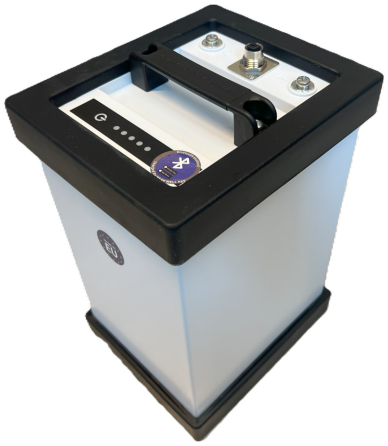
LFP 4S 12V 70Ah QHB

QHB-12F70.0



QHB-12F70.0



QHB-12F70.0C

Charged by MEAN WELL

MADE IN EU

Features

- Data Visibility – APP – Integrated with Battery
- Made in Europe
- Mounting in any position
- Durable design- IP67
- BMS with auto on/off hibernate function, no quiescent current draw
- Battery parameter logger
- Battery performance and lifetime optimizer based on all battery values for charging/discharging
- 2 years warranty

Applications

- Electric mobility
- Boating
- Industry
- Mobile energy supply

Description

The QHB series from MEAN WELL EUROPE is designed for multipurpose use within li-ion 7S-13S (24V-48V) and LiFePO4 4S (12V) battery setups. The durable design, consisting of fiber reinforced plastics, makes this battery suitable for operating in harsh environments. This type of battery is suited with a digital indicator and can be fitted with Bluetooth functionality to read out a broad variety of data.

Model Encoding / Order Information

QHB - 12 F 70.0 □ - □ □ □ □

- For optional
- Blank: M5 terminal + XLR-3P
  C: with CANBus - M5 terminal + M12-F
- 70.0Ah
- N:NMC, F:LiFePO4
- 12V Battery voltage
- Series name

Part Number	Battery Description	Note
QHB-12F70.0	Battery LiFePO4 4S 12V 70.0Ah, M5 terminal + XLR-3P	In Stock
QHB-12F70.0C	Battery LiFePO4 4S 12V 70.0Ah, M5 terminal + M12-F	In Stock

*C: With CANBus

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LFP 4S 12V 70Ah QHB

QHB-12F70.0

1.Product specifications

Item	Value	Remark
Product category	Lithium batteries	
Product name	Battery LiFePO4 4S 12V 70Ah QHB	
Weight	9.8 Kg	
Dimensions with bumpers	197 x 167 x 296.5 mm	(LxWxH)
Dimensions without bumpers	182.8 x 152.8 x 288.5 mm	(LxWxH)
Voltage nominal	12.8 V	
Voltage max	14.6 V	
Voltage min	10 V	
Capacity Ah	70 Ah	
Discharge current continuous	50A	
Discharge current peak	100A	3 sec
Max charge current	20A	Via battery terminals
Charge method	CC/CV	
Operating temperature; charge	0 ~ 45°C	
Operating temperature; discharge	-10 ~ 65°C	
Storage temperature	-20 ~ 60°C	

2.Cell specifications

Item	Value	Remark
Cell type	18650 LFP cell	
Nominal voltage cell	3.20 V	
Cell capacity	4.75-5.00 mAh	@0.2C
CID	Yes	
Max Current	5C	
Cells in series	4	
Cells parallel	14	

3.BMS specifications

Item	Value	Remark
Cell auto balance	Yes, 72±10mA	
Short circuit protection	Yes	
Temperature protection	Yes	
Overcharge protection	Yes, 3.65±0.025V	
Over discharge protection	Yes, 2.10±0.05V	
Over current protection	Yes, 120A±20A	

4.Control PCB

The control PCB is an add-on for the BMS, making the battery "smart". This PCB gathers all applicable data and processes it for Bluetooth or CAN communication. To save energy and increase shelf life, this control PCB will shut down when the battery SOC < 50% and the battery is not used for 25 hours. To wake up, one of the following actions should be performed: The battery key switch* must be pulled high, the button pressed or a current of 2+Amp must be drawn by charging or discharging.

**if installed*

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5.Connectors and terminals

Item	Value	Remark
Terminal material	Brass, silver plated	
Terminal dimensions	M5 inner thread	
Standard secondary socket	XLR-F 3P	1(+), 2(-), 3(NC)
	M12-F, A-coded, 5-pins	Please see pin assignment on the page of Mechanical Specification

6.Enclosure

Item	Value	Remark
Material	PC/ABS/fiber reinforced/Rubber	
FR Class (UL-94)	HB	

7.Safety

Item	Value	Remark
MSDS	Yes	
UN 38.3	Yes	
CE	Yes	
IP	IP65-67 rated, compliance	Depends on the options of connector
Temperature protection	Yes	1x digital + 2x analog

8.CAN-bus (optional)

MEAN WELL Europe provides good local service, and the design house can fit a basic CAN-bus feature, compliant with different CAN-bus protocol suited for parallel (hot-swap) operation. A detailed CANbus guide is available for protocol instructions. To give the complete solution, MEAN WELL smart charger is 100% compatible with the lithium battery packs.

Note: For swappable systems it is advised to put an ESD protection in your CANbus, e.g. a TSV diode.

P/N	Value	Remark
Baudrate	250 or 500kbps	
CANBus	CAN2.0B, CANOpen	
Data format	Little endian	
Data type	Unsigned	
Node-ID	15	
Available data basic protocol	Battery status	Ready, Disengaged, Charging, Discharging, Preheating, Error
	SOC	%
	Voltage	V
	Current	A
	Battery temperature	°C
Available data advanced protocol (suitable for parallel stacked battery setup)	Pack status	Ready, Disengaged, Charging, Discharging, Preheating, Error
	Pack SOC	%
	Pack voltage	V
	Pack current	A
	Pack max temperature	°C
	Pack min temperature	°C
	Active batteries in the pack	#
	Passive batteries in the pack	#
Individual battery data request (advanced protocol only)	Battery ID	#
	Lowest lifetime voltage	V
	Highest lifetime voltage	V
	Cycle life	#
	Number of deep discharges	#
	Number of subzero charges	#

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9.Bluetooth data (optional)

MEAN WELL EUROPE offers an in-house built smart phone application that may be altered upon client request.

