



TCL energy manager

Intelligent whole home energy management gateway

Coordinates PV generation, battery storage, EV charging, smart appliances and flexible household loads for optimal household energy usage.



Open-standard compatibility

Supports integration with third-party energy storage, EV chargers, smart meters, home appliances and intelligent loads.



TOU, dynamic tariff and grid services ready

Supports Time-of-Use tariff strategies and dynamic electricity price response, enabling smart load shifting and cost-saving energy scheduling.



Multi-coms interfaces

Equipped with RS485, LAN, WAN, Wi-Fi 6, Bluetooth, USB Type-C, DI, and DO interfaces for flexible system integration.



Local, cloud and Edge AI collaboration

Supports local control, edge-side decision-making, and cloud-based optimization to improve response speed, system reliability, and energy management efficiency.

Power & electrical	
Power Input	12 VDC @ 1 A, -10% / +10%
Power Consumption	4 W

Operation & reliability	
Operating Temperature	-20°C ~ +60°C
Storage Temperature	-40°C ~ +70°C
Operating Humidity	5% ~ 90% RH, non-condensing
Protection Rating	IP20
Altitude	≤ 2000 m
Reliability Features	Watchdog, backup power, hardware RTC, power failure detection, reverse polarity protection

Installation	
Installation	Wall mounting / DIN35 rail
Dimensions	104 × 90 × 70 mm
Weight	260 g
Color	Grey

User interface	
LED Indicators	Power indicator, communication indicator, alarm indicator
Buttons	Reset button, function button

Interfaces & connectivity	
WIRED COMMUNICATION	
RS485 Interface	4 × RS485
RS485 Baud Rate	9600 bps / 19200 bps / 115200 bps
RS485 Device Capacity	Supports up to 32 devices
RS485 Cable Length	Less than 100 m
LAN	1 × 10/100 Mbps adaptive Ethernet, cable length <100 m
WAN	1 × 10/100 Mbps adaptive Ethernet, cable length <100 m
USB Interface	USB Type-C, USB 2.0

WIRELESS COMMUNICATION	
Wi-Fi Frequency Band	2.4 GHz & 5 GHz
2.4 GHz Frequency	2412 MHz ~ 2484 MHz
5 GHz Frequency	5180 MHz ~ 5885 MHz
Bluetooth	BLE 5.0, 2402 MHz ~ 2480 MHz

DIGITAL INPUT/OUTPUT	
DI Interface	2 × isolated DI, rated voltage 12 VDC
DO Configuration	1 channel supports NO/COM/NC; 1 channel supports NO/COM

Compliance	
Applicable Standards	IEC 61000 series, IEC 61010 series