TECHNICAL GUIDE · IN-IC2E-03 · EXTERNAL

i-Controller 2.0e IO List

Document: IN-IC2e-03

Title: i-Controller 2.0e IO List

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Overview

This document outlines the I/O points for the i-Controller 2.0e VCCX-454, RSMD-454 and EM1.

IC2.0e Main

Universal Inputs	*Analog Outputs*				
1	Space Temperature 1	U-1	1	Mod Reclaim LVL	Y-1
2	Space Humidity/DP 1	U-2	2		Y-2
3	Entering Reheat Temperature	U-3			
4	Space Temperature 2	U-4			
5	Space Humidity/DP 2	U-5			
6	Space CO2 1	U-6			
7	Space CO2 2	U-7			
8	Exhaust Interlock 1 (DRY)	U-8			
9	*SPARE U1 (Monitor Only) / Space CO2 3*	U-9			
10	*SPARE U2 (Monitor Only) / Flow Mtr/ Vest Temp*	U-10			
Digital Inputs	*Digital Outputs*				
1	Phase Monitor	ID-1	1		NO-1
2	Load Shed	ID-2	2		NO-2
			3	CHW Pump En	NO-3
			4		NO-4
			5	Vestibule Damper	NO-5
			6	Alarm OUT	NO-6

IC2.0e EXT

Universal Inputs	*Analog Outputs*				
1	Entering Reclaim Temperature 1	U-1	1	Boost Reclaim LVL 1	Y-1
2	Leaving Reclaim Temperature 1	U-2	2	Boost Reclaim LVL 2	Y-2
3	Entering Reclaim Coil Pressure 1	U-3			
4	Leaving Reclaim Coil Pressure 1	U-4			
5	Unit Leak Detect (CO2)	U-5			
6	Entering Reclaim Temperature 2	U-6			
7	Leaving Reclaim Temperature 2	U-7			
8	Entering Reclaim Coil Pressure 2	U-8			
9	*Leaving Reclaim Coil Pressure 2*	U-9			
10	*SPARE U3 (Monitor Only) / Space CO2 4*	U-10			
Digital Inputs	*Digital Outputs*				
1	Rack feedback	ID-1	1	SubC Reclaim-En	NO-1
2	Overflow Switch	ID-2	2	DeSH Reclaim-En 1	NO-2
			3		NO-3
			4	DeSH Reclaim-En 2	NO-4
			5		NO-5

			6		NO-6

VCCX-454

Analog Inputs	*Analog Outputs*				
1	Supply Temp Signal	VCCX - AI3	1	Supply Fan VFD	VCCX - AO1
2	Return Air Temperature	VCCX - AI4	2	Outside Air Damper	VCCX - AO2
3	Building Pressure	VCCX - AI5	3	Modulating Heat	VCCX - AO3
4	Outside Air Temperature	VCCX - AI7	4	ExhFan VFD (Bldg Pres or PWR Exh)	VCCX - AO4
5	Supply Duct Static Pressure	VCCX - AI8			
Digital Inputs	*Digital Outputs*				
1	Airflow Switch	VCCX - BI1	1	Supply Fan	VCCX - RLY 1
2	Clogged Filter	VCCX - BI2	2	Heat Stage 1 / (Hot Water pmp EN)	VCCX - RLY 2
3	OAD End Switch	VCCX - BI3	3	Heat Stage 2	VCCX - RLY 3
4	A2L Airstrean Leak	VCCX - BI5	4	Heat Stage 3	VCCX - RLY 4
5	A2L Cabinet Leak	VCCX - BI6	5	Heat Stage 4	VCCX - RLY 5
6	Emergency Shutdown	VCCX - BI8	6	Heat Wheel Enable (ERV)	VCCX - RLY 6
			7	Chilled Water Valve	VCCX - RLY 7
			8	Alarm Indicator	VCCX - RLY 8

