

Fronius Galvo 1.5-1 – 3.1-1 208-240

USB update *fro28171.upd*

Software versions:

Control	RECERBO	V0.3.11.10
Power module	GALVO_PS	V0.1.3.12
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.39.12

- No changes

Software version:		fro28090.upd
Control unit	RECERBO	V0.3.11.10
Power stage set	GALVO_PS	V0.1.3.12
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.37.12

- Text length of the setup names changed
- P(f) menu items added in the PROFI menu (Initial Delay and Change Time Constant)
- Service menu Profi: additional setting possibilities regarding Q(U): "Ch Q(U) Init. Delay" and "Ch Q(U) Offset Factor" (required by CE10-21)
- Change of the display text "Max. AC Grid Voltage" to "Max. Voltage L-N" in the Log menu
- The Energy Yield menus at the display were removed due to RGM requirements.
- New state code 609 „Configuration Value Out Of Limits“
- Correction of the event handler for sending SMS:
State codes 108 and 442: no sending of SMS when these state codes appear.
State codes 502 and 475: every time, when these state codes appear, an SMS is sent (once per calendar day).
- The accuracy of the following calculated values has been increased:
log data, day/year/total, yield / CO2, total energy supplied
Thereby the false indication of mirrored MPP-tracker-powers in Solar.web has been fixed.
- New state code 610 „Can-Init failed“.
- The serial number is displayed in the device information menu.
- Anti Islanding can be switched on and off in the Profi Menu

Bugfixes:

- The speed of the setup menu selection was increased
- Adjustment of the energy yield calculation (daily values)
- The state code 574 is not shown at the display anymore
- Accuracy of energy meter was improved . The existing derogation to -1.2% no longer occurs
- The inverter lost the device type - device type = 0 was displayed.
- Shutdowns without displaying a state code have been fixed
- Transmission problems in Fronius Solar Net after changing the Solar Net number during operation have been fixed.

New functions:

- Implementing of state code 141 (grid frequency jump too high)
This value can be adjusted to the grid via menupoint RoCoF (Rate of Change of Frequency) in the Profi Menu

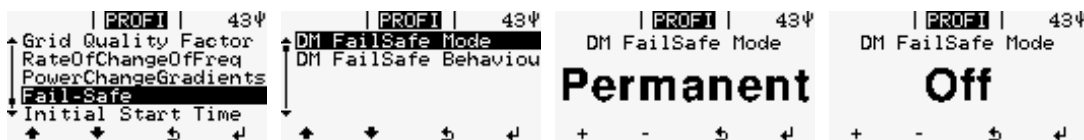


- Anti Islanding Parameter „Grid Quality Factor“
Coming adjustments by energy supply utilities can be covered with this adjustable parameter in the Profi Menu.

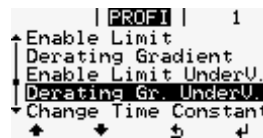
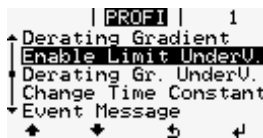


- Fail-Safe Mode
Australia: If a DRM logic is not connected, the fail-safe mode is triggered.
ROW: If a data logger or datamanager is not detected, the fail-safe mode is triggered.

A prerequisite for both cases is the activation of this mode in the Profi Menu.

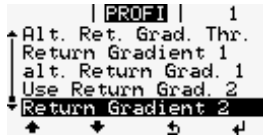


- Two new extensions for the P (U) control:
Switch-on threshold for undervoltage derating power reduction gradient at undervoltage



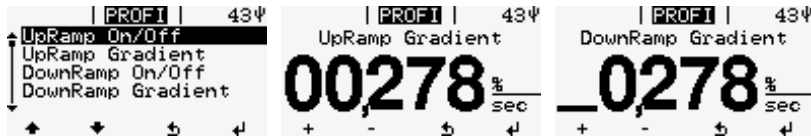
- Extension of the P (f) settings for the GDPR function by the following parameters:
Start frequency at underfrequency
Stop frequency at overfrequency
Stop frequency at underfrequency
Frequency Test Time (Duration of frequency monitoring before return to nominal power)
Disable Limit min (lower limit for frequency monitoring)
Alternative Return Gradient Threshold (Percentage drop of nominal power, from which "Alternative Return Gradient 1" is activated)
Alternative Return Gradient 1 (Alternative return gradient to maximum power in %/s, based on the difference between frozen and lowest power)
Use Return Gradient 2 Mode (Mode: 0 ... 'Return Gradient 1' or 'Return Gradient 1 Alternative' is used, 1 ... 'Return Gradient 2' is used)
Return Gradient 2 (Further return gradient to the maximum power in %/s, based on nominal power, if this is activated)





