



Model 691A50/02
BNC Termination Enclosure
Installation and Operating Manual

**For assistance with the operation of this product,
contact PCB Piezotronics, Inc.**

Toll-free: 800-959-4464
24-hour SensorLine: 716-684-0001
Fax: 716-684-3823
E-mail: imi@pcb.com
Web: www.imi-sensors.com



Repair and Maintenance

PCB guarantees Total Customer Satisfaction through its “Lifetime Warranty Plus” on all Platinum Stock Products sold by PCB and through its limited warranties on all other PCB Stock, Standard and Special products. Due to the sophisticated nature of our sensors and associated instrumentation, **field servicing and repair is not recommended and, if attempted, will void the factory warranty.**

Beyond routine calibration and battery replacements where applicable, our products require no user maintenance. Clean electrical connectors, housings, and mounting surfaces with solutions and techniques that will not harm the material of construction. Observe caution when using liquids near devices that are not hermetically sealed. Such devices should only be wiped with a dampened cloth—never saturated or submerged.

In the event that equipment becomes damaged or ceases to operate, our Application Engineers are here to support your troubleshooting efforts 24 hours a day, 7 days a week. Call or email with model and serial number as well as a brief description of the problem.

Calibration

Routine calibration of sensors and associated instrumentation is necessary to maintain measurement accuracy. We recommend calibrating on an annual basis, after exposure to any extreme environmental influence, or prior to any critical test.

PCB Piezotronics is an ISO-9001 certified company whose calibration services are accredited by A2LA to ISO/IEC 17025, with full traceability to SI through N.I.S.T. In addition to our standard calibration services, we also offer specialized tests, including: sensitivity at elevated or cryogenic temperatures, phase response, extended high or low frequency response, extended range, leak testing, hydrostatic pressure testing, and others. For more information, contact your local PCB Piezotronics distributor, sales representative, or factory customer service representative.

Returning Equipment

If factory repair is required, our representatives will provide you with a Return Material Authorization (RMA) number, which we use to reference any information you have already provided and expedite the repair process. This number should be clearly marked on the outside of all returned package(s) and on any packing list(s) accompanying the shipment.

Contact Information

PCB Piezotronics, Inc.
3425 Walden Ave.
Depew, NY14043 USA
Toll-free: (800) 828-8840
24-hour SensorLine: (716) 684-0001
General inquiries: info@pcb.com
Repair inquiries: rma@pcb.com

For a complete list of distributors, global offices and sales representatives, visit our website, www.pcb.com.

Safety Considerations

This product is intended for use by qualified personnel who recognize shock hazards and are familiar with the precautions required to avoid injury. While our equipment is designed with user safety in mind, the protection provided by the equipment may be impaired if equipment is used in a manner not specified by this manual.

Discontinue use and contact our 24-Hour Sensorline if:

- Assistance is needed to safely operate equipment
- Damage is visible or suspected
- Equipment fails or malfunctions

For complete equipment ratings, refer to the enclosed specification sheet for your product.

Definition of Terms and Symbols

The following symbols may be used in this manual:



DANGER

Indicates an immediate hazardous situation, which, if not avoided, may result in death or serious injury.

**CAUTION**

Refers to hazards that could damage the instrument.

**NOTE**

Indicates tips, recommendations and important information. The notes simplify processes and contain additional information on particular operating steps.

The following symbols may be found on the equipment described in this manual:



This symbol on the unit indicates that high voltage may be present. Use standard safety precautions to avoid personal contact with this voltage.



This symbol on the unit indicates that the user should refer to the operating instructions located in the manual.



This symbol indicates safety, earth ground.



PCB工业监视和测量设备 - 中国RoHS2公布表

PCB Industrial Monitoring and Measuring Equipment - China RoHS 2 Disclosure Table

