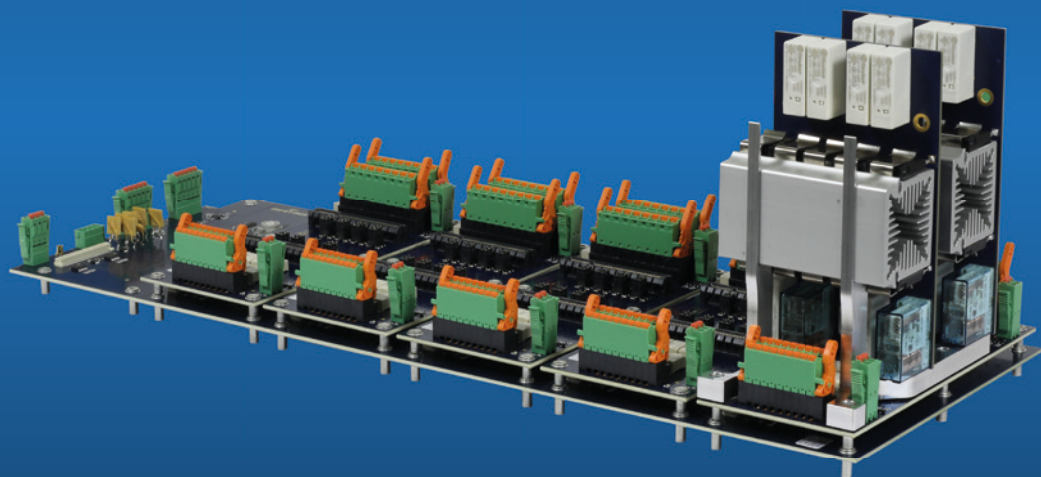




Manual Ver. 1.0 EN



ADQ-LB-BB System

Imprint

Handbuch ADQ-LB-BB System Rev. 1.0

Manufacturer and support

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All information contained in this manual has been compiled with the utmost care and to the best of our knowledge.

Nevertheless, errors cannot be completely ruled out.

The specifications and contents of this manual are subject to change without notice and we would be grateful if you would inform us of any errors.

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1. Introduction

Please check the packaging and contents for damage and completeness before commissioning. If there are any defects, please inform us immediately.

- Does the packaging indicate that something was damaged during transportation?
- Are there any signs of use on the device?

Under no circumstances should you operate the appliance if it is damaged. If in doubt, please contact our technical customer service.

Please read this manual carefully before installing the device!

1.1 Scope of delivery (depending on the expansion stage)

- ALLDAQ ADQ-LB-BB (control unit with ADQ-Link) for ADQ-LB-BM 2.0
- ALLDAQ ADQ-LB-BM 2.0 carrier board for ADQ-LB-LM/VLM modules
- ALLDAQ ADQ-LB-LM (load module) ALLDAQ ADQ-LB-VLM (variable load module)
- ALLDAQ ADQ-LB-MB for mechanical mounting of the ADQ-LB-LM/VLM modules on the ADQ-LB-BM carrier board (optional). ADQ-LB-BM carrier board (optional)

1.2 Safety instructions

Please observe the following instructions:

- Never expose the device to direct sunlight during operation.
- Never operate the device near heat sources.
- Protect the device from moisture, dust, liquids and vapors.
- Do not use the device in damp rooms or in potentially explosive atmospheres.
- Repairs may only be carried out by trained, authorized personnel.
- Please observe the installation regulations and all relevant standards (including VDE standards) when commissioning the device, especially when operating with voltages greater than 42 V.
- We recommend that unused inputs are always connected to the corresponding reference ground in order to avoid crosstalk between the input channels.
- Always disconnect your field wiring from the power source before making or breaking cable connections with the card.
- Ensure that no static discharge can occur via the device when handling the board. Follow the standard ESD protection measures.
- Never connect the devices to live parts, especially not to mains voltage.
- Precautionary measures to prevent unforeseeable misuse must be taken by the user.

ALLNET® GmbH Computersysteme accepts no liability for improper use and the resulting damage.

1.3 Installation and mounting location

The ADQ-LB-BB system is intended for installation in measurement and test systems by qualified specialist personnel. The relevant installation regulations and standards must be observed.

The ADQ-LB-BB system may only be used in dry rooms. Ensure adequate heat dissipation. Make sure the connection cables are secure. The installation must be carried out in such a way that the cables are not under tension, otherwise they could come loose.

Please also be careful not to bend the cables or lay them in too tight a bending radius. If cable ties or similar are used to fasten, they must not be tightened too tightly to avoid internal short circuits in the cable.

We cannot accept any liability for any damage or failures resulting from this.

1.4 Brief description

The ALLDAQ ADQ-LB-BB signal conditioning unit was developed for use in industrial automation in order to subject the DUT to an appropriate ohmic load in automated measurement and test systems (e.g. loading audio power amplifiers). The ADQ-Link bus controls the ADQ-LB-BB system. For this purpose, ALLDAQ offers preconfigured ADQ-LB-LM modules and the variable ADQ-LB-VLM module. Other loads are possible on request.

