Dynamic Pressure Sensors

Dynamic Pressure sensors measure combustion instability in gas turbine combustion chambers. They can detect impending compressor surge or stall and monitor the combustion process. This enables operator to get more power using less gas, and to control emissions.

Extreme High Temperaturees

High Temperature Piezoelectric (HTPE) Accelerometers and Extreme High Temperature Piezoelectric (EHTPE) Accelerometers for shock and vibration measurement of structures in industrial or laboratory applications involving high temperature, Gamma and Neutron radiation and loose-parts- monitoring systems.

- Temperature range for HTPE Accels: +750˚F (+399˚C) to +900˚F (+482˚C)
- Temperature range for EHTPE Accels: +1000˚F (+538˚C) to +1500˚F (+815˚C)
- Charge sensitivities ranging from 3 pC/g to 100 pC/g
- Rugged designs with stud mounting, through bolt or multi-point screw mount.
- Integral hardline with variable length or integral connectors. Electrical design optimized for use with single ended amplifiers and terminated with a 10-32 coaxial connector or designs for differential charge amplifiers terminated with a 2 pin connector. The EHTPE Accels are designed to accept a 10KΩ; source resistance the HTPE Accels are designed to accept 100KΩ; source resistance.
- Fully compliant to the European Union's Low Voltage, EMC and RoHS directives.

Remote Charge Converters (RCC)

RCC's are designed for HTPE and EHTPE acceleromaters. RCC 1772-X (USA Patent 11,309,855) and 1772M1-X are used with single ended PE's. RCC's 1772M2-XX and 1772M3 are used with differential PE's. The RCC extends the PE frequency range and suppresses its resonance.

Accelerometers | Vibration Sensors

Accelerometers measure the levels of vibration in an engine or systems. They detect faults and prevent potential damage. They enable you to achieve the reliability and accuracy you need for your engine, aircraft, helicopter, UAS, space or transportation application. From helicopter HUMS, to modern turbofans, our wide range of accelerometers are the core of all vibration and engine monitoring systems. We provide a comprehensive range of accelerometers. Let our experts help you select the best device.

Aerospace Accelerometers

The vast majority of current transport aircraft rely on our accelerometers to monitor the condition and health of their engines. They allow engine manufacturers to fine tune engine for increased efficiency and enable operators to optimize their maintenance. The vibration data is fed into the Engine Monitoring Unit (EMU) which performs advanced trending, monitoring and prognostic functions. These accelerometers can operate in extreme temperatures, up to 1500˚F (815˚C).

Our Piezo-electric accelerometers are ideally suited to a wide range of jet engine (civil and military) helicopter and test labs.

- gas turbine engine monitoring
- aircraft structure vibration analysis
- gearbox analysis
- bearing analysis
- Health and usage monitoring systems (HUMS)
- rotor trim and balance
- propeller balancing
- auxiliary power unit monitoring

Parker Meggitt
Defense Systems Division
9801 Muirlands Boulevard
Irvine
California
92618 USA

Tel: +1 949 465 7700
www.meggittdefense.com

Parker Defense Systems

PE SENSORS CATALOG

CABLES

DYNAMIC PRESSURE SENSORS

ELECTRONICS (REMOTE CHARGE CONVERTER)

PATENTED TRS

EXTREME HIGH TEMPERATURE PIEZOELECTRIC ACCELEROMETER (EHTPE)

HIGH TEMPERATURE PIEZOELECTRIC ACCELEROMETER (HTPE)

