



**ADDI-DATA GmbH  
Dieselstraße 3  
D-77833 OTTERSWEIER**



**Technical support:  
+49 (0)7223 / 9493 - 0**

**Technical description**

**PX-BNC**

**BNC connection box**

Edition: 01.01-07/2005

## Product information

This manual contains the technical installation and important instructions for correct commissioning and usage, as well as production information according to the current status before printing.

The content of this manual and the technical product data may be changed without prior notice. ADDI-DATA GmbH reserves the right to make changes to the technical data and the materials included herein.

## Warranty and liability

The user is not permitted to make changes to the product beyond the intended use, or to interfere with the product in any other way.

ADDI-DATA shall not be liable for obvious printing and phrasing errors. In addition, ADDI-DATA, if legally permissible, shall not be liable for personal injury or damage to materials caused by improper installation and/or commissioning of the board by the user or improper use, for example, if the board is operated despite faulty safety and protection devices, or if notes in the operating instructions regarding transport, storage, installation, commissioning, operation, thresholds, etc. are not taken into consideration. Liability is further excluded if the operator changes the board or the source code files without authorisation and/or if the operator is guilty of not monitoring the permanent operational capability of working parts and this has led to damage.

## Copyright

This manual, which is intended for the operator and its staff only, is protected by copyright. Duplication of the information contained in the operating instructions and of any other product information, or disclosure of this information for use by third parties, is not permitted, unless this right has been granted by the product licence issued. Non-compliance with this could lead to civil and criminal proceedings.

## ADDI-DATA software product licence

Please read this licence carefully before using the standard software. The customer is only granted the right to use this software if he/she agrees with the conditions of this licence.

The software must only be used to set up the ADDI-DATA boards.

Reproduction of the software is forbidden (except for back-up and for exchange of faulty data carriers). Disassembly, decompilation, decryption and reverse engineering of the software are forbidden. This licence and the software may be transferred to a third party if this party has acquired a board by purchase, has agreed to all the conditions in this licence contract and the original owner does not keep any copies of the software.

## Trademarks

- ADDI-DATA is a registered trademark of ADDI-DATA GmbH.
- Turbo Pascal, Delphi, Borland C, Borland C++ are registered trademarks of Borland Insight Company.
- Microsoft C, Visual C++, Windows XP, 98, Windows 2000, Windows 95, Windows NT, EmbeddedNT and MS DOS are registered trademarks of Microsoft Corporation.
- LabVIEW, LabWindows/CVI, DasyLab, Diadem are registered trademarks of National Instruments Corp.
- CompactPCI is a registered trademark of PCI Industrial Computer Manufacturers Group.
- VxWorks is a registered trademark of Wind River Systems Inc.

## WARNING

**The following risks result from improper implementation and from using the box contrary to the regulations:**



- ◆ **Personal injury**
- ◆ **Damage to the box, PC and peripherals**
- ◆ **Pollution of the environment**

- ◆ **Protect yourself, the others and the environment!**
- ◆ **Read carefully the safety precautions (yellow leaflet).**

If this leaflet is not with the documentation, please contact us and ask for it.

- ◆ **Observe the instructions of the manual.**

Make sure that you do not forget or skip any step. We are not liable for damages resulting from a wrong use of the box.

- ◆ **Used symbols:**



### **IMPORTANT!**

designates hints and other useful information.



### **WARNING!**

It designates a possibly dangerous situation.

If the instructions are ignored the box, board, PC and/or peripheral may be destroyed.

<b>1</b>	<b>DEFINITION OF APPLICATION .....</b>	<b>6</b>
1.1	Intended use .....	6
1.2	Usage restrictions.....	6
1.3	General description .....	6
<b>2</b>	<b>USER .....</b>	<b>6</b>
2.1	Qualification .....	6
2.2	Personal protection.....	6
<b>3</b>	<b>HANDLING OF THE CONNECTION BOX .....</b>	<b>7</b>
<b>4</b>	<b>PYHSICAL SET-UP.....</b>	<b>7</b>
<b>5</b>	<b>DESCRIPTION OF THE CONNECTION BOX.....</b>	<b>8</b>
5.1	Housing.....	8
5.2	Accessories .....	9
<b>6</b>	<b>CONNECTION .....</b>	<b>10</b>
<b>6.1</b>	<b>Signal connections.....</b>	<b>10</b>
6.1.1	Signal connection: 16 BNC connectors.....	10
6.1.2	Signal connection: 8 BNC connectors.....	11
<b>6.2</b>	<b>Connection to the board.....</b>	<b>12</b>