Important features:

- Loads for analog Signals with different levels
- Loads for analog signals up to 200W/channel
- Modular design (max. 48 channels (6x ADQ-LB-BM 2.0), individually switchable load channels depending on the expansion level)
- Automatic fan control
- Switching off the automatic fan control (status information on fan operation)
- Emergency shutdown of individual loads if the load resistors overheat, independent of software control
- Status displays for power, relay, emergency shutdown and fan
- Optimized for operation with the ADQ-SCU or ADQ-SCU-LC
- Can also be used as a stand-alone (simple control via ADQ-153, ADQ-LINK card)
- API for easy integration into your application software
- Easy control via the ALLDAQ driver system

- Customer-specific extensions via plug-in module
- Easy control via ADQ-LINK-IN
- An ADQ LINK OUT port

In order to fully exploit the potential of the ADQ-LB-BB system, a combination with the ALLDAQ signal conditioning unit ADQ-SCU/LC and the multifunction measurement card ADQ-344/ADQ-348 is recommended.

1.5 System requirements

Hardware

- PC system with a current Intel® or compatible processor based on the x86(-64) architecture
- Optional ALLDAQ driver

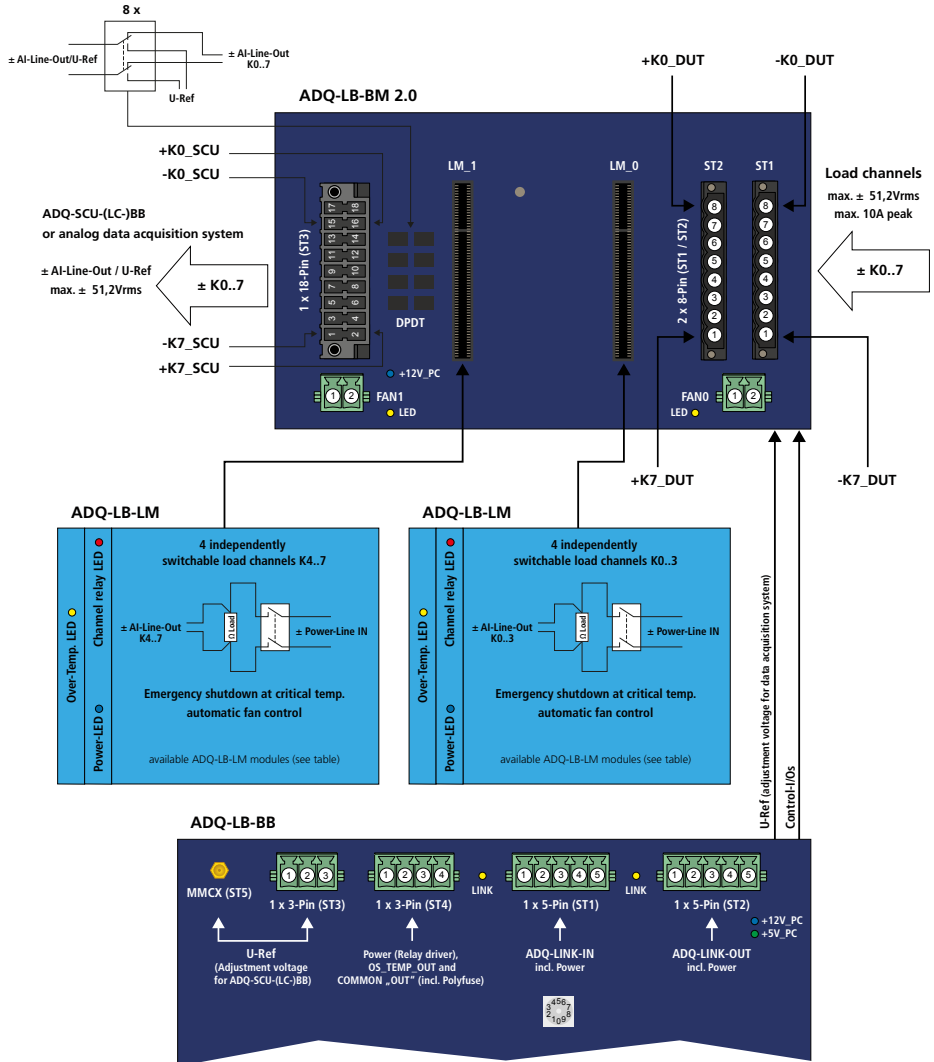
Software

On the ALLDAQ homepage you will find drivers for Windows 11/10/8.1/8/7 (32 and 64 bit) as well as a function library (API) with code examples for high-level language programming.

