GENERAL INFORMATION

SIMPLWINDOWS NAME:	Home Connect v1.0 Coffee Maker
CATEGORY:	Misc.
VERSION:	1.0
SUMMARY:	This module monitors and controls the coffee machine appliances compatible with the Home Connect cloud platform. Home Connect is featured on a wide range of connected home appliances from Bosch, Siemens, Neff, Gaggenau and Thermador.
GENERAL NOTES:	This module interacts with one physical appliance. If multiple coffee maker appliances are required, one module for each appliance must be added to the solution. This module requires one instance of the Home Connect v1.0 Comm IP module for managing all communication to and from the appliance. Refer to the BSH Home Appliance v1.0 Comm IP Help file for important instructions regarding control processor and module configuration.
CRESTRON HARDWARE REQUIRED:	Crestron 3-Series processor.
SETUP OF CRESTRON HARDWARE:	N/A
VENDOR FIRMWARE:	N/A
VENDOR SETUP:	N/A

PARAMETERS:

Device ID   Setting indicates the unique ID of the appliance this module will interact with.

Partner: Home Connect GmbH
Appliance Type: Home Connect-enabled Coffee Machine

CONTROL:

Power On	D	Pulse to set the power state to on.
Power_Standby	D	Pulse to set the power state to standby.
Start_Program	D	Pulse to begin execution of the selected program.
Resume_Program	D	Pulse to resume the selected program from paused state.
Pause_Program	D	Pulse to temporarily halt execution of the selected program.
Stop_Program	D	Pulse to abort execution of the selected program.
Program_[x]_Select	D	Pulse to select the desired program. The program must be available in order to be selected. Selecting a program will refresh the options in the module (where "x" is the specific program name).
BeanAmount_[x]_Select	D	Pulse to select the desired bean amount (beverage strength) program option. The option must be available in order to be selected (where "x' is the specific bean amount).
FillQuantity_StepUp	D	Pulse to increase the fill quantity by the incremental step size defined by the FillQuantity_Step analog output. The incremental amount is in units of volume.
FillQuantity_StepDown	D	Pulse to decrease the fill quantity by the incremental step size defined by the FillQuantity_Step analog output. The incremental amount is in units of volume.
FillQuantity_Set_Value	D	Pulse to set the fill quantity specified by the FillQuantity_Amount_Value analog input.
FillQuantity_Amount_Value	A	Integer value indicates the fill quantity expressed in units of volume. The value must be in range between FillQuantity_Min and FillQuantity_Max analog output values.
FillQuantity_Set_Percent	D	Pulse to set the fill quantity specified by the FillQuantity_Amount_Percent analog input.
FillQuantity_Amount_Percent	A	Integer value indicates the fill quantity value expressed as a percentage scaled from 0 to 65535.
CoffeeTemperature_[x]_Set	D	Pulse to set the desired temperature option for the selected program. The option must be available in order to be selected (where "x' is the specific program temperature).
FunctionLight_On	D	Pulse to turn on the function light.
FunctionLight_Off	D	Pulse to turn off the function light.
FunctionLight_WhenInUse	D	Pulse to set the function light to turn on only when the device is in use.

FunctionLight_Toggle	D	Pulse to turn on the function light if it is off or turn off the function light if it is on.
FunctionLight_StepUp	D	Pulse to increase the function light brightness by the incremental step size specified by the FunctionLight_Brightness_Step analog output.
FunctionLight_StepDown	D	Pulse to decrease the function light brightness by the incremental step size specified by the FunctionLight_Brightness_Step analog output.
FunctionLight_Set_Level	D	Pulse to set the function light brightness specified by the FunctionLight_Target_Level analog input.
FunctionLight_Target_Level	A	Integer value indicates the function light brightness expressed as a relative range from 1 to 10. The value must be in range between FunctionLight_Brightness_Min and FunctionLight_Brightness_Max analog output values.
FunctionLight_Set_Percent	D	Pulse to set the function light brightness specified by the FunctionLight_Target_Percent analog input.
FunctionLight_Target_Percent	A	Integer value indicates the function light brightness expressed as a percentage scaled from 0 to 65535.

