CARLETON UNIVERSITY ACADEMIC BUILDING; CANAL SITE 1125 Colonel By Drive Ottawa, ON K1S 5R1 PROJECT NO.:2111-00451 SPECIALTY: DDC CONTROL PROJECT MANAGER: ERIC SAVAGE DESIGNER: E. KERCKHOFF R.E. Hein Construction CLIENT: Crossey Engineering Ltd. **ENGINEER** 29 Edgewater Street 2255 Sheppard Avenue East, Suite E-331 Ottawa, ON K2L 1V7 Toronto, ON M2J 1V7 TEL.: 613-831-2335 Tel: 416-479-3111 FAX: 613-831-8779 Fax: 416-479-7210 □ GENERAL CONTRACTOR ☐ MECHANICAL CONTRACTOR OWNER

SITE MAP 1125 Colonel By Drive Ottawa, ON K1S 5R1 West Centre Town
- Little Italy - Civic
Hospital East 16 16/ Carleton University 19 19 16 19 Civic Hospital -Experimental Farm - Central Park 16 Vincent Massey Park

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VALVE SCHEDULE

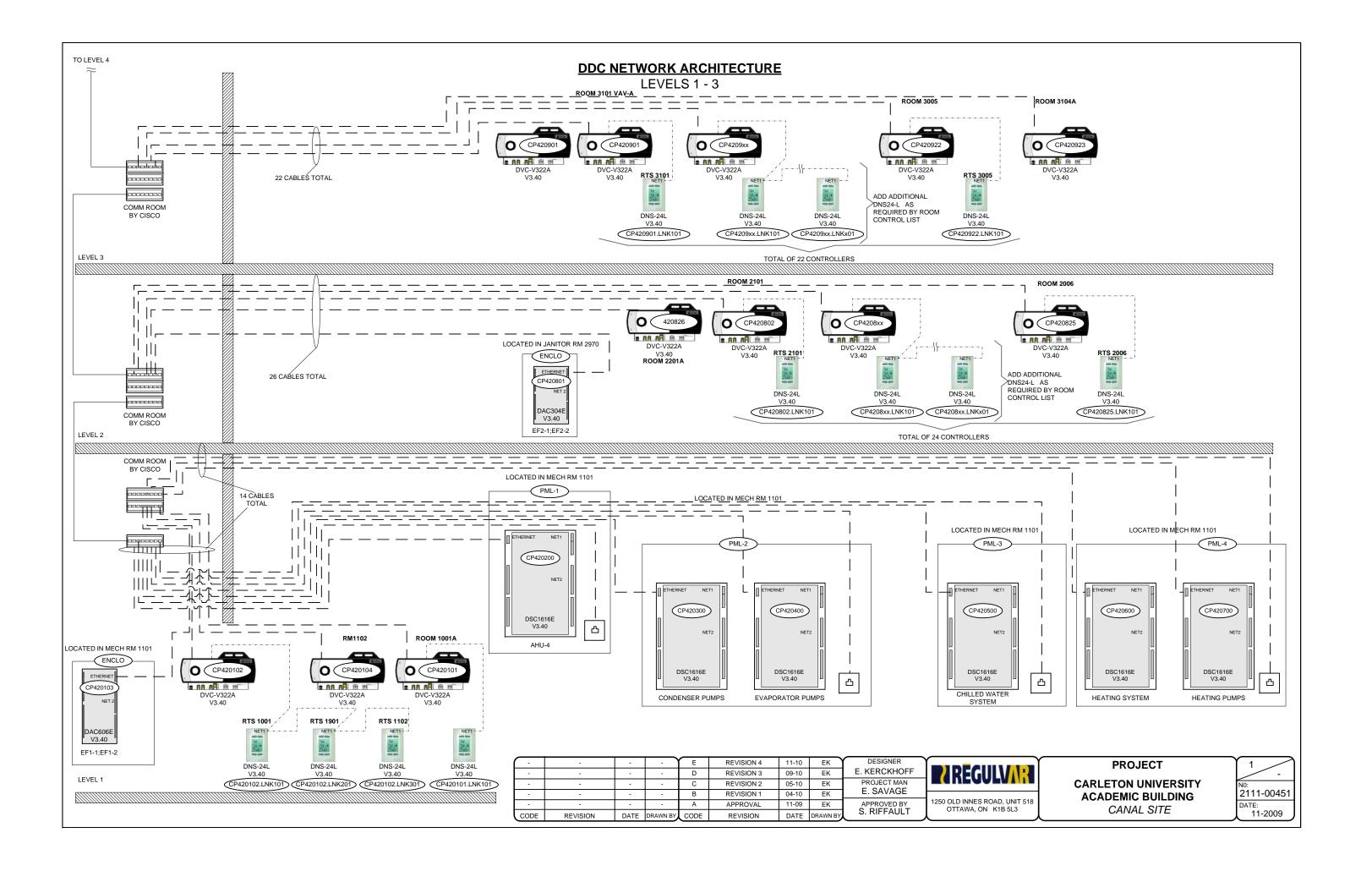
ACTUATOR SCHEDULE

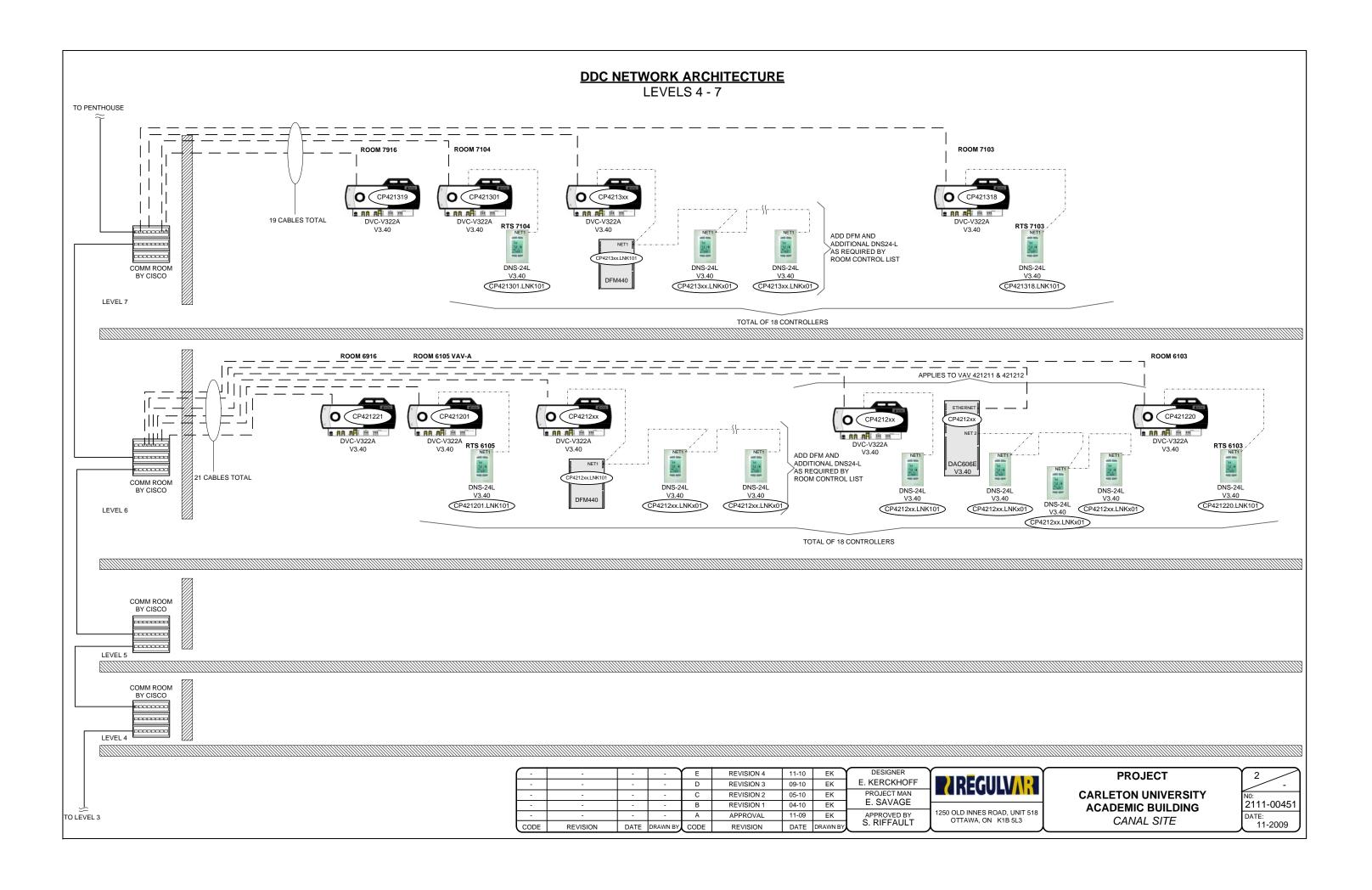
STEAM VALVE SCHEDULE

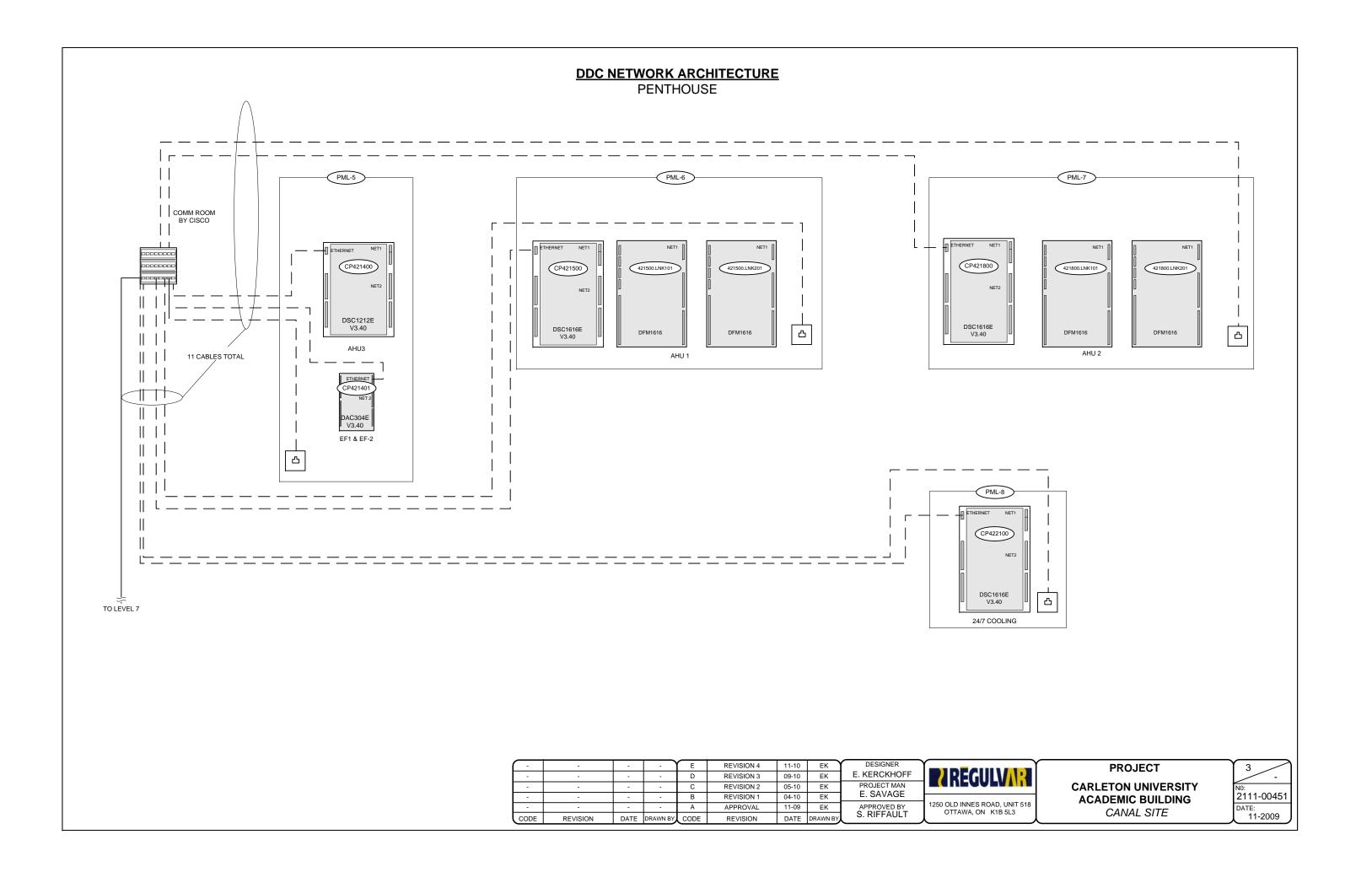
LEGEND — — — ETHERNET ---- MS/TP RS-485 ---- LINKNET ---- WIRING BY REGULVAR **EXISTING WIRING OR BY OTHERS ELECTRICAL CONNECTIONS IDENTIFICATION** (#) TERMINAL CONNECTIONS IDENTIFICATION TO STARTER TERMINAL CONNECTIONS IDENTIFICATION TO DEVICE **EQUIPMENT TERMINAL IDENTIFICATIONS** FACE MOUNTED ENCLOSURE EQUIPMENT MOUNTED INSIDE ENCLOSURE EQUIPMENT EXISTING EQUIPMENT OR SUPPLIED BY OTHERS **ELECTRIC MOTOR STARTER** REFER TO ELECTRICAL DIAGRAM END OF LINE RESISTANCE FOR TRM MS-TP (TRM-768) SIGNAL AMPLIFIER FOR RPT MS/TP (RPT-768) **DDC TERMINAL** | CONNECTION TYPE DETAIL: AA # INPUT / OUTPUT |-(See last four pages for NUMBER OF WIRES complete list) AI: ANALOG INPUT DETAIL #DEVICE AND #POINT X Y Z BI: BINARY INPUT **IDENTIFICATION** AO: ANALOG OUTPUT **BO: BINARY OUTPUT** — #POINT I : INPUT O: OUTPUT #DEVICE

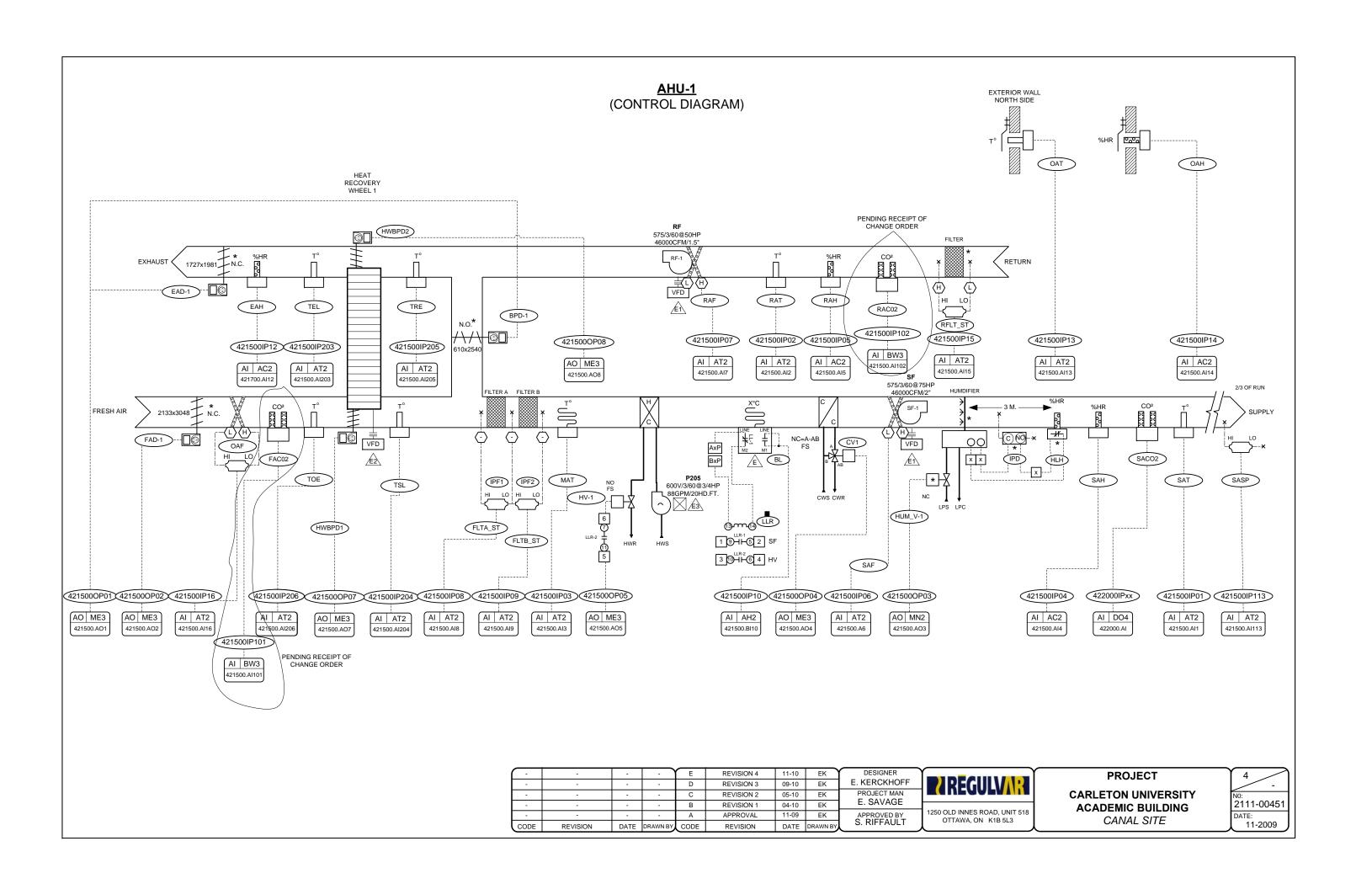
SECTION A

SCHEMATIC DRAWINGS

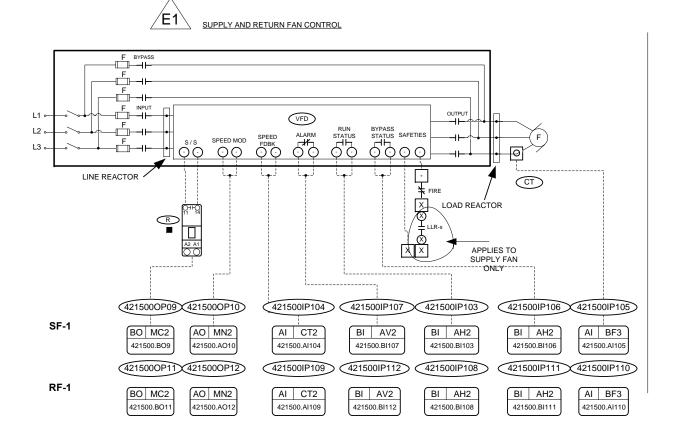


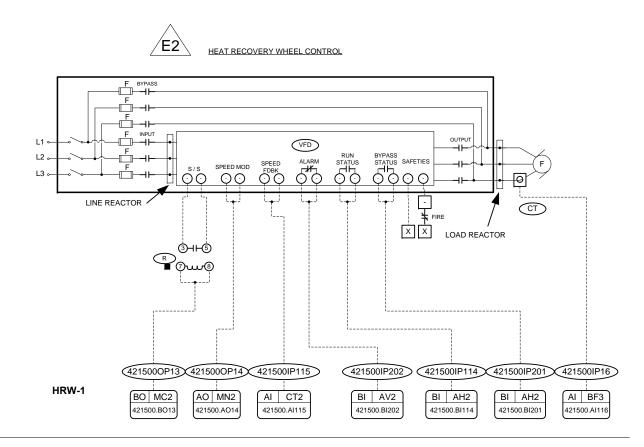


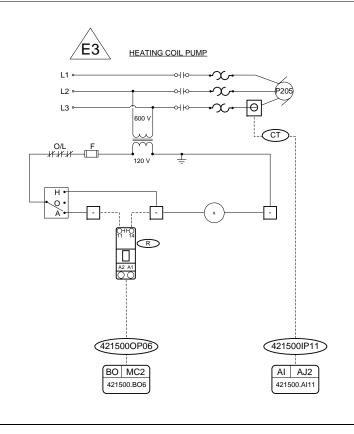




AHU (ELECTRICAL DIAGRAM)







							_	
DESIGNER	EK	11-10	REVISION 4	E	-	-	-	-
E. KERCKHOF	EK	09-10	REVISION 3	D	-	-	-	-
PROJECT MAN	EK	05-10	REVISION 2	С	-	-	-	-
E. SAVAGE	EK	04-10	REVISION 1	В	-	-	-	-
APPROVED BY	EK	11-09	APPROVAL	Α	-	-	-	-
S. RIFFAULT	DRAWN BY	DATE	REVISION	CODE	DRAWN BY	DATE	REVISION	CODE



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	N0:
	2111-00451
	DATE:
J	11-2009

AHU-1 (BILL OF MATERIALS)

BILL OF MATERIALS

<u>TAG</u>	QTY	MANUFACTURER	MODEL	DESCRIPTION
EAH;RAH;SAH	3	INTEC CONTROLS	CH3D420	Duct humidity sensor 0-100% rh, +/-2% rh, 4-20 mA.
OAH	1	SIEMENS	QFA3101	Outside air humidity sensor +/-2% 4-20mA
SAT;RAT;TEL;TRE;	6	MINCO	S450PDY12	Duct temperature sensor, platinum 100ohm, 12"
TSL;TOE;				
OAT	1	MINCO	S454PDY12	Outside air temperature sensor, platinum 100ohm, 12"
MAT	1	MINCO	S457PEZ12	Duct average temperature sensor, platinum 100 ohm, 12'
MAT;RAT;TEL;TRE	4	MINCO	TT111PD1N	Duct temperature sensor, 0 to 50°C, 4-20 mA, 24Vdc
SAT	1	MINCO	TT111PD1C	Duct temperature sensor, 0 to 100°C, 4-20 mA, 24Vdc
OAT;TOE;TSL	3	MINCO	TT111PD1M	Duct temperature sensor, -50°C to 50°C, 4-20 mA, 24Vdc
LL	1	SIEMENS	134-1504	Low temp manual reset, temperature adjustement -9 to 13°C, DPDT
■ LLR		CARLO GAVAZZI	RPY-A002-A24L	Electronic relay 2 pole 10 amp./120 V, 24 vac
■ LLR		CARLO GAVAZZI	ZPY08	Relay socket
CO2	2	INTEC CONTROLS	1310ED	CO2 gas transmitter & duct temperature sensor, 0-10 vdc ou 4-20 mA, 24 vac
SASP	1	SETRA	2641-2R5WD-11-T1-C	Differential pressure transducer. 0-2.5"WC , 4-20 mA
RAF;SAF;OAF	2	3 AIR MONITOR CORP DP	DPT2500	Air Monitor Veltron DPT2500 Plus Microporcessor Ultra-Low Differential Pressure and Flow
KAF,SAF,OAF	3		DP 12500	Transmitter for signal processing
RAF;SAF;OAF	3	AIR MONITOR CORP		Air Monitor Volu-probe Fan Inlet Traverse Probe
FLTx_ST	3	SETRA	2641-005WD-11-T1-C	Differential pressure transducer. 0-5"WC , 4-20 mA
СТ	1	VERIS	H-922	Current Transmitter 0-120 amp., 0-5 vdc
СТ	3	VERIS	H-720	Current Transmitter 0-200 amp., 3 wires, 4-20 mA, 24 vdc
∎ R		CARLO GAVAZZI	M15M	Electronic relay 8 amp. to 380 vac, 12 vdc.
ı R		CARLO GAVAZZI	ZD35	Relay base
ı R		CARLO GAVAZZI	939.90.33.3	Surge Suppressor & Pilot light for M15MAH001812Vcc relay
∎ R		CARLO GAVAZZI	RPY-A002-A24L	Electronic relay 2 pole 10 amp./120 V, 24 vac
■ R		CARLO GAVAZZI	ZPY08	Relay socket
R	1	CARLO GAVAZZI	M15M	Electronic relay 8 amp. to 380 vac, 12 vdc.
R	1	CARLO GAVAZZI	ZD35	Relay base
R	1	CARLO GAVAZZI	939.90.33.3	Surge Suppressor & Pilot light for M15MAH001812Vcc relay
HV-1	1	BELIMO	B240+AF24-SR	2 way valve, 1.5 in. dia., N.O., C.V.: 46, close-off: 200 psi c/w electrical actuator
CV-1	1	SIEMENS	291-06161	3 way valve, 3 in. dia., N.O., C.V.:100, close-off: 63 psi c/w electrical actuator
DMP	9	BELIMO	AF24-SR	Modulating 24 vac, actuator 2-10 vdc c/w spring return

(-	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

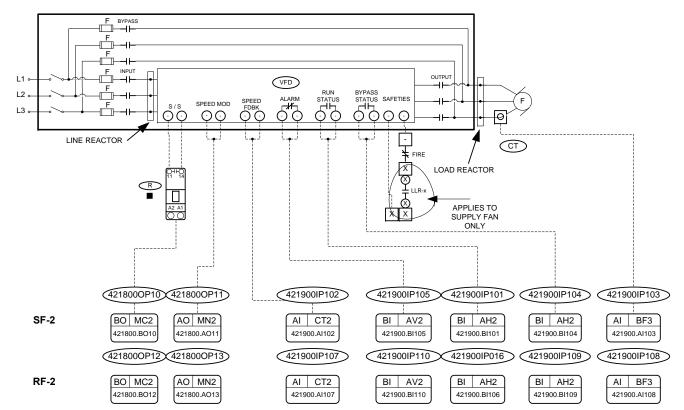
1250 OLD INNES ROAD, UNIT 518 OTTAWA, ON K1B 5L3 PROJECT
CARLETON UNIVERSITY
ACADEMIC BUILDING
CANAL SITE

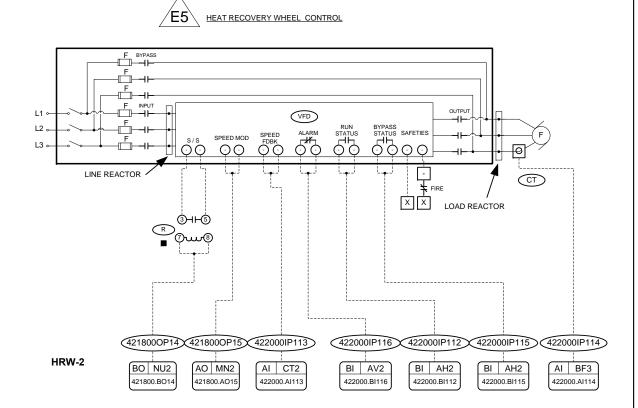
6 -N0: 2111-00451 DATE: 11-2009

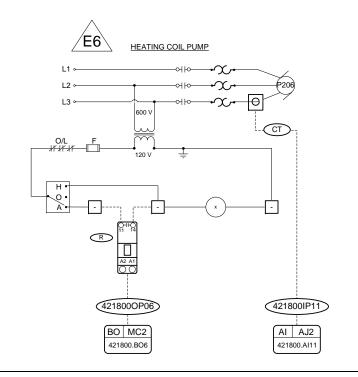
AHU-2 (CONTROL DIAGRAM) HEAT RECOVERY WHEEL 2 PENDING RECEIPT OF CHANGE ORDER 575/3/60@50HP HWBPD2 46000CFM/1.5 RETURN EXHAUST 1727x1981 N.O. AID-2 RAT RAH AIH TEL TEE RAC02 MAD RAD N.O.* RFLT_ST 421800IP16 421800IP13 421800OP08 421800OP09 421800IP12 421800IP204 421800IP203 421800IP07 421800IP02 421800IP05 AI BW3 AI AT2 AO ME3 AO ME3 AI AC2 AI AA2 AI AA2 AI AT2 AI AT2 AI AC2 421800.AO8 421800.AI12 421800.AI204 421800.AI203 421800.AO9 421800.AI7 421800.AI2 421800.AI5 2/3 OF RUN FILTER A FILTER B 46000CFM/2" FRESH AIR ₩. FAD-2 QQ VFD OAF VFD TSL SAF x x (IPD) HLH E5 FAC02 SACO2 HV-2 **P206** 600V/3/60@3/4HP 88GPM/20HD.FT. SAT SAT SASP (IPF1) (IPF2) NO FS TSE (HWBPD1 CV-2 6 7 1 1 1 5 HUM_V-2 @md LLR 1 9H+5 2 SF FLTA_ST FLTB_ST 3 10-1-6 4 HV 421800OP07 421800OP01 421800OP02 (421800IP14) 421800IP15 421800IP201 (421800IP202) 421800IP08) 421800IP09 421800IP03 (421800OP05) (421800IP10) (421800OP04) (421800IP06) (421800OP03) 421800IP04 422000IPxx 421800IP01 421800IP111 AO ME3 AO ME3 AI AT2 AO ME3 AI AA2 AI AT2 AI AT2 AO ME3 AO ME3 AI DO4 AI AT2 AI AT2 AI BW3 AI AA2 AI AT2 AI AH2 AI AT2 AO MN2 AI AC2 421800.AO1 421800.AO2 421800.AI18 421800.AI15 421800.AI201 421800.AO7 421800.AI202 421800.AI8 421800.AI9 421800.AI3 421800.AO5 421800.AO4 421800.Al6 421800.AO3 421800.AI4 422000.AI 421800.AI1 421800.AI111 421800.BI10 CHANGE ORDER REVISION 4 DESIGNER **PROJECT** REGULVAR E. KERCKHOFF EK 09-10 D REVISION 3 PROJECT MAN **CARLETON UNIVERSITY** REVISION 2 05-10 EK E. SAVAGE 2111-00451 **REVISION 1** 04-10 EK **ACADEMIC BUILDING** 1250 OLD INNES ROAD, UNIT 518 11-09 EK APPROVED BY S. RIFFAULT OTTAWA, ON K1B 5L3 CANAL SITE 11-2009 DATE DRAWN BY CODE REVISION DATE DRAWN BY CODE

<u>AHU-2</u> (ELECTRICAL DIAGRAM)









	_							
	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT



PROJECT

CARLETON UNIVERSITY

ACADEMIC BUILDING

CANAL SITE

8 -N0: 2111-00451 DATE: 11-2009

AHU-2 (BILL OF MATERIALS)

BILL OF MATERIALS

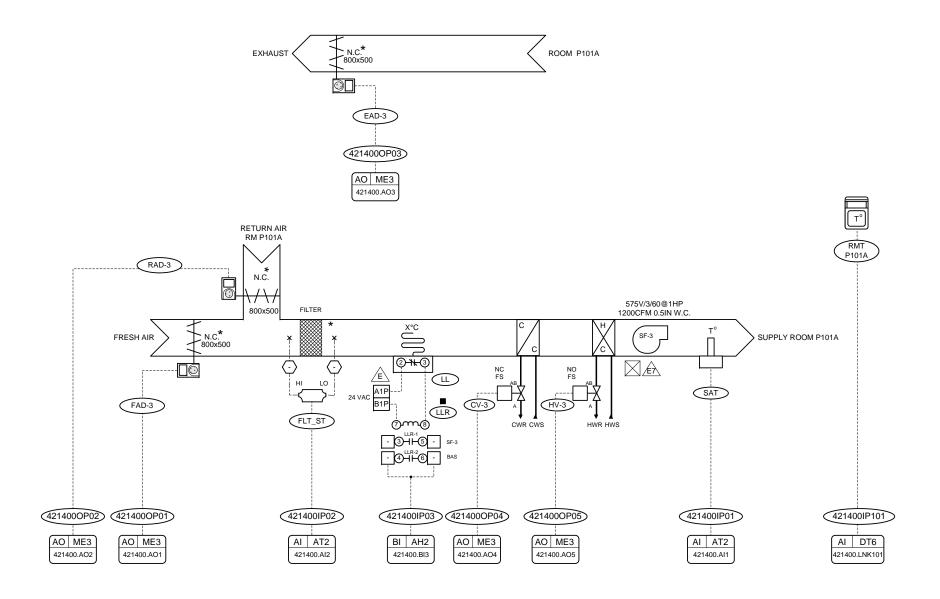
<u>T</u>	ΓAG	QTY	MANUFACTURER	MODEL	DESCRIPTION
E	AH;RAH;SAH	3	INTEC CONTROLS	CH3D420	Duct humidity sensor 0-100% rh, +/-2% rh, 4-20 mA.
	SAT;RAT;TEL;TRE; SL;TOE	6	MINCO	S450PDY12	Duct temperature sensor, platinum 100ohm, 12"
M	ЛАТ	1	MINCO	S457PEZ12	Duct average temperature sensor, platinum 100 ohm, 12'
M	MAT;RAT;TEL;TRE	4	MINCO	TT111PD1N	Duct temperature sensor, 0 to 50°C, 4-20 mA, 24Vdc
S	SAT	1	MINCO	TT111PD1C	Duct temperature sensor, 0 to 100°C, 4-20 mA, 24Vdc
Т	OE;TSL	2	MINCO	TT111PD1M	Duct temperature sensor, -50°C to 50°C, 4-20 mA, 24Vdc
L	.L	1	SIEMENS	134-1504	Low temp manual reset, temperature adjustement -9 to 13°C, DPDT
■ L	.LR		CARLO GAVAZZI	RPY-A002-A24L	Electronic relay 2 pole 10 amp./120 V, 24 vac
■ L	.LR		CARLO GAVAZZI	ZPY08	Relay socket
S	SASP	1	SETRA	2641-2R5WD-11-T1-C	Differential pressure transducer. 0-2.5"WC , 4-20 mA
R	RAF;SAF;OAF	3	AIR MONITOR CORP	DPT2500	Air Monitor Veltron DPT2500 Plus Microporcessor Ultra-Low Differential Pressure and Flow Transmitter for signal processing
R	RAF;SAF;OAF	3	AIR MONITOR CORP		Air Monitor Volu-probe Fan Inlet Traverse Probe
F	LTx_ST	3	SETRA	2641-005WD-11-T1-C	Differential pressure transducer. 0-5"WC , 4-20 mA
С	T	1	VERIS	H-922	Current Transmitter 0-120 amp., 0-5 vdc
С	T	3	VERIS	H-720	Current Transmitter 0-200 amp., 3 wires, 4-20 mA, 24 vdc
С	CO2	2	INTEC CONTROLS	1310ED	CO2 gas transmitter & duct temperature sensor, 0-10 vdc ou 4-20 mA, 24 vac
■ R	3		CARLO GAVAZZI	M15M	Electronic relay 8 amp. to 380 vac, 12 vdc.
■ R	3		CARLO GAVAZZI	ZD35	Relay base
■ R	3		CARLO GAVAZZI	939.90.33.3	Surge Suppressor & Pilot light for M15MAH001812Vcc relay
■ R	?		CARLO GAVAZZI	RPY-A002-A24L	Electronic relay 2 pole 10 amp./120 V, 24 vac
■ R			CARLO GAVAZZI	ZPY08	Relay socket
R		1	CARLO GAVAZZI	M15M	Electronic relay 8 amp. to 380 vac, 12 vdc.
R		1	CARLO GAVAZZI	ZD35	Relay base
R		1	CARLO GAVAZZI	939.90.33.3	Surge Suppressor & Pilot light for M15MAH001812Vcc relay
	IV-2	1	BELIMO	B240+AF24-SR	2 way valve, 1.5 in. dia., N.O., C.V.: 46, close-off: 200 psi c/w electrical actuator
	CV-2	1	BELIMO	B278+AF24-MFT	2 way valve, 3 in. dia., N.C., C.V.:130, close-off: 100 psi c/w electrical actuator
D	OMP	9	BELIMO	AF24-SR	Modulating 24 vac, actuator 2-10 vdc c/w spring return

(-	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

1250 OLD INNES ROAD, UNIT 518 OTTAWA, ON K1B 5L3 PROJECT
CARLETON UNIVERSITY
ACADEMIC BUILDING
CANAL SITE

9 -N0: 2111-00451 DATE: 11-2009

<u>AHU-3</u> (CONTROL DIAGRAM)



-	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

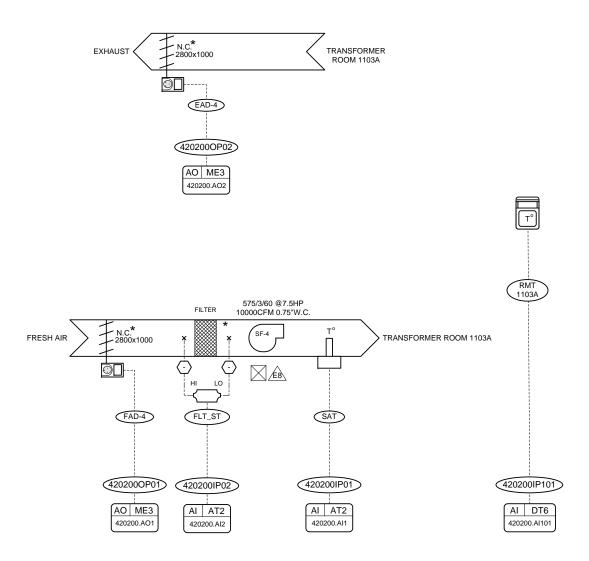


CARLETON UNIVERSITY ACADEMIC BUILDING CANAL SITE

PROJECT



<u>AHU-4</u> (CONTROL DIAGRAM)

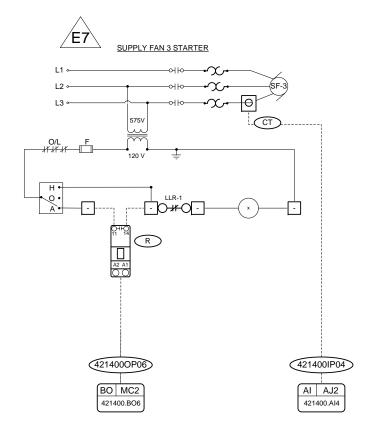


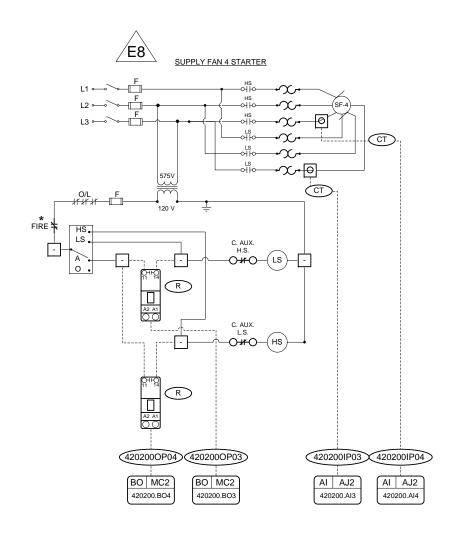
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E. KERCKHOFF	EK	09-10	REVISION 3	D	-	-	-	-
PROJECT MAN	EK	05-10	REVISION 2	С	-	-	-	-
E. SAVAGE	EK	04-10	REVISION 1	В	-	-	-	-
APPROVED BY	EK	11-09	APPROVAL	Α	-	-	-	-
S. RIFFAULT	DRAWN BY	DATE	REVISION	CODE	DRAWN BY	DATE	REVISION	CODE



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	NO: 2111-00451
	DATE:
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<u>AHU-3&4</u> (ELECTRICAL DIAGRAM)





DESIGNER	EK	11-10	REVISION 4	E	-	-	-	
E. KERCKHOFF	EK	09-10	REVISION 3	D	-	-	-	-
PROJECT MAN	EK	05-10	REVISION 2	С	-	-	-	-
E. SAVAGE	EK	04-10	REVISION 1	В	-	-	-	
APPROVED BY	EK	11-09	APPROVAL	Α	-	-	-	-
S. RIFFAULT	DRAWN BY	DATE	REVISION	CODE	DRAWN BY	DATE	REVISION	CODE



1	12
	N0:
	2111-00451
	DATE:
	11-2009

AHU-3 & AHU-4

(BILL OF MATERIALS)

BILL OF MATERIALS

TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION					
SAT	2	MINCO	S450PDY12	Duct temperature sensor, platinum 100ohm, 12"					
SAT	2	MINCO	TT111PD1C	Duct temperature sensor, 0 to 100°C, 4-20 mA, 24Vdc					
LL	1	SIEMENS	134-1504	Low temp manual reset, temperature adjustement -9 to 13°C, DPDT					
LLR		CARLO GAVAZZI	RPY-A002-A24L	Electronic relay 2 pole 10 amp./120 V, 24 vac					
LLR		CARLO GAVAZZI	ZPY08	Relay socket					
FLTx_ST	2	SETRA	2641-005WD-11-T1-C	Differential pressure transducer. 0-5"WC , 4-20 mA					
СТ	3	VERIS	H-922	Current Transmitter 0-120 amp., 0-5 vdc					
RMT1103A	1	DELTA	DNS24L	BACNET room temperature sensor c/w 4 push-button & LCD display, 1 Subnet or LinkNet port & 1 RJ II service port, 24vac					
HV-3	1	BELIMO	B211B+TF24-SR	2 way valve, 0.5in. dia., N.O., C.V.: 1.9, close-off: 200 psi c/w electrical actuator					
CV-3	1	BELIMO	B217B+TF24-SR	2 way valve, 0.75in. dia., N.O., C.V.: 4.7, close-off: 200 psi c/w electrical actuator					
FAD3;EAD3;RAD3	3	BELIMO	LF24-SR	Modulating 24 vac, actuator 2-10 vdc c/w spring return					
FAD4;EAD4	4	BELIMO	AF24-SR	Modulating 24 vac, actuator 2-10 vdc c/w spring return					

DESIGNER	EK	11-10	REVISION 4	E	-	-	-	-
E. KERCKHOFF	EK	09-10	REVISION 3	D	-	-	-	
PROJECT MAN	EK	05-10	REVISION 2	С	-	-	-	-
E. SAVAGE	EK	04-10	REVISION 1	В	-	-	-	-
APPROVED BY	EK	11-09	APPROVAL	Α	-	-	-	-
S. RIFFAULT	DRAWN BY	DATE	REVISION	CODE	DRAWN BY	DATE	REVISION	CODE

1250 OLD INNES ROAD, UNIT 518 OTTAWA, ON K1B 5L3 PROJECT

CARLETON UNIVERSITY

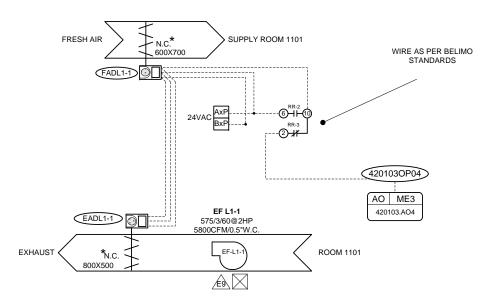
ACADEMIC BUILDING

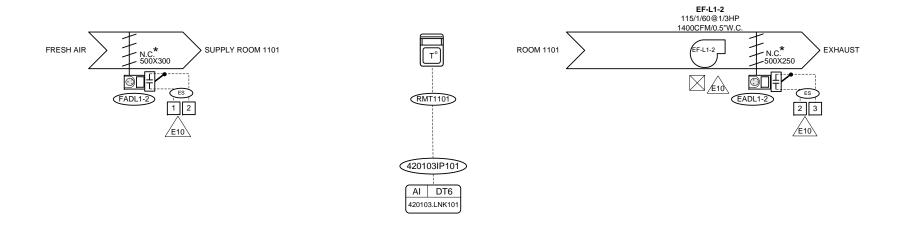
CANAL SITE

13 -N0: 2111-00451 DATE: 11-2009

LEVEL 1 EXHAUST FANS

(CONTROL DIAGRAM)





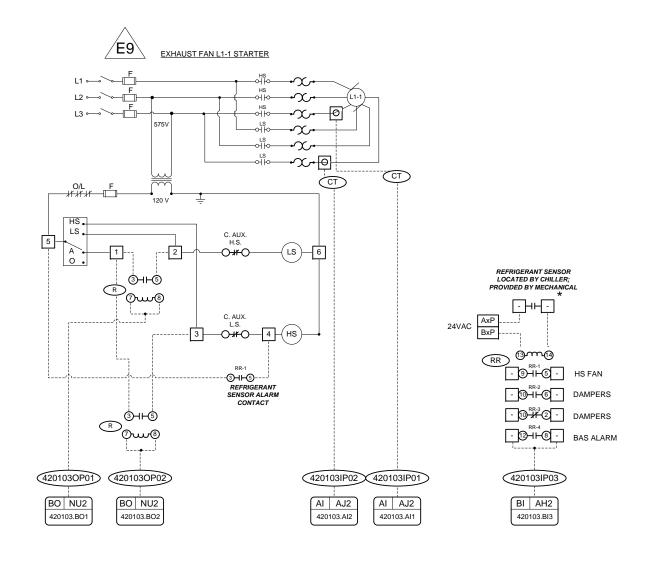
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-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	PEVISION	DATE	DRAWN BY	CODE	PEVISION	DATE	DRAWN BY	S. RIFFAULT

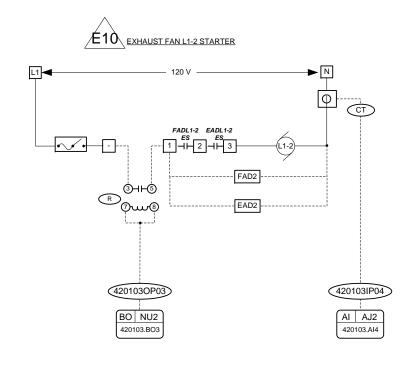


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NO: 2111-00451
DATE: 11-2009

LEVEL 1 EXHAUST FANS

(ELECTRICAL DIAGRAM)





_	=	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	=	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT





LEVEL 1 EXHAUST FANS

(BILL OF MATERIALS)

