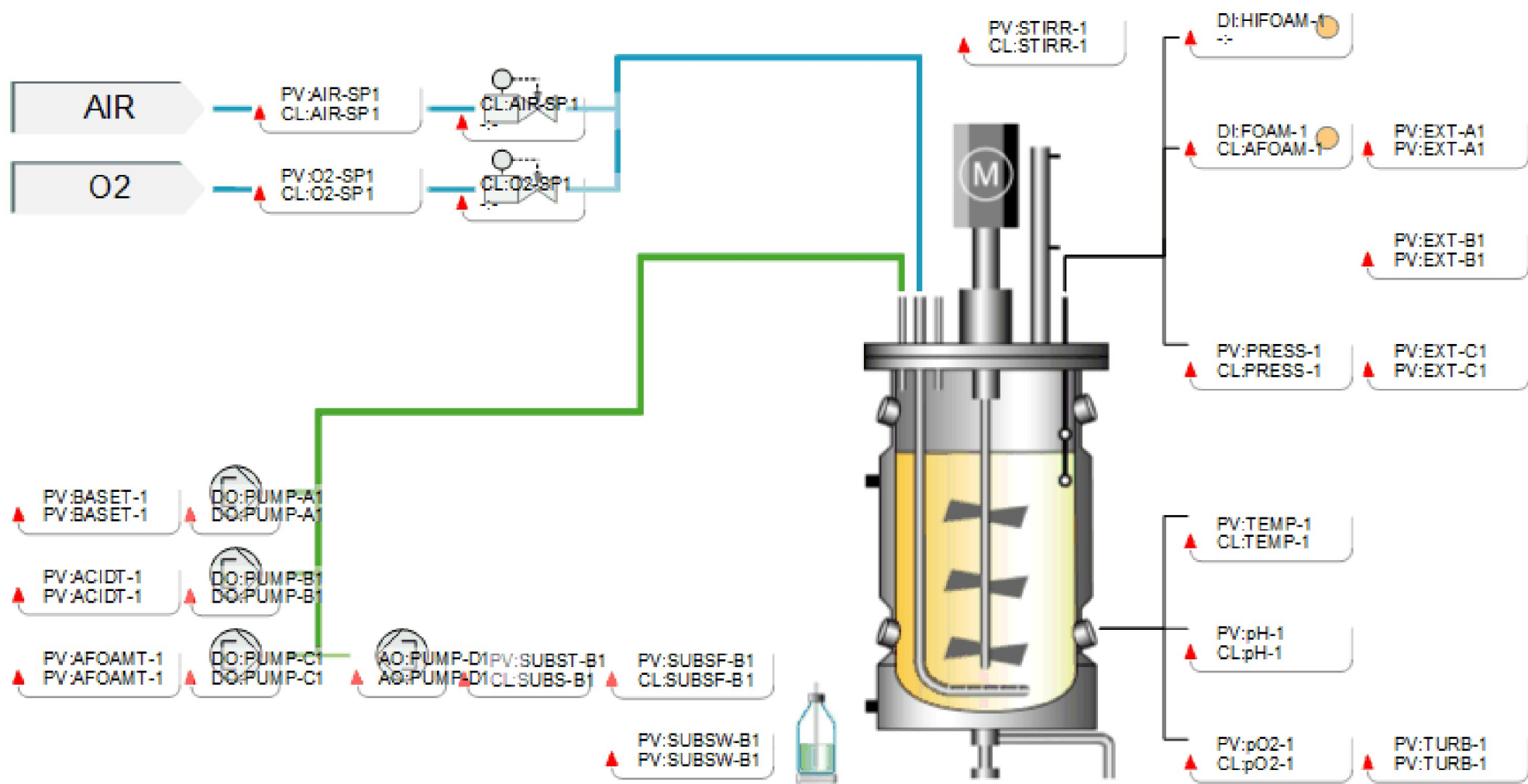