| 部件名称 | 有害物质 | | | | | |
|--|--------|--------|--------|--------------|------------|--------------|
| | 铅 (Pb) | 汞 (Hg) | 镉 (Cd) | 六价铬 (Cr(VI)) | 多溴联苯 (PBB) | 多溴二苯醚 (PBDE) |
| 住房 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCB板 | X | 0 | 0 | 0 | 0 | 0 |
| 电气连接器 | 0 | 0 | 0 | 0 | 0 | 0 |
| 压电晶体 | X | 0 | 0 | 0 | 0 | 0 |
| 环氧 | 0 | 0 | 0 | 0 | 0 | 0 |
| 铁氟龙 | 0 | 0 | 0 | 0 | 0 | 0 |
| 电子 | 0 | 0 | 0 | 0 | 0 | 0 |
| 厚膜基板 | 0 | 0 | X | 0 | 0 | 0 |
| 电线 | 0 | 0 | 0 | 0 | 0 | 0 |
| 电缆 | X | 0 | 0 | 0 | 0 | 0 |
| 塑料 | 0 | 0 | 0 | 0 | 0 | 0 |
| 焊接 | X | 0 | 0 | 0 | 0 | 0 |
| 铜合金/黄铜 | X | 0 | 0 | 0 | 0 | 0 |
| 本表格依据 SJ/T 11364 的规定编制。 | | | | | | |
| 0：表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。 | | | | | | |
| X：表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。 | | | | | | |
| 铅是欧洲RoHS指令2011/65/ EU附件三和附件四目前由于允许的豁免。 | | | | | | |

CHINA RoHS COMPLIANCE

| Component Name | Hazardous Substances | | | | | |
|------------------------|----------------------|--------------|--------------|--------------------------------|--------------------------------|---------------------------------------|
| | Lead (Pb) | Mercury (Hg) | Cadmium (Cd) | Chromium VI Compounds (Cr(VI)) | Polybrominated Biphenyls (PBB) | Polybrominated Diphenyl Ethers (PBDE) |
| Housing | O | O | O | O | O | O |
| PCB Board | X | O | O | O | O | O |
| Electrical Connectors | O | O | O | O | O | O |
| Piezoelectric Crystals | X | O | O | O | O | O |
| Epoxy | O | O | O | O | O | O |
| Teflon | O | O | O | O | O | O |
| Electronics | O | O | O | O | O | O |
| Thick Film Substrate | O | O | X | O | O | O |
| Wires | O | O | O | O | O | O |
| Cables | X | O | O | O | O | O |
| Plastic | O | O | O | O | O | O |
| Solder | X | O | O | O | O | O |
| Copper Alloy/Brass | X | O | O | O | O | O |

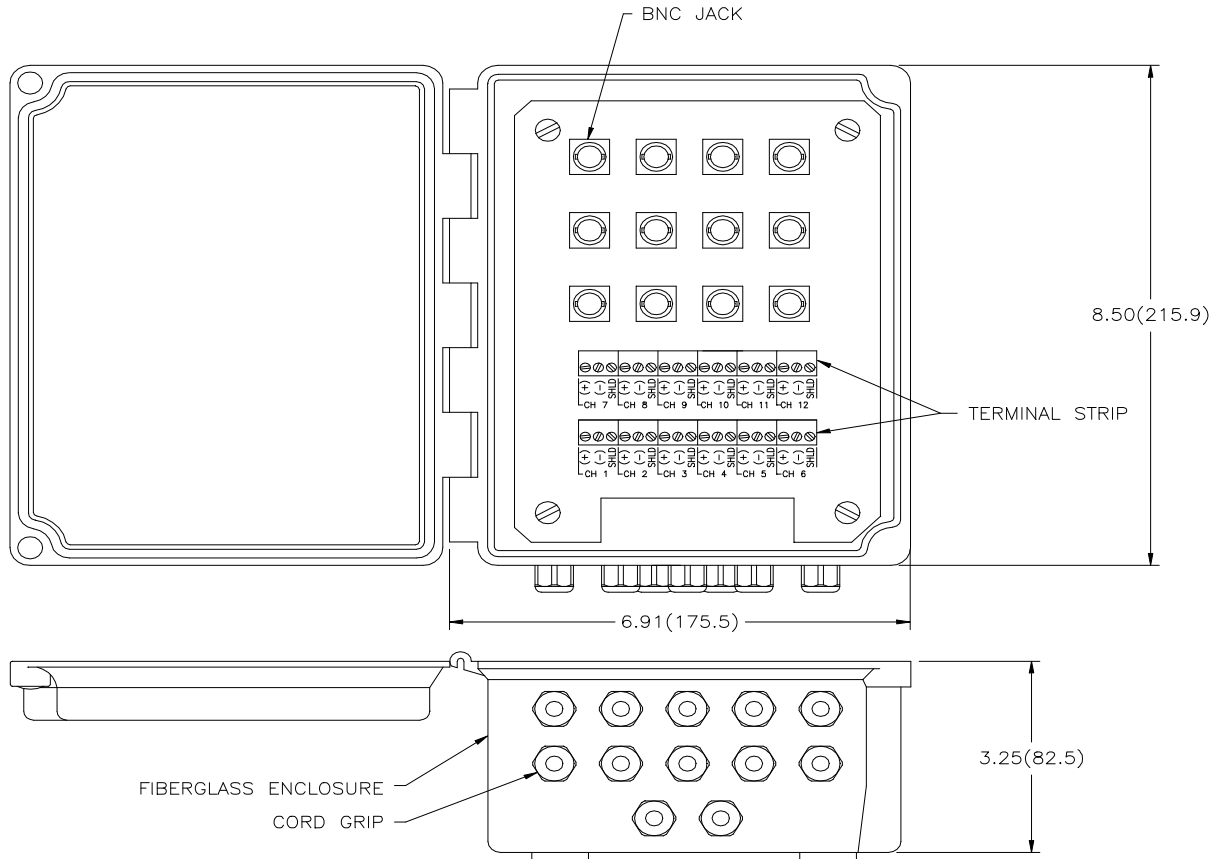
This table is prepared in accordance with the provisions of SJ/T 11364.