BILL OF MATERIALS

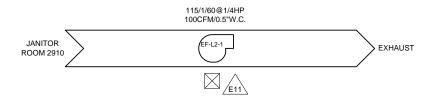
TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION				
RMT1101	1	DELTA	DNS24L	BACNET room temperature sensor c/w 4 push-button & LCD display, 1 Subnet or LinkNet port & 1				
				RJ II service port, 24vac				
СТ	3	VERIS	H-922	Current Transmitter 0-120 amp., 0-5 vdc				
RR	1	OMRON	MY4N-AC24	Electrical relay 4 pole 5 amp., 24 vac				
RR	1	OMRON	PYF14A-E	Relay socket				
R	3	CARLO GAVAZZI	RPY-A002-A24L	Electronic relay 2 pole 10 amp./120 V, 24 vac				
R	3	CARLO GAVAZZI	ZPY08	Relay socket				
FADL1-1;EADL1-1	2	BELIMO	LF24-SR	Modulating 24 vac, actuator 2-10 vdc c/w spring return				
FADL1-2;EADL1-2	2	BELIMO	TF120-S	ON OFF 120vac, actuator c/w spring return and end switch				

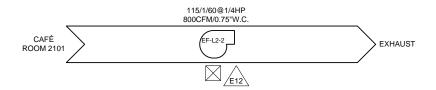
-	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

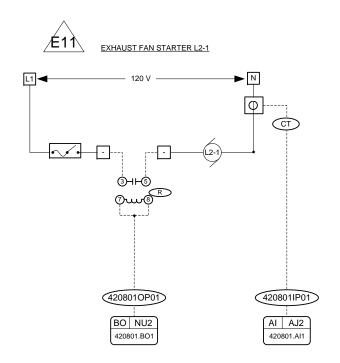


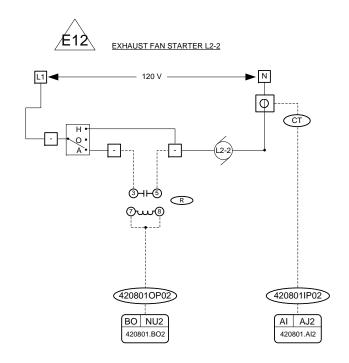


LEVEL 2 EXHAUST FANS (CONTROL DIAGRAM)







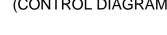


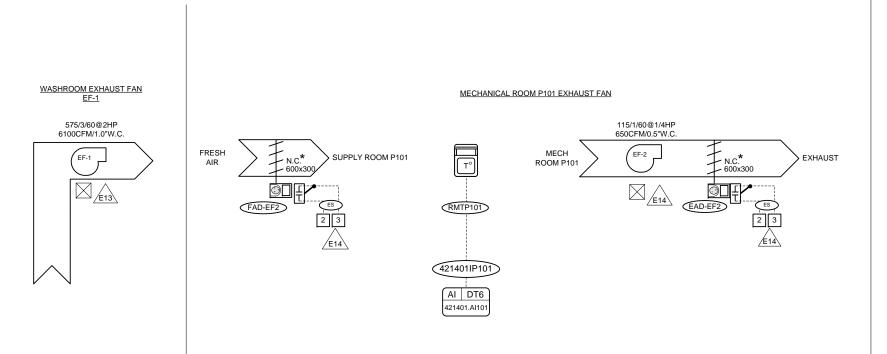
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-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT



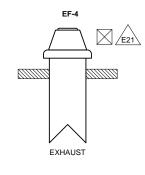


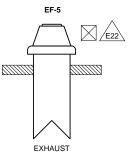
ROOF EXHAUST FANS (CONTROL DIAGRAM)











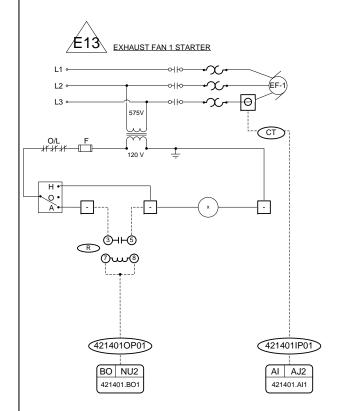
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-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

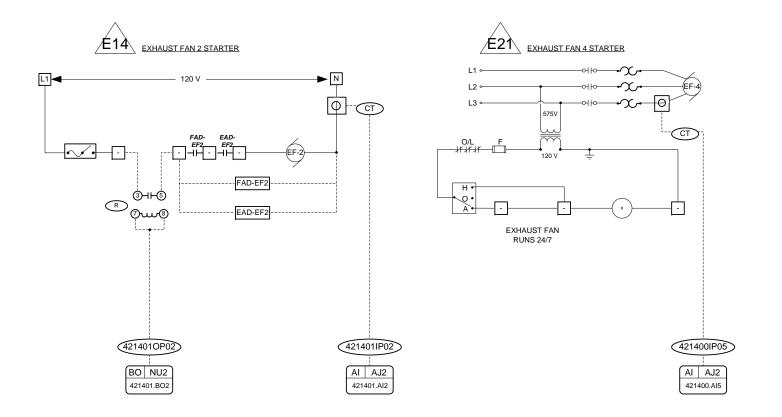


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ROOF EXHAUST FANS

(ELECTRICAL DIAGRAM & BILL OF MATERIALS)





BILL OF MATERIALS

TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION
RMTP101	1	DELTA	DNS24L	BACNET room temperature sensor c/w 4 push-button & LCD display, 1 Subnet or LinkNet port & 1
				RJ II service port, 24vac
СТ	6	VERIS	H-922	Current Transmitter 0-120 amp., 0-5 vdc
R	4	CARLO GAVAZZI	RPY-A002-A24L	Electronic relay 2 pole 10 amp./120 V, 24 vac
R	4	CARLO GAVAZZI	ZPY08	Relay socket
FADEF2;EADEF2	2	BELIMO	TF120-S	ON OFF 120vac, actuator c/w spring return and end switch

· ·	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT



PROJECT

CARLETON UNIVERSITY

ACADEMIC BUILDING

CANAL SITE

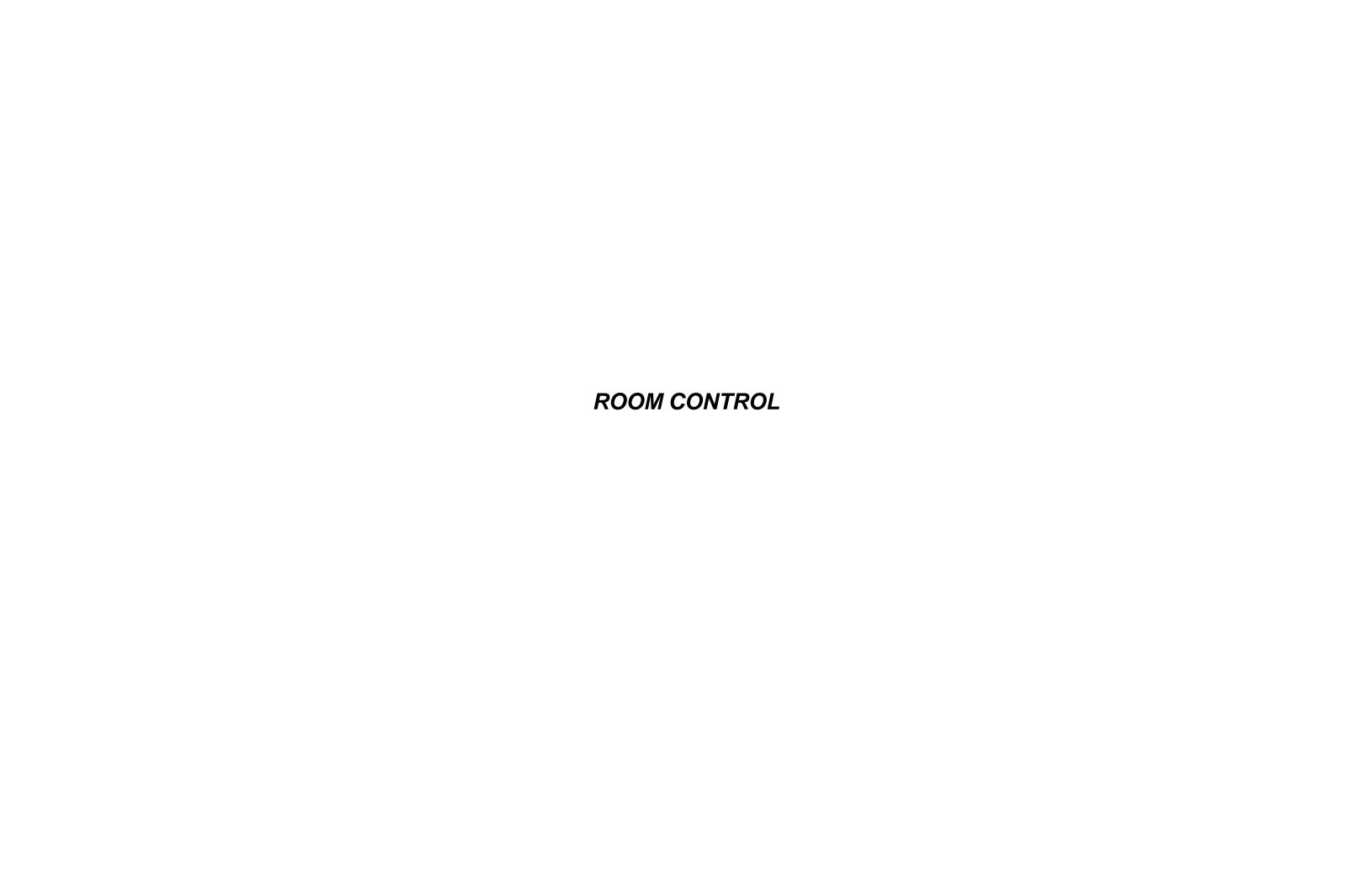
É22 EXHAUST FAN 5 STARTER

EXHAUST FAN RUNS 24/7

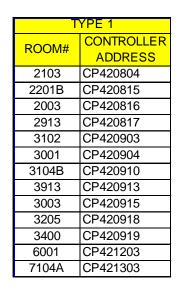


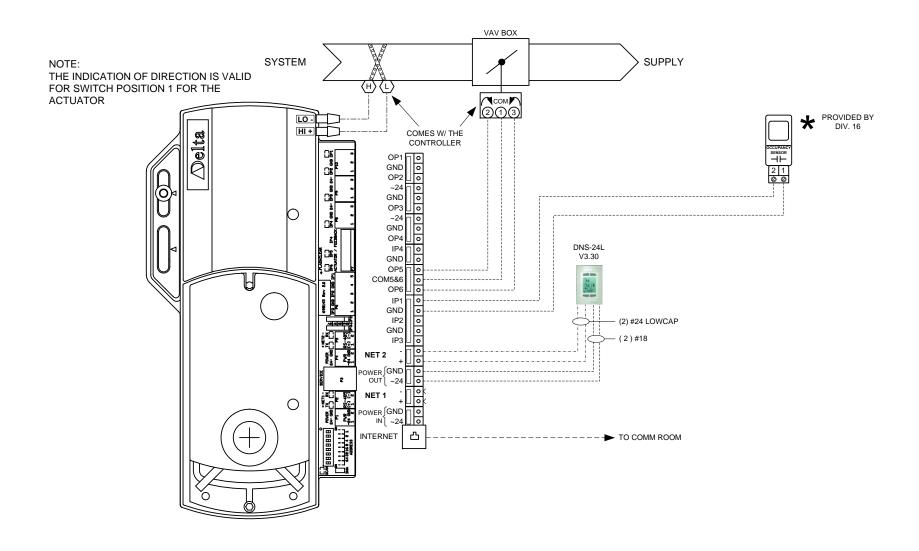
421400IP06

AI AJ2 421400.AI6



(TYPE 1 – TYPICAL OF 13)



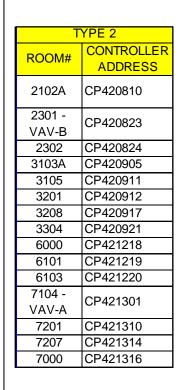


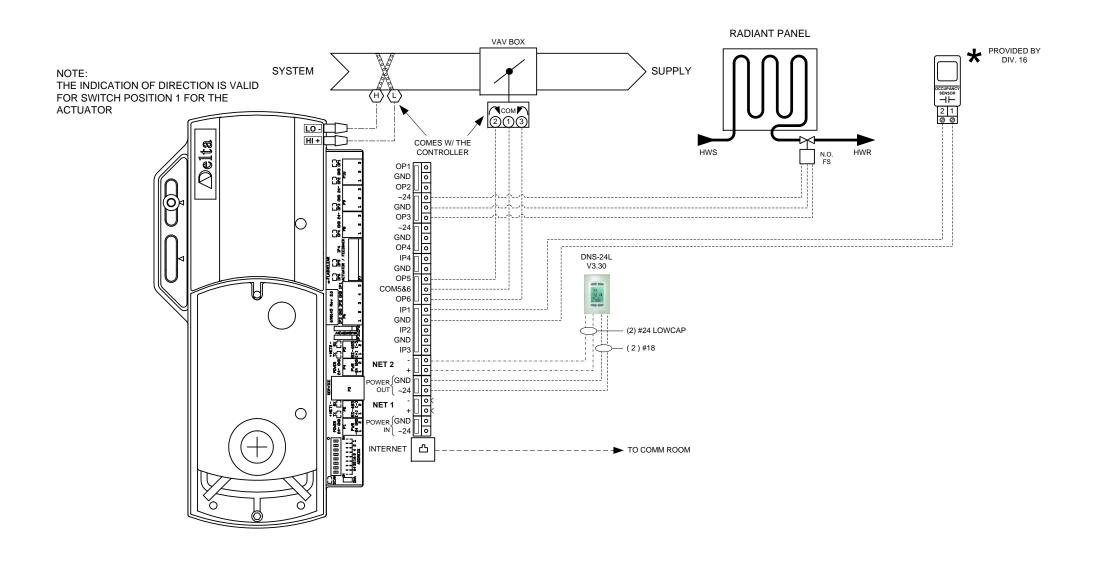
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-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	PE//ISION	DATE	DRAWN BY	CODE	PEVISION	DATE	DRAWN BY	S. RIFFAULT



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10:
2111-00451
DATE:
11-2009

(TYPE 2 – TYPICAL OF 15)



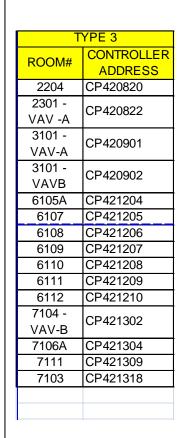


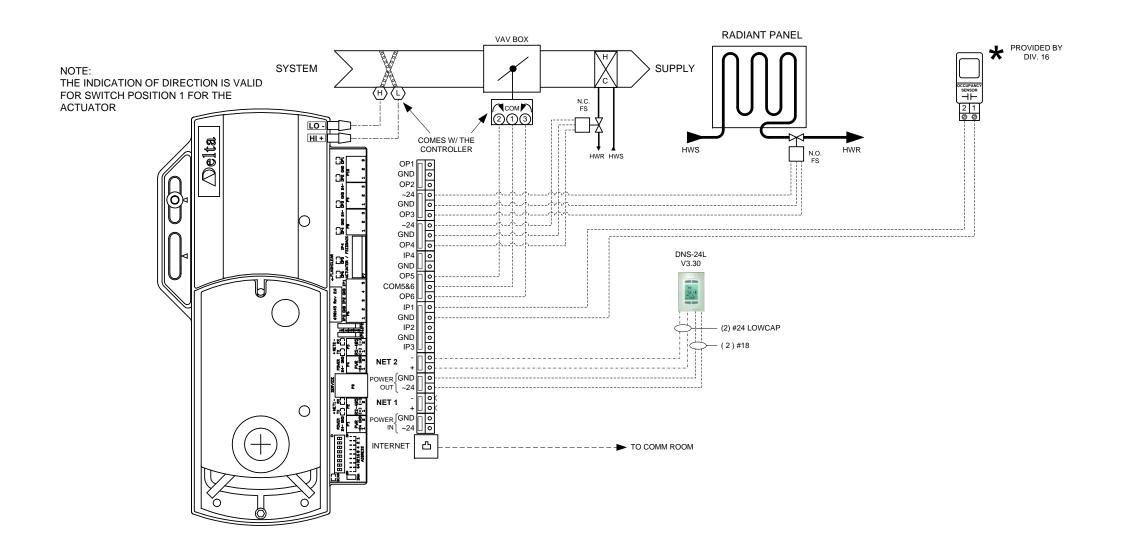
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-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
COD	E REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT



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NO: 2111-00451
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(TYPE 3 – TYPICAL OF 15)





$\overline{}$	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

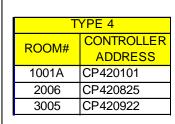


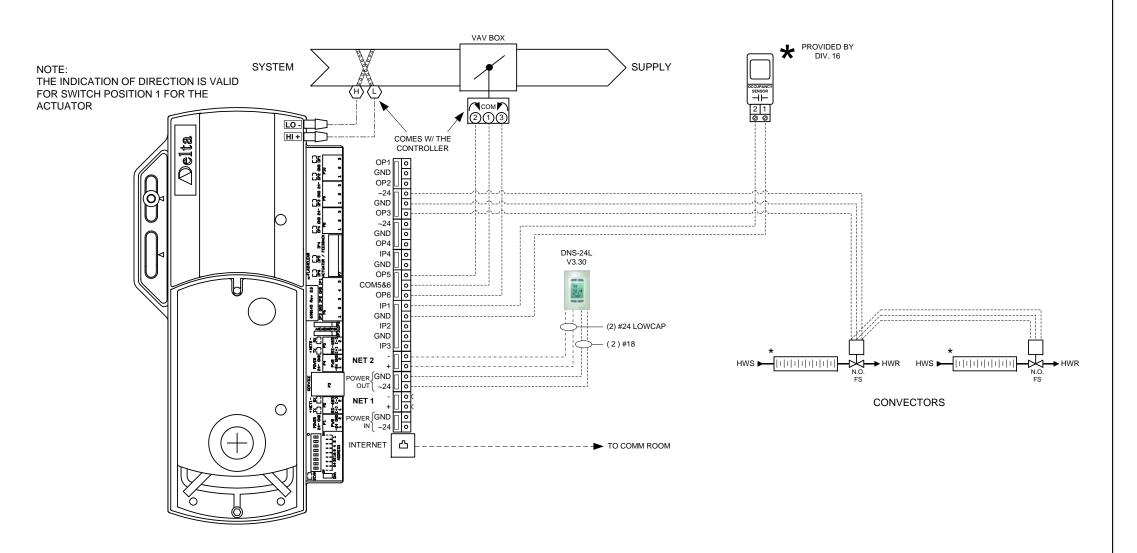
CARLETON UNIVERSITY ACADEMIC BUILDING CANAL SITE

PROJECT

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io: 2111-00451
ATE:

(TYPE 4 TYPICAL OF 3)



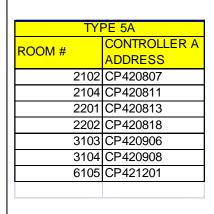


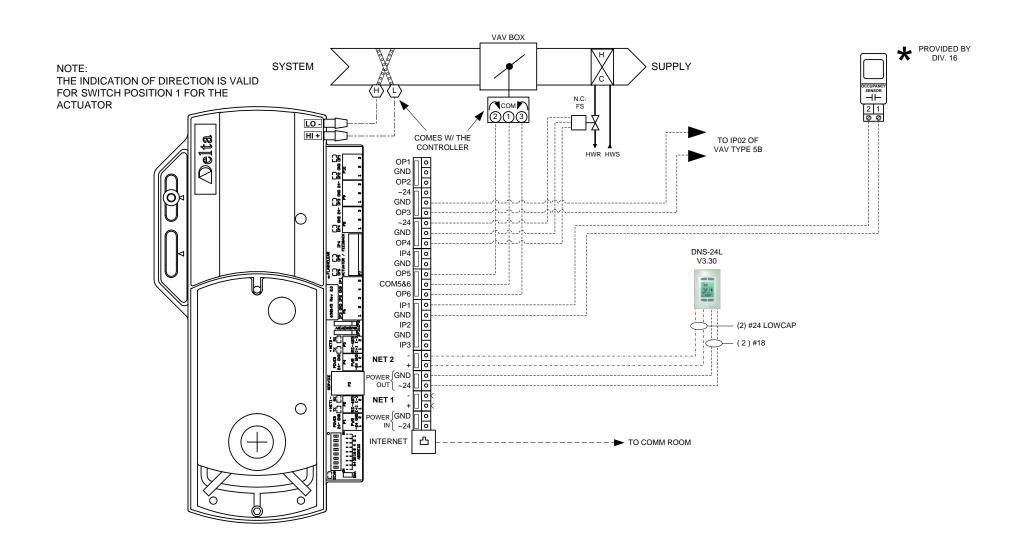
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-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	PEVISION	DATE	DRAWN BY	CODE	PEVISION	DATE	DRAWN BY	S. RIFFAULT





(TYPE 5A – TYPICAL OF 7)





<u> </u>	=	-	-)	E	REVISION 4	11-10	EK	DESIGNER
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-	=	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

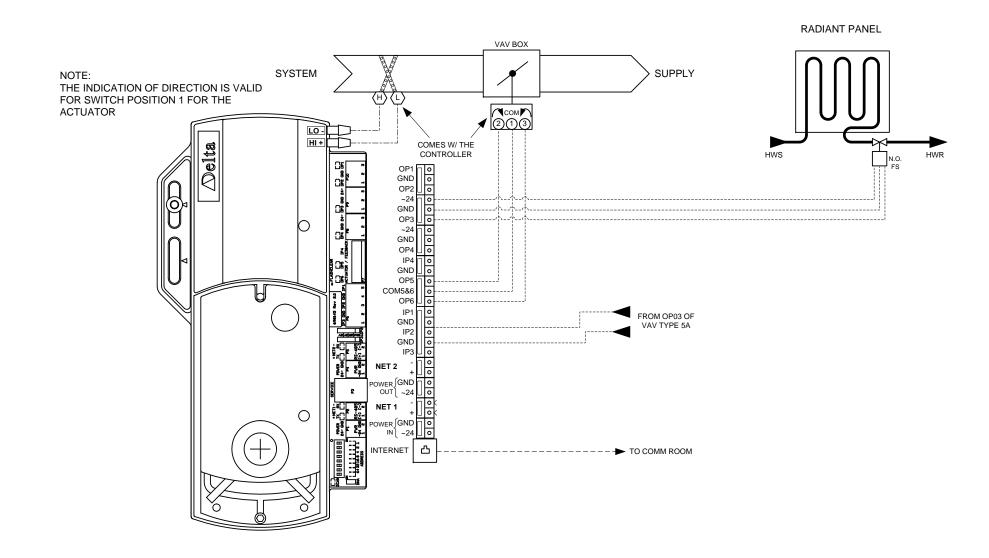


CARLETON UNIVERSITY ACADEMIC BUILDING CANAL SITE

PROJECT

24
NO:
2111-00451
DATE:
11-2009

(TYPE 5B – TYPICAL OF 7)



TYPE 5B							
ROOM #		CONTROLLER					
IXOOWI #		B ADDRESS					
		CP420808					
	2104	CP420812					
	2201	CP420814					
		CP420819					
		CP420907					
		CP420909					
	6105	CP421202					

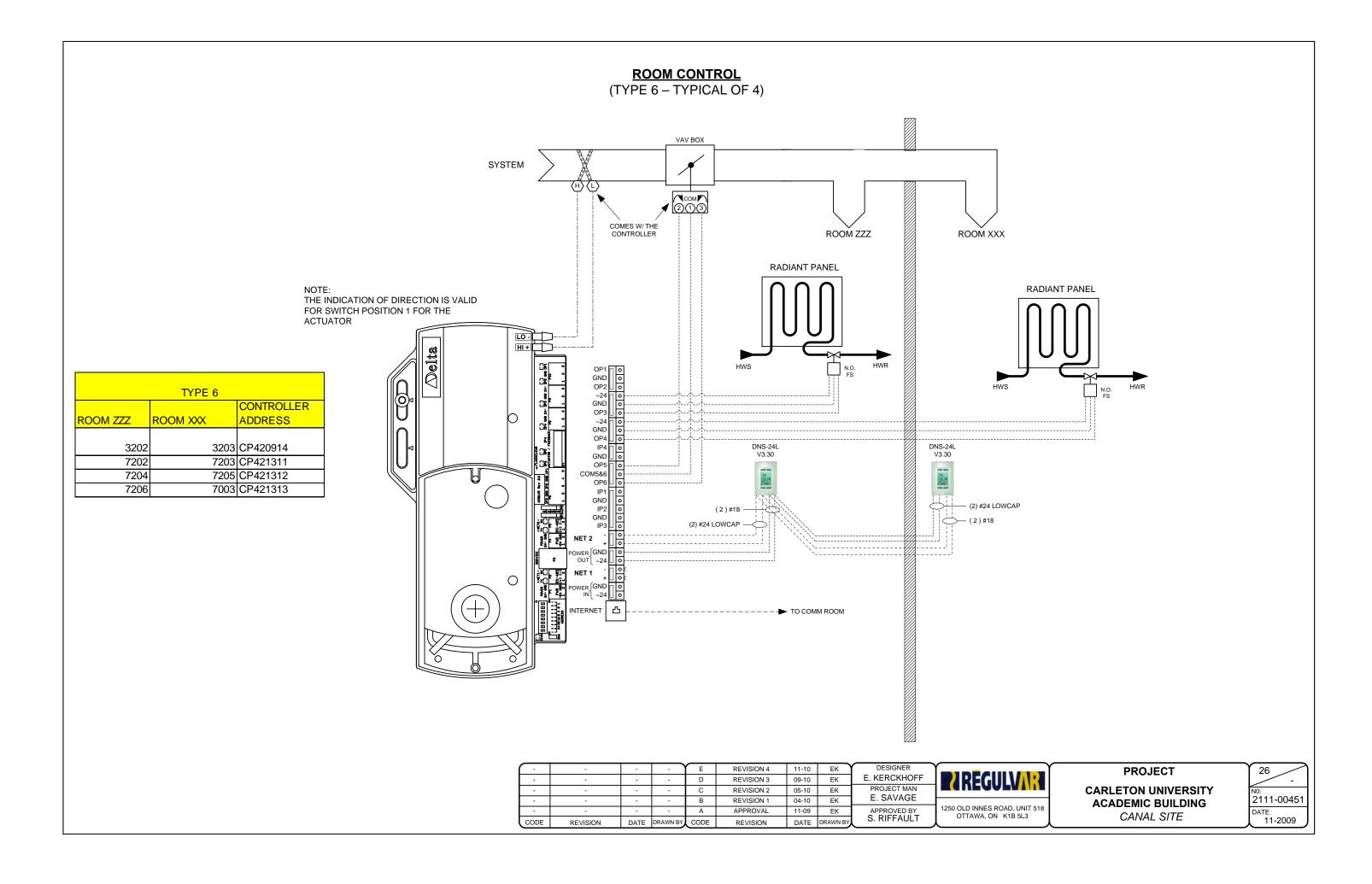
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-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

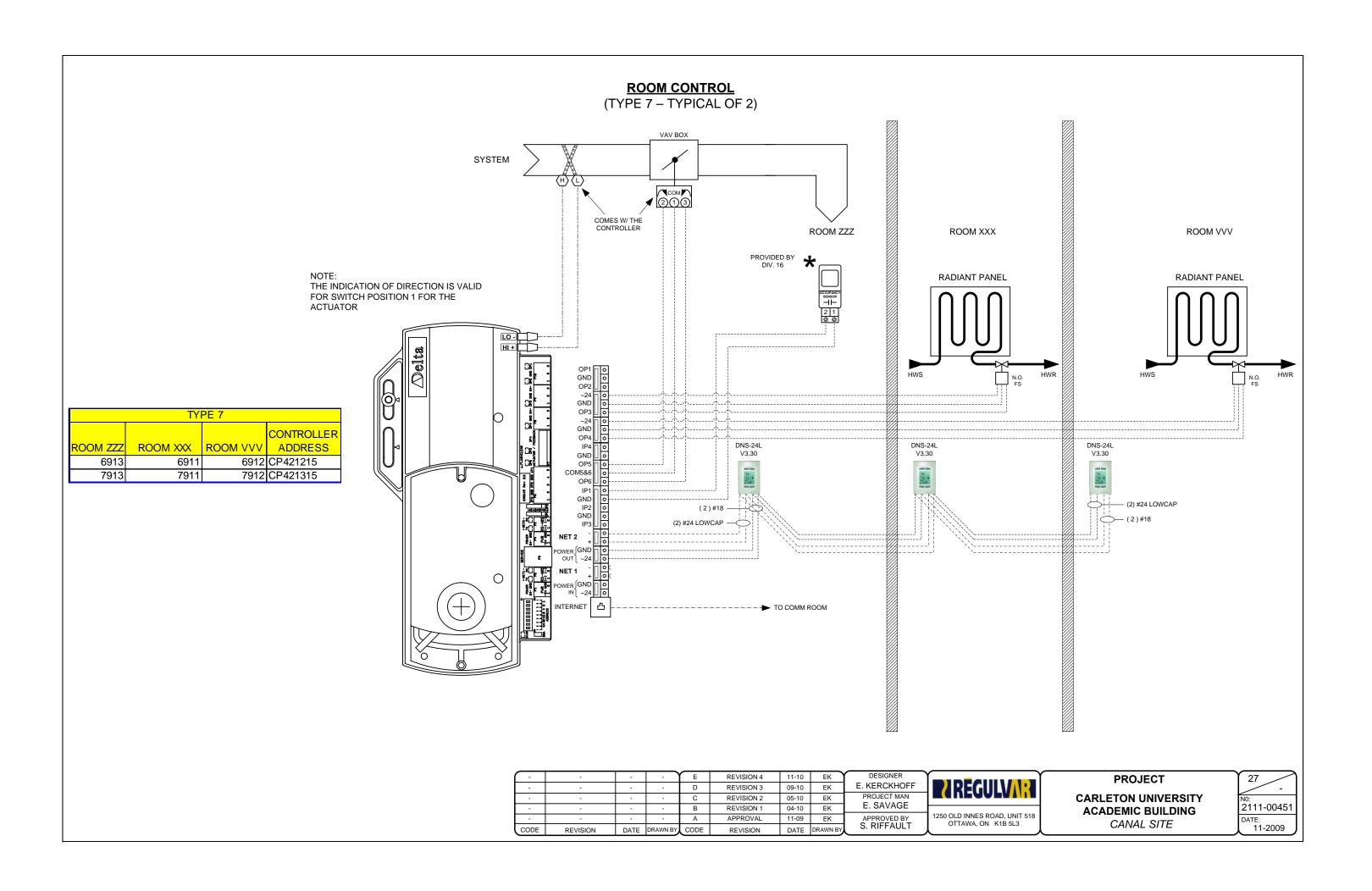


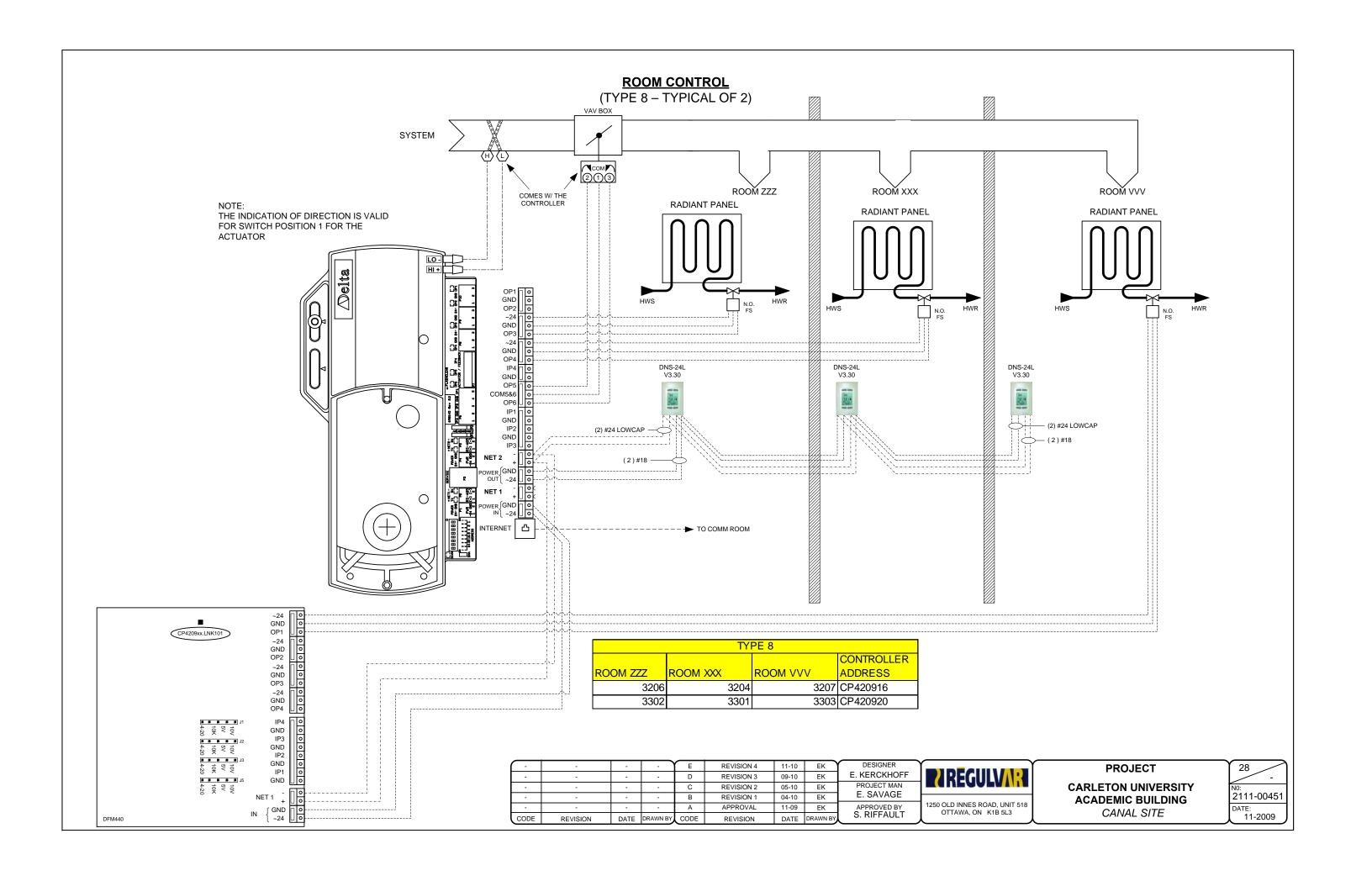
CARLETON UNIVERSITY ACADEMIC BUILDING CANAL SITE

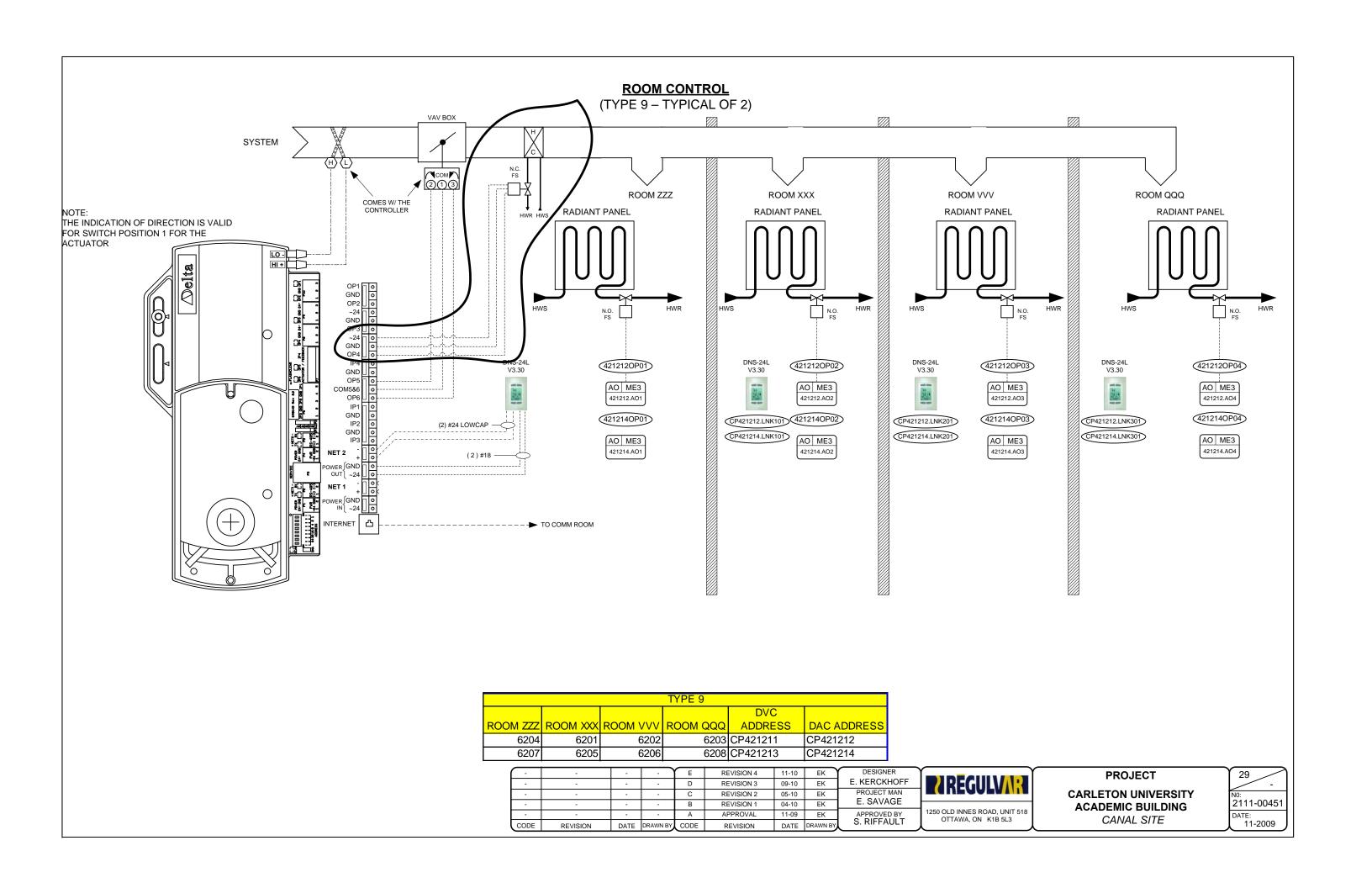
PROJECT

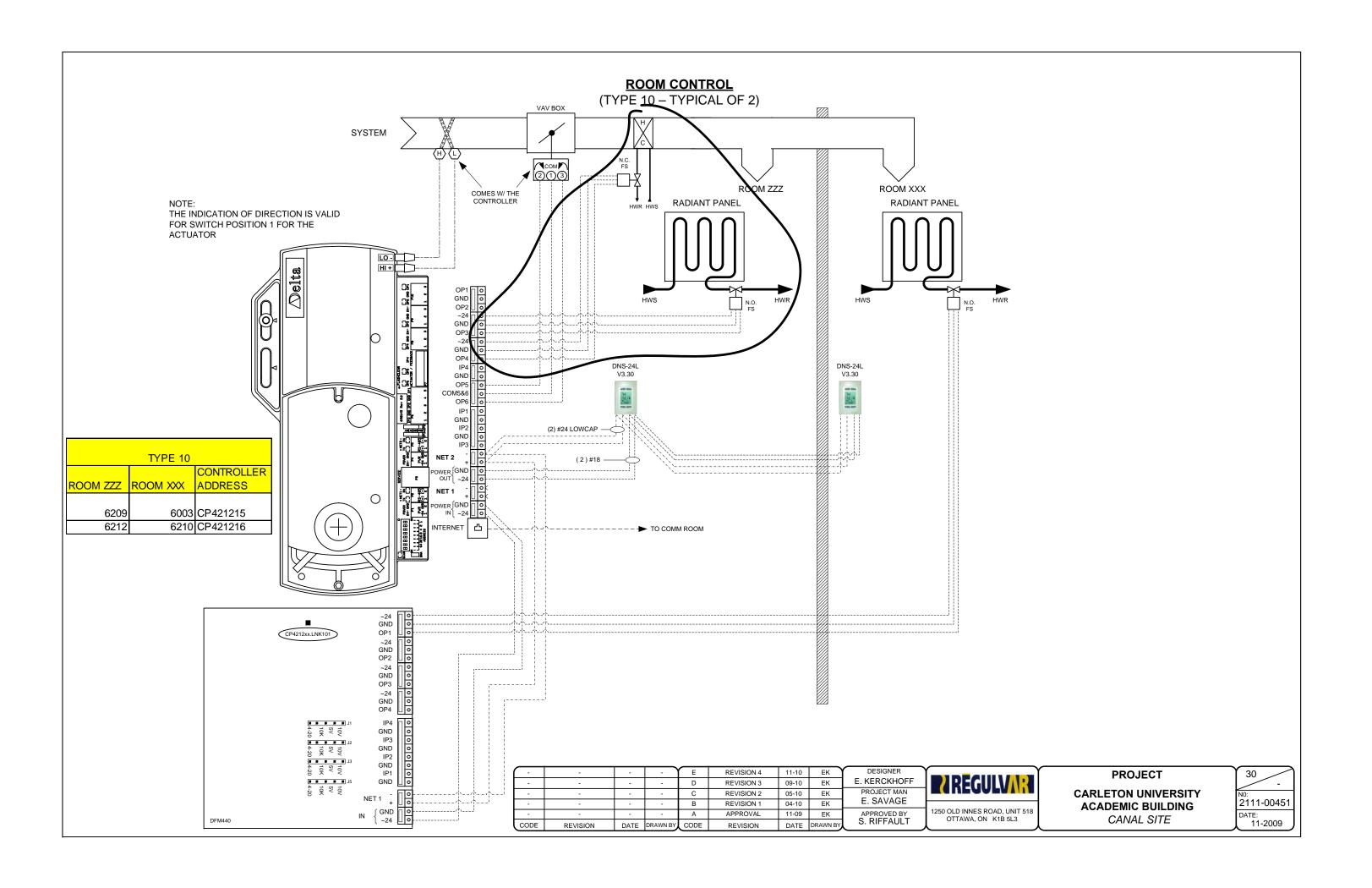
25 -
NO: 2111-00451
DATE: 11-2009

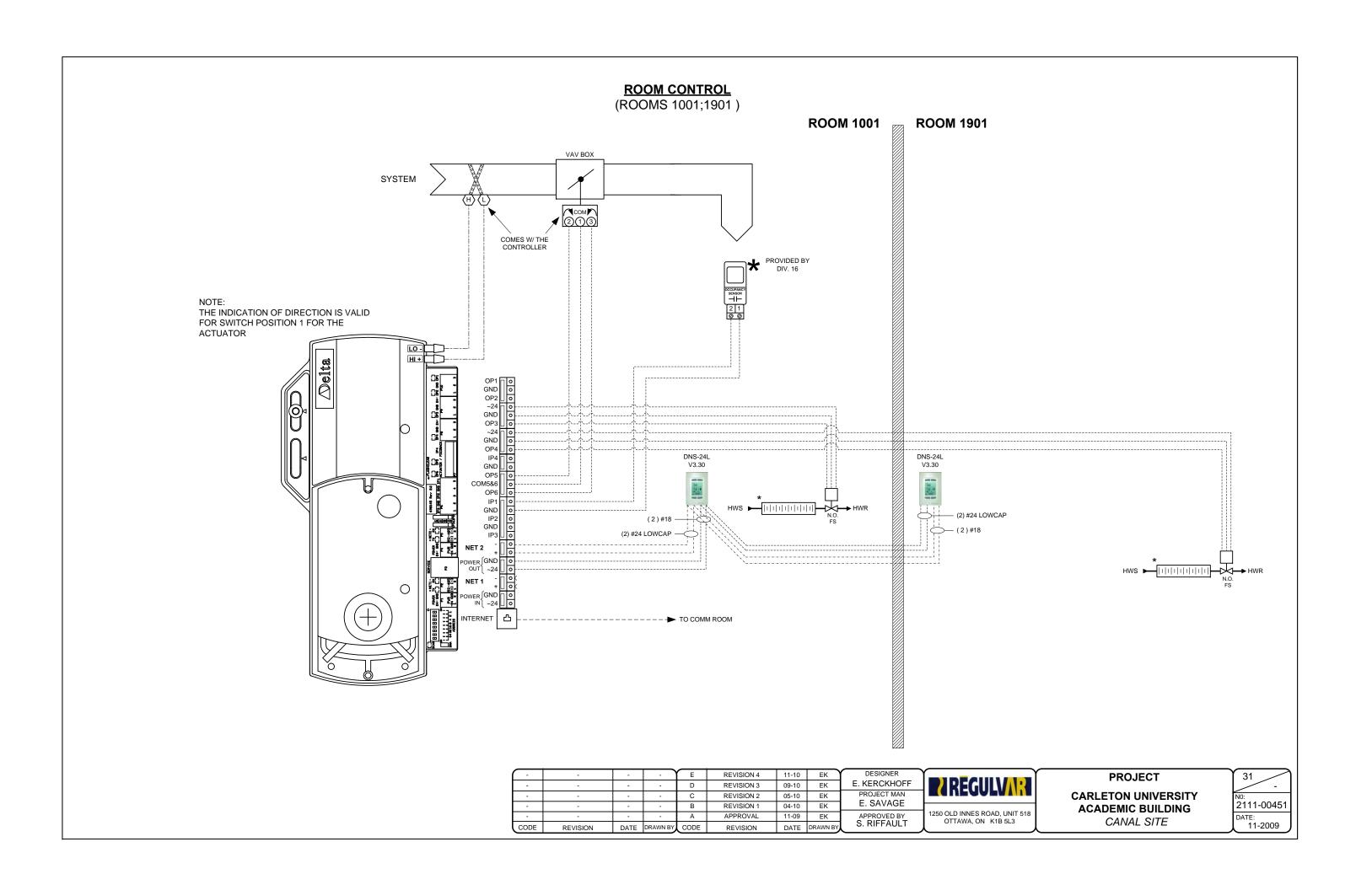




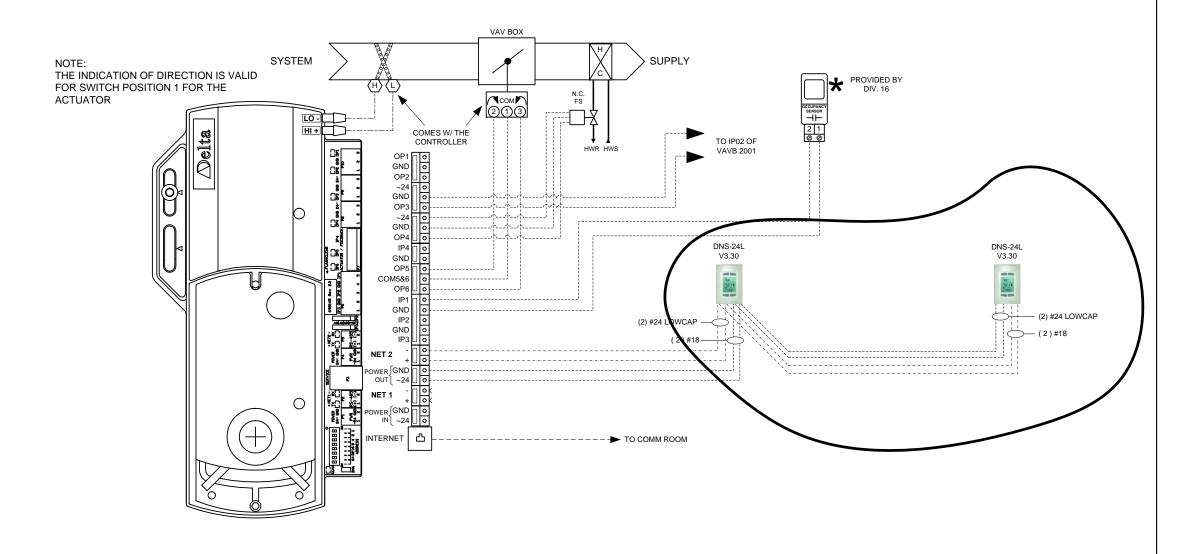








ROOM CONTROL (ROOM 2001 – VAV-A)