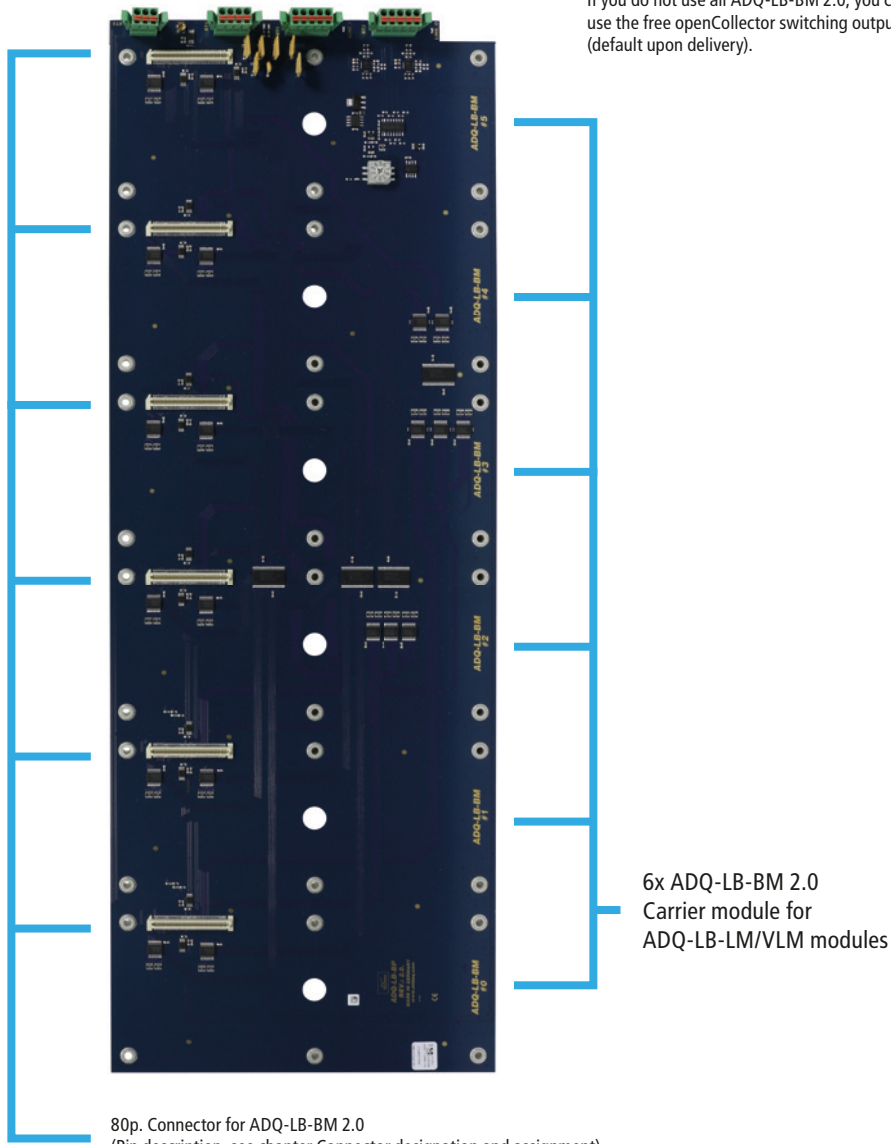
Please note the information in the associated help file adqSDK.chm. You can also find details about programming in the help file adqDriver.chm, which you can access via the "ALLDAQ Manager" in the information area of the taskbar (usually at the bottom right) or the Windows start menu.

2. Overview of the system

2.1 Block diagram



2.2 ADQ-LB-BB



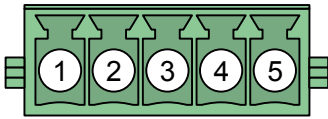
2.3 Connector and pin assignment

Specifications (ST1) and (ST2)

The ADQ-LB-BB can be controlled via the ADQ-LINK via this connector.

ADQ-LINK-IN (point to point): ST1

- Overvoltage protection of the cables up to ± 60 V / ADQ devices can be deployed up to 100 m (twisted cable)
- IEC Level 4 ESD ± 8 kV and EFT ± 5 kV
- Status LED (yellow) if there is a connection to a remote device



Würth 5-pin (691305130005)
Mating plug (691305130005)

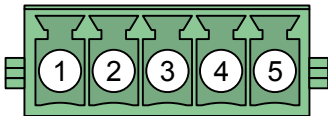
| Pin | ST1 | Description |
|-----|-----------|------------------|
| 1 | +ADQ-LINK | Differential BUS |
| 2 | GND_PC | PC ground |
| 3 | +5V_PC | Power supply |
| 4 | -ADQ-LINK | Differential BUS |
| 5 | +12V_PC | Power supply |

Note: Route the ADQ link via a simple twisted pair cable.

The ADQ-LINK-OUT is made available via this plug connector.

ADQ-LINK-OUT (point to point): ST2

- Overvoltage protection of the cables up to ± 60 V / ADQ devices can be deployed up to 100 m (twisted cable)
- IEC Level 4 ESD ± 8 kV and EFT ± 5 kV
- Status LED (yellow) if there is a connection to a remote device



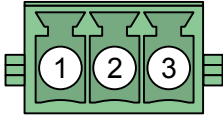
Würth 5-pin (691305130005)
Mating plug (691305130005)

| Pin | ST2 | Description |
|-----|-----------|------------------|
| 1 | +ADQ-LINK | Differential BUS |
| 2 | GND_PC | PC ground |
| 3 | +5V_PC | Power supply |
| 4 | -ADQ-LINK | Differential BUS |
| 5 | +12V_PC | Power supply |

Note: Route the ADQ link via a simple twisted pair cable.

U-Ref (ST3) and (ST5)

The adjustment voltage for ADQ-SCU-(LC-)BB) can be connected via this connector.



Würth 3-pin (691305130003)
Mating plug (691305130003)

| Pin | ST3 | Description |
|-----|-----------|-------------|
| 1 | GND_PC | PC ground |
| 2 | U-Ref (P) | +U-Ref |
| 3 | U-Ref (N) | -U-Ref |

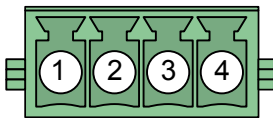


MMCX

| Pin | ST5 | Description |
|-----|-----------|-------------|
| 1 | U-Ref (P) | IN |
| 2 | U-Ref (N) | OUT |

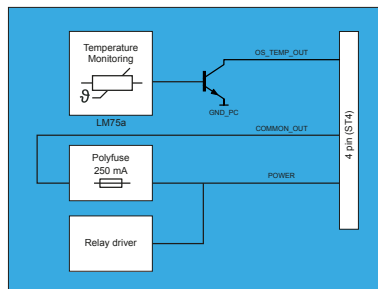
ST4 Power (Relais-Treiber), OS_TEMP_OUT und COMMON „OUT“ (incl. Polyfuse)

The relay drivers are supplied with voltage via this connector.



