Fronius State Codes

Code	Description	Behaviour	Remedy
STATE 102	AC voltage too high	Following careful testing and when the grid conditions are within the permissible range again, the inverter will resume feeding energy into the grid.	Check grid connections: If this STATE code keeps recurring contact First Choice Solar
STATE 103	AC voltage too low		
STATE 105	AC frequency too high		
STATE 106	AC frequency too low		
STATE 107	AC grid outside the permissible limits		
STATE 108	Stand alone operation detected		
STATE 112	RCMU error		
STATE 301	Overcurrent (AC)	Short-term interruption while feeding energy into the grid due to over current in the inverter.	Fault is rectified automatically; if this STATE code is displayed all the time: contact First Choice Solar
STATE 302	Overcurrent (DC)	The inverter resumes with its startup routine.	
STATE 303	Power stage set over temperature	Short term interruption while feeding energy into the grid due to over temperature.	Purge openings for cooling air and heat sink if necessary; fault is rectified automatically; if this STATE code keeps recurring contact your solar power system installer.
STATE 304	Internal temperature too high	The inverter resumes with its startup routine.	
STATE 306	LOW PV OUTPUT	Short term interruption while feeding energy into the grid.	Fault is rectified automatically; if this STATE code occurs when there is sufficient insolation (sunlight) contact First Choice Solar
	Intermediate circuit voltage too low for feeding energy into the grid	The inverter resumes with its startup routine.	**IMPORTANT!** Due to the low level of insolation (sunlight) early in the morning and in the evening, the STATE codes 306 (LOW PV OUTPUT) and 307 LOW PV VOLTAGE) are displayed routinely at these times of day. These STATE codes **do not** indicate any kind of fault.
STATE 307	LOW PV VOLTAGE		
	DC input voltage too low for feeding energy into the grid		
STATE 308	Intermediate circuit overvoltage	Short term interruption while feeding energy into the grid. The inverter resumes with its startup routine.	Fault is rectified automatically; if this STATE code is displayed all the time: contact First Choice Solar
STATE 309	DC input voltage MPPT 1 too high		
STATE 313	DC input voltage MPPT 2 too high		
STATE 401	No communication with power stage set possible	The inverter will automatically attempt to connect again and, if possible, will resume feeding energy into the grid.	If the STATE code is displayed all the time contact First Choice Solar
STATE 406	Power stage set temperature sensor faulty		
STATE 407	Internal temperature sensor faulty		
STATE 408	DC feeding into the grid detected		
STATE 412	Fixed voltage mode has been selected instead of MPP voltage mode and the fixed voltage has been set to too low or too high a value		If this STATE code persists contact First Choice Solar
STATE 415	Safety cut out via option card or RECERBO has triggered	The inverter is not feeding any energy into the grid.	
STATE 416	No communication possible between power stage set and control system		
STATE 417	Hardware ID problem		
STATE 419	Unique ID conflict	The inverter will automatically attempt to reconnect again and, if possible, will resume	If the STATE code is displayed all the time contact First Choice Solar

STATE 421	HID range error		
		reconnect again and, if possible, will resume feeding energy into the grid.	
STATE 425	No communication possible with the power stage set		
STATE 426-428	Possible hardware fault		
STATE 431	Software problem	The inverter is not feeding any energy into the grid.	Carry out an AC reset (switch the AC circuit breaker off and on); update the inverter firmware; if this status code is displayed all the time please contact First Choice Solar
STATE 436	Functional incompatibility (one or more PC boards in the inverter are not compatible with each other, e.g. after a PC board has	The inverter will automatically attempt to connect again and, if possible, will resume feeding energy into the grid.	Update the inverter firmware; if this status code is displayed all the time please contact First Choice Solar
STATE 437	Power stage set problem		
STATE 438	Functional incompatibility (one or more PC boards in the inverter in the inverter are not compatible with each other, e.g. after a PC		
STATE 443	Intermediate circuit voltage too low or asymmetric	The inverter is not feeding any energy into the grid.	If the status code is displayed all the time contact First Choice Solar
STATE 445	Invalid limit value settings	The inverter is not feeding any energy into the grid for safety reasons.	Update the inverter firmware with the latest firmware here; if the STATE code is displayed all the time after the firmware update contact First Choice Solar
STATE 447	Insulation fault		If this status code is displayed all the time: contact First Choice Solar
STATE 448	Neutral conductor not connected		
STATE 450	Guard cannot be found		
STATE 452	Memory error detected	The inverter will automatically attempt to connect again, and if possible, will resume feeding energy into the grid.	If the STATE code is displayed all the time: contact First Choice Solar
STATE 452	Communication error between the processors		
STATE 453	Short term grid voltage error		
STATE 454	Short term grid frequency error		
STATE 456	Anti-islanding function is no longer implemented correctly		
STATE 457	Grid relay sticking	The inverter is not feeding any energy into the grid.	Contact First Choice Solar
STATE 459	Error when recording the measuring signal for the insulation test		
STATE 460	Reference voltage source for the digital signal processor (DSP) is working out of tolerance		
STATE 461	Fault in the DSP data memory		
STATE 462	Error with DC feed monitoring routine	The inverter is not feeding any energy into the grid.	Contact First Choice Solar
STATE 463	Reversed AC polarity, AC connector inserted incorrectly		
STATE 474	RCMU sensor faulty		If this STATE code keeps recurring, contact First Choice Solar
STATE 475	Solar panel ground fault, insulation fault (connection between solar panel and ground)		
STATE 476	Driver supply voltage too low		
STATE 480, 481	Functional incompatibility (one or more PC boards in the inverter are not compatible with each other, e.g. after a PC board has been replaced)		Update the inverter firmware with the latest firmware here; if the STATE code persists contact First Choice Solar
STATE 482	Startup incomplete		Perform AC reset (turn AC circuit breaker off and on), complete startup.
STATE 483	Voltage UDC fixed on MPP2 string out of limits		Check the MPP settings; if the status code is displayed all the time contact First Choice Solar