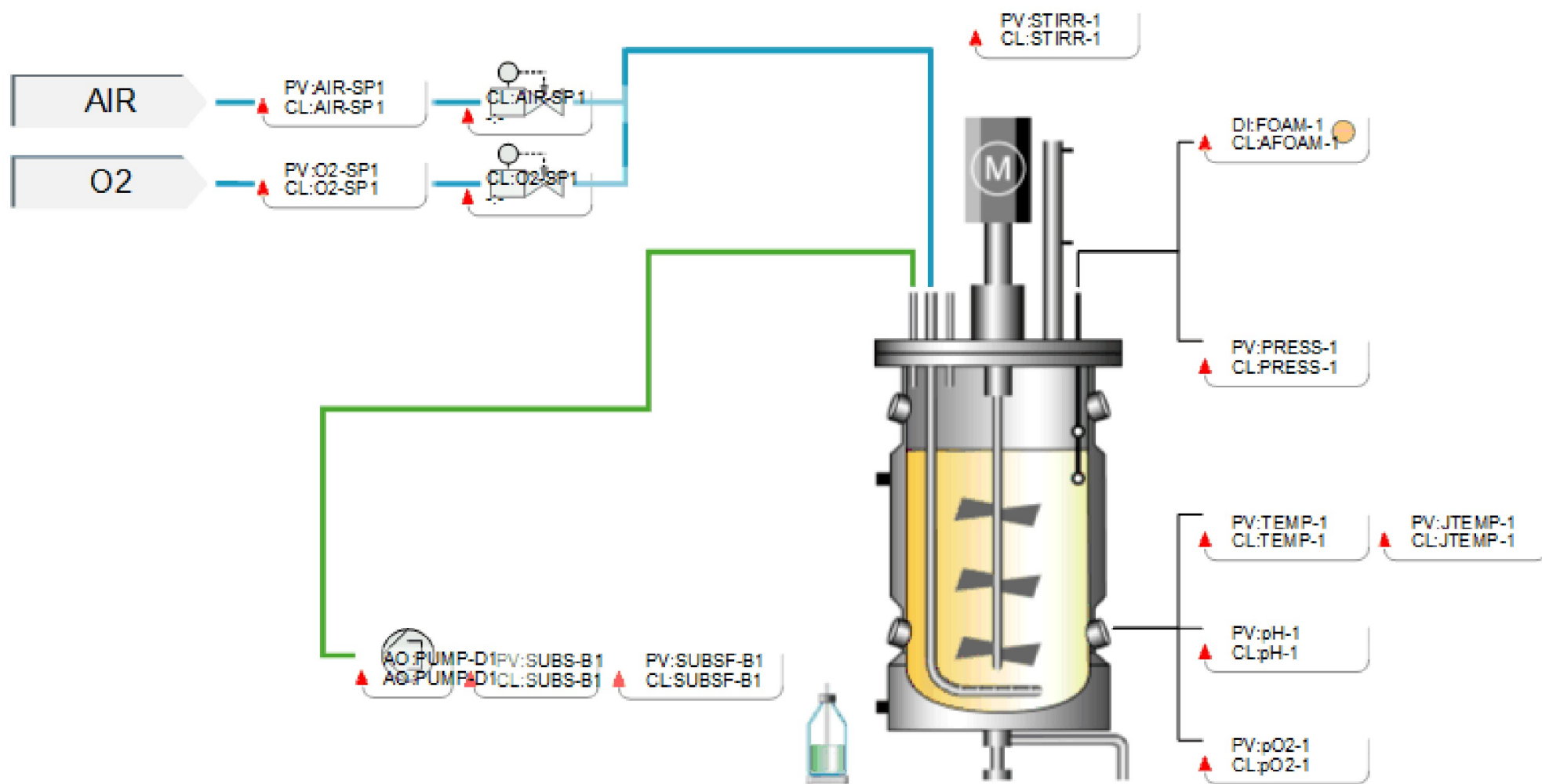




VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration	
D 92_CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	1: 10,4" MASK: Main0	
E 92_CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92_CP_C048F	2022-08-23	Bernhard Schminke-S	Proj. Man.:		CF-501361179-CP C048G	
G 92_CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	Page: 1 / 32
			Validation:	No		



VER. CFG.IDENT.:	DATE:	NAME:	System:	BIostat Cplus	DCU4 Configuration	
D 92_CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	1: 10,4" MASK: Controller0	
E 92_CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92_CP_C048F	2022-08-23	Bernhard Schminke-Si	Proj. Man.:		CF-501361179-CP C048G	
G 92_CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	Page: 3 / 32
			Validation:	No		

UNIT	CALIBRATION SENSOR	TOTALIZER	BALANCE	CONTROLLER	BATCHES SEQUENCES	BATCH CONTROLLER	DOCUMENTATION
0							Trend
							Shutdown Button
							Beeper Active / Enabled
1							
2							
3							
4							
5							
6							

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration UNIT MENU OVERVIEW	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Si	Proj. Man.:		CF-501361179-CP C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	Page: 5 / 32
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	
			Validation:	No		

UNIT	TP	INPUT	MENU SKEY	MENU TEXT	MASK PAGE 1	MASK PAGE 2	C H E C K
0	UN	Unit 0	All				
0	MA	Main1	Main	Main	Main0		
0	MA	Calibration1	Calibration	Calibration	Calibration0		
0	MA	Controller1	Controller	Controller	Controller0		
0	MA	Batches1	Phases	Phases	Phases0		
0	SE	pH-1			05: pH		
0	SE	pO2-1			06: pO2		
0	SE	REDOX-1			07: Redox		
0	SE	TURB-1			48: Turbidity		
0	PU	ACIDT-1			201: Pump		
0	PU	BASET-1			201: Pump		
0	PU	AFOAMT-1			201: Pump		
0	PU	LEVELT-1			201: Pump		
0	PU	SUBST-A1			201: Pump		
0	PU	SUBST-B1			201: Pump		
0	PU	AIRT-OV1			200: Gas		
0	PU	AIRT-SP1			200: Gas		
0	PU	O2T-SP1			200: Gas		
0	PU	N2T-SP1			200: Gas		
0	PU	CO2T-SP1			200: Gas		
0	BA	VWEIGHT-1			12: Balance		
0	BA	SUBSW-A1			12: Balance		
0	BA	SUBSW-B1			12: Balance		
0	CL	TEMP-1			26: SETPT/PID	01: PID 1/1	
0	CL	JTEMP-1			26: SETPT/PID	01: PID 1/1	
0	CL	STIRR-1			26: SETPT/PID	02: SETPT 1/-	
0	CL	pH-1			26: SETPT/PID	01: PID 1/1	
0	CL	pO2-1			55: PID 2/3	12: PID 1/3	
0	CL	PRESS-1			26: SETPT/PID	01: PID 1/1	
0	CL	AIR-OV1			26: SETPT/PID	02: SETPT 1/-	
0	CL	AIR-SP1			26: SETPT/PID	02: SETPT 1/-	
0	CL	O2-SP1			26: SETPT/PID	02: SETPT 1/-	
0	CL	N2-SP1			26: SETPT/PID	02: SETPT 1/-	
0	CL	CO2-SP1			26: SETPT/PID	02: SETPT 1/-	
0	CL	O2EN-1			26: SETPT/PID	02: SETPT 1/-	

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration UNIT ASSIGNMENT		
D 92_CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D			
E 92_CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:		
F 92_CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G		
G 92_CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice DCU4_92_CP_C048G_Print.pdf		
			Exceptional:				
			Validation:	No			Page: 6 / 32

UNIT	TP	INPUT	MENU SKEY	MENU TEXT	MASK PAGE 1	MASK PAGE 2	C H E C K
0	CL	AFOAM-1			28: TIMER		
0	CL	LEVEL-1			29: LEVEL		
0	CL	SUBS-A1			26: SETPT/PID	02: SETPT 1/-	
0	CL	SUBS-B1			26: SETPT/PID	02: SETPT 1/-	
0	CL	SUBSF-A1			99: FLOW	18: FLOW 1/1	
0	CL	SUBSF-B1			99: FLOW	18: FLOW 1/1	
0	CL	VWEIGHT-1			26: SETPT/PID	20: PID 1/1, Pump	
0	SQ	S_FVESS-1			214: EP: 5 Setp + 5 Time		
0	SQ	S_EVESS-1			214: EP: 5 Setp + 5 Time		
0	SQ	PHOLD-1			213: EP: 1 Time		
0	SQ	CM-1			210: EP		
1	UN	Unit 1	1				
2	UN	Unit 2	2				
3	UN	Unit 3	3				
4	UN	Unit 4	4				
5	UN	Unit 5	5				
6	UN	Unit 6	6				

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	UNIT ASSIGNMENT	
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice DCU4_92_CP_C048G_Print.pdf	
			Exceptional:			
			Validation:	No		Page: 7 / 32