Würth 4-pin (691305130004)
Mating plug (691305130004)

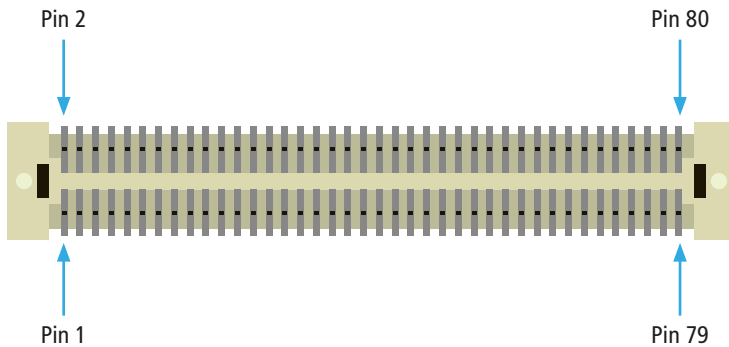
| Pin | ST4 | Description |
|-----|-------------|--|
| 1 | COMMON_OUT | Voltage output incl. polyfuse |
| 2 | OS_TEMP_OUT | Open collector output of the temperature monitoring on the baseboard (VCE = 50 V / I _{max.} = 250 mA) |
| 3 | GND_PC | PC ground |
| 4 | Power | Voltage level for relay drivers |



Connector plug (STB_BM 0..5)

Note: Pin description of the connection plug (STB_BM0..5) between the ADQ-LB-BB and the ADQ-LB-BM 2.0 is only relevant when using a customer-specific add-on board instead of the ADQ-LB-BM 2.0

All control signals are exchanged between the ADQ-LB-BB and the ADQ-LB-BM 2.0 via this connector.



| Pin | Description Circuit diagram | Type |
|-----|--------------------------------|-----------------------|
| 1 | Cal_N | -URef |
| 2 | Cal_P | +URef |
| 3 | GND | POWER |
| 4 | GND | POWER |
| 5 | Mx_FTR_7 | Output (relay driver) |
| 6 | Mx_FTR_0 | Output (relay driver) |
| 7 | Mx_FTR_6 | Output (relay driver) |
| 8 | Mx_FTR_1 | Output (relay driver) |
| 9 | Mx_FTR_5 | Output (relay driver) |
| 10 | Mx_FTR_2 | Output (relay driver) |
| 11 | Mx_FTR_4 | Output (relay driver) |
| 12 | Mx_FTR_3 | Output (relay driver) |
| 13 | GND | POWER |
| 14 | GND | POWER |
| 15 | GND | POWER |

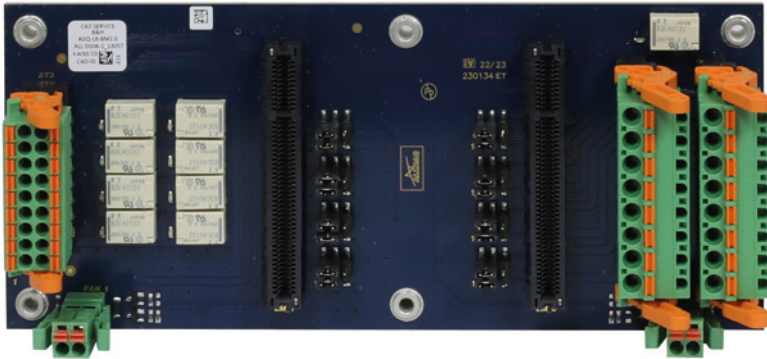
| Pin | Description Circuit diagram | Type |
|-----|--------------------------------|-----------------------|
| 16 | GND | POWER |
| 17 | Mx_FINDER_6 | Output (relay driver) |
| 18 | Mx_FINDER_2 | Output (relay driver) |
| 19 | Mx_FINDER_7 | Output (relay driver) |
| 20 | Mx_FINDER_3 | Output (relay driver) |
| 21 | BMx_2 | Output (relay driver) |
| 22 | BMx_0 | Output (relay driver) |
| 23 | BMx_FREE1 | Output (relay driver) |
| 24 | BMx_FREE0 | Output (relay driver) |
| 25 | Mx_FINDER_5 | Output (relay driver) |
| 26 | Mx_FINDER_1 | Output (relay driver) |
| 27 | Mx_FINDER_4 | Output (relay driver) |
| 28 | BMx_1 | Output (relay driver) |
| 29 | BMx_3 | Output (relay driver) |
| 30 | Mx_FINDER_0 | Output (relay driver) |

| Pin | Description Circuit diagram | Type |
|-----|--------------------------------|--------------------------|
| 31 | GND | POWER |
| 32 | GND | POWER |
| 33 | GND | POWER |
| 34 | GND | POWER |
| 35 | Mx_Sense_1 | LM/VLM Modul-ID-Spannung |
| 36 | Mx_Sense_0 | LM/VLM Modul-ID-Spannung |
| 37 | GND | POWER |
| 38 | GND | POWER |
| 39 | GND | POWER |
| 40 | GND | POWER |
| 41 | Open_Collector_A | Fan status |
| 42 | Open_Collector_B | Fan status |
| 43 | GND | POWER |
| 44 | GND | POWER |
| 45 | GND | POWER |
| 46 | GND | POWER |
| 47 | NC | not occupied |
| 48 | NC | not occupied |
| 49 | NC | not occupied |
| 50 | NC | not occupied |
| 51 | NC | not occupied |
| 52 | NC | not occupied |
| 53 | NC | not occupied |
| 54 | BMx_FREE2 | Output (relay driver) |
| 55 | NC | not occupied |