P/N	Value	Remark
Current status	Battery status [basic]	Ready, Disengaged, Charging, Discharging, Preheating, Error
	State of charge[basic]	0-100%
	Voltage[basic]	V
	Current[basic]	A
	Outside (ref) temperature[basic]	°C
	Battery temperarure	°C
Battery healthcare	Deep discharges	#
	Subzero discharges	#
	Min voltage	V
	Max voltage	V
	Max humidity level (water damage)	Level between 1-100
	Max charge current	A
	Max discharge current	A
History	Cyle life[basic]	#
	Used energy (Wh) over last 5 runs	A run is defined as the period between two charge events that last at least 8 seconds

*Items marked with [basic] are available in our free app **"Charged by MEAN WELL"**, available in the Apple app store and Google Play store. MWEU offers custom apps for commercial use. (applying)*

10.IoT

With the optional Bluetooth module all battery data can be sent to a secured server of AWS (Amazon Web Services) and stored in a NoSQL format database (MongoDB). Data may only be shared upon customer request.

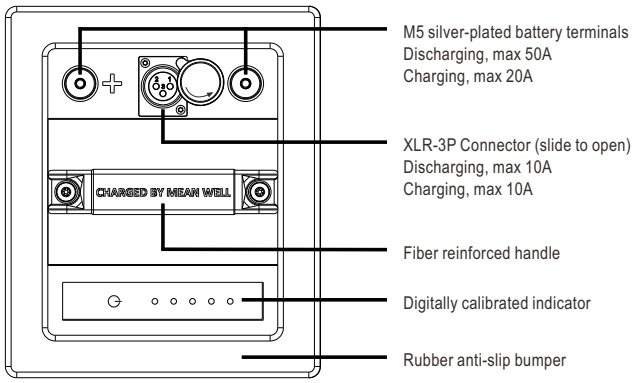
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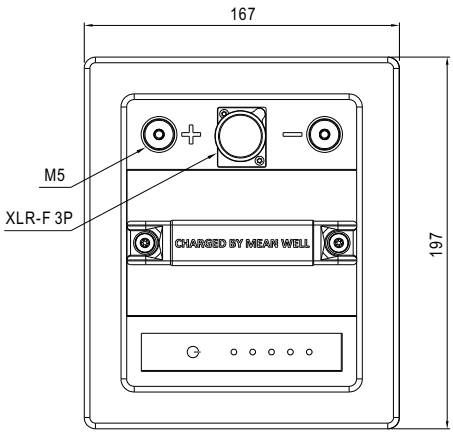
QHB-12F70.0