PE Sensors Catalog

Parker Defense Systems

Model	Sensitivity (pC/g)	Output	Frequency response (+/- 1 dB)	Reso-nance	Exit and connector type	Temperature limits	Mounting	Weight (typical)	Shock limit	Isolated	RCC used with sensor	Applications	Radiation
2248/2248M1	3	single ended	1Hz to 8kHz	25 kHz	side 10/32 coaxial	-65°F to +900°F (-54°C to +482°C)	6-32 bolts (qty 2) / 10-32 stud	13 gr	3000 g pk	grounded		Gas turbine - Nuclear monitoring	"up to 6.2 x 10^10 Integrated gamma flux up to 3.7 x 10^18 Integrated neutron flux"
2273A	3	single ended	1 to 6000 Hz	30 kHz	side 10/32 coaxial	-300˚F to +750˚F (-184˚C to +399˚C)	10-32 stud	25 gr	10 000 g pk	grounded	1772-6 1772-6-10	Test cell vibration - Nuclear - High temp testing	"up to 6.2 x 10^10 Integrated gamma flux up to 3.7 x 10^18 Integrated neutron flux"
2273AM1/AM20	10	single ended	1 to 7000 Hz	27/24 kHz	side/top 10/32 coaxial	-67˚F to +750˚F (-55˚C to +399˚C)	10-32 stud	32 / 34 gr	3000 g pk	isolated	1772-6 1772-6-10	Test cell vibration - Reactor and loose parts testing	"up to 6.2 x 10^10 Integrated gamma flux up to 3.7 x 10^18 Integrated neutron flux"
2276	10	single ended	1 to 7000 Hz	27 kHz	side 10/32 coaxial	-67˚F to +900˚F (-55˚C to +482˚C)	10-32 stud	30 gr		grounded	1772-6 1772-6-10	Test cell vibration - Nuclear - High temp testing	"up to 6.2 x 10^10 Integrated gamma flux up to 3.7 x 10^18 Integrated neutron flux"
2280 - Triax	3	single ended	10 to 4000 Hz	25 kHz	3 off 10/32 coaxial	-65°F to +900°F (-54°C to +482°C)	8-32 bolts (qty 2)	250 gr	3000 g pk	isolated	1772M1-X	Gas turbine - Nuclear applications	5 x 10^7 rad per IEEE STD 383-1974
6222M59	50	differential	20 Hz to 4 kHz	20 kHz	mates with MS3106R-10SL-4S plug	-65°F to +500°F (-54°C to +260°C)	M7 bolts (qty 4)	150 gr	1000 g pk	isolated	1772M2-XX	Gas turbine monitoring	NOT RADIATION RESISTANT
6233C-10	10	differential	1 to 9 kHz	31 kHz	side 7/16-27	-67°F to +900°F (-55°C to +482°C)	8-32 botls (qty 3)	75 gr	2000 g pk	isolated	1772M3-1	Gas turbine - Test cell vibration - Nuclear	"up to 6.2 x 10^10 Integrated gamma flux up to 3.7 x 10^18 Integrated neutron flux"
6233C-50	50	differential	1 to 4500 Hz	16 kHz	side 7/16-27	-67°F to +900°F (-55°C to +482°C)	8-32 botls (qty 3)	110 gr	2000 g pk	isolated	1772M2-XX	Gas turbine - Test cell vibration - Nuclear	"up to 6.2 x 10^10 Integrated gamma flux up to 3.7 x 10^18 Integrated neutron flux"
6233C-100	100	differential	1 to 4000 Hz	12 kHz	side 7/16-27	-67°F to +900°F (-55°C to +482°C)	8-32 botls (qty 3)	110 gr	1000 g pk	isolated	1772M2-XX	Gas turbine - Test cell vibration - Nuclear	"up to 6.2 x 10^10 Integrated gamma flux up to 3.7 x 10^18 Integrated neutron flux"
6235M1	10	differential	1 to 9000 Hz	30 kHz	three pins socket MS3474G8-33S receptacle	-325°F to +900°F (-196°C to +482°C)	M4 bolts (qty 3)	75 gr	2000 g pk	isolated	1772M2-XX	Aircraft and gas turbine engine monitoring - Test cell - Nuclear	"up to 6.2 x 10^10 Integrated gamma flux up to 3.7 x 10^18 Integrated neutron flux"
6237M70 / M71	10	single ended	1 to 5000 Hz	11 kHz	10/32 coaxial receptacle	-67˚F to +1200˚F (-55˚C to +650˚C)	10-32 X .75 in mounting screw	13 gr	2000 g pk	isolated	1772-2	Gas Turbine Testing - Test cell	5 x 10^7 rad per IEEE STD 383-1974
6240M4X /5X /6X	50	differential	20 to 350 Hz	15 kHz	"M83723/89Y 1020-6 M83723/89Y 1020-N MS3106R-10SL-4P"	-65°F to 900°F (-54°C to 482°C) extreme to 930°F (499°C)	M7 bolts (qty 4)	680 gr	1000 g pk	isolated	1772M2-XX	Gas turbine monitoring	5 x 10^7 rad per IEEE STD 383-1974
6240M10 / M11	5	single ended	1 Hz to 3000 Hz	10 kHz	10/32 coaxial receptacle	"-65˚F to +1200˚F (-54˚C to +650˚C) -65˚F to +1400˚F (-54˚C to +760˚C) intermittent"	¼-28 mounting screw	95 + 14 gr	1000 g pk	isolated	1772M1-X	Aircraft and gas turbine engine monitoring - Test cell - Nuclear	5 x 10^7 rad per IEEE STD 383-1974
6243M1/6243M2	5.5	single ended	1 Hz to 3000 Hz	11 kHz	10/32 coaxial receptacle	"-65˚F to +1200˚F (-54˚C to +650˚C) -65˚F to +1400˚F (-54˚C to +760˚C) intermittent"	10-32 X .75 in mounting screw	30 gr plus cable	2000 g pk	isolated	1772-1	Aircraft and gas turbine engine monitoring - Test cell - Nuclear	5 x 10^7 rad per IEEE STD 383-1974
6243M3/6243M4	5.5	differential	1 Hz to 3000 Hz	11 kHz	7/16-27 receptacle	"-65˚F to +1200˚F (-54˚C to +650˚C) -65˚F to +1400˚F (-54˚C to +760˚C) intermittent"	10-32 X .75 in mounting screw	30 gr plus cable	2000 g pk	isolated	1772-1	Aircraft and gas turbine engine monitoring - Test cell - Nuclear	5 x 10^7 rad per IEEE STD 383-1974
6243M8/6243M9	5.5	single ended	1 Hz to 3000 Hz	11 kHz	10/32 coaxial plug, flex cable	-65°F to +1000°F (-54°C to +538°C)	10-32 X .75 in mounting screw	30 gr plus cable	2000 g pk	isolated	1772-1	Aircraft and gas turbine engine monitoring - Test cell - Nuclear	5 x 10^7 rad per IEEE STD 383-1974
6245	3	single ended	1 Hz to 4000 Hz	11 kHz	10/32 coaxial receptacle	-65°F to +1500°F (-54°C to +815°C)	10-32 X .75 in mounting screw	30 gr plus cable	2000 g pk	isolated	1772-3	Aircraft and gas turbine engine monitoring - Test cell - Nuclear	5 x 10^7 rad per IEEE STD 383-1974