| Pin | Description Circuit diagram | Type |
|-----|--------------------------------|-----------------------|
| 56 | BMx_FREE3 | Output (relay driver) |
| 57 | NC | not occupied |
| 58 | BMx_FREE4 | Output (relay driver) |
| 59 | NC | not occupied |
| 60 | BMx_FREE5 | Output (relay driver) |
| 61 | NC | not occupied |
| 62 | NC | not occupied |
| 63 | NC | not occupied |
| 64 | NC | not occupied |
| 65 | NC | not occupied |
| 66 | NC | not occupied |
| 67 | NC | not occupied |
| 68 | NC | not occupied |
| 69 | NC | not occupied |
| 70 | NC | not occupied |
| 71 | NC | not occupied |
| 72 | NC | not occupied |
| 73 | GND | POWER |
| 74 | GND | POWER |
| 75 | GND | POWER |
| 76 | GND | POWER |
| 77 | 12V | POWER |
| 78 | 12V | POWER |
| 79 | 12V | POWER |
| 80 | 12V | POWER |

2.4 ADQ-LB-BM 2.0

Carrier module for the ADQ-LB-LM/VLM modules.



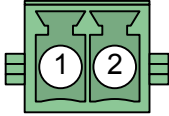
ADQ-LB-MH

Module holder for ADQ-LB-LM (item no. 189126)



2.4.1 Connector and pin assignment

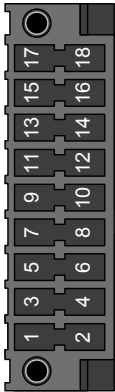
Fan connection (FAN0) and (FAN1)



Würth 2-pin (691305130002)
Mating plug (691305130002)

| Pin | FAN0/FAN1 | Description |
|-----|-----------------------|--|
| 1 | +12V_PC | Power supply |
| 2 | Switching ou (GND_PC) | Type: Open Collector Negative pole from a 12VDC fan (Imax. 0.5A)g |

± AI-Line-Out / U-Ref (ST3)

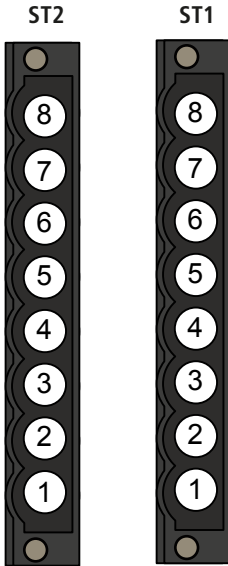


Typ: Phoenix Contact
(1711100)

Mating plug (1790551)

| Pin | ST3 | Description |
|-----|------|---|
| 1 | -K7 | ± AI-Line-Out / U-Ref |
| 2 | +K7 | ± AI-Line-Out / U-Ref |
| 3 | -K6 | ± AI-Line-Out / U-Ref |
| 4 | +K6 | ± AI-Line-Out / U-Ref |
| 5 | -K5 | ± AI-Line-Out / U-Ref |
| 6 | +K5 | ± AI-Line-Out / U-Ref |
| 7 | -K4 | ± AI-Line-Out / U-Ref |
| 8 | +K4 | ± AI-Line-Out / U-Ref |
| 9 | -K3 | ± AI-Line-Out / U-Ref |
| 10 | +K3 | ± AI-Line-Out / U-Ref |
| 11 | -K2 | ± AI-Line-Out / U-Ref |
| 12 | +K2 | ± AI-Line-Out / U-Ref |
| 13 | -K1 | ± AI-Line-Out / U-Ref |
| 14 | +K1 | ± AI-Line-Out / U-Ref |
| 15 | -K0 | ± AI-Line-Out / U-Ref |
| 16 | +K0 | ± AI-Line-Out / U-Ref |
| 17 | AGND | Analog reference ground for data acquisition system (e.g. ADQ-SCU/LC) |
| 18 | AGND | Analog reference ground for data acquisition system (e.g. ADQ-SCU/LC) |

Load channel connections (ST1) and (ST2)



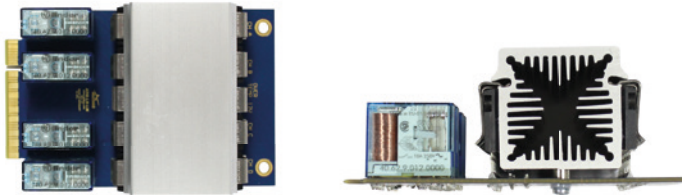
| Pin | ST2 | ST1 |
|-----|-----|-----|
| 8 | +K0 | -K0 |
| 7 | +K1 | -K1 |
| 6 | +K2 | -K2 |
| 5 | +K3 | -K3 |
| 4 | +K4 | -K4 |
| 3 | +K5 | -K5 |
| 2 | +K6 | -K6 |
| 1 | +K7 | -K7 |

Typ: Phoenix Contact (1792795)

Mating plug (1792575)

2.5 ADQ-LB-LM

Load modules with the corresponding load resistors (see table).