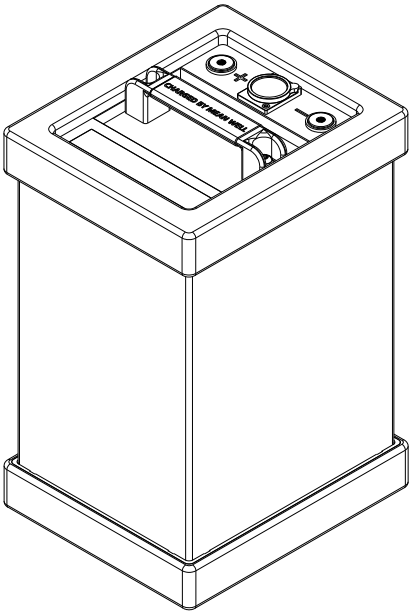
■ MECHANICAL SPECIFICATION

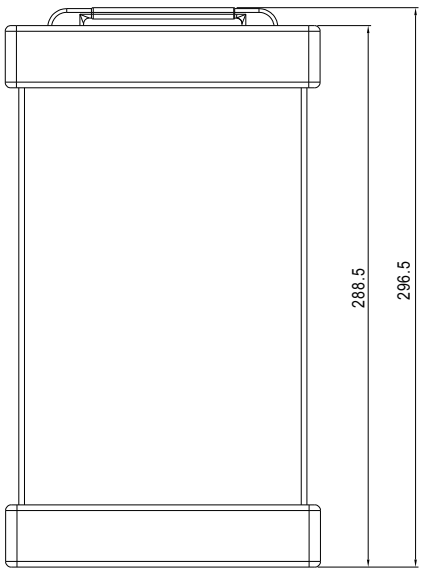
Unit:mm

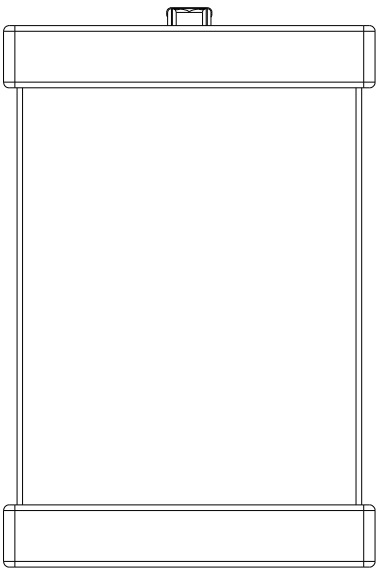
QHB-12F70.0









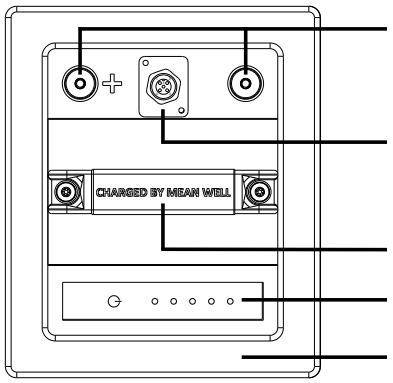


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QHB-12F70.0

Unit:mm

QHB-12F70.0C



M5 silver-plated battery terminals
Discharging, max 50A
Charging, max 20A

M12-F

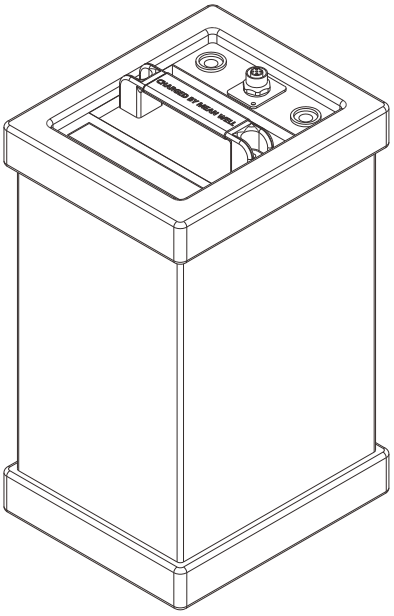


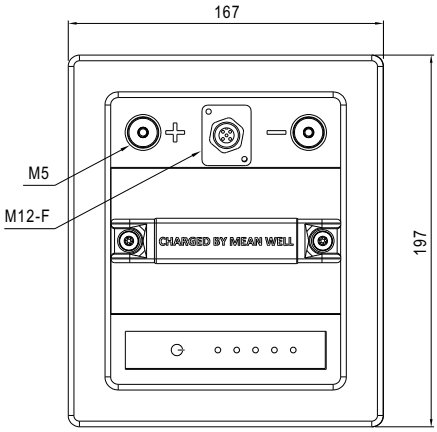
1(NC) 2(12V) 3(GND) 4(CAN HIGH) 5(CAN LOW)

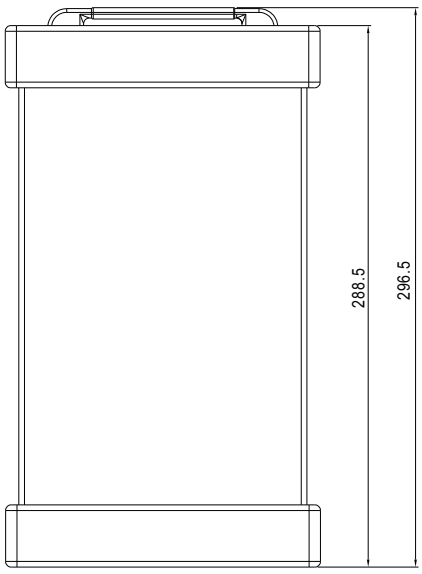
Fiber reinforced handle

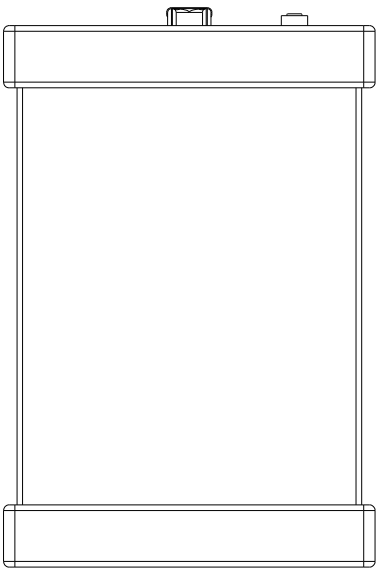
Digitally calibrated indicator

Rubber anti-slip bumper









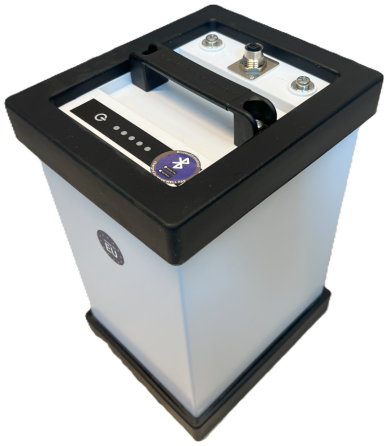
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Li-ion 7S 24V 62.4Ah QHB

QHB-24N62.4



QHB-24N62.4



QHB-24N62.4C

Charged by MEAN WELL

MADE IN EU

Features

- Data Visibility – APP – Integrated with Battery
- Made in Europe
- Mounting in any position
- Durable design- IP67
- BMS with auto on/off hibernate function, no quiescent current draw
- Battery parameter logger
- Battery performance and lifetime optimizer based on all battery values for charging/discharging
- 2 years warranty

Applications

- Electric mobility
- Boating
- Industry
- Mobile energy supply

Description

The QHB series from MEAN WELL EUROPE is designed for multipurpose use within li-ion 7S-13S (24V-48V) and LiFePO4 4S (12V) battery setups. The durable design, consisting of fiber reinforced plastics, makes this battery suitable for operating in harsh environments. This type of battery is suited with a digital indicator and can be fitted with Bluetooth functionality to read out a broad variety of data.