STATE 485	CAN transmit buffer is full		Carry out an AC reset (turn AC circuit breaker off and on), if the STATE code continues to be displayed contact First Choice Solar
STATE 502	Insulation error on the solar panels	Warning message is shown on the display	If this STATE code keeps recurring, contact First Choice Solar
STATE 509	No energy fed into the grid in the past 24 hours		Acknowledge STATE code; check whether all the conditions for the problem free feeding of energy into the grid have been met. If the STATE code is displayed all the time: look out for further STATE codes.
STATE 515	No communication with filter possible		If the status code is displayed all the time contact First Choice Solar
STATE 516	No communication possible with the storage unit	Storage unit warning message.	
STATE 517	Derating caused by too high a temperature	When power derating occurs, a warning message is shown on the display	Purge cooling air openings and heat sink if necessary; fault is rectified automatically; if this STATE code keeps recurring contact First Choice Solar
STATE 522	DC1 Input Voltage too low	The DC voltage on input 1 of the inverter is too low	Check voltage & polarity on input 1 of the inverter. If this STATE code keeps recurring please contact First Choice Solar
STATE 523	DC2 Input Voltage too low	The DC voltage on input 2 of the inverter is too low	Check voltage & polarity on input 2 of the inverter. Check MPP settings / voltage at the "Installer Menu Basic". If this STATE code keeps recurring please contact First Choice Solar
STATE 558	Functional incompatibility (one or more PC boards in the inverter are not compatible with each other, e.g. after a PC board has been replaced)	Possible error displays or malfunction on the inverter	If this STATE code keeps recurring contact First Choice Solar
STATE 560	Derating caused by over-frequency	This STATE code is displayed when the grid frequency becomes excessively high. The inverter will then reduce its output. The status indicator will continue to be displayed until the inverter has returned to normal operation.	As soon as the grid frequency is back within the permissible range and the inverter has returned to normal operation, the fault is rectified automatically. If this STATE code keep recurring contact First Choice Solar
STATE 566	Arc detector switched off (e.g. during external arc monitoring)	The STATE code is displayed every day until the arc detector is reactivated.	No error, Confirm status code by pressing 'Enter'.
STATE 567	Grid Voltage Dependent Power Reduction is active	This state code is a warning informing you that the Grid Voltage Dependent Power Reduction mode (GVDPR or Volt – Watt mode) has been activated and the inverter will continue to operate with	Acknowledge status code; if this STATE 567 code keeps recurring contact First Choice Solar Find out more about the STATE 567 message here
STATE 705	Conflict when setting the inverter number (e.g. number already assigned)	–	Correct the inverter number via the setup menu
STATE 721	EEPROM has been reinitialised or EEPROM is faulty	Warning message is shown on the display	Acknowledge STATE code; If the STATE code is displayed all the time ccontact First Choice Solar
STATE 731	Initialisation error – USB stick is not supported		Check or replace USB stick. Check the file system on the USB stick. If the STATE code is displayed all the time contact First Choice Solar
STATE 732	Over current on USB stick		
STATE 733	No USB stick connected		Connect or check the USB stick. If STATE code is displayed all the time contact First Choice Solar
STATE 734	Update file not recognised or not present		Check update file (e.g. for correct file name). If STATE code is displayed all the time contact First Choice Solar
STATE 735	Update file does not match the device, update file too old	Warning message appears on the display, update process is interrupted.	Update the inverter firmware with the latest firmware here; if the STATE code is displayed all the time after the firmware update contact your local Fronius Service Partner. If STATE code is displayed all the time contact First Choice Solar
STATE 736	Write or read error occurred	Warning message is shown on the display	Check USB stick and the data contained on it or replace USB stick.
			Never unplug a USB stick if the 'Data Transmission' LED is still flashing or lit.
			If the STATE code is displayed all the contact First Choice Solar
STATE 738	Log file cannot be saved (e.g. USB stick is write protected or full)t		Create storage space, remove write protection, check or replace USB stick if necessary.
			If STATE code is displayed all the time contact your local Fronius Service Partner.
STATE 743	Error occurred during update process		Repeat the update process, check USB stick. If STATE code is displayed all the time contact your local Fronius Service Partner.
STATE 745	Update file corrupt	Warning message appears on the display, update process is interrupted.	Redownload the with the latest firmware here. If STATE code is displayed all the time contact First Choice Solar

STATE 751	Time lost	Warning message is shown on the display	Reset the time and date on the inverter. Check update file (e.g. for correct file name). If STATE code is displayed all the time contact First Choice Solar
STATE 752	Real Time Clock module communication error		
STATE 757	Hardware error in the Real Time Clock module	Error message is shown on the display; the inverter is not feeding any energy into the grid.	If STATE code is displayed all the time contact First Choice Solar
STATE 758	Internal error: Real Time Clock module is in emergency mode	Time may be inaccurate or lost (feeding energy into the grid normal)..	
STATE 766	Emergency power de-rating has been activated	Error message is shown on the display.	

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