

Fronius Datamanager Register Map: Integer Inverter Model (111, 112, 113)

Start	End			Size	RW	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
212	212			1	RW	0x03 0x06 0x10	F_Delete_Data	Delete stored ratings of the current inverter by writing 0xFFFF.	uint16			0xFFFF
213	213			1	RW	0x03 0x06 0x10	F_Store_Data	Rating data of all inverters connected to the Fronius Datamanager are persistently stored by writing 0xFFFF.	uint16			0xFFFF
214	214			1	R	0x03	F_Active_State_Code	Current active state code of inverter - Description can be found in inverter manual	uint16			not supported for Fronius Hybrid inverters (because of this inverter status maybe reported differently during nighttime compared to other inverter types)
215	215			1	RW	0x03 0x06 0x10	F_Reset_All_Event_Flags	Write 0xFFFF to reset all event flags and active state code.	uint16			0xFFFF
216	216			1	RW	0x03 0x06 0x10	F_ModelType	Type of SunSpec models used for inverter and meter data. Write 1 or 2 and then immediately 6 to acknowledge setting.	uint16			1: Floating point 2: Integer & SF
217	217			1	RW	0x03 0x06 0x10	F_Storage_Restrictions_View_Mode	Type of Restrictions reported in BasicStorageControl Model (IC124). Local restrictions are those that are set by Modbus Interface. Global restrictions are those that are set system wide.	uint16			0: local (default); 1: global
500	501			2	R	0x03	F_Site_Power	Total power (site sum) of all connected inverters.	uint32	W		
502	505			4	R	0x03	F_Site_Energy_Day	Total energy for current day of all connected inverters.	uint64	Wh		
506	509			4	R	0x03	F_Site_Energy_Year	Total energy for last year of all connected inverters.	uint64	Wh		
510	513			4	R	0x03	F_Site_Energy_Total	Total energy of all connected inverters.	uint64	Wh		

Start	End			Size	RW	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
40001	40002			2	R	0x03	SID	Well-known value. Uniquely identifies this as a SunSpec Modbus Map	uint32			0x53756e53 ('SunS')
40003	40003			1	R	0x03	ID	Well-known value. Uniquely identifies this as a SunSpec Common Model block	uint16			1
40004	40004			1	R	0x03	L	Length of Common Model block	uint16	Registers		65
40005	40020			16	R	0x03	Mn	Manufacturer	String32			Fronius
40021	40036			16	R	0x03	Md	Device model	String32			z. B. IG+150V
40037	40044			8	R	0x03	Opt	Options	String16			Firmware version of Datamanager
40045	40052			8	R	0x03	Vr	SW version of inverter	String16			
40053	40068			16	R	0x03	SN	Serialnumber of the inverter	String32			
40069	40069			1	R	0x03	DA	Modbus Device Address	uint16			1 - 247

Start	End	Noted	Noted	Size	RW	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
40070	40070			1	R	0x03	ID	Uniquely identifies this as a SunSpec Inverter Float Modbus Map; 111: single phase, 112: split phase, 113: three phase	uint16			111, 112, 113
40071	40071			1	R	0x03	L	Length of inverter model block	uint16	Registers		60
40072	40073	0	3	2	R	0x03	A	AC Total Current value	float32	A		
40074	40075	4	7	2	R	0x03	AphA	AC Phase-A Current value	float32	A		
40076	40077	8	11	2	R	0x03	AphB	AC Phase-B Current value	float32	A		
40078	40079	12	15	2	R	0x03	AphC	AC Phase-C Current value	float32	A		
40080	40081	16	19	2	R	0x03	PPVphAB	AC Voltage Phase-AB value	float32	V		
40082	40083	20	23	2	R	0x03	PPVphBC	AC Voltage Phase-BC value	float32	V		
40084	40085	24	27	2	R	0x03	PPVphCA	AC Voltage Phase-CA value	float32	V		
40086	40087	28	31	2	R	0x03	PhVphA	AC Voltage Phase-A-to-neutral value	float32	V		
40088	40089	32	35	2	R	0x03	PhVphB	AC Voltage Phase-B-to-neutral value	float32	V		
40090	40091	36	39	2	R	0x03	PhVphC	AC Voltage Phase-C-to-neutral value	float32	V		
40092	40093	40	43	2	R	0x03	W	AC Power value	float32	W		
40094	40095	44	47	2	R	0x03	Hz	AC Frequency value	float32	Hz		
40096	40097	48	51	2	R	0x03	VA	Apparent Power	float32	VA		
40098	40099	52	55	2	R	0x03	VAR	Reactive Power	float32	VAR		
40100	40101	56	59	2	R	0x03	PF	Power Factor	float32	%		
40102	40103	60	63	2	R	0x03	WH	AC Lifetime Energy production	float32	Wh		
40104	40105	64	67	2	R	0x03	DCA	DC Current value	float32	A		Not supported if multiple DC inputs; current can be found in Multiple MPPT model
40106	40107	68	71	2	R	0x03	DCV	DC Voltage value	float32	V		Not supported if multiple DC inputs; voltage can be found in Multiple MPPT model

