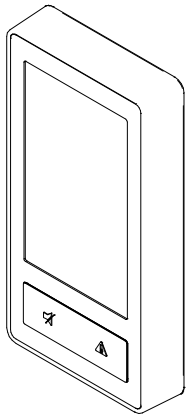
Cava™ - Touchscreen Fume Hood Controller

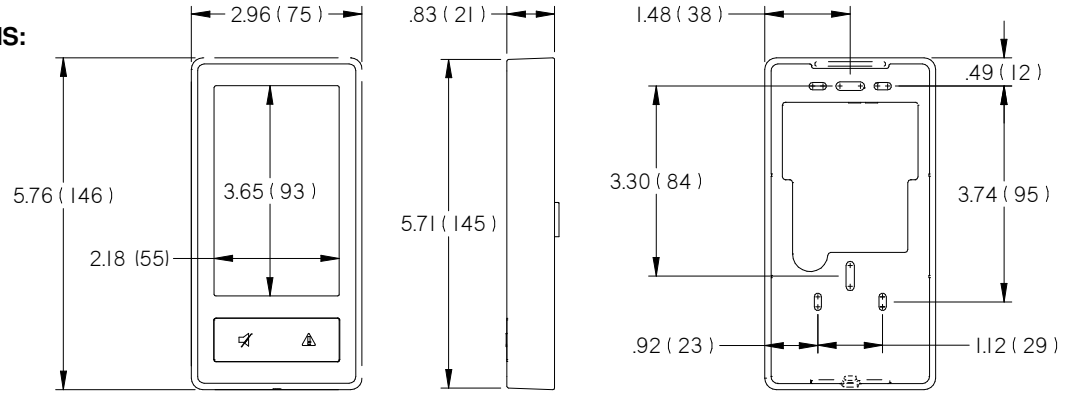
Product Submittal

272814
Rev. B
2021/08/20

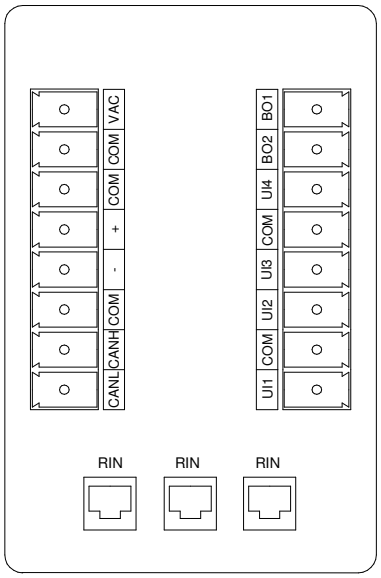
CAVA SPECIFICATIONS:		
ENVIRONMENTAL (OPERATING)	32ºF to 130ºF (0ºC to 55ºC), 5% to 95% R.H.(NON-CONDENSING)	
ENVIRONMENTAL (STORAGE)	-22ºF to 158ºF (-30ºC to 70ºC), 0% to 95% R.H.(NON-CONDENSING)	
INPUT POWER	24 VAC +/- 10%, 50/60 Hz, 12 VA MAX (EXCLUDING EXTERNAL LOADS), CLASS 2	
INPUTS	4 UNIVERSAL INPUTS	BINARY INPUT (CONTACT CLOSURE or ACTIVE), ANALOG INPUT (0 to 10 VDC), RESISTANCE INPUT - SASH POSITION (0-50 kOhm)
	CANbus ROOM INFORMATION NETWORK	
OUTPUTS	2 BINARY OUTPUTS (MAX: 24 VAC, 500 mA)	
INDICATORS	TOUCHSCREEN DISPLAY, 4.3" TFT	
HOUSING	UL 94 V - 0, PC-ABS PLASTIC	
COMMUNICATION PROTOCOL	BACNET	
BACNET	DEVICE TYPE	B-AAC
	COMMUNICATION TYPE	MS/TP (RS-485)
	COMMUNICATION SPEED	9600, 19200, 38400, 76800
	CERTIFICATION	BTL
	CONTROL PRIORITY ORDER	1. BACNET 2. NORMAL OPERATION



DIMENSIONS:



TERMINATION:



VAC	INPUT POWER, HOT
COM	INPUT POWER, GROUND
COM	BACNET NET COM
+	BACNET +
-	BACNET -
COM	CANbus NETWORK
CANH	
CANL	
BO1	BINARY OUTPUT
BO2	BINARY OUTPUT
UI4	UNIVERSAL INPUT
COM	UNIVERSAL INPUT GROUND
UI3	UNIVERSAL INPUT
UI2	UNIVERSAL INPUT
COM	UNIVERSAL INPUT GROUND
UI1	UNIVERSAL INPUT
RIN	ROOM INFORMATION NETWORK IN/OUT
RIN	ROOM INFORMATION NETWORK IN/OUT
RIN	ROOM INFORMATION NETWORK IN/OUT