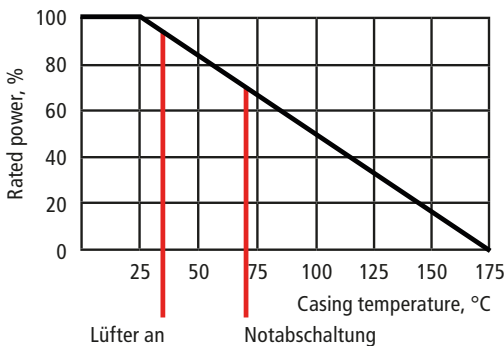


| ID Label | ID Voltage(U) | Item no. | CH_0 (4) | CH_1 (5) | CH_2 (6) | CH_3 (7) | |
|----------|---------------|------------------------|----------|----------|----------|----------|--|
| | 6 | 183233* | 2R/100W | 2R/100W | 2R/100W | 2R/100W | |
| | 3 | 180736* | 4R/100W | 4R/100W | 4R/100W | 4R/100W | |
| | 9 | 180734* | 8R/100W | 8R/100W | 8R/100W | 8R/100W | |
| | 1,5 | 189210* | 10R/100W | 10R/100W | 10R/100W | 10R/100W | |
| | 4,5 | 189211* | 16R/100W | 16R/100W | 16R/100W | 16R/100W | |
| ID75 | 7,5 | 180737 | 2R/200W | 2R/200W | 2R/200W | 2R/200W | |
| ID105 | 10,5 | 180618 | 4R/200W | 4R/200W | 4R/200W | 4R/200W | |
| ID075 | 0,75 | 180406 | 8R/200W | 8R/200W | 8R/200W | 8R/200W | |
| ID225 | 2,25 | 180619 | 10R/200W | 10R/200W | 10R/200W | 10R/200W | |
| ID375 | 3,75 | 189212 | 16R/200W | 16R/200W | 16R/200W | 16R/200W | |
| ID525 | 5,25 | 180620 | 8R/200W | 8R/200W | 10R/200W | 2R/200W | |
| ID11 | 11 | For customized modules | | | | | |

Conditions: TA = 25°C unless otherwise specified; warm-up time: 30 minutes.

* No longer available. Will be replaced by the 200W LM modules

Customized configuration of load resistors possible. Please contact our sales department.



Derating with casing temperature (T_c):

Alle Leistungs- und zugehörigen Überlastwerte werden basierend auf der Gehäusetemperatur unter Verwendung der Derating-Kurve dargestellt.

Kurzzeitige Überlast nach Kaltstart:
1,5 x Kanal-Leistung (max. 4 sec.)

Conditions: TA = 25°C unless otherwise specified; warm-up time: 30 minutes.

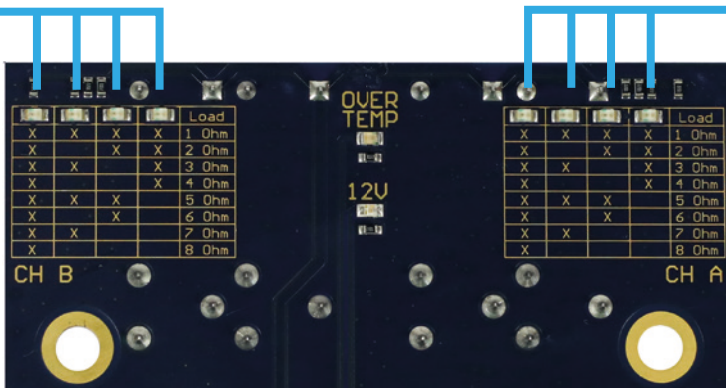
2.5.1 ADQ-LB-VLM

Variable load module with the corresponding load resistors (see table).



Status LOAD-LEDs

Status LOAD-LEDs



| ID Label | ID Voltage(U) | Art.-Nr. | CH_0 | CH_1 |
|----------|---------------|------------------------|----------|----------|
| ID0325 | 0,325 | 219051 | 1R to 8R | 1R to 8R |
| ID11 | 11 | For customized modules | | |

| Slot (ADQ-LB-BM 2.0) | Channel VLM-Modul | ST2 | ST1 |
|----------------------|-------------------|-----|-----|
| LM0 | CH_0 | +K3 | -K3 |
| LM0 | CH_1 | +K2 | -K2 |
| LM1 | CH_0 | +K7 | -K7 |
| LM1 | CH_1 | +K6 | -K6 |

Technical specifications VLM module (1R to 8R).

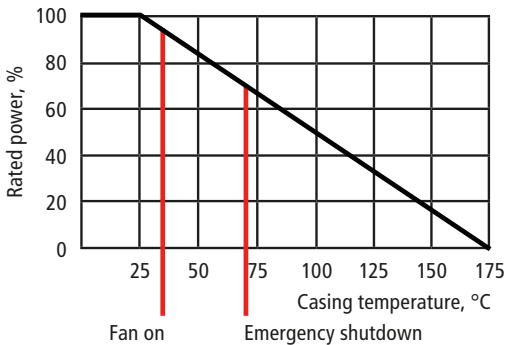
| Ω | V peak max | I peak max | Pmax |
|------------|------------|------------|------|
| 1 Ω | 10V | 10A | 100W |
| 2 Ω | 20V | 10A | 200W |
| 3 Ω | 21,21V | 7,07A | 150W |
| 4 Ω | 28,28V | 7,07A | 200W |
| 5 Ω | 25V | 5A | 125W |
| 6 Ω | 30V | 5A | 150W |
| 7 Ω | 35V | 5A | 175W |
| 8 Ω | 40V | 5A | 200W |

Conditions: TA = 25°C unless otherwise specified; warm-up time: 30 minutes.