40108	40109	72	75	2	R	0x03	DCW	DC Power value	float32	W		Total power of all DC inputs
40110	40111			2	R	0x03	TmpCab	Cabinet Temperature	float32	° C		Not supported
40112	40113			2	R	0x03	TmpSnk	Coolant or Heat Sink Temperature	float32	° C		Not supported
40114	40115			2	R	0x03	TmpTrns	Transformer Temperature	float32	° C		Not supported
40116	40117			2	R	0x03	TmpOt	Other Temperature	float32	° C		Not supported
40118	40118			1	R	0x03	St	Operating State	enum16	Enumerate d	N/A	
40119	40119			1	R	0x03	StVnd	Vendor Defined Operating State	enum16	Enumerate d	N/A	
40120	40121			2	R	0x03	Evt1	Event Flags (bits 0-31)	uint32	Bitfield	N/A	
40122	40123			2	R	0x03	Evt2	Event Flags (bits 32-63)	uint32	Bitfield	N/A	
40124	40125			2	R	0x03	EvtVnd1	Vendor Defined Event Flags (bits 0-31)	uint32	Bitfield	N/A	
40126	40127			2	R	0x03	EvtVnd2	Vendor Defined Event Flags (bits 32-63)	uint32	Bitfield	N/A	
40128	40129			2	R	0x03	EvtVnd3	Vendor Defined Event Flags (bits 64-95)	uint32	Bitfield	N/A	
40130	40131			2	R	0x03	EvtVnd4	Vendor Defined Event Flags (bits 96-127)	uint32	Bitfield	N/A	

Start	End			Size	RW	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
40132	40132			1	R	0x03	ID	A well-known value 120. Uniquely identifies this as a SunSpec Nameplate Model	uint16			120
40133	40133			1	R	0x03	L	Length of Nameplate Model	uint16	Registers		26
40134	40134			1	R	0x03	DERTyp	Type of DER device. Default value is 4 to indicate PV device.	enum16			4
40135	40135			1	R	0x03	WRtg	Continuous power output capability of the inverter.	uint16	W	WRtg_SF	
40136	40136			1	R	0x03	WRtg_SF	Scale factor	sunssf			0
40137	40137			1	R	0x03	VARtg	Continuous Volt-Ampere capability of the inverter.	uint16	VA	VARtg_SF	
40138	40138			1	R	0x03	VARtg_SF	Scale factor	sunssf			0
40139	40139			1	R	0x03	VARtgQ1	Continuous VAR capability of the inverter in quadrant 1.	int16	var	VARtg_SF	
40140	40140			1	R	0x03	VARtgQ2	Continuous VAR capability of the inverter in quadrant 2.	int16	var	VARtg_SF	Not supported
40141	40141			1	R	0x03	VARtgQ3	Continuous VAR capability of the inverter in quadrant 3.	int16	var	VARtg_SF	Not supported
40142	40142			1	R	0x03	VARtgQ4	Continuous VAR capability of the inverter in quadrant 4.	int16	var	VARtg_SF	
40143	40143			1	R	0x03	VARtg_SF	Scale factor	sunssf			1
40144	40144			1	R	0x03	ARtg	Maximum RMS AC current level capability of the inverter.	uint16	A	ARtg_SF	
40145	40145			1	R	0x03	ARtg_SF	Scale factor	sunssf			-2
40146	40146			1	R	0x03	PFRtgQ1	Minimum power factor capability of the inverter in quadrant 1.	int16	cos()	PFRtg_SF	
40147	40147			1	R	0x03	PFRtgQ2	Minimum power factor capability of the inverter in quadrant 2.	int16	cos()	PFRtg_SF	Not supported
40148	40148			1	R	0x03	PFRtgQ3	Minimum power factor capability of the inverter in quadrant 3.	int16	cos()	PFRtg_SF	Not supported
40149	40149			1	R	0x03	PFRtgQ4	Minimum power factor capability of the inverter in quadrant 4.	int16	cos()	PFRtg_SF	
40150	40150			1	R	0x03	PFRtg_SF	Scale factor	sunssf			-3
40151	40151			1	R	0x03	WHRtg	Nominal energy rating of storage device.	uint16	Wh	WHRtg_SF	
40152	40152			1	R	0x03	WHRtg_SF	Scale factor	sunssf			0
40153	40153			1	R	0x03	AhrRtg	The useable capacity of the battery. Maximum charge minus minimum charge from a technology capability perspective (Amp-hour capacity rating).	uint16	AH	AhrRtg_SF	Not supported
40154	40154			1	R	0x03	AhrRtg_SF	Scale factor for amp-hour rating.	sunssf			Not supported
40155	40155			1	R	0x03	MaxChaRte	Maximum rate of energy transfer into the storage device.	uint16	W	MaxChaRte_SF	
40156	40156			1	R	0x03	MaxChaRte_SF	Scale factor	sunssf			0
40157	40157			1	R	0x03	MaxDisChaRte	Maximum rate of energy transfer out of the storage device.	uint16	W	MaxDisChaRte_SF	
40158	40158			1	R	0x03	MaxDisChaRte_SF	Scale factor	sunssf			0
40159	40159			1	R	0x03	Pad	Pad register				