MFCS CHAN. / NO.	TAG NAME	INPUT	MEASUREMENT RANGE	FUNCTION	DESCRIPTION	CYCLE	ALARM				HYSTERESIS	P+I DIAGRAM	REMARKS	C H E C K
							LIMITS LOW	HIGH	LOW	HIGH				
1	TEMP-1	AI	TEMP-1	0.0 .. 150.0 °C			1s							
2	JTEMP-1	AI	JTEMP-1	0.0 .. 150.0 °C			1s							
3	STIRR-1	DC	MOTP-1	0 .. 2000 rpm		32.0 p/rpm	1s							
4	pH-1	SE	pH-1	2.00 .. 12.00 pH		Out from pH Knick calib.	1s							
5	pO2-1	SE	pO2-1	0.0 .. 100.0 %sat		Out from pO2 Knick calib.	1s							
6	PRESS-1	AI	PRESS-1	-500 .. 2000 mbar			0.2s	-500	2000					
#NV	AIR-OV1	AI	MFC-E1	0.0 .. 100.0			1s							
8	AIR-SP1	AI	MFC-A1	0.00 .. 50.00 lpm			1s							
9	O2-SP1	AI	MFC-B1	0.00 .. 50.00 lpm			1s							
#NV	N2-SP1	AI	MFC-C1	0.0 .. 100.0			1s							
#NV	CO2-SP1	AI	MFC-D1	0.0 .. 100.0			1s							
#NV	O2EN-1	CS	O2EN-1	0.0 .. 100.0 %			1s							
#NV	AIRT-OV1	TO	AIRT-OV1	0 .. 9999 l		totalizer DO-VALVE-E1	1s							
14	AIRT-SP1	TO	AIRT-SP1	0 .. 9999 l		totalizer DO-VALVE-A1	1s							
15	O2T-SP1	TO	O2T-SP1	0 .. 9999 l		totalizer DO-VALVE-B1	1s							
#NV	N2T-SP1	TO	N2T-SP1	0 .. 9999 l		totalizer DO-VALVE-C1	1s							
#NV	CO2T-SP1	TO	CO2T-SP1	0 .. 9999 l		totalizer DO-VALVE-D1	1s							
#NV	SUBS-A1	CS	SUBS-A1	0.0 .. 100.0 %			1s							
19	SUBS-B1	CS	SUBS-B1	0.0 .. 100.0 %			1s							
#NV	SUBST-A1	TO	SUBST-A1	0 .. 9999 ml		totalizer AO-PUMP-C1	1s							
21	SUBST-B1	TO	SUBST-B1	0 .. 9999 ml		totalizer AO-PUMP-D1	1s							
#NV	SUBSF-A1	CV	SUBSF-A1	0.0 .. 9999.9 g/h			1s							
23	SUBSF-B1	CV	SUBSF-B1	0.00 .. 10.00 kg/h			1s							
24	SUBSW-A1	BA	SUBSW-A1	0.0 .. 60000.0 g		Out from WEIGHT calib.	1s							
25	SUBSW-B1	BA	SUBSW-B1	0.00 .. 60.00 kg		Out from WEIGHT calib.	1s							
26	BASET-1	TO	BASET-1	0 .. 9999 ml		totalizer DO-PUMP-A1	0.2s							
27	ACIDT-1	TO	ACIDT-1	0 .. 9999 ml		totalizer DO-PUMP-B1	0.2s							
28	AFOAMT-1	TO	AFOAMT-1	0 .. 9999 ml		totalizer DO-PUMP-C1	0.2s							
#NV	LEVELT-1	TO	LEVELT-1	0 .. 9999 ml		totalizer DO-PUMP-D1	0.2s							
30	EXT-A1	AI	EXT-A1	0.0 .. 100.0 %			1s							
31	EXT-B1	AI	EXT-B1	0.0 .. 100.0 %			1s							
32	EXT-C1	AI	EXT-C1	0.0 .. 100.0 %			1s							
#NV	EXHO2-1	AI	EXT-B1	-12.25 .. 50.00 %			1s							
#NV	EXHCO2-1	AI	EXT-A1	-2.50 .. 10.00 %			1s							
#NV	VWEIGHT-1	BA	VWEIGHT-1	0.00 .. 50.00 kg		Out from WEIGHT calib.	1s							

MFCS CHAN. / NO.	TAG NAME	INPUT	MEASUREMENT RANGE	FUNCTION	DESCRIPTION	CYCLE	ALARM				P+I DIAGRAM	REMARKS	C H E C K
							LIMITS		HYSTERESIS				
							LOW	HIGH	LOW	HIGH			
#NV	REDOX-1	SE REDOX-1	-1000 .. 1000 mV		Out from Redox Knick calib.	1s							
37	TURB-1	SE TURB-1	0.00 .. 6.00 AU		Out from Turbidity calib.	1s							
#NV	SUBS-C1	CS SUBS-C1	0.0 .. 100.0 %			1s							
#NV	SUBST-C1	TO SUBST-C1	0 .. 9999 ml		totalizer AO-PUMP-C1	1s							

VER. CFG.IDENT.:				DATE:		NAME:		System: BIOSTAT Cplus Customer: Uni Münster / D Order No.: Proj. Man.: DCU Ser. No.: >07100 /2014 Exceptional:		DCU4 Configuration PROCESS VALUE LIST		 sartorius stedim biotech	
D	92_CP_C048D	2022-08-17	Bernhard.Schminke						DWG.NO.:				
E	92_CP_C048E	2022-08-22	Lukas Hutter						CF-501361179-CP_C048G				
F	92_CP_C048F	2022-08-23	Bernhard Schminke-Sr						m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice				
G	92_CP_C048G	2022-08-24	Stefan Mende						DCU4_92_CP_C048G_Print.pdf				
								Validation: No				Page: 9 / 32	