Attention: Please note that the Pmax is not identical. The power loss varies depending on the power resistor (Ω).

Customized configuration of load resistors possible.

Please contact our sales department.



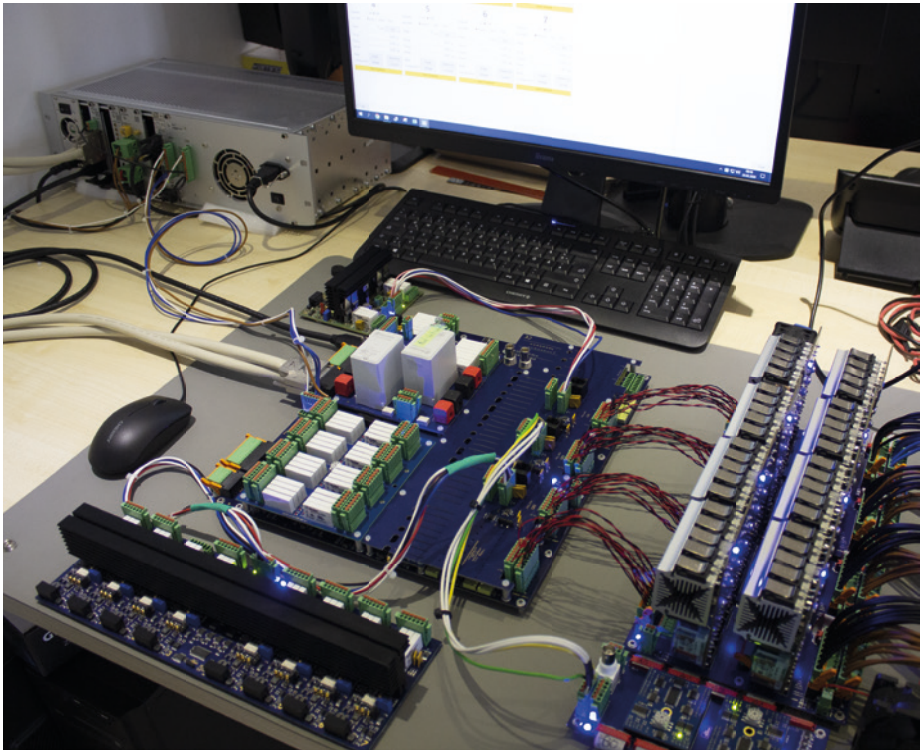
Derating with casing temperature (T_c):

All power and associated overload values are displayed based on the housing temperature using the derating curve.

Short-term overload after cold start:

1.5 x channel power (max. 4 sec.)

Conditions: TA = 25°C unless otherwise specified; warm-up time: 30 minutes.



4. Specifications

Conditions: TA = 25°C unless otherwise specified; warm-up time: 30 minutes.

| Element | Condition | Specification |
|--------------|--------------------|---|
| Supply | ST1 ADQ-LINK-IN | +5 V / +12 V supply via Würth connector from PC power supply unit |
| Frequency | | 100kHz |
| Isolation | ADQ-LINK+/- | 50VDC |
| Cable length | 2-core twisted | max. 100m |

| | | |
|--------------|---------------------|---|
| | ST2 ADQ-LINK-OUT | |
| Frequency | | 100kHz |
| Isolation | ADQ-LINK+/- | 50VDC |
| Tap | +5V (Pin 3) | Protected by Polyfuse 2920L500/16 5A |
| | +12V (Pin 5) | Protected by Polyfuse 2920L500/16 5A |
| Cable length | 2-core twisted | max. 100m |

| | | |
|---|--|---|
| Quiescent current consumption ADQ-LB system full extension | No relay energized | +5V: max. 50 mA +12V: max. 100 mA |
| Power consumption ADQ-LB system full extension | ADQ-LB-BM 2.0 all relays energized | +5V: max. 128 mA +12V: max. 80 mA |
| | ADQ-LB-LM all relays energized | +5V: max. 130 mA +12V: max. 490mA |
| | ADQ-LB-VLM all relays energized | +5V: max. 130 mA +12V: max. 735 mA |
| Status display LED | Power 5V | Green |
| | Power 12V | Blue |
| | LINK-LED | Yellow |
| Custom relay driver | 12V (80p. connector plug) | 0.5 A per channel (relay driver) |
| COMMON_OUT | Voltage output 12V incl. Polyfuse 300mA | Protected by Polyfuse 2920L030 300mA |
| OS_TEMP_OUT | Open-Collector-Ausgang der Temperaturüberwachung auf dem Baseboard | VCE = 50 V / I _{max.} = 250 mA |
| Temperature range | Operation | 0..60 °C (Standard) |

| | | |
|---|---------------|--------------------------------|
| Humidity | Operation | 20%..55% (non-condensing) |
| Dimensions (W x D x H) | ADQ-LB-BB | 465 x 170 x 20 mm |
| | ADQ-LB-BM 2.0 | 115 x 76 x 49 mm |
| | Total height | 180 mm (VLM module plugged in) |
| | Total height | 145 mm (LM module plugged in) |
| Manufacturer's warranty incl. load modules | | 36 months |

