SunSpec Modbus Profile				
Modbus registe	SunSpec-Name	Description / Number code(s)	Type	Access
40001	SID	A well-known value 0x53756e53. Uniquely identifies this as a SunSpec Modbus Map: 1400204883	uint32	RO
40003	ID	A well-known value 1. Uniquely identifies this as a SunSpec Common Model	uint16	RO
40004	L	Well-known # of 16 bit registers to follow : 66	uint16	RO
40005	Mn	Well known value registered with SunSpec for compliance: SMA	string16	RO
40021	Md	Manufacturer specific value (32 chars): Solar Inverter	string16	RO
40037	Opt	Manufacturer specific value (16 chars): Model ID	string8	RO
40045	Vr	Manufacturer specific value (16 chars)	string8	RO
40053	SN	Manufacturer specific value (32 chars)	string16	RO
40071	ID	A well-known value 11. Uniquely identifies this as a SunSpec Ethernet Link Layer Model	uint16	RO
40072	L	Well-known # of 16 bit registers to follow : 13	uint16	RO
40073	Spd	Interface speed in Mb/s: 0 10 100	uint16	RO
40074	CfgSt	Bitmask values Interface flags: 0 1 3	uint16	RO
40075	St	Enumerated value. State information for this interface: 0 1 2	uint16	RO
40076	MAC	IEEE MAC address of this interface	uint64	RO
40086	ID	A well-known value 12. Uniquely identifies this as a SunSpec IPv4 Model	uint16	RO
40087	L	Well-known # of 16 bit registers to follow : 98	uint16	RO
40092	CfgSt	Enumerated value. Configuration status	uint16	RO
40093	ChgSt	Bitmask value. A configuration change is pending	uint16	RO
40094	Cap	Bitmask value. Identify capable sources of configuration	uint16	RO
40095	Cfg	Enumerated value. Configuration method used: 0 1	uint16	RW
40096	Ctl	Configure use of services	uint16	RO
40097	Addr	IPv4 numeric address as a dotted string xxx.xxx.xxx.xxx	string8	RW
40105	Msk	IPv4 numeric netmask as a dotted string xxx.xxx.xxx.xxx	string8	RW
40113	Gw	IPv4 numeric gateway address as a dotted string xxx.xxx.xxx.xxx	string8	RW
40121	DNS1	IPv4 numeric DNS address as a dotted string xxx.xxx.xxx.xxx	string8	RW
40186	ID	A well-known value 101,102,103. Uniquely identifies this as a SunSpec Inverter Model (101: 1-phase, 102: 2-phase, 103: 3-phase): 103	uint16	RO
40187	L	Well-known # of 16 bit registers to follow : 50	uint16	RO
40188	A	AC Current	uint16	RO
40189	AphA	Phase A Current	int16	RO
40190	AphB	Phase B Current	int16	RO

40191	AphC	Phase C Current	int16	RO
40192	A_SF		int16	RO
40196	PhVphA	Phase Voltage AN	uint16	RO
40197	PhVphB	Phase Voltage BN	uint16	RO
40198	PhVphC	Phase Voltage CN	uint16	RO
40199	V_SF		int16	RO
40200	W	AC Power	int16	RO
40201	W_SF		int16	RO
40202	Hz	Line Frequency	uint16	RO
40203	Hz_SF		int16	RO
40204	VA	AC Apparent Power	int16	RO
40205	VA_SF		int16	RO
40206	VAr	AC Reactive Power	int16	RO
40207	VAr_SF		int16	RO
40209	PF_SF		int16	RO
40210	WH	AC Energy	acc32	RO
40212	WH_SF		int16	RO
40218	DCW_SF		int16	RO
40219	TmpCab	Cabinet Temperature	int16	RO
40223	Tmp_SF		int16	RO
40224	St	Enumerated value. Operating state: 0 1 2 3 4 5 6 7 8	uint16	RO
40226	Evt1	Bitmask value. Event fields: 0 1 2 4 8 16 32 64 128 256 512 768 1024 2048 3072 4096 8192 16384 32768	uint32	RO
40230	EvtVnd1	Vendor defined events: 0 1	uint32	RO
40238	ID	A well-known value 120. Uniquely identifies this as a SunSpec Nam	uint16	RO

