

BOM - WLANThermo Mini V3

Version: 02/2021

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<https://wlanthermo.de>



| Kennung | Bauteilbezeichnung | Anmerkung | Größe | Menge | Händler | Alternative | Kit [1] |
|-----------|--------------------|------------------------------------|----------|-------|--|--------------------------|------------------------|
| IC1 | MCP73831T-2ACI/OT | Battery Management | SOT-23-5 | 1 | Mouser [2] | reichelt | |
| IC2 | MCP3208-CI/SL | 12-bit A/D Converter, 8-Kanal | SOIC-16 | 1 | Mouser | reichelt | |
| IC3 | LP2985IM5-3,3 | Reference Voltage 3.3V | SOT-23-5 | 1 | Mouser | reichelt | |
| IC4 | TLV61046ADBVR | Switching Voltage Regulator | SOT-23-6 | 1 | Mouser | --- | |
| IC5 | TLV271CDBVR | Rail-to-Rail Operational Amplifier | SOT-23-5 | 1 | Mouser | --- | |
| IC6 | MAX31855KASA | Thermocouple to Digital Converter | SOIC-8 | 1 | Mouser | --- | |
| C1 | GRM31CR60J107ME39L | 100uF, 6.3V, 20%, X5R | SMD 1206 | 1 | Mouser | reichelt | |
| C2 / C3 | GRM21BR61E226ME44L | 22uF, 25V, 20% | SMD 0805 | 2 | Mouser | --- | |
| C4 - C7 | CL21B106KPQNNNE | 10uF, 10V, 10%, X7R | SMD 0805 | 4 | Mouser | reichelt | |
| C8 / C9 | CC0805KRX7R9BB103 | 0.01uF, 50V, 10%, X7R | SMD 0805 | 2 | Mouser | reichelt | |
| C10 - C20 | CC0805KRX7R9BB104 | 0.1uF, 50V, 10% | SMD 0805 | 11 | Mouser | reichelt | |
| R1 | CRCW08052K00FKEAC | 2K, 1%, 0.125W ±100ppm/°C | SMD 0805 | 1 | Mouser | reichelt | |
| R2 | CRCW06034K99FKEAC | 4.99K, 1%, 0.125W ±100ppm/°C | SMD 0603 | 1 | Mouser | reichelt | |
| R3 | CRCW08053K48FKEAC | 3.48K, 1%, 0.125W ±100ppm/°C | SMD 0805 | 1 | Mouser | reichelt | |
| R4 | CRCW080522K0FKEAC | 22K, 1%, 0.125W ±100ppm/°C | SMD 0805 | 1 | Mouser | reichelt | |
| R5 | CRCW0805330KFKEA | 330K, 1%, 0.125W ±100ppm/°C | SMD 0805 | 1 | Mouser | reichelt | |
| R6 | CRCW0805100KFKEAC | 100K, 1%, 0.125W ±100ppm/°C | SMD 0805 | 1 | Mouser | reichelt | |
| R7 - R12 | CRCW080510K0FKEAC | 10K, 1%, 0.125W ±100ppm/°C | SMD 0805 | 6 | Mouser | reichelt | |
| R13 - R22 | CRCW08051K00FKEAC | 1K, 1%, 0.125W ±100ppm/°C | SMD 0805 | 10 | Mouser | reichelt | |
| R23 - R31 | ERA-6AEB473V | 47K, 0,1% | SMD 0805 | 9 | Mouser | reichelt | |
| F1 | OZCJ0150FF2C | Re. Fuse, IH 1.5A, IT 3.0A, 6V | SMD 1206 | 1 | Mouser | --- | |
| F2 | OZCJ0050AF2E | Re. Fuse, IH 0.5A, IT 1.0A, 24V | SMD 1206 | 1 | Mouser | --- | Mouser |
| T1 - T2 | IRLML6402TR | P-MOSFET | SOT-23-3 | 2 | Mouser | reichelt | |

