



Title:	i-Controller 2.0 BMS Integration Specification – Modbus Protocol
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Overview

The FLō i-Controller 2.0 has the capability to communicate with Building Management Systems (BMS) over Modbus or BACnet protocols. Set points, occupancy, and some site-specific parameters can be sent from the BMS to the i-Controller 2.0 as an “Input” for control customization. Unit status parameters can also be mapped as “Outputs” to the BMS from the i-Controller to provide real-time status of the FLō unit.

The following sections explain the available Inputs and Outputs, along with associated rules and configuration parameters. For unit operation details, refer to *CN-IC2-01 i-Controller 2.0 (6-70 Ton) MPU Generic Sequence Of Operations REV.300 Ver.1*.

NOTE: This integration specification is only applicable for FLō units equipped with i-Controller 2.0 Revision 300 or greater.

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Inputs

This section describes the values that can be sent to the i-Controller 2.0 from the BMS for control customization.

Initializing Inputs

For the i-Controller to operate from the set points, occupancy, etc. sent from a BMS, a continuous check is made to ensure a successful communication exists between the i-Controller 2.0 and the BMS. To prove communication, the program looks for a value equal or greater than 0 over address F400 for Modbus.

Every BMS transfer should include an update of this register with a value greater than or equal to 0. If this value is not updated within 90s of the last transfer, the i-Controller 2.0 will revert to standalone control.

Modbus Inputs

Address	Variable Description	Input Format	Eng Units	Acceptable Range	Modbus Function	Read/Write
End User Settings						
F400	Building Controller Online (Send Value >= 0 to controller)	INT	-	>=0	Holding Register	Write
F401	Occ Cool Set Point	INT * 10	°C	16 - 29°C	Holding Register	Write
F402	Unocc Cool Set Point	INT * 10	°C	16 - 29°C	Holding Register	Write
F403	Occ Heat Set Point	INT * 10	°C	10 - 26°C	Holding Register	Write
F404	Unocc Heat Set Point	INT * 10	°C	10 - 26°C	Holding Register	Write
F405	Occ Dew Point Set Point	INT * 10	°C	9 - 15°C	Holding Register	Write
F406	Unocc Dew Point Set Point	INT * 10	°C	9 - 15°C	Holding Register	Write
F896	Reheat / Reclaim Set Point	INT * 10	°C	Heat SP - Cool SP	Holding Register	Write
F407	Occupied / Unoccupied (True if Occupied)	BOOL	-	-	Coil	Write
F408	Enable/Disable* (True if Flō Unit Enabled)	BOOL	-	-	Coil	Write
F845	Outdoor Air Temperature	INT * 10	°C	≠ 0.0°C	Holding Register	Write
F846	Outdoor Humidity	INT * 10	% RH	≠ 0.0%	Holding Register	Write
F673	Exhaust Fan 1 Interlock	BOOL	-	-	Coil	Write
F674	Exhaust Fan 2 Interlock	BOOL	-	-	Coil	Write
F675	Exhaust Fan 3 Interlock	BOOL	-	-	Coil	Write
F671	Load Shed Network Input	BOOL	-	-	Coil	Write
F894	Exhaust Fan Minimum Speed %	INT	%	0 - 100	Holding Register	Write
F895	Exhaust Fan Maximum Speed %	INT	%	0 - 100	Holding Register	Write
F08B	Dehumidification Test Mode	BOOL			Coil	Write
F08C	Cooling Test Mode	BOOL			Coil	Write

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F08D	Heating Test Mode	BOOL			Coil	Write
F43F	Fan Only Test Mode	BOOL			Coil	Write

*The FLō Unit Enable/Disable variable can be used to disable the FLō unit via the BMS. The value will be “TRUE” by default but can be sent a “FALSE” value to disable the FLō unit.

NOTE: Input values have a precision of 0.1 °C or 0.1%. To represent the decimal value over Modbus communication, all values noted with an input format of “INT*10” need to be converted to SI units (°C) and multiplied by 10 before sending to the i-Controller 2.0. *Example:* A desired Occ Cool Set Point of 74°F is equivalent to 23.3 °C and would be sent over Modbus address F401 as a value of 233 (23.3 * 10).

Outputs

This section describes the values that can be mapped from the i-Controller 2.0 to the BMS to view status of the FLō unit operation.