Model Encoding / Order Information

QHB - 24 N 62.4 □ - □ □ □ □

- For optional
- Blank: M5 terminal + XLR-3P
  C: with CANBus - M5 terminal + M12-F
- 62.4Ah
- N:NMC, F:LiFePO4
- 24V Battery voltage
- Series name

Part Number	Battery Description	Note
QHB-24N62.4	Battery NMC 13S 24V 62.4Ah, M5 terminal + XLR-3P	In Stock
QHB-24N62.4C	Battery NMC 13S 24V 62.4Ah, M5 terminal + M12-F	In Stock

*C: With CANBus

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Li-ion 7S 24V 62.4Ah QHB

QHB-24N62.4

1.Product specifications

Item	Value	Remark
Product category	Lithium batteries	
Product name	Battery Li-ion 7S 24V 62.4Ah QHB	
Weight	10.8 Kg	
Dimensions with bumpers	197 x 167 x 296.5 mm	(LxWxH)
Dimensions without bumpers	182.8 x 152.8 x 288.5 mm	(LxWxH)
Voltage nominal	25.6 V	
Voltage max	29.4 V	
Voltage min	20.3 V	
Capacity Ah	62.4Ah (max)	
Discharge current continuous	50A	
Discharge current peak	100A	3 sec
Max charge current	20A	Via battery terminals
Charge method	CC/CV	
Operating temperature; charge	0 ~ 45°C	
Operating temperature; discharge	-10 ~ 65°C	
Storage temperature	-20 ~ 60°C	

2.Cell specifications

Item	Value	Remark
Cell type	DMEGC 18650-26E	
Nominal voltage cell	3.60 V	
Cell capacity	2,600 mAh	@0.05C
CID	Yes	
Max Current	3C	
Cells in series	7	
Cells parallel	24	

3.BMS specifications

Item	Value	Remark
Cell auto balance	Yes, 72±10mA	
Short circuit protection	Yes	
Temperature protection	Yes	Bi-metal sensors
Overcharge protection	Yes, 4.28±0.025V	
Over discharge protection	Yes, 3.00±0.05V	
Over current protection	Yes, 120A±20A	

4.Control PCB

The control PCB is an add-on for the BMS, making the battery "smart". This PCB gathers all applicable data and processes it for Bluetooth or CAN communication. To save energy and increase shelf life, this control PCB will shut down when the battery SOC < 50% and the battery is not used for 25 hours. To wake up, one of the following actions should be performed: The battery key switch* must be pulled high, the button pressed or a current of 2+Amp must be drawn by charging or discharging.

**if installed*

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5.Connectors and terminals

Item	Value	Remark
Terminal material	Brass, silver plated	
Terminal dimensions	M5 inner thread	
Standard secondary socket	XLR-F 3P	1(+), 2(-), 3(NC)
	M12-F, A-coded, 5-pins	Please see pin assignment on the page of Mechanical Specification

6.Enclosure

Item	Value	Remark
Material	PC/ABS/fiber reinforced/Rubber	
FR Class (UL-94)	HB	Or better

7.Safety

Item	Value	Remark
MSDS	Yes	
UN 38.3	Yes	
CE	Yes	
IP	IP65-67 rated, compliance	Depends on the options of connector
Temperature protection	Yes	1x digital + 2x analog

8.CAN-bus (optional)

MEAN WELL Europe provides good local service, and the design house can fit a basic CAN-bus feature, compliant with different CAN-bus protocol suited for parallel (hot-swap) operation. A detailed CANbus guide is available for protocol instructions. To give the complete solution, MEAN WELL smart charger is 100% compatible with the lithium battery packs.

Note: For swappable systems it is advised to put an ESD protection in your CANbus, e.g. a TSV diode.

P/N	Value	Remark
Baudrate	250 or 500kbps	
CANBus	CAN2.0B, CANOpen	
Data format	Little endian	
Data type	Unsigned	
Node-ID	15	
Available data basic protocol	Battery status	Ready, Disengaged, Charging, Discharging, Preheating, Error
	SOC	%
	Voltage	V
	Current	A
	Battery temperature	°C
Available data advanced protocol (suitable for parallel stacked battery setup)	Pack status	Ready, Disengaged, Charging, Discharging, Preheating, Error
	Pack SOC	%
	Pack voltage	V
	Pack current	A
	Pack max temperature	°C
	Pack min temperature	°C
	Active batteries in the pack	#
	Passive batteries in the pack	#
Individual battery data request (advanced protocol only)	Battery ID	#
	Lowest lifetime voltage	V
	Highest lifetime voltage	V
	Cycle life	#
	Number of deep discharges	#
	Number of subzero charges	#

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9.Bluetooth data (optional)

MEAN WELL EUROPE offers an in-house built smart phone application that may be altered upon client request.

P/N	Value	Remark
Current status	Battery status [basic]	Ready, Disengaged, Charging, Discharging, Preheating, Error
	State of charge[basic]	0-100%
	Voltage[basic]	V
	Current[basic]	A
	Outside (ref) temperature[basic]	°C
	Battery temperarure	°C
Battery healthcare	Deep discharges	#
	Subzero discharges	#
	Min voltage	V
	Max voltage	V
	Max humidity level (water damage)	Level between 1-100
	Max charge current	A
	Max discharge current	A
History	Cyle life[basic]	#
	Used energy (Wh) over last 5 runs	A run is defined as the period between two charge events that last at least 8 seconds
Mulitiple packs status (optional, combined with CANbus)	Short ID	Battery ID starting at 1
	Pack state	Same as "Battery status", but for the whole parallel pack
	Pack SOC	%
	Pack current	A
	Number of active packs	#
	Number of passive packs	#
	Pack highest temperature	°C
	Pack lowest temperature	°C

*Items marked with [basic] are available in our free app **"Charged by MEAN WELL"**, available in the Apple app store and Google Play store. MWEU offers custom apps for commercial use. (applying)*

10.IoT

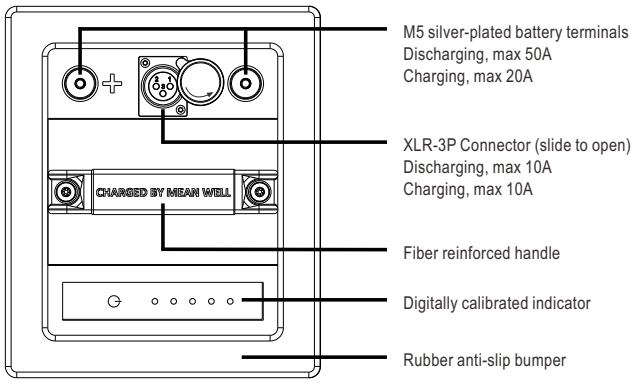
With the optional Bluetooth module all battery data can be sent to a secured server of AWS (Amazon Web Services) and stored in a NoSQL format database (MongoDB). Data may only be shared upon customer request.

