

Solar Analytics for Home Assistant - List of Sensors

Version: 9...

Author: Peter Hormann  
Date: 13-Feb-25

Note: sensors shown in *italised text* are raw/source sensors. They are generally not used for display in Lovelace and *modifying the state units* will cause calculation errors.

TYPE	SENSOR UNIQUE_ID	FRIENDLY NAME / ALIAS	YAML SOURCE	STATE UNITS	Attributes	DESCRIPTION
STATUS SENSORS						
site	sa_dashboard_status	Dashboard Status	all	text	none	Shows the Dashboard Status
site	sa_mer_status	System Status	all	text	none	Shows the system Status
site	sa_mer_percentage	PV Performance	all	%	none	Shows the PV Performance percentage as reported by SA (Efficiency of Solar System)
POWER SENSORS (W)						
consumed	sa_consumption_power	Power Consumption	all	W	time_stamp	Used for display purposes. Units and number of decimal points can be changed in Lovelace. Reports current consumption data, updated every 30 seconds
generated	sa_generation_power	Power Generation	all	W	time_stamp	Reports current power generated, updated every 30 seconds
import_export	sa_import_export_power	Power Import Export	all	W	time_stamp	Calculates the current consumption minus the power generated to give you a positive or negative power usage, updates every 30 seconds. (positive means you have surplus solar, negative means you are importing from grid)
[NEW]	sa_battery_power	Power Battery	battery only	W	time_stamp	
ENERGY SENSORS (Wh)						
consumed	sa_todays_energy_consumed_total	Total Energy Consumed	all	Wh	time_stamp, last_5min	Used for display purposes. Units and number of decimal points can be changed in Lovelace. Reports accumulated daily total of Todays Consumed Energy (Total house usage grid and solar). Includes battery storage in/out where applicable.
[NEW]	sa_todays_energy_consumed_home_total	Total Energy Consumed Home	battery only	Wh	time_stamp, last_5min	Reports accumulated daily total of Todays Consumed Energy (Total house usage grid and solar) minus battery storage in/out energy.
[NEW]	sa_todays_energy_consumed_home_imported_total	Total Energy Consumed Home Imported	battery only	Wh	time_stamp	Reports accumulated imported daily total of Todays Consumed Energy minus battery storage in/out energy.
[NEW]	sa_todays_energy_generated_total	Total Energy Generated	all	Wh	time_stamp, last_5min	Reports accumulated daily total of Todays Generated Energy (Solar Production)
	sa_todays_energy_consumed_solar	Total Energy Consumed Solar	all	Wh	time_stamp	Reports accumulated daily total of energy consumed from Solar Production
	sa_todays_energy_exported_generated	Total Energy Exported Generated	battery only	Wh	time_stamp	
[NEW]	sa_todays_energy_generated_expected_total	Total Energy Generated Expected	all	Wh	time_stamp	Repots accumulated total of expected solar generation, updated hourly.
	sa_todays_energy_imported	Total Energy Imported	all	Wh	time_stamp, last_5min	Reports accumulated daily total of energy imported from the grid (Import)
	sa_todays_energy_exported	Total Energy Exported	all	Wh	time_stamp, last_5min	Reports accumulated daily total of energy exported to the grid (Export or Feed in)
[NEW]	sa_todays_battery_storage_in_total	Total Battery Storage Energy Input	battery only	Wh	time_stamp, last_5min	Reports accumulated daily total of energy added into the battery storage.
[NEW]	sa_todays_battery_storage_in_imported	Battery Storage Energy In Imported	battery only	Wh	time_stamp, percentage_of_total	Reports accumulated daily total of imported energy added into the battery storage.
[NEW]	sa_todays_battery_storage_in_generated	Battery Storage Energy In Generated	battery only	Wh	time_stamp, percentage_of_total	Reports accumulated daily total of generated energy added into the battery storage.
[NEW]	sa_todays_battery_storage_in_generated_percentage	Battery Storage Energy In Generated Percentage	battery only	%	time_stamp	Reports accumulated % daily total of generated energy added into the battery storage.