- Power Change Gradients - Ramp-Up/-Down Feature (Australia)
Is to be activated in the Profi Menu, four parameters can be set:
Power Ramp-Up Mode (ramp-rate mode for increase of output power, 0 ... Off, 1 ... On)
Power Ramp-Up Value (ramp-rate for increase of output power in 10⁻³ %/s)
Power Ramp-Down Mode (ramp-rate mode for reduction of output power, 0 ... Off, 1 ... On)
Power Ramp-Down Value (ramp-rate for reduction of output power in 10⁻³ %/s)

These new gradients are also referred to as W_Gra + and W_Gra- and are always active when a DRM change occurs.



Software version:		fro27470.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	GALVO_PS	V0.1.3.7
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.33.12

- No changes

Software version:		fro27372.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	GALVO_PS	V0.1.3.7
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.32.12

- No changes

Software version:		fro27170.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	GALVO_PS	V0.1.3.7
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.32.12

- No changes

Software version:		fro27140.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	GALVO_PS	V0.1.3.7
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.31.12

- No changes

Software version: fro27063.upd
Control unit RECERBO V0.2.20.0
Power stage set GALVO_PS V0.1.3.7
Filter PC board GALVO_FIL V0.0.1.2
Country setups V0.0.30.12

- No changes

Software version: fro26470.upd
Control unit RECERBO V0.2.20.0
Power stage set GALVO_PS V0.1.3.7
Filter PC board GALVO_FIL V0.0.1.2
Country setups V0.0.28.12

- No changes

Software version: fro26420.upd
Control unit RECERBO V0.2.20.0
Power stage set GALVO_PS V0.1.3.7
Filter PC board GALVO_FIL V0.0.1.2
Country setups V0.0.26.10

- No changes

Software version: fro26380.upd
Control unit RECERBO V0.2.20.0
Power stage set GALVO_PS V0.1.3.7
Filter PC board GALVO_FIL V0.0.1.2
Country setups V0.0.25.10

- No changes

Software version: fro26350.upd
Control unit RECERBO V0.2.20.0
Power stage set GALVO_PS V0.1.3.7
Filter PC board GALVO_FIL V0.0.1.2
Country setups V0.0.24.12

- No changes

Software version: fro26300.upd
Control unit RECERBO V0.2.20.0
Power stage set GALVO_PS V0.1.3.7
Filter PC board GALVO_FIL V0.0.1.2
Country setups V0.0.23.12

- No changes

Software version: fro26270.upd
Control unit RECERBO V0.2.20.0
Power stage set GALVO_PS V0.1.3.7
Filter PC board GALVO_FIL V0.0.1.2
Country setups V0.0.22.12

- No changes

Software version:		fro26211.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	GALVO_PS	V0.1.3.7
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.22.12

- New country setups:
HI1
-

Software version:		fro26070.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	GALVO_PS	V0.1.3.7
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.19.12