-	=	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	PEVISION	DATE	DRAWN BY	CODE	PEVISION	DATE	DRAWN BY	S. RIFFAULT

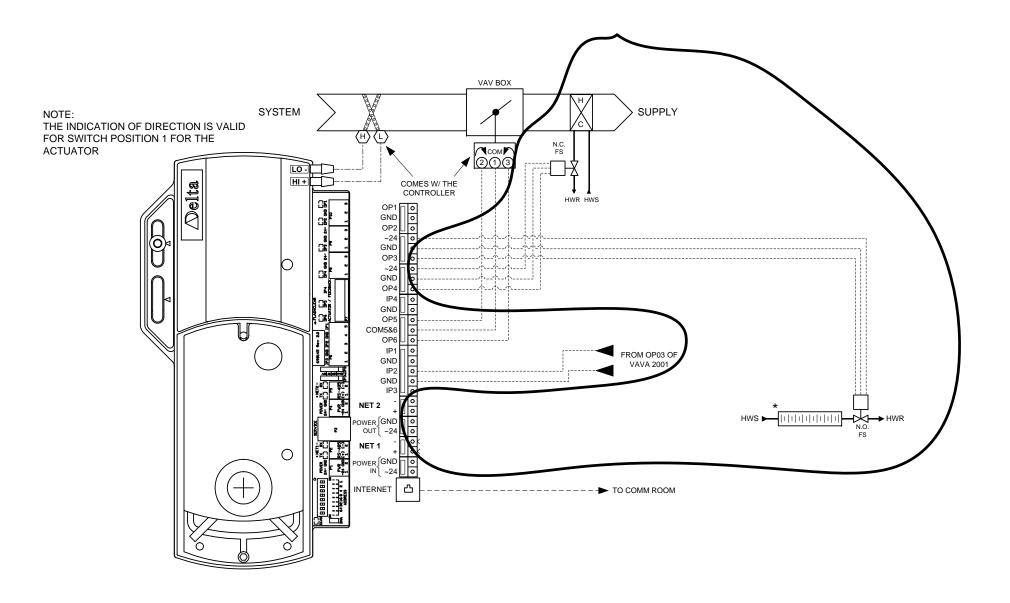


CARLETON UNIVERSITY ACADEMIC BUILDING CANAL SITE

PROJECT

32 -N0: 2111-00451 DATE: 11-2009

ROOM CONTROL (ROOM 2001 - VAV-B)



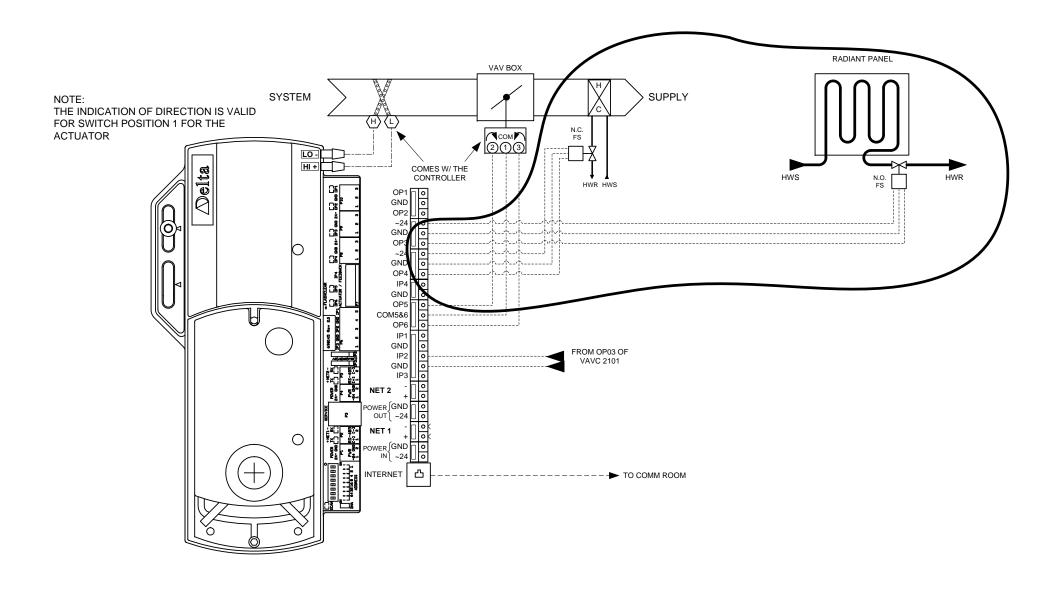
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-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT



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N0:
2111-00451
DATE:
11-2009

ROOM CONTROL

(ROOMS 2101 – VAV-A)



<u> </u>	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT



CARLETON UNIVERSITY ACADEMIC BUILDING CANAL SITE

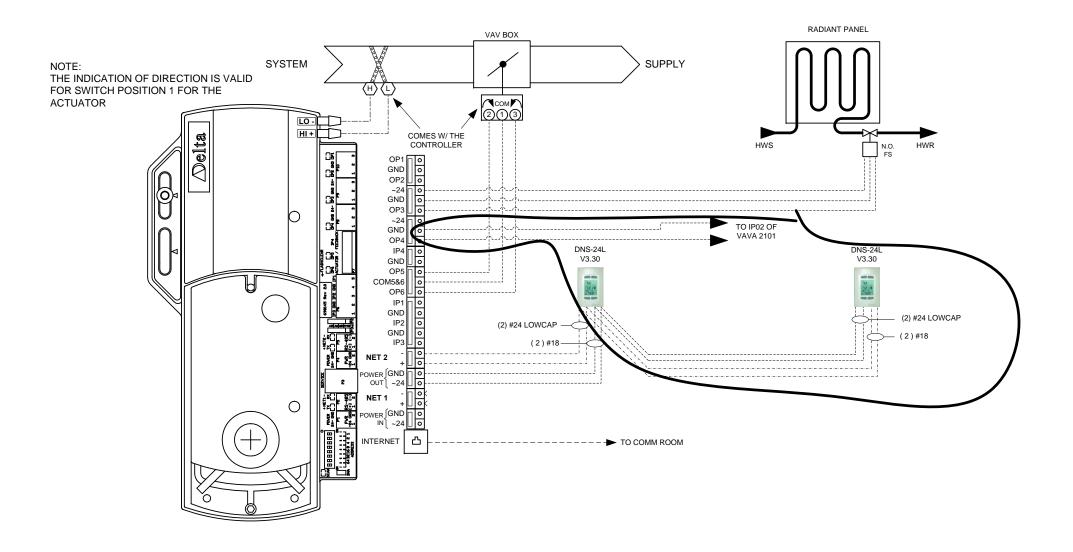
PROJECT

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ROOM CONTROL (ROOMS 2101 – VAV-B & VESTIBULE 2002A) VESTIBULE 2002A VAV BOX PROVIDED BY DIV. 16 AIR CURTAIN SYSTEM SUPPLY NOTE: THE INDICATION OF DIRECTION IS VALID FOR SWITCH POSITION 1 FOR THE ACTUATOR **√** com **/** 2 (1) (3) LO. COMES W/ THE CONTROLLER OP3 OP3 1 -24 GND OP4 IP4 GND OP5 COM5&6 OP6 IP1 GND IP2 GND IP3 - (2) #24 LOWCAP (2)#18 NET 1 0 凸 ----- TO COMM ROOM REVISION 4 11-10 EK DESIGNER **PROJECT** 35 E. KERCKHOFF EK REVISION 3 09-10 PROJECT MAN **CARLETON UNIVERSITY** REVISION 2 05-10 EK E. SAVAGE 2111-00451 REVISION 1 04-10 EK ACADEMIC BUILDING 1250 OLD INNES ROAD, UNIT 518 OTTAWA, ON K1B 5L3 APPROVED BY S. RIFFAULT 11-09 EK CANAL SITE 11-2009 CODE DATE DRAWN BY CODE DATE DRAWN BY

ROOM CONTROL

(ROOMS 2101 – VAV-C)



-	=	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	PEVISION	DATE	DRAWN BY	CODE	PEVISION	DATE	DRAWN BY	S. RIFFAULT

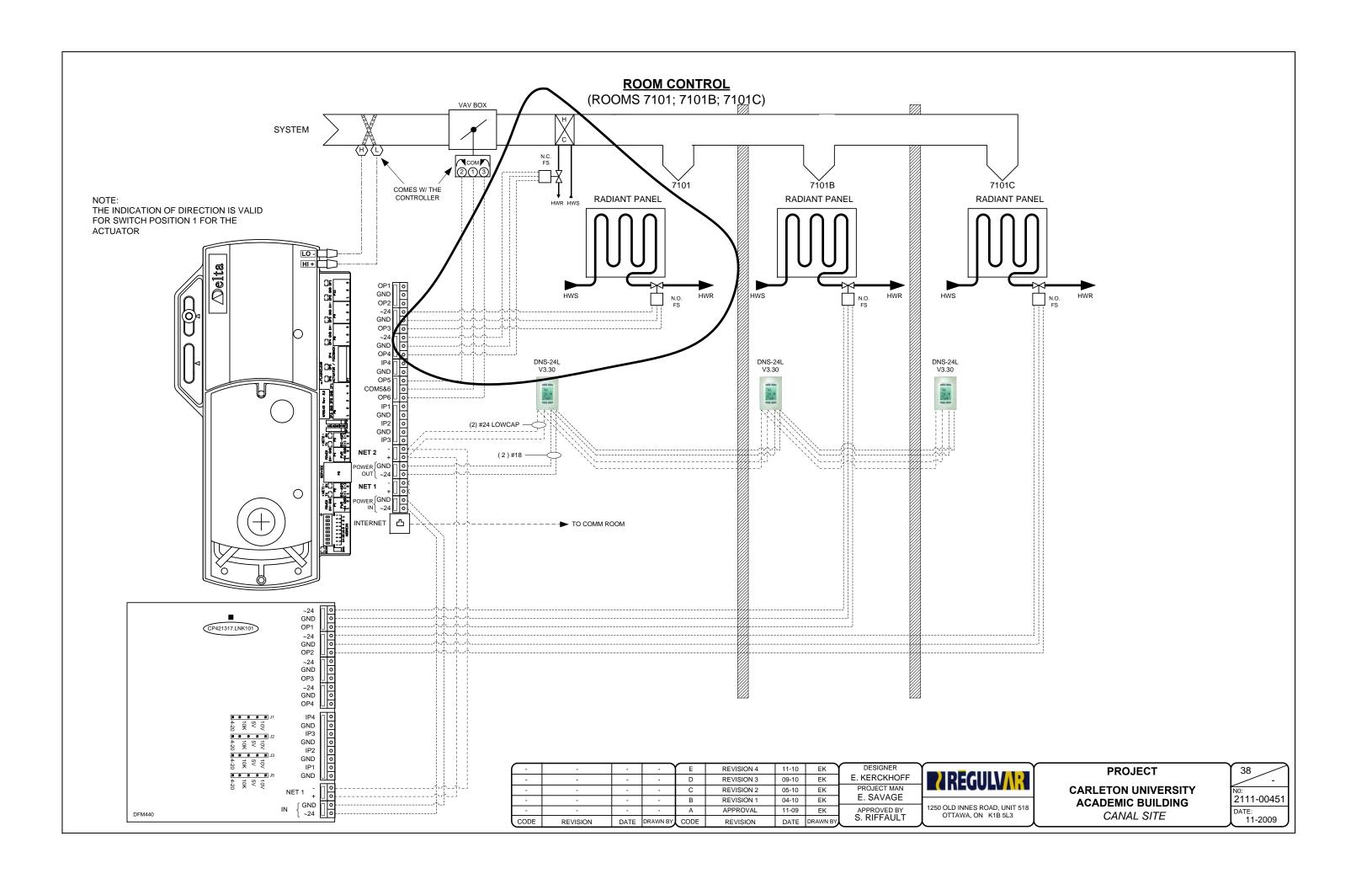


CARLETON UNIVERSITY ACADEMIC BUILDING CANAL SITE

PROJECT

36
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DATE: 11-2009

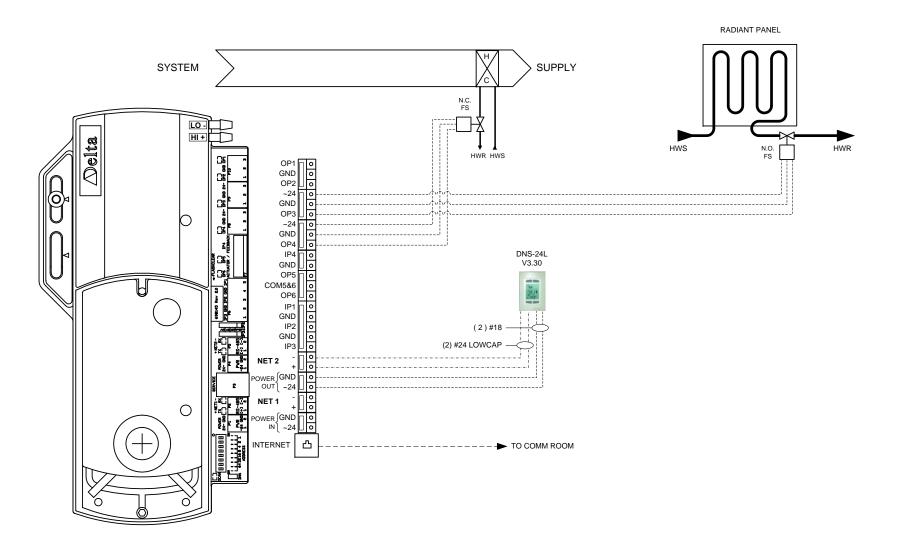
ROOM CONTROL (ROOMS 2400 & 2204A) VAV BOX **√** com **/** 2 1 3 COMES W/ THE CONTROLLER NOTE: **ROOM 2400 ROOM 2204A** THE INDICATION OF DIRECTION IS VALID FOR SWITCH POSITION 1 FOR THE **ACTUATOR** ~24 GND OP3 ~24 O O O O O O IP4 O GND O OP5 O V3.30 COM5&6 OP6 O GND IP2 GND IP3 - (2) #24 LOWCAP (2) #18 (2) #24 LOWCAP (2)#18 NET 2 INTERNET 💍 ----- TO COMM ROOM HWR N.O. FS CONVECTION UNIT REVISION 4 11-10 EK DESIGNER 37 **PROJECT** E. KERCKHOFF D REVISION 3 09-10 EK PROJECT MAN **CARLETON UNIVERSITY** REVISION 2 05-10 EK E. SAVAGE 2111-00451 REVISION 1 04-10 EK ACADEMIC BUILDING 1250 OLD INNES ROAD, UNIT 518 OTTAWA, ON K1B 5L3 APPROVED BY S. RIFFAULT 11-09 EK DATE: CANAL SITE 11-2009 CODE REVISION DATE DRAWN BY CODE DATE DRAWN BY



FUME HOOD LAB TEMPERATURE CONTROL

(ROOMS 7106; 7108; 7110) TYPICAL OF 3

NOTE: CONTROL STRATEGY TO BE COORDINATED WITH FUME HOOD CONTROL CONTRACTOR

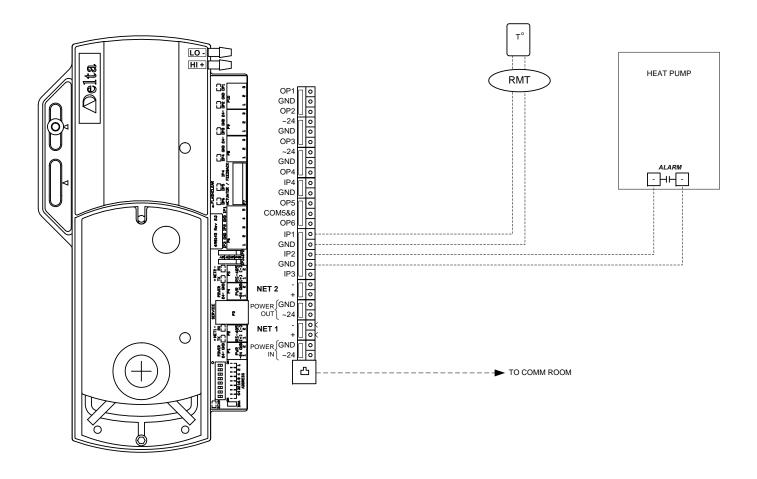


<u> </u>	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	DEVISION	DATE	DD AWN BY	CODE	BEVICION	DATE	DD AWN BV	S. RIFFAULT





ROOM CONTROL – HEAT PUMPS (ROOMS 1102; 2201A; 3104A; 6916; 7916) TYPICAL OF 5

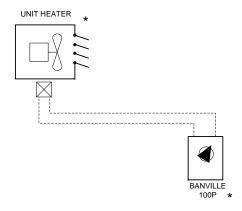


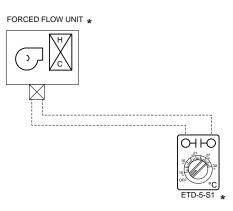
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-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	PEVISION	DATE	DRAWN BY	CODE	PEVISION	DATE	DRAWN BY	S. RIFFAULT



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ROOM CONTROL – UNIT HEATERS & FORCED FLOW UNITS (WIRING DIAGRAM)





ROOM NUMBER	EQUIPMENT TAG
1101	UH1
2901	FF1
2902	FF5
2002A	FF2
3902	FF4
4100	UH2
4110	UH2
4200	UH2
4300	UH2
4xxx	FF3
5100	UH2
5110	UH2
5200	UH2
5300	UH2
5902	CONNECT TO FF5 ON LEVEL 2
P101	UH1
P101	UH1
AH1 ACCESS CORRIDOR	UH1
AH1 ACCESS CORRIDOR	UH1
AH1 ACCESS	
CORRIDOR	UH1
AH2 ACCESS	UH1
CORRIDOR	UHI
AH2 ACCESS	UH1
CORRIDOR	0111
AH2 ACCESS	UH1
CORRIDOR	0111

	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

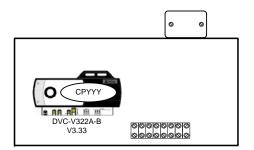


41
o: 2111-00451
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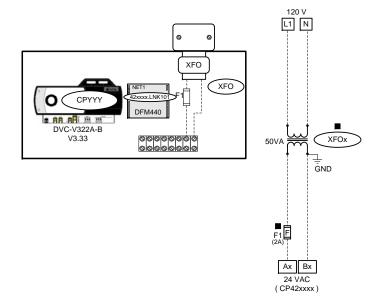
ROOM CONTROL

(ENCLOSURE DETAILS)

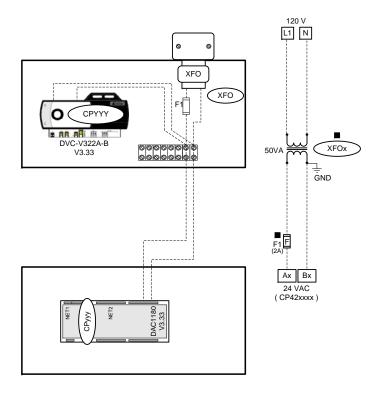
ENCLOSURE TYPE 1 TYPICAL OF 89



ENCLOSURE TYPE 2 TYPICAL OF 5



ENCLOSURE TYPE 3 TYPICAL OF 2



-	-	-	·)	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT





ROOM CONTROL

(BILL OF MATERIALS)

BILL OF MATERIALS

	TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION
	CP42xxxx	89	DELTA	DVC-V322	BACNET, 3 universal inputs, 2 triacs outputs, 2 universal outputs, air flow transducer & BELIMO
					actuator c/w 1 MS/TP port for SUBNET & 1 LinkNet port, 24vac
		84	BELIMO	LM24T-REG	Electrical floating actuator 44 in-lb, 24 vac.
•	CP42xxxx	2	DELTA	DAC1180	BACNET, digital controller 11 universal inputs, 8 universal outputs c/w 1 MS/TP port for SUBNET &
					1 LinkNet port, 24 vac
•	CP42xxxx.LNK101	6	DELTA	DFM440	BACNET 4 universal input and 4 universal output expansion card, 24 vac
	CP42xxxx.LNKx01	104	DELTA	DNS24L	BACNET room temperature sensor c/w 4 push-button & LCD display, 1 Subnet or LinkNet port & 1
					RJ II service port, 24vac
		91	REGULVAR	1894Q	Control case
		84	REGULVAR	BOI2020	case 2020
		84	REGULVAR	20C4	Plate for case 2020
		84	HAMMOND	BE2G	Transformer 120/24 VAC, open type, 40 VA.
•		7	POLARIS	OP50IK	Transformer 120/24 vac open type, 50 VA.
		84	REGULVAR	FUSE 2A	2A fuse

DESIGNER	EK	11-10	REVISION 4	E	-	-	-	-
E. KERCKHOFF	EK	09-10	REVISION 3	D	-	-	-	-
PROJECT MAN	EK	05-10	REVISION 2	С	-	-	-	-
E. SAVAGE	EK	04-10	REVISION 1	В	-	-	-	-
APPROVED BY	EK	11-09	APPROVAL	Α	-	-	-	-
S. RIFFAULT	DRAWN BY	DATE	REVISION	CODE	DRAWN BY	DATE	REVISION	CODE





	Room No.	Air Handler	SYSTEM	CONTROL		T'sta	at	Duct Reh	eat Coil	R	adiant Panel	Base b	ooard	Controller	Controller
			(TAG)	(TYPE)	(Equipment)	(Tag name)	(Address)	(Equipment)	(Tag name)	(Equipment)	(Capacity)	(Equipment)	(Capacity)	(Model)	address
1	1001A	1	VAV	4	DNS	RTS	CP420101.LNK101	NA	NA	NA	NA	B207B	CV3:5.0	DVC-V322E-A	CP420101
2	1000;1001	1	VAV	NA	DNS	RTS	CP420102.LNK101	NA	NA	NA	NA	B207B	CV1:5.0	DVC-V322E-A	CP420102
3	1901	NA	PERIM	NA .	DNS	RTS	CP420102.LNK201	NA	NA	NA	NA	B207B	CV1:5.0	DV0-V322L-A	01 420102
4	2101 VAVA	1	VAV	NA	DNS	RTS	CP420804.LNK201	B210B	RH-2101	B209B	RPA:2@5.0	NA	NA	DVC-V322E-A	CP420802
5	2101 VAVC	1	VAV	NA	DNS	RTS	CP420804.LNK101	NA	NA	B209B	RPA:2@5.4	NA	NA	DVC-V322E-A	CP420804
6	2101 VAVB	1	VAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420803
7	2002A	NA	AIR CURTAIN	NA	DNS	RTS	CP420803.LNK101	NA	NA	B217B	DAC1:70	NA	NA	DVC-V322E-A	GF420003
8	2001 VAVA	1	VAV		DNS	RTS	CP420805.LNK201	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420805
	2001 VAVA	1	VAV	NA	DNS	RTS	CP420806.LNK101	B209B	RH-2001A	NA	NA	NA	NA	DVC-V322E-A	GF420003
9 2	2001 VAVB	1	VAV		NA	NA	NA	B209B	RH-2002A	NA	NA	B211B	CV1:30.8	DVC-V322E-A	CP420806
10	2102 VAVA	1	VAV	5	DNS	RTS	CP420807.LNK101	B207B	RH-2102	B210B	RPA:2@5.4+3.4	NA	NA	DVC-V322E-A	CP420807
11 :	2102 VAVB	1	VAV	,	DNS	KIS	CF420007.LINK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420808
12	2103	1	VAV	1	DNS	RTS	CP420809.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420809
13	2102A	1	VAV	2	DNS	RTS	CP420810.LNK101	NA	NA	B207B	RPA: 3.3	NA	NA	DVC-V322E-A	CP420810
14	2104 VAVA	1	VAV	5	DNS	RTS	CP420811.LNK101	B207B	RH-2104	B209B	RPA: 2@5.1+3.2	NA	NA	DVC-V322E-A	CP420811
15	2104 VAVB	1	VAV	5	DNS	KIS	CF420011.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420812
16	2201 VAVA	2	VAV	5	DNS	RTS	CP420813.LNK101	B207B	RH-2201	B209B	RPA: 4.0+6.6	NA	NA	DVC-V322E-A	CP420813
17	2201 VAVB	2	VAV	,	DNS	KIS	CF420013.LINK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420814
18	2201B	2	VAV	1	DNS	RTS	CP420815.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420815
19	2003	2	VAV	1	DNS	RTS	CP420816.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420816
20	2913	2	VAV	1	DNS	RTS	CP420817.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420817
21	2202 VAVA	2	VAV	5	DNS	RTS	CP420818.LNK101	B207B	RH-2202	B209B	RPA:2@5.1+3.0	NA	NA	DVC-V322E-A	CP420818
22	2202 VAVB	2	VAV	3	DNS	KIS	CF420010.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420819
23	2204	2	VAV	3	DNS	RTS	CP420820.LNK101	B207B	RH2204	B207B	RPB:5.0	NA	NA	DVC-V322E-A	CP420820
24	2204A	NA	PERIM	NA.	DNS	RTS	CP420821.LNK201	NA	NA	NA	NA	B207B	CV2:1.6	DVC V222E A	CP420821
25	2400	2	VAV	NA	DNS	RTS	CP420821.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	GP42U021
26	2301 VAVA	2	VAV	3	DNS	RTS	CP420822.LNK101	B207B	RH-2301	B209B	RPB:2@4.9	NA	NA	DVC-V322E-A	CP420822
27	2301 VAVB	2	VAV	2	DNS	RTS	CP420823.LNK101	NA	NA	B208B	RPB:2@3.5	NA	NA	DVC-V322E-A	CP420823
28	2302	2	VAV	2	DNS	RTS	CP420824.LNK101	NA	NA	B209B	RPB:1.9+6.4	NA	NA	DVC-V322E-A	CP420824
29	2006	2	VAV	4	DNS	RTS	CP420825.LNK101	NA	NA	NA	NA	B209B B207B	CV1:12 CV1:4.4	DVC-V322E-A	CP420825

#	Room No.	Air Handler	SYSTEM	CONTROL		T'stat		Duct Reh	eat Coil	R	adiant Panel	Base b	oard	Controller	Controller
			(TAG)	(TYPE)	(Equipment)	(Tag name)	(Address)	(Equipment)	(Tag name)	(Equipment)	(Capacity)	(Equipment)	(Capacity)	(Model)	address
30	3101 VAVA	1	VAV	3	DNS	RTS	CP420901.LNK101	B207B	RH-3101.1	B209B	RPA:2@4.9	NA	NA	DVC-V322E-A	CP420901
31	3101 VAVB	1	VAV	3	DNS	RTS	CP420902.LNK101	B207B	RH-3101.2	B210B	RPB:2@4.9+4.7	NA	NA	DVC-V322E-A	CP420902
32	3102	1	VAV	1	DNS	RTS	CP420903.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420903
33	3001	1	VAV	1	DNS	RTS	CP420904.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420904
34	3103A	1	VAV	2	DNS	RTS	CP420905.LNK101	NA	NA	B207B	RPA:3.4	NA	NA	DVC-V322E-A	CP420905
35	3103 VAVA	1	VAV	5	DNS	RTS	CP420906.LNK101	B207B	RH-3103	B209B	RPA:7+6.3	NA	NA	DVC-V322E-A	CP420906
36	3103 VAVB	1	VAV					NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420907
37	3104 VAVA	2	VAV	5	DNS	RTS	CP420908.LNK101	B207B	RH-3104	B209B	RPA:2@5.1+2.6	NA	NA	DVC-V322E-A	CP420908
38	3104 VAVB	2	VAV		5.10	6		NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420909
39	3104B	2	VAV	1	DNS	RTS	CP420910.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420910
40	3105	2	VAV	2	DNS	RTS	CP420911.LNK101	NA	NA	B209B	RPC:2@2.0+5.5	NA	NA	DVC-V322E-A	CP420911
41	3201	2	VAV	2	DNS	RTS	CP420912.LNK101	NA	NA	B207B	RPA:3.2+1.3	NA	NA	DVC-V322E-A	CP420912
42	3913	2	VAV	1	DNS	RTS	CP420913.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420913
43	3202	2	VAV	6	DNS	RTS	CP420914.LNK101	NA	NA	B207B	RPB:3.0	NA	NA	DVC-V322E-A	CP420914
44	3203	NA	PERIM		DNS	RTS	CP420914.LNK201	NA	NA	B207B	RPB:3.0	NA	NA		5 <u></u>
45	3003	2	VAV	1	DNS	RTS	CP420915.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420915
46	3204	NA	PERIM		DNS	RTS	CP420916.LNK201	NA	NA	B207B	RPB:3.0	NA	NA	DVC-V322E-A	CP420916
47	3206	2	VAV	8	DNS	RTS	CP420916.LNK301	NA	NA	B207B	RPB:3.0	NA	NA		G. 1200.10
48	3207	NA	PERIM		DNS	RTS	CP420916.LNK401	NA	NA	B207B	RPB:3.0	NA	NA	DFM	CP420916.LNK101
49	3208	2	VAV	2	DNS	RTS	CP420917.LNK101	NA	NA	B209B	RPA:7.7+3.6	NA	NA	DVC-V322E-A	CP420917
50	3205	2	VAV	1	DNS	RTS	CP420918.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420918
51	3400	2	VAV	1	DNS	RTS	CP420919.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP420919
52	3301	NA	PERIM		DNS	RTS	CP420920.LNK201	NA	NA	B207B	RPA:4.7	NA	NA	DVC-V322E-A	CP420920
53	3302(3301;330 3)	2	VAV	8	DNS	RTS	CP420920.LNK201	NA	NA	B207B	RPA:3.3	NA	NA		S. 12020
54	3303	NA	PERIM		DNS	RTS	CP420920.LNK201	NA	NA	B207B	RPA:4.7	NA	NA	DFM	CP420920.LNK101
55	3304	2	VAV	2	DNS	RTS	CP420921.LNK101	NA	NA	B208B	RPA:7.2+2.1	NA	NA	DVC-V322E-A	CP420921
56	3005	2	VAV	4	DNS	RTS	CP420922.LNK101	NA	NA	NA	NA	B209B B207B	R-A:10.4 R- A:4.4	DVC-V322E-A	CP420922
57	6105 VAVA	1	VAV	5	DNS	RTS	CP421201.LNK101	B207B	RH-6105	B210B	RPB:3@5.1+4.7	NA	NA	DVC-V322E-A	CP421201
58	6105 VAVB	1	VAV		2.10		C. INTERVIEW	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP421202
59	6001	1	VAV	1	DNS	RTS	CP421203.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP421203

#	Room No.	Air Handler	SYSTEM	CONTROL		T'stat		Duct Reh	eat Coil	Ra	adiant Panel	Base b	oard	Controller	Controller
			(TAG)	(TYPE)	(Equipment)	(Tag name)	(Address)	(Equipment)	(Tag name)	(Equipment)	(Capacity)	(Equipment)	(Capacity)	(Model)	address
60	6105A	1	VAV	3	DNS	RTS	CP421204.LNK101	B207B	RH-6105A	B207B	RPA:3.4	NA	NA	DVC-V322E-A	CP421204
61	6107	1	VAV	3	DNS	RTS	CP421205.LNK101	B207B	RH-6107	B208B	RPB:6.8	NA	NA	DVC-V322E-A	CP421205
62	6108	1	VAV	3	DNS	RTS	CP421206.LNK101	B207B	RH-6108	B208B	RPA:5.6	NA	NA	DVC-V322E-A	CP421206

#	Room No.	Air Handler	SYSTEM	CONTROL		T'stat		Duct Reh			adiant Panel	Base I	_	Controller	Controller
63	6109	1	(TAG) VAV	(TYPE) 3	(Equipment) DNS	(Tag name) RTS	(Address) CP421207.LNK101	(Equipment) B207B	(Tag name) RH-6109	(Equipment) B208B	(Capacity) RPA:2.0+4.4	(Equipment) NA	(Capacity) NA	(Model) DVC-V322E-A	address CP421207
64					DNS	RTS	CP421208.LNK101	B207B							
	6110	2	VAV	3					RH-6110	B208B	RPA:6.4	NA 	NA	DVC-V322E-A	CP421208
65	6111	2	VAV	3	DNS	RTS	CP421209.LNK101	B207B	RH-6111	B213B	RPA:1.4+4.4+2.4	NA	NA	DVC-V322E-A	CP421209
66	6112	2	VAV	3	DNS	RTS	CP421210.LNK101	B207B	RH-6112	B210B	RPA:7.9+2.8	NA	NA	DVC-V322E-A	CP421210
67	6201	NA	PERIM		DNS	RTS	CP421212.LNK101	NA	NA	B207B	RPC:2.8	NA	NA		
68	6202	NA	PERIM	9	DNS	RTS	CP421212.LNK201	NA	NA	B207B	RPC:2.8	NA	NA	DAC1180	CP421212
69	6203	NA	PERIM		DNS	RTS	CP421212.LNK301	NA	NA	B207B	RPC:2.8	NA	NA		
70	6204(6201;620 2;6203)	2	VAV		DNS	RTS	CP421211.LNK101	B207B	RH-6204	B207B	RPC:2.8	NA	NA	DVC-V322E-A	CP421211
71	6205	NA	PERIM		DNS	RTS	CP421214.LNK101	NA	NA	B207B	RPC:2.8	NA	NA		
72	6206	NA	PERIM	9	DNS	RTS	CP421214.LNK201	NA	NA	B207B	RPC:2.8	NA	NA	DAC1180	CP421214
73	6208	NA	PERIM	9	DNS	RTS	CP421214.LNK301	NA	NA	B207B	RPC:2.8	NA	NA		
74	6207(6205;620 6;6208)	2	VAV		DNS	RTS	CP421213.LNK101	B207B	RH-6207	B207B	RPC:2.8	NA	NA	DVC-V322E-A	CP421213
75	6209(6003)	2	VAV	40	DNS	RTS	CP421215.LNK201	B207B	RH-6209	B207B	RPA:3.3	NA	NA	DVC-V322E-A	CP421215
76	6003	NA	PERIM	10	DNS	RTS	CP421215.LNK301	NA	NA	B207B	RPA:2.4	NA	NA	DFM	CP421215.LNK101
77	6210	NA	PERIM	4.0	DNS	RTS	CP421216.LNK301	NA	NA	B207B	RPB:1.8+1.4	NA	NA	DFM	CP421216.LNK101
78	6212	2	VAV	10	DNS	RTS	CP421216.LNK201	B207B	RH-6212	B208B	RPA:5.9	NA	NA	DVC-V322E-A	CP421216
79	6911	NA	PERIM		DNS	RTS	CP421217.LNK201	NA	NA	B207B	RPA:1.6	NA	NA		
80	6912	NA	PERIM	7	DNS	RTS	CP421217.LNK301	NA	NA	B207B	RPA:1.6	NA	NA	DVC-V322E-A	CP421217
81	6913	2	VAV		DNS	RTS	CP421217.LNK101	NA	NA	NA	NA	NA	NA		
82	6000	1	VAV	2	DNS	RTS	CP421218.LNK101	NA	NA	B207B	RPA:2.3	NA	NA	DVC-V322E-A	CP421218
83	6101	1	VAV	2	DNS	RTS	CP421219.LNK101	NA	NA	B208B	RPA:2@3.9	NA	NA	DVC-V322E-A	CP421219
84	6103	1	VAV	2	DNS	RTS	CP421220.LNK101	NA	NA	B208B	RPA:2@3.9	NA	NA	DVC-V322E-A	CP421220
85	7104 VAVA	1	VAV	2	DNS	RTS	CP421301.LNK101	NA	NA	B209B	RPB:2@4.1	NA	NA	DVC-V322E-A	CP421301
86	7104 VAVB	1	VAV	3	DNS	RTS	CP421302.LNK101	B207B	RH-7104	B210B	RPB:3@4.7	NA	NA	DVC-V322E-A	CP421302
87	7104A	1	VAV	1	DNS	RTS	CP421303.LNK101	NA	NA	NA	NA	NA	NA	DVC-V322E-A	CP421303
88	7106A	1	VAV	3	DNS	RTS	CP421304.LNK101	B208B	RH-7106A	B208B	RPA:6.7	NA	NA	DVC-V322E-A	CP421304
89	7106 VAVA	1	AIR VALVE					B208B	RH-7106	B210B	RPA:2@5.4+3.9	NA	NA	DVC-V322E-A	CP421305
90	7106 VAVB	1	AIR VALVE	NA	DNS	RTS	CP421305.LNK101	NA	NA	NA	NA	NA	NA		
91	7108	2	AIR VALVE	NA	DNS	RTS	CP421307.LNK101	B208B	RH-7108	B209B	RPA:8.2	NA	NA	DVC-V322E-A	CP421307
92	7110	2	AIR VALVE	NA	DNS	RTS	CP421308.LNK101	B208B	RH-7110	B210B	RPA:4.4+4.0+15	NA	NA	DVC-V322E-A	CP421308

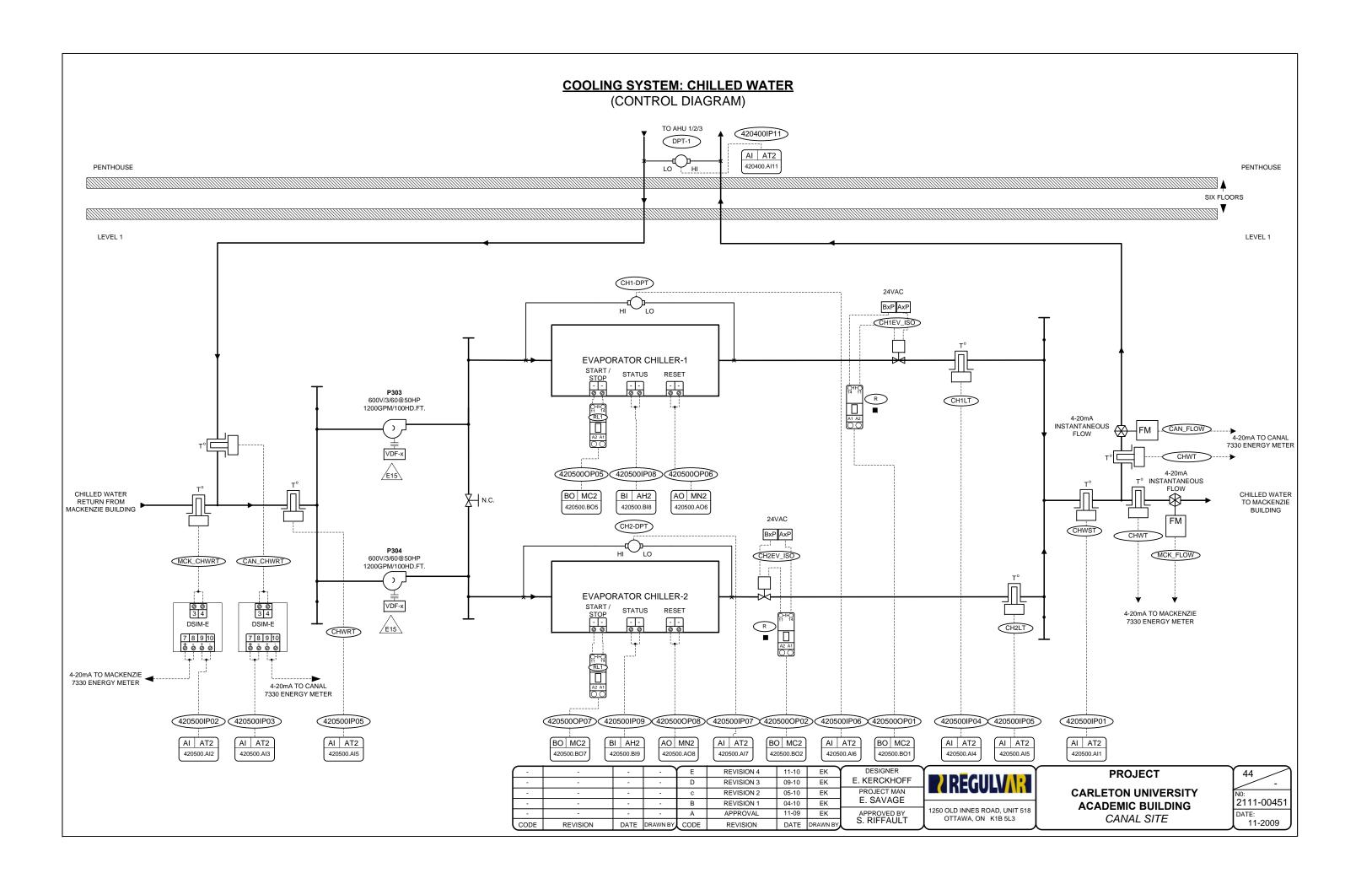
#	Room No.	Air Handler	SYSTEM	CONTROL		T'stat		Duct Reh	eat Coil	R	adiant Panel	Base b	oard	Controller	Controller
			(TAG)	(TYPE)	(Equipment)	(Tag name)	(Address)	(Equipment)	(Tag name)	(Equipment)	(Capacity)	(Equipment)	(Capacity)	(Model)	address
93	7111	2	VAV	3	DNS	RTS	CP421309.LNK101	B207B	RH-7111	B208B	RPB:3.5+2.4;RPA:1.0	NA	NA	DVC-V322E-A	CP421309
94	7201	2	VAV	2	DNS	RTS	CP421310.LNK101	NA	NA	B207B	RPB3.4	NA	NA	DVC-V322E-A	CP421310
95	7202	NA	PERIM	6	DNS	RTS	CP421311.LNK201	NA	NA	B207B	RPB:4.9	NA	NA	DVC-V322E-A	CP421311
96	7203(7202)	2	VAV	0	DNS	RTS	CP421311.LNK101	NA	NA	B207B	RPB:5.2	NA	NA	DVC-V322E-A	CP421311
97	7204(7205)	2	VAV	6	DNS	RTS	CP421312.LNK101	NA	NA	B207B	RPA:5.2	NA	NA	DVC-V322E-A	CP421312
98	7205	NA	PERIM	0	DNS	RTS	CP421312.LNK201	NA	NA	B207B	RPA:5.2	NA	NA	DVC-V322E-A	CP421312
99	7206	2	VAV	6	DNS	RTS	CP421313.LNK101	NA	NA	B208B	RPB:5.2+RPA:1.1	NA	NA	DVC-V322E-A	CP421313
100	7003	NA	PERIM		DNS	RTS	CP421313.LNK201	NA	NA	B207B	RPA:2.8	NA	NA	DVC-V322E-A	GF421313
101	7207	2	VAV	2	DNS	RTS	CP421314.LNK101	NA	NA	B208B	RPB:2.2+4.3	NA	NA	DVC-V322E-A	CP421314
102	7911	NA	PERIM		DNS	RTS	CP421315.LNK201	NA	NA	B207B	RPA:2.35	NA	NA		
103	7912	NA	PERIM	7	DNS	RTS	CP421315.LNK301	NA	NA	B207B	RPA:2.35	NA	NA	DVC-V322E-A	CP421315
104	7913	2	VAV		DNS	RTS	CP421315.LNK101	NA	NA	NA	NA	NA	NA		
105	7000	1	VAV	2	DNS	RTS	CP421316.LNK101	NA	NA	B207B	RPA:2.3	NA	NA	DVC-V322E-A	CP421316
106	7101	1	VAV		DNS	RTS	CP421317.LNK201	B207B	RH-7101	B208B	RPA:5.4	NA	NA	DVC-V322E-A	CP421317
107	7101B	NA	PERIM	NA	DNS	RTS	CP421317.LNK301	NA	NA	B207B	RPA:1.9	NA	NA	DFM	CP421317.LNK101
108	7101C	NA	PERIM		DNS	RTS	CP421317.LNK401	NA	NA	B207B	RPA:2.9	NA	NA	DEIVI	GF421317.LNK101
109	7103	1	VAV	3	DNS	RTS	CP421318.LNK101	B208B	RH-7103	B209B	RPB:2@4.8	NA	NA	DVC-V322E-A	CP421318