ADQ-LB-BM 2.0 carrier board

| Element | Condition | Specification |
|----------------------------------|------------------|--------------------------------------|
| Type | | FTR-B3CA()Z Standard |
| Quantity | AI part | Up to 8 relays in the AI signal path |
| | Fan ON/OFF | 1x FTR-B3CA()Z Standard |
| Type of contact | | 2-pole changeover contact (DPDT) |
| Contact material | | Silver/nickel with gold plating |
| Contact impedance | 1 A/6VDC | max. 75 mΩ at 1 A/6 VDC |
| Operating time | Response time | max. 3 ms |
| | Fallback time | max. 3 ms |
| Switching cycles | mechanical | min. 50.000.000 |
| Switching output (FAN0/1) | Collector output | I _{max.} 0,5A |
| Status indicators LED | U-Ref relay | Red |
| | Automatic fan | Yellow |
| Massebezug | GND-PC | |

ADQ-LB-LM module

| Element | Condition | Specification |
|---|---|---|
| Quantity/Type | | 4 changeover relays (DPDT), type: Finder Series 40.62 |
| Contact material | | AgNi |
| Operating time | Response time | max. 12 ms |
| | Fallback time | max. 4 ms |
| Switch cycles | mechanical | min. 10.000.000 |
| Electrical service life | | min. 100 x 10 ³ |
| Min. switching load | mW (V/mA) | 300mW (5V/5mA) must not be undershot |
| Max. Continuous current/ Max. inrush current | DC | 10/20A |
| Max. Switching load | AC | 2500VA |
| Pulse load | Short-term overload after cold start | 1.5 x channel power (max. 4 sec.) |
| Status indicators LED | Channel relay | Red |
| | Power 12V | Blue |
| | Emergency shutdown | Yellow |
| Connection | Edge-Connector | |

ADQ-LB-VLM module

| Element | Condition | Specification |
|---|---|--|
| Quantity/Type | | 2 changeover relays (DPDT), type: Finder Series 40.62 |
| Contact material | | AgNi |
| Operating time | Response time | max. 12 ms |
| | Fallback time | max. 4 ms |
| Switch cycles | mechanical | min. 10.000.000 |
| Electrical service life | | min. 100×10^3 |
| Min. switching load | mW (V/mA) | 300mW (5V/5mA) must not be undershot |
| Max. Continuous current/ Max. inrush current | DC | 10/20A |
| Max. Switching load | AC | 2500VA |
| Pulse load | Short-term overload after cold start | 1.5 x channel power (max. 4 sec.) |
| Quantity/Type | | 6 changeover contact relay (DPDT), type: Finder Series 43.41 |
| Contact material | | AgNi |
| Operating time | Response time | max. 6 ms |
| | Fallback time | max. 4 ms |
| Switch cycles | mechanical | min. 10.000.000 |
| Electrical service life | | min. 100×10^3 |
| Min. switching load | mW (V/mA) | 300mW (5V/5mA) must not be undershot |
| Max. Continuous current/ Max. inrush current | DC | 10/15A |
| Max. Switching load | AC | 2500VA |
| Pulse load | Short-term overload after cold start | 1.5 x channel power (max. 4 sec.) |
| Status indicators LED | Channel relay | Red |
| | Ω -value display (see table on VMÖ module) | Red |
| | Power 12V | Blue |
| | Emergency shutdown | Yellow |
| Connection | Edge-Connector | |

5. Appendix

5.1 Accessories

ADQ products

- ADQ-63 (item no. 188372), ADQ-LINK bus control box
- ADQ-153 (Art. No. 185076), control box USB to ADQ-LINK bus
- ALLDAQ ADQ-LB-MH (item no. 189126), for mechanically attaching the ADQ-LB-LM/VLM modules to the ADQ-LB-BM 2.0 carrier board
- Fan for ADQ-LB-LM/VLM modules (item no. 189126)

5.2 Manufacturer and support

ALLNET® is a registered trademark of ALLNET® GmbH Computersysteme. If you have any questions, problems or require product information of any kind, please contact the manufacturer directly:

ALLNET® GmbH Computersysteme
Division ALLDAQ
Maistrasse 2, D-82110 Germering

E-Mail: support@alldaq.com
Phone: +49 (0)89 894 222 – 474
Fax: +49 (0)89 894 222 – 33
Internet: www.alldaq.com

5.3 Packaging Ordinance

„In principle, manufacturers and distributors are obliged to ensure that sales packaging is taken back by the end consumer after use and reused or recycled.“ (according to § 4 sentence 1 of the Packaging Ordinance). If you as a customer have any problems with the disposal of packaging and shipping materials, please send an e-mail to info@allnet.de.



5.4 Recycling notice and RoHS conformity

The ADQ-LB system bears the CE mark.

This device fulfills the requirements of EU Directive 2004/108/EC, the Electromagnetic Compatibility Directive and the mutual recognition of its conformity. Conformity with the above directive is confirmed by the CE mark on the device.



ALLNET® products are manufactured in compliance with RoHS (Restriction of the use of certain hazardous substances).



5.5 CE label

Das ADQ-LB-System trägt die CE-Kennzeichnung.

Dieses Gerät erfüllt die Anforderungen der EU-Richtlinie 2004/108/EG, Richtlinie über elektromagnetische Verträglichkeit und die gegenseitige Anerkennung ihrer Konformität. Die Konformität mit der o.a. Richtlinie wird durch das CE-Zeichen auf dem Gerät bestätigt.

5.6 Warranty

Within the warranty period, we will rectify manufacturing and material defects free of charge. You can find the warranty conditions valid for your country on the homepage of your distributor. If you have any questions or problems with the application, you can reach us during our normal opening hours on the following telephone number +49 (0)89 894 222 - 474 or by e-mail to: support@alldaq.com.



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