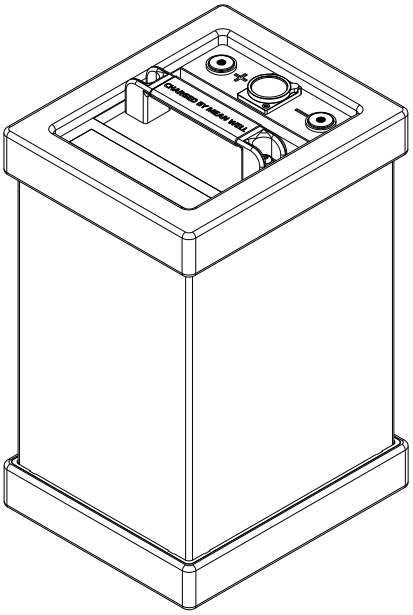
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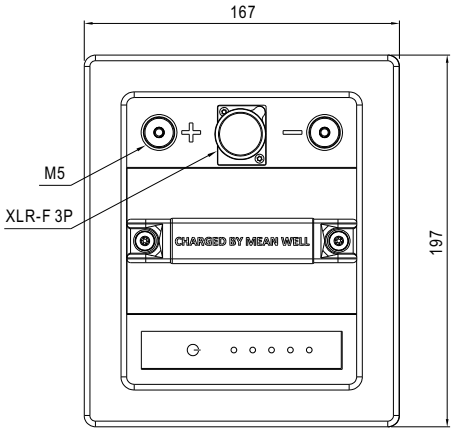
■ MECHANICAL SPECIFICATION