Start	End			Size	RW	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
40160	40160			1	R	0x03	ID	A well-known value 121. Uniquely identifies this as a SunSpec Basic Settings Model	uint16			121
40161	40161			1	R	0x03	L	Length of Basic Settings Model	uint16	Registers		30
40162	40162			1	RW	0x03 0x06 0x10	WMax	Setting for maximum power output. Default to I _{WRtg} .	uint16	W	VAMax_SF	
40163	40163			1	RW	0x03 0x06 0x10	VRef	Voltage at the PCC.	uint16	V	VAMax_SF	
40164	40164			1	RW	0x03 0x06 0x10	VRefOfs	Offset from PCC to inverter.	int16	V	VRefOfs_SF	
40165	40165			1	RW	0x03 0x06 0x10	VMax	Setpoint for maximum voltage.	uint16	V	VMinMax_SF	Not supported

40166	40166			1	RW	0x03 0x06 0x10	VMin	Setpoint for minimum voltage.	uint16	V	VMinMax_SF	Not supported
40167	40167			1	RW	0x03	VAMax	Setpoint for maximum apparent power. Default to I_VARtg.	uint16	VA	VAMax_SF	
40168	40168			1	R	0x03	VARMaxQ1	Setting for maximum reactive power in quadrant 1. Default to VARtgQ1.	int16	var	VARMax_SF	
40169	40169			1	R	0x03	VARMaxQ2	Setting for maximum reactive power in quadrant 2. Default to VARtgQ2.	int16	var	VARMax_SF	Not supported
40170	40170			1	R	0x03	VARMaxQ3	Setting for maximum reactive power in quadrant 3 Default to VARtgQ3.	int16	var	VARMax_SF	Not supported
40171	40171			1	R	0x03	VARMaxQ4	Setting for maximum reactive power in quadrant 4 Default to VARtgQ4.	int16	var	VARMax_SF	
40172	40172			1	R	0x03	WGra	Default ramp rate of change of active power due to command or internal action.	uint16	% WMax/min	WGra_SF	Not supported
40173	40173			1	R	0x03	PFMinQ1	Setpoint for minimum power factor value in quadrant 1. Default to PFRtgQ1.	int16	cos()	PFMin_SF	
40174	40174			1	R	0x03	PFMinQ2	Setpoint for minimum power factor value in quadrant 2. Default to PFRtgQ2.	int16	cos()	PFMin_SF	Not supported
40175	40175			1	R	0x03	PFMinQ3	Setpoint for minimum power factor value in quadrant 3. Default to PFRtgQ3.	int16	cos()	PFMin_SF	Not supported
40176	40176			1	R	0x03	PFMinQ4	Setpoint for minimum power factor value in quadrant 4. Default to PFRtgQ4.	int16	cos()	PFMin_SF	
40177	40177			1	R	0x03	VARAct	VAR action on change between charging and discharging: 1=switch 2=maintain VAR characterization.	enum16			Not supported
40178	40178			1	R	0x03	ClcTotVA	Calculation method for total apparent power. 1=vector 2=arithmetic.	enum16			Not supported
40179	40179			1	R	0x03	MaxRmpRte	Setpoint for maximum ramp rate as percentage of nominal maximum ramp rate. This setting will limit the rate that watts delivery to the grid can increase or decrease in response to intermittent PV generation.	uint16	% WGra	MaxRmpRte_SF	Not supported
40180	40180			1	R	0x03	ECPNomHz	Setpoint for nominal frequency at the ECP.	uint16	Hz	ECPNomHz_SF	Not supported
40181	40181			1	R	0x03	ConnPh	Identity of connected phase for single phase inverters. A=1 B=2 C=3.	enum16			Not supported
40182	40182			1	R	0x03	WMax_SF	Scale factor for maximum power output.	sunssf			1
40183	40183			1	R	0x03	VRef_SF	Scale factor for voltage at the PCC.	sunssf			0
40184	40184			1	R	0x03	VRefOfs_SF	Scale factor for offset voltage.	sunssf			0
