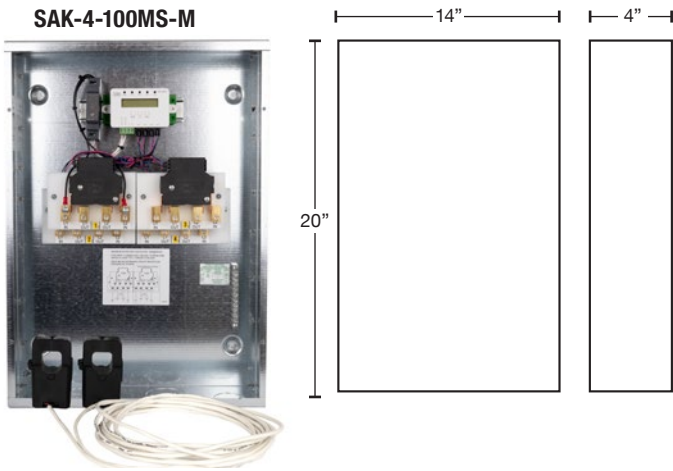


Electric Vehicle Charger Load Management



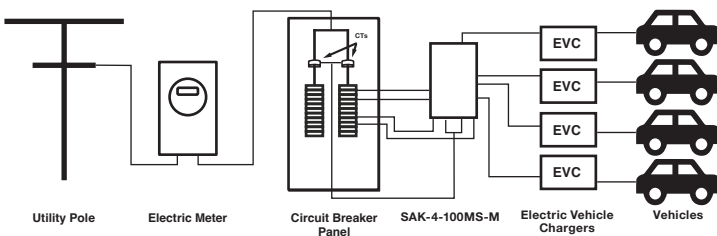
Features

- Manages loads of 4 EV chargers up to 100A each
- Can be installed on any main or sub panel up to 400A to add managed loads up to 100A continuous.
- Adapts to any application using the precision field adjustable set points. These maximize access to the added load and prevent looping.
- Field adjustable set points include: panel overload amperage, overload inrush cutoff delay, restore amperage threshold, load restore delay time and line-loss compensation adjustment for CTs. Controller LCD displays actual real-time amperage on panel.
- Controller is self-powered from line voltage. External power supply not required. Can control 120 VAC single pole or 208–240VAC double pole circuits.
- Prevents overloading and saves costly upgrades to panel and/or electrical infrastructure.
- Utilizes a magnetic latching relay for long-term reliability, and box-lug in and out terminals for ease of installation.
- Comes standard with 250A split core CTs. 100A and 500A split core CTs are available at additional cost.
- 2 year warranty
- Comes standard in NEMA 1 enclosure (NEMA 3R option also available)

Load Watch - Power Manager

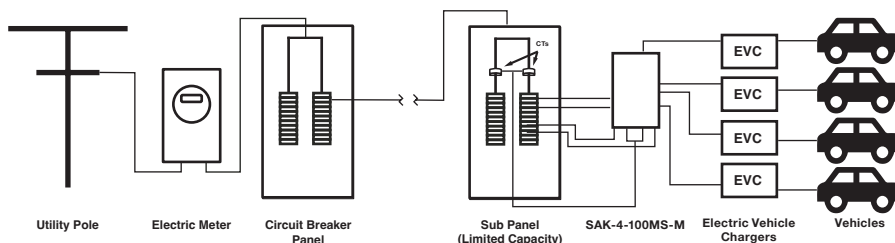
Allows 4 loads up to 100A to be added to any main service panel or sub panel that is at risk of overload, or will become overloaded, when a new load is introduced. The onboard intelligent micro-controller monitors the load on the existing panel and only allows the added load access to the panel when capacity is available on each of the four existing loads. Installation requires four open breakers or two quad breakers.

Diagrams



**PROBLEM:** Main circuit panel does not have capacity to add EVC and trips main breaker when EVC is active.

**SOLUTION:** Install SAK-4-100MS-M in between EVC and main panel. Load management device will ensure panel is never overloaded by EVC or any controlled load connected to SAK-4-100MS-M.