RSMD-454 (1 per Suction Group) – Separate Circuits

Analog Inputs	*Analog Outputs*				
1	Suction Pressure 1	RSMD - SP1	1	Condenser 1 Signal	RSMD - AO1
2	Suction Pressure 2	RSMD - SP2	2	Condenser 2 Signal	RSMD - AO2
3	Discharge Pressure 1	RSMD - HP1	*Triac Output*		
4	Discharge Pressure 2	RSMD - HP2	1	Dig Comp 1 or Comp 1 Stage 2	RSMD - COMP1
5	Discharge Temp 1	RSMD - AI1	2	Dig Comp 2 or Comp 2 stage 2	RSMD - COMP2
6	Discharge Temp 2	RSMD - AI2	*Digital Outputs*		
7	Leaving Water Temp (WSHP)	RSMD - AI3	1	Compressor 1 Enable	RSMD - RLY1
Digital Inputs	2	Compressor 2 Enable	RSMD - RLY2		
1	Compressor 1 Status	RSMD - BI1	3	Condenser 1 Enable	RSMD - RLY3
2	Compressor 2 Status	RSMD - BI2	4	Condenser 2 Enable	RSMD - RLY4
3	POF (WSHP) /DEF (ASHP)	RSMD - BI3	5	Reversing Valve (WSHP)	RSMD - RLY5
4	Emergency Shutdown	RSMD - BI4			

EM1

Analog Inputs	*Analog Outputs*				
1	Entering Water Temp (WC)	EM1- T1	1	Motorized Exh Damper	EM1 - AO1
2	Return Air Plenum Press	EM1- SIG1	2	Return Air Damper	EM1 - AO2
3	Exhaust POF	EM1 - BI1	3	Bypass Air Damper	EM1 - AO3
			4		EM1 - AO4
Digital Inputs					
1	Exhaust POF	EM1 - BI1			
			Digital Outputs		
			1	Reheat 1 (On/Off)	EM1 - RLY 1
			2	Reheat 2 (On/Off)	EM1 - RLY 2
			3	ERV Power Exhaust (On/Off or ERV Pwr Exh)	EM1 - RLY 3

Unit LVTB

Terminal #		**Input Name**	**Point #**
1	I	Supply Temp Signal	*VCCX AI-3*
2	I	Supply Temp Common	*VCCX GND*
3	I	Space Temp 1 Signal	J2-U1
4	I	Space Temp 1 Common	J2-GND1
5	I	Space Hum 1 Signal	J2-U2
6	I	Space Hum 1 Common	J2-GND1

7	I	Space Temp 2 Signal	J2-U4
8	I	Space Temp 2 Common	J2-GND2
9	I	Space Hum 2 Signal	J2-U5
10	I	Space Hum 2 Common	J2-GND2
11	P	Combo Sensor Power (+)	CT-T20 (+)
12	P	Combo Sensor Power (-)	CT-T20 (-)
13	I	Smoke Detector Signal	*VFD MC*
14	I	Smoke Detector Common	*SR5-5*
15	I	Space CO2 1 Signal	J2-U6
16	I	Space CO2 1 Common	J2-GND2
17	I	Space CO2 2 Signal	J2-U7
18	I	Space CO2 2 Common	J2-GND3
19	P	Sensor +24 VAC Power	CT-T1
20	P	Sensor -24 VAC Power	CT-T1
21	I	Spare U1 Signal	J2-U9
22	I	Spare U1 Common	J2-GND3
23	I	Spare U2 Signal	J2-U10
24	I	Spare U2 Common	J2-GND3
25	I	Load Shed Signal	J8-ID2
26	I	Load Shed Common	J8-GND1
27	I	Exh Interlock Signal	J2-U8
28	I	Exh Interlock Common	J2-GND3
29	O	Mod Reclaim LVL	J8-Y1
30	O	Mod Reclaim LVL Common	J8-GND2
31	O	Alarm Out Signal	J12-NO6
32	O	Alarm Out Common	J12-C6

LVTB 1-2		IC2.0e WO/Disply	
Terminal #		**Input Name**	**Point #**
33	I	Unit Leak Detect (CO2) Signal	J2-U4
34	I	Unit Leak Detect (CO2) Common	J2-GND-2
35	I	Rack Feedback Signal	J8-ID1
36	I	Rack Feedback Common	J8-GND1
37	I	Spare U3 Signal	J2-U10
38	I	Spare U3 Common	J2-GND3
39	O	Subcooling Reclaim Signal	J10-NO1
40	O	Subcooling Reclaim Common	J10-C1/2
41	O	Desuperheating Reclaim Signal	J10-NO2
42	O	Desuperheating Reclaim Common	J10-C1/2
43	O	Boost Reclaim Level Signal	J8-Y1
44	O	Boost Reclaim Level Common	J8-GND2
45	C	+ BMS Connection	J4- +
46	C	- BMS Connection	J4- -
47	C	GND - BMS Connection	J4-GND

Revision History

Revision (n-ddmonthyyyy)	**Modification**
1-9JUNE2021	Content provided by LS, Released
1-12JUNE2026	Updated for IC2.0e

Approvals

Author	Manager	Supervisor, VP, Director or CEO

Christopher Agnew		