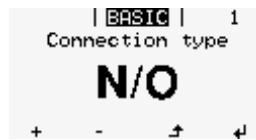
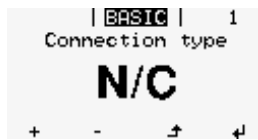
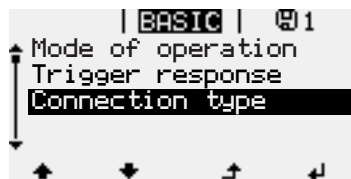
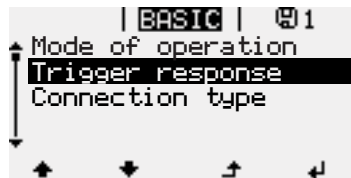
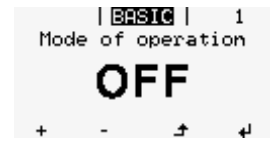
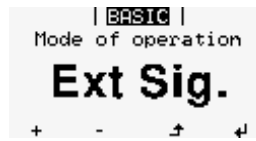
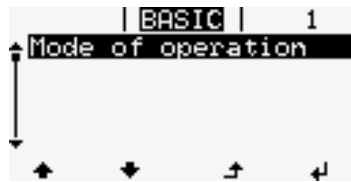
- Changes to country setups:
240, 240N, 208, 208N, 220, 220N: Relay Mode for the potentialfree signal contact has been changed to ON; Romanian language has been added.
 - Change of the display text "Max. AC Grid Voltage" to "Max. Voltage L-N" in the Log menu
 - Implementing of under-temperature derating:
At temperatures below -13 °F / -25 °C, the inverter limits the power and displays the state code 573.
 - Display „External Limitation“: in case of an external power control the specified output power is displayed in % under „INFO“ (e.g. for dynamic power control, Modbus command, etc.).
 - If incompatible prints with an invalid power limit (< 300 W or > 3150 W) are combined in one inverter, the inverter limits the output power to 750 W after displaying the state code 572.
 - So far, the same error was displayed for undertemperature and overtemperature.
New state code 312 for „undertemperature“.
 - Bugfix: faulty displaying of values <10 kWh has been fixed under „Total Energy“.
 - Bugfix: incorrect display of the state code 573 (derating caused by too low a temperature) in Standby mode has been fixed.
 - Bugfix: Stop of feeding power into the grid with state code 1000 no longer occurs.
 - Bugfix: Incorrect display of daily energy values has been fixed.
 - Bugfix: „sticking“ of devices in the state codes 306 or 307 (Power Low or Low DC) has been fixed.
 - Bugfix: displaying or logging of negative insulation values has been fixed.
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Software version:		fro26030.upd
Control unit	RECERBO	V0.2.14.0
Power stage set	GALVO_PS	V0.1.3.4
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.18.12

- No changes
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Software version:		fro25360.upd
Control unit	RECERBO	V0.2.14.0
Power stage set	GALVO_PS	V0.1.3.4
Filter PC board	GALVO_FIL	V0.0.1.2
Country setups		V0.0.13.12

- Changes to country setups:
208, 208N, 220, 220N, 240, 240N
 - New adjusting range for the AC frequency limits: 45 - 65 Hz
 - New adjusting range for the trip-time of the outer AC Frequency: 1 - 35929
 - The "Input signal" function can be selected at the display, S0 entry is activated.
- The menu navigation for "Input signal" (S0) has been integrated into the Basic service menu:



- Implementation of the WiFi Access Point for the Fronius Datamanager 2.0 in the Setup-Menu:



- When power is reduced to 0 %, the inverter displays “Forced Standby”.
 - Romanian translation of the display-texts has been implemented.
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Changelog Fronius Primo 3.8-1 - 8.2-1 208 - 240

USA

USB update *fro28171.upd*

Software versions:

Control	RECERBO	V0.3.8.2
Power module	PRIMO_PS	V0.18.10.3
Filter PC board	PRIMO_FIL	V0.6.26.4
Country setups		V0.0.39.12

- No changes

Software version: fro28090.upd

Control unit	RECERBO	V0.3.8.2
Power stage set	PRIMO_PS	V0.18.10.3
Filter PC board	PRIMO_FIL	V0.6.26.4
Country setups		V0.0.37.12

no changes

Software version: fro27470.upd

Control unit	RECERBO	V0.3.8.2
Power stage set	PRIMO_PS	V0.18.10.3
Filter PC board	PRIMO_FIL	V0.6.26.4
Country setups		V0.0.33.12

no changes

Software version: fro27372.upd

Control unit	RECERBO	V0.3.8.2
Power stage set	PRIMO_PS	V0.18.10.3
Filter PC board	PRIMO_FIL	V0.6.26.4
Country setups		V0.0.32.12

no changes

Software version: fro27170.upd

Control unit	RECERBO	V0.3.8.2
Power stage set	PRIMO_PS	V0.18.10.3
Filter PC board	PRIMO_FIL	V0.6.26.4
Country setups		V0.0.32.12

no changes

Software version: fro27140.upd
Control unit RECERBO V0.3.8.2
Power stage set PRIMO_PS V0.18.10.3
Filter PC board PRIMO_FIL V0.6.26.4
Country setups V0.0.31.12

Changes to country setups:

- All setups:
Anti islanding periods have been changed from 25 to 40; Start-up time has been reduced.
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Software version: fro27063.upd
Control unit RECERBO V0.3.8.2
Power stage set PRIMO_PS V0.18.10.3
Filter PC board PRIMO_FIL V0.6.26.4
Country setups V0.0.30.12

no changes

Software version: fro26470.upd
Control unit RECERBO V0.3.8.2
Power stage set PRIMO_PS V0.18.10.3
Filter PC board PRIMO_FIL V0.6.26.4
Country setups V0.0.28.12

- New state code 609 „Configuration Value Out Of Limits“
- Response to state code 245 has been adjusted: the inverter restarts after a defined time.