[NEW]	sa_todays_battery_storage_out_total	Total Battery Storage Energy Output	battery only	Wh	time_stamp, last_5min	Reports accumulated daily total of energy output from the battery storage.
[NEW]	sa_todays_battery_storage_out_exported	Battery Storage Energy Out Exported	battery only	Wh	time_stamp, percentage_of_total	Reports accumulated daily total of consumed energy output from the battery storage.
[NEW]	sa_todays_battery_storage_out_consumed	Battery Storage Energy Out Consumed	battery only	Wh	time_stamp, percentage_of_total	Reports accumulated daily total of exported energy output from the battery storage.
[NEW]	sa_todays_battery_storage_out_consumed_percentage	Battery Storage Energy Out Consumed Percentage	battery only	%	time_stamp	Reports accumulated % of daily total of consumed energy output from the battery storage.
AC	sa_todays_air_conditioner_total	Heating Cooling Energy	not 3phase or battery	Wh	time_stamp, last_5min	SA Channel data as labelled "load_air_conditioner".
EV	sa_todays_electric_vehicle_total	Electric Vehicle Energy	not 3phase or battery	Wh	time_stamp, last_5min	SA Channel data as labelled "load_ev_charger".
HW	sa_todays_hot_water_total	Hot Water Energy	not 3phase or battery	Wh	time_stamp, last_5min	SA Channel data as labelled "load_hot_water".
ST	sa_todays_stove_oven_total	Stove Oven Energy	not 3phase or battery	Wh	time_stamp, last_5min	SA Channel data as labelled "load_stove".
Consumed	sa_todays_energy_other_total	Todays Energy Other Total	not 3phase or battery	Wh	time_stamp, last_5min	Balance of total consumed energy that's not heating-cooling, EV charging, hot water or stove-oven.
AC	sa_todays_heating_cooling_generated	Heating Cooling Energy Generated	not 3phase or battery	Wh	time_stamp ac_energy_last5min percentage_of_total	Heating-cooling energy from generated sources.
AC	sa_todays_heating_cooling_imported	Heating Cooling Energy Imported	not 3phase or battery	Wh	time_stamp ac_energy_last5min percentage_of_total	Heating-cooling energy imported from the grid.
AC	sa_todays_heating_cooling_generated_percentage	Heating Cooling Energy Generated Percentage	not 3phase or battery	%	time_stamp	Same as Heating Cooling Energy Generate percentage_of_total attribute.

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TYPE	SENSOR UNIQUE_ID	FRIENDLY NAME / ALIAS	YAML SOURCE	STATE UNITS	Attributes	DESCRIPTION
EV	sa_todays_electric_vehicle_generated	Electric Vehicle Energy Generated	not 3phase or battery	Wh	time_stamp ev_energy_last5min percentage_of_total	EV charging energy from generated sources.
EV	sa_todays_electric_vehicle_imported	Electric Vehicle Energy Imported	not 3phase or battery	Wh	time_stamp ev_energy_last5min percentage_of_total	EV charging energy imported from the grid.
EV	sa_todays_electric_vehicle_generated_percentage	Electric Vehicle Energy Generated Percentage	not 3phase or battery	%	time_stamp	Same as Electric Vehicle Energy Generate percentage_of_total attribute.
HW	sa_todays_hot_water_generated	Hot Water Energy Generated	not 3phase or battery	Wh	time_stamp hw_energy_last5min percentage_of_total	Hot water energy from generated sources.
HW	sa_todays_hot_water_imported	Hot Water Energy Imported	not 3phase or battery	Wh	time_stamp hw_energy_last5min percentage_of_total	Hot water energy imported from the grid.
HW	sa_todays_hot_water_generated_percentage	Hot Water Energy Generated Percentage	not 3phase or battery	%	time_stamp	Same as Hot Water Energy Generate percentage_of_total attribute.
ST	sa_todays_stove_oven_generated	Stove Oven Energy Generated	not 3phase or battery	Wh	time_stamp st_energy_last5min percentage_of_total	Stove-oven energy from generated sources.
