



CEC Electronics

CCATS 8000 System



Features:

- Industry exclusive: Optional Manual Operation Module
- Programmable filtering, including tracking and sweep operations
- Simultaneous tracking operations with every input
- Up to 14 independent input channels
- Individual processors for specialized tasks

8003	3U Chassis assembly (1-6 Channels); Includes basic power supply	13.5 lbs.
8006	6U Chassis assembly (1-14 Channels); Includes basic power supply	21.5 lbs.
8103	3U Chassis assembly (1-6 Channels); Includes Manual Operation Module	13.6 lbs.
8106	6U Chassis assembly (1-14 Channels); Includes Manual Operation Module	21.6 lbs.
8200	Amplifier Module (requires one each model 8400 per amplifier)	0.6 lbs.
8400	Transducer I/O Module	0.4 lbs.
8600	Serial RS232 Module	0.3 lbs.
8800	Tachometer Input Module (1 to 4 inputs)	0.3 lbs.
700309-00-0001	Power Supply with Manual Operation Module	4 lbs.



4000 System

367017-0104	1-196 4-channel 4SE00444-3	
367017-0105	1-196 5-channel 4SE00444-4	
1-196-0001	Programmable Tracking Filter	4 lbs.
1-196-0002	Programmable Tracking Filter with IEEE Computer Interface Note: to retrofit existing CEC 4000-3xxx case with IEEE interface, please consult with factory.	4 lbs.
1-196-0107	Programmable Tracking Filter	4 lbs.
1-196-0108	Programmable Tracking Filter	4 lbs.

Vibration Transmitters

1-808 Vibration Transmitter



Features:

- Calibrated 4-20 mA output proportional to transducer input
- Buffered output
- Includes two filters
- Signal cable monitoring

1-808-ACxxx-xxx-xx	Accelerometer (constant current) input	0.4 lbs.
1-808-ADxxx-xxx-xx	Accelerometer (differential Piezo) input	0.4 lbs.
1-808-DMxxx-xxx-xx	Displacement mV input (from probe driver)	0.4 lbs.
1-808-VCxxx-xxx-xx	Velocity (constant current) input	0.4 lbs.
1-808-VMxxx-xxx-xx	mV input	0.4 lbs.
1-808-VSxxx-xxx-xx	Velocity Transducer (mV / ips) input	0.4 lbs.
700552-90-0001	Power Supply (universal AC input, 24VDC output), DIN Rail Mountable	0.5 lbs.



Indicators, Panel Meters

1-809 Vibration Monitor



Features:

- Dual Programmable Alarms
- 4-20 mA output
- Bright 4-digit LED display
- Measures in velocity or displacement units
- 3-way electrical isolation
- Buffered output
- Optional filtering

1-809-00XX	Input type = Self generating velocity sensor (coil), XXXmV/ips (use with CEC models 4-102 thru 4-137)	2 lbs.
1-809-01XX	Input type = Integrated velocity sensor (constant I), 100mV/ips (use with CEC model 4-161 series)	2 lbs.
1-809-02XX	Input type = Integrated accelerometer (constant I), 100mV/g (use with CEC model 4-160 series)	2 lbs.
1-809-03XX	Input type = Customer defined, mV	1 lbs.



Vibration Switch

1-890/895 Vibration Switch



Features:

- Dual Alarms
- Easy alarm setup
- 3-digit LCD display
- Start-up trip delay (30 seconds), prevents false alarms
- Alarm trip delays (3 seconds), filters out transients
- 4-20 mA output
- LED alarm indication
- Remote alarm reset input
- Remote start input
- Displacement or Velocity response

1-890-0X01	Displacement 0-5 mils Pk-Pk, NEMA 4X enclosure	3 lbs.
1-890-0X02	Displacement 0-10 mils Pk-Pk, NEMA 4X enclosure	3 lbs.
1-890-0X03	Displacement 0-20 mils Pk-Pk, NEMA 4X enclosure	3 lbs.
1-890-0X11	Velocity 0-1 ips peak, NEMA 4X enclosure	3 lbs.
1-890-0X12	Velocity 0-2 ips peak, NEMA 4X enclosure	3 lbs.
1-890-0X14	Velocity 0-10 ips peak, NEMA 4X enclosure	3 lbs.
700693	Mounting Adapter Kit, 3/4-14-NPT (1-890 only)	1 lb
1-895-0X01	Displacement 0-5 mils Pk-Pk, Explosion Proof enclosure	4 lbs.
1-895-0X02	Displacement 0-10 mils Pk-Pk, Explosion Proof enclosure	4 lbs.
1-895-0X03	Displacement 0-20 mils Pk-Pk, Explosion Proof enclosure	4 lbs.
1-895-0X11	Velocity 0-1 ips peak, Explosion Proof enclosure	4 lbs.
1-895-0X12	Velocity 0-2 ips peak, Explosion Proof enclosure	4 lbs.
1-895-0X14	Velocity 0-10 ips peak, Explosion Proof enclosure	4 lbs.



