**Data**sheet
06/2025

*illustration similar



# 7S8P HI0708MS01 Battery Pack

- 7S8P Li-Ion Battery pack
- 25.2 V nominal voltage
- 33.6 Ah nominal capacity, 846 Wh (UN38.3)
- Molicel premium quality cell INR21700-P42A
- Aluminum case

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7S8P HI0708MS01 Battery Pack

# Specifications

| Item | Descriptions | Specifications | | Remark |
|---|---|---|---|---|
| **1** | Model Number | HI0708MS01 | | |
| **2** | Cell | Molicel INR21700-P42A | | |
| **3** | Configuration | 7S8P | | |
| **4** | Nominal Voltage | 25.2 V | | 3.6 V * 7S |
| **5** | Nominal Capacity | 33.6 Ah | | 4.2 Ah * 8P |
| **6** | Watt-Hour (UN38.3) | 845.6 Wh | | Calc.: 15.1 Wh (V * Ah) |
| **7** | Internal Resistance | <50 mΩ | | Measure from output terminal of battery pack |
| **8** | Operation Temperature | Standard Charge<br>Standard Discharge | 0°C … +45°C<br>-20°C … +60° C | |
| **9** | Storage condition | < one month<br>< three months | -20°C … +50°C<br>-20°C … +40°C | Percentage of recoverable capacity 80% |
| **10** | Humidity | 30 … 80% | | |
| **11** | Charging Voltage (Maximum) | 29.4 V | | 29.05 V recommended |
| **12** | Charge Current | 7.5 A<br>5.0 A | | Max.<br>recommended |
| **13** | Discharge End Voltage | 21.0 V | | Recommended |
| **14** | Discharge Current | 50.0 A | | 63.0 A for 16 sec. |
| **15** | Internal Consumption | <150 µA<br><2 mA | | Sleep mode<br>Operation |
| **16** | Communication Interface | SMBus | | |
| **17** | BMS Design (7S-42A) | (1) Over charge voltage threshold<br>(2) Under voltage threshold<br>(3) Over charge current threshold<br>(4) Over discharge current threshold<br>(5) Short circuit protection<br>(6) Short circuit delay time<br>(7) Pack internal resistance | | (1) 4.25 ±0.025 V<br>(2) 2.80 ±0.025 V<br>(3) 16.0 ±1.0 A<br>(4) 63.0 ±1.0 A<br>(5) 200.0 ±1.0%<br>(6) typ. 550 µs<br>(7) <50 mΩ |
| **18** | Connection type | Connector: 94M007P3-5S<br>SB-50 | | Charge<br>Discharge |

7S8P HI0708MS01 Battery Pack

# Specifications

| | | | |
|---|---|---|---|
| **20** | Enclosure | Aluminum Hard Case | |
| **21** | Weight (g) | 5.6 kg ± 5% | |
| **22** | Dimension(mm) | 287 x 156 x 85 mm | ±3.0 mm |
| **23** | IP standard | IP20 | |
| **24** | Certifications | UN38.3 Rev. 7 | UN Transport Test |