40185	40185			1	R	0x03	VMinMax_SF	Scale factor for min/max voltages.	sunssf			0
40186	40186			1	R	0x03	VAMax_SF	Scale factor for voltage at the PCC.	sunssf			1
40187	40187			1	R	0x03	VARMax_SF	Scale factor for reactive power.	sunssf			1
40188	40188			1	R	0x03	WGra_SF	Scale factor for default ramp rate.	sunssf			Not supported
40189	40189			1	R	0x03	PFMin_SF	Scale factor for minimum power factor.	sunssf			-3
40190	40190			1	R	0x03	MaxRmpRte_SF	Scale factor for maximum ramp percentage.	sunssf			Not supported
40191	40191			1	R	0x03	ECPNomHz_SF	Scale factor for nominal frequency.	sunssf			Not supported

Start	End			Size	RW	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
40192	40192			1	R	0x03	ID	A well-known value 122. Uniquely identifies this as a SunSpec Measurements_Status Model	uint16			122
40193	40193			1	R	0x03	L	Length of Measurements_Status Model	uint16	Registers		44
40194	40194			1	R	0x03	PVConn	PV inverter present/available status. Enumerated value.	bitfield16			Bit 0: Connected Bit 1: Available Bit 2: Operating Bit 3: Test
40195	40195			1	R	0x03	StorConn	Storage inverter present/available status. Enumerated value.	bitfield16			bit 0: CONNECTED bit 1: AVAILABLE bit 2: OPERATING bit 3: TEST
40196	40196			1	R	0x03	ECPConn	ECP connection status: disconnected=0 connected=1.	bitfield16			0: Disconnected 1: Connected
40197	40200			4	R	0x03	ActWh	AC lifetime active (real) energy output.	acc64	Wh		
40201	40204			4	R	0x03	ActVAh	AC lifetime apparent energy output.	acc64	VAh		Not supported

40205	40208			4	R	0x03	ActVARhQ1	AC lifetime reactive energy output in quadrant 1.	acc64	varh		Not supported
40209	40212			4	R	0x03	ActVARhQ2	AC lifetime reactive energy output in quadrant 2.	acc64	varh		Not supported
40213	40216			4	R	0x03	ActVARhQ3	AC lifetime negative energy output in quadrant 3.	acc64	varh		Not supported
40217	40220			4	R	0x03	ActVARhQ4	AC lifetime reactive energy output in quadrant 4.	acc64	varh		Not supported
40221	40221			1	R	0x03	VARAval	Amount of VARs available without impacting watts output.	int16	var	VARAval_SF	Not supported
40222	40222			1	R	0x03	VARAval_SF	Scale factor for available VARs.	sunssf			Not supported
40223	40223			1	R	0x03	WAval	Amount of Watts available.	uint16	W	WAval_SF	Not supported
40224	40224			1	R	0x03	WAval_SF	Scale factor for available Watts.	sunssf			Not supported
40225	40226			2	R	0x03	StSetLimMsk	Bit Mask indicating setpoint limit(s) reached. Bits are persistent and must be cleared by the controller.	bitfield32			Not supported
40227	40228			2	R	0x03	StActCtl	Bit Mask indicating which inverter controls are currently active.	bitfield32			Bit 0: FixedW Bit 1: FixedVAR Bit 2: FixedPF
40229	40232			4	R	0x03	TmSrc	Source of time synchronization.	String8			RTC
40233	40234			2	R	0x03	Tms	Seconds since 01-01-2000 00:00 UTC	uint32	Secs		
40235	40235			1	R	0x03	RtSt	Bit Mask indicating which voltage ride through modes are currently active.	bitfield16			Not supported
40236	40236			1	R	0x03	Ris	Isolation resistance	uint16	Ohm	Ris_SF	Not supported
40237	40237			1	R	0x03	Ris_SF	Scale factor for Isolation resistance	int16			Not supported