NOTE: PLEASE REFER TO CAVA MANUAL FOR INSTALLATION INSTRUCTIONS. SEE PROJECT SUBMITTAL SCHEDULE FOR SELECTED OPTIONS.
ALL METRIC DIMENSIONS ( ) ARE SOFT CONVERTED. IMPERIAL DIMENSIONS ARE CONVERTED TO METRIC AND ROUNDED TO THE NEAREST MILLIMETER.
SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

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NOTE: THE BACNET POINTS LIST BELOW APPLIES ONLY IF THE CAVA CONTROLLER IS CONNECTED DIRECTLY TO BACNET MS/TP AND NOT CONNECTED TO THE PACE CONTROLLER. IF THE CAVA CONTROLLER IS CONNECTED TO A PACE CONTROLLER THROUGH THE ROOM INFORMATION NETWORK (RIN), REFER TO THE PACE PRODUCT SUBMITTAL (anteccontrols.com/products/).

BACNET POINTS LIST v2.0.0 OR NEWER

Object	Name	Units	Range	Description	Write Setting
ANALOG INPUTS					
Note: Analog input AI1 will display as AI11 for Controller 1, AI21 for Controller 2, etc.					
AI#1	[Controller name] AI1 – [AI1 Device name]	Dynamic	Dynamic	Analog Input with multiple uses See *Input* section of the Antec Toolbox manual for options	R
AI#2	[Controller name] AI2 – [AI2 Device name]	Dynamic	Dynamic	Analog Input with multiple uses See *Input* section of the Antec Toolbox manual for options	R
AI#3	[Controller name] AI3 – [AI3 Device name]	Dynamic	Dynamic	Analog Input with multiple uses See *Input* section of the Antec Toolbox manual for options	R
AI#4	[Controller name] AI4 – [AI4 Device name]	Dynamic	Dynamic	Analog Input with multiple uses See *Input* section of the Antec Toolbox manual for options	R
BINARY INPUTS					
Note: Binary input BI1 will display as BI11 for Controller 1, BI21 for Controller 2, etc.					
BI#1	[Controller name] BI1 – [BI1 Device name]	Open/Closed	Open/Closed	Binary Input with multiple uses See *Input* section of the Antec Toolbox manual for options	R
BI#2	[Controller name] BI2 – [BI2 Device name]	Open/Closed	Open/Closed	Binary Input with multiple uses See *Input* section of the Antec Toolbox manual for options	R
BI#3	[Controller name] BI3 – [BI1 Device name]	Open/Closed	Open/Closed	Binary Input with multiple uses See *Input* section of the Antec Toolbox manual for options	R
BI#4	[Controller name] BI4 – [BI2 Device name]	Open/Closed	Open/Closed	Binary Input with multiple uses See *Input* section of the Antec Toolbox manual for options	R
ANALOG OUTPUTS					
Note: Analog output AO1 will display as AO11 for Controller 1, AO21 for Controller 2, etc.					
AO#1	[Controller name] AO1 – [AO1 Device name]	VDC	0 to 10	Analog Output with multiple uses See *Output* section of the Antec Toolbox manual for options	R/W
AO#2	[Controller name] AO2 – [AO2 Device name]	VDC	0 to 10	Analog Output with multiple uses See *Output* section of the Antec Toolbox manual for options	R/W
AO#3	[Controller name] AO3 – [AO3 Device name]	VDC	0 to 10	Analog Output with multiple uses See *Output* section of the Antec Toolbox manual for options	R/W
AO#4	[Controller name] AO4 – [AO4 Device name]	VDC	0 to 10	Analog Output with multiple uses See *Output* section of the Antec Toolbox manual for options	R/W
BINARY OUTPUTS					
Note: Analog output BO1 will display as BO11 for Controller 1, BO21 for Controller 2, etc.					
BO#1	[Controller name] BO1 – [BO1 Device name]	Active/Inactive	Active/Inactive	Binary Output with multiple uses See *Output* section of the Antec Toolbox manual for options	R/W
BO#2	[Controller name] BO2 – [BO2 Device name]	Active/Inactive	Active/Inactive	Binary Output with multiple uses See *Output* section of theAntec Toolbox manual for options	R/W
ANALOG VALUE					
AV1 - AV10 not applicable for Cava™ controller.					
AV11	Total Fume Hood Exhaust	CFM; L/s	0 to 50000 CFM (0 to 23600 L/s)	Total fume hood exhaust airflow *Hidden if no fume hoods connected*	R
AV12 - AV98 not applicable for Cava™ controller.					
Note: Analog value AV#01 will display as AV101 for Controller 1, AV201 for Controller 2, etc.					
AV#01	[Controller name] Flow - [POT1 Device name]	CFM; L/s	0 to 50000 CFM (0 to 23600 L/s)	POT1 airflow reading *Hidden when POT1 is not used*	R
AV#02	[Controller name] Flow - [POT2 Device name]	CFM; L/s	0 to 50000 CFM (0 to 23600 L/s)	POT2 airflow reading *Hidden when POT2 is not used*	R
AV#03	[Controller name] - Valve Pressure	in.w.c.; Pa	-5.0 to 5.0 in.w.c. (-1245 to 1245 Pa)	Valve Pressure *Hidden when device type is not VV*	R
AV#04	[Controller name] Flow - [Transducer Device name]	CFM; L/s	0 to 50000 CFM (0 to 23600 L/s)	Transducer airflow reading *Hidden when airflow source is not transducer*	R
AV#15	[Controller name] Face Velocity	FPM; m/s	0 to 1000 FPM (0 to 5.08 m/s)	Displays the current face velocity across the fume hood *Hidden when controller is not a Cava™*	R

