PCB PIEZOTRONICS INC.
3425 WALDEN AVE.
DEPEW, NEW YORK 14043

INSTRUCTIONS FOR USE –EX682XYYY Series

Model(s)	EX682XYYY series where "X" is a letter that signifies family type. The letter will be from A to M. "YYY" is a number from 1 to 999 that signifies changes to filtering, gain frequency response etc..
Markings	PCB Depew, NY IECEx LCIE 13.0002X LCIE 13 ATEX 3031 X Ex ia IIC T4 Ga LCIE 13 ATEX 1010 X Ex nA IIC T4 Gc
Putting Into Service	Powering: All Charge Amplifiers require constant current excitation for proper operation. For this reason, use only PCB constant-current signal conditioners or other approved constant-current sources. The power supply consists of a current-regulated, 18 to 30 VDC source. This power is regulated by a current-limiting circuit, which provides the constant-current excitation required for proper operation of Charge Amplifiers. In general, battery-powered devices offer versatility for portable, low-noise measurements, whereas line-powered units provide the capability for continuous monitoring. Consult the Vibration Division's product catalog for more information about signal conditioners. **NOTE:** *Under no circumstances should a voltage be supplied to the Charge Amplifiers without a current-regulating diode or equivalent electrical circuit. This may include ohmmeters, multi-meters and continuity testers.*
Safe Use	After completing the system setup, switch on the signal conditioner and allow 1 to 2 minutes for the system to stabilize. The meter (or LED) on the signal conditioner should be reading "green." This indicates proper operation and you may begin taking measurements. If a faulty condition is indicated (red or yellow reading), first check all system connections, then check the functionality of the cable and signal conditioner. If the system still does not operate properly, consult a PCB factory representative. **NOTE:** *Always operate the Charge Amplifiers within the limitations listed on the enclosed* ***Specification Sheet****. Operating the device outside these parameters can cause temporary or permanent damage to the Charge Amplifiers.*
Assembling	The EX682XYYY Series have green polyamide housing and do not require any assembly. Only mounting on a 35mm Din Rail.
Dismantling	Other than removal from the mounting, there is no disassembly of the Charge Amplifiers required to take it out of service.
Maintenance	Routine maintenance, such as the cleaning of electrical connectors, housings, and mounting surfaces with solutions and techniques that will not harm the physical material of construction, is acceptable.
Servicing	Due to the sophisticated nature of the Charge Amplifiers and associated instrumentation provided by PCB Piezotronics, user servicing or repair is not recommended and, if attempted, may void the factory warranty. However, routine calibration of Charge Amplifiers and associated instrumentation is recommended as this helps build confidence in measurement accuracy and acquired data.
Repair	In the event that equipment becomes damaged or ceases to operate, arrangements should be made to return the equipment to PCB Piezotronics for repair. User servicing or repair is not recommended and, if attempted, may void the factory warranty.

Installation	Overview: The Charge Amplifiers are designed to be mounted on a 35mm Dain rail. Do note install in a harsh area where it can be exposed to cleaning fluid or machine oils. The unit should be mounted in a NEMA type enclosure to protect the electronics from contamination. Cabling: Care and attention to cable installation and cable condition is essential as the reliability and accuracy of any measurement system is no better than that of its weakest link. Due to the nature of vibration measurements, all Charge Amplifiers cables will ultimately fatigue and fail. Good installation practice will extend the life of a cable, however, it is highly recommended to keep spare cables on hand to enable continuation of the test in the event of a cable failure.
Adjustment	No user adjustments are possible. However, routine calibration of Charge Amplifiers by the manufacturer is recommended as this helps build confidence in measurement accuracy and acquired data.
Danger Areas (for pressure-relief devices)	N/A – not a pressure relief device.
Training Instructions	Industrial Charge Amplifiers must be installed in Hazardous Locations by trained professionals according to EN/IEC 60079-14 requirements.
Details on Safety of Protection Category	Ex ia is “intrinsic safety”, which limits the energy of sparks and surface temperatures to safe levels Ex nA is “Non-Sparking”, which ensures that there is no risk of arcing and sparking or hot surfaces during normal operation.
Entity Parameters and Limits (Values)	Temperature Range: -40°C to +85C Power Terminals (VDC, COM): Ui ≤ 28V, Ii ≤ 100 mA, Pi ≤ 0.7W, Ci=0, Li = 0 Sensor Terminals (-SIG, +SIG, SHLD): Uo ≤ 28V, Io ≤ 60 mA, Po ≤ 0.42W, Co=83nF, Li = 10mH
Special Conditions of Use	Version Ex ia : The equipment can be only connected to intrinsically safe certified equipment. These combinations must be compatible as regard the intrinsic safety rules (see electrical parameters) Version Ex nA: The user must comply with the requirements of the instructions for use. The component shall be installed in an enclosure conform to requirements of standard IEC 60079-0 and with ingress protection at least IP54.
Essential Characteristics of tools fitted to the system (if any).	N/A – No tools are fitted to the system.
Drawings and Diagrams	54707,54708,54711,54712,54713,54714,65028,65092,54715,54716,54718
Other	

Note: Literature (such as the manual or marketing materials) describing the equipment or protective system must not contradict the instructions with regard to safety aspects.