ST	sa_todays_stove_oven_imported	Stove Oven Energy Imported	not 3phase or battery	Wh	time_stamp st_energy_last5min percentage_of_total	Stove-oven energy imported from the grid.
ST	sa_todays_stove_oven_generated_percentage	Stove Oven Energy Generated Percentage	not 3phase or battery	%	time_stamp	Same as Stove Oven Energy Generate percentage_of_total attribute.
GENERATED SOLAR % SENSORS						
generated, consumed	sa_todays_generated_consumed_percentage	Percentage Generated Energy Consumed	all	%	time_stamp	Reports the accumulated daily percentage of generated energy vs consumed, higher the value the more solar energy you have used, lower means more exported.
consumed, generated	sa_todays_consumed_generated_percentage	Percentage Consumed Energy Generated	all	%	time_stamp	Reports the accumulated daily percentage of energy consumed from Solar vs total consumption i.e. percentage of solar use vs grid use, higher the value the more you used of your solar.
ENERGY COST RELATED SENSORS (\$)						
import_export	sa_todays_energy_imported_cost	Todays Energy Imported Cost	all	\$	last_reset	As defined by HA energy dashboard - not in solar_analytics.yaml
import_export	sa_todays_energy_exported_compensation	Todays Energy Exported Compensation	all	\$	last_reset	As defined by HA energy dashboard - not in solar_analytics.yaml.
import_export	sa_todays_energy_total_net_cost	Todays Energy Total Net Cost	all	\$	time_stamp	Reports the net cost (imported cost minus exported revenue)
import_export	sa_todays_energy_import_rate	Todays Energy Import Rate	all	\$/kWh	time_stamp	Import rate in cost / kWh
import_export	sa_todays_energy_export_rate	Todays Energy Export Rate	all	\$/kWh	time_stamp	Export rate in cost / kWh
HISTORY SENSOR						
[Modified]	sa_todays_energy_history	Total Energy History	all	date-time	times times_simple energy_consumed energy_generated	Used for plotting a graph - e.g. using Apex Charts
			not_3phase or battery		energy_load_air_conditioner energy_load_ev_charger energy_load_hot_water energy_load_stove	
			battery_only		energy_imported_exported energy_battery_storage energy_consumed_home	

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TYPE	SENSOR UNIQUE_ID	FRIENDLY NAME / ALIAS	YAML SOURCE	STATE UNITS	Attributes	DESCRIPTION	
REST (HTTP) SENSORS							
api	sa_auth_token	sa_auth_token	all	seconds	token expires	Get an refreshed authentication token every 2 hours (typically won't have changed) or whenever triggered by the sa_token_expiry_timer automation. State value is the duration until token expires in seconds. Attributes include the token itself, and the date-time of next expiry.	
api	sa_site_list	sa_site_list	all	date-time	...	Get the site details and status, updated every 24 hours. State is date-time of last update. Various attributes as provided by Solar Analytics.	
api	sa_status	sa_status	all	text	...	Shows the status of site updated every hour. State is text label - e.g. "good". Various attributes as provided by Solar Analytics.	
api	sa_status_log_entry	sa_status_log_entry	all	text	...	Get the site fault status log entry for the specified site_id updated every 5 minutes. State is short text description of any fault, normally "Good". Various attributes as provided by Solar Analytics.	
api	sa_data_by_5min...					Get used to retrieve energy related sensor data every 5 mins. The retrieved sensor data is considered as "raw", where it's typically not used display or historic data purposes.	
time	sa_data_by_5min_time_stamp	sa_data_by_5min_time_stamp	all	date-time	none	Solar Analytics timestamp of the provided data.	
time	sa_data_by_5min_meter_reset	sa_data_by_5min_meter_reset	all	true/false		Derived true/false sensor indicating true for 5 minutes at the start of the day (past midnight). Useful for triggering resetting cost related sensors.	