Bugfixes

- The accuracy of the following calculated values has been increased:
log data, day/year/total, yield / CO2, total energy supplied
Thereby the false indication of mirrored MPP-tracker-powers in Solar.web has been fixed.
 - Improved AFCI evaluation
 - State code 247 when the inverter starts
 - False tripping of state code 607 has been fixed.
-

Software version: fro26420.upd
Control unit RECERBO V0.3.7.0
Power stage set PRIMO_PS V0.18.10.3
Filter PC board PRIMO_FIL V0.6.12.4
Country setups V0.0.26.12

Bugfixes:

- False tripping of state code 301 during connecting process has been fixed.
 - The destruction of the AC output bridge by unauthorized switching states has been fixed.
-

Software version: fro26380.upd
Control unit RECERBO V0.3.7.0
Power stage set PRIMO_PS V0.18.6.3
Filter PC board PRIMO_FIL V0.6.12.4
Country setups V0.0.25.10

no changes

Software version:		fro26350.upd
Control unit	RECERBO	V0.3.7.0
Power stage set	PRIMO_PS	V0.18.6.3
Filter PC board	PRIMO_FIL	V0.6.12.4
Country setups		V0.0.24.12

Changes to country setups

- In all country setups the menu items "Yield Offset" and "Yield Correction" were removed due to RGM demand.
- New state code 243 - AFCI Event:
The inverter detects an arc below the switch-off limit from state code 240 and shuts down. After a defined reconnection time the inverter reconnects again, if all reconnect conditions are met.
- In the startup phase a RCMU offset calibration for higher stability of the RCMU was introduced.
- State codes 519, 574 and 579 are not shown at the display anymore.
- Correction at the Event-Handler for sending SMS:
State codes 108, 442: no SMS is sent, when these state codes occur.
State codes 502, 475: at each occurrence, an SMS is sent (once per calendar day).
- The energy yield menus on the display have been removed due to the RGM requirements.
- Improving of the AFCI algorithm

Bugfixes:

- Accuracy of energy meter was improved . The existing derogation to -1.2% no longer occurs.
- Inverter lost the device type, device type = 0 was displayed - fixed
- The accuracy in the reactive power modes Q (U), Q (P), CosPhi (P) and TanPhi (V) has been improved..
- False tripping of state code 247 has been fixed.
- False tripping of state code 301 due to vibration behavior of the intermediate circuit at 60 Hz grids was fixed.
- The state code 415 has been displayed before AFCI- or NLMON-errors could be received.
- PMC of the filter PC Poard could not be read - fixed
- False tripping of state code 453 due to high indermediate circuit voltage and resulting harmonics at the AC current was fixed.
- To avoid false trippings, negative currents are no longer considered when examining the AFCI sensor.
- Sending faulty AC voltage readings from the filter PC board after an AC-reset was fixed.

Software version:		fro26300.upd
Control unit	RECERBO	V0.2.25.1
Power stage set	PRIMO_PS	V0.17.6.3
Filter PC board	PRIMO_FIL	V0.4.12.4
Country setups		V0.0.23.12

Changes to country setups

- 208, 208N, 50Hz, 50HN, 220, 220N, 240, 240N, HI1:
MPP voltage range changed from 160 - 800 V to 80 - 800 V.

Software version:		fro26270.upd
Control unit	RECERBO	V0.2.25.2
Power stage set	PRIMO_PS	V0.17.6.3
Filter PC board	PRIMO_FIL	V0.5.14.4
Country setups		V0.0.57.10

Changes to country setups

- CY:
The relative cutoff-value was changed to 0.5 % of the nominal current.

Bugfixes

- State code 519 is logged only in the Error Counter menu.
- False tripping of state code 452 has been fixed; the stability of the internal communication between power stage set and control (CAN-bus) has been improved.
- "Sticking" of the MPP Tracker after Dynamik Peak Manager Scan has been fixed.
- False tripping of state code 102 has been fixed.