NOTE: All Network Variables do not pertain to all FLō units. Refer to the “Unit Type Applicability” column to determine if the Network Variable should be included for a specific unit. The “Design Options” section provides detailed information about the configuration of the FLō unit and can be used to determine if a feature is included for Network Variables with an “Unit Type Applicability” noted as “OPTION.”

Modbus Outputs

Addr	Network Variables	Output Format	Eng Units	Modbus Function	Read/Write	Unit Type Applicability	Description
Operation Mode							
F842	Current Operation Mode	INT	-	Input Register	Read	ALL	1: FanOnly, 2: Heating Only, 3: Cooling Only, 4: Dehum Only, 5: Dehum + Heat, 6: Dehum + Cool, 7: Pre-Emptive Ramp Up, 8: Shutdown; 9: Net Disable
F0F5	Dehumidification Mode	BOOL		Discrete Input	Read	ALL	True if unit is in dehumidification mode
F0F3	Cooling Mode	BOOL		Discrete Input	Read	ALL	True if unit is in cooling mode
F0F2	Heating Mode	BOOL		Discrete Input	Read	ALL	True if unit is in heating mode
Physical Inputs							
F06B	Space Temp	INT * 10	°C	Input Register	Read	ALL	Average Space Temperature
F06C	Space Dewpoint	INT * 10	°C	Input Register	Read	ALL	Calculated or Measured Space Dew Point
F142	Return Air Temp	INT * 10	°C	Input Register	Read	ALL	Temperature of Air in Return Duct

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F143	Outdoor Air Temp	INT * 10	°C	Input Register	Read	ALL	Outdoor Air Temperature
F141	Outdoor Air Dewpoint	INT * 10	°C	Input Register	Read	OPTION	Calculated Outdoor Air Dewpoint
F06F	Supply Air Temp	INT * 10	°C	Input Register	Read	ALL	Temperature of Air in Supply Duct
F514	Suction Pressure Transducer A1	INT * 10	psi	Input Register	Read	ALL	Suction pressure reading for Compressor A1
F588	Discharge Pressure Transducer A1	INT * 10	psi	Input Register	Read	ALL	Discharge pressure reading for Compressor A1

Physical Inputs - *Continued*

F06D	Suction Pressure Transducer A1	INT * 10	Pa	Input Register	Read	ALL	Suction pressure reading for Compressor A1
F13E	Discharge Pressure Transducer A1	INT * 10	Pa	Input Register	Read	ALL	Discharge pressure reading for Compressor A1
F524	Suction Pressure Transducer A2	INT * 10	psi	Input Register	Read	10 - 70 TON	Suction pressure reading for Compressor A2
F589	Discharge Pressure Transducer A2	INT * 10	psi	Input Register	Read	10 - 70 TON	Discharge pressure reading for Compressor A2
F201	Suction Pressure Transducer A2	INT * 10	Pa	Input Register	Read	10 - 70 TON	Suction pressure reading for Compressor A2
F204	Discharge Pressure Transducer A2	INT * 10	Pa	Input Register	Read	10 - 70 TON	Discharge pressure reading for Compressor A2
F779	Suction Pressure Transducer B1	INT * 10	psi	Input Register	Read	31 - 70 TON	Suction pressure reading for Compressor B1
F759	Discharge Pressure Transducer B1	INT * 10	psi	Input Register	Read	31 - 70 TON	Discharge pressure reading for Compressor B1
F77A	Suction Pressure Transducer B1	INT * 10	Pa	Input Register	Read	31 - 70 TON	Suction pressure reading for Compressor B1
F76E	Discharge Pressure Transducer B1	INT * 10	Pa	Input Register	Read	31 - 70 TON	Discharge pressure reading for Compressor B1
F77E	Suction Pressure Transducer B2	INT * 10	psi	Input Register	Read	31 - 70 TON	Suction pressure reading for Compressor B2
F75C	Discharge Pressure Transducer B2	INT * 10	psi	Input Register	Read	31 - 70 TON	Discharge pressure reading for Compressor B2
F77F	Suction Pressure Transducer B2	INT * 10	Pa	Input Register	Read	31 - 70 TON	Suction pressure reading for Compressor B2
F76F	Discharge Pressure Transducer B2	INT * 10	Pa	Input Register	Read	31 - 70 TON	Discharge pressure reading for Compressor B2
F13F	Reheat/Reclaim Inlet Temp 1	INT * 10	°C	Input Register	Read	OPTION	Temperature reading from inlet pipe of reheat/reclaim coil (if equipped)
F06E	CO2 Level	INT * 10	ppm	Input Register	Read	OPTION	Current CO2 level reading from CO2 sensor
F04C	Airflow Switch	BOOL	-	Discrete Input	Read	ALL	True if airflow switch is closed and fan proof is made
F054	Phase Loss	BOOL	-	Discrete Input	Read	ALL	True if no phase loss is detected