DYNAMIC PRESSURE

Model	Sensitivity pC/g	Output	Pressure range	Reso-nance	Connector type	Temperature limits	Mounting	Weight	Shock limit	Material	Applications	Notes
522M17	12	single ended	2500 psi static with 500 psi dynamic range	45 kHz	10/32 coaxial plug	"°F (°C) 1000(538) continuous °F (°C) 1200 (650) intermittent"	Compression seal	25 gr (sensor)	NA	Case Inconel, hardline cable without overbraid	Combustion Monitoring - High Pressure Steam - Turbine exhaust pressure	Cable length to define
522M35A/B	17	differential	400 psi static with +/- 500 psi dynamic range	20 kHz	EN2997 3 pin	"°F (°C) 986 (530) continuous °F (°C)1040 (560) intermittent"	Compression seal	250 gr (35A)	NA	Case Inconel, hardline cable with overbraid	Combustion Monitoring - High Pressure Steam - Turbine exhaust pressure measurements	EExnA II T1 certified, 2 ft cable length (35A) Cable length to define (35B)
522M37A	17	differential	400 psi static with +/- 500 psi dynamic range	20 KHz	EN2997 3 pin	"°F (°C) 986 (530) continuous °F (°C)1040 (560) intermittent"	Compression seal	18 gr (sensor)	NA	Case Inconel, hardline cable with overbraid	Gas turbine combustion monitoring - High pressure steam - Propulsion system testing.	Cable length to define
522M40	12	single ended	2500 psi static with 500 psi dynamic range	45 kHz	10/32 coaxial plug	"°F (°C) 1300 (704) continuous °F (°C)1500 (815) intermittent"	Compression seal	25 gr (sensor)	NA	Case Iconel, hardline cable without overbraid	Combustion Monitoring - High Pressure Steam - Turbine exhaust pressure	Cable length to define

Note: Due to continuous process improvement, specifications are subject to change without notice. TCO Review # 355