



\*Illustration similar

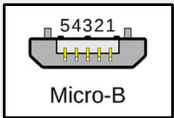
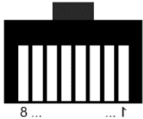
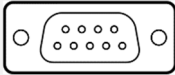
# HY-Di-HBI-A1

## HY-LINE Battery Interface - HBI

- For easy communication with HY-LINE Smart Battery Family and other battery packs
- SM- and CAN-Bus communication
- External power supply via micro-USB connector
- Webserver / Web Interface

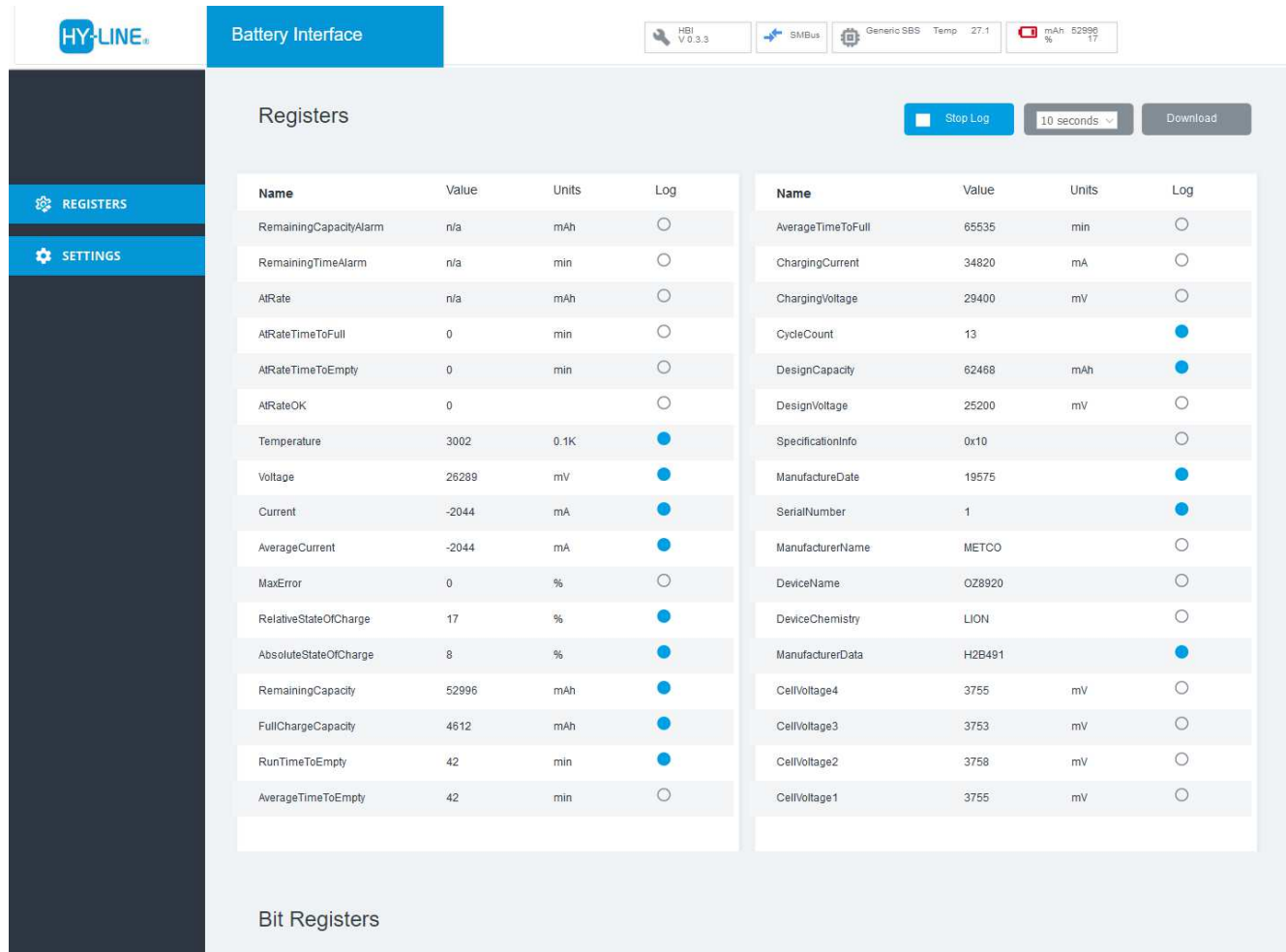
## HY-Di-HBI-A1 - HY-LINE Battery Interface - HBI