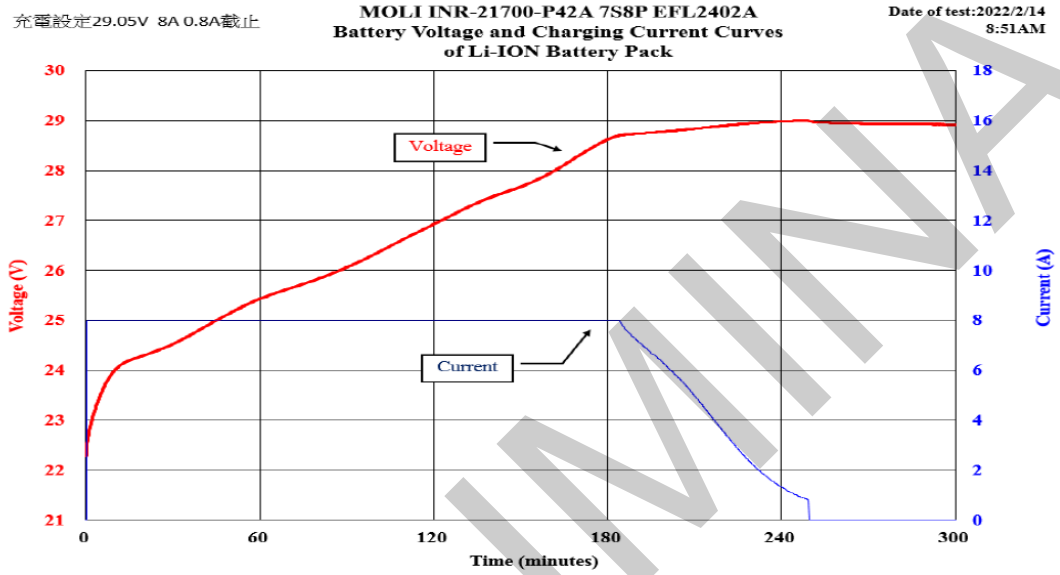
## Power Consumption

| | | | |
|---|---|---|---|
| **Storage condition** | 35°C after fully charged | | |
| **Full Capacity** | 33.6 Ah | 30% Capacity | 10.8 Ah |
| **Estimated Power Consumption** | | 150 µA | |
| **Time (Day)** | **Per Period (mAh)** | **SOC %** | |
| **1** | 3.6 | 29.9 | |
| **30** | 108 | 29.7 | |
| **90** | 324 | 29.1 | |
| **180** | 648 | 28.2 | |
| **270** | 972 | 27.3 | |
| **360** | 1296 | 26.4 | |

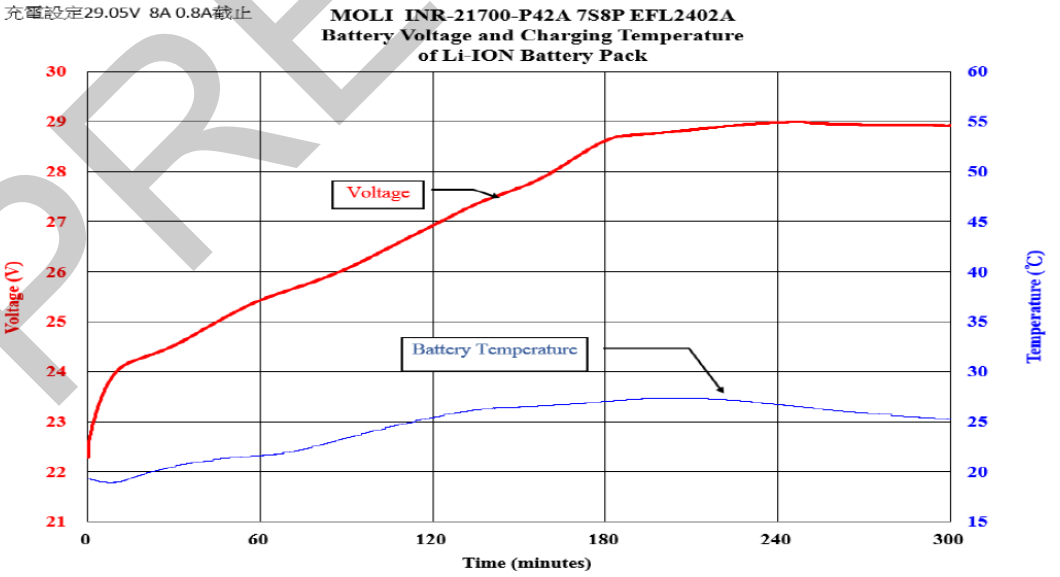
7S8P HI0708MS01 Battery Pack

# Charge Performance Curve

| | |
|---|---|
| Charging condition | 29.05V/8A, 0.8A end |
| Charging time | 249.33min |
| Charging capacity | 28.854Ah |