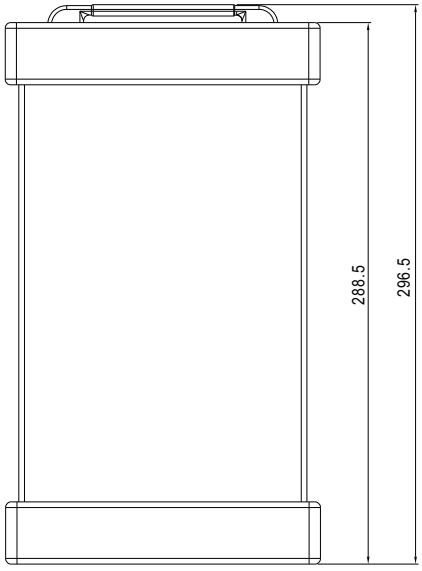
Unit:mm

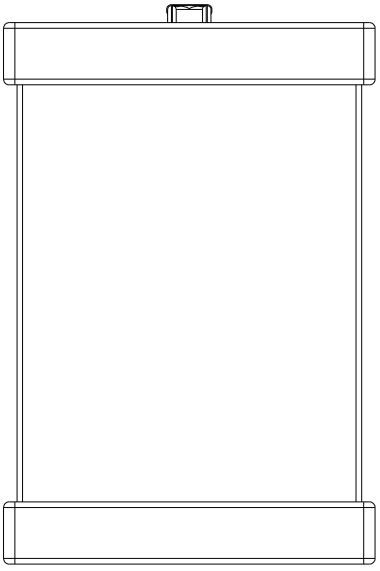
QHB-24N62.4









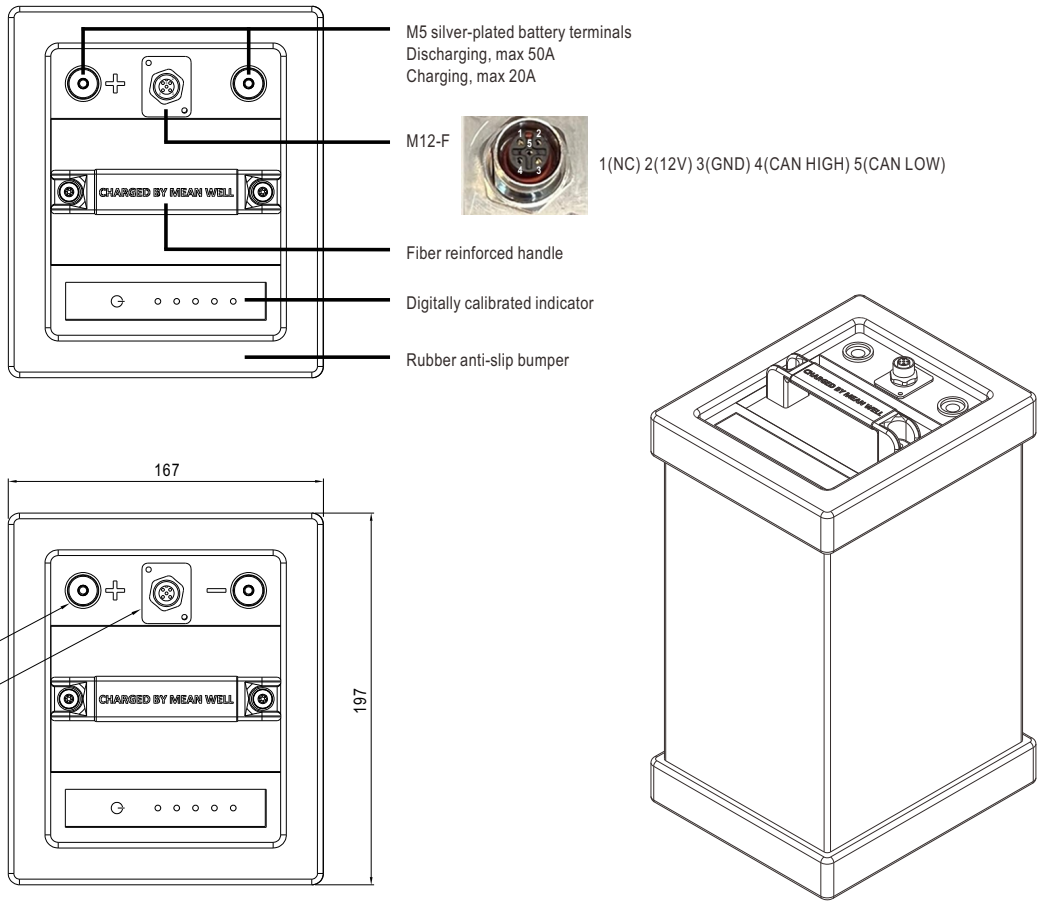


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QHB-24N62.4

Unit:mm

QHB-24N62.4C



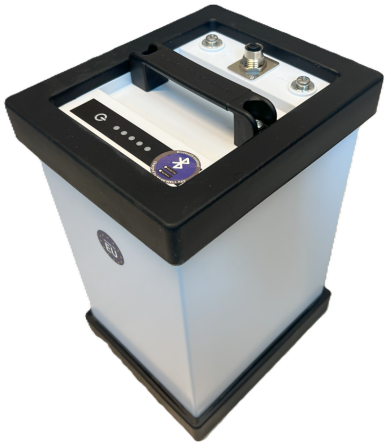
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Li-ion 13S 48V 33.8Ah QHB

QHB-48N33.8



QHB-48N33.8



QHB-48N33.8C

Charged by MEAN WELL

MADE IN EU

Features

- Data Visibility – APP – Integrated with Battery
- Made in Europe
- Mounting in any position
- Durable design- IP67
- BMS with auto on/off hibernate function, no quiescent current draw
- Battery parameter logger
- Battery performance and lifetime optimizer based on all battery values for charging/discharging
- 2 years warranty

Applications

- Electric mobility
- Boating
- Industry
- Mobile energy supply

Description

The QHB series from MEAN WELL EUROPE is designed for multipurpose use within li-ion 7S-13S (24V-48V) and LiFePO4 4S (12V) battery setups. The durable design, consisting of fiber reinforced plastics, makes this battery suitable for operating in harsh environments. This type of battery is suited with a digital indicator and can be fitted with BLE functionality to read out a broad variety of data.

Model Encoding / Order Information

QHB - 48 N 33.8 □ - □ □ □ □

- For optional
- Blank: M5 terminal + XLR-3P
  C: with CANBus - M5 terminal + M12-F
- 33.8Ah
- N:NMC, F:LiFePO4
- 48V Battery voltage
- Series name

Part Number	Battery Description	Note
QHB-48N33.8	Battery NMC 13S 48V 33.8Ah, M5 terminal + XLR-3P	In Stock
QHB-48N33.8C	Battery NMC 13S 48V 33.8Ah, M5 terminal + M12-F	In Stock

*C: With CANBus

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Li-ion 13S 48V 33.8Ah QHB

QHB-48N33.8

1.Product specifications

Item	Value	Remark
Product category	Lithium batteries	
Product name	Battery Li-ion 13S 48V 33.8Ah QHB	
Weight	10.75 kg	
Dimensions with bumpers	197 x 167 x 296.5 mm	(LxWxH)
Dimensions without bumpers	182.8 x 152.8 x 288.5 mm	(LxWxH)
Voltage nominal	46.8 V	
Voltage max	54.6 V	
Voltage min	37.7 V	
Capacity Ah	33.8Ah (max)	
Discharge current continuous	50A	
Discharge current peak	100A	3 sec
Max charge current	15A	Via battery terminals
Charge method	CC/CV	
Operating temperature; charge	0 ~ 45°C	
Operating temperature; discharge	-10 ~ 65°C	
Storage temperature	-20 ~ 60°C	

2.Cell specifications

Item	Value	Remark
Cell type	DMEGC 18650-26E	
Nominal voltage cell	3.60 V	
Cell capacity	2,600 mAh	@0.05C
CID	Yes	
Max Current	3C	
Cells in series	13	
Cells parallel	13	

3.BMS specifications

Item	Value	Remark
Cell auto balance	Yes, 72±10mA	
Short circuit protection	Yes	
Temperature protection	Yes	Bi-metal sensors
Overcharge protection	Yes, 4.28±0.025V	
Over discharge protection	Yes, 3.00±0.05V	
Over current protection	Yes, 120A±20A	

4.Control PCB

The control PCB is an add-on for the BMS, making the battery "smart". This PCB gathers all applicable data and processes it for Bluetooth or CAN communication. To save energy and increase shelf life, this control PCB will shut down when the battery SOC < 50% and the battery is not used for 25 hours. To wake up, one of the following actions should be performed: The battery key switch* must be pulled high, the button pressed or a current of 2+Amp must be drawn by charging or discharging.