40239	L	Well-known # of 16 bit registers to follow : 26	uint16	RO
40240	DERTyp	Type of DER device. Default value is 4 to indicate PV device: 4	uint16	RO
40241	WRtg	Continuous power output capability of the inverter	uint16	RO
40242	WRtg_SF	Scale factor	int16	RO
40243	VARtg	Continuous Volt-Ampere capability of the inverter	uint16	RO
40244	VARtg_SF	Scale factor	int16	RO
40245	VArRtgQ1	Continuous VAR capability of the inverter in quadrant 1	int16	RO
40248	VArRtgQ4	Continuous VAR capability of the inverter in quadrant 4	int16	RO
40249	VArRtg_SF	Scale factor	int16	RO
40251	ARtg_SF	Scale factor	int16	RO
40252	PFRtgQ1	Minimum power factor capability of the inverter in quadrant 1	int16	RO
40255	PFRtgQ4	Minimum power factor capability of the inverter in quadrant 4	int16	RO
40256	PFRtg_SF	Scale factor	int16	RO
40258	WHRtg_SF	Scale factor	int16	RO
40260	AhrRtg_SF	Scale factor for amp-hour rating	int16	RO
40262	MaxChaRte_SF	Scale factor	int16	RO
40264	MaxDisChaRte	Scale factor	int16	RO
40266	ID	A well-known value 121. Uniquely identifies this as a SunSpec Basic Settings Model	uint16	RO
40267	L	Well-known # of 16 bit registers to follow : 30	uint16	RO
40268	WMax	Setting for maximum power output. Default to WRtg	uint16	RW
40269	VRef	Voltage at the PCC	uint16	RW
40270	VRefOfs	Offset from PCC to inverter	int16	RW
40273	VAMax	Setpoint for maximum apparent power. Default to VARtg	uint16	RW
40278	WGra	Default ramp rate of change of active power due to command or in	uint16	RW
40286	ECPNomHz	Setpoint for nominal frequency at the ECP	uint16	RW
40288	WMax_SF	Scale factor for real power	int16	RO
40289	VRef_SF	Scale factor for voltage at the PCC	int16	RO
40290	VRefOfs_SF	Scale factor for offset voltage	int16	RO
40291	VMinMax_SF	Scale factor for min/max voltages	int16	RO
40292	VAMax_SF	Scale factor for apparent power	int16	RO
40293	VArMax_SF	Scale factor for reactive power	int16	RO
40294	WGra_SF	Scale factor for default ramp rate	int16	RO
40297	ECPNomHz_SF	Scale factor for nominal frequency	int16	RO
40298	ID	A well-known value 122. Uniquely identifies this as a SunSpec Mea	uint16	RO
40299	L	Well-known # of 16 bit registers to follow : 44	uint16	RO
40300	PVConn	PV inverter present/available status. Enumerated value: 1 3 5	uint16	RO
40302	ECPConn	ECP connection status: disconnected=0 connected=1: 0 1	uint16	RO
40303	ActWh	AC lifetime active (real) energy output	acc64	RO
40342	Ris	Isolation resistance	uint16	RO
40343	Ris_SF	Scale factor for isolation resistance	int16	RO
40344	ID	A well-known value 123. Uniquely identifies this as a SunSpec Imm	uint16	RO
40345	L	Well-known # of 16 bit registers to follow : 24	uint16	RO

40348	Conn	Enumerated valued. Connection control: 0 1	uint16	RW
40349	WMaxLimPct	Set power output to specified level	uint16	RW
40353	WMaxLim_Ena	Enumerated valued. Throttle enable/disable control: 0 1	uint16	RW
40354	OutPFSet	Set power factor to specific value - cosine of angle	int16	RW
40358	OutPFSet_Ena	Enumerated valued. Fixed power factor enable/disable control: 0 1	uint16	RW
40359	VArWMaxPct	Reactive power in percent of WMax	int16	RW
40365	VArPct_Mod	Enumerated value. VAR percent limit mode	uint16	RO
