UNIPULSE

LOADCELL INTERFACE
for **OMRON SYSMAC CJ1**

F130

CE RoHS

For strain gauge type sensor

Real size

Direct plug-in to SYSMAC CJ1!
It operates as a High performance I/O unit.

Loadcell interface allowing direct connection to the bus of OMRON SYSMAC CJ1

Sensor output is quickly loaded as a digital value, and directly output to the CPU.

High-speed sampling of 3,000 times per second

Necessary points are reliably captured by high-speed sampling following dynamic changes.

Downsizing of production line

Waste in production line construction is thoroughly eliminated to realize substantial cost reductions and high added value.

- Completely seamless communication between CJ1 and F130.
- Shortening of measurement system development time, and easy maintenance control, modification, and maintenance.
- Remarkable simplification of equipment wiring.
- Cost advantages.

Equivalent input calibration

Calibration is performed by simply inputting the rated output value and rated capacity value of the sensor. Calibration can be easily performed even in the case where actual load cannot be applied and when the loadcell is replaced.

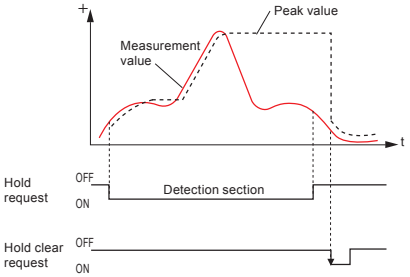
Digital zero & Digital offset

The indicated value can be zeroed by request from the CPU. Also, the function of subtracting the set value from the indicated value is on-board. It is a convenience in the case where a no-load state cannot be brought about and for offsetting.

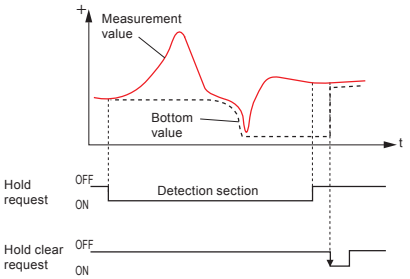
Simultaneous hold function

The peak, bottom, and average values in the detection section are held simultaneously.

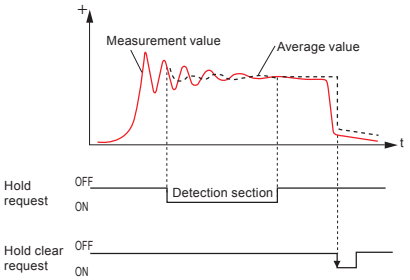
■Peak hold



■Bottom hold



■Average value hold



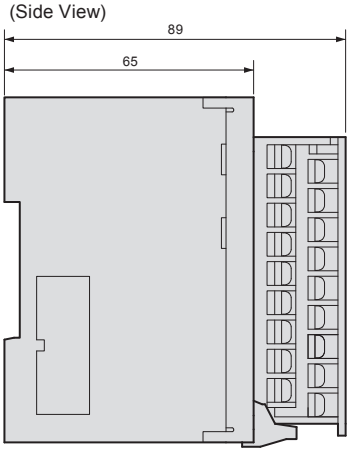
SPECIFICATIONS

Analog	Excitation voltage	DC10V±5%, output current within 30mA (single 350Ω sensor) or DC2.5V±5%, output current within 30mA (single 120Ω sensor or four 350Ω sensors in parallel)
	Signal input range	−3.0 ～+3.0mV/V
	Equivalent input calibration range	−3.0 ～−0.5mV/V, +0.5 ～+3.0mV/V
	Zero･Gain adjustment range	Automatic adjustment via digital processing
	Auuracy	Non-linearity....Within 0.02%FS ±1digit (at a 3.0mV/V input) Zero drift.....Within 0.5μV/℃ RTI Gain drift.....Within 25ppm/℃
	Analog filter	Low-pass filter (−6dB/oct.) Selectable from 3, 10, 30, 100, 300, 1kHz
	A/D converter	Rate…3000times/sec. Resolution…24bit (binary) 1/10000 to 1.0mV/V
Display	Status LED	RUN (Green) ....Turns on when Normal operation ERC (Red) .....Turns on when an alarm occurs or blinks when an error occurs in the F130. ERH (Red) .....Turns on when an alarm occurs in data exchange with the CPU unit.
Terminal Block Layout	Detachable terminal block (M3 screw)	SHIELD B1, +SIG B2, −SIG B3, +EXC B4, −EXC B5, RSV B6, RSV B7, RSV B8, RSV B9 A1 RSV, A2 RSV, A3 RSV, A4 RSV, A5 RSV, A6 RSV, A7 RSV, A8 RSV, A9 RSV RSV: Never connect anything to the RSV terminals.
Setting	Unit No. rotary switch	High performance I/O unit No. setting: 0 ～ 95 unit
	Setting method	Made from the CPU unit via the data memory (DM) area defined for the F130.
	Set value Storage	Calibration value: Stored in NOV RAM (non-volatile RAM) Set value: Measurement starts with the set values (DM area) written from the CPU unit after power-on. (Not stored on the F130 side)
DM (data memory) area	Setting item	Excitation voltage, Minimum scale division, Analog filter, Digital filter count, Digital offset, Sensor rated output value, Sensor rated capacity value
Relay area	F130→CPU	Measurement value (−32768 ～ 32767), Data update counter, Peak hold value (In calibration mode: sensor rated output value), Bottom hold value (In calibration mode: sensor rated capacity value), Average value (In calibration mode: sensor output value at the Zero calibration point), Average count (In calibration mode: calibration error number), Measurement value overflow, A/D input range over
	CPU→F130	Mode selection (Normal operation mode･Calibration mode), Equivalent input calibration, Actual load calibration, Zero calibration, Survival confirmation, Hold value clear, Hold (section specification), Digital zero
Hold		Peak, Bottom, Average (Simultaneous hold)
General Specifications	Consumption current	DC5V Approx.0.46A (At excitation voltage DC10V, single 350Ω sensor)
	Operating conditions	temperature Operation temperature: 0 ～+55℃ Accuracy compensation applicable temperature: 0 ～+40℃ Storage temperature: −20 ～+75℃ Humidity 90% or less (non-condensing)
	Dimensions	31 (W) ×90 (H) ×65 (D) mm (protrusions excluded)
	Weight	Approx.160g
Attachment	Operation manual.....1	
CE marking certification	EMC Directive EN61131-2 (CLASS A)	

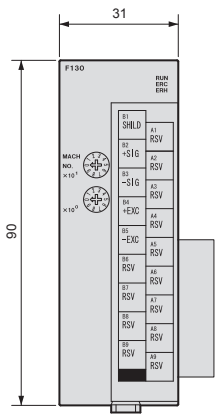
DIMENSIONS

Unit: mm

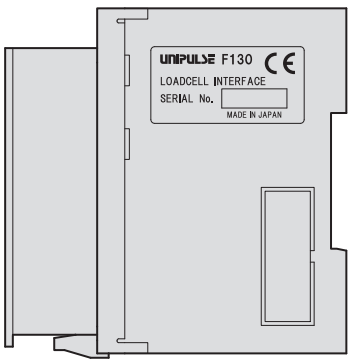
(Side View)



(Front View)



(Side View)



※ 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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