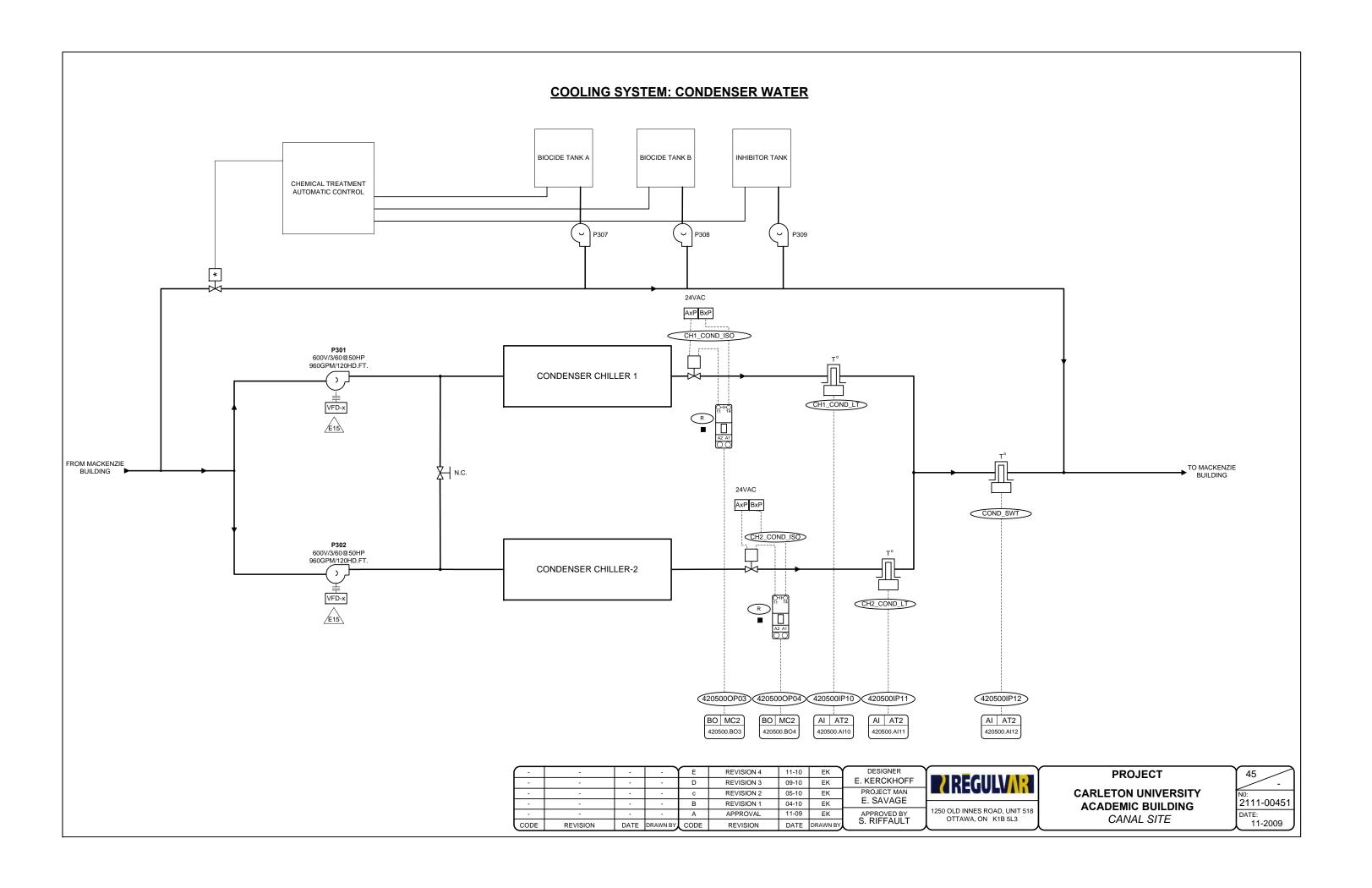
#	Room No.	Ventilation	type	Air Flow	Required	K Factor	Box
		System	(TAG)	MAX. (cfm)	MIN. (cfm)	Theoretical	Dim. (mm)
1	1000;1001	AH1	D	450,00	1000,00	46,60	250
2	1001A	AH1	A	-	250,00	13,90	150
3	2101(1)	AH1	E	1325,00	400,00		350
4	2101(2)	AH1	D	1060,00	320,00	92,80	300
5	2102(3)	AH1	A	170,00	60,00	13,90	150
6	2001(1)	AH1	С	840,00	840,00	46,60	250
7	2001(2)	AH1	С	840,00	840,00	46,60	250
8	2102(1)	AH1	E	1290,00	380,00		350
9	2102(2)	AH1	E	1290,00	380,00		350
10	2103	AH1	Α	200,00	60,00	13,90	150
11	2102A	AH1	В	410,00	120,00	27,80	200
12	2104(1)	AH2	С	660,00	190,00	46,60	250
13	2104(2)	AH2	С	660,00	190,00	46,60	250
14	2201(1)	AH2	E	1470,00	440,00		350
15	2201(2)	AH2	С	735,00	220,00	46,60	250
16	2201B	AH2	A	300,00	-	13,90	150
17	2003	AH2	Α	300,00	90,00	13,90	150
18	2913	AH1	Α	300,00	-	13,90	150
19	2202(1)	AH2	С	870,00	260,00	46,60	250
20	2202(2)	AH2	В	360,00	100,00	27,80	200
21	2204	AH2	С	610,00	180,00	46,60	250
22	2400	AH2	D	990,00	200,00	92,80	300
23	2301(1)	AH2	E	1290,00	380,00		350
24	2301(2)	AH2	E	1290,00	380,00		350
25	2301	AH2	В	410,00	120,00	27,80	200
26	2006	AH2	В	450,00	150,00	27,80	200

	=						
27	3101(1)	AH1	С	880,00	265,00	46,60	250
28	3101(2)	AH1	С	880,00	265,00	46,60	250
29	3102	AH1	Α	200,00	60,00	13,90	150
30	3001	AH1	D	1150,00	345,00	92,80	300
31	3103A	AH1	В	500,00	150,00	27,80	200
32	3103(1)	AH1	E	1325,00	400,00		350
33	3103(2)	AH1	D	1190,00	-	92,80	300
34	3104(1)	AH2	E	1300,00	390,00		350
35	3104(2)	AH2	D	1170,00	-	92,80	300
36	3104B	AH2	В	380	110	27,80	200
37	3105	AH2	С	640	190	46,60	250
38	3201	AH2	В	380	110	27,80	200
39	3913	AH2	Α	300	-	13,90	150
40	3202	AH2	В	550	165	27,80	200
41	3003	AH2	?	?	?		?
42	3206	AH2	С	870	260	46,60	250
43	3208	AH2	С	880	260	46,60	250
44	3205	AH2	С	740	220	46,60	250
45	3400	AH2	D	1080	325	92,80	300
46	3302(3301;330 3)	AH2	E	1420	420		350
47	3304	AH2	В	520	150	27,80	200
48	3005	AH2	В	520	150	27,80	200
49	6105(1)	AH1	E	1400	420		350
50	6105(2)	AH1	D	1120	-	92,80	300
51	6001	AH1	В	200	-	27,80	200
52	6105A	AH1	В	480	145	27,80	200
53	6107	AH1	В	600	180	27,80	200
	J						

	=						
54	6108	AH1	В	560	170	27,80	200
55	6109	AH1	В	600	180	27,80	200
56	6110	AH2	В	580	175	27,80	200
57	6111	AH2	С	680	205	46,60	250
58	6112	AH2	В	510	155	27,80	200
59	6204(6201;620 2;6203)	AH2	С	880	265	46,60	250
60	6207(6205;620 6;6208)	AH2	С	880	265	46,60	250
61	6209(6003)	AH2	В	305	90	27,80	200
62	6212	AH2	С	715	215	46,60	250
63	6913	AH2	Α	300	-	13,90	150
64	6000	AH1	В	600	180	27,80	200
65	6101	AH1	В	580	170	27,80	200
66	6103	AH1	С	740	220	46,60	250
67	7104(1)	AH1	D	1140	1	92,80	300
68	7104(2)	AH1	E	1425	430		350
69	7104A	AH1	В	430	-	27,80	200
70	7106A	AH1	С	650	195	46,60	250
71	7106(1)	AH1	F	1450	435		PHOENIX
72	7106(2)	AH1	D	1160	-	92,80	300
73	7108	AH2	F	780	235		PHOENIX
74	7110	AH2	F	840	255		PHOENIX
75	7111	AH2	В	380	100	27,80	200
76	7201	AH2	Α	250	70	13,90	150
77	7203(7202)	AH2	E	2110	360		350
78	7204(7205)	AH2	E	1240	360		350
79	7206	AH2	С	710	210	46,60	250
80	7207	AH2	В	600	180	27,80	200
							<u> </u>

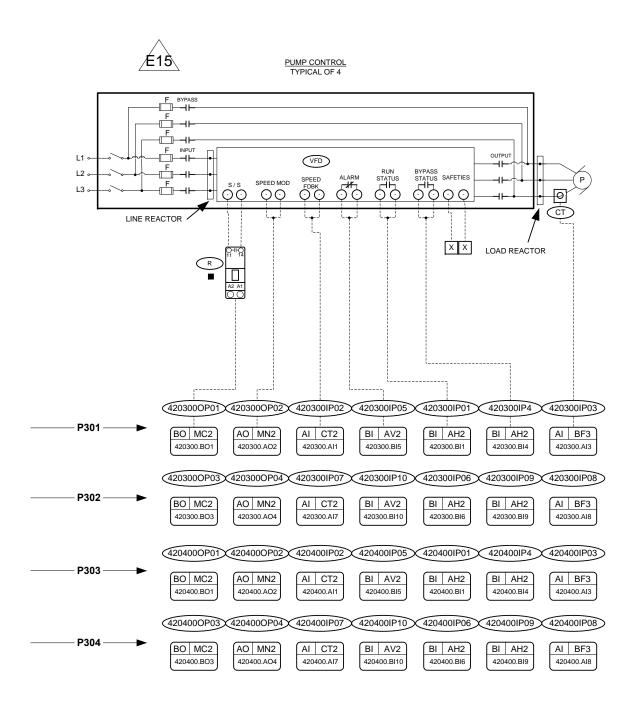
81	7913	AH2	Α	300	-	13,90	150
82	7000	AH1	В	600	180	27,80	200
83	7101	AH1	С	740	220	46,60	250
84	7103	AH1	F	680	205		PHOENIX





COOLING SYSTEM

(ELECTRICAL DIAGRAM)



<u> </u>	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT



CARLETON UNIVERSITY ACADEMIC BUILDING CANAL SITE

PROJECT

46

2111-00451

11-2009

COOLING SYSTEM
(BILL OF MATERIALS)

BILL OF MATERIALS

TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION				
xxT	6	MINCO	S479PDY30	Immerision temperature sensor, platinum 100 ohm, 3"				
CHxT	3	MINCO	TT111PD1SJ	temperature sensor, 0 to 25°C, 4-20 mA, 24Vdc				
CONDxT	3	MINCO	TT111PD1C	temperature sensor, 0 to 100°C, 4-20 mA, 24Vdc				
FM	2	KROHNE	ENVIROMAG IFS400KC + IFC 100	Magnetic Flowmeter. 4-20mA				
DPT-1	1	SETRA	2301-010PD-3V-11	Differential pressure transducer.0-10 psi, Wet-to-Wet, 4-20 mA				
CHx-DPT	2	SETA	2301-005PD-3V-11	Differential pressure transducer.0-5 psi, Wet-to-Wet, 4-20 mA				
CT	4	VERIS	H-720	Current Transmitter 0-200 amp., 3 wires, 4-20 mA, 24 vdc				
CHWT	4	ENDRESS + HAUSER	TMT 181	4-20 MA Transmitter and 100 ohm RTD Immersion Probe with well				
DSIM-E	2	ATKINSON	DSIM-E/1/SEQ/mA	parallel output dual isolated signal module				
CHxEV_ISO	2	BELIMO	F6150HS+SY3-24	Butterfly 2 way valve, 6 in. dia., N.O., close-off: 200 psi c/w electrical actuator				
CHxCOND_ISO	2	BELIMO	F6200HS+SY3-24	Butterfly 2 way valve, 8 in. dia., N.O., close-off: 200 psi c/w electrical actuator				
R	-	CARLO GAVAZZI	M15M	Electronic relay 8 amp. to 380 vac, 12 vdc.				
R	-	CARLO GAVAZZI	ZD35	Relay base				
R	•	CARLO GAVAZZI	939.90.33.3	Surge Suppressor & Pilot light for M15MAH001812Vcc relay				

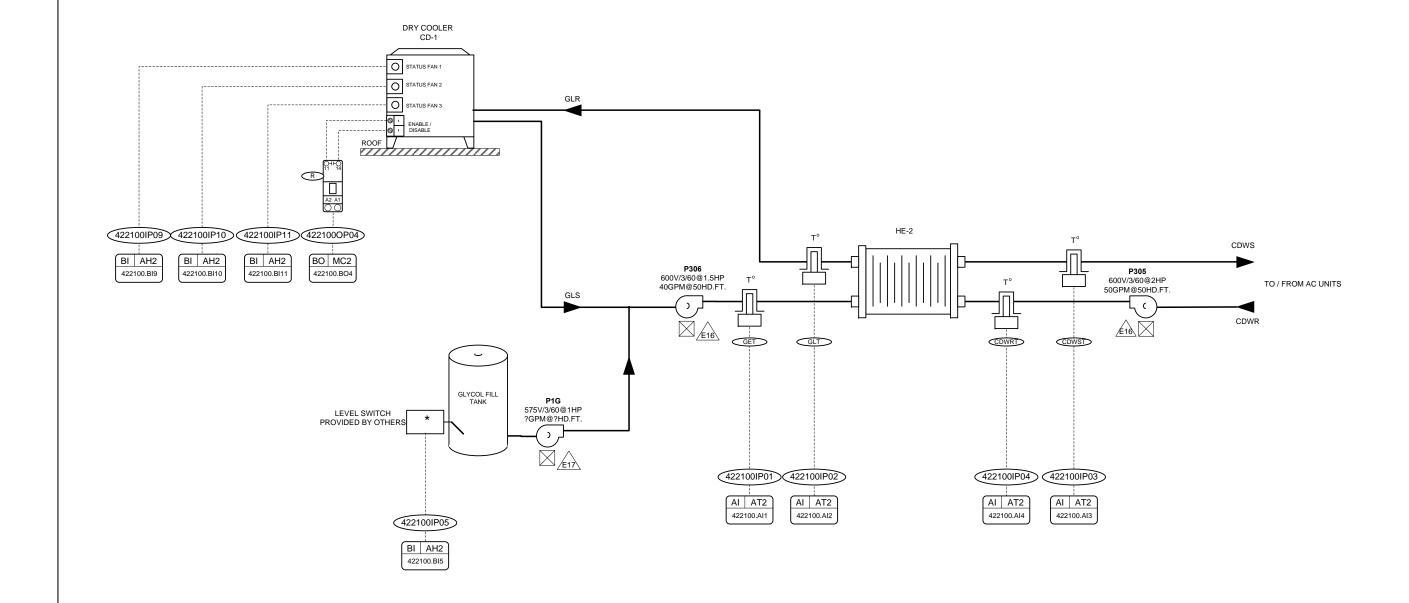
-	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

1250 OLD INNES ROAD, UNIT 518 OTTAWA, ON K1B 5L3

PROJECT **CARLETON UNIVERSITY** ACADEMIC BUILDING CANAL SITE

N0: 2111-00451 DATE: 11-2009

24/7 COOLING WATER (CONTROL DIAGRAM)



DESIGNER	EK	11-10	REVISION 4	E	-)	-	-	
E. KERCKHOFF	EK	09-10	REVISION 3	D	-	-	-	-
PROJECT MAN	EK	05-10	REVISION 2	С	-	-	-	-
E. SAVAGE	EK	04-10	REVISION 1	В	-	-	-	-
APPROVED BY	EK	11-09	APPROVAL	Α	-	-	-	-
S. RIFFAULT	DRAWN BY	DATE	REVISION	CODE	DRAWN BY	DATE	REVISION	CODE

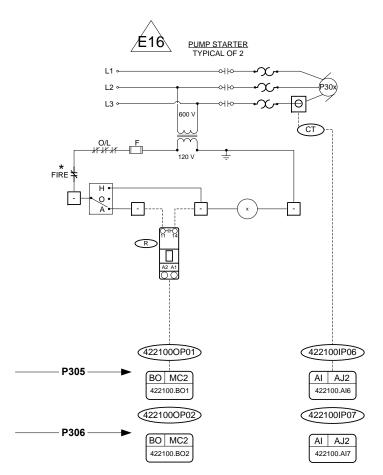


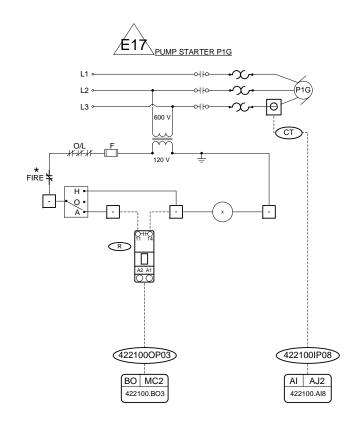
CARLETON UNIVERSITY ACADEMIC BUILDING CANAL SITE

PROJECT



24/7 COOLING WATER (ELECTRICAL DIAGRAM & BILL OF MATERIALS)





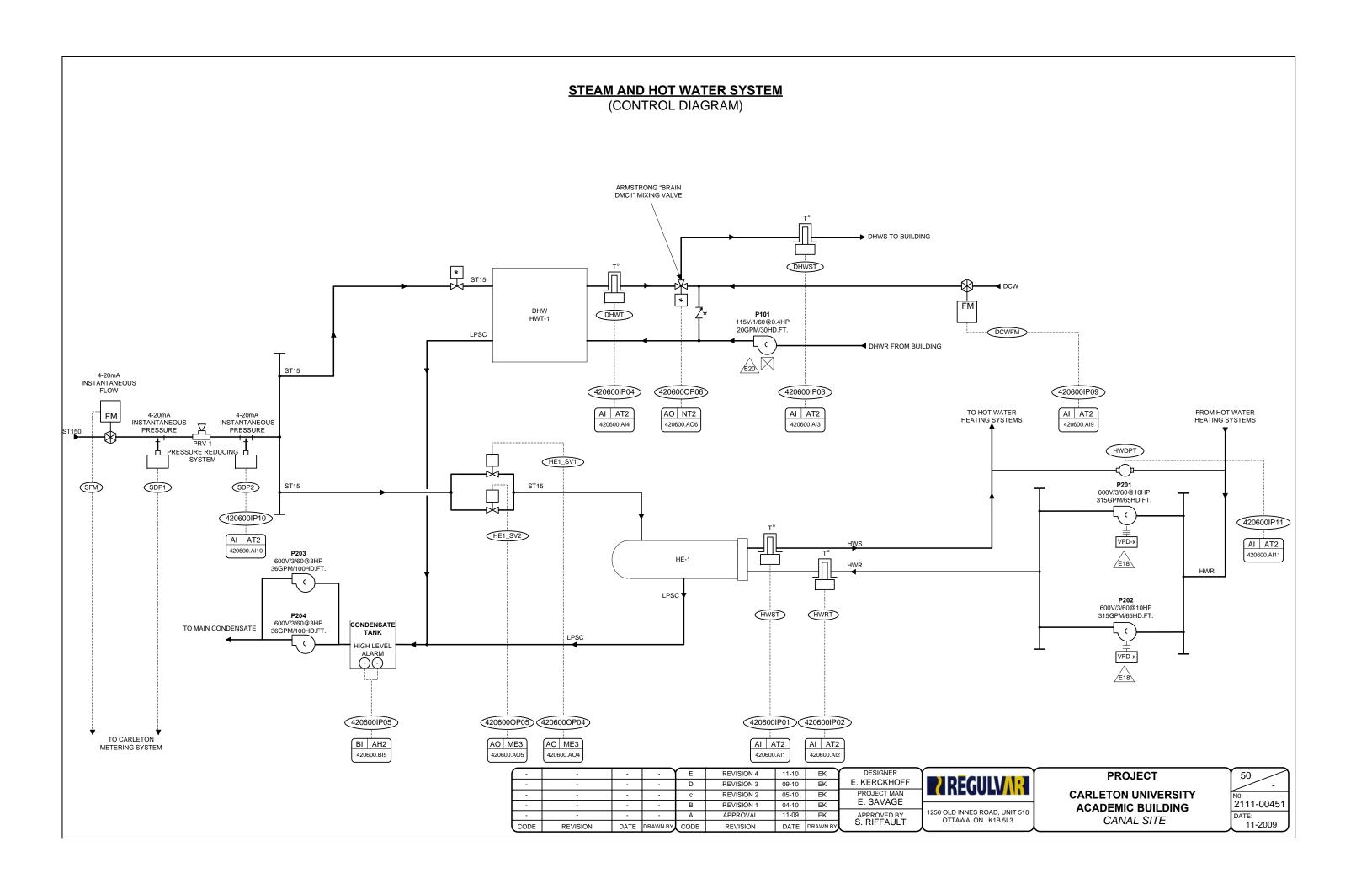
BILL OF MATERIALS

TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION			
xxT	4	MINCO	S479PDY30	Immerision temperature sensor, platinum 100 ohm, 3"			
xxT	4	MINCO	TT111PD1SJ	temperature sensor, 0 to 25°C, 4-20 mA, 24Vdc			
CT	6	VERIS	H-922	Current Transmitter 0-120 amp., 0-5 vdc			
R	4	CARLO GAVAZZI	M15M	Electronic relay 8 amp. to 380 vac, 12 vdc.			
R	4	CARLO GAVAZZI	ZD35	Relay base			
R	4	CARLO GAVAZZI	939.90.33.3	Surge Suppressor & Pilot light for M15MAH001812Vcc relay			

DESIGNER	EK	11-10	REVISION 4	E	-	-	-	-
E. KERCKHOFF	EK	09-10	REVISION 3	D	-	-	-	-
PROJECT MAN	EK	05-10	REVISION 2	С	-	-	-	-
E. SAVAGE	EK	04-10	REVISION 1	В	-	-	-	-
APPROVED BY	EK	11-09	APPROVAL	Α	-	-	-	-
S. RIFFAULT	DRAWN BY	DATE	REVISION	CODE	DRAWN BY	DATE	REVISION	CODE

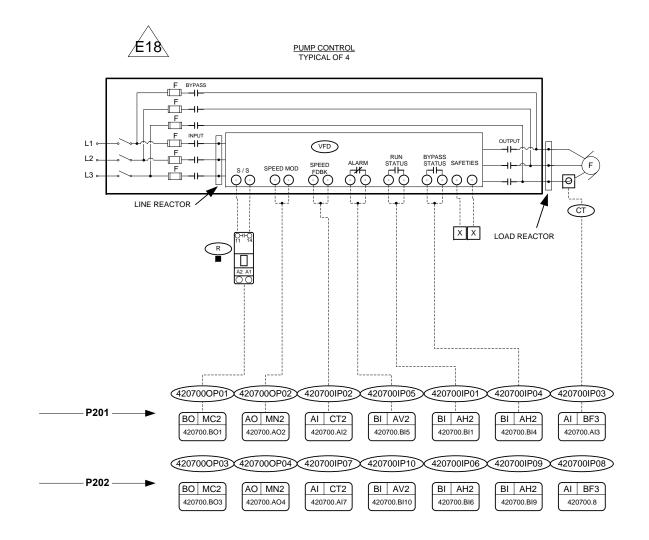


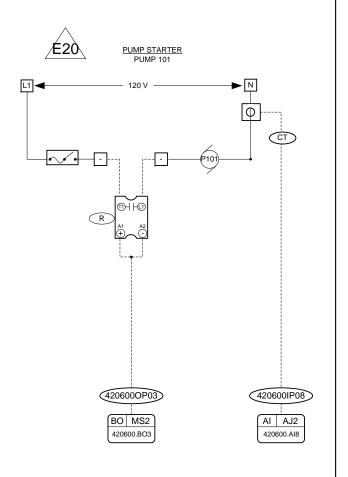




STEAM AND HOT WATER SYSTEM

(ELECTRICAL DIAGRAM)





-	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT



`	51
	-
	N0:
	2111-00451
	DATE:
	11-2009

STEAM AND HOT WATER SYSTEM (BILL OF MATERIALS)

BILL OF MATERIALS

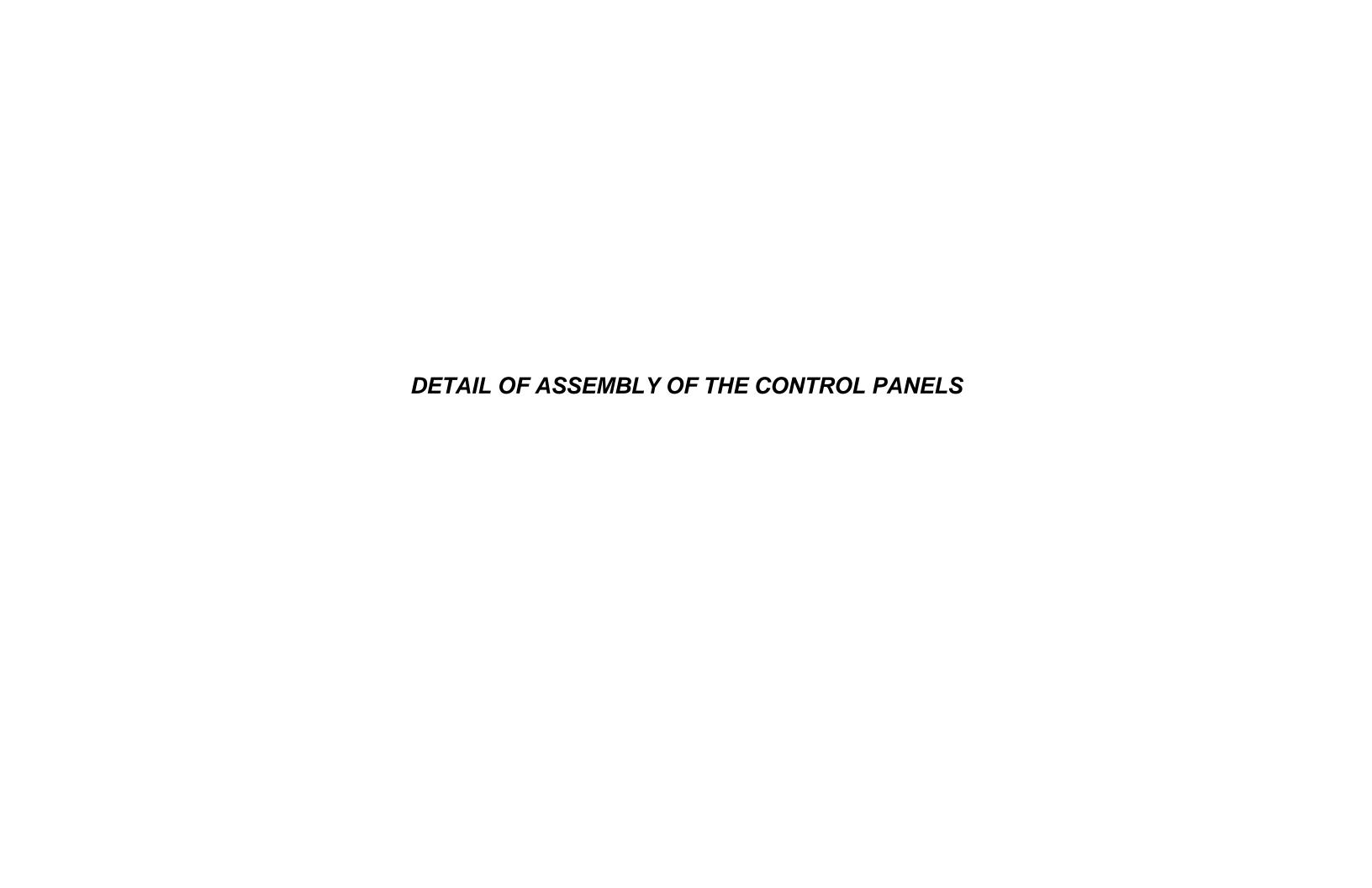
TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION
xxT	4	MINCO	S479PDY30	Immerision temperature sensor, platinum 100 ohm, 3"
xxT	4	MINCO	TT111PD1C	temperature sensor, 0 to 100°C, 4-20 mA, 24Vdc
СТ	3	VERIS	H-922	Current Transmitter 0-120 amp., 0-5 vdc
CT	2	VERIS	H-720	Current Transmitter 0-200 amp., 3 wires, 4-20 mA, 24 vdc
SFM	1	KROHNE	OPTISWIRL4070	Vortex flow meter
DCWFM	1	KROHNE	ENVIROMAG IFS400KC + IFC 100	Magnetic Flowmeter. 4-20mA
SDP-1	1	KROHNE	OPTIBAR P 3050 C	0-150PSI steam pressure transmitter + pigtail.
SDP-2	1	KROHNE	OPTIBAR P 3050 C	0-15PSI steam pressure transmitter + pigtail.
R	2	CARLO GAVAZZI	M15M	Electronic relay 8 amp. to 380 vac, 12 vdc.
R	2	CARLO GAVAZZI	ZD35	Relay base
R	2	CARLO GAVAZZI	939.90.33.3	Surge Suppressor & Pilot light for M15MAH001812Vcc relay
R	1	CARLO GAVAZZI	RM1A60D25	1 poles full load 25 amps. & resistive load 55 amps. 4-32 Vdc
SV-1	1	BELIMO	G250S+AF24-SR	2 way valve, 2 in. dia., N.C., C.V.: 40, close-off: 93 psi c/w electrical actuator
SV-2	1	BELIMO	G232S+AF24-SR	2 way valve, 1.25in. dia., N.C., C.V.: 20, close-off: 105 psi c/w electrical actuator
PRV-1	1	FISHER	ET-1.5-WCC-150RF	150PSI - 15PSI steam pressure reducting station
HWDPT	1	SETRA	2301-050PD-3V-11	Differential pressure transducer.0-50 psi, Wet-to-Wet, 4-20 mA

-	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

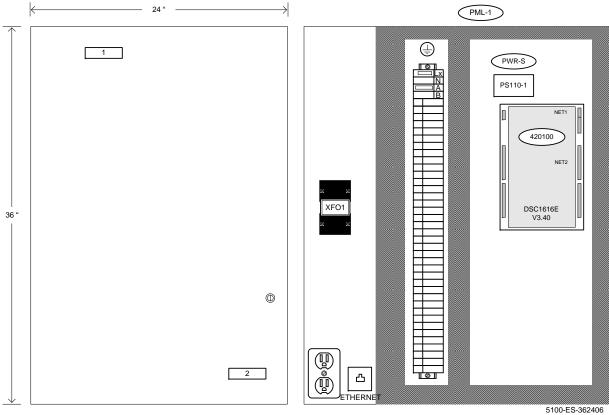
1250 OLD INNES ROAD, UNIT 518 OTTAWA, ON K1B 5L3

PROJECT **CARLETON UNIVERSITY** ACADEMIC BUILDING CANAL SITE

52 2111-00451 DATE: 11-2009

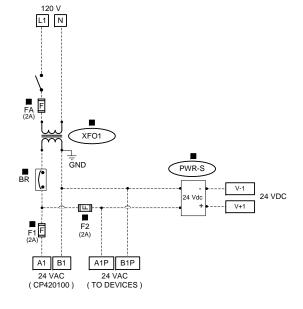


TYPE - PML1 (PANEL DETAILS)



NAME PLATE

1 : CONTROL PANEL PML1 2 : RÉGULVAR CANADA INC.



NOTE: ALL COMPONENTS IN THE PANEL (EXCEPT CLASS 2 PRODUCTS) MUST BE APPROVED BY CSA.

APPROVED BY: DATE:

-	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	=	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT





TYPE - PML1 (BILL OF MATERIALS)

BILL OF MATERIALS

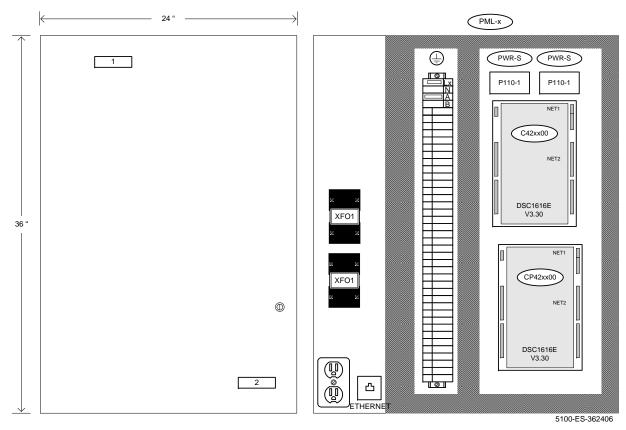
	TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION				
	PML-1	1	EUROBEX	5100-ES-362406	Control panel, 36x24x9, complete with safety lock				
•	CP420000	1	DELTA	DSM-RTR	BACNET TCP/IP ROUTER for V3, c/w (1) Ethernet expansion card for RJ45 connection for AREA,				
					(2) MS/TP port & (2) RS-232 ports, internal battery, 24 vac				
	CP420100	1	DELTA	DSC1616E	BACNET, digital controller, 16 universal inputs, 16 universal outputs c/w HOA & 2 MS/TP ports for				
					AREA or SYSTEM or SUBNET, 1 ETHERNET port & 1 RS-232 port, internal battery,24 vac				
•	BR	2	TYCO	W28-XQ1A-4	Circuit Breaker, Single Pole, 4 Amp.				
		2	CHICAGO MINIATURE	LA32RG182111T3	Non-Relampable LED Red indicator lights, 18Vac				
	PWR-S	1	GREYSTONE	PS-110-1	Power supply, 24 Vav/ 24 Vdc @ 1.5 Amp., adujstable half wave rectified				
A	XFO1x	2	POLARIS	EP100IK	Transformer enclosed type, 120/24 vac, 100 VA				
•	Fx	5	REGULVAR	2A	Fuse 2A				
•	FB	1	REGULVAR	3A	Fuse 3A				
		1	REGULVAR	5320-001	120 volts double electric plug				
		1	REGULVAR	BOI2020	case 2020				
•		1	REGULVAR	20C1	Receptacle Plate for case 2020				

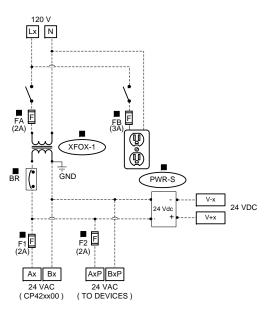
DESIGNER	EK	11-10	REVISION 4	E	-	-	-	
E. KERCKHOFF	EK	09-10	REVISION 3	D	-	-	-	-
PROJECT MAN	EK	05-10	REVISION 2	С	-	-	-	-
E. SAVAGE	EK	04-10	REVISION 1	В	-	-	-	-
APPROVED BY	EK	11-09	APPROVAL	Α	-	-	-	-
S. RIFFAULT	DRAWN BY	DATE	REVISION	CODE	DRAWN BY	DATE	REVISION	ODE

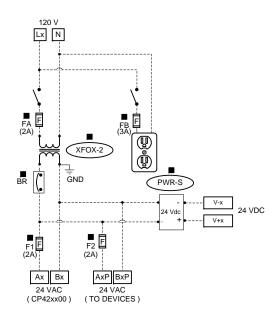




TYPE - PML2, 4 (PANEL DETAILS)







- NAME PLATE

 1 : CONTROL PANEL PMLx
 2 : RÉGULVAR CANADA INC.

NOTE: ALL COMPONENTS IN THE PANEL (EXCEPT CLASS 2 PRODUCTS) MUST BE APPROVED BY CSA.

APPROVED BY: DATE:

	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT





TYPE - PML2, 4 (BILL OF MATERIALS)

BILL OF MATERIALS

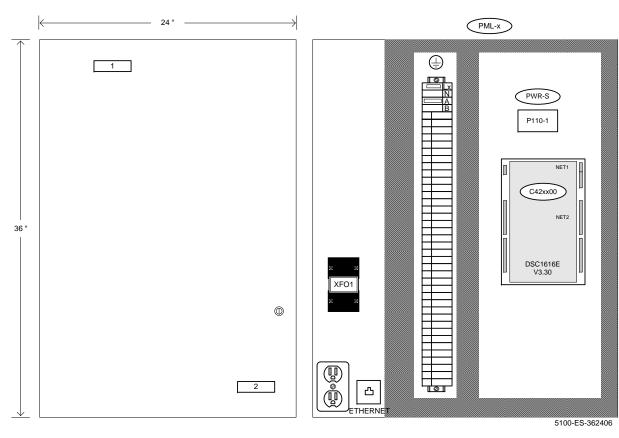
	TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION				
	PML-x	2	EUROBEX	5100-ES-362406	Control panel, 36x24x9, complete with safety lock				
•	CP42xx00	4	DELTA	DSC1616E	BACNET, digital controller, 16 universal inputs, 16 universal outputs c/w HOA & 2 MS/TP ports for AREA or SYSTEM or SUBNET, 1 ETHERNET port & 1 RS-232 port, internal battery,24 vac				
-	BR	4	TYCO	W28-XQ1A-4	Circuit Breaker, Single Pole, 4 Amp.				
•		4	CHICAGO MINIATURE	LA32RG182111T3	Non-Relampable LED Red indicator lights, 18Vac				
	PWR-S	4	GREYSTONE	PS110-1	Power supply 1 amp. 24 vac / 0 to 24 vdc				
A	XFOx	4	POLARIS	EP100IK	Transformer enclosed type, 120/24 vac, 100 VA				
	Fx	12	REGULVAR	2A	Fuse 2A				
	FB	4	REGULVAR	3A	Fuse 3A				
		2	REGULVAR	5320-001	120 volts double electric plug				
		2	REGULVAR	BOI2020	case 2020				
		2	REGULVAR	20C1	Receptacle Plate for case 2020				

-		-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT





TYPE - PML3, 8 (PANEL DETAILS)



120 V Ax Bx 24 VAC (CP42xx00) AxP BxP 24 VAC (TO DEVICES)

NAME PLATE

- 1 : CONTROL PANEL PMLx 2 : RÉGULVAR CANADA INC.

NOTE: ALL COMPONENTS IN THE PANEL (EXCEPT CLASS 2 PRODUCTS) MUST BE APPROVED BY CSA.

APPROVED BY: DATE:

	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT





TYPE - PML3, 8 (BILL OF MATERIALS)

BILL OF MATERIALS

	TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION
	PML-x	2	EUROBEX	5100-ES-362406	Control panel, 36x24x9, complete with safety lock
•	CP42xx00	2	DELTA	DSC1616E	BACNET, digital controller, 16 universal inputs, 16 universal outputs c/w HOA & 2 MS/TP ports for
					AREA or SYSTEM or SUBNET, 1 ETHERNET port & 1 RS-232 port, internal battery,24 vac
-	BR	2	TYCO	W28-XQ1A-4	Circuit Breaker, Single Pole, 4 Amp.
		2	CHICAGO MINIATURE	LA32RG182111T3	Non-Relampable LED Red indicator lights, 18Vac
	PWR-S	2	GREYSTONE	PS-110-1	Power supply, 24 Vav/ 24 Vdc @ 1.5 Amp., adujstable half wave rectified
A	XFOx	2	POLARIS	EP100IK	Transformer enclosed type, 120/24 vac, 100 VA
	Fx	6	REGULVAR	2A	Fuse 2A
	FB	2	REGULVAR	3A	Fuse 3A
		2	REGULVAR	5320-001	120 volts double electric plug
		2	REGULVAR	BOI2020	case 2020
		2	REGULVAR	20C1	Receptacle Plate for case 2020

$\overline{}$	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT



PROJECT

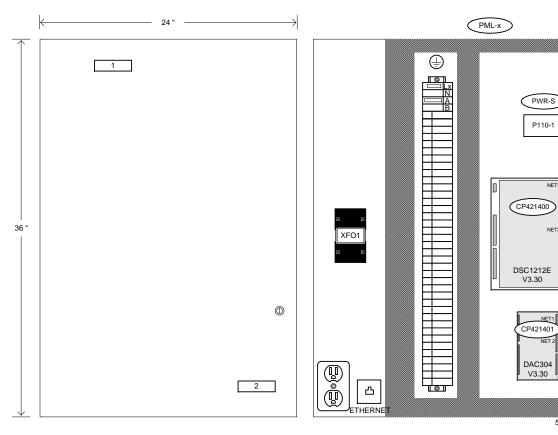
CARLETON UNIVERSITY

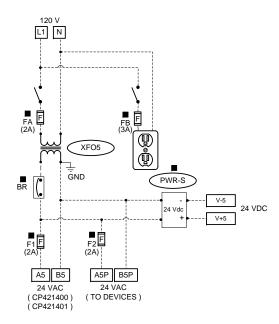
ACADEMIC BUILDING

CANAL SITE

58 -N0: 2111-00451 DATE: 11-2009

TYPE - PML 5 (PANEL DETAILS)





NAME PLATE

- 1 : CONTROL PANEL PMLx 2 : RÉGULVAR CANADA INC.

NOTE: ALL COMPONENTS IN THE PANEL (EXCEPT CLASS 2 PRODUCTS) MUST BE APPROVED BY CSA.

APPROVED BY: DATE:

-	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT

5100-ES-362406





TYPE - PML 5 (BILL OF MATERIALS)

BILL OF MATERIALS

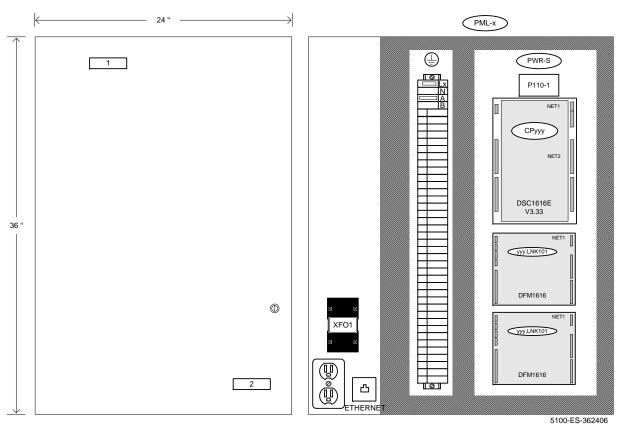
	TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION
	PML-5	1	EUROBEX	5100-ES-362406	Control panel, 36x24x9, complete with safety lock
•	CP421400	1	DELTA	DSC1616E	BACNET, digital controller, 16 universal inputs, 16 universal outputs c/w HOA & 2 MS/TP ports for
					AREA or SYSTEM or SUBNET, 1 ETHERNET port & 1 RS-232 port, internal battery,24 vac
•	CP421401	1	DELTA	DAC304	BACNET, digital controller 3 inputs & 4 binary outputs c/w 1 MS/TP port for SUBNET & 1
					LinkNet port, 24 vac
	BR	1	TYCO	W28-XQ1A-4	Circuit Breaker, Single Pole, 4 Amp.
		1	CHICAGO MINIATURE	LA32RG182111T3	Non-Relampable LED Red indicator lights, 18Vac
	PWR-S	1	GREYSTONE	PS-110-1	Power supply, 24 Vav/ 24 Vdc @ 1.5 Amp., adujstable half wave rectified
A	XFO11	1	POLARIS	EP100IK	Transformer enclosed type, 120/24 vac, 100 VA
	Fx	3	REGULVAR	2A	Fuse 2A
	FB	1	REGULVAR	3A	Fuse 3A
		1	REGULVAR	5320-001	120 volts double electric plug
		1	REGULVAR	BOI2020	case 2020
		1	REGULVAR	20C1	Receptacle Plate for case 2020
	R	1	CARLO GAVAZZI	RPY-A002-A24L	Electronic relay 2 pole 10 amp./120 V, 24 vac
	R	1	CARLO GAVAZZI	ZPY08	Relay socket

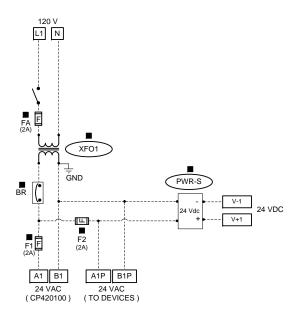
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-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT





TYPE - PML6,7 (PANEL DETAILS)





- NAME PLATE 1 : CONTROL PANEL PMLx 2 : RÉGULVAR CANADA INC.