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F144	Load Shed	BOOL		Discrete Input	Read	OPTION	True if load shed physical input is closed
F056	Exhaust Fan Interlock	BOOL		Discrete Input	Read	OPTION	True if physical input for exhaust fan interlock is closed
F556	Outdoor Humidity	INT * 10	%RH	Input Register	Read	OPTION	Outdoor %RH
F577	Indoor Humidity	INT * 10	%RH	Input Register	Read	ALL	Indoor %RH
F848	Single CT Amp Reading	INT * 10	A	Input Register	Read	OPTION	Amperage reading from one leg of the input power

Physical Inputs - *Continued*

F35C	Hydronic HW Entering Temperature	INT * 10	°F	Input Register	Read	OPTION	Hydronic Heating Entering Hot Water Temperature
F362	Hydronic HW Leaving Temperature	INT * 10	°F	Input Register	Read	OPTION	Hydronic Heating Leaving Hot Water Temperature
F368	Hydronic HW Flow Proof	BOOL	-	Discrete Input	Read	OPTION	Hydronic Heating Water Flow Proof
F31F	Entering Water Temp A	INT * 10	°C	Input Register	Read	WATER SOURCE	Entering Water Temperature for water condenser A
F324	Leaving Water Temp A	INT * 10	°C	Input Register	Read	WATER SOURCE	Leaving Water Temperature for water condenser A
F32B	Entering Water Temp B	INT * 10	°C	Input Register	Read	WATER SOURCE	Entering Water Temperature for water condenser B
F331	Leaving Water Temp B	INT * 10	°C	Input Register	Read	WATER SOURCE	Leaving Water Temperature for water condenser B
F33F	Water Flow Switch A	BOOL	-	Discrete Input	Read	WATER SOURCE	Water Flow Switch for water condenser A
F340	Water Flow Switch B	BOOL	-	Discrete Input	Read	WATER SOURCE	Water Flow Switch for water condenser B
F8CA	Spare UI-1	INT	NA	Input Register	Read	ALL	Spare universal input for monitoring only
F8CB	Spare UI-2	INT	NA	Input Register	Read	ALL	Spare universal input for monitoring only

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Alarms

F07E	Clogged Filter Alarm	BOOL	-	Discrete Input	Read	ALL	True if a clogged filter is detected
F130	Fan Fail Alarm	BOOL	-	Discrete Input	Read	ALL	True if supply fan has failed to start after 10 attempts
F756	Phase Loss Alarm	BOOL	-	Discrete Input	Read	ALL	True if the phase monitor detects a voltage above the acceptable limit
F8D7	Unit Shutdown	BOOL		Discrete Input	Read	ALL	True if unit is off due to: Smoke, Fan Fail, Phase Loss, or supply air temperature trip.
F69C	Refrigerant Leak Alarm	BOOL	-	Discrete Input	Read	OPTION	True if a signal was received from the refrigeration system indicating a leak
F132	Heat Alarm	BOOL	-	Discrete Input	Read	OPTION	True heating module is not functioning properly (if equipped)
F719	Reheat/Reclaim Proof	BOOL	-	Discrete Input	Read	OPTION	True if proof of reheat or reclaim operation is made (if equipped)
F85E	Compressor A1 Status	INT	-	Input Register	Read	ALL	0: OK; 1: Compressor High Discharge Trip; 2: Compressor Proof Alarm, 3: Low Suction Pressure Alarm, 4: High Discharge Pressure Alarm, 5: High Suction Pressure Alarm, 6: Suction Pressure Transducer Error, 7: Discharge Pressure Transducer Error, 8: Gradual Compressor Shutdown, 9: Instant Compressor Shutdown, 10: Entering Water Temp Shutdown, 11: No Condenser Flow, 12: Outdoor Air Compressor Lockout, 13: EconMode LockOut, 14: Compressor Gradual Shutdown
F860	Compressor A2 Status	INT	-	Input Register	Read	10 - 70 TON	0: OK; 1: Compressor High Discharge Trip; 2: Compressor Proof Alarm, 3: Low Suction Pressure Alarm, 4: High Discharge Pressure Alarm, 5: High Suction Pressure Alarm, 6: Suction Pressure Transducer Error, 7: Discharge Pressure Transducer Error, 8: Gradual Compressor Shutdown, 9: Instant Compressor Shutdown, 10: Entering Water Temp Shutdown, 11: No Condenser Flow, 12: Outdoor Air Compressor Lockout, 13: EconMode LockOut, 14: Compressor Gradual Shutdown
F861	Compressor B1 Status	INT	-	Input Register	Read	31 - 70 TON	0: OK; 1: Compressor High Discharge Trip; 2: Compressor Proof Alarm, 3: Low Suction Pressure Alarm, 4: High Discharge Pressure Alarm, 5: High Suction Pressure Alarm, 6: Suction Pressure Transducer Error, 7: Discharge Pressure Transducer Error, 8: Gradual Compressor Shutdown, 9: Instant Compressor Shutdown, 10: Entering Water Temp Shutdown, 11: No Condenser Flow, 12: Outdoor Air Compressor Lockout, 13: EconMode LockOut, 14: Compressor Gradual Shutdown