[NEW]	consumed	sa_data_by_5min_energy_consumed	sa_data_by_5min_energy_consumed	all	Wh	none	Last 5 minutes energy consumed. Includes battery storage in/out where applicable.
	consumed, battery	sa_data_by_5min_energy_consumed_home	sa_data_by_5min_energy_consumed_home	battery only	Wh	none	Last 5 minutes energy consumed minus battery storage in/out.
[NEW]	generated	sa_data_by_5min_energy_generated	sa_data_by_5min_energy_generated	all	Wh	none	Last 5 minutes energy generated.
	battery	sa_data_by_5min_battery_storage	sa_data_by_5min_battery_storage	battery only	Wh	none	Last 5 minutes battery storage in (-ve) and out (+ve).
[NEW]	import_export	sa_data_by_5min_imported	sa_data_by_5min_imported	battery only	Wh	none	Last 5 minutes imported energy.
[NEW]	import_export	sa_data_by_5min_exported	sa_data_by_5min_exported	battery only	Wh	none	Last 5 minutes exported energy.
AC	sa_data_by_5min_load_air_conditioner	sa_data_by_5min_load_air_conditioner	not 3phase or battery	Wh	none	Last 5 minutes energy for an "load_air_conditioner" (channel as labeled by Solar Analytics).	
EV	sa_data_by_5min_load_ev_charger	sa_data_by_5min_load_ev_charger	not 3phase or battery	Wh	none	Last 5 minutes energy for an "load_ev_charger" load (channel as labeled by Solar Analytics).	
HW	sa_data_by_5min_load_hot_water	sa_data_by_5min_load_hot_water	not 3phase or battery	Wh	none	Last 5 minutes energy for a "load_hot_water" (channel as labeled by Solar Analytics).	
ST	sa_data_by_5min_load_stove	sa_data_by_5min_load_stove	not 3phase or battery	Wh	none	Last 5 minutes energy for a "load_stove" (channel as labeled by Solar Analytics).	
[NEW]	consumed	sa_data_by_5min_energy_consumed_total	sa_data_by_5min_energy_consumed_total	all	Wh	none	Daily total of 5 minute energy consumed. Includes battery storage in/out where applicable.
	consumed	sa_data_by_5min_energy_consumed_home_total	sa_data_by_5min_energy_consumed_home_total	battery only	Wh	none	Daily total of 5 minute energy consumed minus battery storage in/out.
[NEW]	consumed, import_export	sa_data_by_5min_energy_consumed_home_imported_total	sa_data_by_5min_energy_consumed_home_imported_total	battery only	Wh	none	Daily total of 5 minute energy consumed from the grid (imported).
[NEW]	generated	sa_data_by_5min_energy_generated_total	sa_data_by_5min_energy_generated_total	all	Wh	none	Daily total of 5 minute energy generated.
	generated, consumed	sa_data_by_5min_consumed_solar_total	sa_data_by_5min_consumed_solar_total	all	Wh	none	Daily total of 5 minute energy generated solar consumed (calculated).
[NEW]	generated, import_export	sa_data_by_5min_exported_generated_total	sa_data_by_5min_exported_generated_total	battery only	Wh	none	Daily total of 5 minute generated solar energy exported (calculated).
[NEW]	battery	sa_data_by_5min_battery_storage_in_total	sa_data_by_5min_battery_storage_in_total	battery only	Wh	none	Daily total of 5 minute energy stored into the battery.
[NEW]	battery, generated	sa_data_by_5min_battery_storage_in_generated_total	sa_data_by_5min_battery_storage_in_generated_total	battery only	Wh	none	Daily total of 5 minute generated energy stored into the battery.
[NEW]	battery, import_export	sa_data_by_5min_battery_storage_in_imported_total	sa_data_by_5min_battery_storage_in_imported_total	battery only	Wh	none	Daily total of 5 minute imported energy stored into the battery.
[NEW]	battery	sa_data_by_5min_battery_storage_out_total	sa_data_by_5min_battery_storage_out_total	battery only	Wh	none	Daily total of 5 minute energy output from the battery.
[NEW]	battery, consumed	sa_data_by_5min_battery_storage_out_consumed_total	sa_data_by_5min_battery_storage_out_consumed_total	battery only	Wh	none	Daily total of 5 minute consumed energy output from the battery.