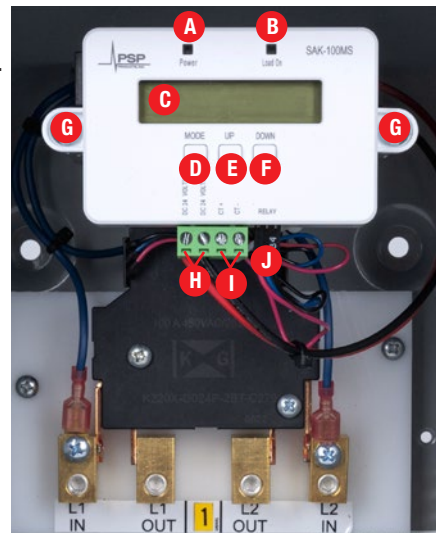


**PROBLEM:** New load is required downstream of main panel. The remote sub panel is near capacity. It is not cost-effective to run new circuit from main panel.

**SOLUTION:** Install SAK-4-100MS-M in between EVC and sub panel. Load management device will ensure sub panel is never overloaded by EVC or any controlled load connected to SAK-4-100MS-M.

### Installation Instructions

1. Confirm power is off prior to performing the installation.
2. Confirm connected load does not exceed 100A.
3. Use the appropriate wire size and type based on the connected load.
4. Connect L1 & L2 input and output connections. Install CTs on L1 and L2 at panel input. Connect CT control wires (black to negative and red to positive) on provided terminals on SAK-100MS. Torque to required specifications. Restore power.
5. Confirm power LED is illuminated and proceed to programming functions.



- A. Power LED: Illuminates green
- B. Load On LED: Illuminates yellow when relays are closed
- C. LCD Display: Displays amperage and adjustment values
- D. Mode Button: Used to enter main menu and toggle adjustments
- E. Up Button
- F. Down Button
- G. Mounting Ears
- H. +/-24VDC
- I. +/-CT
- J. Relay Plug

### Error Codes

- E-0001 = HC greater than CF
- E-0002 = LC greater than HC
- E-0003 = LC greater than CF
- E-0004 = CT input voltage greater than CU

### To Enter Programming Mode

Push “Mode” button one time. Setup will begin by displaying setting “CF250”. Each time mode button is pressed, the menu advances to the next setting. Adjustments to the settings are made using the UP & DOWN buttons. The program mode exits and saves settings after 30 seconds of inactivity. The reading on the display screen reflects the highest amperage recorded from either L1 or L2 from CTs. Technical Support Call **703-687-4057**.

## Programming Adjustments

Mode	Adjustment Range	Adjustment Details
CF	001 - 999	<b>CT Full Current Range:</b> Set for the highest amperage the connected CT can read. Standard CTs come in 100, 250 or 500A.
HC	001 - 999	<b>High Current Set Point:</b> This is the amperage level that when exceeded will cause the controlled load to be disconnected.
Od	001 - 999	<b>Off Delay:</b> Set for the delay time in seconds before the controlled load will be disconnected in the event high current set point is exceeded. Allows for inrush stabilization.
Cu	050 - 100	<b>CT DC Operating Range:</b> Adjustable for 0-5V and 0-10V DC Current Transformers. CTs provided are 5V.
CC	001 - 099	<b>CT Compensation Adjustment:</b> Consult technical support prior to making any changes to this adjustment. Default setting is 0.03 for 0-250A CT.
L1	001 - 099	<b>Load 1:</b> 001-099A. Actual ampacity of load.
L2	001 - 099	<b>Load 2:</b> 001-099A. Actual ampacity of load.
L3	001 - 099	<b>Load 3:</b> 001-099A. Actual ampacity of load.
L4	001 - 099	<b>Load 4:</b> 001-099A. Actual ampacity of load.
Sd	001 - 999	<b>Start Delay:</b> Adjust the delay time in seconds before the controlled load will be restored after an over current event or at power up. The panel load must be less than <b>Load Control</b> set point before the load will be restored.
EP	000 - 001	<b>Eprom Protection:</b> Password protection for settings. Set to 000 for protection OFF or 001 for password protection.
5	0000 - 9999	<b>Enter Passcode:</b> Enter 0000 to 9999 use down key to adjust position and up key adjust value.