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Alarms - Continued

F862	Compressor B2 Status	INT	-	Input Register	Read	31 - 70 TON	0: OK; 1: Compressor High Discharge Trip; 2: Compressor Proof Alarm, 3: Low Suction Pressure Alarm, 4: High Discharge Pressure Alarm, 5: High Suction Pressure Alarm, 6: Suction Pressure Transducer Error, 7: Discharge Pressure Transducer Error, 8: Gradual Compressor Shutdown, 9: Instant Compressor Shutdown, 10: Entering Water Temp Shutdown, 11: No Condenser Flow, 12: Outdoor Air Compressor Lockout, 13: EconMode LockOut, 14: Compressor Gradual Shutdown
F0A0	Smoke Alarm	BOOL	-	Discrete Input	Read	ALL	True if alarm is active (smoke detector has been tripped)
F07F	CO2 Alarm	BOOL	-	Discrete Input	Read	OPTION	True if alarm is active (CO2 level has exceeded upper limit)
F8D6	VCCX Offline	BOOL		Discrete Input	Read	ALL	True if VCCX board is expected but not communicating.
F851	EM-1 Board Fault	BOOL	-	Discrete Input	Read	ALL	True if EM-1 board is expected but not communicating
F8DC	RSM-A Board Fault	BOOL		Discrete Input	Read	ALL	True if RSM-A board is expected but not communicating
F8DD	RSM-B Board Fault	BOOL		Discrete Input	Read	31 - 70 TON	True if RSM-b board is expected but not communicating
F210	Sensor Failures	BOOL	-	Discrete Input	Read	ALL	True if a sensor failure exists
F47E	Space Temp 1 Error	BOOL		Discrete Input	Read	ALL	True if a sensor failure exists
F09C	Space Temp 2 Error	BOOL		Discrete Input	Read	OPTION	True if a sensor failure exists
F08A	Space Humidity Error	BOOL		Discrete Input	Read	ALL	True if a sensor failure exists
F47F	Suction Pressure A1 Error	BOOL		Discrete Input	Read	ALL	True if a sensor failure exists
F082	Discharge Pressure A1 Error	BOOL		Discrete Input	Read	ALL	True if a sensor failure exists
F10D	Suction Pressure A2 Error	BOOL		Discrete Input	Read	10 - 70 TON	True if a sensor failure exists
F466	Discharge Pressure A2 Error	BOOL		Discrete Input	Read	10 - 70 TON	True if a sensor failure exists
F2B4	Suction Pressure B1 Error	BOOL		Discrete Input	Read	31 - 70 TON	True if a sensor failure exists
F294	Discharge Pressure B1 Error	BOOL		Discrete Input	Read	31 - 70 TON	True if a sensor failure exists
F2BD	Suction Pressure B2 Error	BOOL		Discrete Input	Read	31 - 70 TON	True if a sensor failure exists
F297	Discharge Pressure B2 Error	BOOL		Discrete Input	Read	31 - 70 TON	True if a sensor failure exists
F060	Supply Temp Error	BOOL		Discrete Input	Read	ALL	True if a sensor failure exists
F084	Outdoor Air Temp Error	BOOL		Discrete Input	Read	ALL	True if a sensor failure exists
F8D5	Supply Temp High	BOOL		Discrete Input	Read	ALL	True when supply air temperature rises above supply air high limit set point.