O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.

X: Indicates that said hazardous substance contained in at least one of the homogeneous materials for this part is above the limit requirement of GB/T 26572.

Lead is present due to allowed exemption in Annex III or Annex IV of the European RoHS Directive 2011/65/EU.

The Model 691A50 Series Vibration BNC Breakout Boxes



Operating Guide with Enclosed Warranty Information

3425 Walden Avenue, Depew, New York 14043-2495

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Toll Free Line 1-800-959-4IMI

MANUAL NUMBER: 18423

MANUAL REVISION: NR



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warranty/servicing

See Inserts for Warranty/Servicing Information

introduction

The Model 691A50 Series are Vibration BNC Breakout Boxes that provide terminal strip input with the convenience of BNC outputs. They are used in conjunction with commercially available data collectors and analyzers. They are available in 1 channel to 12 channel units, all housed in a NEMA enclosure. They come standard in a fiberglass, NEMA 4X (IP 66) enclosure with optional painted steel, NEMA 12 (IP65) or stainless steel, NEMA 4X (IP66) enclosure. One cord grip (PGME07) is installed on the bottom of the unit per channel. A few specifications are listed below for easy reference:

| | |
|-------------------------------|--|
| <i>Input Connectors.....</i> | 3-Socket Terminal Strip |
| <i>Output Connectors.....</i> | BNC Jack |
| <i>Cable Input</i> | PGME07 |
| <i>Enclosure Type.....</i> | NEMA 4X (IP66) |
| <i>Size.....</i> | 8 x 6 x 4 in [203 x 152 x 102 mm] |

installation

Establish an easily accessible location for installation and keep in mind that the cabling will be coming from the bottom panel of the enclosure. One PGME07 cord grip is installed for each channel ordered. Use the supplied mounting feet to install the enclosure.

NOTE: *The unit has BNC connectors that can be easily contaminated. Install the unit away from sprays, cleaning fluids, steam, excess temperature (above 212°F) and other contaminants. Always keep door closed when not in use.*



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ICP® is a registered trademark of PCB Piezotronics, Incorporated,
which uniquely identifies PCB sensors that incorporate built-in microelectronics.

| | | |
|----------------------------------|----------------------------------|-----------------------------|
| Model Number 691A50/02 | BNC TERMINATION ENCLOSURE | Revision: A ECN #: 47548 |
|----------------------------------|----------------------------------|-----------------------------|

| | <u>ENGLISH</u> | <u>SI</u> |
|-------------------------------|--------------------|--------------------------|
| Performance | | |
| Channels | 2 | 2 |
| Environmental | | |
| Enclosure Rating | Nema 4X | IP66 |
| Temperature Range | -15 to +158 °F | -26 to +70 °C |
| Physical | | |
| Electrical Connector(Input) | Terminal Block | Terminal Block |
| Electrical Connector(Output) | BNC Jack | BNC Jack |
| Cable Input | PGME07 | PGME07 |
| Housing Material | Fiberglass | Fiberglass |
| Size (Height x Width x Depth) | 8 in x 6 in x 4 in | 203 mm x 152 mm x 102 mm |
| Weight | 2.5 lb | 1.14 kg |



All specifications are at room temperature unless otherwise specified.
 In the interest of constant product improvement, we reserve the right to change specifications without notice.
 ICP® is a registered trademark of PCB Group, Inc.

| OPTIONAL VERSIONS | | |
|--|--------|---------|
| Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used. | | |
| PS - Painted Steel | | [2] |
| Enclosure Rating | IP65 | Nema 12 |
| Weight | 5.0 lb | 2.3 kg |
| SS - Stainless Steel Enclosure | | [2] |
| Enclosure Rating | IP66 | Nema 4X |
| Weight | 5.5 lb | 2.5 kg |