-	-	-	-)	E	REVISION 4	11-10	EK	DESIGNER
-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT





TYPE - PML 6,7 (BILL OF MATERIALS)

BILL OF MATERIALS

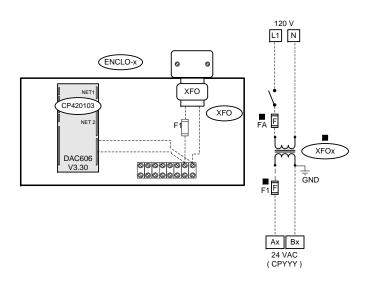
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	<u>TAG</u>	<u>QTY</u>	<u>MANUFACTURER</u>	MODEL	DESCRIPTION
	PML-x	2	EUROBEX	5100-ES-362406	Control panel, 36x24x9, complete with safety lock
	CP42xx00	4	DELTA	DSC1616E	BACNET, digital controller, 16 universal inputs, 16 universal outputs c/w HOA & 2 MS/TP ports for
					AREA or SYSTEM or SUBNET, 1 ETHERNET port & 1 RS-232 port, internal battery,24 vac
	BR	4	TYCO	W28-XQ1A-4	Circuit Breaker, Single Pole, 4 Amp.
		4	CHICAGO MINIATURE	LA32RG182111T3	Non-Relampable LED Red indicator lights, 18Vac
	PWR-S	4	GREYSTONE	PS110-1	Power supply 1 amp. 24 vac / 0 to 24 vdc
A	XFOx	4	POLARIS	EP100IK	Transformer enclosed type, 120/24 vac, 100 VA
	Fx	12	REGULVAR	2A	Fuse 2A
	FB	4	REGULVAR	3A	Fuse 3A
		2	REGULVAR	5320-001	120 volts double electric plug
		2	REGULVAR	BOI2020	case 2020
		2	REGULVAR	20C1	Receptacle Plate for case 2020
	LLR	2	CARLO GAVAZZI	RPY-A002-A24L	Electronic relay 2 pole 10 amp./120 V, 24 vac
	LLR	2	CARLO GAVAZZI	ZPY08	Relay socket
	R	6	CARLO GAVAZZI	M15M	Electronic relay 8 amp. to 380 vac, 12 vdc.
	R	6	CARLO GAVAZZI	ZD35	Relay base
	R	6	CARLO GAVAZZI	939.90.33.3	Surge Suppressor & Pilot light for M15MAH001812Vcc relay

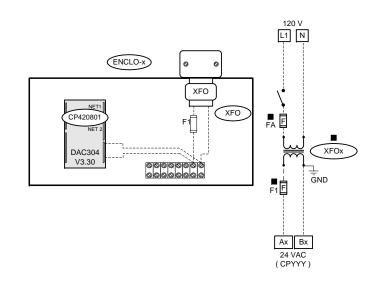
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-	=	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	=	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	REVISION	DATE	DRAWN BY	CODE	REVISION	DATE	DRAWN BY	S. RIFFAULT





TYPE - ENCLO (PANEL DETAILS)





BILL OF MATERIALS

	TAG	QTY	MANUFACTURER	MODEL	DESCRIPTION
	ENCLO	2	REGULVAR	1894	control case
•	CP420103	1	DELTA	DAC606	BACNET, digital controller, 6 inputs & 6 binary outputs c/w 1 MS/TP port for SUBNET & 1 LinkNet port, 24 vac
•	CP420801	1	DELTA	DAC304	BACNET, digital controller 3 inputs & 4 binary outputs c/w 1 MS/TP port for SUBNET & 1 LinkNet port, 24 vac
A	XFO	2	POLARIS	BE2G	Transformer 120/24 VAC, open type, 40 VA.
•	F	2	REGULVAR	2A	Fuse 2A
lack		2	REGULVAR	1894Q	Control case
A		2	REGULVAR	BOI2020	case 2020
\blacktriangle		2	REGULVAR	20C4	Plate for case 2020

$\overline{}$	-	-	-	E	REVISION 4	11-10	EK	DESIGNER
-	-	-	-	D	REVISION 3	09-10	EK	E. KERCKHOFF
-	-	-	-	С	REVISION 2	05-10	EK	PROJECT MAN
-	-	-	-	В	REVISION 1	04-10	EK	E. SAVAGE
-	-	-	-	Α	APPROVAL	11-09	EK	APPROVED BY
CODE	BEVICION	DATE	DD AWN BY	CODE	BEVICION	DATE	DD AWN BV	S. RIFFAULT





SECTION B

POINTS LIST

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:ENCLO LOCATED IN MECHANICAL ROOM 1101

CONTROLLER:CP420103 (DAC 633 V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DAC633	CP420103	IP1	420103.AI1	EXH	420103IP01	CS_01EXIFH01	STATUS HIGH SPEED EXHAUST FAN L1-1	AI	H922	AJ2
2	DAC633	CP420103	IP2	420103.AI2	EXH	420103IP02	CS_01EXIFL01	STATUS LOW SPEED EXHAUST FAN L1-1	AI	H922	AJ2
3	DAC633	CP420103	IP3	420103.BI3	EXH	420103IP03	CS_01C1SREAL	ALARM REFRIDGERANT	ВІ	MY4N	AH2
4	DAC633	CP420103	IP4	420103.AI4	EXH	420103IP04	CS_01EXIL102	STATUS EXHAUST FAN L1-2	AI	H922	AJ2
5	DAC633	CP420103	IP5	420103.AI5							
6	DAC633	CP420103	IP6	420103.Al6							
NET2	DNS-24L	CP420103.LNK101		420103.Al101	EXH	420103IP101	CS_01EXTRM00	TEMPERATURE ROOM 1101	AI	DNS-24L	DT6
											_
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output		Controller address CP420103		Logical address 420103.BO1	System EXH	Tag name 420103OP01	Point name CS_01EXCFH01	Description START / STOP EXHAUST FAN L1-1 HIGH SPEED	Туре	Equipment RPY	Detail NU2
	type		address					-			
1	type DAC633	CP420103	address OP1	420103.BO1	EXH	420103OP01	CS_01EXCFH01	START / STOP EXHAUST FAN L1-1 HIGH SPEED	во	RPY	NU2
1 2	DAC633	CP420103 CP420103	address OP1 OP2	420103.BO1 420103.BO2	EXH EXH	420103OP01 420103OP02	CS_01EXCFH01 CS_01EXCFL01	START / STOP EXHAUST FAN L1-1 HIGH SPEED START / STOP EXHAUST FAN L1-1 LOW SPEED	во	RPY RPY	NU2 NU2
1 2 3	DAC633 DAC633 DAC633	CP420103 CP420103 CP420103	Address OP1 OP2 OP3	420103.BO1 420103.BO2 420103.BO3	EXH EXH	420103OP01 420103OP02	CS_01EXCFH01 CS_01EXCFL01	START / STOP EXHAUST FAN L1-1 HIGH SPEED START / STOP EXHAUST FAN L1-1 LOW SPEED	во	RPY RPY	NU2 NU2
1 2 3 4	DAC633 DAC633 DAC633 DAC633	CP420103 CP420103 CP420103	address OP1 OP2 OP3 OP4	420103.BO1 420103.BO2 420103.BO3 420103.BO4	EXH EXH EXH	420103OP01 420103OP02 420103OP03	CS_01EXCFH01 CS_01EXCFL01 CS_01EXCL102	START / STOP EXHAUST FAN L1-1 HIGH SPEED START / STOP EXHAUST FAN L1-1 LOW SPEED START / STOP EXHAUST FAN L1-2	BO BO BO	RPY RPY RPY	NU2 NU2 NU2

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-1 LOCATED IN MECH ROOM 1101 CONTROLLER:CP420200 (DSC1212E V3.40)

# Input	Controller type	Controller address	Physical	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1212E	CP420200	address IP1	420200.AI1	AHU4	420200IP01	CS_01A4TSA00	TEMPERATURE SUPPLY AIR	Al	S450PDY12	AT2
2	DSC1212E	CP420200	IP2	420200.AI2	AHU4	420200IP02	CS_01A4SFT00	STATUS FILTER	AI	SETRA 264	AT2
3	DSC1212E	CP420200	IP3	420200.AI3	AHU4	420200IP03	CS_01A4IFLSF	STATUS SUPPLY FAN LOW SPEED	Al	H922	AJ2
4	DSC1212E	CP420200	IP4	420200.AI4	AHU4	420200IP04	CS_01A4IFHSF	STATUS SUPPLY FAN HIGH SPEED	AI	H922	AJ2
5	DSC1212E	CP420200	IP5	420200.BI5	SUMP	420200IP05	CS_01SPSSUPS	STATUS STORM SUMP PUMPS PUMP STATUS	BI	CTC	AH2
6	DSC1212E	CP420200	IP6	420200.BI6	SUMP	420200IP06	CS_01SPSSUHL	HIGH LEVEL STORM SUMP PUMPS	BI	СТС	AH2
7	DSC1212E	CP420200	IP7	420200.BI7	SUMP	420200IP07	CS_01SPSSAPS	STATUS SANITARY PUMPS PUMP STATUS	BI	СТС	AH2
8	DSC1212E	CP420200	IP8	420200.BI8	SUMP	420200IP08	CS_01SPSSAHL	HIGH LEVEL SANITARY PUMPS	BI	СТС	AH2
9	DSC1212E	CP420200	IP9	720200.510		42020011 00	CO_CTOT COATE	THOMELY LE GARMANT TOWN O	5.	0.0	7112
10	DSC1212E	CP420200	IP10								
11	DSC1212E	CP420200	IP11								
12	DSC1212E	CP420200	IP12								
NET2	DNS-24L	CP420200.LNK101	" 12	420200.AI101	AHU4	420200IP101	CS_01A4TRM00	TEMPERATURE ROOM 1103A	AI	DNS-24L	DT6
NETZ	DNO-24L	O1 420200.LINITIO1		420200.A1101	A1104	72020011 101	00_01A411(W00	TEMPERATORE ROOM TION	71	D110-24E	5.0
			Dhysical								
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output	Controller type DSC1212E	Controller address CP420200	Physical address OP1	Logical address 420200.AO1	System AHU4	Tag name 420200OP01	Point name CS_01A4RDMFA	Description MODULATION FRESH AIR DAMPER	Type AO	Equipment 2*AF24-SR	Detail ME3
			address								
1	DSC1212E	CP420200	address OP1	420200.AO1	AHU4	420200OP01	CS_01A4RDMFA	MODULATION FRESH AIR DAMPER	AO	2*AF24-SR	ME3
1 2	DSC1212E DSC1212E	CP420200 CP420200	OP1 OP2	420200.AO1 420200.AO2	AHU4 AHU4	420200OP01 420200OP02	CS_01A4RDMFA CS_01A4RDMEA	MODULATION FRESH AIR DAMPER MODULATION EXHUAST AIR DAMPER	AO AO	2*AF24-SR 2*AF24-SR	ME3
1 2 3	DSC1212E DSC1212E DSC1212E	CP420200 CP420200 CP420200	OP1 OP2 OP3	420200.AO1 420200.AO2 420200.BO3	AHU4 AHU4 AHU4	420200OP01 420200OP02 420200OP03	CS_01A4RDMFA CS_01A4RDMEA CS_01A4CFLSF	MODULATION FRESH AIR DAMPER MODULATION EXHUAST AIR DAMPER START / STOP SUPPLY FAN LOW SPEED	AO AO BO	2*AF24-SR 2*AF24-SR M15M	ME3 ME3 MC2
1 2 3 4	DSC1212E DSC1212E DSC1212E DSC1212E	CP420200 CP420200 CP420200 CP420200	OP1 OP2 OP3 OP4	420200.AO1 420200.AO2 420200.BO3	AHU4 AHU4 AHU4	420200OP01 420200OP02 420200OP03	CS_01A4RDMFA CS_01A4RDMEA CS_01A4CFLSF	MODULATION FRESH AIR DAMPER MODULATION EXHUAST AIR DAMPER START / STOP SUPPLY FAN LOW SPEED	AO AO BO	2*AF24-SR 2*AF24-SR M15M	ME3 ME3 MC2
1 2 3 4 5	DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E	CP420200 CP420200 CP420200 CP420200	OP1 OP2 OP3 OP4 OP5	420200.AO1 420200.AO2 420200.BO3	AHU4 AHU4 AHU4	420200OP01 420200OP02 420200OP03	CS_01A4RDMFA CS_01A4RDMEA CS_01A4CFLSF	MODULATION FRESH AIR DAMPER MODULATION EXHUAST AIR DAMPER START / STOP SUPPLY FAN LOW SPEED	AO AO BO	2*AF24-SR 2*AF24-SR M15M	ME3 ME3 MC2
1 2 3 4 5	DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E	CP420200 CP420200 CP420200 CP420200 CP420200 CP420200	OP1 OP2 OP3 OP4 OP5 OP6	420200.AO1 420200.AO2 420200.BO3	AHU4 AHU4 AHU4	420200OP01 420200OP02 420200OP03	CS_01A4RDMFA CS_01A4RDMEA CS_01A4CFLSF	MODULATION FRESH AIR DAMPER MODULATION EXHUAST AIR DAMPER START / STOP SUPPLY FAN LOW SPEED	AO AO BO	2*AF24-SR 2*AF24-SR M15M	ME3 ME3 MC2
1 2 3 4 5 6	DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E	CP420200 CP420200 CP420200 CP420200 CP420200 CP420200 CP420200	OP1 OP2 OP3 OP4 OP5 OP6 OP7	420200.AO1 420200.AO2 420200.BO3	AHU4 AHU4 AHU4	420200OP01 420200OP02 420200OP03	CS_01A4RDMFA CS_01A4RDMEA CS_01A4CFLSF	MODULATION FRESH AIR DAMPER MODULATION EXHUAST AIR DAMPER START / STOP SUPPLY FAN LOW SPEED	AO AO BO	2*AF24-SR 2*AF24-SR M15M	ME3 ME3 MC2
1 2 3 4 5 6 7	DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E	CP420200 CP420200 CP420200 CP420200 CP420200 CP420200 CP420200 CP420200	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8	420200.AO1 420200.AO2 420200.BO3	AHU4 AHU4 AHU4	420200OP01 420200OP02 420200OP03	CS_01A4RDMFA CS_01A4RDMEA CS_01A4CFLSF	MODULATION FRESH AIR DAMPER MODULATION EXHUAST AIR DAMPER START / STOP SUPPLY FAN LOW SPEED	AO AO BO	2*AF24-SR 2*AF24-SR M15M	ME3 ME3 MC2
1 2 3 4 5 6 7 8 9	DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E	CP420200 CP420200 CP420200 CP420200 CP420200 CP420200 CP420200 CP420200 CP420200	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	420200.AO1 420200.AO2 420200.BO3	AHU4 AHU4 AHU4	420200OP01 420200OP02 420200OP03	CS_01A4RDMFA CS_01A4RDMEA CS_01A4CFLSF	MODULATION FRESH AIR DAMPER MODULATION EXHUAST AIR DAMPER START / STOP SUPPLY FAN LOW SPEED	AO AO BO	2*AF24-SR 2*AF24-SR M15M	ME3 ME3 MC2

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-2 LOCATED IN MECH ROOM 1101 CONTROLLER:CP420300 (DSC1616E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP420300	IP1	420300.BI1	COND_VFD	420300IP01	CS_01CHSKP01_RUN	RUN STATUS P301 VFD	ВІ	стс	AH2
2	DSC1616E	CP420300	IP2	420300.AI2	COND_VFD	420300IP02	CS_01CHAKP01_SPD	FEEDBACK P301 SPEED	AI	4-20mA	CT2
3	DSC1616E	CP420300	IP3	420300.AI3	COND_VFD	420300IP03	CS_01CHIKP01	STATUS P301 CURRENT	AI	H-720	BF3
4	DSC1616E	CP420300	IP4	420300.BI4	COND_VFD	420300IP04	CS_01CHSKP01_BP	STATUS P301 VFD BYPASS MODE	ВІ	стс	AH2
5	DSC1616E	CP420300	IP5	420300.BI5	COND_VFD	420300IP05	CS_01CHSKP01_AL	ALARM P301	ВІ	стс	AV2
6	DSC1616E	CP420300	IP6	420300.BI6	COND_VFD	420300IP06	CS_01CHSKP02_RUN	RUN STATUS P302 VFD	ВІ	стс	AH2
7	DSC1616E	CP420300	IP7	420300.AI7	COND_VFD	420300IP07	CS_01CHAKP02_SPD	FEEDBACK P302 SPEED	AI	4-20mA	CT2
8	DSC1616E	CP420300	IP8	420300.AI8	COND_VFD	420300IP08	CS_01CHIKP02	STATUS P302 CURRENT	AI	H-720	BF3
9	DSC1616E	CP420300	IP9	420300.BI9	COND_VFD	420300IP09	CS_01CHSKP02_BP	STATUS P302 VFD BYPASS MODE	ВІ	СТС	AH2
10	DSC1616E	CP420300	IP10	420300.BI10	COND_VFD	420300IP10	CS_01CHSKP02_AL	ALARM P302	ВІ	стс	AV2
11	DSC1616E	CP420300	IP11								
12	DSC1616E	CP420300	IP12								
13	DSC1616E	CP420300	IP13								
14	DSC1616E	CP420300	IP14								
15	DSC1616E	CP420300	IP15								
16	DSC1616E	CP420300	IP16								
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	0040000									
	50010102	CP420300	OP1	420300.BO1	COND_VFD	420300OP01	CS_01CHCKP01	START / STOP P301 VFD	во	M15M	MC2
2	DSC1616E	CP420300	OP1 OP2	420300.BO1 420300.AO2	COND_VFD COND_VFD	420300OP01 420300OP02	CS_01CHCKP01 CS_01CHRKP01	START / STOP P301 VFD MODULATION P301 VFD	BO AO	M15M 0-10VDC	MC2 MN2
3											
	DSC1616E	CP420300	OP2	420300.AO2	COND_VFD	420300OP02	CS_01CHRKP01	MODULATION P301 VFD	АО	0-10VDC	MN2
3	DSC1616E	CP420300 CP420300	OP2 OP3	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3	DSC1616E DSC1616E DSC1616E	CP420300 CP420300 CP420300	OP2 OP3 OP4	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5	DSC1616E DSC1616E DSC1616E DSC1616E	CP420300 CP420300 CP420300 CP420300	OP2 OP3 OP4 OP5	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6	DSC1616E DSC1616E DSC1616E DSC1616E	CP420300 CP420300 CP420300 CP420300 CP420300	OP2 OP3 OP4 OP5 OP6	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420300 CP420300 CP420300 CP420300 CP420300 CP420300	OP2 OP3 OP4 OP5 OP6 OP7	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420300 CP420300 CP420300 CP420300 CP420300 CP420300 CP420300	OP2 OP3 OP4 OP5 OP6 OP7 OP8	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420300 CP420300 CP420300 CP420300 CP420300 CP420300 CP420300 CP420300	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8 9	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420300 CP420300 CP420300 CP420300 CP420300 CP420300 CP420300 CP420300 CP420300	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8 9 10	DSC1616E	CP420300	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8 9 10 11	DSC1616E	CP420300	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8 9 10 11 12 13	DSC1616E DSC1616E	CP420300	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12 OP13	420300.AO2 420300.BO3	COND_VFD	420300OP02 420300OP03	CS_01CHRKP01 CS_01CHCKP02	MODULATION P301 VFD START / STOP P302 VFD	AO BO	0-10VDC M25M	MN2 MC2

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-2 LOCATED IN MECH ROOM 1101 CONTROLLER:CP420400 (DSC1616E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP420400	IP1	420400.BI1	CWS_VFD	420400IP01	CS_01CHSEP03_RUN	RUN STATUS P303 VFD	ВІ	стс	AH2
2	DSC1616E	CP420400	IP2	420400.AI2	CWS_VFD	420400IP02	CS_01CHAEP03_SPD	FEEDBACK P303 SPEED	Al	4-20mA	CT2
3	DSC1616E	CP420400	IP3	420400.AI3	CWS_VFD	420400IP03	CS_01CHIKP03	STATUS P303 CURRENT	Al	H-720	BF3
4	DSC1616E	CP420400	IP4	420400.BI4	CWS_VFD	420400IP04	CS_01CHSEP03_BP	STATUS P303 VFD BYPASS MODE	ВІ	стс	AH2
5	DSC1616E	CP420400	IP5	420400.BI5	CWS_VFD	420400IP05	CS_01CHSEP03_AL	ALARM P303	ВІ	стс	AV2
6	DSC1616E	CP420400	IP6	420400.BI6	CWS_VFD	420400IP06	CS_01CHSEP04_RUN	RUN STATUS P304 VFD	ВІ	стс	AH2
7	DSC1616E	CP420400	IP7	420400.AI7	CWS_VFD	420400IP07	CS_01CHAEP04_SPD	FEEDBACK P304 SPEED	Al	4-20mA	CT2
8	DSC1616E	CP420400	IP8	420400.AI8	CWS_VFD	420400IP08	CS_01CHIEP04	STATUS P304 CURRENT	Al	H-720	BF3
9	DSC1616E	CP420400	IP9	420400.BI9	CWS_VFD	420400IP09	CS_01CHSEP04_BP	STATUS P304 VFD BYPASS MODE	ВІ	стс	AH2
10	DSC1616E	CP420400	IP10	420400.BI10	CWS_VFD	420400IP10	CS_01CHSEP04_AL	ALARM P304	ВІ	стс	AV2
11	DSC1616E	CP420400	IP11	420400.Al11	CWS_DPT	420400IP11	CS_01CHPCW00_EOL	END OF LINE PRESSURE OF CHILLED WATER SYSTEM	AI	SETRA 230	AT2
12	DSC1616E	CP420400	IP12								
13	DSC1616E	CP420400	IP13								
14	DSC1616E	CP420400	IP14								
15	DSC1616E	CP420400	IP15								
16	DSC1616E	CP420400	IP16								
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output	Controller type DSC1616E			Logical address 420400.BO1	System CWS_VFD	Tag name 420400OP01	Point name CS_01CHCEP03	Description START / STOP P303 VFD	Type BO	Equipment M15M	Detail MC2
	type	address	address		-						
1	type DSC1616E	address CP420400	address OP1	420400.BO1	CWS_VFD	420400OP01	CS_01CHCEP03	START / STOP P303 VFD	во	M15M	MC2
1 2	type DSC1616E DSC1616E	address CP420400 CP420400	address OP1 OP2	420400.BO1 420400.AO2	CWS_VFD	420400OP01 420400OP02	CS_01CHCEP03 CS_01CHREP03	START / STOP P303 VFD MODULATION P303 VFD	BO AO	M15M 0-10VDC	MC2 MN2
2	DSC1616E DSC1616E DSC1616E	address CP420400 CP420400 CP420400	OP1 OP2 OP3	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4	DSC1616E DSC1616E DSC1616E DSC1616E	address CP420400 CP420400 CP420400 CP420400	OP1 OP2 OP3 OP4	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4 5	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP420400 CP420400 CP420400 CP420400 CP420400	OP1 OP2 OP3 OP4 OP5	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4 5	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP420400 CP420400 CP420400 CP420400 CP420400 CP420400 CP420400	OP1 OP2 OP3 OP4 OP5 OP6	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4 5 6	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP420400 CP420400 CP420400 CP420400 CP420400 CP420400 CP420400 CP420400	OP1 OP2 OP3 OP4 OP5 OP6 OP7	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4 5 6 7	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP420400 CP420400 CP420400 CP420400 CP420400 CP420400 CP420400 CP420400	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4 5 6 7 8 9	type DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP420400	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4 5 6 7 8 9	type DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP420400	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4 5 6 7 8 9 10 11	DSC1616E	address CP420400	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4 5 6 7 8 9 10 11 12	type DSC1616E	address CP420400	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2
1 2 3 4 5 6 7 8 9 10 11 12 13	type DSC1616E DSC1616E	address CP420400	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12	420400.BO1 420400.AO2 420400.BO3	CWS_VFD CWS_VFD CWS_VFD	4204000P01 4204000P02 4204000P03	CS_01CHCEP03 CS_01CHREP03 CS_01CHCEP04	START / STOP P303 VFD MODULATION P303 VFD START / STOP P304 VFD	BO AO BO	M15M 0-10VDC M25M	MC2 MN2 MC2

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-3 LOCATED IN MECH ROOM 1101 CONTROLLER: 420500 (DSC1616E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP420500	IP1	420500.AI1	CHW_EVAP	420500IP01	CS_01CHTCHSW	TEMPERATURE CHILLED WATER SUPPLY	AI	S479PDY30	AT2
2	DSC1616E	CP420500	IP2	420500.AI2	CHW_EVAP	420500IP02	CS_01CHTCHRW_MACK	TEMPERATURE MACKENZIE BLDG CHILLED WATER RETURN	AI	S479PDY30	AT2
3	DSC1616E	CP420500	IP3	420500.AI3	CHW_EVAP	420500IP03	CS_01CHTCHRW_CAN	TEMPERATURE CANAL BLDG CHILLED WATER RETURN	AI	S479PDY30	AT2
4	DSC1616E	CP420500	IP4	420500.AI4	CHW_EVAP	420500IP04	CS_01CHTC1SW	TEMPERATURE CHILLER 1 EVAPORATOR LEAVING WATER	AI	S479PDY30	AT2
5	DSC1616E	CP420500	IP5	420500.AI5	CHW_EVAP	420500IP05	CS_01CHTC2SW	TEMPERATURE CHILLER 2 EVAPORATOR LEAVING WATER	AI	S479PDY30	AT2
6	DSC1616E	CP420500	IP6	420500.Al6	CHW_EVAP	420500IP06	CHW_EVAP_CH1_FS	FLOW CHILLER 1	ВІ	SETRA 230	AT2
7	DSC1616E	CP420500	IP7	420500.AI7	CHW_EVAP	420500IP07	CHW_EVAP_CH2_FS	FLOW CHILLER 2	ВІ	SETRA 230	AT2
8	DSC1616E	CP420500	IP8	420500.AI8	CHW_EVAP	420500IP08	CS_01CHSCH01	STATUS CHILLER 1	ВІ	стс	AH2
9	DSC1616E	CP420500	IP9	420500.AI9	CHW_EVAP	420500IP09	CS_01CHSCH02	STATUS CHILLER 2	ВІ	стс	AH2
10	DSC1616E	CP420500	IP10	420500.Al10	CHW_COND	420500IP10	CS_01CHTC1KS	TEMPERATURE CHILLER 1 CONDENSER LEAVING WATER	AI	S479PDY30	AT2
11	DSC1616E	CP420500	IP11	420500.AI11	CHW_COND	420500IP11	CS_01CHTC2KS	TEMPERATURE CHILLER 2 CONDENSER LEAVING WATER	AI	S479PDY30	AT2
12	DSC1616E	CP420500	IP12	420500.Al12	CHW_COND	420500IP12	СЅ_01СНТСНКЅ	TEMPERATURE SUPPLY WATER FROM CONDENSER	AI	S479PDY30	AT2
13	DSC1616E	CP420500	IP13	420500.Al13	CHW_COND	420500IP13	CS_01CHTCHRW	TEMPERATURE CHILLED WATER RETURN	AI	S479PDY30	AT2
14	DSC1616E	CP420500	IP14	420500.Al14							
15	DSC1616E	CP420500	IP15	420500.AI15							
16	DSC1616E	CP420500	IP16	420500.AI16							
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP420500	OP1	420500.BO1	CHW_EVAP	420500OP01	CS_01CHRIVC1_EVAP	OPEN / CLOSE CHILLER 1 EVAPORATOR ISOLATION VALVE	во	M15M	MC2
2	DSC1616E	CP420500	OP2	420500.BO2	CHW_EVAP	420500OP02	CS_01CHRIVC2_EVAP	OPEN / CLOSE CHILLER 2 EVAPORATOR ISOLATION VALVE	во	M15M	MC2
3	DSC1616E DSC1616E	CP420500 CP420500	OP2 OP3	420500.BO2 420500.BO3	CHW_EVAP CHW_COND	420500OP02 420500OP03	CS_01CHRIVC2_EVAP CS_01CHRIVC1_COND	OPEN / CLOSE CHILLER 2 EVAPORATOR ISOLATION VALVE OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE	во	M15M M15M	MC2
					_						
3	DSC1616E	CP420500	OP3	420500.BO3	CHW_COND	420500OP03	CS_01CHRIVC1_COND	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE	во	M15M	MC2
3	DSC1616E DSC1616E	CP420500	OP3	420500.BO3 420500.BO4	CHW_COND	420500OP03 420500OP04	CS_01CHRIVC1_COND CS_01CHRIVC2_COND	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE	во	M15M M15M	MC2
3 4 5	DSC1616E DSC1616E DSC1616E	CP420500 CP420500 CP420500	OP3 OP4 OP5	420500.BO3 420500.BO4 420500.BO5	CHW_COND CHW_EVAP	4205000P03 4205000P04 4205000P05	CS_01CHRIVC1_COND CS_01CHRIVC2_COND CS_01CHC0C1SS	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE START / STOP CHILLER 1	BO BO	M15M M15M M15M	MC2 MC2 MC2
3 4 5 6	DSC1616E DSC1616E DSC1616E	CP420500 CP420500 CP420500 CP420500	OP3 OP4 OP5 OP6	420500.BO3 420500.BO4 420500.BO5 420500.AO6	CHW_COND CHW_EVAP CHW_EVAP	420500OP03 420500OP04 420500OP05 420500OP06	CS_01CHRIVC1_COND CS_01CHRIVC2_COND CS_01CHC0C1SS CS_01CHRC1RST	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE START / STOP CHILLER 1 RESET CHILLER 1	BO BO BO AO	M15M M15M M15M 0-10VDC	MC2 MC2 MC2 MC2 MN2
3 4 5 6 7	DSC1616E DSC1616E DSC1616E DSC1616E	CP420500 CP420500 CP420500 CP420500 CP420500	OP3 OP4 OP5 OP6 OP7	420500.BO3 420500.BO4 420500.BO5 420500.AO6 420500.BO7	CHW_COND CHW_COND CHW_EVAP CHW_EVAP CHW_EVAP	420500OP03 420500OP04 420500OP05 420500OP06 420500OP07	CS_01CHRIVC1_COND CS_01CHRIVC2_COND CS_01CHC0C1SS CS_01CHRC1RST CS_01CHC0C2SS	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE START / STOP CHILLER 1 RESET CHILLER 1 START / STOP CHILLER 2	BO BO BO AO BO	M15M M15M M15M 0-10VDC M15M	MC2 MC2 MC2 MC2 MN2 MN2
3 4 5 6 7 8	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420500 CP420500 CP420500 CP420500 CP420500 CP420500	OP3 OP4 OP5 OP6 OP7 OP8	420500.BO3 420500.BO4 420500.BO5 420500.AO6 420500.BO7 420500.AO8	CHW_COND CHW_COND CHW_EVAP CHW_EVAP CHW_EVAP	420500OP03 420500OP04 420500OP05 420500OP06 420500OP07	CS_01CHRIVC1_COND CS_01CHRIVC2_COND CS_01CHC0C1SS CS_01CHRC1RST CS_01CHC0C2SS	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE START / STOP CHILLER 1 RESET CHILLER 1 START / STOP CHILLER 2	BO BO BO AO BO	M15M M15M M15M 0-10VDC M15M	MC2 MC2 MC2 MC2 MN2 MN2
3 4 5 6 7 8	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420500 CP420500 CP420500 CP420500 CP420500 CP420500 CP420500	OP3 OP4 OP5 OP6 OP7 OP8 OP9	420500.BO3 420500.BO4 420500.BO5 420500.AO6 420500.BO7 420500.AO8 420500.AO9	CHW_COND CHW_COND CHW_EVAP CHW_EVAP CHW_EVAP	420500OP03 420500OP04 420500OP05 420500OP06 420500OP07	CS_01CHRIVC1_COND CS_01CHRIVC2_COND CS_01CHC0C1SS CS_01CHRC1RST CS_01CHC0C2SS	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE START / STOP CHILLER 1 RESET CHILLER 1 START / STOP CHILLER 2	BO BO BO AO BO	M15M M15M M15M 0-10VDC M15M	MC2 MC2 MC2 MC2 MN2 MN2
3 4 5 6 7 8 9	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420500 CP420500 CP420500 CP420500 CP420500 CP420500 CP420500 CP420500	OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10	420500.BO3 420500.BO4 420500.BO5 420500.AO6 420500.BO7 420500.AO8 420500.AO9 420500.AO10	CHW_COND CHW_COND CHW_EVAP CHW_EVAP CHW_EVAP	420500OP03 420500OP04 420500OP05 420500OP06 420500OP07	CS_01CHRIVC1_COND CS_01CHRIVC2_COND CS_01CHC0C1SS CS_01CHRC1RST CS_01CHC0C2SS	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE START / STOP CHILLER 1 RESET CHILLER 1 START / STOP CHILLER 2	BO BO BO AO BO	M15M M15M M15M 0-10VDC M15M	MC2 MC2 MC2 MC2 MN2 MN2
3 4 5 6 7 8 9 10	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420500 CP420500 CP420500 CP420500 CP420500 CP420500 CP420500 CP420500 CP420500	OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	420500.BO3 420500.BO4 420500.BO5 420500.AO6 420500.AO8 420500.AO9 420500.AO10 420500.AO11	CHW_COND CHW_COND CHW_EVAP CHW_EVAP CHW_EVAP	420500OP03 420500OP04 420500OP05 420500OP06 420500OP07	CS_01CHRIVC1_COND CS_01CHRIVC2_COND CS_01CHC0C1SS CS_01CHRC1RST CS_01CHC0C2SS	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE START / STOP CHILLER 1 RESET CHILLER 1 START / STOP CHILLER 2	BO BO BO AO	M15M M15M M15M 0-10VDC M15M	MC2 MC2 MC2 MC2 MN2 MN2
3 4 5 6 7 8 9 10 11	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420500	OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12	420500.BO3 420500.BO4 420500.BO5 420500.AO6 420500.BO7 420500.AO8 420500.AO9 420500.AO10 420500.AO11 420500.AO12	CHW_COND CHW_COND CHW_EVAP CHW_EVAP CHW_EVAP	420500OP03 420500OP04 420500OP05 420500OP06 420500OP07	CS_01CHRIVC1_COND CS_01CHRIVC2_COND CS_01CHC0C1SS CS_01CHRC1RST CS_01CHC0C2SS	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE START / STOP CHILLER 1 RESET CHILLER 1 START / STOP CHILLER 2	BO BO BO AO	M15M M15M M15M 0-10VDC M15M	MC2 MC2 MC2 MC2 MN2 MN2
3 4 5 6 7 8 9 10 11 12 13	DSC1616E DSC1616E	CP420500 CP420500	OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12 OP13	420500.BO3 420500.BO4 420500.BO5 420500.AO6 420500.AO8 420500.AO9 420500.AO10 420500.AO11 420500.AO12 420500.AO13	CHW_COND CHW_COND CHW_EVAP CHW_EVAP CHW_EVAP	420500OP03 420500OP04 420500OP05 420500OP06 420500OP07	CS_01CHRIVC1_COND CS_01CHRIVC2_COND CS_01CHC0C1SS CS_01CHRC1RST CS_01CHC0C2SS	OPEN / CLOSE CHILLER 1 CONDENSER ISOLATION VALVE OPEN / CLOSE CHILLER 2 CONDENSER ISOLATION VALVE START / STOP CHILLER 1 RESET CHILLER 1 START / STOP CHILLER 2	BO BO BO AO	M15M M15M M15M 0-10VDC M15M	MC2 MC2 MC2 MC2 MN2 MN2

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-4 LOCATED IN MECH ROOM 1101 CONTROLLER: 420600 (DSC1616E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP420600	IP1	420600.AI1	HE1	420600IP01	CS_01HWTHWSW	TEMPERATURE HOT WATER SYSTEM SUPPLY	AI	S479PDY30	AT2
2	DSC1616E	CP420600	IP2	420600.AI2	HE1	420600IP02	CS_01HWTHWRW	TEMPERATURE HOT WATER SYSTEM RETURN	AI	S479PDY30	AT2
3	DSC1616E	CP420600	IP3	420600.AI3	HE1	420600IP03	CS_01HWTDWSW	TEMPERATURE DOMESTIC HOT WATER SUPPLY	AI	S479PDY30	AT2
4	DSC1616E	CP420600	IP4	420600.AI4	HE1	420600IP04	CS_01HWTDWTW	TEMPERATURE DOMESTIC HOT WATER FROM TANK	AI	S479PDY30	AT2
5	DSC1616E	CP420600	IP5	420600.BI5	HE1	420600IP05	CS_01LSSCTHL	ALARM CONDENSATE TANK HIGH LEVEL	ВІ	стс	AH2
6	DSC1616E	CP420600	IP6	420600.AI6							
7	DSC1616E	CP420600	IP7	420600.AI7							
8	DSC1616E	CP420600	IP8	420600.AI8	HE1	420600IP08	CS_01HWIDW01	STATUS PUMP 101	AI	H922	AJ2
9	DSC1616E	CP420600	IP9	420600.AI9	METERING	420600IP09	CS_01MEADW00	FLOW DOMESTIC COLD WATER	AI	ENVIROMAG	AT2
10	DSC1616E	CP420600	IP10	420600.Al10	STEAM	420600IP10	CS_01STPLPSP	PRESSURE LOW PRESSURE STEAM	AI	OPTIBAR	AT2
11	DSC1616E	CP420600	IP11	420600.AI11	HOT WATER	420600IP11	CS_01HWPHWDP	PRESSURE DIFFERENTIAL HOT WATER LOOP	AI	SETRA 230	AT2
12	DSC1616E	CP420600	IP12	420600.Al12							
13	DSC1616E	CP420600	IP13	420600.AI13							
14	DSC1616E	CP420600	IP14	420600.AI14							
15	DSC1616E	CP420600	IP15	420600.AI15							
16	DSC1616E	CP420600	ID46								
10	DOCTOTOL	CF420600	IP16	420600.Al16							
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
	Controller	Controller	Physical		System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output	Controller type DSC1616E	Controller address CP420600	Physical address OP1	Logical address 420600.BO1	System HE1	Tag name 4206000P03	Point name CS_01HWCDW01	Description START / STOP PUMP 101	Туре	Equipment RM1A	Detail MS2
# Output 1 2	Controller type DSC1616E DSC1616E	Controller address CP420600 CP420600	Physical address OP1 OP2	Logical address 420600.BO1 420600.BO2							
# Output 1 2 3	Controller type DSC1616E DSC1616E	Controller address CP420600 CP420600 CP420600	Physical address OP1 OP2 OP3	Logical address 420600.BO1 420600.BO2 420600.BO3	HE1	420600OP03	CS_01HWCDW01	START / STOP PUMP 101	во	RM1A	MS2
# Output 1 2 3 4	Controller type DSC1616E DSC1616E DSC1616E DSC1616E	Controller address CP420600 CP420600 CP420600	Physical address OP1 OP2 OP3 OP4	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO4	HE1 HE1	420600OP03 420600OP04	CS_01HWCDW01 CS_01HWRSC01	START / STOP PUMP 101 MODULATION STEAM VALVE 1	ВО	RM1A G250-S+AF24-SR	MS2 ME3
# Output 1 2 3 4 5	Controller type DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	Controller address CP420600 CP420600 CP420600 CP420600 CP420600	Physical address OP1 OP2 OP3 OP4 OP5	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO4 420600.BO5	HE1 HE1 HE1	4206000P03 4206000P04 4206000P05	CS_01HWCDW01 CS_01HWRSC01 CS_01HWRSC02	START / STOP PUMP 101 MODULATION STEAM VALVE 1 MODULATION STEAM VALVE 2	BO AO	RM1A G250-S+AF24-SR G232-S+AF24-SR	MS2 ME3 ME3
# Output 1 2 3 4 5	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	Controller address CP420600 CP420600 CP420600 CP420600 CP420600 CP420600	Physical address OP1 OP2 OP3 OP4 OP5 OP6	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO4 420600.BO5 420600.AO6	HE1 HE1 HE1	4206000P03 4206000P04 4206000P05	CS_01HWCDW01 CS_01HWRSC01 CS_01HWRSC02	START / STOP PUMP 101 MODULATION STEAM VALVE 1 MODULATION STEAM VALVE 2	BO AO	RM1A G250-S+AF24-SR G232-S+AF24-SR	MS2 ME3 ME3
# Output 1 2 3 4 5 6	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	Controller address CP420600 CP420600 CP420600 CP420600 CP420600 CP420600 CP420600	Physical address OP1 OP2 OP3 OP4 OP5 OP6	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO4 420600.BO5 420600.AO6 420600.BO7	HE1 HE1 HE1	4206000P03 4206000P04 4206000P05	CS_01HWCDW01 CS_01HWRSC01 CS_01HWRSC02	START / STOP PUMP 101 MODULATION STEAM VALVE 1 MODULATION STEAM VALVE 2	BO AO	RM1A G250-S+AF24-SR G232-S+AF24-SR	MS2 ME3 ME3
# Output 1 2 3 4 5 6 7	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	Controller address CP420600 CP420600 CP420600 CP420600 CP420600 CP420600 CP420600 CP420600	Physical address OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO4 420600.BO5 420600.AO6 420600.BO7 420600.BO8	HE1 HE1 HE1	4206000P03 4206000P04 4206000P05	CS_01HWCDW01 CS_01HWRSC01 CS_01HWRSC02	START / STOP PUMP 101 MODULATION STEAM VALVE 1 MODULATION STEAM VALVE 2	BO AO	RM1A G250-S+AF24-SR G232-S+AF24-SR	MS2 ME3 ME3
# Output 1 2 3 4 5 6 7 8 9	Controller type DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	Controller address CP420600	Physical address OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO4 420600.BO5 420600.AO6 420600.BO7 420600.BO8	HE1 HE1 HE1	4206000P03 4206000P04 4206000P05	CS_01HWCDW01 CS_01HWRSC01 CS_01HWRSC02	START / STOP PUMP 101 MODULATION STEAM VALVE 1 MODULATION STEAM VALVE 2	BO AO	RM1A G250-S+AF24-SR G232-S+AF24-SR	MS2 ME3 ME3
# Output 1 2 3 4 5 6 7 8 9	Controller type DSC1616E	Controller address CP420600	Physical address OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO5 420600.BO5 420600.BO7 420600.BO8 420600.BO9 420600.BO9	HE1 HE1 HE1	4206000P03 4206000P04 4206000P05	CS_01HWCDW01 CS_01HWRSC01 CS_01HWRSC02	START / STOP PUMP 101 MODULATION STEAM VALVE 1 MODULATION STEAM VALVE 2	BO AO	RM1A G250-S+AF24-SR G232-S+AF24-SR	MS2 ME3 ME3
# Output 1 2 3 4 5 6 7 8 9 10	Controller type DSC1616E	Controller address CP420600	Physical address OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO5 420600.BO5 420600.BO7 420600.BO9 420600.BO9 420600.BO10	HE1 HE1 HE1	4206000P03 4206000P04 4206000P05	CS_01HWCDW01 CS_01HWRSC01 CS_01HWRSC02	START / STOP PUMP 101 MODULATION STEAM VALVE 1 MODULATION STEAM VALVE 2	BO AO	RM1A G250-S+AF24-SR G232-S+AF24-SR	MS2 ME3 ME3
# Output 1 2 3 4 5 6 7 8 9 10 11	DSC1616E	Controller address CP420600	Physical address OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO4 420600.BO5 420600.BO7 420600.BO8 420600.BO9 420600.BO10 420600.BO11 420600.BO12	HE1 HE1 HE1	4206000P03 4206000P04 4206000P05	CS_01HWCDW01 CS_01HWRSC01 CS_01HWRSC02	START / STOP PUMP 101 MODULATION STEAM VALVE 1 MODULATION STEAM VALVE 2	BO AO	RM1A G250-S+AF24-SR G232-S+AF24-SR	MS2 ME3 ME3
# Output 1 2 3 4 5 6 7 8 9 10 11 12	DSC1616E DSC1616E	Controller address CP420600	Physical address OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12 OP13	Logical address 420600.BO1 420600.BO2 420600.BO3 420600.BO4 420600.BO5 420600.BO7 420600.BO7 420600.BO9 420600.BO10 420600.BO11 420600.BO12 420600.BO13	HE1 HE1 HE1	4206000P03 4206000P04 4206000P05	CS_01HWCDW01 CS_01HWRSC01 CS_01HWRSC02	START / STOP PUMP 101 MODULATION STEAM VALVE 1 MODULATION STEAM VALVE 2	BO AO	RM1A G250-S+AF24-SR G232-S+AF24-SR	MS2 ME3 ME3

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-4 LOCATED IN MECH ROOM 1101 CONTROLLER:CP420700 (DSC1616E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP420700	IP1	420700.BI1	HWS_VFD	420700IP01	CS_01HWSHW01_RUN	RUN STATUS P201 VFD	ВІ	стс	AH2
2	DSC1616E	CP420700	IP2	420700.AI2	HWS_VFD	420700IP02	CS_01HWAHW01_SPD	FEEDBACK P201 SPEED	Al	4-20mA	CT2
3	DSC1616E	CP420700	IP3	420700.AI3	HWS_VFD	420700IP03	CS_01HWIHW01	STATUS P201 CURRENT	Al	H-720	BF3
4	DSC1616E	CP420700	IP4	420700.BI4	HWS_VFD	420700IP04	CS_01HWSHW01_BP	STATUS P201 VFD BYPASS MODE	ВІ	стс	AH2
5	DSC1616E	CP420700	IP5	420700.BI5	HWS_VFD	420700IP05	CS_01HWSHW01_AL	ALARM P201	ВІ	стс	AV2
6	DSC1616E	CP420700	IP6	420700.BI6	HWS_VFD	420700IP06	CS_01HWSHW02_RUN	RUN STATUS P202 VFD	ВІ	стс	AH2
7	DSC1616E	CP420700	IP7	420700.AI7	HWS_VFD	420700IP07	CS_01HWAHW02_SPD	FEEDBACK P202 SPEED	AI	4-20mA	CT2
8	DSC1616E	CP420700	IP8	420700.AI8	HWS_VFD	420700IP08	CS_01HWIHW02	STATUS P202 CURRENT	AI	H-720	BF3
9	DSC1616E	CP420700	IP9	420700.BI9	HWS_VFD	420700IP09	CS_01HWSHW02_BP	STATUS P202 VFD BYPASS MODE	ВІ	стс	AH2
10	DSC1616E	CP420700	IP10	420700.BI10	HWS_VFD	420700IP10	CS_01HWSHW02_AL	ALARM P202	ВІ	СТС	AV2
11	DSC1616E	CP420700	IP11								
12	DSC1616E	CP420700	IP12								
13	DSC1616E	CP420700	IP13								
14	DSC1616E	CP420700	IP14								
15	DSC1616E	CP420700	IP15								
16	DSC1616E	CP420700	IP16								
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP420700	OP1	420700 DO4	LIME VED	4007000704	CS_01HWCHW01	OTABE (OTOB BOOK VED			
2			01 1	420700.BO1	HWS_VFD	420700OP01	CS_UTHWCHWUT	START / STOP P201 VFD	ВО	M15M	MC2
4	DSC1616E	CP420700	OP2	420700.BO1 420700.AO2	HWS_VFD	4207000P01 4207000P02	CS_01HWRHW01	MODULATION P201 VFD	AO	0-10VDC	MC2 MN2
3	DSC1616E DSC1616E	CP420700 CP420700									
			OP2	420700.AO2	HWS_VFD	420700OP02	CS_01HWRHW01	MODULATION P201 VFD	АО	0-10VDC	MN2
3	DSC1616E	CP420700	OP2 OP3	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2 MC2
3	DSC1616E DSC1616E	CP420700 CP420700	OP2 OP3 OP4	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5	DSC1616E DSC1616E DSC1616E	CP420700 CP420700 CP420700	OP2 OP3 OP4 OP5	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6	DSC1616E DSC1616E DSC1616E DSC1616E	CP420700 CP420700 CP420700 CP420700	OP2 OP3 OP4 OP5 OP6	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420700 CP420700 CP420700 CP420700 CP420700	OP2 OP3 OP4 OP5 OP6 OP7	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420700 CP420700 CP420700 CP420700 CP420700 CP420700	OP2 OP3 OP4 OP5 OP6 OP7 OP8	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420700 CP420700 CP420700 CP420700 CP420700 CP420700 CP420700	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8 9	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420700 CP420700 CP420700 CP420700 CP420700 CP420700 CP420700 CP420700	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2
3 4 5 6 7 8 9 10	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	CP420700 CP420700 CP420700 CP420700 CP420700 CP420700 CP420700 CP420700 CP420700	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2 MC2
3 4 5 6 7 8 9 10 11	DSC1616E	CP420700	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2
3 4 5 6 7 8 9 10 11 12 13	DSC1616E DSC1616E	CP420700	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12 OP13	420700.AO2 420700.BO3	HWS_VFD	420700OP02 420700OP03	CS_01HWRHW01 CS_01HWCHW02	MODULATION P201 VFD START / STOP P202 VFD	AO BO	0-10VDC M25M	MN2 MC2