[NEW]	battery, import_export	sa_data_by_5min_battery_storage_out_exported_total	sa_data_by_5min_battery_storage_out_exported_total	battery only	Wh	none	Daily total of 5 minute exported energy output from the battery.
AC	sa_data_by_5min_load_air_conditioner_total	sa_data_by_5min_load_air_conditioner_total	not 3phase or battery	Wh	none	Daily total of 5 minute energy air conditioner load.	
EV	sa_data_by_5min_load_ev_charger_total	sa_data_by_5min_load_ev_charger_total	not 3phase or battery	Wh	none	Daily total of 5 minute energy EV charger load.	
HW	sa_data_by_5min_load_hot_water_total	sa_data_by_5min_load_hot_water_total	not 3phase or battery	Wh	none	Daily total of 5 minute energy hot water load.	
ST	sa_data_by_5min_load_stove_total	sa_data_by_5min_load_stove_total	not 3phase or battery	Wh	none	Daily total of 5 minute energy stove-oven load.	
import_export	sa_data_by_5min_imported_total	sa_data_by_5min_imported_total	all	Wh	none	Daily total of 5 minute energy imported (calculated).	
	import_export	sa_data_by_5min_exported_total	sa_data_by_5min_exported_total	all	Wh	none	Daily total of 5 minute energy solar exported (calculated).
AC	sa_data_by_5min_load_air_conditioner_generated	sa_data_by_5min_load_air_conditioner_generated	not 3phase or battery	Wh	none	Daily total of 5 minute energy air conditioner load that was generated.	
AC	sa_data_by_5min_load_air_conditioner_imported	sa_data_by_5min_load_air_conditioner_imported	not 3phase or battery	Wh	none	Daily total of 5 minute energy air conditioner load that was imported.	
EV	sa_data_by_5min_load_ev_charger_generated	sa_data_by_5min_load_ev_charger_generated	not 3phase or battery	Wh	none	Daily total of 5 minute energy EV charger load that was generated.	
EV	sa_data_by_5min_load_ev_charger_imported	sa_data_by_5min_load_ev_charger_imported	not 3phase or battery	Wh	none	Daily total of 5 minute energy EV charger load that was imported.	
HW	sa_data_by_5min_load_hot_water_generated	sa_data_by_5min_load_hot_water_generated	not 3phase or battery	Wh	none	Daily total of 5 minute energy hot water load that was generated.	
HW	sa_data_by_5min_load_hot_water_imported	sa_data_by_5min_load_hot_water_imported	not 3phase or battery	Wh	none	Daily total of 5 minute energy hot water load that was imported.	
ST	sa_data_by_5min_load_stove_generated	sa_data_by_5min_load_stove_generated	not 3phase or battery	Wh	none	Daily total of 5 minute energy stove-oven load that was generated.	
ST	sa_data_by_5min_load_stove_imported	sa_data_by_5min_load_stove_imported	not 3phase or battery	Wh	none	Daily total of 5 minute energy stove-oven load that was imported.	

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time	sa_data_by_5min_history_time_stamp	sa_data_by_5min_history_time_stamp	all	array	none	Array of 5 minute timestamps for the recent history.
time	sa_data_by_5min_history_time_stamp_count	sa_data_by_5min_history_time_stamp_count	all	number	none	Count of entries in the history array.
consumed	sa_data_by_5min_history_energy_consumed	sa_data_by_5min_history_energy_consumed	all	array	none	Array of 5 minute consumed energy. Includes battery storage in/out where applicable.
consumed, battery	sa_data_by_5min_history_energy_consumed_home	sa_data_by_5min_history_energy_consumed_home	battery only	array	none	Array of 5 minute consumed minus battery storage energy.
generated	sa_data_by_5min_history_energy_generated	sa_data_by_5min_history_energy_generated	all	array	none	Array of 5 minute generated energy.
battery	sa_data_by_5min_history_battery_storage	sa_data_by_5min_history_battery_storage	battery only	array	none	Array of 5 minute battery storage in (-ve) and out (+ve) energy.
