

Li-Ion LiHD Battery 18 V – 10 Ah, Part number 625549000, 321001600, 321001610



Functions

- Metabo LiHD[®] Cell Technology 3.0
- Ultra M technology: Intelligent battery management for long-lasting battery packs
- Patented "AIR COOLED" charging technology
- Permanent Electronic Single Cell Protection (ESCP), for particularly long life.
- Processor-controlled charge and discharge management
- LED Fuel gauge, displays remaining capacity
- No memory effect, Long storage capacity with almost no self-discharge

Characteristics

Voltage-Capacity-Energy-Power-Current	18V-10Ah-180Wh-900W-45A-184Wh/kg-240Wh/L
Cell dimension / number off cells	21700 / 5S2P = 10 cells,
Weight / Size	976g / L123 x W83 x H74
Impedance	$R_{AC1KHz} < 40m\Omega$, $R_{DC} < 80m\Omega$ (delivery condition)
Life cycle	> 500 cycles, C > 70% ($T_{Ambient} = 25^{\circ}C$, $\frac{1}{2} I_{Nominal}$)
State of charge	20 - 30%

LED-Display

State of charge	LED1>20%, LED2>40%, LED3>60%, LED4>80%
Battery empty	LED1<20%, 3 times flashing
Electronic awake	LED 4, short flashing each 15 s
Over voltage, Wire break	LED 1, 2 and 4, short flashing each 15 s

Following Data must be strictly adhered

Battery Charging

Battery must only be charged using original Metabo/CAS chargers!

Environmental Conditions

Temperature range	Storage: -20°C... 60°C / Application: -20°C ... 50°C
Humidity	< 90% (non-condensing), IP-Code IP20
Vibrations- and Shock stress	< 5G, (x-, y-, z-axis)
International Markings	

Specification and Measurements

<u>Equipment</u>	Name Date comment		
<u>Equipment Functions</u>	Metabo specified Values	Measured Values Customer	Metabo comments
Read out data	I _{nom_pack_discharge} (45A) Cellcount_serial (5) Capacity (10Ah)		
Over current cut-off 1 if Over current cut-off 2 if Over current cut-off 3 if	I > I _{nom_pack_discharge} x 1,5 within 30s I > I _{nom_pack_discharge} x 2,5 within 2s I > I _{nom_pack_discharge} x 4 within 0,1s		
Over temperature cut-off	T cutoff < 75°C, R _{NTC} > 1.000Ω (Sensor NTC 6,8k / B3950)		
Under temperature cut-off	T cutoff > -40°C, R _{NTC} < 270KΩ (Sensor NTC 6,8k / B3950)		
Under voltage cut-off, under Load	V cutoff > Cellcount_serial x 2,5V after 1s		
Startup protection in Undervoltage	V startup > Cellcount_serial x 3V		
No Battery wakeup in Idle or Error mode, NTC+ & Datapin	V < 0,5V after 5 minutes		
Quiescent Current when in Undervoltage (U<11V)	I _q < 5μA		
Current into Battery	I < 1.6 x Capacity / h (max. 4s, max. 21,15V)		

Certification

Battery is certified regarding UN Transportation 38.3 and IEC 62133

Transportation

Shipping of the battery must guarantee according ZVEI-EPTA-IVG-guidelines

<http://www.zvei.org/Verband/Fachverbaende/Elektrowerkzeuge/Seiten/Neue-Merkblaetter-Transport-von-Lithium-Ionen-Batterien.aspx>

Approval

For the complete battery system approval, the customer have to send a sample device including functional description. The reference sample stay at metabo.

Application

Battery used together with equipment:

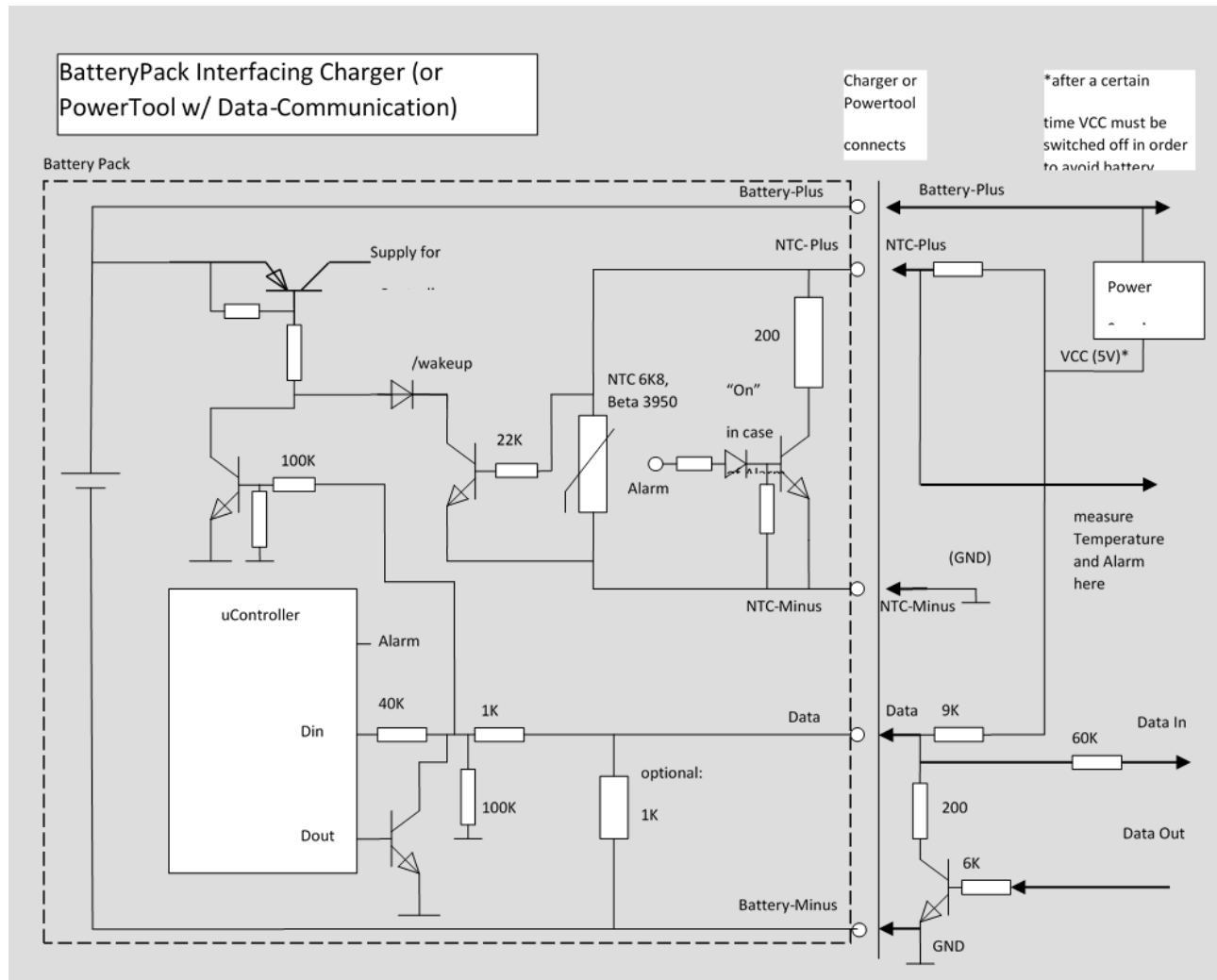
Equipment Name / Description

Place / Date / Signature Customer

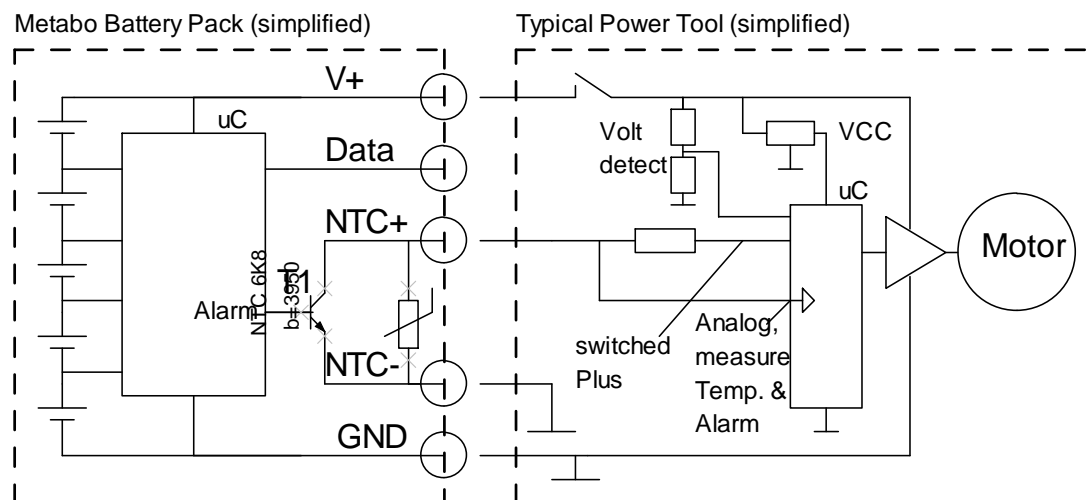
Place / Date / Signature Metabo

The information in this brochure has been compiled with the utmost care. Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Further applicable documents is the battery manual. This document is confidential and must not disclosed to any third person without written permission.

Appendix: Electrical Connection for Equipment with Data Pin



Appendix: Electrical Connection for Equipment without Data Pin



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