

# Datasheet

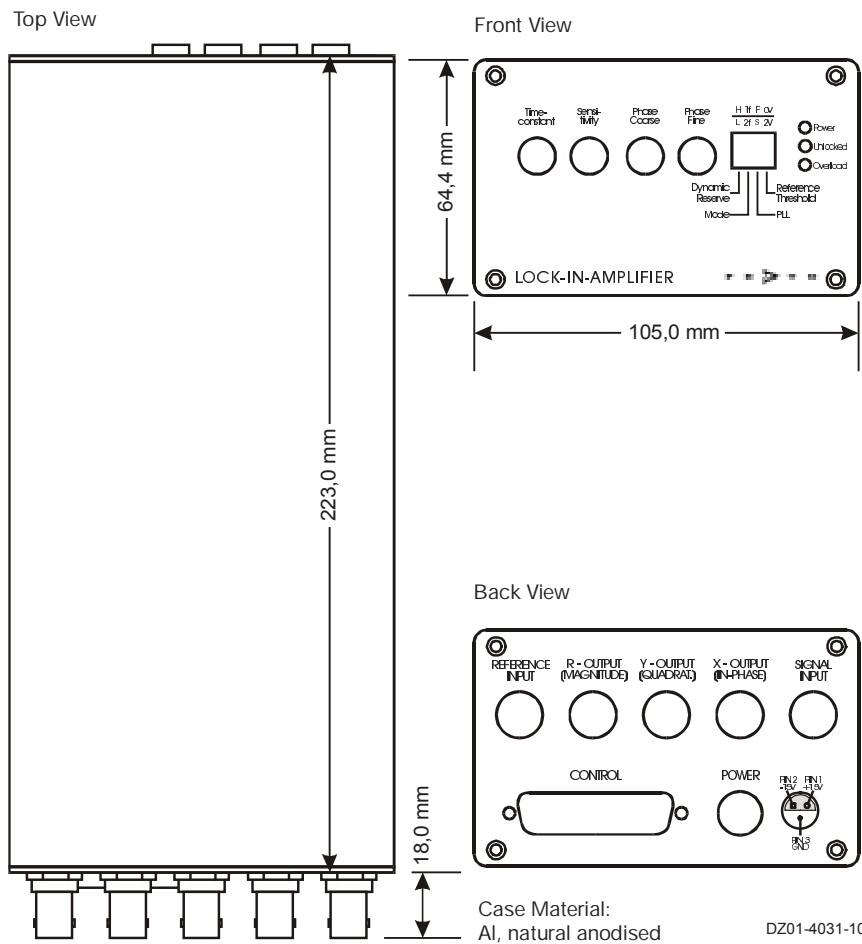
# MK-LIA-3-A

## Housing for Lock-In-Amplifier Series LIA-BV(D)-150

### Features

- High-Quality Aluminium Housing
- BNC Connectors for Input and Output Signals
- Standard FEMTO Connectors for Power Supply and Remote Control
- Adaptable Signal-Connector Configuration

### Dimensions



### Specifications


#### General

If the housing is ordered together with a Lock-In-Amplifier series LIA-BV(D)-150, FEMTO will do the installation, wiring and testing. The Lock-In-Amplifier board can be installed by the user. Insert the Lock-In-Amplifier board into the slot. All connections are made by the internal adapter card. For detailed specifications of the Lock-In-Amplifier please use the LIA-BV-150 Series documentation.

#### Connector Options

The BNC-connector configuration can be easily changed by setting electrical jumpers at the internal I/O-adapter card. The standard and optional connector configuration is