40366	VArPct_Ena	Enumerated valued. Percent limit VAr enable/disable control: 0 1	uint16	RW
40367	WMaxLimPct_S	Scale factor for power output percent	int16	RO
40368	OutPFSet_SF	Scale factor for power factor	int16	RO
40369	VArPct_SF	Scale factor for reactive power percent	int16	RO
40370	ID	A well-known value 124. Uniquely identifies this as a SunSpec Stor	uint16	RO
40371	L	Well-known # of 16 bit registers to follow : 24	uint16	RO
40375	StorCtl_Mod	Activate hold/discharge/charge storage control mode. Bitfield value: 0	uint16	RW
40388	WChaMax_SF	Scale factor for maximum charge	int16	RO
40392	ChaState_SF	Scale factor for available energy percent	int16	RO
40394	InBatV_SF	Scale factor for battery voltage	int16	RO
40396	ID	A well-known value 126. Uniquely identifies this as a SunSpec Stat	uint16	RO
40397	L	Variable # of 16 bit registers to follow : 10+N*54	uint16	RO
40398	ActCrv	Index of active curve. 0=no active curve: 0	uint16	RW
40403	NCrv	Number of curves supported (recommend 4)	uint16	RO
40404	NPt	Number of curve points supported (maximum of 20)	uint16	RO
40405	V_SF	Scale factor for percent VRef	int16	RO
40406	DeptRef_SF	scale factor for dependent variable	int16	RO
40407	RmpIncDec_SF	Scale factor for increment and decrement ramps	int16	RO
40408	ActPt	Number of active points in array	uint16	RW
40409	DeptRef	Meaning of dependent variable: 1=%WMax 2=%VArMax 3=% VArAval: 0 1 2	uint16	RW
40410	V1	Point 1 Volts	uint16	RW
40411	VAr1	Point 1 VARs	int16	RW
40412	V2	Point 2 Volts	uint16	RW
40413	VAr2	Point 2 VARs	int16	RW
40414	V3	Point 2 Volts	uint16	RW
40415	VAr3	Point 3 VARs	int16	RW
40416	V4	Point 4 Volts	uint16	RW
40417	VAr4	Point 4 VARs	int16	RW

40418	V5	Point 5 Volts	uint16	RW
40419	VAr5	Point 5 VARs	int16	RW
40420	V6	Point 6 Volts	uint16	RW
40421	VAr6	Point 6 VARs	int16	RW
40422	V7	Point 7 Volts	uint16	RW
40423	VAr7	Point 7 VARs	int16	RW
40424	V8	Point 8 Volts	uint16	RW
40425	VAr8	Point 8 VARs	int16	RW
40458	RmpTms	The time of the PT1 in seconds (time to accomplish a change of 95%	uint16	RW
40459	RmpDecTmm	The maximum rate at which the VAR value may be reduced in respor	uint16	RW
40460	RmpIncTmm	The maximum rate at which the VAR value may be increased in resp	uint16	RW
40461	ReadOnly	Boolean flag indicates if curve is read-only or can be modified	uint16	RO
40462	ID	A well-known value 127. Uniquely identifies this as a SunSpec Freq-Watt Param Model	uint16	RO
40463	L	Well-known # of 16 bit registers to follow : 10	uint16	RO
40464	WGra	The slope of the reduction in the maximum allowed watts output as	uint16	RW
40465	HzStr	The frequency deviation from nominal frequency (ECPNomHz) at w	int16	RW
40466	HzStop	The frequency deviation from nominal frequency (ECPNomHz) at w	int16	RW
40467	HysEna	Enable hysterisis: 0 1	uint16	RW
40468	ModEna	Is Parameterized Frequency-Watt control active: 0 1	uint16	RW
40469	HzStopWGra	The maximum time-based rate of change at which power output ret	uint16	RW
40470	WGra_SF	Scale factor for output gradient	int16	RO
40471	HzStrStop_SF	Scale factor for frequency deviations	int16	RO
40472	RmpIncDec_SF	Scale factor for increment and decrement ramps	int16	RO
