

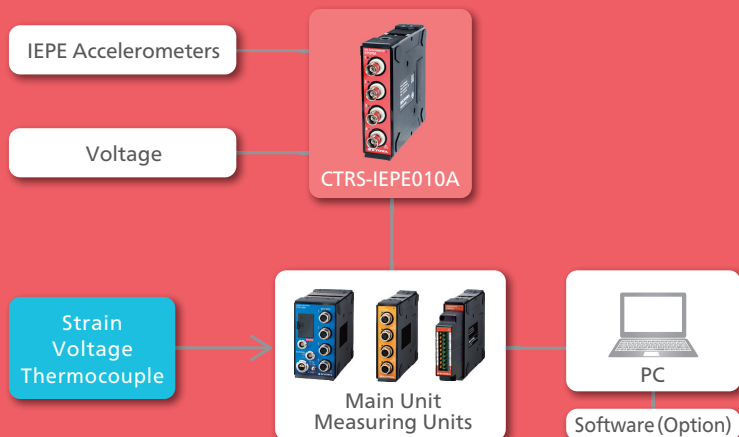
CTRS-IEPE010A

IEPE Accelerometer Unit for CTRS-100 Series

IEPE Accelerometer Compatible
Supports voltage input to maximize channel utilization.



System Content



Application Example



Vehicle and Motorcycle Driving Tests



Durability and structural strength testing for construction, agricultural, and special-purpose vehicles

Specifications

Channels		4	Operating Humidity	20 to 90% (Non-condensing)
Input Connector	Connector Shape	BNC jack	Storage Temperature	-20 to 60°C
	Compatible Plug	BNC plug	Vibration Resistance	49.0 m/s ² (5 G), 5 to 200 Hz
Input Modes		Unbalanced input	Shock Resistance	490 m/s ² (50 G), 11 ms or less, half sine wave
AD Converter		24 bit	Degrees of Protection	IP50 (JIS C 0920/IEC 60529)
Sampling Method		Synchronous sampling of all channels	Dimensions	26.6 W × 92 H × 94 D mm (Excluding protrusions and protectors)
Indicator		Status LED, channel-status LED	Weight	Approx. 230 g
Power Supply		Supplied by the CTRS-100A or CTRS-BATT010A	Compliance	Directive 2014/30/EU (EMC) Directive 2011/65/EU, (EU)2015/863 (10 restricted substances) (RoHS)
Power Consumption		Approx. 1.7 W (When supplying 12 VDC)	Utility Nuts	Size: M4, 6 places
Operating Temperature		-10 to 50°C		

Items		IEPE Accelerometer	Voltage
Measuring Target		IEPE Accelerometer A charge converter (sold separately) is required for charge output types. Recommended model: "CAC1R0" manufactured by FUJI CERAMICS CORPORATION	Voltage
Sensor Excitation		Constant Current: Approx. 4 mA Excitation Voltage: Approx. 23 VDC Load Resistance: 1 kΩ or less	—
Input Impedance		—	1.8 MΩ±10%
Measuring Range	Setting Method	Any range method or OFF	
	Settable Range	Minimum: 100 mV, Maximum: 5000 mV	Minimum: 1 V, Maximum: 10 V
	Setting Steps	100 to 990 mV 10 mV steps 1000 to 5000 mV 100 mV steps	1 to 10 V 0.1 V steps
Range Accuracy		Within ±0.5% FS	Within ±0.2% FS
Nonlinearity		Within ±0.2% FS	Within ±0.1% FS
Temperature Stability	Zero Point	—	Within ±(0.009% FS + 0.21 mV)/°C
	Sensitivity	Within ±0.03%/°C	Within ±0.03%/°C
Time Stability	Zero Point	—	Within ±0.05% FS/8H
	Sensitivity	Within ±0.1%/8H	Within ±0.1%/8H
Zero Suppress	Setting	—	For each channel, ON, OFF, or NONE can be selected. ON: Execute zero suppress and set the measured value to zero. OFF: Do not execute zero suppress again. NONE: Zero suppress can be disabled to check the initial unbalanced value (Input voltage).
	Operating Method	—	Execute the zero suppress by using the control software or operate the special-remote-control BAL switch.
	Adjustment Method	—	Auto balance (Saved in nonvolatile memory)
	Adjustment Range	—	Within ±10 V
	Accuracy	—	Within ±0.1% FS
	NONE Accuracy	—	Within ±0.2% FS
Input Voltage Range		0 to 20 V	Within ±20 V
Absolute Maximum Rating	Input	-5 to 21 V	Within ±30 V
Frequency Response		0.5 Hz to 20 kHz (At 20 kHz input, -3±1 dB)	DC to 20 kHz (At 20 kHz input, -3±1 dB)
LPF	Transfer Characteristics	5th-order Butterworth	
	Cutoff Frequency	10, 20, 50, 100, 200, 500, 1k, 2k, 5k, 10k Hz, FLAT, AUTO When FLAT is set, the cutoff frequency is set to approx. 25k Hz.*1 When AUTO is set, the cutoff frequency is set to approx. 1/4 the specified sampling frequency.	
	Amplitude Ratio at Cutoff Point	-3±1 dB	
	Attenuation Characteristics	When the cutoff frequency is less than 5k Hz: -30 ±3 dB/oct. When the cutoff frequency exceeds 5k Hz: -30 (+3, -12) dB/oct.	
HPF	Cutoff Frequency	—	0.2, 1 Hz and OFF
	Attenuation Characteristics	—	-6 dB/oct.
Other Functions	TEDS	Read the TEDS information and apply it to the measurement conditions. (Only when online control is performed by a PC.)	—

*All specifications apply at an ambient temperature of 23 ± 5°C after a 30-min warm-up period and under stable temperature conditions.

*Product specifications listed above do not include charge converter accuracy.

*1 Amplitude ratio specifications at the cutoff point are not applicable.

Standard Accessories Stack-connector cap (female) ×1
Stack-connector cap (male) ×1

Optional Accessories Charge converter CAC1R0

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