FUNCTION	TAGNAME	INPUT	TYPE	PARAMETERS		DESCRIPTION	REMARKS	C H E C K
				TEMPERATURE COMPENSATION	CYCLE			
SENSOR	pH-1	AI	pH-1	pH Knick	TEMP-1	1s		
	pO2-1	AI	pO2-1	pO2 Knick	TEMP-1	1s		
	REDOX-1	AI	REDOX-1	Redox Knick	TEMP-1	1s		
	TURB-1	AI	TURB-1	Turbidity	TEMP-1	0.2s		
TOTALIZER	ACIDT-1	DO	PUMP-B1			0.2s		
	BASET-1	DO	PUMP-A1			0.2s		
	AFOAMT-1	DO	PUMP-C1			0.2s		
	LEVELT-1	DO	PUMP-D1			0.2s		
	SUBST-A1	AO	PUMP-C1			0.2s		
	SUBST-B1	AO	PUMP-D1			0.2s		
	AIRT-OV1	DO	VALVE-E1			0.2s		
	AIRT-SP1	DO	VALVE-A1			0.2s		
	O2T-SP1	DO	VALVE-B1			0.2s		
	N2T-SP1	DO	VALVE-C1			0.2s		
	CO2T-SP1	DO	VALVE-D1			0.2s		
	SUBST-C1	AO	PUMP-C1			0.2s		
BALANCE	VWEIGHT-1	AI	VWEIGHT-1	Weight		1s		
	SUBSW-A1	SL	BALANCE-A1	Tare and Hold		5s		
	SUBSW-B1	SL	BALANCE-A1	Tare and Hold		5s		

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration CALIBRATION LIST	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-S	Proj. Man.:		CF-501361179-CP_C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	Page: 10 / 32
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	
			Validation:	No		

ANALOG INPUT ADDRESS	MODUL NUM	MODUL ADDR.	MIN RAW	MAX RAW	TYPE	VALUE Min, Max, phys. Unit	TAG NAME	ALARM ENABLE	ALARM HYST.	DESCRIPTION	P+I DIAGRAM	REMARKS	CHECK
1AI01	1.MODUL	/mb/0/1	0	4095	0-10V	0 .. 10 V	EXT-A1						
1AI02	1.MODUL	/mb/0/3	0	4095	0-10V	0 .. 10 V	EXT-B1						
1AI03	1.MODUL	/mb/0/5	0	4095	0-10V	0 .. 10 V	EXT-C1						
1AI04	1.MODUL	/mb/0/7	0	4095	0-10V	0 .. 10 V							
1AI05	1.MODUL	/mb/0/9	0	4095	4-20mA	4 .. 20 mA	MFC-A1	NO					
1AI06	1.MODUL	/mb/0/11	0	4095	4-20mA	4 .. 20 mA	MFC-B1	NO					
1AI07	1.MODUL	/mb/0/13	0	4095	4-20mA	4 .. 20 mA	MFC-C1	NO					
1AI08	1.MODUL	/mb/0/15	0	4095	4-20mA	4 .. 20 mA	MFC-D1	NO					
1AI09	1.MODUL	/mb/0/17	0	4095	4-20mA	4 .. 20 mA	PRESS-1	NO					
1AI10	1.MODUL	/mb/0/19	0	4095	4-20mA	4 .. 20 mA	MFC-E1	NO					
1AI11	1.MODUL	/mb/0/21	0	4095	4-20mA	4 .. 20 mA	VWEIGHT-1	NO					
1AI12	1.MODUL	/mb/0/23	0	4095	4-20mA	4 .. 20 mA		NO					
1AI13	1.MODUL	/kn/58/0	0	1500	RAW	0 .. 150 °C	TEMP-1						
1AI14	1.MODUL	/kn/58/5	0	1500	RAW	0 .. 150 °C	JTEMP-1						
1AI15	1.MODUL	/kn/59/0	5000	-5000	0-10V	2 .. 12 pH	pH-1						
1AI16	1.MODUL	/kn/59/5	10000	-10000	0-10V	-1000 .. 10000 V	REDOX-1						
1AI17	1.MODUL	/kn/60/0	0	-10000	0-10V	0 .. 100 %sat	pO2-1						
1AI18	1.MODUL	/kn/61/5	0	50000000	RAW	0 .. 50000000	FOAM-1						
1AI19	1.MODUL	/kn/61/5	0	50000000	RAW	0 .. 50000000	LEVEL-1						
1AI20	1.MODUL	/kn/62/0	0	100000	0-10V	0 .. 6 AU	TURB-1						