40474	ID	A well-known value 128. Uniquely identifies this as a SunSpec Dynamic Reactive Current Model	uint16	RO
40475	L	Well-known # of 16 bit registers to follow : 14	uint16	RO
40476	ArGraMod	Indicates if gradients trend toward zero at the edges of the deadband or trend toward zero at the center of the deadband: 0 1	uint16	RW
40479	ModEna	Activate dynamic reactive current model: 0 1	uint16	RW
40480	FilTms	The time window used to calculate the moving average voltage	uint16	RO
40481	DbVMin	The lower delta voltage limit for which negative voltage deviations	int16	RW
40482	DbVMax	The upper delta voltage limit for which positive voltage deviations	uint16	RW
40483	BlkZnV	Block zone voltage which defines a lower voltage boundary below	uint16	RW
40484	HysBlkZnV	Hysteresis voltage used with BlkZnV	uint16	RW
40485	BlkZnTmms	Block zone time the time before which reactive current support ren	uint16	RW
40487	ArGra_SF	Scale factor for the gradients	int16	RO
40488	VRefPct_SF	Scale factor for the voltage zone and limit settings	int16	RO
40490	ID	A well-known value 131. Uniquely identifies this as a SunSpec Watt-PF Model	uint16	RO
40491	L	Variable # of 16 bit registers to follow : 10+N*54	uint16	RO

40492	ActCrv	Index of active curve. 0=no active curve: 0	uint16	RW
40497	NCrv	Number of curves supported (recommend 4)	uint16	RO
40498	NPt	Max number of points in array	uint16	RO
40499	W_SF	Scale factor for percent WMax	int16	RO
40500	PF_SF	Scale factor for PF	int16	RO
40554	ReadOnly	Enumerated value indicates if curve is read-only or can be modified	uint16	RO
40556	ID	A well-known value 132. Uniquely identifies this as a SunSpec Volt-Watt Model	uint16	RO
40557	L	Variable # of 16 bit registers to follow : 10+N*54	uint16	RO
40558	ActCrv	Index of active curve. 0=no active curve: 0	uint16	RW
40563	NCrv	Number of curves supported (recommend min. 4)	uint16	RO
40564	NPt	Number of points in array (maximum 20)	uint16	RO
40565	V_SF	Scale factor for percent VRef	int16	RO
40566	DeptRef_SF	Scale Factor for % DeptRef	int16	RO
40568	ActPt	Number of active points in array	uint16	RW
40569	DeptRef	Defines the meaning of the Watts DeptRef. 1=% WMax 2=% WAvail: 0 1	uint16	RW
40570	V1	Point 1 Volts	uint16	RW
40571	W1	Point 1 Watts	int16	RW
40572	V2	Point 2 Volts	uint16	RW
40573	W2	Point 2 Watts	int16	RW
40574	V3	Point 3 Volts	uint16	RW
40575	W3	Point 3 Watts	int16	RW
40576	V4	Point 4 Volts	uint16	RW
40577	W4	Point 4 Watts	int16	RW
40578	V5	Point 5 Volts	uint16	RW
40579	W5	Point 5 Watts	int16	RW
40580	V6	Point 6 Volts	uint16	RW
40581	W6	Point 6 Watts	int16	RW
40582	V7	Point 7 Volts	uint16	RW
40583	W7	Point 7 Watts	int16	RW
40584	V8	Point 8 Volts	uint16	RW
40585	W8	Point 8 Watts	int16	RW
40618	RmpPt1Tms	The time of the PT1 in seconds (time to accomplish a change of 95%	uint16	RW
40619	RmpDecTmm	The maximum rate at which the watt value may be reduced in respo	uint16	RW
40620	RmpIncTmm	The maximum rate at which the watt value may be increased in resp	uint16	RW
40621	ReadOnly	Enumerated value indicates if curve is read-only or can be modified	uint16	RO
40622	ID	A well-known value 160. Uniquely identifies this as a SunSpec Mult	uint16	RO