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:ENCLO LOCATED IN JANITOR ROOM 2970 CONTROLLER:420801 (DAC304 V 3.30)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DAC304	CP420801	IP1	420801.AI1	EXH	420801IP01	CS_02EXIL201	STATUS EXHAUST FAN L2-1	AI	H922	AJ2
2	DAC304	CP420801	IP2	420801.AI2	EXH	420801IP02	CS_02EXIL202	STATUS EXHAUST FAN L2-2	AI	H922	AJ2
3	DAC304	CP420801	IP3	420801.AI3							
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DAC304	CP420801	OP1	420801.BO1	EXH	420801OP01	CS_02EXCL201	START / STOP EXHAUST FAN L2-1	ВО	RPY	NU2
2	DAC304	CP420801	OP2	420801.BO2	EXH	420801OP02	CS_02EXCL202	START / STOP EXHAUST FAN L2-2	во	RPY	NU2
3	DAC304	CP420801	OP3	420801.BO3							
4	DAC304	CP420801	OP4	420801.BO4							

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-5 LOCATED IN MECHANICAL ROOM P101 CONTROLLER:CP421400 (DSC1212E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1212E	CP421400	IP1	421400.AI1	AHU3	421400IP01	CS_0PA3TSA00	TEMPERATURE SUPPLY AIR	AI	S450PDY12	AT2
2	DSC1212E	CP421400	IP2	421400.AI2	AHU3	421400IP02	CS_0PA3SFT00	STATUS FILTER	AI	SETRA 264	AT2
3	DSC1212E	CP421400	IP3	421400.BI3	AHU3	421400IP03	CS_0PA3SFR00	STATUS LOW TEMPERATURE LIMIT	ВІ	стс	AH2
4	DSC1212E	CP421400	IP4	421400.AI4	AHU3	421400IP04	CS_0PA3ISF00	STATUS SUPPLY FAN	AI	H922	AJ2
5	DSC1212E	CP421400	IP5	421400.AI5	EF-4	421400IP05	CS_0PFHIEF04	STATUS FUME HODD EXHAUST FAN 4	AI	H922	AJ2
6	DSC1212E	CP421400	IP6	421400.AI6	EF-5	421400IP06	CS_0PFHIEF05	STATUS FUME HODD EXHAUST FAN 5	AI	H922	AJ2
7	DSC1212E	CP421400	IP7								
8	DSC1212E	CP421400	IP8								
9	DSC1212E	CP421400	IP9								
10	DSC1212E	CP421400	IP10								
11	DSC1212E	CP421400	IP11								
12	DSC1212E	CP421400	IP12								
NET2	DNS-24L	CP421400.LNK101	IP101	421400.AI101	AHU3	421400IP101	CS_0PA3TST00	TEMPERATURE ROOM P101A	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1212E	CP421400	OP1	421400.AO1	AHU3	421400OP01	CS_0PA3RDMFA	MODULATION FRESH AIR DAMPER	AO	LF24-SR	ME3
2	DSC1212E										
3		CP421400	OP2	421400.AO2	AHU3	421400OP02	CS_0PA3RDMRA	MODULATION RETURN AIR DAMPER	AO	LF24-SR	ME3
Ī	DSC1212E	CP421400 CP421400	OP2 OP3	421400.AO2 421400.AO3	AHU3 AHU3		CS_0PA3RDMRA CS_0PA3RDMEA	MODULATION RETURN AIR DAMPER MODULATION EXHAUST AIR DAMPER	AO AO	LF24-SR LF24-SR	ME3
4	DSC1212E										
4 5		CP421400	OP3	421400.AO3	AHU3	421400OP03 421400OP04	CS_0PA3RDMEA	MODULATION EXHAUST AIR DAMPER	AO	LF24-SR	ME3
	DSC1212E	CP421400 CP421400	OP3 OP4 OP5	421400.AO3 421400.AO4	AHU3	421400OP03 421400OP04 421400OP05	CS_0PA3RDMEA CS_0PA3RCC00	MODULATION EXHAUST AIR DAMPER MODULATION COOLING VALVE	AO AO	LF24-SR B217B+TF24-SR	ME3
5	DSC1212E DSC1212E	CP421400 CP421400 CP421400	OP3 OP4 OP5	421400.AO3 421400.AO4 421400.AO5	AHU3 AHU3	421400OP03 421400OP04 421400OP05	CS_0PA3RDMEA CS_0PA3RCC00 CS_0PA3RHC00	MODULATION EXHAUST AIR DAMPER MODULATION COOLING VALVE MODULATION HEATING VALVE	AO AO	LF24-SR B217B+TF24-SR B211B+TF24-SR	ME3 ME3 ME3
5	DSC1212E DSC1212E DSC1212E	CP421400 CP421400 CP421400 CP421400	OP3 OP4 OP5 OP6	421400.AO3 421400.AO4 421400.AO5	AHU3 AHU3	421400OP03 421400OP04 421400OP05	CS_0PA3RDMEA CS_0PA3RCC00 CS_0PA3RHC00	MODULATION EXHAUST AIR DAMPER MODULATION COOLING VALVE MODULATION HEATING VALVE	AO AO	LF24-SR B217B+TF24-SR B211B+TF24-SR	ME3 ME3 ME3
5 6 7	DSC1212E DSC1212E DSC1212E DSC1212E	CP421400 CP421400 CP421400 CP421400	OP3 OP4 OP5 OP6 OP7	421400.AO3 421400.AO4 421400.AO5	AHU3 AHU3	421400OP03 421400OP04 421400OP05	CS_0PA3RDMEA CS_0PA3RCC00 CS_0PA3RHC00	MODULATION EXHAUST AIR DAMPER MODULATION COOLING VALVE MODULATION HEATING VALVE	AO AO	LF24-SR B217B+TF24-SR B211B+TF24-SR	ME3 ME3 ME3
5 6 7 8	DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E	CP421400 CP421400 CP421400 CP421400 CP421400 CP421400	OP3 OP4 OP5 OP6 OP7 OP8	421400.AO3 421400.AO4 421400.AO5	AHU3 AHU3	421400OP03 421400OP04 421400OP05	CS_0PA3RDMEA CS_0PA3RCC00 CS_0PA3RHC00	MODULATION EXHAUST AIR DAMPER MODULATION COOLING VALVE MODULATION HEATING VALVE	AO AO	LF24-SR B217B+TF24-SR B211B+TF24-SR	ME3 ME3 ME3
5 6 7 8	DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E DSC1212E	CP421400 CP421400 CP421400 CP421400 CP421400 CP421400 CP421400	OP3 OP4 OP5 OP6 OP7 OP8 OP9	421400.AO3 421400.AO4 421400.AO5	AHU3 AHU3	421400OP03 421400OP04 421400OP05	CS_0PA3RDMEA CS_0PA3RCC00 CS_0PA3RHC00	MODULATION EXHAUST AIR DAMPER MODULATION COOLING VALVE MODULATION HEATING VALVE	AO AO	LF24-SR B217B+TF24-SR B211B+TF24-SR	ME3 ME3 ME3

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-5 LOCATED IN MECHANICAL ROOM P101 CONTROLLER:421401 (DAC304 V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DAC304	CP421401	IP1	421401.Al1	EXH	421401IP01	CS_0PEXIPH01	STATUS EXHAUST FAN 1	AI	H922	AJ2
2	DAC304	CP421401	IP2	421401.AI2	EXH	421401IP02	CS_0PEXIPH02	STATUS EXHAUST FAN 2	AI	H922	AJ2
3	DAC304	CP421401	IP3	421401.AI3							
NET2	DNS-24L	P421401.LNK10	IP101	421401.AI101	EXH	421400IP101	CS_0PEXTST00	TEMPERATURE ROOM P101	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output			•	_	System EXH	-		Description START / STOP EXHAUST FAN 1	Type BO	Equipment RPY	Detail NU2
# Output 1 2	type	address	address	address		-	CS_0PEXCPH01	-	-		
1	type DAC304	address CP421401	address OP1	address 421401.BO1	EXH	421401OP01	CS_0PEXCPH01	START / STOP EXHAUST FAN 1	ВО	RPY	NU2

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-6 LOCATED IN MECHANICAL ROOM P101 CONTROLLER:CP421500 (DSC1616E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP421500	IP1	421500.Al1	AHU1	421500IP01	CS_0PA1TSA00	TEMPERATURE SUPPLY AIR	Al	S450PDY12	AT2
2	DSC1616E	CP421500	IP2	421500.AI2	AHU1	421500IP02	CS_0PA1TRA00	TEMPERATURE RETURN AIR	Al	S450PDY12	AT2
3	DSC1616E	CP421500	IP3	421500.AI3	AHU1	421500IP03	CS_0PA1TMA00	TEMPERATURE MIXED AIR	Al	S457PEZ24	AT2
4	DSC1616E	CP421500	IP4	421500.AI4	AHU1	421500IP04	CS_0PA1HSA00	HUMIDITY SUPPLY AIR	Al	CH3D420	AC2
5	DSC1616E	CP421500	IP5	421500.AI5	AHU1	421500IP05	CS_0PA1HRA00	HUMIDITY RETURN AIR	Al	CH3D420	AC2
6	DSC1616E	CP421500	IP6	421500.Al6	AHU1	421500IP06	CS_0PA1FSA00	AIR FLOW SUPPLY	Al	DPT2500	AT2
7	DSC1616E	CP421500	IP7	421500.AI7	AHU1	421500IP07	CS_0PA1FRA00	AIR FLOW RETURN	Al	DPT2500	AT2
8	DSC1616E	CP421500	IP8	421500.AI8	AHU1	421500IP08	CS_0PA1PFT0A	STATUS FILTER A	Al	SETRA 264	AT2
9	DSC1616E	CP421500	IP9	421500.AI9	AHU1	421500IP09	CS_0PA1PFT0B	STATUS FILTER B	Al	SETRA 264	AT2
10	DSC1616E	CP421500	IP10	421500.BI10	AHU1	421500IP10	CS_0PA1SFR00	STATUS LOW TEMPERATURE LIMIT	ВІ	MY4N	AH2
11	DSC1616E	CP421500	IP11	421500.Al11	AHU1	421500IP11	CS_0PA1IHP05	STATUS HEATING PUMP 205	Al	H922	AJ2
12	DSC1616E	CP421500	IP12	421500.Al12	AHU1	421500IP12	CS_0PA1HEA00	HUMIDITY EXHAUST AIR	Al	CH3D420	AT2
13	DSC1616E	CP421500	IP13	421500.Al13	BLDG	421500IP13	CS_OPA1TOA00	TEMPERATURE OUTSIDE AIR	Al	S454PDY12	AT2
14	DSC1616E	CP421500	IP14	421500.Al14	BLDG	421500IP14	CS_OPA1HOA00	HUMIDITY OUTSIDE AIR	Al	CH3D420	AC2
15	DSC1616E	CP421500	IP15	421500.AI15	AHU1	421500IP15	CS_0PA1PFTRA	STATUS RETUIRN AIR FILTER	Al	SETRA 264	AT2
16	DSC1616E	CP421500	IP16	421500.AI16	AHU1	421500IP16	CS_0PA1FOA00	AIR FLOW OUTSIDE AIR	Al	DPT2500	AT2
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output 1				Logical address 421500.AO1	System AHU1	Tag name 421500OP01	Point name CS_0PA1RDMEA	Description MODULATION EXHAUST AIR /MIXED AIR DAMPERS	Type AO	Equipment AF24-SR	Detail ME3
	type	address	address								
1	type DSC1616E	address CP421500	address OP1	421500.AO1	AHU1	421500OP01	CS_0PA1RDMEA	MODULATION EXHAUST AIR /MIXED AIR DAMPERS	AO	AF24-SR	ME3
1 2	type DSC1616E DSC1616E	address CP421500 CP421500	address OP1 OP2	421500.AO1 421500.AO2	AHU1 AHU1	421500OP02	CS_0PA1RDMEA CS_0PA1RDMFA	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER	AO AO	AF24-SR AF24-SR	ME3
2	type DSC1616E DSC1616E DSC1616E	address CP421500 CP421500 CP421500	OP1 OP2 OP3	421500.AO1 421500.AO2 421500.AO3	AHU1 AHU1 AHU1	4215000P01 4215000P02 4215000P03	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE	AO AO	AF24-SR AF24-SR 0-10VDC	ME3 ME3 MN2
1 2 3 4	DSC1616E DSC1616E DSC1616E DSC1616E	address CP421500 CP421500 CP421500 CP421500	OP1 OP2 OP3 OP4	421500.AO2 421500.AO3 421500.AO4	AHU1 AHU1 AHU1 AHU1	421500OP01 421500OP02 421500OP03 421500OP04	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE	AO AO AO	AF24-SR AF24-SR 0-10VDC 294-05992	ME3 ME3 MN2 ME3
1 2 3 4 5	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP421500 CP421500 CP421500 CP421500 CP421500	OP1 OP2 OP3 OP4 OP5	421500.AO1 421500.AO2 421500.AO3 421500.AO4 421500.AO5	AHU1 AHU1 AHU1 AHU1 AHU1	421500OP01 421500OP02 421500OP03 421500OP04 421500OP05	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00 CS_0PA1RHC00	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE	AO AO AO AO	AF24-SR AF24-SR 0-10VDC 294-05992 B240+AF24-SR	ME3 ME3 MN2 ME3 ME3 ME3
1 2 3 4 5 6	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP421500 CP421500 CP421500 CP421500 CP421500 CP421500	OP1 OP2 OP3 OP4 OP5 OP6	421500.AO1 421500.AO2 421500.AO3 421500.AO4 421500.AO5 421500.BO6	AHU1 AHU1 AHU1 AHU1 AHU1 AHU1	421500OP01 421500OP02 421500OP03 421500OP04 421500OP05 421500OP06	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00 CS_0PA1RHC00 CS_0PA1CHP05	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP	AO AO AO AO BO	AF24-SR AF24-SR 0-10VDC 294-05992 B240+AF24-SR M15M	ME3 ME3 ME3 ME3 MC2
1 2 3 4 5 6 7	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP421500 CP421500 CP421500 CP421500 CP421500 CP421500 CP421500 CP421500	OP1 OP2 OP3 OP4 OP5 OP6 OP7	421500.AO1 421500.AO2 421500.AO3 421500.AO4 421500.AO5 421500.BO6 421500.AO7	AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1	4215000P01 4215000P02 4215000P03 4215000P04 4215000P05 4215000P06 4215000P07	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00 CS_0PA1RHC00 CS_0PA1CHP05 CS_0PA1RDMBP1	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1	AO AO AO AO AO AO AO AO	AF24-SR AF24-SR 0-10VDC 294-05992 B240+AF24-SR M15M AF24-SR	ME3 ME3 ME3 ME3 MC2 ME3
1 2 3 4 5 6 7 8	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP421500 CP421500 CP421500 CP421500 CP421500 CP421500 CP421500 CP421500 CP421500	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8	421500.AO1 421500.AO2 421500.AO3 421500.AO4 421500.AO5 421500.BO6 421500.AO7 421500.AO8	AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1	421500OP01 421500OP02 421500OP03 421500OP04 421500OP05 421500OP06 421500OP07 421500OP08	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00 CS_0PA1RHC00 CS_0PA1CHP05 CS_0PA1RDMBP1 CS_0PA1RDMBP2	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION BYPASS DAMPER 2	AO AO AO AO AO AO AO AO AO	AF24-SR AF24-SR 0-10VDC 294-05992 B240+AF24-SR M15M AF24-SR AF24-SR	ME3 ME3 ME3 ME3 ME3 MC2 ME3 ME3
1 2 3 4 5 6 7 8 9	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP421500 CP421500 CP421500 CP421500 CP421500 CP421500 CP421500 CP421500 CP421500	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	421500.AO1 421500.AO2 421500.AO3 421500.AO4 421500.AO5 421500.BO6 421500.AO7 421500.AO8 421500.BO9	AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1	421500OP01 421500OP02 421500OP03 421500OP04 421500OP05 421500OP06 421500OP07 421500OP08 421500OP09	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00 CS_0PA1RHC00 CS_0PA1CHP05 CS_0PA1RDMBP1 CS_0PA1RDMBP2 CS_0PA1CSF00	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION BYPASS DAMPER 2 START / STOP SUPPLY FAN VFD	AO AO AO AO AO BO AO BO	AF24-SR AF24-SR 0-10VDC 294-05992 B240+AF24-SR M15M AF24-SR AF24-SR M15M	ME3 ME3 ME3 ME3 MC2 ME3 ME3 MC2 ME3 MC2
1 2 3 4 5 6 7 8 9 10	type DSC1616E	address CP421500	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10	421500.AO1 421500.AO2 421500.AO3 421500.AO4 421500.AO5 421500.AO7 421500.AO7 421500.AO8 421500.BO9 421500.AO10	AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1	421500OP01 421500OP02 421500OP03 421500OP04 421500OP05 421500OP06 421500OP07 421500OP08 421500OP09 421500OP10	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00 CS_0PA1RHC00 CS_0PA1CHP05 CS_0PA1RDMBP1 CS_0PA1RDMBP2 CS_0PA1CSF00 CS_0PA1RSF00	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION BYPASS DAMPER 2 START / STOP SUPPLY FAN VFD MODULATION SUPPLY FAN VFD	AO	AF24-SR AF24-SR 0-10VDC 294-05992 B240+AF24-SR M15M AF24-SR AF24-SR M15M 0-10VDC	ME3 ME3 ME3 ME3 ME3 MC2 ME3 MC2 MN2
1 2 3 4 5 6 7 8 9 10 11	DSC1616E	address CP421500	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	421500.AO1 421500.AO2 421500.AO3 421500.AO4 421500.AO5 421500.BO6 421500.AO7 421500.AO8 421500.BO9 421500.BO11	AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1	421500OP01 421500OP02 421500OP03 421500OP04 421500OP05 421500OP06 421500OP07 421500OP09 421500OP10 421500OP11	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00 CS_0PA1RHC00 CS_0PA1CHP05 CS_0PA1RDMBP1 CS_0PA1RDMBP2 CS_0PA1CSF00 CS_0PA1RSF00 CS_0PA1CRF00	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION BYPASS DAMPER 2 START / STOP SUPPLY FAN VFD MODULATION SUPPLY FAN VFD START / STOP RETURN FAN VFD	AO AO AO BO AO BO BO BO	AF24-SR AF24-SR 0-10VDC 294-05992 B240+AF24-SR M15M AF24-SR AF24-SR M15M 0-10VDC M15M	ME3 ME3 ME3 ME3 ME3 MC2 ME3 ME3 MC2 MM2 MC2
1 2 3 4 5 6 7 8 9 10 11 12	DSC1616E	address CP421500	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	421500.AO1 421500.AO2 421500.AO3 421500.AO4 421500.AO5 421500.AO7 421500.AO7 421500.AO8 421500.BO9 421500.BO11 421500.BO11	AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1	421500OP01 421500OP02 421500OP03 421500OP04 421500OP05 421500OP06 421500OP07 421500OP09 421500OP10 421500OP11 421500OP12	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00 CS_0PA1RHC00 CS_0PA1CHP05 CS_0PA1RDMBP1 CS_0PA1RDMBP2 CS_0PA1CSF00 CS_0PA1CSF00 CS_0PA1CRF00 CS_0PA1CRF00	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION BYPASS DAMPER 2 START / STOP SUPPLY FAN VFD MODULATION SUPPLY FAN VFD START / STOP RETURN FAN VFD MODULATION RETURN FAN VFD	AO AO AO BO AO BO AO	AF24-SR AF24-SR 0-10VDC 294-05992 B240+AF24-SR M15M AF24-SR AF24-SR M15M 0-10VDC M15M 0-10VDC	ME3 ME3 ME3 ME3 ME3 MC2 ME3 ME3 MC2 MM2 MM2
1 2 3 4 5 6 7 8 9 10 11 12 13	type DSC1616E DSC1616E	address CP421500 CP421500	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12	421500.AO1 421500.AO2 421500.AO3 421500.AO4 421500.AO5 421500.AO7 421500.AO8 421500.AO8 421500.BO9 421500.BO11 421500.BO11 421500.BO13	AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1 AHU1	421500OP01 421500OP02 421500OP03 421500OP04 421500OP05 421500OP06 421500OP07 421500OP08 421500OP09 421500OP10 421500OP11 421500OP12 421500OP13	CS_0PA1RDMEA CS_0PA1RDMFA CS_0PA1RSV00 CS_0PA1RCC00 CS_0PA1RHC00 CS_0PA1CHP05 CS_0PA1RDMBP1 CS_0PA1RDMBP2 CS_0PA1CSF00 CS_0PA1CRF00 CS_0PA1RF00 CS_0PA1RF00 CS_0PA1RF00	MODULATION EXHAUST AIR /MIXED AIR DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION BYPASS DAMPER 2 START / STOP SUPPLY FAN VFD MODULATION SUPPLY FAN VFD START / STOP RETURN FAN VFD MODULATION RETURN FAN VFD START / STOP HRW	AO AO AO BO AO BO BO BO BO	AF24-SR AF24-SR 0-10VDC 294-05992 B240+AF24-SR M15M AF24-SR AF24-SR M15M 0-10VDC M15M 0-10VDC M15M	ME3 ME3 ME3 ME3 ME3 MC2 ME3 ME3 MC2 MM2 MC2 MN2 MC2 MN2

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-6 LOCATED IN MECHANICAL ROOM P101 CONTROLLER:CP421500.LNK101 (DFM1616 V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM1616	421500.LNK101	IP1	421500.Al101	AHU1	421500IP101	CS_0PA1CO2FA	CO2 FRESH AIR	AI	I310E	BW3
2	DFM1616	421500.LNK101	IP2	421500.Al102	AHU1	421500IP102	CS_0PA1CO2RA	CO2 RETURN AIR	AI	I310E	BW3
3	DFM1616	421500.LNK101	IP3	421500.BI103	AHU_VFD	421500IP103	CS_0PA1SSF00_RUN	RUN STATUS SUPPLY FAN VFD	ВІ	стс	AH2
4	DFM1616	421500.LNK101	IP4	421500.Al104	AHU_VFD	421500IP104	CS_0PA1ASF00_SPD	FEEDBACK SUPPLY FAN SPEED	AI	4-20mA	CT2
5	DFM1616	421500.LNK101	IP5	421500.BI105	AHU_VFD	421500IP105	CS_0PA1ISF00	STATUS SUPPLY FAN CURRENT	AI	H720	BF3
6	DFM1616	421500.LNK101	IP6	421500.BI106	AHU_VFD	421500IP106	CS_0PA1SSF00_BP	STATUS SUPPLY FAN VFD BYPASS MODE	ВІ	стс	AH2
7	DFM1616	421500.LNK101	IP7	421500.BI107	AHU_VFD	421500IP107	CS_0PA1SSF00_AL	ALARM SUPPLY FAN	ВІ	стс	AV2
8	DFM1616	421500.LNK101	IP8	421500.Al108	AHU_VFD	421500IP108	CS_0PA1SRF00_RUN	RUN STATUS RETURN FAN VFD	ВІ	стс	AH2
9	DFM1616	421500.LNK101	IP9	421500.Al109	AHU_VFD	421500IP109	CS_0PA1ARF00_SPD	FEEDBACK RETURN FAN SPEED	AI	4-20mA	CT2
10	DFM1616	421500.LNK101	IP10	421500.Al110	AHU_VFD	421500IP110	CS_0PA1IRF00	STATUS RETURN FAN CURRENT	AI	H720	BF3
11	DFM1616	421500.LNK101	IP11	421500.BI111	AHU_VFD	421500IP111	CS_0PA1SRF00_BP	STATUS RETURN FAN VFD BYPASS MODE	ВІ	стс	AH2
12	DFM1616	421500.LNK101	IP12	421500.BI112	AHU_VFD	421500IP112	CS_0PA1SRF00_AL	ALARM RETURN FAN	ВІ	СТС	AV2
13	DFM1616	421500.LNK101	IP13	421500.AI113	AHU_VFD	421500IP113	CS_0PA1PSA00	PRESSURE SUPPLY AIR SENSOR	AI	SETRA 264	AT2
14	DFM1616	421500.LNK101	IP14	421500.BI114	AHU1_HRW	421500IP114	CS_0PA1SHRW0_RUN	RUN STATUS HRW VFD	ВІ	СТС	AH2
15	DFM1616	421500.LNK101	IP15	421500.Al115	AHU1_HRW	421500IP115	CS_0PA1AHRW0_SPD	SPEED FEEDBACK HRW VFD	AI	4-20mA	CT2
16	DFM1616	421500.LNK101	IP16	421500.AI116	AHU1_HRW	421500IP116	CS_0PA1IHRW0	STATUS HRW CURRENT	AI	H720	BF3
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output	type DFM1616	Controller address 421500.LNK101		Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
	type		address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	type DFM1616	421500.LNK101	address OP1	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1 2	type DFM1616 DFM1616	421500.LNK101 421500.LNK101	address OP1 OP2	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1 2 3	DFM1616 DFM1616 DFM1616	421500.LNK101 421500.LNK101 421500.LNK101	OP1 OP2 OP3	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1 2 3	type DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101	OP1 OP2 OP3 OP4	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1 2 3 4 5 5	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101	OP1 OP2 OP3 OP4 OP5	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1 2 3 4 5 6	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101	OP1 OP2 OP3 OP4 OP5 OP6	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1 2 3 4 5 6 7	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101	OP1 OP2 OP3 OP4 OP5 OP6 OP7	Logical address	System	Tag name	Point name	Description	Type	Equipment	Detail
1 2 3 4 5 6 7 8	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8	Logical address	System	Tag name	Point name	Description	Type	Equipment	Detail
1 2 3 4 5 6 7 8 9	type DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	Logical address	System	Tag name	Point name	Description	Type	Equipment	Detail
1 2 3 4 5 6 7 8 9 10	type DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101 421500.LNK101	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10	Logical address	System	Tag name	Point name	Description	Type	Equipment	Detail
1 2 3 4 5 6 7 8 9 10 11	type DFM1616	421500.LNK101	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	Logical address	System	Tag name	Point name	Description	Type	Equipment	Detail
1 2 3 4 5 6 7 8 9 10 11 12	type DFM1616	421500.LNK101	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	Logical address	System	Tag name	Point name	Description	Type	Equipment	Detail
1 2 3 4 5 6 7 8 9 10 11 12 13	type DFM1616	421500.LNK101	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12	Logical address	System	Tag name	Point name	Description	Type	Equipment	Detail

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-6 LOCATED IN MECHANICAL ROOM P101 CONTROLLER:CP421500.LNK201 (DSC1146E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM1616	421500.LNK201	IP1	421500.BI201	AHU1_HRW	421500IP201	CS_0PA1HRW0_BP	STATUS HRW BYPASS MODE	ВІ	стс	AH2
2	DFM1616	421500.LNK201	IP2	421500.BI202	AHU1_HRW	421500IP202	CS_0PA1HRW0_AL	STATUS HRW ALARM	ВІ	стс	AV2
3	DFM1616	421500.LNK201	IP3	421500.AI203	AHU1_HRW	421500IP203	CS_OPA1TOAEW	TEMPERATURE OUTSIDE AIR ENTERING HRW	AI	S450PDY12	AT2
4	DFM1616	421500.LNK201	IP4	421500.AI204	AHU1_HRW	421500IP204	CS_0PA1TSALW	TEMPERATURE SUPPLY AIR LEAVING HRW	AI	S450PDY12	AT2
5	DFM1616	421500.LNK201	IP5	421500.AI205	AHU1_HRW	421500IP205	CS_0PA1TRAEW	TEMPERATURE RETURN AIR ENTERING HRW	AI	S450PDY12	AT2
6	DFM1616	421500.LNK201	IP6	421500.AI206	AHU1_HRW	421500IP206	CS_0PA1TSALW	TEMPERATURE EXHAUST AIR LEAVING HRW	AI	S450PDY12	AT2
7	DFM1616	421500.LNK201	IP7								
8	DFM1616	421500.LNK201	IP8								
9	DFM1616	421500.LNK201	IP9								
10	DFM1616	421500.LNK201	IP20								
11	DFM1616	421500.LNK201	IP11								
12	DFM1616	421500.LNK201	IP12								
13	DFM1616	421500.LNK201	IP13								
14	DFM1616	421500.LNK201	IP14								
15	DFM1616	421500.LNK201	IP15								
16	DFM1616	421500.LNK201	IP16								
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM1616	421500.LNK201									
2			OP1								
	DFM1616	421500.LNK201	OP1 OP2								
3	DFM1616 DFM1616										
		421500.LNK201	OP2								
3	DFM1616	421500.LNK201 421500.LNK201	OP2 OP3								
3	DFM1616 DFM1616	421500.LNK201 421500.LNK201 421500.LNK201	OP2 OP3 OP4								
3 4 5	DFM1616 DFM1616 DFM1616	421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201	OP2 OP3 OP4 OP5								
3 4 5 6	DFM1616 DFM1616 DFM1616	421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201	OP2 OP3 OP4 OP5 OP6								
3 4 5 6 7	DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201	OP2 OP3 OP4 OP5 OP6 OP7								
3 4 5 6 7 8	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201	OP2 OP3 OP4 OP5 OP6 OP7 OP8								
3 4 5 6 7 8	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9								
3 4 5 6 7 8 9	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9								
3 4 5 6 7 8 9 10	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201 421500.LNK201	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11								
3 4 5 6 7 8 9 10 11	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK201	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12								
3 4 5 6 7 8 9 10 11 12 13	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421500.LNK201	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12 OP13								

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-8 LOCATED IN MECHANICAL ROOM P101 CONTROLLER:CP421800 (DSC1616E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP421800	IP1	421800.AI1	AHU2	421800IP01	CS_0PA2TSA00	TEMPERATURE SUPPLY AIR	Al	S450PDY12	AT2
2	DSC1616E	CP421800	IP2	421800.AI2	AHU2	421800IP02	CS_0PA2TRA00	TEMPERATURE RETURN AIR	AI	S450PDY12	AT2
3	DSC1616E	CP421800	IP3	421800.AI3	AHU2	421800IP03	CS_0PA2TMA00	TEMPERATURE MIXED AIR	AI	S457PEZ24	AT2
4	DSC1616E	CP421800	IP4	421800.AI4	AHU2	421800IP04	CS_0PA2HSA00	HUMIDITY SUPPLY AIR	AI	CH3D420	AT2
5	DSC1616E	CP421800	IP5	421800.AI5	AHU2	421800IP05	CS_0PA2HRA00	HUMIDITY RETURN AIR	AI	CH3D420	AT2
6	DSC1616E	CP421800	IP6	421800.AI6	AHU2	421800IP06	CS_0PA2FSA00	AIR FLOW SUPPLY	AI	DPT2500	AT2
7	DSC1616E	CP421800	IP7	421800.AI7	AHU2	421800IP07	CS_0PA2FRA00	AIR FLOW RETURN	Al	DPT2500	AT2
8	DSC1616E	CP421800	IP8	421800.AI8	AHU2	421800IP08	CS_0PA2PFT0A	STATUS FILTER A	AI	SETRA 264	AT2
9	DSC1616E	CP421800	IP9	421800.AI9	AHU2	421800IP09	CS_0PA2PFT0B	STATUS FILTER B	AI	SETRA 264	AT2
10	DSC1616E	CP421800	IP10	421800.BI10	AHU2	421800IP10	CS_0PA2SFR00	STATUS LOW TEMPERATURE LIMIT	ВІ	RPY	AH2
11	DSC1616E	CP421800	IP11	421800.AI11	AHU2	421800IP11	CS_0PA2IHP05	STATUS HEATING PUMP 206	AI	H922	AJ2
12	DSC1616E	CP421800	IP12	421800.AI12	AHU2	421800IP12	CS_0PA2HEA00	HUMIDITY EXHAUST AIR	AI	CH3D420	AT2
13	DSC1616E	CP421800	IP13	421800.AI13	AHU2	421800IP13	CS_0PA2PFTRA	STATUS RETURN AIR FILTER	AI	SETRA 264	AT2
14	DSC1616E	CP421800	IP14	421800.AI14	AHU2	421800IP14	CS_0PA2FOA00	AIR FLOW OUTSIDE AIR	AI	DPT2500	AT2
15	DSC1616E	CP421800	IP15	421800.AI15	AHU2	421800IP15	CS_0PA2CO2FA	CO2 FRESH AIR	AI	1310E	BW3
16	DSC1616E	CP421800	IP16	421800.AI16	AHU2	421800IP16	CS_0PA2CO2RA	CO2 RETURN AIR	AI	1310E	BW3
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
<mark># Output</mark> 1			-	Logical address 421800.AO1	System AHU2	Tag name 421800OP01	Point name CS_0PA2RDMEA	Description MODULATION EXHAUST AIR / BYPASS DAMPERS	Type AO	Equipment AF24-SR	Detail ME3
	type	address	address	_	_						
1	type DSC1616E	address CP421800	address OP1	421800.AO1	AHU2	421800OP01	CS_0PA2RDMEA	MODULATION EXHAUST AIR / BYPASS DAMPERS	AO	AF24-SR	ME3
1 2	type DSC1616E DSC1616E	address CP421800 CP421800	OP1 OP2	421800.AO1 421800.AO2	AHU2 AHU2	421800OP01 421800OP02	CS_0PA2RDMEA CS_0PA2RDMFA	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER	AO AO	AF24-SR AF24-SR	ME3
1 2 3	type DSC1616E DSC1616E DSC1616E	address CP421800 CP421800 CP421800	OP1 OP2 OP3	421800.AO1 421800.AO2 421800.AO3	AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE	AO AO	AF24-SR AF24-SR 0-10VDC	ME3 ME3 MN2
1 2 3 4	DSC1616E DSC1616E DSC1616E DSC1616E	address CP421800 CP421800 CP421800 CP421800	OP1 OP2 OP3 OP4	421800.AO1 421800.AO2 421800.AO3 421800.AO4	AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE	AO AO AO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT	ME3 ME3 MN2 ME3
1 2 3 4 5	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP421800 CP421800 CP421800 CP421800 CP421800	OP1 OP2 OP3 OP4 OP5	421800.AO1 421800.AO2 421800.AO3 421800.AO4 421800.AO5	AHU2 AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04 421800OP05	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00 CS_0PA2RHC00	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE	AO AO AO AO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT B240+AF24-SR	ME3 ME3 MN2 ME3 ME3
1 2 3 4 5	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP421800 CP421800 CP421800 CP421800 CP421800 CP421800 CP421800	OP1 OP2 OP3 OP4 OP5 OP6	421800.AO1 421800.AO2 421800.AO3 421800.AO4 421800.AO5 421800.BO6	AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04 421800OP05 421800OP06	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00 CS_0PA2RHC00 CS_0PA2CHP05	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP	AO AO AO AO BO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT B240+AF24-SR M15M	ME3 ME3 MN2 ME3 ME3 ME3 MC2
1 2 3 4 5 6	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP421800 CP421800 CP421800 CP421800 CP421800 CP421800 CP421800 CP421800	OP1 OP2 OP3 OP4 OP5 OP6 OP7	421800.AO1 421800.AO2 421800.AO3 421800.AO4 421800.AO5 421800.BO6 421800.AO7	AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04 421800OP05 421800OP06 421800OP07	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00 CS_0PA2RHC00 CS_0PA2CHP05 CS_0PA2RDMBP1	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1	AO AO AO AO AO AO AO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT B240+AF24-SR M15M AF24-SR	ME3 ME3 ME3 ME3 ME3 ME3 ME3 ME3
1 2 3 4 5 6 7 8	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP421800 CP421800 CP421800 CP421800 CP421800 CP421800 CP421800 CP421800 CP421800	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8	421800.AO1 421800.AO2 421800.AO3 421800.AO4 421800.AO5 421800.BO6 421800.AO7 421800.AO8	AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04 421800OP05 421800OP06 421800OP07 421800OP08	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00 CS_0PA2RHC00 CS_0PA2CHP05 CS_0PA2RDMBP1 CS_0PA2RDMRA	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION RETURN AIR DAMPER	AO AO AO BO AO AO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT B240+AF24-SR M15M AF24-SR AF24-SR	ME3 ME3 MN2 ME3 ME3 ME3 ME3 MC2 ME3 ME3 ME3
1 2 3 4 5 6 7 8 9	DSC1616E	address CP421800	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	421800.AO1 421800.AO2 421800.AO3 421800.AO4 421800.AO5 421800.AO7 421800.AO7 421800.AO8	AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04 421800OP05 421800OP06 421800OP07 421800OP08 421800OP09	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00 CS_0PA2RHC00 CS_0PA2CHP05 CS_0PA2RDMBP1 CS_0PA2RDMRA CS_0PA2RDMBP2	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION RETURN AIR DAMPER MODULATION BYPASS DAMPER 2	AO AO AO AO AO AO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT B240+AF24-SR M15M AF24-SR AF24-SR AF24-SR	ME3
1 2 3 4 5 6 7 8 9 10	DSC1616E	address CP421800	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10	421800.AO1 421800.AO2 421800.AO3 421800.AO4 421800.AO5 421800.AO7 421800.AO7 421800.AO8 421800.AO9 421800.BO10	AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04 421800OP05 421800OP06 421800OP07 421800OP08 421800OP09 421800OP10	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00 CS_0PA2RHC00 CS_0PA2CHP05 CS_0PA2RDMBP1 CS_0PA2RDMRA CS_0PA2RDMBP2 CS_0PA2CSF00	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION RETURN AIR DAMPER MODULATION BYPASS DAMPER 2 START / STOP SUPPLY FAN VFD	AO AO AO AO AO AO BO BO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT B240+AF24-SR M15M AF24-SR AF24-SR M15M	ME3 ME3 ME3 ME3 ME3 MC2 ME3 ME3 ME3 ME3 ME3 ME3
1 2 3 4 5 6 7 8 9 10 11	DSC1616E	address CP421800	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	421800.AO1 421800.AO2 421800.AO3 421800.AO4 421800.AO5 421800.AO7 421800.AO7 421800.AO9 421800.BO10 421800.AO11	AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04 421800OP05 421800OP06 421800OP07 421800OP09 421800OP10 421800OP11	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00 CS_0PA2RHC00 CS_0PA2CHP05 CS_0PA2RDMBP1 CS_0PA2RDMRA CS_0PA2RDMBP2 CS_0PA2CSF00 CS_0PA2RSF00	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION RETURN AIR DAMPER MODULATION BYPASS DAMPER 2 START / STOP SUPPLY FAN VFD MODULATION SUPPLY FAN VFD	AO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT B240+AF24-SR M15M AF24-SR AF24-SR AF24-SR M15M 0-10VDC	ME3
1 2 3 4 5 6 7 8 9 10 11 12	DSC1616E DSC1616E	address CP421800	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12	421800.AO1 421800.AO2 421800.AO3 421800.AO4 421800.AO5 421800.BO6 421800.AO7 421800.AO8 421800.AO9 421800.BO10 421800.BO11 421800.BO12	AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04 421800OP05 421800OP06 421800OP07 421800OP09 421800OP10 421800OP11 421800OP12	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00 CS_0PA2RHC00 CS_0PA2CHP05 CS_0PA2RDMBP1 CS_0PA2RDMBP2 CS_0PA2RDMBP2 CS_0PA2CSF00 CS_0PA2RSF00 CS_0PA2CRF00	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION RETURN AIR DAMPER MODULATION BYPASS DAMPER 2 START / STOP SUPPLY FAN VFD MODULATION SUPPLY FAN VFD START / STOP RETURN FAN VFD	AO AO AO AO AO AO BO AO BO BO BO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT B240+AF24-SR M15M AF24-SR AF24-SR AF24-SR M15M 0-10VDC M15M	ME3
1 2 3 4 5 6 7 8 9 10 11 12 13	type	address CP421800	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12	421800.AO1 421800.AO2 421800.AO3 421800.AO4 421800.AO5 421800.AO7 421800.AO7 421800.AO8 421800.AO9 421800.BO10 421800.BO11 421800.BO12 421800.AO13	AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2 AHU2	421800OP01 421800OP02 421800OP03 421800OP04 421800OP05 421800OP06 421800OP07 421800OP08 421800OP09 421800OP10 421800OP11 421800OP12 421800OP13	CS_0PA2RDMEA CS_0PA2RDMFA CS_0PA2RSV00 CS_0PA2RCC00 CS_0PA2RHC00 CS_0PA2CHP05 CS_0PA2RDMBP1 CS_0PA2RDMBP2 CS_0PA2CSF00 CS_0PA2CSF00 CS_0PA2CRF00 CS_0PA2CRF00 CS_0PA2CRF00	MODULATION EXHAUST AIR / BYPASS DAMPERS MODULATION FRESH AIR DAMPER MODULATION HUMIDIFIER STEAM VALVE MODULATION COOLING VALVE MODULATION HEATING VALVE START / STOP HEATING PUMP MODULATION BYPASS DAMPER 1 MODULATION RETURN AIR DAMPER MODULATION BYPASS DAMPER 2 START / STOP SUPPLY FAN VFD MODULATION SUPPLY FAN VFD START / STOP RETURN FAN VFD MODULATION RETURN FAN VFD	AO AO AO AO BO AO BO AO AO	AF24-SR AF24-SR 0-10VDC B278+AF24-MFT B240+AF24-SR M15M AF24-SR AF24-SR M15M 0-10VDC M15M 0-10VDC	ME3 ME3 MN2 ME3 ME3 ME3 MC2 ME3 ME3

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-8 LOCATED IN MECHANICAL ROOM P101 CONTROLLER:CP421800.LNK101 (DFM1616 V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM1616	421800.LNK101	IP1	421800.BI101	AHU_VFD	421800IP101	CS_0PA2SSF00_RUN	RUN STATUS SUPPLY FAN VFD	ВІ	стс	AH2
2	DFM1616	421800.LNK101	IP2	421800.Al102	AHU_VFD	421800IP102	CS_0PA2ASF00_SPD	FEEDBACK SUPPLY FAN SPEED	AI	4-20mA	CT2
3	DFM1616	421800.LNK101	IP3	421800.BI103	AHU_VFD	421800IP103	CS_0PA2ISF00	STATUS SUPPLY FAN CURRENT	AI	H720	BF3
4	DFM1616	421800.LNK101	IP4	421800.BI104	AHU_VFD	421800IP104	CS_0PA2SSF00_BP	STATUS SUPPLY FAN VFD BYPASS MODE	ВІ	СТС	AH2
5	DFM1616	421800.LNK101	IP5	421800.BI105	AHU_VFD	421800IP105	CS_0PA2SSF00_AL	ALARM SUPPLY FAN	ВІ	СТС	AV2
6	DFM1616	421800.LNK101	IP6	421800.BI106	AHU_VFD	421800IP106	CS_0PA2SRF00_RUN	RUN STATUS RETURN FAN VFD	ВІ	СТС	AH2
7	DFM1616	421800.LNK101	IP7	421800.AI107	AHU_VFD	421800IP107	CS_0PA2ARF00_SPD	FEEDBACK RETURN FAN SPEED	AI	4-20mA	CT2
8	DFM1616	421800.LNK101	IP8	421800.BI108	AHU_VFD	421800IP108	CS_0PA2IRF00	STATUS RETURN FAN CURRENT	AI	H720	BF3
9	DFM1616	421800.LNK101	IP9	421800.BI109	AHU_VFD	421800IP109	CS_0PA2SRF00_BP	STATUS RETURN FAN VFD BYPASS MODE	ВІ	СТС	AH2
10	DFM1616	421800.LNK101	IP10	421800.BI110	AHU_VFD	421800IP110	CS_0PA2SRF00_AL	ALARM RETURN FAN	ВІ	стс	AV2
11	DFM1616	421800.LNK101	IP11	421800.AI111	AHU_VFD	421800IP111	CS_0PA2PSA00	PRESSURE SUPPLY AIR SENSOR	AI	SETRA 264	AT2
12	DFM1616	421800.LNK101	IP12	421800.BI112	AHU2_HRW	421800IP112	CS_0PA2SHRW0_RUN	RUN STATUS HRW VFD	ВІ	стс	AH2
13	DFM1616	421800.LNK101	IP13	421800.AI113	AHU2_HRW	421800IP113	CS_0PA2AHRW0_SPD	SPEED FEEDBACK HRW VFD	AI	4-20mA	CT2
14	DFM1616	421800.LNK101	IP14	421800.Al114	AHU2_HRW	421800IP114	CS_0PA2IHRW0	STATUS HRW CURRENT	AI	H720	BF3
15	DFM1616	421800.LNK101	IP15	421800.BI115	AHU2_HRW	421800IP115	CS_0PA2HRW0_BP	STATUS HRW BYPASS MODE	ВІ	СТС	AH2
16	DFM1616	421800.LNK101	IP16	421800.BI116	AHU2_HRW	421800IP116	CS_0PA2HRW0_AL	STATUS HRW ALARM	ВІ	СТС	AV2
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM1616	421800.LNK101	OP1								
2			OFI								
_	DFM1616	421800.LNK101	OP2								
3	DFM1616										
		421800.LNK101	OP2								
3	DFM1616	421800.LNK101 421800.LNK101	OP2 OP3								
3	DFM1616 DFM1616	421800.LNK101 421800.LNK101 421800.LNK101	OP2 OP3 OP4								
3 4 5	DFM1616 DFM1616 DFM1616	421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101	OP2 OP3 OP4 OP5								
3 4 5 6	DFM1616 DFM1616 DFM1616	421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101	OP2 OP3 OP4 OP5 OP6								
3 4 5 6 7	DFM1616 DFM1616 DFM1616 DFM1616	421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101	OP2 OP3 OP4 OP5 OP6 OP7								
3 4 5 6 7 8	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101	OP2 OP3 OP4 OP5 OP6 OP7 OP8								
3 4 5 6 7 8	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9								
3 4 5 6 7 8 9	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101 421800.LNK101	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9								
3 4 5 6 7 8 9 10	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421800.LNK101	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11								
3 4 5 6 7 8 9 10 11	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421800.LNK101	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11								
3 4 5 6 7 8 9 10 11 12	DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616 DFM1616	421800.LNK101	OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12 OP13								

