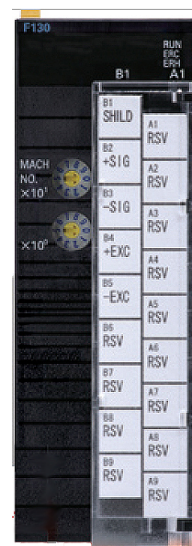


Sysmac CJ-Series F130 Load Cell Interface

CJ1W-F130

High-Performance Load Cell Input Interface Helps Integrate Strain Gauge Sensors

- **Directly connects a load cell to CJ Series PLCs** without additional hardware or wiring
- **Fast conversion** – Sensor output is quickly loaded as a digital value, and directly output to the CPU
- **Responds to dynamic changes** – High speed sampling rate at 3000 times per second for high accuracy
- **High resolution conversion** – 24 bit high resolution data
- **Detachable terminal block** – simplifies installation



Built-in Functions

Equivalent input calibration

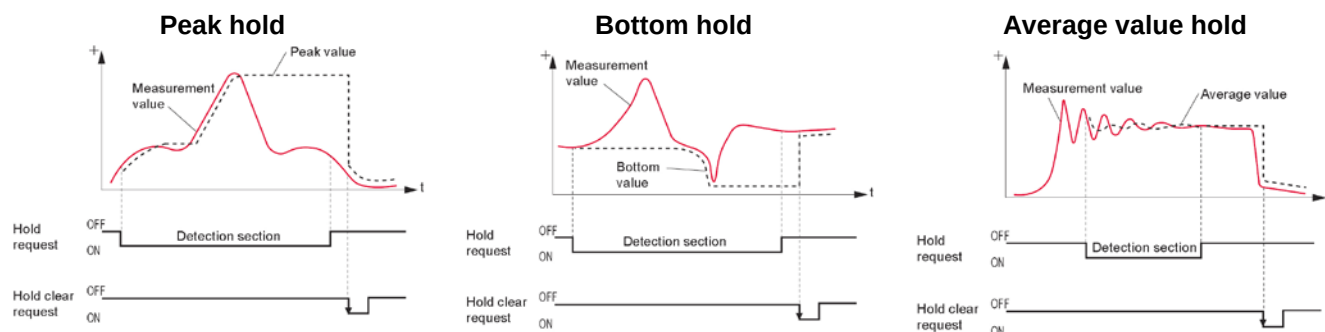
Calibration is performed by simply inputting the rated output value and rate capacity value of the sensor. Calibration can be easily performed even in the case where actual load cannot be applied and when the load cell is replaced.

Digital Zero and 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 functions

Peak, bottom and average values are held simultaneously.



Ordering Information

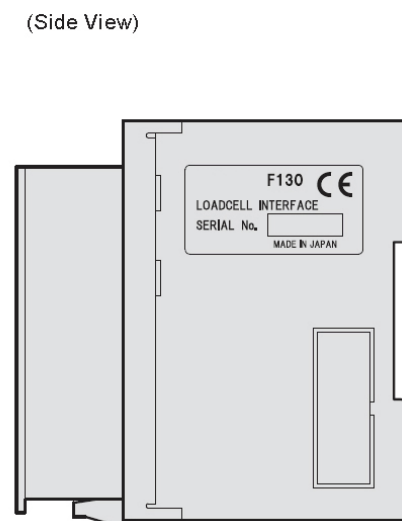
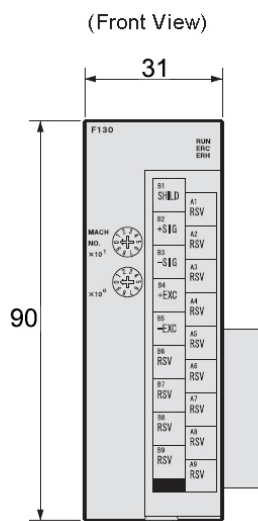
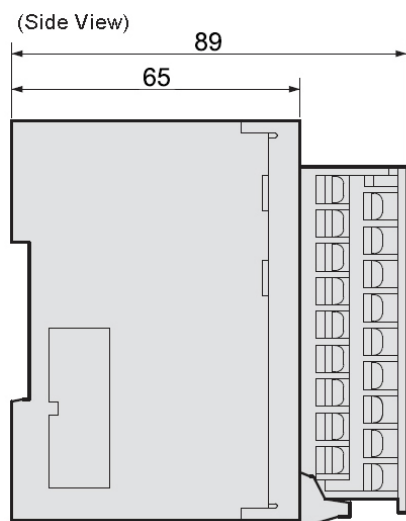
Type	Description	Specification	Model
Special I/O	Load cell input interface unit	1 strain gauge or load cell input	CJ1W-F130