# Specifications

Item	Descriptions	Specifications	Remark
1	Model Number	HY-Di-HBI-A1	
2	To be used for	HY-LINE Smart Battery Family	Other battery packs with SM-Bus communication can be use.
3	Input voltage	5V DC	Recommended power adapter: Standard 5W wall-mount adapter (See accessory list page 5)
4	Input current	1A	
5	Max input power	5W	
6	Input scan	Automatic	SM- or CAN-Bus will be detected
7	IP Address	Static or dynamic	To be found on the carton box label Can be programmed
8	Data logging	Parameters to be selected via web interface	Intervals from 0.1 to 2 seconds
9	Enclosure	Aluminium, black anodized	
10	Operation temperature	0°C ~ 40°C	
11	Storage temperature	-10°C ~ 60°C	
12	Input connector power	microUSB, female	Pin1: V+ Pin2: D- Pin3: D+ Pin4: nc Pin5: GND 
13	Input connector data	RJ45, female	To be used with standard Ethernet cables 
14	Output connector data	D-Sub 9 pin, female	
15	Dimension (mm) Weight (g)	L108 * W69.1 * H32 160	
16	LED indication (one per slot)	1: Power connected 2: Connected with battery / power 3: Start up	Blue LED on Green LED on Red LED on
17	Certifications	CE	
18	Specifications SM-Bus	SM-Bus: SBS1.1	
19	Specifications CAN-Bus	CAN-Bus: HY-LINE_CAN_Protocol_3.0_Rev.2 500kBit/s	upon request

## HY-Di-HBI-A1 - HY-LINE Battery Interface - HBI

# Integrated Webserver – Web Interface



The screenshot shows the 'Battery Interface' web interface. The top navigation bar includes the 'HY-LINE' logo and a 'Battery Interface' tab. Below the navigation bar, there are status indicators for 'HBI V0.3.3', 'SMBus', 'Generic SBS', 'Temp: 27.1', and 'mAh: 52996 17%'. The main content area is titled 'Registers' and features a 'Stop Log' button, a '10 seconds' dropdown menu, and a 'Download' button. The interface displays two tables of registers, each with columns for Name, Value, Units, and Log status.

Name	Value	Units	Log
RemainingCapacityAlarm	n/a	mAh	<input type="radio"/>
RemainingTimeAlarm	n/a	min	<input type="radio"/>
AtRate	n/a	mAh	<input type="radio"/>
AtRateTimeToFull	0	min	<input type="radio"/>
AtRateTimeToEmpty	0	min	<input type="radio"/>
AtRateOK	0		<input type="radio"/>
Temperature	3002	0.1K	<input checked="" type="radio"/>
Voltage	26289	mV	<input checked="" type="radio"/>
Current	-2044	mA	<input checked="" type="radio"/>
AverageCurrent	-2044	mA	<input checked="" type="radio"/>
MaxError	0	%	<input type="radio"/>
RelativeStateOfCharge	17	%	<input checked="" type="radio"/>
AbsoluteStateOfCharge	8	%	<input checked="" type="radio"/>
RemainingCapacity	52996	mAh	<input checked="" type="radio"/>
FullChargeCapacity	4612	mAh	<input checked="" type="radio"/>
RunTimeToEmpty	42	min	<input checked="" type="radio"/>
AverageTimeToEmpty	42	min	<input type="radio"/>