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-8 LOCATED IN MECHANICAL ROOM P101 CONTROLLER:CP421800.LNK201 (DFM1616 V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM1616	421800.LNK101	IP1	421800.Al201	AHU2_HRW	421800IP201	CS_OPA2TOAEW	TEMPERATURE OUTSIDE AIR ENTERING HRW	Al	S450PDY12	AT2
2	DFM1616	421800.LNK101	IP2	421800.Al202	AHU2_HRW	421800IP202	CS_0PA2TSALW	TEMPERATURE SUPPLY AIR LEAVING HRW	Al	S450PDY12	AT2
3	DFM1616	421800.LNK101	IP3	421800.Al203	AHU2_HRW	421800IP203	CS_0PA2TRAEW	TEMPERATURE EXHAUST AIR ENTERING HRW	Al	S450PDY12	AT2
4	DFM1616	421800.LNK101	IP4	421800.Al204	AHU2_HRW	421800IP204	CS_0PA2TSALW	TEMPERATURE EXHAUST AIR LEAVING HRW	AI	S450PDY12	AT2
5	DFM1616	421800.LNK101	IP5								
6	DFM1616	421800.LNK101	IP6								
7	DFM1616	421800.LNK101	IP7								
8	DFM1616	421800.LNK101	IP8								
9	DFM1616	421800.LNK101	IP9								
10	DFM1616	421800.LNK101	IP10								
11	DFM1616	421800.LNK101	IP11								
12	DFM1616	421800.LNK101	IP12								
13	DFM1616	421800.LNK101	IP13								
14	DFM1616	421800.LNK101	IP14								
15	DFM1616	421800.LNK101	IP15								
16	DFM1616	421800.LNK101	IP16								
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM1616	421800.LNK101	OP1								
2	DFM1616	421800.LNK101	OP2								
3	DFM1616	421800.LNK101	OP3								
4	DFM1616	421800.LNK101	OP4								
5	DFM1616	421800.LNK101	OP5								
6	DFM1616	421800.LNK101	OP6								
7	DFM1616	421800.LNK101	OP7								
8	DFM1616	421800.LNK101	OP8								
9	DFM1616	421800.LNK101	OP9								
10	DFM1616	421800.LNK101	OP10								
11	DFM1616	421800.LNK101	OP11								
	DFM1616	421800.LNK101	OP12								
12		1	1						1		
13	DFM1616	421800.LNK101	OP13								
	DFM1616 DFM1616	421800.LNK101 421800.LNK101	OP13 OP14								

PROJECT: 2111-00451 CARLETON U - CANAL SITE PANEL:PML-10 LOCATED IN MECHANICAL ROOM P101 CONTROLLER:422100 (DSC1616E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DSC1616E	CP422100	IP1	422100.Al1	CDW	422100IP01	CS_0PDCTGS00	TEMPERATURE GLYCOL ENTERING	Al	S479PDY30	AT2
2	DSC1616E	CP422100	IP2	422100.AI2	CDW	422100IP02	CS_0PDCTGR00	TEMPERATURE GLYCOL LEAVING	Al	S479PDY30	AT2
3	DSC1616E	CP422100	IP3	422100.AI3	CDW	422100IP03	CS_0PDCTSW00	TEMPERATURE CHILLED WATER SUPPLY	Al	S479PDY30	AT2
4	DSC1616E	CP422100	IP4	422100.AI4	CDW	422100IP04	CS_0PDCTRW00	TEMPERATURE CHILLED WATER RETURN	Al	S479PDY30	AT2
5	DSC1616E	CP422100	IP5	422100.BI5	CDW	422100IP05	CS_0PDCSGFT1	STATUS GLYCOL TANK LEVEL SWITCH	ВІ	стс	AH2
6	DSC1616E	CP422100	IP6	422100.Al6	CDW	422100IP06	CS_0PDCIWP05	STATUS WATER PUMP 305	Al	H922	AJ2
7	DSC1616E	CP422100	IP7	422100.AI7	CDW	422100IP07	CS_0PDCIGP06	STATUS GLYCOL PUMP 306	AI	H922	AJ2
8	DSC1616E	CP422100	IP8	422100.AI8	CDW	422100IP08	CS_0PDCIGFP1	STATUS GLYCOL FILL PUMP 1G	AI	H922	AJ2
9	DSC1616E	CP422100	IP9	422100.BI9	CDW	422100IP09	CS_0PDCIDCF1	STATUS DRY COOLER FAN 1	ВІ	стс	AH2
10	DSC1616E	CP422100	IP10	422100.BI10	CDW	422100IP10	CS_0PDCIDCF2	STATUS DRY COOLER FAN 2	ВІ	СТС	AH2
11	DSC1616E	CP422100	IP11	422100.BI11	CDW	422100IP11	CS_0PDCIDCF3	STATUS DRY COOLER FAN 3	ВІ	стс	AH2
12	DSC1616E	CP422100	IP12	422100.BI12							
13	DSC1616E	CP422100	IP13	422100.Al13							
14	DSC1616E	CP422100	IP14	422100.Al14							
15	DSC1616E	CP422100	IP15	422100.Al15							
16	DSC1616E	CP422100	IP16	422100.Al16							
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output 1				Logical address 422100.BO1	System CDW	Tag name 422100OP01	Point name CS_0PDCCWP05	Description START / STOP WATER PUMP 305	Type BO	Equipment M15M	Detail MC2
-	type	address	address	_				-			
1	type DSC1616E	address CP422100	address OP1	422100.BO1	CDW	422100OP01	CS_0PDCCWP05	START / STOP WATER PUMP 305	во	M15M	MC2
1 2	type DSC1616E DSC1616E	address CP422100 CP422100	address OP1 OP2	422100.BO1 422100.BO2	CDW	422100OP01 422100OP02	CS_0PDCCWP05 CS_0PDCCGP06	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306	во	M15M M15M	MC2
1 2 3	type DSC1616E DSC1616E DSC1616E	address CP422100 CP422100 CP422100	OP1 OP2 OP3	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2 MC2
1 2 3 4	DSC1616E DSC1616E DSC1616E DSC1616E	address CP422100 CP422100 CP422100 CP422100	OP1 OP2 OP3 OP4	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2
1 2 3 4 5	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP422100 CP422100 CP422100 CP422100 CP422100	OP1 OP2 OP3 OP4 OP5	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2
1 2 3 4 5	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP422100 CP422100 CP422100 CP422100 CP422100 CP422100 CP422100	OP1 OP2 OP3 OP4 OP5 OP6	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2 MC2
1 2 3 4 5 6 7	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP422100 CP422100 CP422100 CP422100 CP422100 CP422100 CP422100 CP422100	OP1 OP2 OP3 OP4 OP5 OP6 OP7	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2
1 2 3 4 5 6 7 8	DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E DSC1616E	address CP422100 CP422100 CP422100 CP422100 CP422100 CP422100 CP422100 CP422100 CP422100	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2 MC2
1 2 3 4 5 6 7 8 9	DSC1616E	address CP422100	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2
1 2 3 4 5 6 7 8 9 10	Type DSC1616E	address CP422100	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2 MC2
1 2 3 4 5 6 7 8 9 10 11	DSC1616E DSC1616E	address CP422100	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2 MC2
1 2 3 4 5 6 7 8 9 10 11 12	type	address CP422100	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2
1 2 3 4 5 6 7 8 9 10 11 12 13	type	address CP422100	OP1 OP2 OP3 OP4 OP5 OP6 OP7 OP8 OP9 OP10 OP11 OP12 OP13	422100.BO1 422100.BO2 422100.BO3	CDW CDW	422100OP01 422100OP02 422100OP03	CS_0PDCCWP05 CS_0PDCCGP06 CS_0PDCCGFP1	START / STOP WATER PUMP 305 START / STOP GLYCOL PUMP 306 START / STOP GLYCOL FILL PUMP 1G	BO BO	M15M M15M M15M	MC2 MC2

PROJECT: 2111-00451 CARLETON U - CANAL SITE

TYPE 1 - BASIC VAV

CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	IP1	YYY.BI1	VAV	YYYIP01	CS_0xVVSOCzzz	STATUS OCCUPANCY SENSOR ROOM ZZZ	ВІ	стс	AH2
2	DVC-V322EE	CPYYY	IP2	YYY.AI2	VAV						
3	DVC-V322EE	СРҮҮҮ	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	CPYYY	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	OP1	YYY.BO1							
2	DVC-V322EE	CPYYY	OP2	YYY.BO2							
3	DVC-V322EE	CPYYY	OP3	YYY.AO3							
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4							
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			
6	DVC-V322EE	СРҮҮҮ	OP6	YYY.BO6			CS_0xVVCDMCLzzz	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE

TYPE 2 - VAV W RADIANT PANEL

CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	IP1	YYY.BI1	VAV	YYYIP01	CS_0xVVSOCzzz	STATUS OCCUPANCY SENSOR	ВІ	стс	AH2
2	DVC-V322EE	СРҮҮҮ	IP2	YYY.AI2	VAV						
3	DVC-V322EE	СРҮҮҮ	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	СРҮҮҮ	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	Al	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	OP1	YYY.BO1							
2	DVC-V322EE	CPYYY	OP2	YYY.BO2							
3	DVC-V322EE	СРҮҮҮ	OP3	YYY.AO3	VAV	YYYOP03	CS_0xVVRRPzzz	MODULATION RADIANT PANEL VALVE ROOM ZZZ	AO	BxxxB+TF24-SR	ME3
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4	_						
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			
6	DVC-V322EE	СРҮҮҮ	OP6	YYY.BO6			CS_0xVVCDMCLzzz	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE

TYPE 2 - VAV W REHEAT & RADIANT PANEL CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	IP1	YYY.BI1	VAV	YYYIP01	CS_0xVVSOCzzz	STATUS OCCUPANCY SENSOR	ВІ	стс	AH2
2	DVC-V322EE	СРҮҮҮ	IP2	YYY.AI2	VAV						
3	DVC-V322EE	СРҮҮҮ	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	СРҮҮҮ	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	СРҮҮҮ	OP1	YYY.BO1							
2	DVC-V322EE	СРҮҮҮ	OP2	YYY.BO2							
3	DVC-V322EE	СРҮҮҮ	OP3	YYY.AO3	VAV	YYYOP03	CS_0xVVRRPzzz	MODULATION RADIANT PANEL VALVE ROOM ZZZ	АО	BxxxB+TF24-SR	ME3
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4	VAV	YYYOP04	CS_0xVVRRHzzz	MODULATION REHEAT COIL VALVE	АО	BxxxB+TF24-SR	ME3
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE

TYPE 2 - VAV W 2 CONVECTORS

CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	IP1	YYY.BI1	VAV	YYYIP01	CS_0xVVSOCzzz	STATUS OCCUPANCY SENSOR	ВІ	стс	AH2
2	DVC-V322EE	CPYYY	IP2	YYY.AI2	VAV						
3	DVC-V322EE	CPYYY	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	СРҮҮҮ	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	OP1	YYY.BO1							
2	DVC-V322EE	CPYYY	OP2	YYY.BO2							
3	DVC-V322EE	СРҮҮҮ	OP3	YYY.AO3	VAV	YYYOP03	CS_0xVVRCVzzz	MODULATION CONVECTOR VALVES	AO	BxxxB+TF24-SR	ME3
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4							
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			
6	DVC-V322EE	CPYYY	OP6	YYY.BO6			CS_0xVVCDMCLzzz	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE TYPE 5A - VAV W REHEAT & SHARED T-STAT CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	СРҮҮҮ	IP1	YYY.BI1	VAV	YYYIP01	CS_0xVVSOCzzz	STATUS OCCUPANCY SENSOR	ВІ	стс	AH2
2	DVC-V322EE	СРҮҮҮ	IP2	YYY.AI2	VAV						
3	DVC-V322EE	СРҮҮҮ	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	СРҮҮҮ	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	СРҮҮҮ	OP1	YYY.BO1							
2	DVC-V322EE	СРҮҮҮ	OP2	YYY.BO2							
3	DVC-V322EE	СРҮҮҮ	OP3	YYY.AO3	VAV	YYYOP03	CS_0xVVRST5B	OUTPUT ROOM TEMPERATURE TO TYPE 5B	AO	0-10VDC	
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4	VAV	YYYOP04	CS_0xVVRRHzzz	MODULATION REHEAT COIL VALVE	AO	BxxxB+TF24-SR	ME3
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			
6	DVC-V322EE	CPYYY	OP6	YYY.BO6			CS_0xVVCDMCLzzz	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE TYPE 5B - VAV W RADIANT PANEL & SHARED T-STAT

CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	IP1	YYY.AI1							
2	DVC-V322EE	CPYYY	IP2	YYY.AI2	VAV	YYYIP02	CS_0xVVAST5A	TEMPERATURE INPUT FROM VAV TYPE 5A	AI	0-10VDC	CT2
3	DVC-V322EE	CPYYY	IP3	YYY.AI3							
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	CPYYY	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	OP1	YYY.BO1							
2	DVC-V322EE	CPYYY	OP2	YYY.BO2							
3	DVC-V322EE	CPYYY	ОР3	YYY.AO3	VAV	YYYOP03	CS_0xVVRRPzzz	MODULATION RADIANT PANEL VALVE ROOM ZZZ	AO	BxxxB+TF24-SR	ME3
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4	_	_					
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			
6	DVC-V322EE	CPYYY	OP6	YYY.BO6			CS_0xVVCDMCLzzz	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE

TYPE 6 - VAV W RADIANT PANEL + 1 ROOM W RADIANT PANEL

CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	IP1	YYY.AI1	VAV						
2	DVC-V322EE	СРҮҮҮ	IP2	YYY.AI2	VAV						
3	DVC-V322EE	СРҮҮҮ	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	СРҮҮҮ	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	AI	DNS-24L	DT6
NET2	DNS-24L	CPYYY.LNK201		YYY.AI201	VAV	YYYIP201	CS_0xVVTSTzzz	TEMPERATURE ROOM XXX	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	OP1	YYY.BO1							
2	DVC-V322EE	СРҮҮҮ	OP2	YYY.BO2							
3	DVC-V322EE	СРҮҮҮ	OP3	YYY.AO3	VAV	YYYOP03	CS_0xVVRRPzzz	MODULATION RADIANT PANEL ROOM ZZZ	AO	BxxxB+TF24-SR	ME3
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4	VAV	YYYOP04	CS_0xVVRRPxxx	MODULATION RADIANT PANEL ROOM xxx	AO	BxxxB+TF24-SR	ME3
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			
6	DVC-V322EE	СРҮҮҮ	OP6	YYY.BO6			CS_0xVVCDMCLzzz	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE TYPE 7 - VAV BASIC + 2 ROOMS W RADIANT PANELS CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	IP1	YYY.BI1	VAV	YYYIP01	CS_0xVVSOCzzz	STATUS OCCUPANCY SENSOR ROOM ZZZ	ВІ	стс	AH2
2	DVC-V322EE	CPYYY	IP2	YYY.AI2	VAV						
3	DVC-V322EE	СРҮҮҮ	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	СРҮҮҮ	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	AI	DNS-24L	DT6
NET2	DNS-24L	CPYYY.LNK201		YYY.AI201	VAV	YYYIP201	CS_0xVVTSTxxx	TEMPERATURE ROOM XXX	AI	DNS-24L	DT6
NET2	DNS-24L	CPYYY.LNK301		YYY.AI301	VAV	YYYIP301	CS_0xVVTSTvvv	TEMPERATURE ROOM VVV	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	OP1	YYY.BO1							
2	DVC-V322EE	СРҮҮҮ	OP2	YYY.BO2							
3	DVC-V322EE	CPYYY	OP3	YYY.AO3	VAV	YYYOP03	CS_0xVVRRPvvv	MODULATION RADIANT PANEL ROOM VVV	AO	BxxxB+TF24-SR	ME3
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4	VAV	YYYOP04	CS_0xVVRRPxxx	MODULATION RADIANT PANEL ROOM xxx	AO	BxxxB+TF24-SR	ME3
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			
6	DVC-V322EE	CPYYY	OP6	YYY.BO6			CS_0xVVCDMCLzzz	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE TYPE 8 - VAV W RADIANT PANEL + 2 ROOMS W RADIANT PANELS

CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	IP1	YYY.AI1	VAV						
2	DVC-V322EE	СРҮҮҮ	IP2	YYY.AI2	VAV						
3	DVC-V322EE	СРҮҮҮ	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	СРҮҮҮ	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	AI	DNS-24L	DT6
NET2	DNS-24L	CPYYY.LNK201		YYY.AI201	VAV	YYYIP201	CS_0xVVTSTxxx	TEMPERATURE ROOM XXX	AI	DNS-24L	DT6
NET2	DNS-24L	CPYYY.LNK301		YYY.AI301	VAV	YYYIP301	CS_0xVVTSTvvv	TEMPERATURE ROOM VVV	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	СРҮҮҮ	OP1	YYY.BO1							
2	DVC-V322EE	СРҮҮҮ	OP2	YYY.BO2							
3	DVC-V322EE	СРҮҮҮ	OP3	YYY.AO3	VAV	YYYOP03	CS_0xVVRRPzzz	MODULATION RADIANT PANEL ROOM ZZZ	AO	BxxxB+TF24-SR	ME3
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4	VAV	YYYOP04	CS_0xVVRRPxxx	MODULATION RADIANT PANEL ROOM XXX	AO	BxxxB+TF24-SR	ME3
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			
6	DVC-V322EE	СРҮҮҮ	OP6	YYY.BO6			CS_0xVVCDMCLzzz	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE

TYPE 8 - VAV W RADIANT PANEL + 2 ROOMS W RADIANT PANELS

CONTROLLER:42xxxx.LNK101 (DFM440 V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM440	YYY.LNK401	IP1	YYY.AI401							
2	DFM440	YYY.LNK401	IP2	YYY.AI402							
3	DFM440	YYY.LNK401	IP3	YYY.AI403							
4	DFM440	YYY.LNK401	IP4	YYY.AI404							
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM440	YYY.LNK401	OP1	YYY.AO401	VAV	YYYOP401	CS_0xVVRRPvvv	MODULATION RADIANT PANEL ROOM VVV	AO	BxxxB+TF24-SR	ME3
2	DFM440	YYY.LNK401	OP2	YYY.AO402							
3	DFM440	YYY.LNK401	OP3	YYY.AO403							
4	DFM440	YYY.LNK401	OP4	YYY.AO404							

PROJECT: 2111-00451 CARLETON U - CANAL SITE TYPE 9 - VAV W REHEAT COIL &RADIANT PANEL + 3 ROOMS W RADIANT PANELS

CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CPYYY	IP1	YYY.AI1	VAV						
2	DVC-V322EE	СРҮҮҮ	IP2	YYY.AI2	VAV						
3	DVC-V322EE	СРҮҮҮ	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	СРҮҮҮ	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	AI	DNS-24L	CU4
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE										
	DVO-V322LL	CPYYY	OP1	YYY.BO1							
2	DVC-V322EE	СРҮҮҮ	OP1 OP2	YYY.BO1 YYY.BO2							
3					VAV	YYYOP03	CS_0xVVRRHzzz	MODULATION REHEAT COIL	AO	BxxxB+TF24-SR	ME3
	DVC-V322EE	СРҮҮҮ	OP2	YYY.BO2	VAV	YYYOP03	CS_0xVVRRHzzz	MODULATION REHEAT COIL	AO	BxxxB+TF24-SR	ME3
3	DVC-V322EE	СРҮҮҮ	OP2 OP3	YYY.BO2 YYY.AO3	VAV			MODULATION REHEAT COIL OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ	AO	BxxxB+TF24-SR	ME3

PROJECT: 2111-00451 CARLETON U - CANAL SITE TYPE 9 - VAV W REHEAT COIL &RADIANT PANEL + 3 ROOMS W RADIANT PANELS CONTROLLER: 42xxxx (DAC1180 V3.40)

# Input	Controller	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail	Correction Factor	Notes	Tech.	Date
1	type DAC1180	CPYYY	IP1	address	-	-		-				Factor		+	
2	DAC1180	CPYYY	IP2												
3	DAC1180	СРҮҮҮ	IP3												
4	DAC1180	CPYYY	IP4												
5	DAC1180	СРҮҮҮ	IP5												
6	DAC1180	СРҮҮҮ	IP6												
7	DAC1180	СРҮҮҮ	IP7												
8	DAC1180	СРҮҮҮ	IP8												
9	DAC1180	СРҮҮҮ	IP9												
10	DAC1180	СРҮҮҮ	IP10												
11	DAC1180	СРҮҮҮ	IP11												
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTxxx	TEMPERATURE ROOM XXX	AI	DNS-24L	CU4				
NET2	DNS-24L	CPYYY.LNK201		YYY.AI201	VAV	YYYIP201	CS_0xVVTSTvvv	TEMPERATURE ROOM VVV	AI	DNS-24L	CU4				
NET2	DNS-24L	CPYYY.LNK301		YYY.AI301	VAV	YYYIP301	CS_0xVVTSTqqq	TEMPERATURE ROOM QQQ	AI	DNS-24L	CU4				
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail	Correction Factor	Notes	Tech.	Date
1	DAC1180	СРҮҮҮ	OP1		VAV	YYYOP01	CS_0xVVRRPzzz	MODULATION RADIANT PANEL ROOM ZZZ	AO	BxxxB+TF24-SR	ME3				
2	DAC1180	СРҮҮҮ	OP2		VAV	YYYOP02	CS_0xVVRRPxxx	MODULATION RADIANT PANEL ROOM XXX	АО	BxxxB+TF24-SR	ME3				
3	DAC1180	СРҮҮҮ	OP3		VAV	YYYOP03	CS_0xVVRRPvvv	MODULATION RADIANT PANEL ROOM VVV	АО	BxxxB+TF24-SR	ME3				
4	DAC1180	СРҮҮҮ	OP4		VAV	YYYOP04	CS_0xVVRRPqqq	MODULATION RADIANT PANEL ROOM QQQ	AO	BxxxB+TF24-SR	ME3				
5	DAC1180	СРҮҮҮ	OP5												

PROJECT: 2111-00451 CARLETON U - CANAL SITE TYPE 10 - VAV W REHEAT COIL &RADIANT PANEL + 1 ROOMS W RADIANT PANELS CONTROLLER:42xxxx (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	СРҮҮҮ	IP1	YYY.AI1	VAV						
2	DVC-V322EE	СРҮҮҮ	IP2	YYY.AI2	VAV						
3	DVC-V322EE	СРҮҮҮ	IP3	YYY.AI3	VAV						
4	DVC-V322E	СРҮҮҮ	IP4	YYY.AI4							
5	DVC-V322E	СРҮҮҮ	IP5	YYY.AI5	VAV		CS_0xVVFSAzzz	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM ZZZ			
NET2	DNS-24L	CPYYY.LNK101		YYY.AI101	VAV	YYYIP101	CS_0xVVTSTzzz	TEMPERATURE ROOM ZZZ	Al	DNS-24L	DT6
NET2	DNS-24L	CPYYY.LNK201		YYY.AI201	VAV	YYYIP201	CS_0xVVTSTxxx	TEMPERATURE ROOM XXX	Al	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	СРҮҮҮ	OP1	YYY.BO1							
2	DVC-V322EE	СРҮҮҮ	OP2	YYY.BO2							
3	DVC-V322EE	СРҮҮҮ	OP3	YYY.AO3	VAV	YYYOP03	CS_0xVVRRPzzz	MODULATION RADIANT PANEL ROOM ZZZ	AO	BxxxB+TF24-SR	ME3
4	DVC-V322EE	СРҮҮҮ	OP4	YYY.AO4	VAV	YYYOP04	CS_0xVVRRHzzz	MODULATION REHEAT COIL	AO	BxxxB+TF24-SR	ME3
5	DVC-V322EE	СРҮҮҮ	OP5	YYY.BO5			CS_0xVVCDMOPzzz	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			
6	DVC-V322EE	СРҮҮҮ	OP6	YYY.BO6			CS_0xVVCDMCLzzz	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM ZZZ			

PROJECT: 2111-00451 CARLETON U - CANAL SITE

TYPE 10 - VAV W REHEAT COIL &RADIANT PANEL + 1 ROOM W RADIANT PANELS

CONTROLLER: 42xxxx.LNK101 (DFM440 V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM440	YYY.LNK301	IP1	YYY.AI301							
2	DFM440	YYY.LNK301	IP2	YYY.AI302							
3	DFM440	YYY.LNK301	IP3	YYY.AI303							
4	DFM440	YYY.LNK301	IP4	YYY.AI304							
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
# Output					System VAV	_	Point name CS_0xVVRRPxxx	Description MODULATION RADIANT PANEL ROOM XXX	Type AO	Equipment BxxxB+TF24-SR	Detail ME3
# Output 1 2	type	address	address	address		_					
1	type DFM440	address YYY.LNK301	address OP1	address YYY.AO301		_					

PROJECT: 2111-00451 CARLETON U - CANAL SITE ROOM 1001 VAV W CONVECTOR + ROOM 1901 W CONVECTOR CONTROLLER:420102 (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420102	IP1	420102.BI1	VAV	420102IP01	CS_01VVSOC1001	STATUS OCCUPANCY SENSOR ROOM 1001	ВІ	стс	AH2
2	DVC-V322EE	CP420102	IP2	420102.AI2	VAV						
3	DVC-V322EE	CP420102	IP3	420102.AI3	VAV						
4	DVC-V322E	CP420102	IP4	420102.AI4							
5	DVC-V322E	CP420102	IP5	420102.AI5	VAV		CS_01VVFSA1001	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM 1001			
NET2	DNS-24L	CP420102.LNK101		420102.Al101	VAV	420102IP101	CS_01VVTST1001	TEMPERATURE ROOM 1001	Al	DNS-24L	DT6
NET2	DNS-24L	CP420102.LNK201		420102.AI201	VAV	420102IP201	CS_01VVTST1901	TEMPERATURE ROOM 1901	Al	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420102	OP1	420102.BO1							
2	DVC-V322EE	CP420102	OP2	420102.BO2							
3	DVC-V322EE	CP420102	ОР3	420102.AO3	VAV	420102OP03	CS_01VVRCV1001	MODULATION CONVECTOR ROOM 1001	АО	B207B+TF24-SR	ME3
4	DVC-V322EE	CP420102	OP4	420102.AO4	VAV	420102OP04	CS_01VVRCV1901	MODULATION CONVECTOR ROOM 1901	AO	B207B+TF24-SR	ME3
5	DVC-V322EE	CP420102	OP5	420102.BO5			CS_01VVCDMOP1001	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM 1001			
6	DVC-V322EE	CP420102	OP6	420102.BO6			CS_01VVCDMCL1001	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM 1001			

PROJECT: 2111-00451 CARLETON U - CANAL SITE RM 2001 VAVA W REHEAT & CONVECTOR & SHARED T-STAT

CONTROLLER: 420805 (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420805	IP1	420805.BI1	VAV	420805IP01	CS_02VVSOC2001	STATUS OCCUPANCY SENSOR ROOM 2001	ВІ	стс	AH2
2	DVC-V322EE	CP420805	IP2	420805.AI2							
3	DVC-V322EE	CP420805	IP3	420805.AI3							
4	DVC-V322E	CP420805	IP4	420805.AI4							
5	DVC-V322E	CP420805	IP5	420805.AI5	VAV		CS_02VVFSA2001-A	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM 2001 VAVA			
NET2	DNS-24L	CP420805.LNK101		420805.AI101	VAV	420805IP101	CS_02VVTST2001	TEMPERATURE ROOM 2001 FOR REHEAT VALVE	AI	DNS-24L	DT6
NET2	DNS-24L	CP420805.LNK201		420805.AI201	VAV	420805IP201	CS_02VVTST2001	TEMPERATURE ROOM 2001 FOR PERIMETER VALVE	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420805	OP1	420805.BO1							
2	DVC-V322EE	CP420805	OP2	420805.BO2							
3	DVC-V322EE	CP420805	OP3	420805.AO3	VAV	420805OP03	CS_02VVRST2001	OUTPUT ROOM TEMPERATURE TO VAV 2001 VAVB	AO	0-10VDC	MN2
4	DVC-V322EE	CP420805	OP4	420805.AO4	VAV	420805OP04	CS_02VVRRH2001	MODULATION REHEAT COIL VALVE	AO	B209B+TF24-SR	ME3
5	DVC-V322EE	CP420805	OP5	420805.BO5			CS_02VVCDMOP2001-A	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2001 VAVA			
6	DVC-V322EE	CP420805	OP6	420805.BO6	_		CS_02VVCDMCL2001-A	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2001 VAVA			

PROJECT: 2111-00451 CARLETON U - CANAL SITE RM 2001 VAVB W REHEAT & CONVECTOR & SHARED T-STAT

CONTROLLER: 420806 (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420806	IP1	420806.AI1							
2	DVC-V322EE	CP420806	IP2	420806.AI2	VAV	420806IP02	CS_0xVVAST2001	TEMPERATURE FROM ROOM 2001 VAVA	AI	0-10VDC	CT2
3	DVC-V322EE	CP420806	IP3	420806.AI3							
4	DVC-V322E	CP420806	IP4	420806.AI4							
5	DVC-V322E	CP420806	IP5	420806.AI5	VAV		CS_02VVFSA2001-B	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM 2001 VAVB			
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420806	OP1	420806.BO1							
2	DVC-V322EE	CP420806	OP2	420806.BO2							
3	DVC-V322EE	CP420806	OP3	420806.AO3	VAV	420806OP03	CS_02VVRCV2001	MODULATION CONVECTOR VALVE	AO	B211B+TF24-SR	ME3
4	DVC-V322EE	CP420806	OP4	420806.AO4	VAV	420806OP04	CS_02VVRRH2001	MODULATION REHEAT COIL VALVE	AO	B209B+TF24-SR	ME3
5	DVC-V322EE	CP420806	OP5	420806.BO5			CS_02VVCDMOP2001-B	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2001 VAVB			
6	DVC-V322EE	CP420806	OP6	420806.BO6			CS_02VVCDMCL2001-B	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2001 VAVB			

PROJECT: 2111-00451 CARLETON U - CANAL SITE
2101 VAV-A - VAV W RADIANT PANEL & REHEAT COIL & SHARED T-STAT

CONTROLLER: 420802 (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420802	IP1	420802.Al1							
2	DVC-V322EE	CP420802	IP2	420802.AI2	VAV	420802IP02	CS_02VVAST2101	TEMPERATURE INPUT FROM ROOM 2101 VAVC	AI	0-10VDC	CT2
3	DVC-V322EE	CP420802	IP3	420802.AI3							
4	DVC-V322E	CP420802	IP4	420802.AI4							
5	DVC-V322E	CP420802	IP5	420802.AI5	VAV		CS_02VVFSA2101-A	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM 2101 VAVA			
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420802	OP1	420802.BO1							
2	DVC-V322EE	CP420802	OP2	420802.BO2							
3	DVC-V322EE	CP420802	OP3	420802.AO3	VAV	420802OP03	CS_02VVRRH2101	MODULATION REHEAT COIL VALVE	AO	B210B+TF24-SR	ME3
4	DVC-V322EE	CP420802	OP4	420802.AO4	VAV	420802OP04	CS_02VVRRP2101	MODULATION RADIANT PANEL VALVE	AO	B209B+TF24-SR	ME3
5	DVC-V322EE	CP420802	OP5	420802.BO5	_		CS_02VVCDMOP2101-A	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2101 VAVA			
6	DVC-V322EE	CP420802	OP6	420802.BO6			CS_02VVCDMCL2101-A	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2101 VAVA			

PROJECT: 2111-00451 CARLETON U - CANAL SITE 2101 VAV-B - VAV W SHARED T-STAT

CONTROLLER: 420803 (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420803	IP1	420803.BI1	VAV	420803IP01	CS_02VVSOC2101	STATUS OCCUPANCY SENSOR ROOM 2101	ВІ	СТС	AH2
2	DVC-V322EE	CP420803	IP2	420803.AI2	VAV						
3	DVC-V322EE	CP420803	IP3	420803.AI3	VAV						
4	DVC-V322E	CP420803	IP4	420803.AI4							
5	DVC-V322E	CP420803	IP5	420803.AI5	VAV		CS_02VVFSA2101-B	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM 2101 VAVB			
NET2	DNS-24L	CP420803.LNK101	IP101	420803.AI101	VAV	420803IP101	CS_02VVTST2002A	TEMPERATURE ROOM 2002A	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	1										
	DVC-V322EE	CP420803	OP1	420803.BO1							
2	DVC-V322EE DVC-V322EE	CP420803 CP420803	OP1 OP2	420803.BO1 420803.BO2							
3					VAV	420803OP03	CS_02VVRAC2002A	MODULATION AIR CURTAIN VALVE 2002A	AO	0-10VDC	MN2
	DVC-V322EE	CP420803	OP2	420803.BO2	VAV	420803OP03	CS_02VVRAC2002A	MODULATION AIR CURTAIN VALVE 2002A	AO	0-10VDC	MN2
3	DVC-V322EE	CP420803	OP2	420803.BO2 420803.AO3	VAV	420803OP03	CS_02VVRAC2002A CS_02VVCDMOP2101-B	MODULATION AIR CURTAIN VALVE 2002A OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2101 VAVB	AO	0-10VDC	MN2

PROJECT: 2111-00451 CARLETON U - CANAL SITE

2101-VAVC - VAV W RADIANT PANEL CONTROLLER: 420804 (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420804	IP1	420804.AI1	VAV						
2	DVC-V322EE	CP420804	IP2	420804.AI2	VAV						
3	DVC-V322EE	CP420804	IP3	420804.AI3	VAV						
4	DVC-V322E	CP420804	IP4	420804.AI4							
5	DVC-V322E	CP420804	IP5	420804.AI5	VAV		CS_02VVFSA2101-C	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM 2101 VAVC			
NET2	DNS-24L	CP420804.LNK101		420804.AI101	VAV	420804IP101	CS_02VVTST2101	TEMPERATURE ROOM 2101	AI	DNS-24L	DT6
NET2	DNS-24L	CP420804.LNK201		420804.AI201	VAV	420804IP201	CS_02VVTST2101	TEMPERATURE ROOM 2101	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420804	OP1	420804.BO1							
2	DVC-V322EE	CP420804	OP2	420804.BO2							
3	DVC-V322EE	CP420804	OP3	420804.AO3	VAV	420804OP03	CS_02VVRRP2101	MODULATION RADIANT PANEL VALVE	AO	B209B+TF24-SR	ME3
4	DVC-V322EE	CP420804	OP4	420804.AO4	VAV	420804OP04	CS_02VVRST2101	OUTPUT ROOM TEMPERATURE TO VAV 2101 VAVA	AO	0-10VDC	MN2
5	DVC-V322EE	CP420804	OP5	420804.BO5	-		CS_02VVCDMOP2101-C	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2101 VAVC			
6	DVC-V322EE	CP420804	OP6	420804.BO6			CS_02VVCDMCL2101-C	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2101 VAVC			

PROJECT: 2111-00451 CARLETON U - CANAL SITE RM 2400 VAV + ROOM 2204A W CONVECTOR

CONTROLLER: 420821 (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420821	IP1	420821.BI1	VAV	420821IP01	CS_02VVSOC2400	STATUS OCCUPANCY SENSOR ROOM 2400	ВІ	стс	AH2
2	DVC-V322EE	CP420821	IP2	420821.AI2	VAV						
3	DVC-V322EE	CP420821	IP3	420821.AI3	VAV						
4	DVC-V322E	CP420821	IP4	420821.AI4							
5	DVC-V322E	CP420821	IP5	420821.AI5	VAV		CS_02VVFSA2400	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM 2400			
NET2	DNS-24L	CP420821.LNK101		420821.Al101	VAV	420821IP101	CS_02VVTST2400	TEMPERATURE ROOM 2400	AI	DNS-24L	DT6
NET2	DNS-24L	CP420821.LNK201		420821.Al201	VAV	420821IP201	CS_02VVTST2204A	TEMPERATURE ROOM 2204A	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP420821	OP1	420821.BO1							
2	DVC-V322EE	CP420821	OP2	420821.BO2							
3	DVC-V322EE	CP420821	OP3	420821.AO3	VAV	420821OP03	CS_02VVRCV2204A	MODULATION CONVECTOR ROOM 2204A	AO	B207B+TF24-SR	ME3
4	DVC-V322EE	CP420821	OP4	420821.AO4							
5	DVC-V322EE	CP420821	OP5	420821.BO5			CS_02VVCDMOP2400	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2400			
6	DVC-V322EE	CP420821	OP6	420821.BO6			CS_02VVCDMCL2400	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM 2400			

PROJECT: 2111-00451 CARLETON U - CANAL SITE

RM 7101 VAV W REHEAT COIL &RADIANT PANEL + 2 ROOMS W RADIANT PANELS

CONTROLLER: 421317 (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP421317	IP1	421317.Al1	VAV						
2	DVC-V322EE	CP421317	IP2	421317.AI2	VAV						
3	DVC-V322EE	CP421317	IP3	421317.AI3	VAV						
4	DVC-V322E	CP421317	IP4	421317.AI4							
5	DVC-V322E	CP421317	IP5	421317.AI5	VAV		CS_07VVFSA7101	DIFFERENTIAL PRESSURE FLOW TRANSDUCER FOR ROOM 7101			
NET2	DNS-24L	CP421317.LNK101		421317.Al101	VAV	421317IP101	CS_07VVTST7101	TEMPERATURE ROOM 7101	AI	DNS-24L	DT6
NET2	DNS-24L	CP421317.LNK201		421317.AI201	VAV	421317IP201	CS_07VVTST7101B	TEMPERATURE ROOM 7101B	AI	DNS-24L	DT6
NET2	DNS-24L	CP421317.LNK301		421317.Al301	VAV	421317IP301	CS_07VVTST7101C	TEMPERATURE ROOM 7101C	AI	DNS-24L	DT6
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322EE	CP421317	OP1	421317.BO1							
2	DVC-V322EE	CP421317	OP2	421317.BO2							
3	DVC-V322EE	CP421317	OP3	421317.AO3	VAV	421317OP04	CS_07VVRRP7101	MODULATION RADIANT PANEL ROOM 7101	АО	B208B+TF24-SR	ME3
4	DVC-V322EE	CP421317	OP4	421317.AO4	VAV	421317OP03	CS_07VVRRH7101	MODULATION REHEAT COIL	АО	B207B+TF24-SR	ME3
5	DVC-V322EE	CP421317	OP5	421317.BO5			CS_07VVCDMOP7101	OPENING OF THE VAV BOX FOR THE SUPPLY OF ROOM 7101			
6	DVC-V322EE	CP421317	OP6	421317.BO6			CS_07VVCDMCL7101	CLOSING OF THE VAV BOX FOR THE SUPPLY OF ROOM 7101			

PROJECT: 2111-00451 CARLETON U - CANAL SITE RM 7101 VAV W REHEAT COIL &RADIANT PANEL + 2 ROOMS W RADIANT PANELS CONTROLLER:421317.LNK101 (DFM440 V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DFM440	421317.LNK401	IP1	421317.Al401							
2	DFM440	421317.LNK401	IP2	421317.Al402							
3	DFM440	421317.LNK401	IP3	421317.AI403							
4	DFM440	421317.LNK401	IP4	421317.Al404							
# Output	Controller		DI COL								
" Catput	type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1		Controller address 421317.LNK401	-	Logical address 421317.AO401	System VAV	Tag name 421317OP401	Point name CS_07VVRRP7101B	Description MODULATION RADIANT PANEL ROOM 7101B	Type AO	Equipment B207B+TF24-SR	Detail ME3
1 2	type		address	_				-	-		
1	type DFM440	421317.LNK401	address OP1	421317.AO401	VAV	421317OP401	CS_07VVRRP7101B	MODULATION RADIANT PANEL ROOM 7101B	AO	B207B+TF24-SR	ME3

PROJECT: 2111-00451 CARLETON U - CANAL SITE

HEAT PUMPS

CONTROLLER: 42XXXX (DVC-V322E V3.40)

# Input	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322E	CP421317	IP1	42XXXX.AI1	HPx	42XXXXIP01	CS_0xHPTRMHPx	ROOMT TEMPERATURE HEAT PUMP x	Al	RTS-20	AB2
2	DVC-V322E	CP421317	IP2	42XXXX.BI2	HPx	42XXXXIP02	CS_0xHPSALHPx	ALARM STATUS HEAT PUMP x	ВІ	стс	AV2
3	DVC-V322E	CP421317	IP3	42XXXX.AI3							
4	DVC-V322E	CP421317	IP4								
5	DVC-V322E	CP421317	IP5								
# Output	Controller type	Controller address	Physical address	Logical address	System	Tag name	Point name	Description	Туре	Equipment	Detail
1	DVC-V322E	CP421317	OP1	421317.BO1							
2	DVC-V322EE	CP421317	OP2	421317.BO2							
3	DVC-V322EE	CP421317	OP3	421317.AO3							
4	DVC-V322EE	CP421317	OP4	421317.AO4							
5	DVC-V322EE	CP421317	OP5	421317.BO5							
6	DVC-V322EE	CP421317	OP6	421317.BO6							

SECTION C

EQUIPMENT SCHEDULE

#	System	Valve	Valve	Flow	WPD			Valve					Actuator		Close-off
		(TAG)	Quantity	(usgpm)	(psig)	Model	Туре	N.O.	N.C.	Dia. (in)	CV	Model	Туре	Spring-Return	(psig)
1	AH-1/2	HV-1/2	2	88,00	3,66	B240	2-WAY	х		1,5	46,0	AF24-SR	PROPORTIONAL	YES	200
2	AH-1	CV-1	1	229,00	5,24	599-06161	3-WAY		х	3	100,0	SKB6U2	PROPORTIONAL	YES	63
4	AH-2	CV-2	1	229,00	3,10	B278	2-WAY		Х	3	130,0	AF24-MFT	PROPORTIONAL	YES	200
5	AH-3	HV-3	1	3,30	3,02	B211B	2-WAY	х		0,5	1,9	TF24-SR	PROPORTIONAL	YES	200
6	AH-3	CV-3	1	6,00	1,63	B217B	2-WAY		х	0,75	4,7	TF24-SR	PROPORTIONAL	YES	200
7	EVAPORATOR	EV_ISO	2	639,40	0,16	F6150HS	2-WAY	х		6	1579,0	SY3-24	ON-OFF	NO	200
8	CONDENSER	COND_ISO	2	1 200,00	0,15	F6200HS	2-WAY	х		8	3136,0	SY4-24	ON-OFF	NO	200
9	DUCT REHEAT	RH-2101	1	1,43	1,42	B210B	2-WAY		х	0,5	1,20	TF24-SR	PROPORTIONAL	YES	200
10	DUCT REHEAT	RH-2002 (2001)	1	0,90	1,27	B209B	2-WAY		x	0,5	0,80	TF24-SR	PROPORTIONAL	YES	200
11	DUCT REHEAT	RH-2102 (2001)	1	0,90	1,27	B209B	2-WAY		х	0,5	0,80	TF24-SR	PROPORTIONAL	YES	200
12	DUCT REHEAT	RH-2102	1	0,41	1,87	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
13	DUCT REHEAT	RH-2104	1	0,22	0,52	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
14	DUCT REHEAT	RH-2201	1	0,48	2,51	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
15	DUCT REHEAT	RH-2202	1	0,28	0,87	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
16	DUCT REHEAT	RH-2204	1	0,19	0,40	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
17	DUCT REHEAT	RH-2301	1	0,41	1,87	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
18	DUCT REHEAT	RH-3101.1	1	0,29	0,91	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
19	DUCT REHEAT	RH-3101.2	1	0,29	0,91	B207B	2-WAY		Х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
20	DUCT REHEAT	RH-3103	1	0,39	1,69	B207B	2-WAY		Х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
21	DUCT REHEAT	RH-3104	1	0,39	1,69	B207B	2-WAY		Х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
22	DUCT REHEAT	RH-6105	1	0,45	2,25	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200

