

Inverter Device Status Values

The following I_Status_* values are supported:

Parameter	Value	Description
I_STATUS_OFF	1	Off
I_STATUS_SLEEPING	2	Sleeping (auto-shutdown) – Night mode
I_STATUS_STARTING	3	Grid Monitoring/wake-up
I_STATUS_MPPT	4	Inverter is ON and producing power
I_STATUS_THROTTLED	5	Production (curtailed)
I_STATUS_SHUTTING_DOWN	6	Shutting down
I_STATUS_FAULT	7	Fault
I_STATUS_STANDBY	8	Maintenance/setup

Inverter Model MODBUS Register Mappings

The following table lists the supported MODBUS register values.

Unsupported values are indicated by the NOT_IMPLEMENTED value.

The base register of the Device Specific block is set to 40070 (MODBUS PLC address [base 1]), or 40069 (MODBUS Protocol Address [base 0]).

- **acc32** is a uint32 accumulator that should always increase. Its value is in the range of 0...4294967295.
- **Scale Factors.** As an alternative to floating point format, values are represented by Integer values with a signed scale factor applied. The scale factor explicitly shifts the decimal point to left (negative value) or to the right (positive value).

For example, a value "Value" may have an associated value "Value_SF"

Value = "Value" * 10^{Value_SF} for example:

- For "Value" = 2071 and "Value_SF" = -2 Value = 2071*10⁻² = 20.71
- For "Value" = 2071 and "Value_SF" = 2 Value = 2071*10² = 207100

Address		Size	Name	Type	Units	Description
(base 0)	(base 1)					
40069	40070	1	C_SunSpec_DID	uint16		101 = single phase 102 = split phase 103 = three phase
40070	40071	1	C_SunSpec_Length	uint16	Registers	50 = Length of model block
40071	40072	1	I_AC_Current	uint16	Amps	AC Total Current value
40072	40073	1	I_AC_CurrentA	uint16	Amps	AC Phase A Current value
40073	40074	1	I_AC_CurrentB	uint16	Amps	AC Phase B Current value
40074	40075	1	I_AC_CurrentC	uint16	Amps	AC Phase C Current value
40075	40076	1	I_AC_Current_SF	int16		AC Current scale factor
40076	40077	1	I_AC_VoltageAB	uint16	Volts	AC Voltage Phase AB value
40077	40078	1	I_AC_VoltageBC	uint16	Volts	AC Voltage Phase BC value
40078	40079	1	I_AC_VoltageCA	uint16	Volts	AC Voltage Phase CA value

Address		Size	Name	Type	Units	Description
(base 0)	(base 1)					
40079	40080	1	I_AC_VoltageAN ¹	uint16	Volts	AC Voltage Phase A to N value
40080	40081	1	I_AC_VoltageBN ¹	uint16	Volts	AC Voltage Phase B to N value
40081	40082	1	I_AC_VoltageCN ¹	uint16	Volts	AC Voltage Phase C to N value
40082	40083	1	I_AC_Voltage_SF	int16		AC Voltage scale factor
40083	40084	1	I_AC_Power	int16	Watts	AC Power value
40084	40085	1	I_AC_Power_SF	int16		AC Power scale factor
40085	40086	1	I_AC_Frequency	uint16	Hertz	AC Frequency value
40086	40087	1	I_AC_Frequency_SF	int16		Scale factor
40087	40088	1	I_AC_VA	int16	VA	Apparent Power
40088	40089	1	I_AC_VA_SF	int16		Scale factor
40089	40090	1	I_AC_VAR	int16	VAR	Reactive Power
40090	40091	1	I_AC_VAR_SF	int16		Scale factor
40091	40092	1	I_AC_PF	int16	%	Power Factor
40092	40093	1	I_AC_PF_SF	int16		Scale factor
40093	40094	2	I_AC_Energy_WH	acc32	WattHours	AC Lifetime Energy production
40095	40096	1	I_AC_Energy_WH_SF	uint16		Scale factor
40096	40097	1	I_DC_Current	uint16	Amps	DC Current value
40097	40098	1	I_DC_Current_SF	int16		Scale factor
40098	40099	1	I_DC_Voltage	uint16	Volts	DC Voltage value
40099	40100	1	I_DC_Voltage_SF	int16		Scale factor
40100	40101	1	I_DC_Power	int16	Watts	DC Power value
40101	40102	1	I_DC_Power_SF	int16		Scale factor
40103	40104	1	I_Temp_Sink	int16	Degrees C	Heat Sink Temperature
40106	40107	1	I_Temp_SF	int16		Scale factor
40107	40108	1	I_Status	uint16		Operating State
40108	40109	1	I_Status_Vendor	uint16		Vendor-defined operating state and error codes. For error description, meaning and troubleshooting, refer to the SolarEdge Installation Guide.

¹ Supported only in split-phase configurations (Japanese grid and 240V grid in North America).