- False tripping of state code 301 in 60 Hz grids due to faulty current control has been fixed.
 - False tripping of state code 453 has been fixed.
 - False tripping of state code 463 in grids without a neutral conductor has been fixed.
-

Software version:		fro26211.upd
Control unit	RECERBO	V0.2.25.1
Power stage set	PRIMO_PS	V0.15.16.3
Filter PC board	PRIMO_FIL	V0.5.4.4
Country setups		V0.0.22.12

No changes

Software version:		fro26161.upd
Control unit	RECERBO	V0.2.25.1
Power stage set	PRIMO_PS	V0.15.16.3
Filter PC board	PRIMO_FIL	V0.5.4.4
Country setups		V0.0.21.12

- New country setups:
HI1
 - Country setup menu: Accelerated selection and loading of the country setups.
 - Country setup menu: display of complete description for selected country setups
 - Service menu Profi: additional setting possibilities regarding GFDPR: "Initial Delay" and "Change Time Constant" (required by CEI0-21)
 - Service menu Profi: additional setting possibilities regarding Q(U): "Ch Q(U) Init. Delay" and "Ch Q(U) Offset Factor" (required by CEI0-21)
 - Service menu Profi: additional setting possibility "Ripple Control"
 - Service menu Profi: additional setting possibility "IDF Compensation"
 - Service menu Profi: additional setting possibility - parameter for feeding DC into the grid is adjustable
 - The minimum DC input and MPP voltage has been changed from 150 V to 70 V.
 - Change of the display text "Max. AC Grid Voltage" to "Max. Voltage L-N" in the Log menu
 - If incompatible prints with an invalid power limit (< 300 W or > 3150 W) are combined in one inverter, the inverter limits the output power to 750 W after displaying the state code 572.
 - Bugfix: incorrect display of the state code 573 (derating caused by too low a temperature) in Standby mode has been fixed.
 - Bugfix: Incorrect display of daily energy values has been fixed.
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Changelog Fronius Primo 10.0-1 - 15.0-1 208 - 240

USB update *fro28171.upd*

Software versions:

Control	RECERBO	V0.3.10.2
Power module	PRIMO_PS15	V0.18.50.3
Filter PC board	PRIMO_FIL15	V0.6.34.4
Country setups		V0.0.39.12

- No changes

Software version: fro28090.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	PRIMO_PS	V0.18.50.3
Filter PC board	PRIMO_FIL	V0.6.34.4
Country setups		V0.0.37.12

no changes

Software version: fro27470.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	PRIMO_PS	V0.18.50.3
Filter PC board	PRIMO_FIL	V0.6.34.4
Country setups		V0.0.33.12

New country setups:

- MG5N (Microgrid 50Hz with neutral conductor monitoring)
 - MG5P (Microgrid 50Hz without neutral conductor monitoring)
 - MG6N (Microgrid 60Hz with neutral conductor monitoring)
 - MG6P (Microgrid 60Hz without neutral conductor monitoring)
-

Software version: fro27372.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	PRIMO_PS	V0.18.50.3
Filter PC board	PRIMO_FIL	V0.6.34.4
Country setups		V0.0.32.12

Bugfixes:

- Detecting of insulation errors has been adapted
 - Faulty trippings during the self-test of the RCMU have been fixed. The error was displayed via state code 314 (DC system error).
-

Software version: fro27170.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	PRIMO_PS	V0.18.46.3
Filter PC board	PRIMO_FIL	V0.6.32.4
Country setups		V0.0.32.12

- RSB fuction is supported
- Bugfix: Faulty tripping of state code 458 has been fixed

Software version:		fro27140.upd
Control unit	RECERBO	V0.3.10.2
Power stage set	PRIMO_PS	V0.18.46.3
Filter PC board	PRIMO_FIL	V0.6.26.4
Country setups		V0.0.31.12

- New state code 141 "Alteration of gid frequency is too high" (is activated depending on the country setup).
- New state code 317 "Unbalanced Intermediate circuit voltage".
- New state code 479 "Intermediate circuit relay has switched off".
- New state code 489 "Permanent intermediate circuit capacitor overvoltage"
- New state code 609 "Config Error - Value Out Of SW Limits".
- New state code 610 „Can-Init failed“.
- The serial number is displayed in the device information menu. Though this feature also requires a change in the hardware, for the moment no value is displayed in this menu. The necessary hardware change is planned for calendar week 10/2016.

Bugfixes:

- Transmission problems in Fronius Solar Net after changing the Solar Net number during operation have been fixed.
- False logging values of the temperature at $U_{DC} = 0$ V have been fixed.
- Intermediate circuit voltage offset can now also be set $> 99,999$ V in the Profi menu
- Faulty tripping of state code 408 "DC proportion in the grid" in 60Hz grids has been fixed.
- Tripping of state code 457 "AC relay sticks" due to changed software routine has been fixed.
- Faulty tripping of state codes 445 and 452 has been fixed.
- Switching off without displaying a state code has been fixed.
- Faulty tripping of state code 519 has been fixed.
- Faulty tripping of state code 301 during the connection process has been fixed.
- Tripping of state code 301 due to faulty AC zero crossing detection has been fixed.
- Faulty tripping of state code 105 at AC voltage dips has been fixed.