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration ANALOG INPUT LIST DWG.NO.: CF-501361179-CP_C048G m:\DE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXX\1CP_C000.ice DCU4_92_CP_C048G_Print.pdf	
D_92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E_92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:			
F_92__CP_C048F	2022-08-23	Bernhard Schminke-St	Proj. Man.:			
G_92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014		
			Exceptional:			
			Validation:	No		Page: 11 / 32

MFCS CHAN	DIGITAL INPUT ADDRESS	MODUL NUM	MODUL ADDRESS	ACTIVE STATE	TAG NAME	TYPE	ALARM STATE	ALARM ENABLE	ALARM HYST.	DESCRIPTION / ALARM TEXT 1 - 4	VALVE MONITOR HYST.	P+I DIAGRAM	REMARKS	C H E C K
1	1DI01	1.MODUL	/mb/0/48	HI	HEATC-1		OFF	YES		Heater failure			Heat check	
2	1DI02	1.MODUL	/mb/0/49	HI	MOTC-1		OFF	YES		Motor failure			Motor check,	
3	1DI03	1.MODUL	/mb/0/50	LO	HIFOAM-1		ON	YES		HIFOAM-1 State alarm			Hight Foam	
4	1DI04	1.MODUL	/mb/0/51											
5	1DI05	1.MODUL	/mb/0/51	LO	FOAM-1		ON	NO		FOAM-1 State alarm				
6	1DI06	1.MODUL	/mb/0/51	LO	LEVEL-1		ON	NO		LEVEL-1 State alarm				

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration	
D 92_CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	DIGITAL INPUT LIST	
E 92_CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92_CP_C048F	2022-08-23	Bernhard Schminke-S	Proj. Man.:		CF-501361179-CP C048G	
G 92_CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	
			Validation:	No		Page: 12 / 32

No.	Address	Module Address	COMMUNICATION PARAMETER BAUD / DATA / STOP / PARITY Range	PROTOCOL	TAG NAME	DESCRIPTION	P + I Diagram	REMARKS	C H E C K
1	Serial 1		9600 / 7 / 1 / EVEN	SART. BAL.	BALANCE-B1	Cycle = 5s			
2	Com4		9600 / 7 / 1 / EVEN	SART. BAL.	BALANCE-A1	Cycle = 5s			
3	MIO-5251-CN19-Top	/kn/58	19200 / 8 / 1 / NONE	KNCK AMP.	Knick	Cycle = 1s			
		>1			>TEMP-1	>Type = Temp			
		>4			>pH-1	>Type = pH			
		>10			>pO2-1	>Type = pO2			
		>13			>FOAM-1	>Type = Foam			
		>19			>TURB-1	>Type = Adapt			

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	SERIAL I/O LIST	
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	Page: 13 / 32
			Validation:	No		

ANALOG OUTPUT ADDRESS	MODUL NUM	MODUL ADDRESS	MIN RAW	MAX RAW	LOCK STATE	OUTPUT SIGNAL	TAG NAME	INPUT	SHUT DOWN	SPL RNG	DESCRIPTION	P-I DIAGRAM	REMARKS	C H E C K
1AO01	1.MODUL	/mb/0/25	0	4095	0% All Signals	0..10V	STIRR-1	CL STIRR-1	0%	&			Stirrer System	
1AO02	1.MODUL	/mb/0/27	0	4095	0% All Signals	0..10V	PUMP-C1	CL SUBS-A1	0%	&				
1AO03	1.MODUL	/mb/0/29	0	4095	0% All Signals	0..10V	PUMP-D1	CL SUBS-B1	0%	&				
1AO04	1.MODUL	/mb/0/31	0	4095	0% All Signals									
1AO05	1.MODUL	/mb/0/33	0	4095	0% All Signals	4..20mA	MFC-A1	CL AIR-SP1	0%	&				
1AO06	1.MODUL	/mb/0/35	0	4095	0% All Signals	4..20mA	MFC-B1	CL O2-SP1	0%	&				
1AO07	1.MODUL	/mb/0/37	0	4095	0% All Signals	4..20mA	MFC-C1	CL N2-SP1	0%	&				
1AO08	1.MODUL	/mb/0/39	0	4095	0% All Signals	4..20mA	MFC-D1	CL CO2-SP1	0%	&				
1AO09	1.MODUL	/mb/0/41	0	4095	0% All Signals	4..20mA	PRESS-1	CL PRESS-1	0%	&				
1AO10	1.MODUL	/mb/0/43	0	4095	0% All Signals	4..20mA	MFC-E1	CL AIR-OV1	0%	&				
1AO11	1.MODUL	/mb/0/45	0	4095	0% All Signals									
1AO12	1.MODUL	/mb/0/47	0	4095	0% All Signals									