**Figures**

Fig. 3-1: Discharge ..... 7  
 Fig. 5-1: PX-BNC ..... 8  
 Fig. 5-2: Clamps for DIN rail mounting ..... 9  
 Fig. 6-1: Pin assignment: 37-pin, SUB-D female connector ..... 11  
 Fig. 6-2: 37-pin SUB-D female connector ..... 12

**Tables**

Table 6-1: Connectable boards (16 BNC) - input ..... 10  
 Table 6-2: Connectable boards (8 BNC) - output ..... 11

# 1 DEFINITION OF APPLICATION

## 1.1 Intended use

The connection box **PX-BNC** is used as electrical equipment for measurement, control and laboratory pursuant to the norm IEC 61010-1.

## 1.2 Usage restrictions

The **PX-BNC** connection box must not be used as safety related part for securing emergency stop functions.

The **PX-BNC** connection box must not be used in potentially explosive atmospheres.

## 1.3 General description

Please do observe the safety precautions and the technical description.

Uses beyond these specifications are not allowed. The manufacturer is not liable for any damages which would result from the non-observance of this clause.

Make sure that the connection box remains in its package **until it is used**.

Do not remove or alter the identification numbers of the board.  
If you do, the guarantee expires.

# 2 USER

## 2.1 Qualification

Only persons trained in electronics are entitled to perform the following works:

- Installation
- operation
- use
- maintenance.

## 2.2 Personal protection

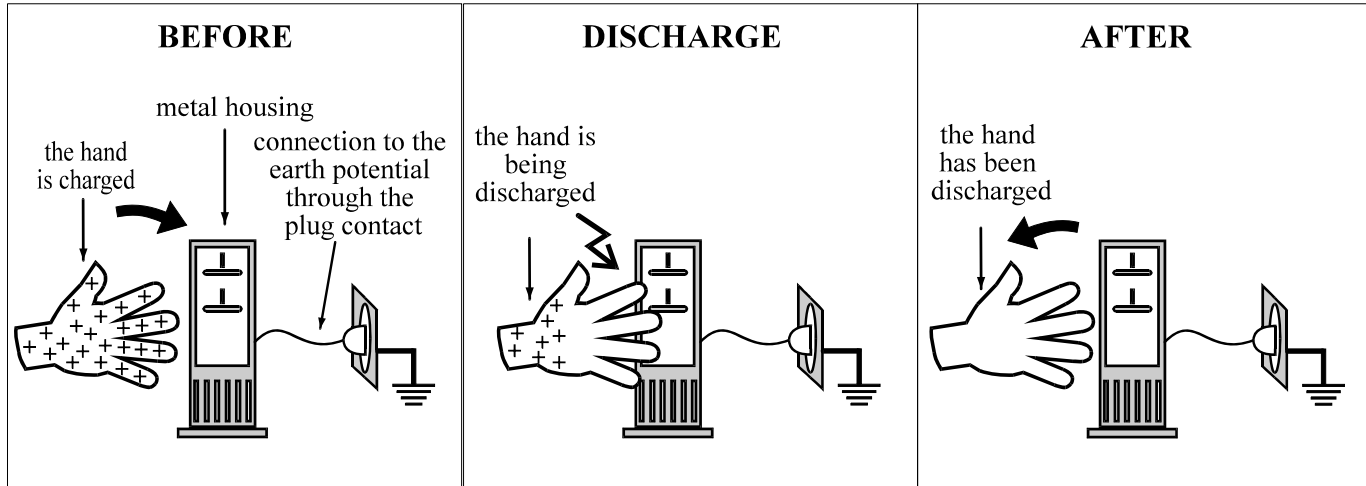
Consider the country-specific regulations about:

- the prevention of accidents
- electrical and mechanical installations
- radio interference suppression.

### 3 HANDLING OF THE CONNECTION BOX

◆ Discharge yourself.