**if installed*

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5.Connectors and terminals

Item	Value	Remark
Terminal material	Brass, silver plated	
Terminal dimensions	M5 inner thread	
Standard secondary socket	XLR-F 3P	1(+), 2(-), 3(NC)
	M12-F, A-coded, 5-pins	Please see pin assignment on the page of Mechanical Specification

6.Enclosure

Item	Value	Remark
Material	PC/ABS/fiber reinforced/Rubber	
FR Class (UL-94)	HB	Or better

7.Safety

Item	Value	Remark
MSDS	Yes	
UN 38.3	Yes	
CE	Yes	
IP	IP65-67 rated, compliance	Depends on the options of connector
Temperature protection	Yes	1x digital + 2x analog

8.CAN-bus (optional)

MEAN WELL Europe provides good local service, and the design house can fit a basic CAN-bus feature, compliant with different CAN-bus protocol suited for parallel (hot-swap) operation. A detailed CANbus guide is available for protocol instructions. To give the complete solution, MEAN WELL smart charger is 100% compatible with the lithium battery packs.

Note: For swappable systems it is advised to put an ESD protection in your CANbus, e.g. a TSV diode.

P/N	Value	Remark
Baudrate	250 or 500kbps	
CANBus	CAN2.0B, CANOpen	
Data format	Little endian	
Data type	Unsigned	
Node-ID	15	
Available data basic protocol	Battery status	Ready, Disengaged, Charging, Discharging, Preheating, Error
	SOC	%
	Voltage	V
	Current	A
	Battery temperature	°C
Available data advanced protocol (suitable for parallel stacked battery setup)	Pack status	Ready, Disengaged, Charging, Discharging, Preheating, Error
	Pack SOC	%
	Pack voltage	V
	Pack current	A
	Pack max temperature	°C
	Pack min temperature	°C
	Active batteries in the pack	#
	Passive batteries in the pack	#
Individual battery data request (advanced protocol only)	Battery ID	#
	Lowest lifetime voltage	V
	Highest lifetime voltage	V
	Cycle life	#
	Number of deep discharges	#
	Number of subzero charges	#

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9.Bluetooth data (optional)

MEAN WELL EUROPE offers an in-house built smart phone application that may be altered upon client request.

P/N	Value	Remark
Current status	Battery status [basic]	Ready, Disengaged, Charging, Discharging, Preheating, Error
	State of charge[basic]	0-100%
	Voltage[basic]	V
	Current[basic]	A
	Outside (ref) temperature[basic]	°C
	Battery temperarure	°C
Battery healthcare	Deep discharges	#
	Subzero discharges	#
	Min voltage	V
	Max voltage	V
	Max humidity level (water damage)	Level between 1-100
	Max charge current	A
	Max discharge current	A
History	Cyle life[basic]	#
	Used energy (Wh) over last 5 runs	A run is defined as the period between two charge events that last at least 8 seconds
Mulitiple packs status (optional, combined with CANbus)	Short ID	Battery ID starting at 1
	Pack state	Same as "Battery status", but for the whole parallel pack
	Pack SOC	%
	Pack current	A
	Number of active packs	#
	Number of passive packs	#
	Pack highest temperature	°C
	Pack lowest temperature	°C

*Items marked with [basic] are available in our free app **"Charged by MEAN WELL"**, available in the Apple app store and Google Play store. MWEU offers custom apps for commercial use. (applying)*

10.IoT

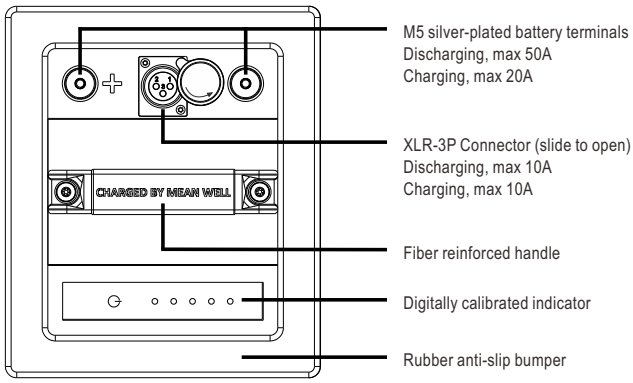
With the optional Bluetooth module all battery data can be sent to a secured server of AWS (Amazon Web Services) and stored in a NoSQL format database (MongoDB). Data may only be shared upon customer request.

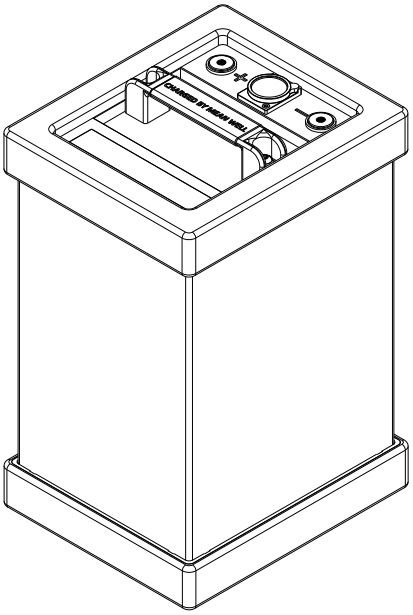
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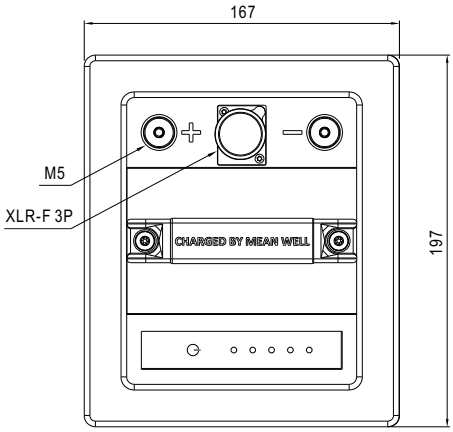
■ MECHANICAL SPECIFICATION

