Energy Meter Module Selection for EV Charger

1-phase&3-phase&DC Energy Meter Selection for all types of EV Charger.

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0. Major Types of EV Charging Station and their requests for Energy Meter

Type 1: Small 1-phase AC EV Charging Station

- Noted: Request below are request of EV charging station to the energy meter used by it.
- Rated Voltage: Request rated voltage in the range of 220~264Vac L-N (1-phase)
- Rated Current: Request Max current at least 60A AC
- Communication: Request RS485 communication for control function
- Metering: Request Multi-rate/tariff metering as a optional function

Type 2: Small 3-phase AC EV Charging Station

- Noted: Request below are request of EV charging station to the energy meter used by it.
- Rated Voltage: Request rated voltage in the range of 380~456Vac L-L & 220~264Vac L-N (3-phase)
- Rated Current: Request Max current input at least 80A AC (direct connect type) or Max 5A AC current input (via CTs)
- Communication: Request RS485 communication for control function
- Metering: Request Multi-rate/tariff metering as a optional function

Type 3: Medium&Large DC EV Charging Station

- Noted: Request below are request of EV charging station to the energy meter used by it.
- Rated Voltage: Request rated voltage in the range of 200~1000Vdc
- Rated Current: Request Max current input normally not more that 500A DC
- Communication: Request RS485 communication for control function
- Metering: Request Multi-rate/tariff metering as a optional function

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1. Energy Meter Model Selection (For Small 1-phase AC EV Charging Station)

Model 1: ADL200 1-phase DIN-rail Energy Meter

1-phase 2-wire | 35mm DIN Rail | Direct Load 80A | MODBUS-RTU

- Rated Voltage: 220~264Vac L-N (45~65Hz)
- Rated Current: 10(80)A AC
- Accuracy: Class 1.0 for active energy monitoring
- Communicaiton: RS485 Interface, MODBUS-RTU Protocol
- Extra Function: Multi-rate/tariff metering & Pulse Output
- Certificate&Standard: IEC; CE; CE-MID;EAC

Model 2: ADL100-ET 1-phase DIN-rail Energy Meter

1-phase 2-wire | 35mm DIN Rail | Direct Load 60A | MODBUS-RTU

- Rated Voltage: 220~264Vac L-N (45~65Hz)
- Rated Current: 10(60)A AC
- Accuracy: Class 1.0 for active energy monitoring
- Communicaiton: RS485 Interface, MODBUS-RTU Protocol
- Extra Function: Multi-rate/tariff metering&Pulse Output
- Certificate&Standard: CE; EAC

Model 3: ADL10-E 1-phase DIN-rail Energy Meter

1-phase 2-wire | 35mm DIN Rail | Direct Load 60A | MODBUS-RTU

- Rated Voltage: 220~264Vac L-N (45~65Hz)
- Rated Current: 10(60)A AC
- Accuracy: Class 1.0 for active energy monitoring
- Communicaiton: RS485 Interface, MODBUS-RTU Protocol
- Certificate&Standard: CE; EAC

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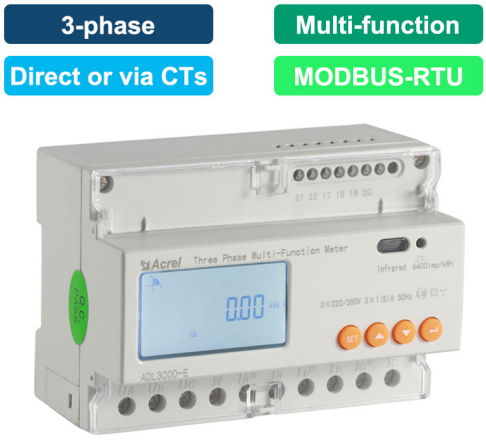
2. Energy Meter Model Selection (For Small 3-phase AC EV Charging Station)

Model 1: ADL400 3-phase DIN-rail Energy Meter

- Rated Voltage: 3x380~456Vac L-L & 220~264Vac L-N (45~65Hz)
- Rated Current: 3x10(80)A AC (direct connect) or 3x1(6)A AC (via CTs)
- Accuracy: Class 0.5S for active energy monitoring
- Harmonic: Total and 2~31st harmonic monitoring
- Communicaiton: RS485 Interface, MODBUS-RTU Protocol
- Extra Function: Multi-rate/tariff metering & Pulse Output
- Certificate&Standard: IEC; CE; CE-MID;EAC

Model 2: ADL3000-E 3-phase DIN-rail Energy Meter

- Rated Voltage: 3x380~456Vac L-L & 220~264Vac L-N (45~65Hz)
- Rated Current: 3x10(80)A AC (direct connect) or 3x1(6)A AC (via CTs)
- Accuracy: Class 0.5S for active energy monitoring
- Communicaiton: RS485 Interface, MODBUS-RTU Protocol
- Certificate&Standard: UL; CE; IEC; EAC



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3. Energy Meter Model Selection (For Medium-Large DC EV Charging Station)

Model 1: DJSF1352-RN DC Din-rail Energy Meter

- Voltage Input Range: 0~1000Vdc
- Current Input Range: 0~5Vdc, 4~20mA DC (via Hall Sensor) 0~75mV (via Shunt) and etc.
- Accuracy: Class 1.0 for active energy monitoring
- Communicaiton: RS485 Interface, MODBUS-RTU Protocol
- Extra Function: Multi-rate/tariff metering & Optional Dual Circuits Monitoring
- Certificate&Standard: CE

DC Metering | Solar PV | EV Charger | RS485 (MODBUS)

Model 2: PZ72L-DE DC Panel mounted Energy Meter

- Voltage Input Range: 0~1000Vdc
- Current Input Range: 0~5Vdc, 4~20mA DC (via Hall Sensor) 0~75mV (via Shunt) and etc.
- Accuracy: Class 1.0 for active energy monitoring
- Communicaiton: RS485 Interface, MODBUS-RTU Protocol
- Extra Function: Multi-rate/tariff metering
- Certificate&Standard: CE

1-circuit | Multi-function | DC Metering | MODBUS-RTU

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3. Shunt&Hall Sensor Model Selection (For Medium-Large DC EV Charging Station)

DC Current In. | DC Current Out.
Max 0~500A DC | 0~75mV DC

Model 1: AFL-T Series Shunt

- Current Input Range: 0~(50~500)A DC
- Current Output Range: 0~75mV
- Advantage: High accuracy, strong anti-interference
- Application: Paired with Acrel DC energy meter for current intput

Hall Effect | AC&DC Transducer
0~500A AC/DC In. | 0~±5/±4Vdc Out.

Model 2: AHKC-EKA Split-core Hall Sensor

- Current Input Range: 0~(50~500)A DC
- Current Output Range: 0~±5Vdc
- Aperture: φ20mm
- Auxiliary Power Supply: ±12~±15Vdc
- Advantage: Safety with electricity isolation
- Application: Paired with Acrel DC energy meter for current intput

Hall Effect | AC&DC Transducer
0~1000A AC/DC In. | 0~±5/±4Vdc Out.

Model 2: AHKC-EKB Split-core Hall Sensor

- Current Input Range: 0~(200~1000)A DC
- Current Output Range: 0~±5Vdc
- Aperture: φ40mm
- Auxiliary Power Supply: ±12~±15Vdc
- Advantage: Safety with electricity isolation
- Application: Paired with Acrel DC energy meter for current intput