## Housing for Lock-In-Amplifier Series LIA-BV(D)-150

Connectors (Standard Configuration)	<p>Signal Input                      BNC (differential, shield connected to –Vin)</p> <p>X-Output                            BNC</p> <p>Y-Output                            BNC (only for Dual Phase Models LIA-BVD)</p> <p>R-Output                            BNC (only for Dual Phase Models LIA-BVD)</p> <p>Reference Input                    BNC</p> <p>Power Supply                      LEMO Series 1S, 3-pin fixed Socket  Pin 1: + 15V  Pin 2: - 15V  Pin 3: GND</p> <div style="text-align: center; margin: 10px 0;">  </div> <p>Control Port                        Sub-D 25-pin, female, Qual. Class 2  Pin 1: +12V (Stabilized Power Supply Output)  Pin 2: -12V (Stabilized Power Supply Output)  Pin 3: AGND (Analog Ground)  Pin 4: +5V (Stabilized Power Supply Output)  Pin 5: X-Output  Pin 6: Overload Status Output  Pin 7: Unlocked Status Output  Pin 8: Disable Local Switch Control Input  Pin 9: DGND (Ground f. Digital Control Pin 8 - 25)  Pin 10: Dynamic Mode (DYN0)  Pin 11: Sensitivity (SEN0)  Pin 12: Sensitivity (SEN1)  Pin 13: Sensitivity (SEN2)  Pin 14: Time Constant Slope (TCSL)  Pin 15: Time Constant (TC0)  Pin 16: Time Constant (TC1)  Pin 17: Time Constant (TC2)  Pin 18: Phase Shift (PH0)  Pin 19: Phase Shift (PH1)  Pin 20: Phase Shift (PH2)  Pin 21: Phase Shift (PH3)  Pin 22: Phase Shift (PH4)  Pin 23: Phase Shift (PH5)  Pin 24: Phase Shift (PH6)  Pin 25: Phase Shift (PH7)</p>
Connector Wiring Options	<p>General</p> <p>The BNC-connector configuration can be easily changed by setting electrical jumpers at the internal I/O-adapter card. Disconnect the power supply and open the case by loosening the two upper screws at the case front and rear side. Please pay attention to the ground connection at the backplane. Now open the case by lifting the top. The jumper options and functions are described in the following table.</p>



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## Housing for Lock-In-Amplifier Series LIA-BV(D)-150

Connector Wiring Options,  
Jumpers on internal  
Adapter Board

### Input Connectors (JP1)

#### Input wiring

#### Jumper installed

IN A = Voltage Input  
(Single Ended, AC)

" +V-IN → IN A"  
" GND → IN A/SHLD"  
" -V-IN → IN A/SHLD"

IN A = Voltage Input  
(Differential, AC)

" +V-IN → IN A"  
" -V-IN → IN A/SHLD"

IN A / IN B = Voltage Input  
(2 BNC Differential, AC)  
(OUT A cannot be used)

" +V-IN → IN A"  
" GND → IN A/SHLD"  
" -V-IN → IN B"

IN A = Current Input  
(Single Ended)

" C-IN → IN A"  
" GND → IN A/SHLD"  
" -V-IN → C-OUT"

### Output Connectors (JP2)

#### Output wiring

#### Jumper installed

OUT A = X-Output

" X → OUT A"  
(JP1) "USE OUT A/NO IN B"

OUT B = X-Output

" X → OUT B"

OUT A = Y-Output

" Y → OUT A"  
(JP1) "USE OUT A/NO IN B"

OUT B = Y-Output

" Y → OUT B"

OUT C = Y-Output

" Y → OUT C"

OUT A = R-Output

" R → OUT A"  
(JP1) "USE OUT A/NO IN B"

OUT B = R-Output

" R → OUT B"

OUT C = R-Output

" R → OUT C"

OUT B = Monitor Output

" MON → OUT B"

OUT C = Monitor Output

" MON → OUT C"

OUT B = Unlocked Output

" UNL → OUT B"

OUT C = Unlocked Output

" UNL → OUT C"

OUT B = Overload Output

" OVL → OUT B"

OUT C = Overload Output

" OVL → OUT C"

OUT C = Reference Output

" REF-OUT → OUT C"

### Reference Connector (JP3)

#### Reference wiring

#### Jumper installed

REF = Reference Input

" REF-IN → REF" (2 Jumper)

REF = Reference Output  
(Reference Output  
connected to Ref. Input)

" REF-OUT → REF-IN" (2 Jp.)  
" REF-IN → REF" (2 Jumper)

REF = Refer. Sync. Input  
(use OUT C as Reference Output)

" REF-SYNC → REF" (2 Jp.)

(Reference Output only if  
optional Oscillator Module  
is installed)



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