Start	End			Size	R/W	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
40238	40238			1	R	0x03	ID	A well-known value 123. Uniquely identifies this as a SunSpec Immediate Controls Model	uint16			123
40239	40239			1	R	0x03	L	Length of Immediate Controls Model	uint16	Registers		24
40240	40240			1	RW	0x03 0x06 0x10	Conn_WinTms	Time window for connect/disconnect.	uint16	Secs		
40241	40241			1	RW	0x03 0x06 0x10	Conn_RvrtTms	Timeout period for connect/disconnect.	uint16	Secs		
40242	40242			1	RW	0x03 0x06 0x10	Conn	Enumerated valued. Connection control.	bitfield16			0: Disconnected 1: Connected
40243	40243			1	RW	0x03 0x06 0x10	WMaxLimPct	Set power output to specified level.	uint16	% WMax	WMaxLimPct_SF	
40244	40244			1	RW	0x03 0x06 0x10	WMaxLimPct_WinTms	Time window for power limit change.	uint16	Secs		0 – 300
40245	40245			1	RW	0x03 0x06 0x10	WMaxLimPct_RvrtTms	Timeout period for power limit.	uint16	Secs		0 – 28800
40246	40246			1	RW	0x03	WMaxLimPct_RmpTms	Ramp time for moving from current setpoint to new setpoint.	uint16	Secs		0 - 65534 (0xFFFF has the same effect as 0x0000)
40247	40247			1	RW	0x03 0x06 0x10	WMaxLim_Ena	Enumerated valued. Throttle enable/disable control.	enum16			0: Disabled 1: Enabled
40248	40248			1	RW	0x03 0x06 0x10	OutPFSet	Set power factor to specific value - cosine of angle.	int16	cos()	OutPFSet_SF	
40249	40249			1	RW	0x03 0x06 0x10	OutPFSet_WinTms	Time window for power factor change.	uint16	Secs		0 – 300
40250	40250			1	RW	0x03 0x06 0x10	OutPFSet_RvrtTms	Timeout period for power factor.	uint16	Secs		0 – 28800
40251	40251			1	RW	0x03 0x06 0x10	OutPFSet_RmpTms	Ramp time for moving from current setpoint to new setpoint.	uint16	Secs		0 - 65534 (0xFFFF has the same effect as 0x0000)
40252	40252			1	RW	0x03 0x06 0x10	OutPFSet_Ena	Enumerated valued. Fixed power factor enable/disable control.	enum16			0: Disabled 1: Enabled
40253	40253			1	R	0x03	VARWMaxPct	Reactive power in percent of I_WMax.	int16	% WMax	VARWMaxPct_SF	Not supported
40254	40254			1	RW	0x03 0x06 0x10	VARMaxPct	Reactive power in percent of I_VARMax.	int16	% VARMax	VARPct_SF	
40255	40255			1	R	0x03	VARAvalPct	Reactive power in percent of I_VARAval.	int16	% VARAval	VARPct_SF	Not supported
40256	40256			1	RW	0x03 0x06 0x10	VARPct_WinTms	Time window for VAR limit change.	uint16	Secs		0 – 300
40257	40257			1	RW	0x03 0x06 0x10	VARPct_RvrtTms	Timeout period for VAR limit.	uint16	Secs		0 – 28800
40258	40258			1	RW	0x03 0x06 0x10	VARPct_RmpTms	Ramp time for moving from current setpoint to new setpoint.	uint16	Secs		0 - 65534 (0xFFFF has the same effect as 0x0000)