Specifications

Item			Specifications																																			
Analog	Excitation voltage		DC 10V±5%, output current within 30 mA (single 350Ω sensor) or DC 2.5V±5%, output current within 30 mA (single 120Ω sensor or four 350Ω sensors in parallel)																																			
	Signal input range		-3.0 ~ +3.0 mV/V																																			
	Equivalent input calibration voltage		-3.0 ~ +0.5 mV/V, +0.5 ~ 3.0 mV/V																																			
	Zero-Gain adjustment range		Automatic adjustment via digital processing																																			
	Accuracy	Non-linearity	Within 0.02%FS ±1 digit (at a 3.0 mV/V input)																																			
		Zero drift	Within 0.5 μV/°C R Tl																																			
		Gain drift	Within 25 ppm/°C																																			
		Temperature	Accuracy compensation: 0 ~ 40°C																																			
	Analog filter	Low pass filter (-6dB/oct)	Selectable from 3, 10, 30, 100, 300 Hz, 1kHz																																			
Display	Status LED	RUN (Green)	Turns on during 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.																																			
Terminal block layout	Type		Detachable terminal block, M3 screws																																			
	Diagram		<table border="1"> <tr> <td>SHIELD</td><td>B1</td><td>A1</td><td>RSV</td></tr> <tr> <td>+SIG</td><td>B2</td><td>A2</td><td>RSV</td></tr> <tr> <td>-SIG</td><td>B3</td><td>A3</td><td>RSV</td></tr> <tr> <td>+EXC</td><td>B4</td><td>A4</td><td>RSV</td></tr> <tr> <td>-EXC</td><td>B5</td><td>A5</td><td>RSV</td></tr> <tr> <td>RSV</td><td>B6</td><td>A6</td><td>RSV</td></tr> <tr> <td>RSV</td><td>B7</td><td>A7</td><td>RSV</td></tr> <tr> <td>RSV</td><td>B8</td><td>A8</td><td>RSV</td></tr> <tr> <td>RSV</td><td>B9</td><td>A9</td><td>RSV</td></tr> </table> RSV: Never connect anything to the RSV terminals.	SHIELD	B1	A1	RSV	+SIG	B2	A2	RSV	-SIG	B3	A3	RSV	+EXC	B4	A4	RSV	-EXC	B5	A5	RSV	RSV	B6	A6	RSV	RSV	B7	A7	RSV	RSV	B8	A8	RSV	RSV	B9	A9
SHIELD	B1	A1	RSV																																			
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RSV	B7	A7	RSV																																			
RSV	B8	A8	RSV																																			
RSV	B9	A9	RSV																																			
Setting	Unit No. rotary switch	Setting range	Unit no. 0 ~ 95																																			
	Setting method		Made from the CPU via the data memory (DM) area defined for the F130																																			
	Set value storage	Calibration value	Stored in non-volatile RAM																																			
		Set value	Measurement starts with the set values (DM area) written from the CPU after power-on. Values are not stored on the F130 unit.																																			
Data Memory area (DM)	Setting items		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 rated output value at the Zero calibration point)																																			
			Average count (in calibration mode, calibration error number)																																			
			Measurement value overflow																																			
			A/D input over range																																			

Item			Specifications
Relay area	CPU → F130		Mode selection (Normal operation mode, calibration mode)
			Equivalent input calibration
			Actual load calibration
			Zero calibration
			Survival confirmation
			Hold value clear
			Hold selection specification
			Digital zero
Hold			Peak, Bottom, Average (simultaneous hold)
General specifications	Consumption current		Approx. 0.46 A at DC5V (at excitation voltage DC10V, single 350Ω sensor)
	Temperature	Operation	0 ~ +55°C
			Accuracy compensation applicable temperature 0 ~ +40°C
		Storage	-20 ~ +75°C
	Humidity		90% RH or less (no condensation)
	Dimensions		31 W x 90 H x 65 D mm (connector protrusions excluded)
	Weight		Approx. 160 g
Supplied			Operation manual, 1 copy
Approvals	CE marking certification		EMC Directive EN61131-2 (Class A)

Dimensions (Unit: mm)



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