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F8D4	Supply Temp Low	BOOL		Discrete Input	Read	ALL	True when supply air temperature drops below supply air low limit set point.
F133	Compressor Alarm	BOOL		Discrete Input	Read	ALL	True when any compressors have an active alarm
F8C2	Comp A1 Alarm	BOOL		Discrete Input	Read	ALL	True if any alarm exists for compressor A1
F8C3	Comp A2 Alarm	BOOL		Discrete Input	Read	10 - 70 TON	True if any alarm exists for compressor A2
F8C4	Comp B1 Alarm	BOOL		Discrete Input	Read	31 - 70 TON	True if any alarm exists for compressor B1
F8C5	Comp B2 Alarm	BOOL		Discrete Input	Read	31 - 70 TON	True if any alarm exists for compressor B2
F140	Override Active	BOOL		Discrete Input	Read	ALL	True if any unit override is active
F423	Hydronic Heating Alarm	BOOL	-	Discrete Input	Read	HYDRONIC	True if Flow Proof Alarm, or Entering Water Temp Alarm
F39E	High Entering Water Temperature A	BOOL	-	Discrete Input	Read	WATER SOURCE	True if water condenser A entering water temperature is too high
F39F	Low Entering Water Temperature A	BOOL	-	Discrete Input	Read	WATER SOURCE	True if water condenser A entering water temperature is too low
F3A2	High Entering Water Temperature B	BOOL	-	Discrete Input	Read	WATER SOURCE	True if water condenser B entering water temperature is too high
F3A3	Low Entering Water Temperature B	BOOL	-	Discrete Input	Read	WATER SOURCE	True if water condenser B entering water temperature is too low
F39C	Water Flow Alarm A	BOOL	-	Discrete Input	Read	WATER SOURCE	True if no water flow is detected in condenser A
F39D	Water Flow Alarm B	BOOL	-	Discrete Input	Read	WATER SOURCE	True if no water flow is detected in condenser B

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Physical Outputs

F565	Supply Fan Speed	INT * 10	%	Input Register	Read	ALL	Current VFD Operating %
F8D8	Compressor A1 Status	INT * 10	%	Input Register	Read	ALL	Compressor A1 Operating %
F8D9	Compressor A2 Status	INT * 10	%	Input Register	Read	31 - 70 TON	Compressor A2 Operating %
F8DA	Compressor B1 Status	INT * 10	-	Input Register	Read	31 - 70 TON	Compressor B1 Operating %
F8DB	Compressor B2 Status	INT * 10	-	Input Register	Read	31 - 70 TON	True if Fixed Compressor B2 Operating %
F0DC	RA Damper	INT * 10	%	Input Register	Read	ALL	Return Air Damper % Open
F0DB	BA Damper	INT * 10	%	Input Register	Read	ALL	Bypass Air Damper % Open
F0DA	OA Damper	INT * 10	%	Input Register	Read	ALL	Outdoor Air Damper % Open
F8CC	Condenser A1 Enable	BOOL		Discrete Input	Read		True if condenser fan A1 is active
F8D0	Condenser A1 Speed	INT * 10		Input Register	Read		Condenser fan A1 operating %
F8CD	Condenser A2 Enable	BOOL		Discrete Input	Read		True if condenser fan A2 is active
F8D1	Condenser A2 Speed	INT * 10		Input Register	Read		Condenser fan A2 operating %
F8CE	Condenser B1 Enable	BOOL		Discrete Input	Read		True if condenser fan B1 is active
F8D2	Condenser B1 Speed	INT * 10		Input Register	Read		Condenser fan B1 operating %
F8CF	Condenser B2 Enable	BOOL		Discrete Input	Read		True if condenser fan B2 is active
F8D3	Condenser B2 Speed	INT * 10		Input Register	Read		Condenser fan B2 operating %
F077	Suction Pressure SP	INT * 10	Pa	Input Register	Read	ALL	Suction Pressure Set Point for
F180	Heating Stage 1	BOOL		Discrete Input	Read		True if heating stage 1 is active
F181	Heating Stage 2	BOOL		Discrete Input	Read		True if heating stage 2 is active
F182	Heating Stage 3	BOOL		Discrete Input	Read		True if heating stage 3 is active
F183	Heating Stage 4	BOOL		Discrete Input	Read		True if heating stage 4 is active
F088	Reheat/Reclaim	BOOL	-	Discrete Input	Read	OPTION	True if reheat or reclaim is active (if equipped)
F572	% Heat Capacity	INT * 10	%	Input Register	Read	OPTION	% of total active heating capacity (if equipped)
F573	% Compressor Capacity	INT * 10	%	Input Register	Read	ALL	% of total active compressor capacity