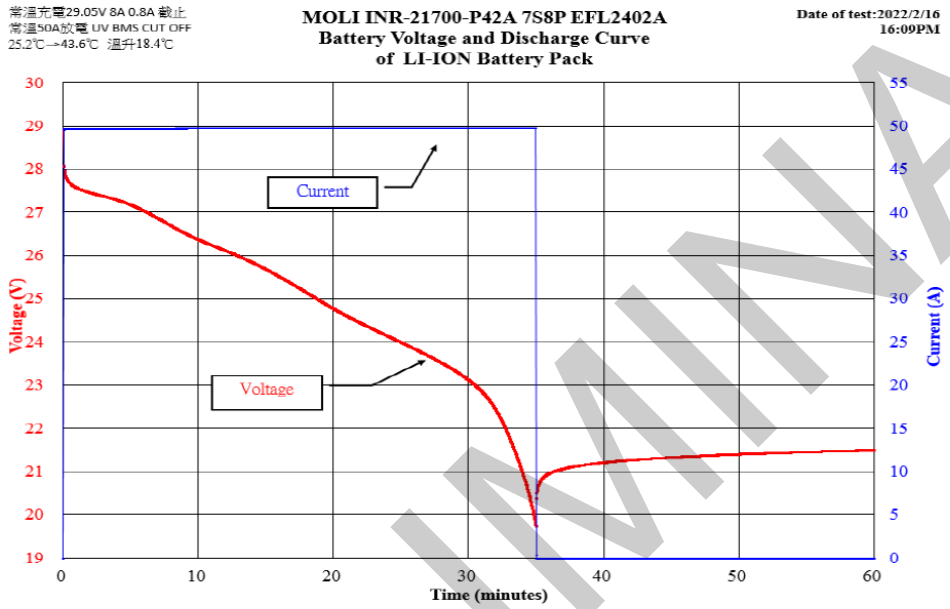

| | |
|---|---|
| Charging condition | 29.05V/8A, 0.8A end |
| Charging time | 249.33min |
| Cell temperature rise | 19.3℃ ➔26.4℃ |



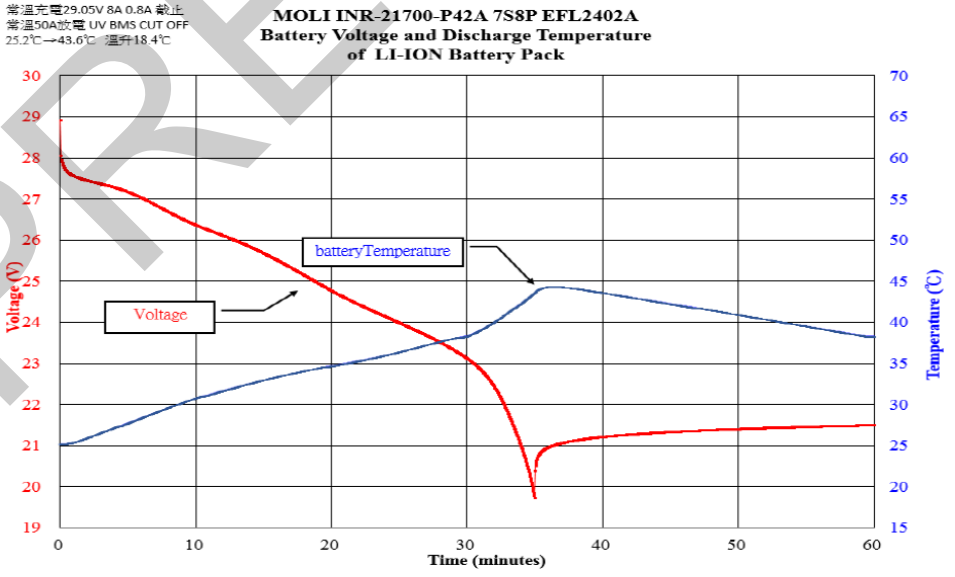
7S8P HI0708MS01 Battery Pack

# Discharge Performance Curve

| | |
|---|---|
| Discharging condition | 50A / UVP |
| Discharging time | 34.97min |
| Discharging capacity | 28.961Ah |