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Partner: Home Connect GmbH
Appliance Type: Home Connect-enabled Coffee Machine

FEEDBACK:

Device_Name	S	Text value indicates the friendly name of the appliance device.
Is_Initialized	D	Signal latched high indicates that all state values of the device have been refreshed in the module and that the module is ready to control the device.
Is_Connected	D	Signal latched high indicates the physical device is connected to the Home Connect cloud platform. When low, the device cannot be controlled through the module.
Power_Is_On	D	Signal latched high indicates the device power state is on.
Power_Is_Standby	D	Signal latched high indicates the device power state is standby.
Remote_Start_Allowed	D	Signal latched high indicates the device allows programs to be started through the module. When low, the module will not be able to start a selected program.
Locally_Controlled	D	Signal latched high indicates the device is being controlled by a person in front of the appliance.
Run_Program_Allowed	D	Signal latched high indicates the device is in a state where a program can be started. Several states prohibit running a program, such as the appliance door being open.
Pause_Program_Allowed	D	Signal latched high indicates the device supports pausing the currently running program. This signal should be used to hide or show a "pause program" option on the user interface.
Resume_Program_Allowed	D	Signal latched high indicates the device supports resuming the currently running program. This signal should be used to hide or show a resume program" option on the user interface.
Program_Running_Progress	A	Integer value indicates the completion percentage of the running program. Percentage range is from 0 to 65535.
Program_Elapsed_Time	S	Text value indicates the amount of time the selected program has been running in hours, minutes, and seconds, formatted as HH:MM:SS.
Program_Remaining_Time	S	Text value indicates the amount of time the selected program still requires for completion in hours, minutes, and seconds, formatted as HH:MM:SS.
Run_Program_Error	S	Text value indicates an error state that prevents the module from running the selected program.
Operation_Is_Inactive	D	Signal latched high indicates the device appliance is in inactive state. This state indicates the appliance power is in standby.
Operation_Is_Ready	D	Signal latched high indicates the device appliance is in ready state.
Operation_Is_Running	D	Signal latched high indicates the device appliance is in running state. This state indicates a program is in progress.

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Operation_Is_ActionRequired	D	Signal latched high indicates the device appliance is in action required state.
Operation_Is_Finished	D	Signal latched high indicates the device appliance is in finished state. This state indicates a running program has completed.
Operation_Is_Error	D	Signal latched high indicates the device appliance is in error state.
Operation_Is_Aborting	D	Signal latched high indicates the device appliance is in aborting state. This state indicates a program has been terminated before completing normally.
Door_Is_Open	D	Signal latched high indicates the device appliance door is open. A program cannot be run while the door is open.
Door_Is_Closed	D	Signal latched high indicates the device appliance door is closed. The door must be closed in order to run a program.
Program_[x]_Is_Available	D	Each signal latched high indicates the program is supported by the device and can be executed through the module (where "x" is the specific program name).
Program_[x]_Is_Selected	D	Any signal latched high indicates the program is the currently selected program on the appliance (where "x" is the specific program name).
Program_Selected_Label	S	Text value indicates the friendly name of the currently selected program.
Program_Selected_Index	A	Integer value indicates the index value of the currently selected program. This value can be used to drive custom text for the selected program.
BeanAmount_Is_Available	D	Signal latched high indicates the appliance supports various bean amount (beverage strength) selections, enabling the module to support selecting any of the available bean amount strengths.
BeanAmount_[x]_Is_Available	D	Each signal latched high indicates the bean amount strength is supported by the appliance and can be selected as a program option through the module (where "x" is the specific bean amount).
FillQuantity_Is_Available	D	Signal latched high indicates the appliance supports various fill quantity (cup size) selections, enabling the module to support selecting different fill quantity ranges.
CoffeeTemperature_Is_Available	D	Signal latched high indicates the appliance supports various temperature selections, enabling the module to support selecting any of the available coffee temperature options.
CoffeeTemperature_[x]_Is_Available	D	Each signal latched high indicates the beverage temperature is supported by the appliance and can be selected as a program option through the module (where "x" is the specific program temperature).
BeanAmount_CoffeeGround_Is_Selected	D	Any signal latched high indicates the bean amount is the current strength option for the selected program (where "x" is the specific bean amount).
BeanAmount_Selected_Label	S	Text value indicates the friendly name of the currently selection bean amount strength option.