HC Controls Inc. 3271 Pleasant Terrace, Crestview, FL 32539, U.S.A.

System (4000) Amplifiers

4000-2047	Amplifier Assembly, Velocity and Acceleration Input (for use with 1010 indicator only)	1.8 lbs.
4000-2063	Amplifier Assembly	1.8 lbs.
4000-2073	Amplifier Assembly (Compatible with Piezo accelerometer when used with 1-310 charge amp)	1.8 lbs.
4000-2101	Amplifier Assembly, Velocity input, Displacement output	2 lbs.
4000-2102	Amplifier Assembly, Velocity input, Velocity or Displacement output	2 lbs.
4000-2103	Amplifier Assembly, Velocity and Acceleration Input, Velocity, Acceleration, or Displacement output	2 lbs.
4000-2104	Amplifier Assembly, Acceleration to Displacement	1.8 lbs.
4000-2106	Amplifier Assembly, Velocity and Constant Current Accelerometer Input	1.8 lbs.
4000-2107	Amplifier Assembly, Velocity and Constant Current Acceleration input (For use with 1010 indicator only)	2 lbs.
4000-2108	Amplifier Assembly, Constant Current accelerometer input displacement readout	2 lbs.
4000-2137	Amplifier Module to be used with 1196 115V	2 lbs.
4000-2138	Amplifier Module to be used with 1-196, 230VAC	2 lbs.
4000-2153	Amplifier Module (Part of 10-101-0535, -0536 system) w/4 filters, 1 built-in, 3 modular; Used with METS	2 lbs.
4000-2163	Amplifier Assembly, Velocity and Acceleration Input (for use with 1010 indicator only) (modified 4000-2047)	2 lbs.

Filter Modules (System 4000 Amplifiers)

368891-0001-H	Low Pass 1000Hz	2 oz
368891-0002-H	Low Pass 90Hz	2 oz
368891-0003-H	Low Pass 110Hz	2 oz
368891-0007-H	Low Pass 2000Hz	2 oz
368891-0009-H	Low Pass 180Hz	2 oz
368891-0010-H	Low Pass 250Hz	2 oz
368891-0011-H	Low Pass 500Hz	2 oz
368891-0100-H	High Pass 10Hz	2 oz
368891-0200-H	High Pass 30Hz	2 oz



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368891-0300-H	High Pass 70Hz	2 oz
368891-0400-H	High Pass 110Hz	2 oz
368891-0500-H	High Pass 800Hz	2 oz
368891-0800-H	High Pass 40Hz	2 oz
368891-0900-H	High Pass 15Hz	2 oz
368891-1000-H	High Pass 150Hz	2 oz
368891-2600-H	High Pass 200Hz	2 oz
368891-2800-H	High Pass 180Hz	2 oz
368891-0101-H	Band Pass 10 - 1000Hz	2 oz
368891-0102-H	Band Pass 10 - 90Hz	2 oz
368891-0201-H	Band Pass 30 - 1000Hz	2 oz
368891-0202-H	Band Pass 30 - 90Hz	2 oz
368891-0203-H	Band Pass 30 - 100Hz	2 oz
368891-0401-H	Band Pass 110 - 1000Hz	2 oz
368891-0407-H	Band Pass 110 - 2000Hz	2 oz
368891-0833-H	Band Pass 40 - 300Hz	2 oz
368891-0844-H	Band Pass 40 - 275Hz	2 oz
368891-0845-H	Band Pass 40 - 350Hz	2 oz
368891-3943-H	Band Pass 915 - 1050Hz	2 oz
368891-4042-H	Band Pass 1010 - 1040Hz	2 oz
368891-4805-H	Band Pass 1000 - 1100Hz	2 oz