NOTES:
 [1] See PCB Declaration of Conformance PS174 for details.
 [2] Mounting kit integral to enclosure.

| | | | | |
|-----------------|-----------------|-----------------|-----------------|--------------|
| Entered: LK | Engineer: BAM | Sales: MC | Approved: BAM | Spec Number: |
| Date: 12/4/2017 | Date: 12/4/2017 | Date: 12/4/2017 | Date: 12/4/2017 | 20652 |

| | |
|---|--|
|  IMI SENSORS A PCB PIEZOTRONICS DIV. 3425 Walden Avenue, Depew, NY 14043 | Phone: 800-959-4464 Fax: 716-684-3823 E-Mail: imi@pcb.com |
|---|--|

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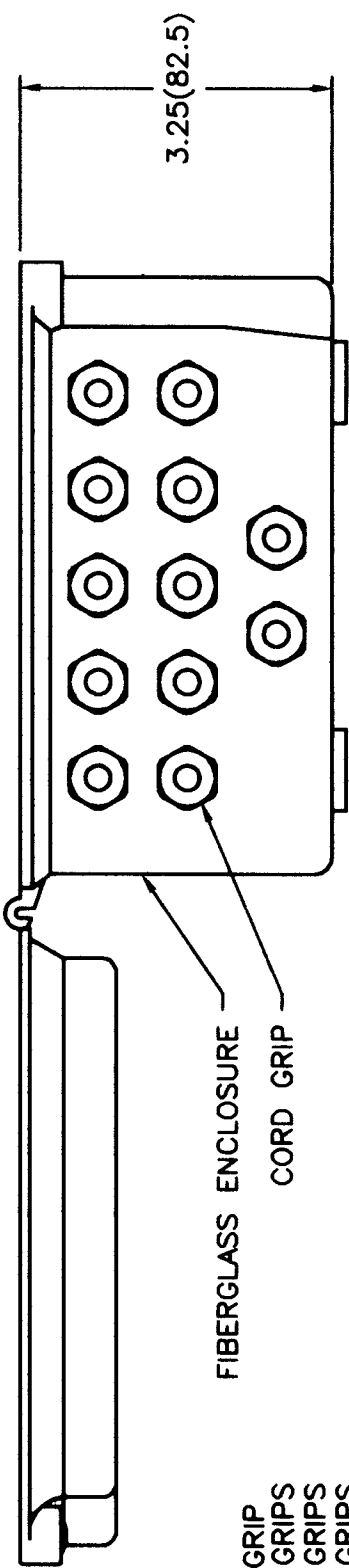
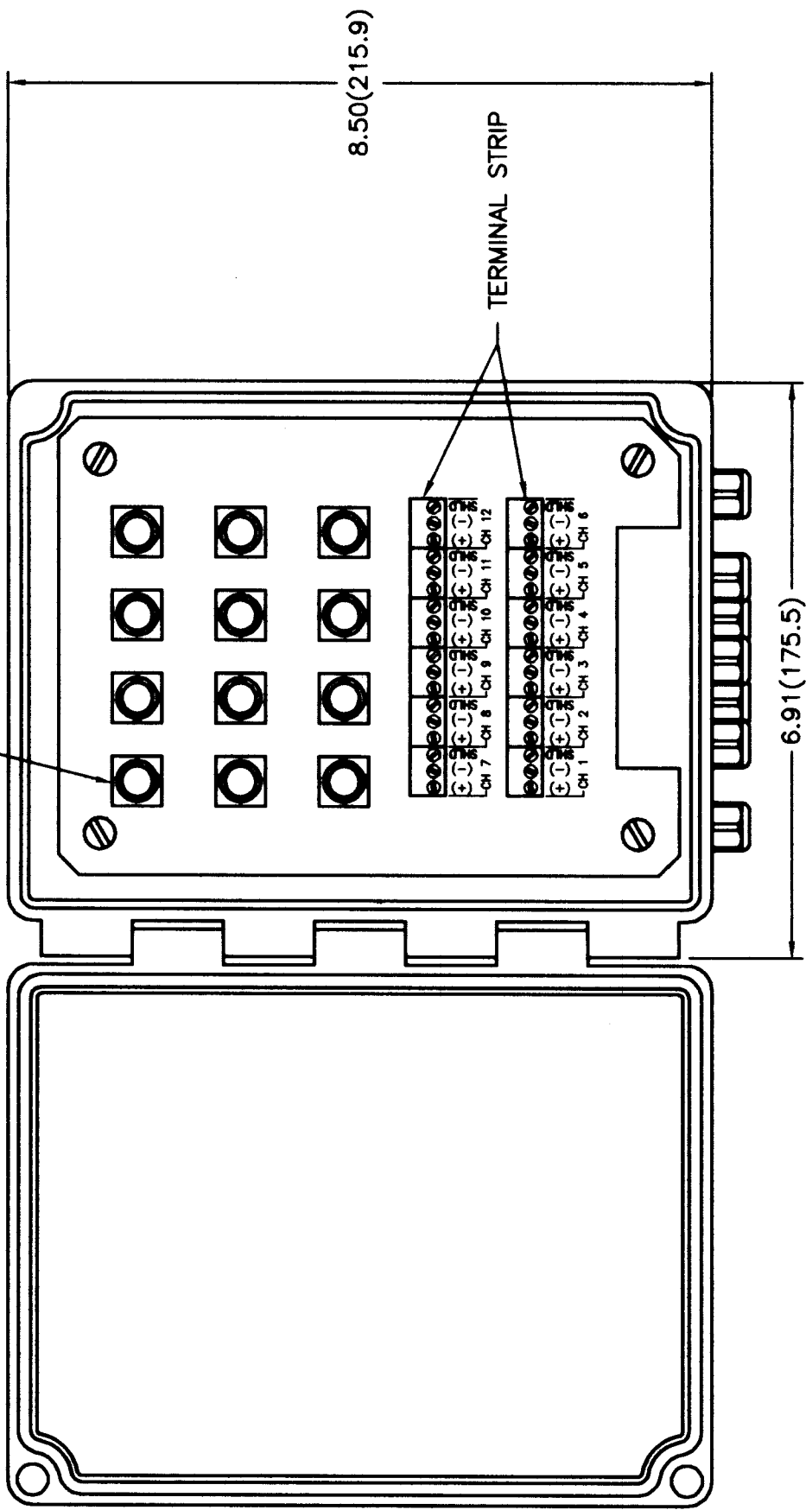
| APPLICATION | |
|-------------|---------|
| NEXT ASSY | USED ON |
| | VAR |