Fig. 3-1: Discharge



### 4 PHYSICAL SET-UP

**Dimensions**

Length: .....210 mm  
Width:.....105 mm  
Height:.....50 mm  
Weight:.....727 g

Installation:.....For snapping on a DIN-rail

## 5 DESCRIPTION OF THE CONNECTION BOX

With the connection box **PX-BNC** you can connect analogue signals through a BNC connector.

**Fig. 5-1: PX-BNC**



### 5.1 Housing

The housing consists of black painted aluminium, profile IP65 with good impact resistance.



## 5.2 Accessories

The standard delivery contains 2 clamps for DIN rail mounting. In addition, you require a standard cable **ST010**, which must be ordered separately.

**Fig. 5-2: Clamps for DIN rail mounting**



## 6 CONNECTION

The following sections list the possible signal connections and the connections to the board:

### 6.1 Signal connections

#### 6.1.1 Signal connection: 16 BNC connectors

16 BNC connectors **In 0** to **In 15** (see Fig. 5-1) serve for the connection of analogue input channels (channel 0-15) of the following ADDI-DATA boards:

**Table 6-1: Connectable boards (16 BNC) - input**

ADDI-DATA board	Your remarks
APCI-3000	
APCI-3001 CPCI-3001	
APCI-3006	
APCI-3010	
APCI-3016	
APCI-3100	
APCI-3106	
APCI-3110	
APCI-3116	
APCI-3120 CPCI-3120	

The BNC shield is connected with the analogue signal mass of the analogue inputs.

### 6.1.2 Signal connection: 8 BNC connectors

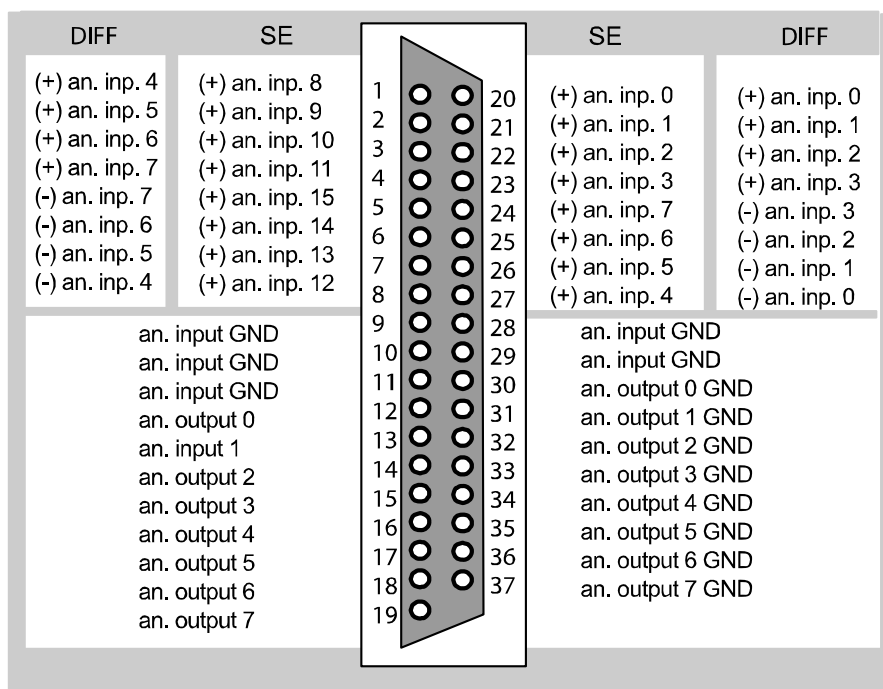
8 BNC connectors **Out 0** to **Out 7** (see Fig. 5-1) serve for the connection of the **analogue output channels** (channel 0-7) of the following ADDI-DATA boards:

**Table 6-2: Connectable boards (8 BNC) - output**

ADDI-DATA board	Your remarks
APCI-3100	
APCI-3106	
APCI-3110	
APCI-3116	
APCI-3120 CPCI-3120	
APCI-3500	
APCI-3501	

The BNC shield is connected with the analogue signal mass of the corresponding analogue output.

**Fig. 6-1: Pin assignment: 37-pin. SUB-D female connector**



**IMPORTANT!**

The connection of the differential channels (DIFF) is only possible through a special BNC cable.

## 6.2 Connection to the board

The box is connected to the board through a 37-pin SUB-D female connector. The pin assignment is specific for each board.

**Fig. 6-2: 37-pin SUB-D female connector**