Software version:		fro27063.upd
Control unit	RECERBO	V0.3.8.2
Power stage set	PRIMO_PS	V0.18.16.3
Filter PC board	PRIMO_FIL	V0.6.26.4
Country setups		V0.0.30.12

no changes

Software version:		fro26470.upd
Control unit	RECERBO	V0.3.8.2
Power stage set	PRIMO_PS	V0.18.16.3
Filter PC board	PRIMO_FIL	V0.6.26.4
Country setups		V0.0.28.12

- New state code 609 „Configuration Value Out Of Limits“
- Response to state code 245 has been adjusted: the inverter restarts after a defined time.

Bugfixes

- The accuracy of the following calculated values has been increased:
log data, day/year/total, yield / CO₂, total energy supplied
Thereby the false indication of mirrored MPP-tracker-powers in Solar.web has been fixed.
 - Improved AFCI evaluation
 - State code 247 when the inverter starts
 - False tripping of state code 301 during connecting process has been fixed
 - False tripping of state code 607 has been fixed.
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Changelog Fronius Symo 10.0-3 - 24.0-3

USA

USB update *fro28171.upd*

Software versions:

Control	RECERBO	V0.3.10.2
Power module	SYMO_PS	V0.18.50.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.39.12

- No changes

Software version: fro28090.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.50.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.37.12

no changes

Software version: fro27470.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.50.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.33.12

no changes

Software version: fro27372.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.50.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.32.12

Bugfixes:

- Detecting of insulation errors has been adapted

Software version: fro27170.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.46.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.32.12

no changes



Software version:		fro27140.upd
Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.46.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.31.12

- New state code 141 "Alteration of grid frequency is too high" (is activated depending on the country setup).
- New state code 317 "Unbalanced Intermediate circuit voltage".
- New state code 479 "Intermediate circuit relay has switched off".
- New state code 489 "Permanent intermediate circuit capacitor overvoltage"

Bugfixes:

- Transmission problems in Fronius Solar Net after changing the Solar Net number during operation have been fixed.
 - False logging values of the temperature at $U_{DC} = 0$ V have been fixed.
 - Intermediate circuit voltage offset can now also be set $> 99,999$ V in the Profi menu
 - Faulty tripping of state code 408 "DC proportion in the grid" in 60Hz grids has been fixed.
 - Tripping of state code 457 "AC relay sticks" due to changed software routine has been fixed.
 - Faulty tripping of state codes 445 and 452 has been fixed.
-

Software version:		fro27063.upd
Control unit	RECERBO	V0.3.9.1
Power stage set	SYMO_PS	V0.18.32.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.30.12

New country setups:

- MG1N, MG1P, MG2N, MG3N, MG3P, MG5N, MG6

Changes to country setups:

- All setups except MGxy
Grid monitoring time has been changed from 300 s to 20 s.

New Feature:

- Additionally SPUI (Special Purpose Utility Interaction) is shown on the display, when Micro Grid setups are used. When a Micro Grid setup is selected, "Info State 581 - SPUI-Mode" is shown at the display. This state code can be reset anytime.
- New state code 609 "Config Error - Value Out Of SW Limits".
- New state code 610 "Can-Init failed".
- The serial number is displayed in the device information menu. Though this feature also requires a change in the hardware, for the moment no value is displayed in this menu. The necessary hardware change is planned for calendar week 10/2016.

Bugfixes

- Shutdowns without displaying a state code have been fixed.
 - False tripping of state code 519 has been fixed.
 - False tripping of state code 301 during the connection process has been fixed.
 - Tripping of state code 301 due to faulty AC zero crossing detection was fixed.
 - Faulty tripping of state code 105 at AC voltage dips was fixed.
 - Tripping of state codes 408, 308, 305 and 301 due to a hardware defect (Opto Gate Driver); The hardware defect is avoided now.
 - Improved AFCI evaluation
 - False tripping of state code 607 has been fixed.
-

Software version:		fro26470.upd
Control unit	RECERBO	V0.3.7.0
Power stage set	SYMO_PS	V0.18.8.3
Filter PC board	SYMO_FIL	V0.6.22.4
Country setups		V0.0.28.12

Changes to country setups:

- BR_N, BR: voltage limits for NL MON adjusted
-

Software version:		fro26420.upd
Control unit	RECERBO	V0.3.7.0
Power stage set	SYMO_PS	V0.18.8.3
Filter PC board	SYMO_FIL	V0.6.22.4
Country setups		V0.0.26.10

No changes

Software version:		fro26380.upd
Control unit	RECERBO	V0.3.7.0
Power stage set	SYMO_PS	V0.18.8.3
Filter PC board	SYMO_FIL	V0.6.22.4
Country setups		V0.0.25.10

Changes to country setups:

- all country setups:
The anti islanding detection time was changed to 40, to improve the THD measurement.
- Country setup menu: Accelerated selection and loading of the country setups.
- Country setup menu: display of complete description for selected country setups
- Service menu Profi: additional setting possibilities regarding GFDR: "Initial Delay" and "Change Time Constant" (required by CEI0-21)
- Service menu Profi: additional setting possibilities regarding Q(U): "Ch Q(U) Init. Delay" and "Ch Q(U) Offset Factor" (required by CEI0-21)
- Service menu Profi: additional setting possibility "Ripple Control"
- Service menu Profi: additional setting possibility "I Δ F Compensation"
- Service menu Profi: additional setting possibility - parameter for feeding DC into the grid is adjustable
- New state code 243 - AFCI Event:
The inverter detects an arc below the switch-off limit from state code 240 and shuts down. After a defined reconnection time the inverter reconnects again, if all reconnect conditions are met.
- State codes 519, 574 and 579 are not shown at the display anymore.
- Correction at the Event-Handler for sending SMS:
State codes 108, 442: no SMS is sent, when these state codes occur.
State codes 502, 475: at each occurrence, an SMS is sent (once per calendar day).
- The energy yield menus on the display have been removed due to the RGM requirements.
- Improving of the AFCI algorithm
- The maximum MPPT1 input current has been changed to 27 A, according to the data sheet.

Bugfixes

- False tripping of state code 314 has been fixed.
- Improving of energy meter accuracy: the existing deviation of -1.2 % no longer occurs.
- Inverter lost the device type, device type = 0 was displayed - fixed
- Accuracy at the reactive power modes Q (U), Q (P), CosPhi (P) and TanPhi (V) has been improved.
- False tripping of state code 247 has been fixed.
- Untill now falsly no SMS was sent at state code 568.
- False tripping of state code 301 due to vibration behavior of the intermediate circuit at 60 Hz grids was fixed.
- False tripping of state code 453 due to high indermediate circuit voltage and resulting harmonics at the AC current was fixed.
- PMC of the filter PC Poard could not be read - fixed.
- To avoid false trippings, negative currents are no longer considered when examining the AFCI sensor.
- The occurrence of state code 316 during the AFCI test has been fixed.

- Faulty displaying of state code 573 (power derating due to too low temperatures) in the stand-by mode has been fixed.
 - False tripping of state code 452 has been fixed; the stability of the internal communication between power stage set and control (CAN-bus) has been improved.
-

Software version:		fro26350.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	SYMO_PS	V0.13.28.3
Filter PC board	SYMO_FIL	V0.4.16.4
Country setups		V0.0.24.12

- no changes
-

Software version:		fro26300.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	SYMO_PS	V0.13.28.3
Filter PC board	SYMO_FIL	V0.4.16.4
Country setups		V0.0.23.12

- no changes
-

Software version:		fro26270.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	SYMO_PS	V0.13.28.3
Filter PC board	SYMO_FIL	V0.4.16.4
Country setups		V0.0.22.12

- no changes
-

Software version:		fro26161.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	SYMO_PS	V0.13.26.3
Filter PC board	SYMO_FIL	V0.4.12.4
Country setups		V0.0.21.12

- Bugfix: the false tripping of state code 463 in grids without neutral conductor has been fixed.
 - Bugfix: the false tripping of state code 103 in grids without neutral conductor has been fixed.
-

Software version:		fro26070.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	SYMO_PS	V0.13.26.3
Filter PC board	SYMO_FIL	V0.4.12.4
Country setups		V0.0.19.12

Changes to country setups:

240, 240N, 208, 208N, 220, 220N

- Relay Mode for the potentialfree signal contact has been changed to ON.
- Adjusting range for the FAC switch off values has been changed from 55 - 65 Hz to 50 - 65 Hz.
- Installation menu: Summer-/Winter- time changeover has been activated.
- Switch off value for the insulation measurement has been changed to 1.025 MOhm.
- Insulation adjusting range has been changed to 1.025 MOhm - 10 MOhm.