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System (4000) Cases

4000-3001	1-channel (1 amplifier) 115V	5 lbs.
4000-3002	2-channel (1 amplifier and 1 indicator) 115V	6.2 lbs.
4000-3003	2-channel (2 amplifiers) 115V	6.2 lbs.
4000-3004	3-channel (2 amplifiers and 1 indicator) 115V	7.6 lbs.
4000-3005	3-channel (3 amplifiers) 115V	7.6 lbs.
4000-3006	4-channel (3 amplifiers and 1 indicator) 115V	9.2 lbs.
4000-3007	4-channel (4 amplifiers) 115V	9.2 lbs.
4000-3008	5-channel (4 amplifiers and 1 indicator) 115V	10.8 lbs.
4000-3009	5-channel (5 amplifiers) 115V (Part of 10-101-0498, -0514, -0530, -0531 systems)	10.8 lbs.
4000-3010	19-inch rack mount, 10-channel (9 amplifiers and 1 indicator) 115V	16 lbs.
4000-3011	10-channel (10 amplifiers), 115V (Part of 10-101-0518 system)	16 lbs.
4000-3012	1-channel (1 indicator), 115V	5 lbs.
4000-3023	10-channel (5 each 2047 amplifiers, plus 5 each 1010 indicators), 115V (Part of 10-101-0493, -0494, -0495, -0505, -0535 systems)	16 lbs.
4000-3030	10-channel designed for (4 ea. 2047 amplifiers, 4 ea. 1010 indicators & 1 ea. 1-196 tracking filter) (Part of 10-101-0512, -0523, -0525, -0529 systems)	16 lbs.
4000-3033	10-channel (Part of 10-101-0519 systems)	16 lbs.
4000-3035	10-channel w/IEEE (Part of 10-101-0520, -0526 systems)	17 lbs.
4000-3037	5-channel for use with 4000-2144 amplifier and 4000-1001 indicators	10.8 lbs.
4000-3040	2-channel, use with 2 ea. 4000-2155 or 4000-2047 amplifiers and 4000-1010 indicators. Hi-Low external alarm reset, AC neutral	9.2 lbs.
4000-3041	2-channel, w/IEEE P/N 617110-0001	9.2 lbs.
4000-3042	4-channel, w/Tracking Filter IEEE (Part of 10-101-0536 systems)	17 lbs.



Charge Amplifiers



1-310-0001	Single channel input switchable either single-ended or differential, (1 pC in = 1 mV out), Output is Acceleration (g output), Terminal Lug connection	0.5 lbs.
1-310-0002	same as 1-310-0001 except single-ended input only	0.5 lbs.
1-310-0003	same as 1-310-0001 except differential input only	0.5 lbs.
1-310-0103	Single channel differential input, (velocity output) Gain = 1 @ 61.5 Hz (1 g peak = 1 ips peak), Terminal Lug connection, unit is potted for moisture protection. Used to test T700 engine.	0.5 lbs.
1-310-0109	same as 1-310-0103 except added 50 Hz high pass filter. Used to test F18 engine.	0.5 lbs.
1-310-0112	same as 1-310-0003 except added 70Hz high pass filter, input and output shield grounded together. Used in F110 engine test cell.	0.5 lbs.
1-310-0113	same as 1-310-0001 except for Terminal Strip connection	0.5 lbs.
1-310-0116	2-channel, with 50 to 2000 Hz filters. Output set one volt RMS equal to 5 IPS average FS when used with accelerometer with sensitivity 20 pC/g	3.5 lbs.
1-310-0119	same as 1-310-0003 except added 50Hz to 1000Hz band pass filter.	0.5 lbs.
1-310-0120	2-channel, with 50 to 1000 Hz filters. Output set one volt RMS equal to 2 IPS average FS when used with accelerometer with sensitivity 20 pC/g	3.5 lbs.
1-310-0121	same as 1-310-0119 except added Terminal Strip	0.5 lbs.
700526-00-0001	Portable Charge Amp Kit, 5 channel, input 50 pC / g, output 110 mV / ips Operates from 90 to 230 VAC	10 lbs.



Portable Meters

1-117 Vibration Monitor



Features:

- Direct indication of average velocity and peak-to-peak displacement
- Four transducer input channels
- Accepts internal or external filters for vibration analysis
- Easily calibrated using closed case calibration procedures

1-117-0001	Vibration Meter, velocity and displacement readout, filters not included	18.5 lbs.
1-117-0105	Vibration Meter, velocity and displacement readout, includes installed high pass filters, (70 Hz and 200 Hz)	19 lbs.