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| REVISIONS | | | |
|-----------|-----|-------------|-----|
| ZONE | REV | DESCRIPTION | ECN |
| | | | |
| | | | |
| | | | |

| DATE | APP'D |
|------|-------|
| | |

BNC JACK



NOTES:

- 691A50/01 - 1 CH / 1 CORD GRIP
- 691A50/02 - 2 CH / 2 CORD GRIPS
- 691A50/03 - 3 CH / 3 CORD GRIPS
- 691A50/04 - 4 CH / 4 CORD GRIPS
- 691A50/05 - 5 CH / 5 CORD GRIPS
- 691A50/06 - 6 CH / 6 CORD GRIPS
- 691A50/07 - 7 CH / 7 CORD GRIPS
- 691A50/08 - 8 CH / 8 CORD GRIPS
- 691A50/09 - 9 CH / 9 CORD GRIPS
- 691A50/10 - 10 CH / 10 CORD GRIPS
- 691A50/11 - 11 CH / 11 CORD GRIPS
- 691A50/12 - 12 CH / 12 CORD GRIPS

| UNLESS SPECIFIED TOLERANCES | | DIMENSIONS IN MILLIMETERS | |
|-----------------------------|-------------------|---------------------------|-------------------|
| DIMENSIONS IN INCHES | DECIMALS | XX ±0.1 | XXX ±0.06 |
| | XX ±0.1 | XX ±0.1 | XX ±0.1 |
| | XXX ±0.06 | XXX ±0.06 | XXX ±0.06 |
| | ANGLES ±2 DEGREES | ANGLES ±2 DEGREES | ANGLES ±2 DEGREES |
| | FILLET RADIUS | FILLET RADIUS | FILLET RADIUS |
| | .003 - .006 | .007 - 0.15 | .007 - 0.15 |

| DATE | CHK'D | APP'D | TITLE | DATE | MFG | ENGR | DATE |
|---------|-------|-------|------------------|---------|-----|------|---------|
| 9/14/99 | TW | LA | OUTLINE DRAWING | 9/14/99 | LA | U.F. | 9/14/99 |
| 9/14/99 | | JJP | MODEL 691A50/XX | 9/14/99 | | | |
| | | | BNC BREAKOUT BOX | | | | |

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CODE 52681
DWT. NO. 11664
SCALE: .5X
SHEET 1 OF 1