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration ANALOG OUTPUT LIST DWG.NO.: CF-501361179-CP_C048G m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice DCU4_92_CP_C048G_Print.pdf	
D_92_CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E_92_CP_C048E	2022-08-22	Lukas Hutter	Order No.:			
F_92_CP_C048F	2022-08-23	Bernhard Schminke-S	Proj. Man.:			
G_92_CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014		
			Exceptional:			
			Validation:	No		

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MFCS CHAN.	DIGITAL OUTPUT ADDRESS	MODUL NUM	MODUL ADDRESS	PIN	TAG NAME	INPUT	TYPE	SHUT DOWN	OP STATE	LOCK STATE	DESCRIPTION	P+I DIAGRAM	REMARKS	CHECK
1	1DO01	1.MODUL	/mb/0/56		1V401/501			OFF	ON	OFF			1V401/1V40	
2	1DO02	1.MODUL	/mb/0/57		1V406/V506			OFF	OFF	OFF			1V411/1V42	
3	1DO03	1.MODUL	/mb/0/58		1V601			OFF	ON	OFF			1V501	
4	1DO04	1.MODUL	/mb/0/59		1V605			OFF	OFF	OFF			1V502	
5	1DO05	1.MODUL	/mb/0/60		1V687/V688			OFF	OFF	OFF			1V143/1V14	
6	1DO06	1.MODUL	/mb/0/61		1V381			OFF	OFF	OFF			1V435	
7	1DO07	1.MODUL	/mb/0/62		1V382			OFF	OFF	OFF			1V101	
8	1DO08	1.MODUL	/mb/0/63		VALVE-D1	CL CO2-SP1	PWM 20s +	OFF	OFF	OFF				
9	1DO09	1.MODUL	/mb/1/0		TMPON-1	CL JTEMP-1	ON	OFF	OFF	OFF			Circulation	
10	1DO10	1.MODUL	/mb/1/1		HEAT-1	CL JTEMP-1	PWM 10s +	OFF	OFF	OFF	InterLock		Heater	
11	1DO11	1.MODUL	/mb/1/2		COOL-1	CL JTEMP-1	PWM 10s -	OFF	OFF	OFF			Cooling valve	
12	1DO12	1.MODUL	/mb/1/3		STRON-1	CL STIRR-1	ON	OFF	OFF	OFF			Stirrer	
13	1DO13	1.MODUL	/mb/1/4		VALVE-A1	CL AIR-SP1	PWM 20s +	OFF	OFF	OFF				
14	1DO14	1.MODUL	/mb/1/5		VALVE-B1	CL O2-SP1	PWM 20s +	OFF	OFF	OFF				
15	1DO15	1.MODUL	/mb/1/6		VALVE-C1	CL N2-SP1	PWM 20s +	OFF	OFF	OFF				
19	1DO16	1.MODUL	/mb/1/8		PUMP-A1	CL pH-1	PWM 10s -	OFF	OFF	OFF				
16	1DO17	1.MODUL	/mb/1/9		PUMP-B1	CL pH-1	PWM 10s +	OFF	OFF	OFF				
17	1DO18	1.MODUL	/mb/1/10		PUMP-C1	CL AFOAM-1	PWM MODE	OFF	OFF	OFF			Antifoam	
18	1DO19	1.MODUL	/mb/1/11		PUMP-D1	CL LEVEL-1		OFF	OFF	OFF			Level pump	
20	1DO20	1.MODUL	/mb/1/13		VALVE-E1	CL AIR-OV1	PWM 20s +	OFF	OFF	OFF				
21	1DO21	1.MODUL	/mb/1/14											
	0DO01	0.MODUL	/mb/1/7		BEEPER-1	BP	Beeper	ON	OFF	OFF				
	0DO02	0.MODUL	/mb/1/12		COMAL-1	CA	Common Alarm	ON	OFF	OFF				

VER. CFG.IDENT.:				DATE:		NAME:		System:		BIOSTAT Cplus		DCU4 Configuration DIGITAL OUTPUT LIST							
D 92__CP_C048D				2022-08-17		Bernhard.Schminke		Customer:		Uni Münster / D									
E 92__CP_C048E				2022-08-22		Lukas Hutter		Order No.:											
F 92__CP_C048F				2022-08-23		Bernhard Schminke-St		Proj. Man.:											
G 92__CP_C048G				2022-08-24		Stefan Mende		DCU Ser. No.:		>07100 /2014									
								Exceptional:				DWG.NO.:							
												CF-501361179-CP_C048G							
												m:\DE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice							
												DCU4_92_CP_C048G_Print.pdf							
								Validation:		No						Page: 15 / 32			