1-157 Portable Vibration Meter



Features:

- Portable vibration meter indicating peak-to-peak displacement and average velocity
- Six selectable inputs
- Optional AC or DC power
- Three internal test circuits

1-157-0001	Vibration Meter, velocity and displacement readout, filters not included, AC power supply.	12 lbs.
1-157-0002	Vibration Meter, velocity and displacement readout, except furnished with DC power supply, including batteries, No filtering including	
1-157-0103	Vibration Meter, velocity and displacement readout, furnished with DC power supply including batteries, Includes 70 Hz and 200 Hz high-pass filters	



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Filter Modules (Portable Meters)

1-003-0015-AA	High Pass 15Hz (model 1-117 & 1-157)	0.5 lbs.
1-003-0030-AA	High Pass 30Hz (model 1-117 & 1-157)	0.5 lbs.
1-003-0040-AA	High Pass 40Hz (model 1-117 & 1-157)	0.5 lbs.
1-003-0045-AA	High Pass 45Hz (model 1-117 & 1-157)	0.5 lbs.
1-003-0070-AA	High Pass 70Hz (model 1-117 & 1-157)	0.5 lbs.
1-003-0110-AA	High Pass 110Hz (model 1-117 & 1-157)	0.5 lbs.
1-003-0150-AA	High Pass 150Hz (model 1-117 & 1-157)	0.5 lbs.
1-003-0155-AA	High Pass 155Hz (model 1-117 & 1-157)	0.5 lbs.
1-003-0200-AA	High Pass 200Hz (model 1-117 & 1-157)	0.5 lbs.
1-003-0500-AA	High Pass 500Hz (model 1-117 & 1-157)	0.5 lbs.
1-044-0035-AA	Low Pass 35Hz (model 1-117 & 1-157)	0.5 lbs.
1-044-0070-AA	Low Pass 70Hz (model 1-117 & 1-157)	0.5 lbs.
1-044-0100-AA	Low Pass 100Hz (model 1-117 & 1-157)	0.5 lbs.
1-044-0450-AA	Low Pass 450Hz (model 1-117 & 1-157)	0.5 lbs.
1-044-0070-AA	Low Pass 70Hz (model 1-117 & 1-157)	0.5 lbs.
1-044-1000-AA	Low Pass 1000Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0001-AA	Band Pass 75-750Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0011-AA	Band Pass 50-400Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0030-AA	Band Pass 100-500Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0035-AA	Band Pass 24-130Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0036-AA	Band Pass 130-310Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0042-AA	Band Pass 40-400Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0051-AA	Band Pass 15-25Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0053-AA	Band Pass 10-2000Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0066-AA	Band Pass 10-100Hz (model 1-117 & 1-157)	0.5 lbs.
1-045-0070-AA	Band Pass 110-2000Hz (model 1-117 & 1-157)	0.5 lbs.



2700 Calibration Source



Features:

- Four outputs: Differential charge, single-ended charge, low impedance AC millivolt, low impedance DC millivolt
- Frequency Adjustable - 10 to 9999.9 Hz in 0.1 Hz increments
- Adjustable Output Level - 10 to 1999 pica coulombs or millivolts

2700-0001	Portable Calibration Source Charge, Voltage and Frequency Outputs 115 VAC (for 220 VAC order -0002)	7.2 lbs.
2700-0101	Portable Calibration Source same as 2700-0001 w/larger case for cable storage includes cable set P/N 0700042-00-0001	10 lbs.
2700-0104	Portable Calibration Source with Tachometer Output, 115 / 220 VAC includes cable set P/N 700042-00-0000	10 lbs.
2700-0105	Portable Calibration Source, 115 / 220 VAC	9 lbs.
2700-0200	Portable Calibration Source with Tachometer Output 115/220 VAC	9 lbs.

Miscellaneous Electronics

368907-0003	Panel, Blank (4000-3xxx)
368937-0001	Extender Card (used for calibration with 4000 series amplifiers & displays)
368937-0002	Extender Card (used for calibration with P/N 1-196-XXXX)
369455-0300	Cable, 4-102 to CEC 4000
369456-0072	Cable, Power for CEC 4000