40259	40259			1	R	0x03	VarPct_Mod	Enumerated value. VAR limit mode.	enum16			2: VAR limit as a % of VarMax
40260	40260			1	RW	0x03 0x06 0x10	VarPct_Ena	Enumerated valued. Fixed VAR enable/disable control.	enum16			0: Disabled 1: Enabled
40261	40261			1	R	0x03	WMaxLimPct_SF	Scale factor for power output percent.	sunssf			-2
40262	40262			1	R	0x03	OutPFSet_SF	Scale factor for power factor.	sunssf			-3
40263	40263			1	R	0x03	VarPct_SF	Scale factor for reactive power.	sunssf			0

Start	End	Buffer		Size	RW	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
40264	40264			1	R	0x03	ID	A well-known value 160. Uniquely identifies this as a SunSpec Multiple MPPT Inverter Extension Model Mode	uint16			160
40265	40265			1	R	0x03	L	Length of Multiple MPPT Inverter Extension Model	uint16			48
40266	40266	0	1	1	R	0x03	DCA_SF	Current Scale Factor	sunssf			
40267	40267	2	3	1	R	0x03	DCV_SF	Voltage Scale Factor	sunssf			
40268	40268	4	5	1	R	0x03	DCW_SF	Power Scale Factor	sunssf			
40269	40269	6	7	1	R	0x03	DCWH_SF	Energy Scale Factor	sunssf			
40270	40271	8	11	2	R	0x03	Evt	Global Events	bitfield32			
40272	40272	12	13	1	R	0x03	N	Number of Modules	uint16			2
40273	40273	14	15	1	R	0x03	TmsPer	Timestamp Period	uint16			Not supported
40274	40274	16	17	1	R	0x03	1_ID	Input ID	uint16			1
40275	40282	18	33	8	R	0x03	1_IDStr	Input ID Sting	String16			"String 1"
40283	40283	34	35	1	R	0x03	1_DCA	DC Current	uint16	A	DCA_SF	
40284	40284	36	37	1	R	0x03	1_DCV	DC Voltage	uint16	V	DCV_SF	
40285	40285	38	39	1	R	0x03	1_DCW	DC Power	uint16	W	DCW_SF	
40286	40287	40	43	2	R	0x03	1_DCWH	Lifetime Energy	acc32	Wh	DCWH_SF	
40288	40289	44	47	2	R	0x03	1_Tms	Timestamp	uint32	Secs		
40290	40290	48	49	1	R	0x03	1_Tmp	Temperature	int16	C		
40291	40291	50	51	1	R	0x03	1_DCSt	Operating State	enum16			
40292	40293	52	55	2	R	0x03	1_DCEvt	Module Events	bitfield32			
40294	40294	56	57	1	R	0x03	2_ID	Input ID	uint16			2
40295	40302	58	73	8	R	0x03	2_IDStr	Input ID Sting	String16			"String 2" or "Not supported"
40303	40303	74	75	1	R	0x03	2_DCA	DC Current	uint16	A	DCA_SF	Not supported if only one DC input.
40304	40304	76	77	1	R	0x03	2_DCV	DC Voltage	uint16	V	DCV_SF	Not supported if only one DC input.
40305	40305	78	79	1	R	0x03	2_DCW	DC Power	uint16	W	DCW_SF	Not supported if only one DC input.
40306	40307	80	83	2	R	0x03	2_DCWH	Lifetime Energy	acc32	Wh	DCWH_SF	Not supported if only one DC input.
40308	40309	84	87	2	R	0x03	2_Tms	Timestamp	uint32	Secs		Not supported if only one DC input.
40310	40310	88	89	1	R	0x03	2_Tmp	Temperature	int16	C		Not supported if only one DC input.
40311	40311	90	91	1	R	0x03	2_DCSt	Operating State	enum16			Not supported if only one DC input.
40312	40313	92	95	2	R	0x03	2_DCEvt	Module Events	bitfield32			Not supported if only one DC input.