Name	Value	Units	Log
AverageTimeToFull	65535	min	<input type="radio"/>
ChargingCurrent	34820	mA	<input type="radio"/>
ChargingVoltage	29400	mV	<input type="radio"/>
CycleCount	13		<input checked="" type="radio"/>
DesignCapacity	62468	mAh	<input checked="" type="radio"/>
DesignVoltage	25200	mV	<input type="radio"/>
SpecificationInfo	0x10		<input type="radio"/>
ManufactureDate	19575		<input checked="" type="radio"/>
SerialNumber	1		<input checked="" type="radio"/>
ManufacturerName	METCO		<input type="radio"/>
DeviceName	OZ8920		<input type="radio"/>
DeviceChemistry	LiON		<input type="radio"/>
ManufacturerData	H2B491		<input checked="" type="radio"/>
CellVoltage4	3755	mV	<input type="radio"/>
CellVoltage3	3753	mV	<input type="radio"/>
CellVoltage2	3758	mV	<input type="radio"/>
CellVoltage1	3755	mV	<input type="radio"/>

Below the registers, there is a section for 'Bit Registers'.

### Standard values can be logged

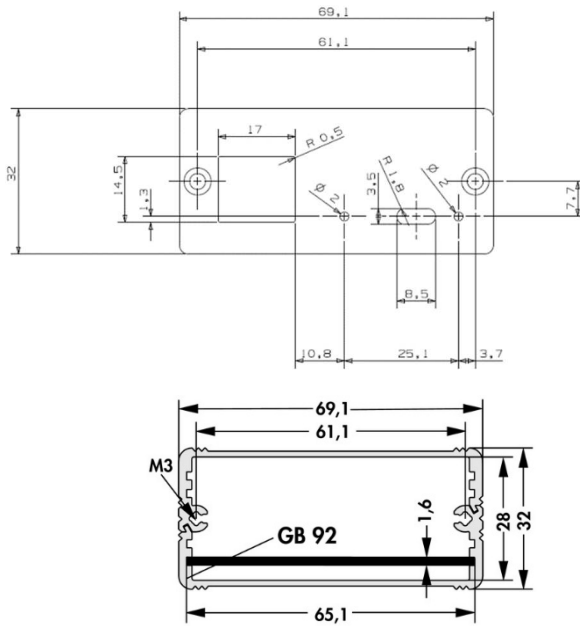
- ☒ Remaining Capacity
  - ☒ Remaining Time
  - ☒ At Rate
  - ☒ At Rate Time To Full
  - ☒ At Rate Time To Empty
  - ☒ At Rate OK
  - ☒ Temperature
  - ☒ Voltage
  - ☒ Current
  - ☒ Average Current
- ☒ Max Error
  - ☒ Relative SoC
  - ☒ Absolute SoC
  - ☒ Full Charge Capacity
  - ☒ Run Time to Empty
  - ☒ Average Time to Empty
  - ☒ Average Time to Full
  - ☒ Charging Current
  - ☒ Charging Voltage
  - ☒ Cycle Count
- ☒ Design Capacity
  - ☒ Design Voltage
  - ☒ Manufacturer Date
  - ☒ Serial Number
  - ☒ Manufacturer Name
  - ☒ Device Name
  - ☒ Device Chemistry
  - ☒ Manufacturer Data
  - ☒ Cell Voltage
  - ☒ .....

## HY-Di-HBI-A1 - HY-LINE Battery Interface - HBI

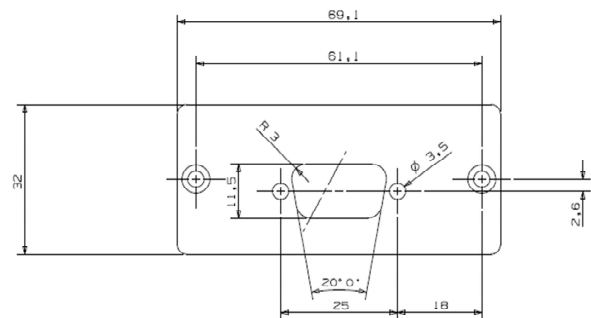
# Mechanical

### Drawing

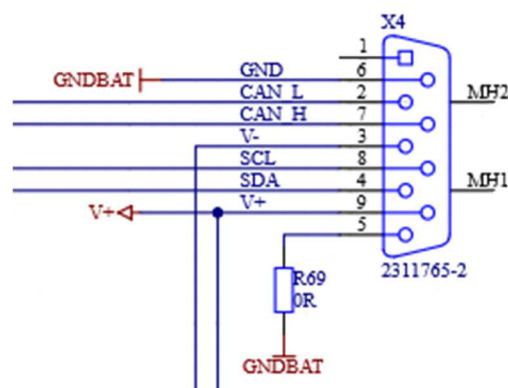
Front:



Back:





### Communication Connector 9pin D-Sub and PIN definition



## HY-Di-HBI-A1 - HY-LINE Battery Interface - HBI

### Accessories

Item	Part number	Remark
Dual Bay Charger	HY-Di-CHG-A1	Suitable for 2S, 3S and 4S HY-LINE batteries
Power adapter for HBI – 4 USB-A	1001-0107	To be used with HY-LINE Battery Interface – HBI
Power adapter for HBI – 2 USB-A	1001-0108	To be used with HY-LINE Battery Interface – HBI
USB-A to microUSB cable	1700-0077	Connection cable from power adapter to HBI – 2m
Cable CAN-Bus	HK-HBI-CAN01	Connection cable for HY-LINE Smart Battery to Battery Interface with AMP Con for CAN-Bus
Cable SM-Bus	HK-HBI-SM01	Connection cable for Smart Battery to Battery Interface with AMP Con for SM-Bus
Cable HBI to terminal block 5pin	HK-HBI-Multi01	Connection cable HBI to terminal block (5pin), CAN- and SM-Bus
Cable HBI to charger	HK-HBI-CH01	Connection cable HBI to HY-LINE Smart Battery Charger (HY-Di-CHG-A1)
Cadex C7 adapter	07-111-7080-00	CADEX Adapter for HY-LINE Smart Batteries to CADEX C7x00 battery analyser
Counterpart connector for battery connector AMP 787614-1	5787419-1 5787446-1	  AMP DC Jack Connectors, Board-to-Board, 5 Positions, Pitch 5mm, with flange AMP DC Jack Connectors, Board-to-Board, 5 Positions, Pitch 5mm

#### Serial number code

Example: HY-Di-HBI-A1-1-4821-00000

Part Number	Hardware Rev.	Production Date wwyy	Serial Number
HY-Di-HBI-A1	-1	-4821	-00000

**HY-Di-HBI-A1 - HY-LINE Battery Interface - HBI****EMC and LVD**

The following applies to this product of HY-LINE AG.

EMC directive 2014/30/EU be fulfilled:

Interference emission/immunity: according to IEC 60601-1-2

Low Voltage Directive 2014/35/EU be fulfilled:

Safety: according to IEC 62368

The EU Declaration of Conformity and related documentation are provided in accordance with the guidelines at:

HY-LINE AG  
Hochstrasse 355  
8200 Schaffhausen  
Switzerland

## HY-Di-HBI-A1 - HY-LINE Battery Interface - HBI

# Contact

### HY-LINE AG

Hochstrasse 355  
CH-8200 Schaffhausen

Support:

**+41 (0) 52 / 647 42 00**

**+41 (0) 52 / 647 42 01**

Mail us:

**[info@hy-line.ch](mailto:info@hy-line.ch)**

### HY-LINE Power Components Vertriebs GmbH

Inselkammerstrasse 10  
D-82008 Unterhaching

Support:

**+49 (0) 89 / 614 503 10**

**+49 (0) 89 / 614 503 20**

Mail us:

**[power@hy-line.de](mailto:power@hy-line.de)**



### HY-LINE AG

HY-LINE AG belongs to the HY-LINE group, a group of specialized distributors.

HY-LINE AG is a specialist in batteries and systems. In addition to standard batteries and charging and maintenance systems, the focus is on the development and design of custom-specific batteries and systems.

### HY-LINE Power Components Vertriebs GmbH

HY-LINE Power Components is part of the HY-LINE Group, a group of specialized distributors.

HY-LINE Power Components supplies all core parts and components for power electronics and power supply technology. As a highly specialized distributor and manufacturer representative, HY-LINE Power Components has extensive application-specific know-how and provides support already during the design phase in the selection of components and the configuration of coordinated subsystems.

HY-LINE® is a registered trademark of the HY-LINE Group.  
Energy\_Datasheet\_HY-Di-HBI-A1 | December 2021  
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