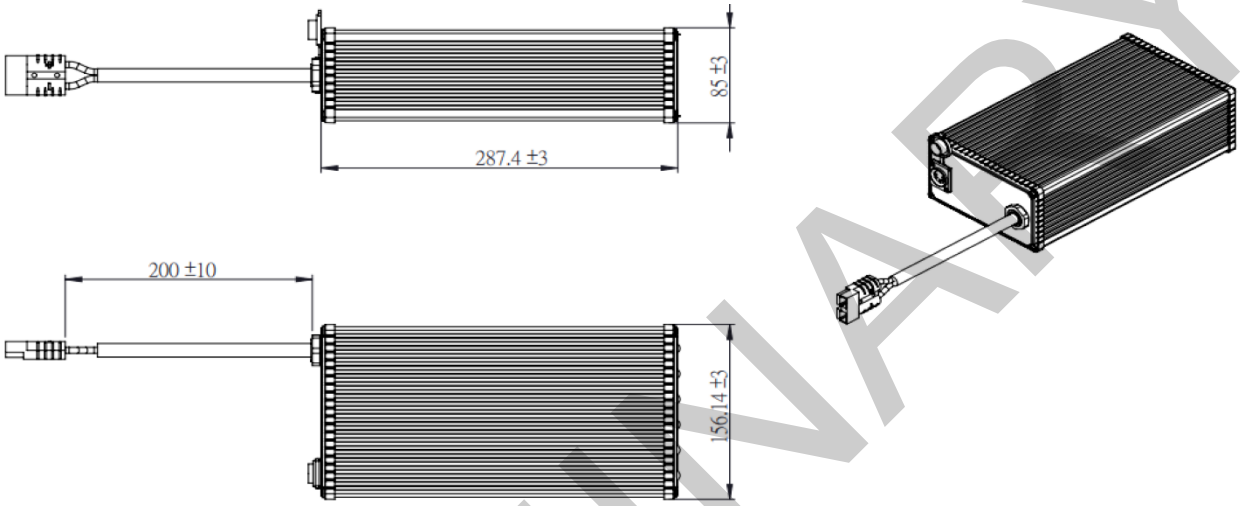

| | |
|---|---|
| Discharging condition | 50A / UVP |
| Discharging time | 34.97min |
| Cell temperature rise | 25.2°C ➔43.6°C |



7S8P HI0708MS01 Battery Pack

# Mechanical

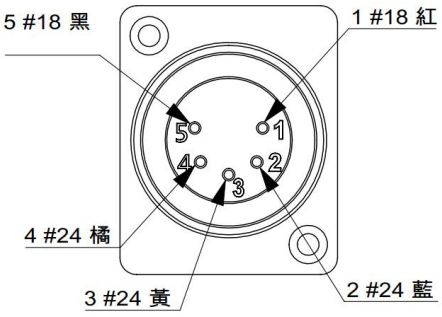
## Drawing




## Connector Definition

Charge: 94M007P-5S

| Pin | Definition | Function |
|---|---|---|
| 1 | CHG+ | Charging positive electrode |
| 2 | RS+ / SDA | RS485 / SMBus communication |
| 3 | NTC | Temperature detection pin |
| 4 | RS / SCK | 25.2 V |
| 5 | CHG- | Charging negative electrode |

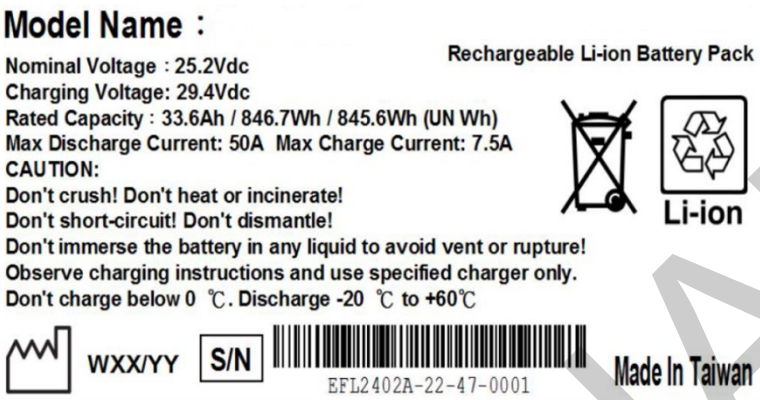



Discharge: SB50

| Pin | Definition | Function |
|---|---|---|
| 1 | DCHG+ | Discharging positive electrode |
| 2 | DCHG- | Discharging negative electrode |

# 7S8P HI0708MS01 Battery Pack

## Label




(preliminary)