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BACNET POINTS LIST v2.0.0 OR NEWER (CONTINUED)

Object	Name	Units	Range	Description	Write Setting
MULTISTATE VALUE					
MV1 - MV5 not applicable for Cava™ controller.					
MV99	Firmware Update Status	Text	4 states	Displays the current firmware update status 1 - Idle 2 - Start Firmware Update 3 - Updating Firmware 4 - Firmware Update Failed	R/W
Note: Multistate value MV#3 will display as MV13 for Controller 1, MV23 for Controller 2, etc…					
MV#3	[Controller Name] Status	Text	12 States	Displays the current room alarm status 1 - CANbus Device Not Responding 2 - Sash Missing/Broken 3 - Sash Height Low 4 - Sash Height High 5 - Face Velocity Low 6 - Face Velocity High 7 - Valve Pressure Low 8 - Valve Pressure High 9 - Valve Airflow Low 10 - Valve Aiflow High 11 - Fume Hood Mode 12 - No Alarm *Hidden when controller is not a Cava™*	R
MV#4	[Controller Name] Hood Mode	Text	4 States	Displays the current hood mode 1 - [Hood Mode 1 Name] 2 - [Hood Mode 2 Name] 3 - [Hood Mode 3 Name] 4 - [Hood Mode 4 Name] *Hidden when controller is not a Cava™*	R/W
MV#5	[Controller Name] Hood Mode Override	Text	4 States	Displays the current hood mode override 1 - [Hood Mode 1 Name] 2 - [Hood Mode 2 Name] 3 - [Hood Mode 3 Name] 4 - [Hood Mode 4 Name] *Hidden when controller is not a Cava™*	R/W
FILE					
FIL1	Firmware	-	-	The file object used for firmware upgrades - feature only available if supported by BAS	W
CALENDAR					
CAL1	Calendar Object	-	-	The calendar object used for scheduling	R/W
NOTIFICATION CLASS					
EVC1	Notification Class object	-	-	The notification class object for alarming	R/W
SCHEDULE					
SCH1	Room Mode Schedule	-	-	The scheduling object for scheduling room mode changes	R/W

NOTE: THE BACNET POINT NAMES CAN BE OVERRIDDEN USING ANTEC TOOLBOX AND MAY NOT MATCH THE NAMES LISTED IN THIS TABLE. THE INSTANCE NUMBERS CAN BE USED IN THIS CASE TO IDENTIFY THE POINTS.

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DEFAULT CHANGE OF VALUE (COV) INCREMENTS				
VARIABLE	**DEFAULT COV INCREMENT**	**UNITS**	**DEFAULT COV INCREMENT**	**UNITS**
-	**IMPERIAL**		**METRIC**	
Airflow	50	CFM	24	L/s
Actuator	0.001	V	0.001	V
Valve Pressure	0.2	in.w.c.	49.8	Pa
CO2	100	ppm	100	ppm
Face Velocity	10	FPM	0.051	m/s
Humidity	1	%	1	%
Position	1	%	1	%
Room Volume	100	ft^3	2.83	m^3
Temperature	0.5	°F	0.3	°C
VOC	100	ppm	100	ppm
Voltage	0.05	V	0.05	V

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