440N, 480N

- Relay Mode for the potentialfree signal contact has been changed to ON.

- Adjusting range for the FAC switch off values has been changed from 55 - 65 Hz to 50 - 65 Hz.
- Adjusting range for the UAC reconnect switch off values has been changed from 256 - 300 V to 256 - 332 V.
- Installation menu: Summer-/Winter- time changeover has been activated.
- Switch off value for the insulation measurement has been changed to 1.025 MOhm.
- Insulation adjusting range has been changed to 1.025 MOhm - 10 MOhm.

50HZ, 50HN:

- Relay Mode for the potentialfree signal contact has been changed to ON.
- Installation menu: Summer-/Winter- time changeover has been activated.
- Switch off value for the insulation measurement has been changed to 1.025 MOhm.
- Insulation adjusting range has been changed to 1.025 MOhm - 10 MOhm.

Software version:		fro26030.upd
Control unit	RECERBO	V0.2.20.0
Power stage set	SYMDC	V0.13.26.3
	SYMOAC	V0.13.26.3
Filter PC board	SYMO_FIL	V0.4.12.4
Country setups		V0.0.18.12

- Detection of unwanted asymmetrical feed-in by comparing individual phase currents when this exceeds nominal current by 3 %.
Shutdown with state code 461 if asymmetrical feed-in detected.
 - Change of the display text "Max. AC Grid Voltage" to "Max. Voltage L-N" in the Log menu
 - Bugfix: incorrect display of the state code 573 (derating caused by too low a temperature) in Standby mode has been fixed.
 - Bugfix: faulty displaying of values <10 kWh has been fixed under „Total Energy“..
 - Bugfix: „sticking“ of devices in the state codes 306 or 307 (Power Low or Low DC) has been fixed.
 - Bugfix: displaying or logging of negative insulation values has been fixed.
 - Bugfix: the false tripping of the anti-islanding measurement (state code 108) at 700 Hz ripple control signals has been fixed.
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Changelog Fronius Symo 15.0-3 208

USA

USB update *fro28171.upd*

Software versions:

Control	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.50.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.39.12

- No changes

Software version: fro28090.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.50.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.37.12

no changes

Software version: fro27470.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.50.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.33.12

New country setups:

- MG2N (Microgrid 50Hz 2 phases with neutral conductor monitoring 220 V)
 - MG3N (Microgrid 60Hz 3 phases with neutral conductor monitoring 208 V)
 - MG3P (Microgrid 60Hz 3 phases without neutral conductor monitoring 208 V)
-

Software version: fro27372.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.50.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.32.12

Bugfixes:

- Detecting of insulation errors has been adapted
-

Software version: fro27170.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.46.3
Filter PC board	SYMO_FIL	V0.6.26.4
Country setups		V0.0.32.12

no changes

Software version: fro27140.upd

Control unit	RECERBO	V0.3.10.2
Power stage set	SYMO_PS	V0.18.46.3
Filter PC board	SYMO_FIL	V0.6.26.4



- New state code 141 "Alteration of grid frequency is too high" (is activated depending on the country setup).
- New state code 317 "Unbalanced Intermediate circuit voltage".
- New state code 479 "Intermediate circuit relay has switched off".
- New state code 489 "Permanent intermediate circuit capacitor overvoltage".
- New state code 609 "Config Error - Value Out Of SW Limits".
- New state code 610 „Can-Init failed“.
- The serial number is displayed in the device information menu. Though this feature also requires a change in the hardware, for the moment no value is displayed in this menu. The necessary hardware change is planned for calendar week 10/2016.

Bugfixes:

- Transmission problems in Fronius Solar Net after changing the Solar Net number during operation have been fixed.
 - False logging values of the temperature at $U_{DC} = 0$ V have been fixed.
 - Intermediate circuit voltage offset can now also be set $> 99,999$ V in the Profi menu
 - Faulty tripping of state code 408 "DC proportion in the grid" in 60Hz grids has been fixed.
 - Tripping of state code 457 "AC relay sticks" due to changed software routine has been fixed.
 - Faulty tripping of state codes 445 and 452 has been fixed.
 - Switching off without displaying a state code has been fixed.
 - Faulty tripping of state code 519 has been fixed.
 - Faulty tripping of state code 301 during the connection process has been fixed.
 - Tripping of state code 301 due to faulty AC zero crossing detection has been fixed.
 - Faulty tripping of state code 105 at AC voltage dips has been fixed.
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