Physical Outputs - Continued

F62E	ERV Wheel	BOOL	-	Discrete Input	Read	OPTION	ERV Wheel Enable
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F62F	ERV Power Exhaust	BOOL	-	Discrete Input	Read	OPTION	ERV Power Exhaust Enable
F630	ERV Bypass	BOOL	-	Discrete Input	Read	OPTION	True if ERV Bypass is open
F631	ERV Store Exhaust	BOOL	-	Discrete Input	Read	OPTION	ERV Store Exhaust Fan Enable
F66E	Exhaust Interlock 1	BOOL	-	Discrete Input	Read	OPTION	True if Exhaust Interlock 1 is Active
F66F	Exhaust Interlock 2	BOOL	-	Discrete Input	Read	OPTION	True if Exhaust Interlock 2 is Active
F670	Exhaust Interlock 3	BOOL	-	Discrete Input	Read	OPTION	True if Exhaust Interlock 3 is Active
F37C	Hydronic Hot Water Valve	INT * 10	%	Input Register	Read	HYDRONIC	Percent opening of Hydronic Heating Coil Valve
F36D	Hydronic Hot Water Enable	BOOL	-	Discrete Input	Read	HYDRONIC	Hydronic Hot Water Mode Enable
F36E	Hydronic Hot Water Pump	BOOL	-	Discrete Input	Read	HYDRONIC	Hydronic Hot Water Pump Enable
F347	Water Condenser Valve A	INT	%	Input Register	Read	WATER SOURCE	Water Condenser Valve A Open Position 0-100%
F349	Water Condenser Valve B	INT	%	Input Register	Read	WATER SOURCE	Water Condenser Valve B Open Position 0-100%
F343	Reversing Valve	BOOL	-	Discrete Input	Read	WATER SOURCE	Reversing Valve Position - true is heating, false is cooling
F3A8	Discharge Pressure SP	INT * 10	psi	Input Register	Read	HEAT PUMP	Discharge Pressure Set Point for Suction Group 1 during heating
F38F	Water Condenser A Pressure	INT * 10	psi	Input Register	Read	WATER SOURCE	Effective pressure used to modulate water condenser valve A
F3C4	Water Condenser A Pressure	INT * 10	Pa	Input Register	Read	WATER SOURCE	Effective pressure used to modulate water condenser valve A
F38B	Water Condenser A Pressure SP	INT * 10	psi	Input Register	Read	WATER SOURCE	Pressure setpoint to modulate condenser valve A
F3C2	Water Condenser A Pressure SP	INT * 10	Pa	Input Register	Read	WATER SOURCE	Pressure setpoint to modulate condenser valve A
F391	Water Condenser B Pressure	INT * 10	psi	Input Register	Read	WATER SOURCE	Effective pressure used to modulate water condenser valve B
F3C1	Water Condenser B Pressure	INT * 10	Pa	Input Register	Read	WATER SOURCE	Effective pressure used to modulate water condenser valve B
F38D	Water Condenser B Pressure SP	INT * 10	psi	Input Register	Read	WATER SOURCE	Pressure setpoint to modulate condenser valve B
F3C3	Water Condenser B Pressure SP	INT * 10	Pa	Input Register	Read	WATER SOURCE	Pressure setpoint to modulate condenser valve B
F8A8	Exhaust Fan Speed %	INT	%	Input Register	Read	OPTION	Current VFD Operating %

Design Options/Parameters (Available for Conditional Visibility)