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|---------|--------------------------|--|-------------|----|-----------------------------|--------------------------|--------------------------|-----|
| T3 | BSS138 SMD | MOSFET N-CH LOGIC | SOT-23-3 | 1 | Mouser | reichelt | | |
| T4 | 2SC3303 / NSS1C301 | NPN | TO-252 | 1 | Mouser | reichelt | | |
| D1 | APL3015QBC/D-F01 | SMD LED BLUE | SMD 1206 | 1 | Mouser | reichelt | | |
| D2 | APTR3216SURCK | SMD LED RED | SMD 1206 | 1 | Mouser | reichelt | | |
| D3 | MBRA340T3G | Schottky Diode, 3A, 40V | SOD-128 | 1 | Mouser | reichelt | Mouser | |
| D4 | PMEG4030ER/8X | Schottky Rectifiers, If 3A | SOD-123-2 | 1 | Mouser | --- | | |
| S1 | EG1247 / SK12D07VG4 | Schiebeschalter | | 1 | Mouser | --- | | |
| L1 | SRN6045TA-220M | 22uH, 2.3A | SMD 6x6x4.2 | 1 | Mouser | reichelt | Mouser | |
| K1 | UJC-HP-3-SMT-TR | USB-C Connector | SMD 6 PIN | 1 | Mouser | --- | | |
| K2 | JST PH2P ST / B2B-PH-K-S | Battery Connector | RM 2.0 | 1 | Mouser | reichelt | | |
| K3 | M20-7812045 | Socket Header 2X20, SMD | RM 2.54 | 1 | Mouser | --- | | |
| K4 - K9 | SJ-2523-SMT-TR | 2.5 mm Klinkenbuchse | 4 Pol | 6 | Mouser | --- | | |
| K10 | PCC-SMP-K | Typ K Thermocouple Terminal | | 1 | Mouser | --- | | |
| K11 | DC031A / PJ-035-SMT-TR | DAC Connector, PJ-035 = 3 Pol-Variante | | 1 | Mouser[3] | --- | ALI | x |
| K11* | 171-PA35135-1-E / PP-018 | 3.5x 1.3 mm Stecker, PP-018 = 3 Pol | | 1 | Mouser[3] | reichelt | 2-Pol | x |
| K12 | MOLEX 43650-0300 | MOLEX Mirco-Fit 3 PIN | RM 3.0 | 1 | Mouser | reichelt | | |
| K12* | MOLEX 43645-0300 | MOLEX 3 PIN Stecker (ohne Kontakte) | RM 3.0 | 1 | Mouser[4] | reichelt | | |
| K12* | MOLEX 43030-0008 | MOLEX Micro-Fit Crimp-Female | | 5 | Mouser | reichelt | | |
| K13 | BKL 10120516 | Stiftleiste, 2X20, gerade | RM 2.54 | 1 | Mouser | reichelt | | |
| B1 | Li-Ion Battery | 2600 mAh Li-Ion, Typ B600BE | 63x57x5,6 | 1 | --- | reichelt | reichelt | |
| X1 | WT TFT Kit [5] | TFT-Modul, ESP32, nRF52840 | SMD | 1 | --- | --- | WT-Shop | (x) |
| X2 | WT Battery Kit | Battery Connector + Protection | SMD | 1 | --- | --- | WT-Shop | (x) |
| M1 | Magnete | Neodym Quadermagnet 40 x 5 x 2 mm | | 2 | --- | --- | MTS | x |
| M2 | Schrauben | M2 x 4mm, Blechschraube | | 14 | --- | --- | Ebay | x |
| M3 | Schrauben | M3 x 25mm Linsenkopfschraube | | 4 | --- | reichelt | Baumarkt | x |
| P1 | Platine | 1 mm Platinendicke | | 1 | github | --- | | x |
| G1 | 3D-Druckteile | Gehäuse + Ecksteine | | 1 | thingiverse | --- | | (x) |
| G2 | Buchsen-Blenden | gelaserte Seitenblenden | | 4 | thingiverse | --- | | x |

[1] Mini-Kit: Bauteile, die nicht über Mouser beziehbar sind, können auf Anfrage (s.ochs@wlanthermo.de) auch als Bauteil-Kit über das WLANThermo Team bezogen werden. (x) = optional.

[2] Mouser-Warenkorb: <https://www.mouser.com/ProjectManager/ProjectDetail.aspx?AccessID=7eb45380b5>

[3] Standardmäßig wird die 2-Pol-Buchse DC031A verbaut, mit passendem 2-Pol-Stecker. Mouser führt allerdings nur die 3-Pol-Buchse PJ-035-SMT-TR, benötigt 3-Pol-Stecker PP-018.

Die 2-Pol und 3-Pol Bauteile sind untereinander nicht kompatibel, es muss also auf die richtige Kombination geachtet werden.

[4] Der Molex-Stecker kommt ohne Crimp-Kontakte. Es werden entweder entsprechende Anschlusskabel mit Crimp-Kontakt benötigt oder die Kontakte selbst gecrimpt werden.

[5] Die Software ist bereits vorinstalliert und direkt betriebsbereit.