

KL110F BATTERY MONITOR

REAL-TIME VOLTAGE, CURRENT, AND CAPACITY TRACKING WITH FLEXIBLE RELAY CONTROL

JOY-IT

SPECIAL FEATURES

- ✓ Multi-Parameter Monitoring
- ✓ Automatic Charge/Discharge Detection
- ✓ BT App Control
- ✓ Programmable Protection Features
- ✓ Low Power Consumption
- ✓ High Resolution & Wide Range
- ✓ Serial Communication Interface



The KL110F is a high-precision battery monitoring solution designed for professionals who require reliable measurement and control of DC power systems. With its ability to monitor voltage, current, power, capacity, and energy in real time, it delivers comprehensive insights into battery performance and operating status.

Equipped with advanced Coulomb counting technology, the KL110F provides accurate tracking of charge and discharge cycles. Automatic current direction detection ensures seamless switching between charging and discharging modes, while integrated protections guard against over-voltage, under-voltage, over-current, over-power, and overheating conditions.

Wireless connectivity via BT radio connection allows convenient monitoring and configuration directly from a smartphone app, while the optional RS-485 serial interface enables integration into supervisory systems and remote monitoring setups. Adjustable calibration functions guarantee precise results across a wide range of applications.

For active protection, the KL110F includes a relay control output. This output can be configured to trigger when user-defined thresholds are exceeded. To actually disconnect loads or chargers, the customer must connect an external relay. This flexible approach allows the KL110F to work with a wide range of relay types and system voltages, making it adaptable to different applications such as low-voltage cut-off, over-current shutdown, or thermal safety protection.

With support for up to 120 V and 100 A, combined with a low internal power consumption of just 0.4 W, the KL110F is ideally suited for use in renewable energy systems, mobile power solutions, electric vehicles, and industrial battery installations. Compact, versatile, and reliable, it brings professional-grade energy management within reach.

MAIN FEATURES

Operating voltage	10 - 80 V
Sampling rate	1 S/s
Protection functions	Overvoltage protection, Undervoltage protection, Over power protection, Charging overcurrent protection, Discharging overcurrent protection, External over temperature protection, External under temperature protection
BT communication distance	10 m
Power consumption	About 0.4 W
Voltage measurement range	0 - 120 V
Current measurement range	0 - 100 A
Temperature measurement range	-20 °C - 120°C
Power measurement range	0 - 72 KW
Capacity measurement range	0 - 9999.99 Ah
Energy measurement range	0 - 9999.99 kWh
Communication interface	BT radio connection, RS485

ACCURACY AND RESOLUTION

Voltage accuracy	±2 % + 3 characters
Voltage resolution	0.01 V
Current accuracy	±5 % + 10 characters
Current resolution	0.01 A
Capacity resolution	0.001 Ah
Energy resolution	0.001 Wh
Temperature resolution	1 °C / 1 °F

FURTHER INFORMATION

Weight	285 g
Dimensions	Main control panel 108 x 61 x 27 mm Shunt resistor 75 x 30 x 25 mm
Item number	JT-KL110F
Scope of delivery	Main control panel, shunt resistor, shunt data cable (20 cm), relay control cable (20 cm), external temperature sensor (100 cm), terminal block, 2x 7mm standoff, 2x M4x25mm countersunk screw
Customs tariff number	90303900
EAN	4250236825977