AC	sa_data_by_5min_history_load_air_conditioner	sa_data_by_5min_history_load_air_conditioner	not 3phase or battery	array	none	Array of 5 minute air conditioner load energy.
EV	sa_data_by_5min_history_load_ev_charger	sa_data_by_5min_history_load_ev_charger	not 3phase or battery	array	none	Array of 5 minute EV charger load energy.
HW	sa_data_by_5min_history_load_hot_water	sa_data_by_5min_history_load_hot_water	not 3phase or battery	array	none	Array of 5 minute hot water load energy.
ST	sa_data_by_5min_history_load_stove	sa_data_by_5min_history_load_stove	not 3phase or battery	array	none	Array of 5 minute stove-oven load energy.
import_export	sa_data_by_5min_history_imported_exported	sa_data_by_5min_history_imported_exported	all	array	none	Array of 5 minute imported (-ve) and exported (+ve) energy
api	sa_live_site_data...		all			Get used to retrieve power related sensor data every minute. The retrieved sensor data is considered as "raw", where it's typically not used display or historic data purposes.
time	sa_live_site_data_time_stamp	sa_live_site_data_time_stamp	all	date-time	none	Solar Analytics timestamp of the provided data.
consumed	sa_live_site_data_consumed	sa_live_site_data_consumed	all	W	none	Average consumption power (previous minute). Includes battery storage in/out where applicable.
consumed, battery	sa_live_site_data_consumed_home	sa_live_site_data_consumed_home	battery only	W	none	Average consumption power (previous minute) minus battery storage energy.
generated	sa_live_site_data_generated	sa_live_site_data_generated	all	W	none	Average generation power (previous minute)
battery	sa_live_site_data_battery	sa_live_site_data_battery	battery only	W	none	
import_export	sa_live_site_data_imported_exported	sa_live_site_data_imported_exported	all	W	none	Average net imported (+ve) or exported (-ve) power (previous minute).
api	sa_data_by_hour...		all			Get used to retrieve energy related sensor data every hour. The retrieved sensor data is considered as "raw", where it's typically not used display or historic data purposes.
time	sa_data_by_hour_time_stamp	sa_data_by_hour_time_stamp	all	date-time	none	Solar Analytics timestamp of the provided data.
generated	sa_data_by_hour_generated_expected	sa_data_by_hour_generated_expected	all	Wh	none	Expected generated energy to the current hour for the day.
AUTOMATIONS						
auth	sa_token_expiry_update	SA Token Expiry update	all	on/off	last_triggered	Automation to restart timer when the authentication token is refreshed.
auth	sa_token_refresh_on_timer_expiry	SA Token refresh on Timer expiry	all	on/off	last_triggered	Automation to refresh the token when the timer expires.
auth	sa_refresh_all_rest_gets	SA Refresh all REST data gets	all	on/off	last_triggered	Manually initiated automation for force refresh of all rest gets.
api	sa_data_by_5min_trigger	SA Data by 5min Trigger	all	on/off	last_triggered	Automated trigger for sa_data_by_5min,... sensors - fires every 5 minutes.
api	sa_live_site_data_trigger	SA Live Site Data Trigger	all	on/off	last_triggered	Automated trigger for sa_live_site_data,... sensors - fires every minute.
api	sa_data_by_hour_trigger	SA Data By Hour Trigger	all	on/off	last_triggered	Automated trigger for sa_data_by_hour,... sensors - fires every hour.
TIMERS						
auth	sa_token_expiry_timer	sa_token_expiry_timer	all	seconds	none	Timer for triggering refresh before token expiry.
TEXT SENSORS						
site	sa_site_id	sa_site_id	all	text	none	Site identifier as defined from the secrets.yaml file.
SECRETS (defined in secrets.yaml)						
site	!secret sa_site_id	na	all	text	none	User site identifier defined in secrets.yaml file.
site	!secret sa_username	na	all	text	none	User username defined in secrets.yaml file
site	!secret sa_password	na	all	text	none	User password defined in secrets.yaml file.