F0F9	Max Outdoor Damper Position	INT	%	Input Register	Read	ALL	Max % opening of the Outdoor Air Damper including DCV requirements (if equipped)
F0F8	Outdoor Damper CO2 Max Inc.	INT	%	Input Register	Read	OPTION	Additional % opening of the Outdoor Air Damper during a CO2 call
F150	Max Return Damper Position	INT	%	Input Register	Read	ALL	Max % opening of the Return Air Damper throughout Cool/Heat/Fan Only modes
F151	Min Return Damper Position	INT	%	Input Register	Read	ALL	Min % opening of the Return Air Damper throughout Dehum mode
F14F	Min Bypass Damper Position	INT	%	Input Register	Read	ALL	Min % opening of the Bypass Air Damper throughout Cool/Heat/Fan Only modes

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F13B	RH/Dew Point Sensor	BOOL	-	Discrete Input	Read	ALL	True if RH sensor, False if Dewpoint Sensor
F0B2	Number of Condenser Fans	INT	#	Input Register	Read	ALL	Total # of Condenser Fans included on the unit
F14D	Condenser Fan Control	BOOL	-	Discrete Input	Read	ALL	True if Condenser Fan Control is Enabled in the control sequence
F0B1	Number of Heat Stages	INT	#	Input Register	Read	OPTION	Total # of Auxiliary Heat Stages included on the unit
F0EC	Reheat/Reclaim	BOOL	-	Discrete Input	Read	OPTION	True if Reclaim, False if Reheat
F847	Reheat/Reclaim Disable	BOOL	-	Discrete Input	Read	OPTION	True if neither Reheat or Reclaim coils are included on the unit
F672	Auxiliary Heat Lockout	BOOL	-	Discrete Input	Read	OPTION	True if there is no auxiliary heating included in the Flō unit
F216	CO2 Sensor	BOOL	-	Discrete Input	Read	OPTION	True if a CO2 Sensor is included on the unit or used for control
F214	Number of Compressors	INT	#	Input Register	Read	ALL	Total # of Compressors included on the unit
F0B3	Number of Exhaust Interlocks	INT	#	Input Register	Read	OPTION	Total # of exhaust interlocks configured in unit control
F62D	ERV Option	BOOL	-	Discrete Input	Read	OPTION	True if an ERV is included on the unit
F574	Program Revision Number	INT	#	Input Register	Read	ALL	Current firmware version loaded on the controller
F3A7	Number of Water Condensers	INT	#	Input Register	Read	WATER SOURCE	# of water condensers present on the unit
F355	Water Source	BOOL	-	Discrete Input	Read	WATER SOURCE	True if the unit uses water source condensers
F3AB	Preheat Option	BOOL	-	Discrete Input	Read	OPTION	True if unit is equipped with pre-heat
F215	Unit Type	INT	#	Input Register	Read	ALL	1: SPU, 2 = MPU, 3 = WSHP, 4 = Split, 5 = MUA, 6 = HOU, 7 = Chilled Water
F386	Min Condenser Valve Position	INT	%	Input Register	Read	WATER SOURCE	Minimum % opening f or water condenser valve during modulation
F397	Max Condenser Valve Position	INT	%	Input Register	Read	WATER SOURCE	Maximum % opening f or water condenser valve during modulation
F3BE	Condenser Valve OFF Position	INT	%	Input Register	Read	WATER SOURCE	Condenser valve % opening when no compressors are called for

Sensor Offsets

F0A1	Space Temp Offset	INT * 10	°F	Input Register	Read	ALL	Space temperature sensor calibration offset
F0A6	Space Humidity Offset	INT * 10	%	Input Register	Read	ALL	Space humidity sensor calibration offset
F0A2	Supply Temp Offset	INT * 10	°F	Input Register	Read	ALL	Supply temperature sensor calibration offset
F0A5	Return Air Temp Offset	INT * 10	°F	Input Register	Read	ALL	Return temperature sensor calibration offset

NOTE: Like the Input values, the Output INT values also have a precision of 0.1 °C, 0.1%, or 0.1psi (Pa). To represent the decimal value over Modbus communication, all values noted with an input format of “INT*10” need to be converted from SI units (°C or Pa) and multiplied by 10 before displaying on the BMS. The pressure values are available in both **Pa** and **psi** units depending on preference.