## Serial Number:

**Serial Number**
Part Number-YY-WW-XXXX

**Definition**

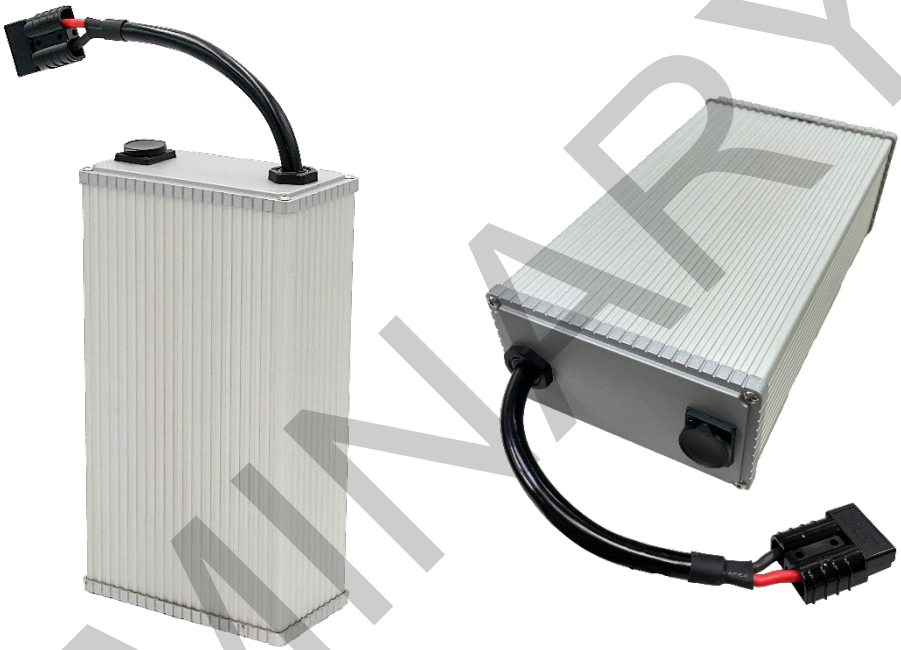
| | |
|---|---|
| Model name: | |
| Production year: | YY |
| Production week: | WW |
| Serial number | XXXX |

**Production Date**
WXX/YY

| | |
|---|---|
| Week of production: | XX |
| Year of production: | YY |

7S8P HI0708MS01 Battery Pack

# Photos



# Packaging

tbd

# Accessories

| Item | Part number | Remark |
|---|---|---|
| **Charger** | TBD | On request |
| | | |
| | | |

7S8P HI0708MS01 Battery Pack

# Precautions for use

- For connector definition, please refer to “Connector Definition” (page 6).
- The battery has a fixed voltage output under normal conditions and can be charged and discharged normally.
- Never disassemble or modify the battery pack.
- Do not pierce the battery pack with a nail or hit it with a hammer, step on it or subject it to strong impact in other ways.
- Do not place the battery near a fire source or high temperature.
- Do not store the battery in a humid environment or expose it to rain or water.
- When the battery pack is not used for a long time, the battery should be removed from the device or equipment. It prevents the battery pack from drawing less current from the device or device.
- The battery conducts a learning cycle according to the specification every 3 months (complete charge and discharge), check the battery pack voltage to prevent deep discharge of the battery pack.
- If the battery is no longer in use and cannot be removed from the device or equipment, immediately remove the battery pack full charge. Check the battery pack voltage status every 2 months to prevent the battery from going into deep discharge due to device or device depletion.

# Battery storage management

New batteries shipped at 30% SOC

- When batteries are stored in a humidity and temperature-controlled environment, the battery should be recharged every 3 months.
- When batteries cannot be stored in a humidity and temperature-controlled environment, the battery should be recharged every 2 months.
- Please charge the battery with METCO approved charger for 1 hour.
- After charging, please measure the battery voltage and internal resistance. If the internal resistance of the battery is over the specification value 2-3 times, please contact HY-LINE for inspection.

Batteries installed with the device shipped to distributors or end users

- Please charge the battery immediately after daily usage.
- Please charge the battery with an appropriate charger for 1 hour or fully charged.
- If there is a short period of time not using the battery (1-2 weeks), please use an appropriate charger to charge for 1 hour. If the battery can be removed from the device, please remove the battery and store it alone after charging for 1 hour or fully charged.

7S8P HI0708MS01 Battery Pack

# Contact

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