

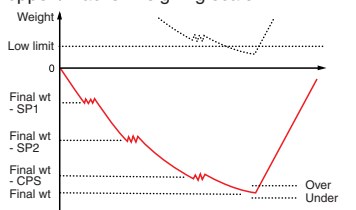
Platform scale



Hopper / Packer scale (Feeding weighing)



Hopper / Packer weighing scale



Application

ANALOG SECTION

| | |
|-----------------------|---|
| Load cell excitation | DC10V; Output current within 120 mA; Remote sensor type (Capable to operate up to 4 units of 350 Ω load cells) |
| Signal input range | -0.2 ~ 3.0 mV/V |
| Zero adjustment range | -0.2 ~ 3.0 mV/V |
| Accuracy | Non-linearity: within 0.02% FS ± 1 digit (at 3 mV/V input) Zero drift: within 0.25 μV/°C RTI; Gain drift: within 25 ppm/°C; Noise: within 0.2 μVp-p RTI |
| A/D converter | Speed:100 times/sec; Resolution:16 bit (binary) |
| Analog filter | Bessel low-pass filter (-12dB/oct); Selectable at 2, 4, 6, 8 Hz |
| Secondary calibration | Equivalent input calibration without the use of actual load by just keying in the sensor's rated output; Minimum indicated resolution during secondary calibration: 1/1000 (at room temperature) |

DISPLAY SECTION

| | |
|--------------------------|--|
| Display unit | STN color LCD module (display screen: 56 mm x 75 mm); 320 x 240 dot |
| Indicated weight display | 5 digits; Displays minus sign |
| Minimum scale division | Can be set from 1 ~ 100 |
| Decimal points | Selectable decimal point display position at 88.8.8.8 |
| Over scale | A/D converter input over: "+LOAD"; A/D converter input minus over: "-LOAD"; Net weight exceeds preset net weight over: "NET WEIGHT OVER"; Gross weight exceeds preset gross weight over: "GROSS WEIGHT OVER" |
| Unit display | t, kg, g, N, lb or no unit display can be selected |

NET Lights when the net is displayed; GROSS Lights when the gross is displayed; HOLD Lights in holding; STAB Lights at stable-time; ZT Lights in zero tracking; ZALM Lights when the zero alarm signal is ON; NZ Lights when the near zero signal is ON; * 1 HH Lights when the hi-hi limit signal is ON; * 1 HI Lights when the high limit signal is ON; * 1 GO Lights when the preset low limit value \leq weight value \leq preset high limit value; * 1 LO Lights when the low limit signal is ON; * 1 LL Lights when the lo-lo limit signal is ON; * 2 SP1 Lights when the final weight-SP1 \geq net weight (in the simple comparison mode); * 2 SP2 Lights when the final weight-SP2 \geq net weight (in the simple comparison mode); * 2 SP3 Lights when the final weight-CPS \geq net weight (in the simple comparison mode); * 2 COMP Lights when the completion signal is ON; * 3 OVER Lights when the overweight signal is ON; * 3 UNDER Lights when the underweight signal is ON; * 4 HI Lights when the high limit signal is ON; * 4 LO Lights when the low limit signal is ON
* 1 Displayed only in the high/low limit comparison mode, * 2 Displayed only in the final discharge mode, * 3 Displayed only in the final discharge-overweight/underweight comparison mode, * 4 Displayed only in the final discharge-high/low limit comparison mode.

INPUT / OUTPUT SIGNAL

| | |
|-----------------------------------|---|
| Output | Able to select high/low limit comparison mode or final discharge mode depending to type of setting |
| At High/Low Limit Comparison Mode | Hi-hi limit, high limit, go, low limit, lo-lo limit, near zero, weight alarm, stable |
| At Final Discharge Mode | SP1, SP2, SP3, COMP, Over/High limit, Under/Low limit, near zero, weight alarm, stable |
| Input | Digital zero, tare subtraction, tare subtraction reset, hold or judgement, feeding or discharge selection, display select, code select, start (sequence), stop (sequence) |

SETTINGS

| | |
|----------------------|---|
| Setting method | Setting via touch screen panel |
| Setting value memory | Code's setting values: Lithium battery backed-up C-MOS RAM (depends on usage conditions and storing environment but memory can be kept for up to 7 years); Crucial setting values (i.e. calibration, comparison, operational setting): NOV RAM (Non-volatile RAM) |
| Saving setting value | Setting values can be locked to prevent its unauthorized modification; Code's setting values (LOCK1), Crucial setting values (LOCK2) |

- Code's setting values (high/low limit comparison) ··· setting for hi-hi limit, high limit, low limit, lo-lo limit
- Code's setting values (final discharge) ··· Final weight, SP1, SP2, CPS, AFFC, over/high limit (selectable depending on setting), under/low limit (selectable depending on setting)
- Comparison setting ··· Select comparison mode, comparison inhibit time, judging time, complete output time, AFFC ON/OFF, CPS coefficient, average count of AFFC, select feeding or discharging weighing, complete signal output mode, select over/under comparison mode, select high/low comparison mode, select near zero comparison mode, preset tare weight 1, near zero setting values, preset tare weight 2
- Operational setting ··· digital filter, analog filter, display frequency, MD period, MD range, zero tracking period, zero tracking range, contrast adjust 1, contrast adjust 2, backlight, select display table, select high/low limit output, LOCK1, LOCK2
- Graphic setting ··· Graphic mode, trigger level, X end point, Y start point, Y end point, select drawing weight
- Calibration ··· Zero calibration, span calibration, equivalent calibration, balance weight value, Min. scale division, net over, gross over, unit display, decimal place, digital zero regulation
- Sequence setting ··· sequence mode, adjust feeding, adjust feeding, at start NZ confirmation, at start WV confirmation, adjust feeding time, auto zero times, judging times

Setting items

GENERAL SETTINGS

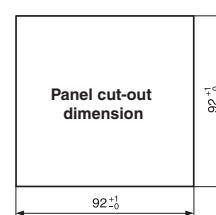
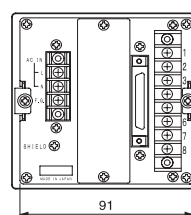
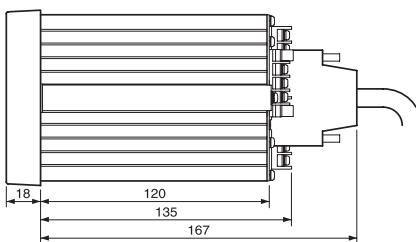
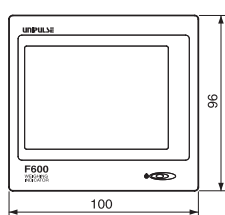
| | |
|----------------------|--|
| Power source voltage | AC100 V~240V(+10%~15%) (Flexible power source 50/60 Hz) |
| Power consumption | 12 W (28 VA) max. |
| Operation conditions | Temperature: Operation temperature range 0~+40°C; Storage temperature range -20~+60°C; Humidity: 80% RH or less (no dew condensation) |
| External dimension | 100 (W) x 96 (H) x 138 (D) mm (protruding areas are not included) |

OPTIONS

BCD parallel data output interface, RS-232C communication interface, RS-485 communication interface, D/A converter, DeviceNet interface, CC-Link interface

External Dimension

UNIT:mm



*Please note that specifications or designs shown in this catalog may vary due to our continuous product improvement activities.

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