Start Offset	End Offset			Size	RW	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
40314	40314			1	R	0x03	ID	A well-known value 124. Uniquely identifies this as a SunSpec Basic Storage Controls Model	uint16			124
40315	40315			1	R	0x03	L	Length of Basic Storage Controls	uint16	Registers		24
40316	40316			1	R	0x03	WchaMax	Setpoint for maximum charge. Additional Fronius description: Reference Value for maximum Charge and Discharge. Multiply this value by InWRte to define maximum charging and OutWRte to define maximum discharging. Every rate between this two limits is allowed. Note that InWRte and OutWRte can be negative to define ranges for charging and discharging only.	uint16	W	WChaMax_SF	
40317	40317			1	R	0x03	WchaGra	Setpoint for maximum charging rate. Default is MaxChaRte.	uint16	% WChaMax/sec	WChaDisChaGra_SF	100
40318	40318			1	R	0x03	WdisChaGra	Setpoint for maximum discharge rate. Default is MaxDisChaRte.	uint16	% WChaMax/sec	WChaDisChaGra_SF	100
40319	40319			1	RW	0x03 0x06 0x10	StorCtl_Mod	Activate hold/discharge/charge storage control mode. Bitfield value. Additional Fronius description: Active hold/discharge/charge storage control mode. Set the charge field to enable charging and the discharge field to enable discharging. Bitfield value.	bitfield16			bit 0: CHARGE bit 1: DISCHARGE

40320	40320			1	R	0x03	VAChaMax	Setpoint for maximum charging VA.	uint16	VA	VAChaMax_SF	Not supported
40321	40321			1	RW	0x03 0x06 0x10	MinRsvPct	Setpoint for minimum reserve for storage as a percentage of the nominal maximum storage.	uint16	% WChaMax	MinRsvPct_SF	
40322	40322			1	R	0x03	ChaState	Currently available energy as a percent of the capacity rating.	uint16	% AhrRtg	ChaState_SF	
40323	40323			1	R	0x03	StorAval	State of charge (ChaState) minus storage reserve (MinRsvPct) times capacity rating (AhrRtg).	uint16	AH	StorAval_SF	
40324	40324			1	R	0x03	InBatV	Internal battery voltage.	uint16	V	InBatV_SF	
40325	40325			1	R	0x03	ChaSt	Charge status of storage device. Enumerated value.	enum16			1: OFF 2: EMPTY 3: DISCHAGING 4: CHARGING 5: FULL 6: HOLDING 7: TESTING
40326	40326			1	RW	0x03 0x06 0x10	OutWRte	Percent of max discharge rate. Additional Fronius description: Defines maximum Discharge rate. If not used than the default is 100 and wChaMax defines max. Discharge rate. See wChaMax for details.	int16	% WChaMax	InOutWRte_SF	
40327	40327			1	RW	0x03 0x06 0x10	InWRte	Percent of max charging rate. Additional Fronius description: Defines maximum Charge rate. If not used than the default is 100 and wChaMax defines max. Charge rate. See wChaMax for details.	int16	% WChaMax	InOutWRte_SF	
40328	40328			1	R	0x03	InOutWRte_WinTms	Time window for charge/discharge rate change.	uint16	Secs		Not supported
40329	40329			1	R	0x03	InOutWRte_RvrtTms	Timeout period for charge/discharge rate.	uint16	Secs		Not supported
40330	40330			1	R	0x03	InOutWRte_RmpTms	Ramp time for moving from current setpoint to new setpoint.	uint16	Secs		Not supported
40331	40331			1	RW	0x03 0x06 0x10	ChaGriSet	Setpoint to enable/disable charging from grid	enum16			0: PV (Charging from grid disabled) 1: GRID (Charging from grid enabled)
40332	40332			1	R	0x03	WchaMax_SF	Scale factor for maximum charge.	sunssf			0
40333	40333			1	R	0x03	WchaDisChaGra_SF	Scale factor for maximum charge and discharge rate.	sunssf			0
40334	40334			1	R	0x03	VAChaMax_SF	Scale factor for maximum charging VA.	sunssf			Not supported
40335	40335			1	R	0x03	MinRsvPct_SF	Scale factor for minimum reserve percentage.	sunssf			-2
40336	40336			1	R	0x03	ChaState_SF	Scale factor for available energy percent.	sunssf			-2
40337	40337			1	R	0x03	StorAval_SF	Scale factor for state of charge.	sunssf			-2
40338	40338			1	R	0x03	InBatV_SF	Scale factor for battery voltage.	sunssf			-2
40339	40339			1	R	0x03	InOutWRte_SF	Scale factor for percent charge/discharge rate.	sunssf			-2

Start	End			Size	R/W	Function codes	Name	Description	Type	Units	Scale Factor	Range of values
40340	40340			1	R	0x03	ID	Identifies this as End block	uint16			0xFFFF
40341	40341			1	R	0x03	L	Length of model block	uint16	Registers		0