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BeanAmount_Selected_Index	A	Integer value indicates the index value of the currently selected bean amount strength option. This value can be used to drive custom text for the selected strength option.
FillQuantity_Min	A	Integer value indicates the minimum fill quantity limit for the selected program. Value is in units of volume.
FillQuantity_Max	A	Integer value indicates the maximum fill quantity limit for the selected program. Value is in units of volume.
FillQuantity_Step	A	Integer value indicates the incremental change when increasing or decreasing the fill quantity by one step size amount. Value is in units of volume.
FillQuantity_CurrentValue	A	Integer value indicates the currently selected fill quantity of the selected program. Value is in units of volume.
FillQuantity_CurrentValue_Label	S	Text value indicates the currently selected fill quantity of the selected program as a string. Value is in units of volume.
FillQuantity_CurrentPercent	A	Integer value indicates the current fill quantity of the selected program as a percentage scaled from 0 to 65535.
FillQuantity_Units	S	Text value indicates the volume units of the fill quantity option, such as "ml".
CoffeeTemperature_[x]_Is_Selected	D	Any signal latched high indicates the coffee temperature is the current temperature option for the selected program (where "x" is the specific program temperature).
CoffeeTemperature_Selected_Label	S	Text value indicates the friendly value of the current temperature option of the selected program.
CoffeeTemperature_Selected_Index	A	Integer value indicates the index value of the currently selected coffee temperature option. This value can be used to drive custom text for the selected temperature option.
CoffeeTemperature_Units	S	Text value indicates the units of temperature, such as "°C".
FunctionLight_Is_Available	D	Signal latched high indicates the appliance supports a function light feature that can be turned on or off.
FunctionLight_Is_On	D	Signal latched high indicates the function light is turned on.
FunctionLight_Is_Off	D	Signal latched high indicates the function light is turned off.
FunctionLight_Is_WhenInUse	D	Signal latched high indicates the function light will turn on when the appliance is in use.
FunctionLight_Brightness_Is_Available	D	Signal latched high indicates the appliance supports adjusting the brightness of the function light.
FunctionLight_Brightness_Min	A	Integer value indicates the minimum brightness of the function light.
FunctionLight_Brightness_Max	A	Integer value indicates the maximum brightness of the function light.

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FunctionLight_Brightness_Step	A	Integer value indicates the incremental amount the brightness level is changed when FunctionLight_StepUp or FunctionLight_StepDown digital input signals are pulsed.
FunctionLight_Current_Level	A	Integer value indicates the current brightness level of the function light. Range is a relative scale from 1 to 10.
FunctionLight_Current_Percent	A	Integer value indicates the current brightness level of the function light as a percentage scaled from 0 to 65535.
FunctionLight_Brightness_Units	S	Text value indicates the units of brightness. The coffee maker relative brightness scale is unitless.

TESTING:

OPS USED FOR TESTING:	CP3 1.603.4242.34642
SIMPL WINDOWS USED FOR TESTING:	4.14.20
CRES DB USED FOR TESTING:	201.00.004.00
DEVICE DATABASE:	200.05.001.00
SYMBOL LIBRARY USED FOR TESTING:	1114
SAMPLE PROGRAM:	Home Connect v1.0 Demo IP CP3.smw
REVISION HISTORY:	v1.0 – Initial Release

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