#	System	Valve	Valve	Flow	WPD			Valve					Actuator		Close-off
		(TAG)	Quantity	(usgpm)	(psig)	Model	Туре	N.O.	N.C.	Dia. (in)	CV	Model	Туре	Spring-Return	(psig)
23	DUCT REHEAT	RH-6105A	1	0,16	0,27	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
24	DUCT REHEAT	RH-6107	1	0,20	0,42	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
25	DUCT REHEAT	RH-6108	1	0,18	0,38	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
26	DUCT REHEAT	RH-6109	1	0,20	0,42	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
27	DUCT REHEAT	RH-6110	1	0,23	0,58	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
28	DUCT REHEAT	RH-6111	1	0,22	0,52	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
29	DUCT REHEAT	RH-6112	1	0,15	0,24	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
30	DUCT REHEAT	RH-6204	1	0,28	0,87	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
31	DUCT REHEAT	RH-6207	1	0,28	0,87	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
32	DUCT REHEAT	RH-6209	1	0,09	0,09	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
33	DUCT REHEAT	RH-6212	1	0,23	2,35	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
34	DUCT REHEAT	RH-7104	1	0,46	0,49	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
35	DUCT REHEAT	RH-7106A	1	0,21	2,55	B208B	2-WAY		х	0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
36	DUCT REHEAT	RH-7106	1	0,73	2,55	B208B	2-WAY		х	0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
37	DUCT REHEAT	RH-7108	1	0,73	2,55	B208B	2-WAY		х	0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
38	DUCT REHEAT	RH-7110	1	0,73	2,55	B208B	2-WAY		х	0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
39	DUCT REHEAT	RH7111	1	0,11	0,13	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
40	DUCT REHEAT	RH-7101	1	0,24	0,63	B207B	2-WAY		х	0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
41	DUCT REHEAT	RH-7103	1	0,73	2,55	B208B	2-WAY		х	0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
42	CONVECTOR	1001A;1001;1901	3	0,50	2,78	B207B	2-WAY	х		0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
43	CONVECTOR	2001	1	3,00	2,49	B211B	2-WAY	х		0,5	1,90	TF24-SR	PROPORTIONAL	YES	200

#	System	Valve	Valve	Flow	WPD			Valve					Actuator		Close-off
		(TAG)	Quantity	(usgpm)	(psig)	Model	Туре	N.O.	N.C.	Dia. (in)	CV	Model	Туре	Spring-Return	(psig)
44	CONVECTOR	2204A	1	0,16	0,28	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
45	CONVECTOR	2006	1	1,20	2,25	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
46	CONVECTOR	2006	1	0,44	2,15	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
47	RUNTAL UNIT	3005	1	1,00	1,56	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
48	RUNTAL UNIT	3005	1	0,40	1,78	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
49	RADIANT PANEL	2101	1	1,00	1,56	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
50	RADIANT PANEL	2101	1	1,08	1,82	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
51	RADIANT PANEL	2102	1	1,42	1,40	B210B	2-WAY	х		0,5	1,2	TF24-SR	PROPORTIONAL	YES	200
52	RADIANT PANEL	2102A	1	0,33	1,21	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
53	RADIANT PANEL	2104	1	1,33	2,76	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
54	RADIANT PANEL	2201	1	1,39	1,34	B210B	2-WAY	х		0,5	1,2	TF24-SR	PROPORTIONAL	YES	200
55	RADIANT PANEL	2202	1	1,32	2,72	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
56	RADIANT PANEL	2204	1	0,50	2,78	B207B	2-WAY	х		0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
57	RADIANT PANEL	2301	1	0,98	1,50	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
58	RADIANT PANEL	2301	1	0,70	2,32	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
59	RADIANT PANEL	2302	1	0,83	1,08	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
60	RADIANT PANEL	3101	1	0,98	1,50	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
61	RADIANT PANEL	3101	1	1,45	1,46	B210B	2-WAY	х		0,5	1,2	TF24-SR	PROPORTIONAL	YES	200
62	RADIANT PANEL	3103A	1	0,34	1,28	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
63	RADIANT PANEL	3103	1	1,33	2,76	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
64	RADIANT PANEL	3104	1	1,28	2,56	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200

#	System	Valve	Valve	Flow	WPD			Valve					Actuator		Close-off
		(TAG)	Quantity	(usgpm)	(psig)	Model	Туре	N.O.	N.C.	Dia. (in)	CV	Model	Туре	Spring-Return	(psig)
65	RADIANT PANEL	3105	1	0,95	1,41	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
66	RADIANT PANEL	3201	1	0,45	2,25	B207B	2-WAY	х		0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
67	RADIANT PANEL	3202	1	0,30	1,00	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
68	RADIANT PANEL	3206	1	0,30	1,00	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
69	RADIANT PANEL	3204	1	0,30	1,00	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
70	RADIANT PANEL	3206	1	0,30	1,00	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
71	RADIANT PANEL	3207	1	0,30	1,00	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
72	RADIANT PANEL	3208	1	1,13	2,00	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
73	RADIANT PANEL	3301	1	0,47	2,45	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
74	RADIANT PANEL	3302	1	0,33	1,21	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
75	RADIANT PANEL	3303	1	0,47	2,45	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
76	RADIANT PANEL	3304	1	0,93	1,35	B209B	2-WAY	х		0,5	0,80	TF24-SR	PROPORTIONAL	YES	200
77	RADIANT PANEL	6105	1	2,00	2,78	B210B	2-WAY	х		0,5	1,2	TF24-SR	PROPORTIONAL	YES	200
78	RADIANT PANEL	6105A	1	0,34	1,28	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
79	RADIANT PANEL	6107	1	0,68	2,19	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
80	RADIANT PANEL	6108	1	0,56	1,48	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
81	RADIANT PANEL	6109	1	0,64	1,94	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
82	RADIANT PANEL	6110	1	0,64	1,94	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
83	RADIANT PANEL	6111	1	8,20	1,23	B214B	2-WAY	х		0,5	7,4	TF24-SR	PROPORTIONAL	YES	200
84	RADIANT PANEL	6112	1	1,07	1,79	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
85	RADIANT PANEL	6201	1	0,28	0,87	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200

#	System	Valve	Valve	Flow	WPD			Valve					Actuator		Close-off
		(TAG)	Quantity	(usgpm)	(psig)	Model	Туре	N.O.	N.C.	Dia. (in)	CV	Model	Туре	Spring-Return	(psig)
86	RADIANT PANEL	6202	1	0,28	0,87	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
87	RADIANT PANEL	6203	1	0,28	0,87	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
88	RADIANT PANEL	6204	1	0,28	0,87	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
89	RADIANT PANEL	6205	1	0,28	0,87	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
90	RADIANT PANEL	6206	1	0,28	0,87	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
91	RADIANT PANEL	6207	1	0,28	0,87	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
92	RADIANT PANEL	6208	1	0,28	0,87	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
93	RADIANT PANEL	6209	1	0,33	1,21	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
94	RADIANT PANEL	6003	1	0,24	0,64	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
95	RADIANT PANEL	6210	1	0,32	1,14	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
96	RADIANT PANEL	6212	1	0,59	1,65	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
97	RADIANT PANEL	6911	1	0,16	0,28	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
98	RADIANT PANEL	6912	1	0,16	0,28	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
99	RADIANT PANEL	6000	1	0,23	0,59	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
100	RADIANT PANEL	6101	1	0,78	2,88	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
101	RADIANT PANEL	6103	1	0,78	2,88	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
102	RADIANT PANEL	7104	1	0,82	1,05	B209B	2-WAY	х		0,5	0,80	TF24-SR	PROPORTIONAL	YES	200
103	RADIANT PANEL	7104	1	1,42	1,40	B210B	2-WAY	х		0,5	1,2	TF24-SR	PROPORTIONAL	YES	200
104	RADIANT PANEL	7106A	1	0,67	2,12	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200

#	System	Valve	Valve	Flow	WPD			Valve					Actuator		Close-off
		(TAG)	Quantity	(usgpm)	(psig)	Model	Туре	N.O.	N.C.	Dia. (in)	CV	Model	Туре	Spring-Return	(psig)
105	RADIANT PANEL	7106	1	1,47	1,50	B210B	2-WAY	х		0,5	1,2	TF24-SR	PROPORTIONAL	YES	200
106	RADIANT PANEL	7108	1	0,82	1,05	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
107	RADIANT PANEL	7110	1	1,22	2,33	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
108	RADIANT PANEL	7111	1	0,69	2,25	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
109	RADIANT PANEL	7201	1	0,34	1,28	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
110	RADIANT PANEL	7202	1	0,49	2,67	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
111	RADIANT PANEL	7203	1	0,52	3,00	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
112	RADIANT PANEL	7204	1	0,52	3,00	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
113	RADIANT PANEL	7205	1	0,52	3,00	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
114	RADIANT PANEL	7206	1	0,63	1,88	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
115	RADIANT PANEL	7003	1	0,28	0,87	B207B	2-WAY	х		0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
116	RADIANT PANEL	7207	1	0,65	2,00	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
117	RADIANT PANEL	7911	1	0,24	0,61	B207B	2-WAY	х		0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
118	RADIANT PANEL	7912	1	0,24	0,61	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
119	RADIANT PANEL	7000	1	0,23	0,59	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
120	RADIANT PANEL	7101	1	0,54	1,38	B208B	2-WAY	х		0,5	0,46	TF24-SR	PROPORTIONAL	YES	200
121	RADIANT PANEL	7101B	1	0,19	0,40	B207B	2-WAY	х		0,5	0,30	TF24-SR	PROPORTIONAL	YES	200
122	RADIANT PANEL	7101C	1	0,29	0,93	B207B	2-WAY	х		0,5	0,3	TF24-SR	PROPORTIONAL	YES	200
123	RADIANT PANEL	7103	1	0,96	1,44	B209B	2-WAY	х		0,5	0,8	TF24-SR	PROPORTIONAL	YES	200
100	AIR CURTAIN	2101A	1	7,00	2,22	B217B	2-WAY		х	0,75	4,7	TF24-SR	PROPORTIONAL	YES	200

STEAM VALVE SELECTION SCHEDULE

#	System	Valve	Valve	Consumption	Pressure	CV Valve							Actuator		Close-off	
		(TAG)	Quantity	(lbs/hr) ou (MBH)	(psig)	Required	Model	Туре	N.O.	N.C.	Dia. (in)	CV	Model	Туре	Spring-Return	(psig)
1	HE1	SV1	1	2 170,00	15	36,7	G250S	PROPORTIONAL		х	2	40,0	NVF24-MFT	PROP	YES	93
2	HE1	SV2	1	1 085,00	15	18,3	G232S	PROPORTIONAL		х	1,25	20,0	NVF24-MFT	PROP	YES	105

ELECTRONIC ACTUATOR SELECTION SCHEDULE

#	System	Damper Actuator (TAG)	Damper Size (ft ²)	Damper Actuator (Quantity)	Model	Protection Degree	Min. Torque (in-lb)	Power Supply 24 vac/vdc, 120/230 vac	Туре	Spring- Return	N.C.	N,O.	Accessories
1	AHU1 & 2	FAD-1/2	72	6	AF24-SR	NEMA-2	133,0	24,0	PROPORTIONAL	YES	х		
2	AHU1 & 2	EAD-1/2	38	4	AF24-SR	NEMA-2	133,0	24,0	PROPORTIONAL	YES	х		
3	AHU1 & 2	BPD-1/2	18	2	AF24-SR	NEMA-2	133,0	24,0	PROPORTIONAL	YES	х		
4	AHU3	FAD-3;EAD-3;RAD-3	4,4	3	LF24-SR	NEMA-2	35,0	24,0	PROPORTIONAL	YES	х		
5	AHU-4	FAD-4;EAD-4	31	4	AF24-SR	NEMA-2	133,0	24,0	PROPORTIONAL	YES	х		
6	EFL1-1	FADL1-1	4,6	1	LF24-SR	NEMA-2	35,0	24,0	PROPORTIONAL	YES	х		
7	EFL1-1	EADL1-1	4,4	1	LF24-SR	NEMA-2	35,0	24,0	PROPORTIONAL	YES	х		
8	EFL1-2	FADL1-2	1,6	1	TF120-S	NEMA-2	18,0	120,0	ON/OFF	YES	х		END SWITCH
9	EFL1-2	EADL1-2	1,4	1	TF120-S	NEMA-2	18,0	120,0	ON/OFF	YES	х		END SWITCH
10	EF2	FAD-EF2;EAD-EF2	2	2	TF120-S	NEMA-2	18,0	120,0	ON/OFF	YES	х		END SWITCH

SECTION D

SEQUENCE OF OPERATIONS

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1.2 Air Handling Unit Safeties:

- .1 All safeties listed in this section will override all operational control sequences unless explicitly stated not to.
- .2 Where indicated a low limit thermostat located on the entering air side of the cooling coil is to be installed to protect the cooling coil against freezing. The low limit thermostat shall be hardwired to shut down the supply and exhaust fans a break the power to the heating valve (forcing it to 100% open) upon detecting a temperature below 1.5°C(35°F) on any 30cm (1 foot) length of its' capillary. Once tripped, the limit must be reset manually. Protection shall work when the fan is in either hand or auto.
- The supply air temperature sensor will be used as a high limit device to protect the system from operating under very hot conditions. When the supply air rises above 66.5°C (152°F) the BAS will shut down the unit. The limit must be manually reset at the BAS through a reset parameter before the BAS will restart the unit.
- .4 The return air temperature sensor will be used as a high limit device to protect the system from operating under very hot conditions. When the supply air rises above 66.5°C (152°F) the BAS will shut down the unit. The limit must be manually reset at the BAS through a reset parameter before the BAS will restart the unit.
- The BAS will not enable humidification, dampers, or cooling until supply fan status is received
- When supply fan status is not received, the heating coil valve will modulate to maintain the mixed air temperature at 18.3°C (65°F).
- During a power failure the supply and return fans shall be hardwired to fail off, the fresh (both) and exhaust dampers to fail closed, the return damper to fail open, the heating valve to fail open, and the cooling valve to fail closed.
- .8 The BAS will implement logic that will override the damper commands (excluding the minimum fresh air damper) to ensure that the mixed air temperature is maintained above the mixed air temperature indicated in the sequence of operation.

1.3 Air Handling Integration with Other Systems:

SEQUENCE OF OPERATION

.1 The air handling units will run in conjunction with zone controls, the heating plant, and the cooling plant.

- .2 Requests will be received from the zone controllers to increase/decrease the supply air temperature setpoint.
- .3 Requests will be sent to the heating to increase/decrease the water temperatures. The BAS will send a heating request if the applicable valve is open more than 90% and setpoint is not satisfied. Requests will be removed once the valve is open less than 70%.
- The zone controller that is requesting the revision to the setpoint temperature shall be displayed on the system graphic for the chilled water and heating systems.
- .5 The zone controller that is requesting the revision to the supply air setpoint shall be displayed on the system graphic for the air handling unit.

1.4 Air Handling Unit Scheduling:

- Occupied, part occupied and unoccupied modes will be determined by a time of day schedule.
- .2 Initial settings for occupied hours will be set at the settings indicated in the sequence of operation.

1.5 Air Handling Unit Modes of Operation:

- .1 Each air handling unit will be provided with a mode of operation. The operator shall be able to set up time of day schedules utilizing the occupancies identified below for each day of the week. The Definition for each mode of operation is as follows:
 - The occupied mode of operation is to describe the control for normal operation when the space is occupied. The occupied mode is determined by the schedule. In occupied mode the outside air damper shall be set to the position identified in the sequence of operation. For some units there will be several occupied schedules identified. The definition of these schedules as follows:
 - Full Occupied: Unit is to operate at the design minimum outside air setpoint(or provide free cooling) at its space/return air temperature setpoint specified.



- .2 Part Occupied: Unit is to operate at the reduced minimum outside air setpoint (or provide free cooling) at is occupied space/return air temperature setpoint.
- .3 Occupied with Full Reirculation: Unit is to operate with the outside air damper and exhaust damper fully closed and the return damper fully open.
- The unoccupied mode of operation is to describe the control for the normal operation when the space is unoccupied. The unoccupied mode is determined by the schedule. The definition of unoccupied settings are as follows:
 - .1 Unoccupied Off: For units that are specified to be off when they are in the unoccupied mode they shall be controlled as follows
 - .1 Unoccupied No Perimeter Heating:
 - .2 In the unoccupied setting the unit shall be off and the space temperature shall be reset to 65°F. If the space temperature sensor/sensors indicates a temperature below 65°F the unit shall be restarted in full recirculation mode and shall raise the space temperature to setpoint. Once the space reaches setpoint the unit shall shut off. If the space temperature sensor/sensors indicates a temperature above 80°F the unit shall be restarted in full recirculation mode and shall lower the space temperature to setpoint. Once the space reaches the setpoint the unit shall shut off
 - .1 Unoccupied With Perimeter Heating
 - .3 In the unoccupied setting the unit shall be off and the space temperature shall be reset to 65°F. The perimeter radiation control valves shall be utilized to maintain the space as this temperature. If the space temperature sensor indicates a temperature below 60°F the unit shall be restarted in full recirculation mode and shall raise the temperature to setpoint. Once the space reaches setpoint the unit shall shut off. If the space temperature sensors indicate a temperature over 80°F the unit shall be restarted in full recirculation mode and shall lower temperature to setpoint. Once the space reaches setpoint the unit shall shut off.
 - .4 Unoccupied On: For units that are specific to be on when they are in the unoccupied mode they shall be controlled as followed:

SEQUENCE OF OPERATION

.1 In the unoccupied setting the unit shall be on and the space temperature shall be reset to 65°F for the heating and 80°F for the cooling and shall be operating at the cfm indicated in the sequence of operations. Outside air volumes shall be reduced to their minimum specified values.

.3 24 Hour Operation

- .1 24 hour operation designates units that are required to provide cooling 24 hours per 7 days per week.
- .2 The emergency power/power failure mode of operation is to describe the control for operating while under emergency power. The emergency power/power failure mode is determined when the BAS receives confirmation that the building is running on emergency power and/or when power is lost to the controller.
- .3 The fire alarm mode of operation is to describe the control for operating while with the fire alarm in alarm. The fire alarm mode is initiated when the BAS receives confirmation that the fire alarm is on.
- The shut down mode of operation is to describe the control for operating while in shut down mode. The shut down mode will be initiated by manual operator command at the BAS. This mode is only to be used when the operator wishes to take the unit out of service. The operator must remove the unit from being in shut down mode before the BAS will allow it to operate.

1.6 Air Handling Unit Low Limit Shutdown

.1 Shut down the supply and return fans, modulate heating coild valve as required to maintain set position and alarm at the EMCS when the low limit thermostat after the heating coil senses a temperature below 38°F. Thermostat shall be complete with manual reset.

1.7 Air Handling Unit System Start Up

- 1 Constant Volume Units with Return Fans
 - .1 The BAS will send a command to start the return fan
 - Once return fan status is received from the current current sense the BAS will send a command to start the supply fan.

- Once supply fan status is received, the BAS will enable control of the unit based on the specific sequence of operation.
- 2 Units with Return Fans and Variable Frequency Drives
 - 1 The BAS will send a command to start the return fan.
 - The return fan shall start and proof of flow shall be established at the variable frequency drive.
 - The BAS will send a command to start the supply fan.
 - .4 Once supply fan status is received, the variable frequency drives shall Gradually speed up and will enable control of the unit based on specific sequence of operation
- .3 Constant Volume Units with Supply Fans
 - 1 The BAS will send a command to start the supply fan
 - Once supply fan status is received from the current sensor, the BAS will enable control of the unit based on the specific sequence of operation.
- .4 Units with Supply Fans only and Variable Frequency Drives
 - .1 The BAS will send a command to start the supply fan.
 - Once supply fan status is received, the variable frequency drives shall Gradually speed up and will enable control of the unit based on specific sequence of operation.

1.8 Alarm Events For All Air Handling Units

- .1 HVAC Critical
 - .1 Fans are commanded on and status is not received (10 minute delay)
 - .2 The low temperature thermostat has tripped
 - .3 The unit is shut down on high supply or return air temperatures.
- .2 HVAC General
 - 1 The mixed air temperature is below its minimum setpoint (5 minute delay)
 - .2 Cooling has been disabled for more than 1 hour and supply air humidity is above 80%.
 - The unit is running and the supply air temperature is $\pm 5^{\circ}$ C (9°F) from setpoint (10 minute delay)
 - The return air humidity rises above 60% (30 minute delay)
- .3 HVAC Maintenance
 - .1 Fan status is on and the fans are commanded off(10 minute delay)

1.9 Air Handling Units AH-1/2 Variable Volume System

.1 General



SEQUENCE OF OPERATION

- .1 The air handling unit serves the entire building and consists of a supply fan, a return fan and heat recovery coil.
- The unit is a variable air volume unit and the supply and return fans have been provided with variable frequency drives.

.2 Safeties

Safety	Low Limit	S/A	R/A	Supply	Return	Supply	Return
	Shutdown	High	Low	Fan	Fan	Fan	Fan
		Limit	Limit			Fire	Fire
						Alarm	Alarm
Required	Yes	Yes	Yes	Yes	Yes	Fan	Fan
Yes/No	Low Limit	S/A	R/A	VFD	VFD	shall	shall
Type	Thermostat	Sensor	Sensor			shut Off	shut Off

.3 Initial Temperature and Humidity Setpoints

	Temperature	Humidity (%RH)
Heating	72°F	30% RH
Cooling	75°F	55% RH

- .4 Supply Air Minimum Setpoint
 - .1 The minimum supply air temperature to the space shall be 55°F.
- .5 Minimum Mixed Air Temperature
 - .1 The minimum mixed air temperature shall be 28°F.
- .6 System Occupied/Unoccupied Setpoints
 - .1 Occupied Settings
 - .1 In the occupied mod the minimum setting for the outside air damper shall be set to maintain a minimum outside air flow rate as per schedule.
 - .2 When the system is off the outside air damper and exhaust air damper shall be closed, return air dampers fully open, chilled water control valve closed, glycol heating coil control valve modulating to maintain a 65°F in the mixed air and humidifier control valve closed.
- .7 System Start Up
 - .1 Start/Stop
 - .1 EMCS based on a time day schedule
 - On system start up the outside damper and exhaust air damper shall modulate open to their minimum position as measured by the outside air flow station and the return damper shall modulate closed to its corresponding position.



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On system start up the variable frequency drives for the supply and return fans shall be set at their minimum position. Once proof of flow is confirmed from the variable frequency drives the drives shall gradually speed up and gradually bring the system under modulating control.

.8 Fan Operation

- .1 Control the static pressure 2/3 downstream in the supply duct at the 1.5 in w.g. setpoint subject to a high limit fan discharge static pressure setpoint of 2 in w.g. by adjusting the setting of the variable speed drive, Static pressure setpoints shall be adjustable by the operator. If static press of 2. In w.g. is reached within the supply air duct alarm at the EMCS. If a static pressure of 3 in w.g. is reached automatically stop the supply fan and alarm at the EMCS. Unit shall be restarted by manual restart.
- .2 Control the differential air quality between the supply and the return air flow measurement, to a setpoint established by the difference fan volumes at design flow by adjusting the setting of the variable frequency drives. The differential between the supply and the return fan shall be set at as per schedule.
- .9 Occupied Mode Temperature Control
 - The BAS will control the dampers and the heating and cooling coil valves to maintain the supply air temperature at setpoint
 - When the outside air temperature is less than 4°C, the pump coil shall be initiated. The air handling unit shall be disabled if the pump ceases to operate.
 - .3 The supply air temperature setpoint will be reset based on the following return air temperature schedule and requests from the zone controllers.

Return Air Temperature °C(°F)	Supply Air Setpoint °C (°F)
22(77)	13(55)
20(68)	20(68)

- .4 Cooling request from the zone controllers will decreases the supply air temperature setpoint.
- .5 When no cooling requests are received from the zone controllers and all applicable VAV box reheat coil valves are open greater than 10% the BAS will increase the setpoint. The setpoint will be increased to a maximum of 5°C (0°F) above scheduled temperature but always below 20°C (68°F). The rate of change for the setpoint increase will be 1°C (1.8°F) every 10 minutes.
- .6 When the supply air temperature is below setpoint all cooling commands (both valve and damper) will be reduced until they are zero. Once the cooling commands are at zero the heating valve will be modulated to maintain temperature. Note the BAS will provide a 2°C (3.5°F) deadband on the enabling of the heating valve.

SEQUENCE OF OPERATION

.7 When the supply air temperature is above setpoint all heating commands will be reduced until they are zero. Once all heating commands are zero if the outside air temperature is less than 18°C (65°F), the BAS will enable free cooling and modulate the dampers to maintaini temperature. If free cooling is at maximum and/or unavailable the BAS will modulate the cooling valve to maintain temperature. The cooling valve will be disabled when outdoor temperature is below 10°C (50°F). Note the BAS will provide a 2°C (3.5°F) deadband on disabling free cooling.

.10 Occupied Mode – Humidity Control

- .1 The BAS will control the humidifier valve to maintain return air humidity at 30% RH
- .2 Supply air humidity sensor will be used to limit the supply air humidity to a maximum of 75%.
- .3 The humidifier will be disabled when outside air temperature is greater than 10°C and/or when fan status is not proven.
- .4 Limit the supply air humidity to a maximum of 75%. Disable high limit controller when the outside air temperature is above 75°F.

.11 Trends

- 1 The EMCS will continuously trend the following data
 - .1 Supply air temperature
 - .2 Return air temperature
 - .3 Mixed air temperature
 - .4 Outside air temperature
 - .5 Status of VFDs for supply and return fans
 - .6 Supply air flow
 - .7 Return air flow
 - .8 Outside air flow
 - .9 Supply air static pressure
 - .10 Heating coil pump

1.10 Main Transformer Room AH-4

- .1 General
 - .1 The air handling unit serves the South Electrical Rooms and consists of a supply fan.
- .2 Safeties



Safety	Low	S/A	R/A	Supply	Return	Supply	Return
	Limit	High	High	Fan	Fan	Fan Fire	Fan
	Shutdown	Limit	Limit			Alarm	Fire
							Alarm
Required	No	Yes	N/A	Yes	No	Fan	N/A
Yes/No		S/A		Current		Shall	
Type		Sensor		Sensor		shut Off	

- .3 System Startup
 - .1 Start/Stop
 - .2 The unit shall be capable of being started/stopped at the EMCS.
- 4 Fire Alarm
 - .1 On fire alarm activation the supply fan and the return fan shall be off.
- .5 Occupied Mode Temperature Control
 - .1 The BAS will control the dampers and the fan to maintain the supply air temperature at setpoint.
 - Mode 1: Room temperature below 18°C 65°F the exhaust air damper closed and supply fan off.
 - .3 Mode 2: For space temperature higher than 18°C, first the exhaust damper is fully opened and if the room is not satisfied, the fan starts at low speed. If after 15 minutes, the space temperature is higher than 80°F, the fan speed goes to high speed.
- 6 Trends

The EMCS will continuously trend the following data

.1 Space temperatures

SEQUENCE OF OPERATION

2.1 Air to Air Heat Recovery Wheels

- .1 The controls for the wheel shall be provided by the Energy Management Control System Supplier.
- .2 The controls shall control the wheel as follows:
- .3 The following controls shall be provided:
 - .1 Discharge air temperature control
 - .2 Free cooling function
 - .3 Summer/winter changeover
 - .4 Prevention of frost formation
- .4 The EMCS shall provide an exhaust air temperature sensor, supply air temperature sensor downstream of the wheel and an exhaust air relative humidity sensor. The outside air temperature sensor(s) provided for the facility shall be utilized to determine whether the unit is in summer or winter mode.
- .5 The EMCS shall send a 4 20mA signal to the variable speed drive provided by the unit manufacturer to vary the speed of the wheel as required by the following control sequence.
- .6 In the heating mode, as the discharge air temperature nears setpoint the speed of the wheel shall be slowed to maintain setpoint. When the minimum speed is reached and there is a cooling demand, the wheel shall stop completely.
- .7 The wheel shall remain off until the outdoor air temperature exceeds the exhaust air temperature, at which time the wheel will resume operation at full rpm.
- When the outdoor air temperature drops below the frost threshold (see schedule) the wheel speed shall be controlled to maintain the relative humidity in the exhaust air at less than 90% RH.
- .9 The wheel manufacturer shall coordinate with the EMCS manufacturer at the shop drawing stage of the project.



.10 The control panel shall receive an input signal from the EMCS to reset the supply air temperature as required.

3.1 Control of VAV Terminal Box

- .1 General
 - .1 The VAV boxes maintain minimum air volumes to areas and provide a source of cooling for space temperature control.
 - .2 In some of the rooms, perimeter radiation works in conjunction with the VAV box to provide heat for the space. For these rooms the VAV boxes have been provided with reheat coils. The reheat coils are the source of secondary heating for space temperature control in occupied mode for some of the perimeter spaces.
 - .3 Supply VAV box controls to VAV box manufacturer for factory mounting. The box manufacturer shall include factory mounting charges.
- 2 Integration with Other Systems
 - .1 The VAV boxes run in conjunction with the air handling units and heating plant.
 - .2 Requests for additional cooling and heating will be sent to the air handling unit.
- .3 Scheduling
 - .1 Occupied and unoccupied modes are determined by time of day schedules and/or occupancy sensors.
 - .2 In lecture rooms and laboratories, the VAV boxes shall be interlocked with occupancy sensors.
- .4 Start Up
 - During the occupied mode a run request is sent to the air handling unit and the VAV box is enabled to control and temperature.
- 5 Occupied Mode

SEQUENCE OF OPERATION

- .1 An electronic space temperature sensor and velocity pressure sensor shall operate through an individual stand-alone DDC controller and control space temperature by modulating the DDC VAV box actuator.
- .2 Where VAV boxes have reheat coils or associated radiation the controller shall modulate the heating valve open on a call for heating after the VAV box is at minimum flow position.
- .3 Minimum and maximum air flow settings are indicated on the schedule.
- .4 Refer to the reheat coil schedule. VAV boxes with minimum settings below the required volume for heating are identified on the schedule. For all VAV boxes indicated to require additional air flows they shall be controlled in the heating mode as follows:
- .5 On a call for heat the reheat coil control valve shall modulate open. If the space temperature is not being maintained the VAV box shall modulate open to provide additional air to the space.
- For lecture rooms and laboratories, space occupancy sensors shall be supplied and installed under Division 16 with wiring of contact to DDC controller by controls contractor. On a signal from a contact at the sensor the local DDC controller shall in the unoccupied heating or cooling mode return the box to "day" mode on sensing space occupancy.

.6 Load Reset

- .1 Space temperatures are utilized in a load reset program.
- When the damper is more than 95% open and the space temperature is at or above 75°F a request shall be sent to the air handling unit to reset the supply air temperature downwards. Once the VAV box drops to 90% of flow, the request shall be disabled.
- Once the heating coil control valve for the perimeter radiation or the reheat coil is more than 90% open a heating request shall be sent to the air handling unit to increase the water supply temperature setpoint. Once the control valve has closed to the 85% open position the request shall be disabled.

.7 Unoccupied Mode



- .1 If the space temperature drops below 18°C (65°F) the VAV controller will send a signal to the AHU to start. The VAV box will establish air flow at the minimum setpoint and request the unit provide a supply air suitable for heating. Once the space temperature rises above 20°C (68°F) the VAV box will remove the run request. Once the air handling unit is turned off, the VAV will return to the unoccupied mode.
- .2 If the space temperature rises above 27°C (80°F) the VAV controller will send a signal to the AHU to start. The VAV box will establish air flow at the maximum setpoint and request the unit provide a supply air suitable for cooling. Once the space temperature drops below 25°C (77°F) the VAV box will remove the run request. Once the air handling unit is turned off, the VAV will return to the unoccupied mode.
- .3 The velocity sensor input shall be automatically calibrated to its zero flow point once per day to ensure accuracy of flow sensing and elimination of need for calibration.

8 Space Temperature Sensor

- The space temperature wall mount sensor shall incorporate a tamper resistant door and plug in jack for installation of hand held service module or laptop computer.
- 2 Set up controls for 72°F / 75°F heating / cooling setpoints.

.9 Operator Interface

- .1 The operator shall be able to adjust the following setpoints at the EMCS.
 - .1 Maximum CFM setpoint
 - .2 Minimum CFM setpoint
 - .3 Space Temperature Setpoint

.10 System Shut Down

- .1 The system will be shut down once the air handling unit serving the box is off.
- .2 The box dampers shall go to their fully open position.
- .3 Space temperature control shall be disabled.

.11 Alarms

SEQUENCE OF OPERATION

- .1 HVAC General
- .2 The space temperature drops below 15°C (60°F) (10 minutes delay)
- .3 The space temperature rises above 28°C (82°F) (10 minutes delay)
- .12 Trends
 - .1 The EMCS shall store the following continuous trends:
 - .2 Actual space temperature and air flow
 - .3 Space temperature and air flow setpoint



SEQUENCE OF OPERATION

4.1 Electrical Room Temperature Control

- .1 If the space temperature is satisfied the fan shall be off.
- .2 If the space temperature rises to 75°F the fan shall start with outside air damper and exhaust air damper closed and the return damper 100 percent open. Provide a current sensor on the starter to confirm status.
- .3 Once the fan is running modulate the outside air damper and relief dampers open and the return damper closed to maintain the space at setpoint.

4.2 Electrical room transfer fan control

- .1 The rooms will have standalone thermostats.
- 2 If the space temperature is satisfied the transfer fan shall be off.

4.3 Chiller Room Alarm System

.1 The alarm panel for refrigerant leak detection shall be connected to the EMCS by a pair of dry contacts. When the alarm panel is in alarm an alarm shall be indicated on the EMCS.

4.4 Mechanical Room Temperature Control and Alarms

- .1 When the refrigerant detection alarm panel is not in alarm the exhaust fans serving the level L-1 mechanical room / chiller room EF-L!-1 shall be controlled as follows:
 - .1 Winter mode or when the chiller is off:
 - 1 Mode 1: On a call for cooling the motorized damper in the outside air intake and exhaust air dampers shall be open to its 100 percent open position.
 - .2 Mode 2: If the room temperature is not satisfied after 15 minutes, the exhaust fan shall operate at low speed.
 - Mode 3: If the room temperature is not satisfied after 15 minutes, the fan shall run at high speed for a minimum of 5 minutes.
- .2 When one of the chillers is activated the EMCS shall activate the exhaust fan at low speed and open the motorized dampers on the air intake to 50 percent open and the exhaust damper on the exhaust air discharge shall be opened to 50 percent open. The fan shall run continuously while one or both of the chillers is activated.



- On a call for cooling the motorized damper in the outside air intake shall open to its 100 percent open position and the exhaust fan shall switch to high speed. On activation of high speed the fan shall run at high speed for a minimum of 5 minutes.
- When the chillers are deactivated by the EMCS the outside air intake and exhaust air dampers shall close and the fan shall be off.
- The fan shall be hardwired from the refrigerant alarm panel to automatically switch to high speed if the refrigerant alarm panel goes into alarm.
- .6 Alarm at the EMCS if the refrigerant monitoring system goes into alarm.

4.5 Local Exhaust Fans

- .1 The following exhaust fans shall be enabled / disabled by the EMCS by a time of day schedule.
- On enable signal the motorized damper shall open fully (where indicated). When the damper is 100 percent open an end switch shall energize the fan.
- .3 A current switch shall be provided to monitor the fan status.

Ex. Fan No.	Serves	Control	Operation
EF-1	Building sanitary	EMCS	Time of day
	exhaust		schedule
EF-2	Penthouse	EMCS	Cycle fan based on

SEQUENCE OF OPERATION

	mechanical room exhaust		temperature
EF-L1-1	Mechanical/chiller room exhaust Level L1	EMCS	Interlocked with refrigerant alarm
EF-L1-2	Mechanical/chiller room exhaust Level L1	EMCS	Cycle fan based on temperature
EF-L2-1	Janitor Closet	EMCS	Time of Day Schedule
EF-L2L2	Café Level 2	EMCS	EMCS – local override in room
EF-4	Fume Hoods	EMCS	24/7
EF-5	Fume Hoods	EMCS	24/7

- .4 Alarms (events)
 - .1 HVAC General
 - .1 Alarm on fan failure

4.6 **Outdoor Air Temperature and Humidity**

Outside air wet bulb and dry bulb temperatures.



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SEQUENCE OF OPERATION

5.1 Variable Volume Pumping

- .1 This shall apply to the following systems:
 - .1 Chilled water Pumps
 - .2 Main heating Pumps
- .2 EMCS shall utilize the flow meter and the temperature sensors to calculate the total amount of BTU/hr the system is utilizing.
- .3 Trends
 - .1 Current Trends
 - .1 Actual system differential pressure (each sensor)
 - .2 System differential pressure setpoint
 - .3 Supply flow
 - .4 Supple temperature
 - 5 Return temperature
 - .2 Historical Trends
 - .1 Peak daily load (Btu/hr)
 - .2 Peak daily flow (gpm)
 - .3 Total daily load (Btu)
 - .4 Total daily flow (gpm)
 - .5 Total load for (identify month@ Btu)
 - .6 Total flow for (identify month@ gpm)
 - .7 The operator shall be able to display the last 12 months of data at the computer terminal.
- .4 For system that, utilize multiple pimps operation in parallel they shall be controlled as follows:
 - On command to start based on a time of day schedule, automatic start on outside air temperature or operator command the EMCS shall start the first pump in sequence.

- .1 Refer to the sequence of operation described for each system to determine whether a time of day schedule of automatic start on outside air temperature is required. All systems shall be able to be started by the Operator.
- .2 The EMCS shall analyze each of the current differential pressure operating points for the differential pressure sensors against the differential pressure setpoint.
- .3 When all set point are satisfied by the process variable, the pump speed shall remain constant at the optimum energy consumption level. If the input from the flow sensor indicated that the operating pumps are approaching the end of curve point, the controller shall automatically stage on lag pumps as required to bring all pumps back to an acceptable operating setpoint.
- .4 The EMCS shall continually scan and compare each process variable to its individual set point and control to the least satisfied zone.
- .5 If the setpoint can't be satisfied by the designated lead pump, the EMCS shall initiate a timed sequence of events to stage a lag pump.
- The lag pump will accelerate resulting in the lead pump(s) decelerating until they equalize speed.
- .7 Further change in process variable will cause the pumps to change speed together.
- When the set point criteria can be safely satisfied with fewer pumps, the EMCS shall initiate a timed de stage sequence and continue variable speed operation.
- .9 As the worst case zone deviates from the set point, the EMCS shall send the appropriate analog signal to the VFD to speed up or slow down the pump/motor.
- When only one pump is operating the minimum speed of the pump motor as commanded by the variable frequency drive shall be 40%. Monitor the flow in the system and modulate the control valve in the bypass line as required to ensure that the pump does not dead head.
- .5 For systems that utilize one pump to provide the total flow required and second pump is a standby pump they shall be controlled as follows:
 - On command to start based on a time of day schedule, automatic start on outside air temperature or operator command the EMCS shall start the first pump in sequence.



SEQUENCE OF OPERATION

- Refer to the sequence of operation described for each system to determine whether a time of day schedule of automatic start on outside air temperature is required. All systems shall be able to be started by the Operator.
- .2 The EMCS shall analyze each of the current differential pressure operating points for the differential pressure sensors against the differential pressure set point.
- .3 When all set point are satisfied by the process variable, the pump speed shall remain constant at the optimum energy consumption level.
- .4 The EMCS shall continually scan and compare each process variable to its individual set point and control to the least satisfied zone.
- .5 As the worst case zone deviates from set point, the EMCS shall send the appropriate analog signal to the VFD to speed up or slow down the pump/motor.
- .6 The minimum speed of the pump motor drive as commanded by the EMCS shall be 40%. Monitor the flow in the system and modulate the control valve in the bypass line as required to ensure that the pump does not dead head.
- .6 Provide the following in the vent of equipment failure:
 - If the variable frequency drive(s), pump(s), flow meter or differential pressure sensor(s) fail initiate an alarm at the EMCS.
 - .2 In the event of a system differential pressure failure, due to a pump failure, variable frequency drive failure or overload fault, the EMCS shall automatically initiate a timed sequence of event to start the remaining pump set(s) in the variable speed mode. A message on the display shall indicate the fault, pump/motor or VFD. Subsequent failures shall initiate a timed sequence of events to the variable speed mode as available.
 - .3 In the event of the failure of a zone sensor/transmitter, its process variable signal shall be removed from the scan/compare program. Alternative zone sensor/transmitters, if available, shall remain in the scan/compare program for control.
 - .4 In the event of the failure to receive all zone process variable signals the variable frequency drives shall continue to operate at their last known position and a critical alarm shall be initiated at the EMCS.

If a pump is supposed to be running and the VFD indicates that is has failed start the next pump in sequence and alarm at the EMCS.

6.1 Hot Water Heating System

.1 General

- .1 The system serves the following systems:
 - .1 Air handling pre-heat coils
 - .2 Perimeter radiation
 - .3 Hot water reheat coils
 - .4 Unit heaters
 - .5 Force flow heaters
- The system is designed to have one pump running and one pump operating as standby pump.
- .3 The pumps and system are on emergency power.
- .4 The system is variable volume system

.2 Alternation of Equipment

- .1 Pumps P201 and P202 will be alternated to equalize run times.
- .2 Pumps will be designated lead and standby.
- .3 Alternations will occur every Monday morning at 7:30am
- .4 If no pumps are running the system will alternate the equipment designations.
- if a pump is running the system shall start the new pump and confirm operation before shutting down the pump that is scheduled to be turned off.

Scheduling

- When the outside air temperature drops below 60°F for a period of 20 minutes the heating system will be activated.
- .2 If the outside air temperature rises above 65°F for a period of 20 minutes the heating system shall be deactivated.

4 System Start Up

- On system activation on of the two hot water heating pumps P201 and P202 shall be started.
- 2 The status of pumps shall be monitored by current sensors
- .3 If the lead pump fails to start automatically start the standby pump and alarm the EMCS.



SEQUENCE OF OPERATION

.5 Temperature Control

The supply eater setpoint shall initially be set based on the following schedule:

Outside air temperature	Setpoint
-5°F	180°F
60°F	110°F

.2 The setpoint shall be reset $\pm 18^{\circ}$ F to satisfy heating requests. Reset will occur between the maximum of 180° F and a minimum of 110° F.

.6 Alarms

- .1 HVAC Critical
 - .1 Pump are commanded on and status is not received (10 minute delay)
- .2 HVAC General
 - .1 The system is running and the supply water temperature drops more than 30°F below setpoint (10 minute delay)
 - .2 The system is running and the supply water temperature rises above 208°F (10 minute delay)
 - .3 The system is running and the differential pressure is \pm 10psi from setpoint.
- .3 HVAC Maintenance
 - .1 Pump status is on and pumps are commanded off (10 minute delay)
 - .2 The system is put into manual mode of operation.

.7 Monitoring

- .1 Hot water supply and return temperatures for heat exchanger HE-1
- .2 Hot water supply and return temperatures for cool down tank CDT-1
- .3 System supply temperature

.8 Trends

- .1 Hot water supply and return temperatures for all temperature sensors.
- .2 Hot water supply temperature setpoints

6.2 Control of Domestic Hot water Temperature

.1 General

- .1 The domestic hot water heating system provides domestic hot water throughout the facility
- .2 The domestic hot water heaters are stand alone devices and not controlled from EMCS



to cool down the hot water if it is over heated in the cool down tank. The three way valve will be connected to the BAS to maintain supply temperature.

The domestic hot water recirc pump P-101 shall be cycled on/off by the BAS

A three way mixing valve has been provided prior to the domestic hot water heaters

.2 Scheduling

- .1 The domestic hot water recirc pump P-101 shall be started/stopped based on time of day schedule.
- The schedule shall be initially set to start the pump at 6:30 am and stop the pump at 1:00am. Operator adjustable.

.3 Monitoring

- .1 Domestic hot water supply temperature.
- .2 Domestic hot water in the main downstream of the mixing valve.

.4 Trend

- .1 Domestic hot water supply temperature from heater
- .2 Incoming cold water temperature.
- .3 Hot water temperature downstream of the mixing valve.
- .4 Domestic hot water system temperature return.

.5 Alarms

- .1 HVAC Critical
 - .1 Any supply temperature rises above 140°F
 - 2 Temperature downstream of the three way mixing valve exceeds 130°F.
 - .3 Any supply temperature drops below 104°F (40°C) 10 minute delay.
- .2 HVAC maintenance
 - .1 Pump status is on and the pump is commanded off (10 minute delay)
 - .2 Pump status is off and the pump is commanded on (10 minute delay)

SEQUENCE OF OPERATION

7.1 **Condensate Pumps**

.1 Provide a connection to the control panel for condensate pumps P-203 and P-204 (duplex system) and initiate an alarm at the EMCS if the condensate panel goes into alarm.

8.1 **24/7 Cooling System**

- .1 The system consists of a glycol pump, building condenser water pump, heat exchanger, dry cooler and glycol feed system.
- .2 The dry cooler will have stand alone controls as per drawing MC-880.
- .3 The pumps will be enabled through EMCS system.
- .4 On low water condenser water supply temperature disable system and provide alarm when temperature of water reaches 4°C.
- .5 Provide alarm on failure of pumps P-305 & P-306

9.1 **Heat Pumps**

.1 A control box shall be located within the unit and shall contain: controls for compressor, reversing valve and fan motor; 24V control power transformer; auto change over and lockout relay, and a terminal block for low voltage field wiring connections. DDC controller, interface power and control wiring between the DDC and heat pump unit shall be by section 15900. The heat pump shall be provided with a single point power connection by Electrical Contractor. The heat pump shall be provided complete with all motor starters, relays and disconnects to make a complete working system.

10.1 **Dry Coolers**

- .1 Fan cycling shall be used to control leaving fluid temperature by cycling the fans in one or two steps by the dry cooler controller. The dry cooler shall be provided with a terminal strip which shall allow the EMCS to make a connection and determine how many fans are currently running.
- .2 The 24 Volt control circuit shall consist of a control transformer and fan contactor and temperature control. The dry cooler shall be set up to maintain the chilled glycol temperature at 54°F entering and 44°F leaving.
- .3 The EMCS shall send a signal to the dry cooler control panel to enable/disable the dry cooler.



- .4 Fans shall be cycled by sensing air temperature passing over the coil.
- .5 Provide all control sensors required to make the system a complete working system.

11.1 Water Treatment System

.1 The BAS contractor shall be able to connect to the chemical treatment controller by a LAN connection. This LAN connection shall be provided, at the chemical treatment controller. The information provided at the chemical treatment controller shall allow the BAS System to review the system performance from a remote location.