40623	L	Variable # of 16 bit registers to follow : 8+N*20	uint16	RO
40624	DCA_SF	Current Scale Factor	int16	RO
40625	DCV_SF	Voltage Scale Factor	int16	RO
40626	DCW_SF	Power Scale Factor	int16	RO
40630	N	Number of Modules	uint16	RO
40632	ID	MPPT 1: Input ID	uint16	RO

40641	DCA	MPPT 1: DC Current	uint16	RO
40642	DCV	MPPT 1: DC Voltage	uint16	RO
40643	DCW	MPPT 1: DC Power	uint16	RO
40652	ID	MPPT 2: Input ID	uint16	RO
40661	DCA	MPPT 2: DC Current	uint16	RO
40662	DCV	MPPT 2: DC Voltage	uint16	RO
40663	DCW	MPPT 2: DC Power	uint16	RO
40672	ID	MPPT 3: Input ID	uint16	RO
40681	DCA	MPPT 3: DC Current	uint16	RO
40682	DCV	MPPT 3: DC Voltage	uint16	RO
40683	DCW	MPPT 3: DC Power	uint16	RO
40692	ID	MPPT 4: Input ID	uint16	RO
40701	DCA	MPPT 4: DC Current	uint16	RO
40702	DCV	MPPT 4: DC Voltage	uint16	RO
40703	DCW	MPPT 4: DC Power	uint16	RO
40712	ID	MPPT 5: Input ID	uint16	RO
40721	DCA	MPPT 5: DC Current	uint16	RO
40722	DCV	MPPT 5: DC Voltage	uint16	RO
40723	DCW	MPPT 5: DC Power	uint16	RO
40732	ID	MPPT 6: Input ID	uint16	RO
40741	DCA	MPPT 6: DC Current	uint16	RO
40742	DCV	MPPT 6: DC Voltage	uint16	RO
40743	DCW	MPPT 6: DC Power	uint16	RO
40752	ID	A well-known value 129. Uniquely identifies this as a SunSpec LVR	uint16	RO
40753	L	Variable # of 16 bit registers to follow : 10+N*50	uint16	RO
40754	ActCrv	Index of active curve. 0=no active curve	uint16	RO
40755	ModEna	LVRT control mode. Enable active curve. Bitfield value	uint16	RO
40759	NCrv	Number of curves supported (recommend 4)	uint16	RO
40760	NPt	Number of curve points supported (maximumn of 20)	uint16	RO
40761	Tms_SF	Scale factor for duration	int16	RO
40762	V_SF	Scale factor for percent VRef	int16	RO
40764	ActPt	Number of active points in array	uint16	RO
40765	Tms1	Point 1 must disconnect duration	uint16	RW
40766	V1	Point 1 must disconnect voltage	uint16	RW
40767	Tms2	Point 2 must disconnect duration	uint16	RW
40768	V2	Point 2 must disconnect voltage	uint16	RW
40769	Tms3	Point 3 must disconnect duration	uint16	RW
40770	V3	Point 3 must disconnect voltage	uint16	RW
40813	ReadOnly	Enumerated value indicates if curve is read-only or can be modified	uint16	RO
40814	ID	A well-known value 130. Uniquely identifies this as a SunSpec HVR	uint16	RO
40815	L	Variable # of 16 bit registers to follow : 10+N*50	uint16	RO
40816	ActCrv	Index of active curve. 0=no active curve	uint16	RO
40817	ModEna	HVRT control mode. Enable active curve. Bitfield value	uint16	RO
40821	NCrv	Number of curves supported (recommend 4)	uint16	RO
40822	NPt	Number of curve points supported (maximumn of 20)	uint16	RO
40823	Tms_SF	Scale factor for duration	int16	RO
40824	V_SF	Scale factor for percent VRef	int16	RO
40826	ActPt	Number of active points in array	uint16	RO

40827	Tms1	Point 1 must disconnect duration	uint16	RW
40828	V1	Point 1 must disconnect voltage	uint16	RW
40829	Tms2	Point 2 must disconnect duration	uint16	RW
40830	V2	Point 2 must disconnect voltage	uint16	RW
40831	Tms3	Point 3 must disconnect duration	uint16	RW
40832	V3	Point 3 must disconnect voltage	uint16	RW
40875	ReadOnly	Enumerated value indicates if curve is read-only or can be modified	uint16	RO