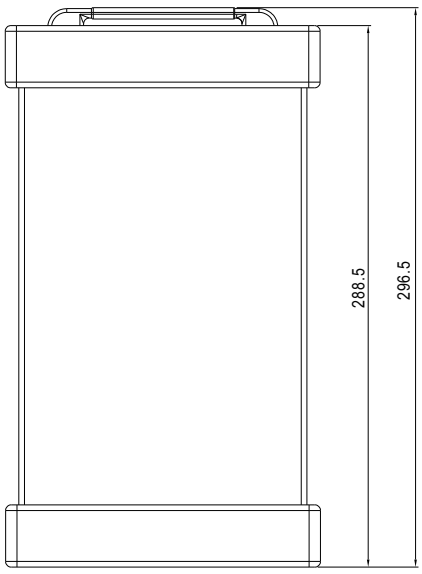
Unit:mm

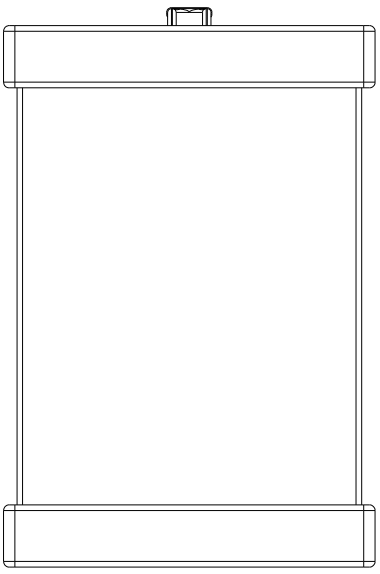
QHB-48N33.8









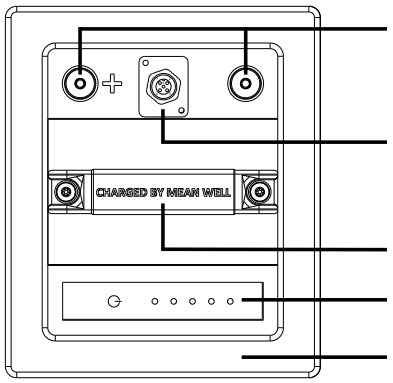


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QHB-48N33.8

Unit:mm

QHB-48N33.8C



M5 silver-plated battery terminals
Discharging, max 50A
Charging, max 20A

M12-F

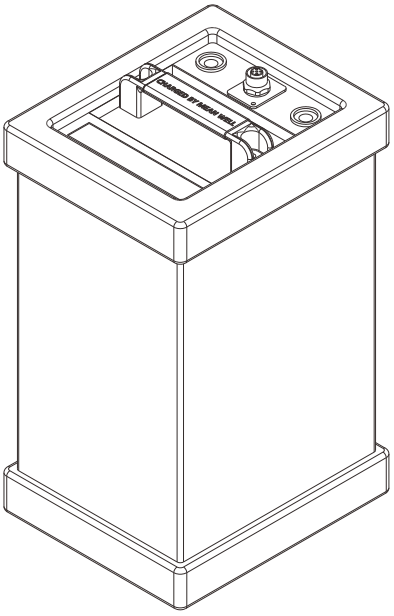


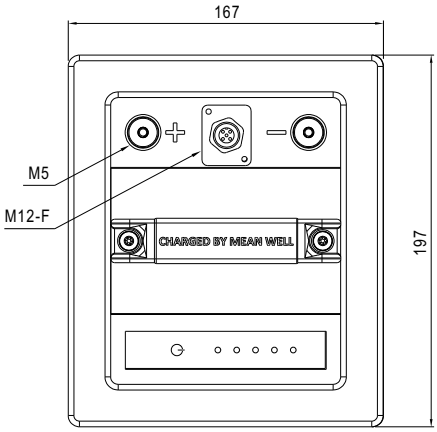
1(NC) 2(12V) 3(GND) 4(CAN HIGH) 5(CAN LOW)

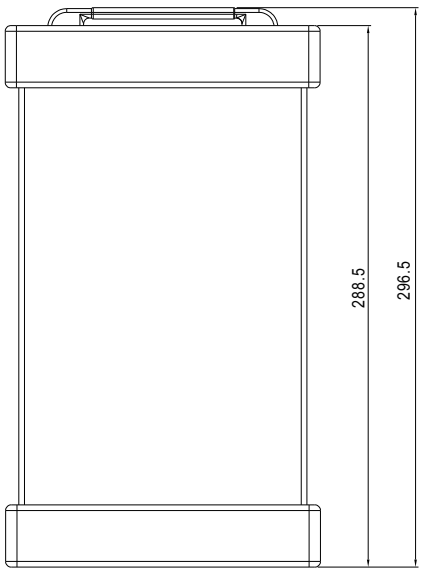
Fiber reinforced handle

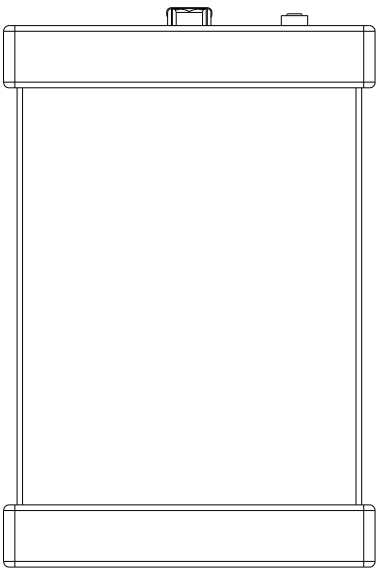
Digitally calibrated indicator

Rubber anti-slip bumper









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