TAG NAME	HARDWARE LABEL	MODUL NUM	MODUL ADDRESS	TYPE	PULSE	COUNTER MAX	DESCRIPTION	REMARKS	C H E C K
MOTP-1	1DC1	1.MODUL	/mb/0/53	Stirrer Frequency	32.0				

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	DIGITAL COUNTER LIST	
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	Page: 16 / 32
			Validation:	No		

NO	OUTPUT TAG	A/D	SHTDN	CONDITIONS TAG	CONDITION	REMARKS	C H E C K
1	HEAT-1	D	OFF	JTEMP-1	Process Value > 137.0 °C	Interlock Condition ILOCK1	
				TEMP-1	Process Value < 0.5 °C		
				JTEMP-1	Process Value < 0.5 °C		

VER. CFG.IDENT.: DATE: NAME:			System: BIOSTAT Cplus Customer: Uni Münster / D Order No.: Proj. Man.: DCU Ser. No.: >07100 /2014 Exceptional: Validation: No	DCU4 Configuration INTERLOCK CONDITIONS - DIGITAL		
D	92__CP_C048D	2022-08-17		DWG.NO.: CF-501361179-CP_C048G		
E	92__CP_C048E	2022-08-22		m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice		
F	92__CP_C048F	2022-08-23		DCU4_92_CP_C048G_Print.pdf		
G	92__CP_C048G	2022-08-24		Stefan Mende		
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MFCS CHAN / NO.	UNIT	TAG NAME	TYPE	CASCADE TO	DESCRIPTION	PROCESS VALUE	CONTROLLER OUTPUT	ADDITIONAL DIG. OUT	PARAMETERS	SETP RAMP	CYCLE	P+I DIAGRAM	REMARKS	CHECK
1		TEMP-1	PID	JTEMP-1		AI TEMP-1			T 2 3	---	1s			
2		JTEMP-1	PID			AI JTEMP-1	DO TMPON-1		T	---	1s			
							DO HEAT-1 + 0 %							
							DO COOL-1 - 0 %							
3		STIRR-1	SETP		Setpt. to ext. STIRR-1	DC STIRR-1	DO STRON-1		T	9 s	1s			
							AO STIRR-1 & 0 %							
4		pH-1	PID			SE pH-1	DO PUMP-B1 + 0 %		T 5 6	---	1s			
							DO PUMP-A1 - 0 %							
5		pO2-1	PIDC	AIR-SP1		SE pO2-1			T	---	1s			
				O2-SP1										
				STIRR-1										
				PRESS-1										
6		PRESS-1	PID			AI PRESS-1	AO PRESS-1 & 100 %		T 1 6	---	0.2s			
#NV		AIR-OV1	SETP		Setpt. to ext. AIR-OV1	AI AIR-OV1	DO VALVE-E1 + 0 %		T	---	1s			
							AO MFC-E1 & 0 %							
8		AIR-SP1	SETP		Setpt. to ext. AIR-SP1	AI AIR-SP1	DO VALVE-A1 + 0 %		T	---	1s			
							AO MFC-A1 & 0 %							
9		O2-SP1	SETP		Setpt. to ext. O2-SP1	AI O2-SP1	DO VALVE-B1 + 0 %		T	---	1s			
							AO MFC-B1 & 0 %							
#NV		N2-SP1	SETP		Setpt. to ext. N2-SP1	AI N2-SP1	DO VALVE-C1 + 0 %		T	---	1s			
							AO MFC-C1 & 0 %							
#NV		CO2-SP1	SETP		Setpt. to ext. CO2-SP1	AI CO2-SP1	DO VALVE-D1 + 0 %		T	---	1s			
							AO MFC-D1 & 0 %							
#NV		O2EN-1	SETP		Setpt. to ext. O2EN-1	CS O2EN-1			T	---	1s			
13		AFOAM-1	TIM			DI FOAM-1	DO PUMP-C1			---	1s			
#NV		LEVEL-1	LEV			DI LEVEL-1	DO PUMP-D1			---	1s			
#NV		SUBS-A1	SETP		Setpt. to ext. SUBS-A1	CS SUBS-A1	AO PUMP-C1 & 0 %		T	---	1s			
16		SUBS-B1	SETP		Setpt. to ext. SUBS-B1	CS SUBS-B1	AO PUMP-D1 & 0 %		T	---	1s			
#NV		SUBSF-A1	FLOW	SUBS-A1		CV SUBSF-A1			T	---	1s			
						BA SUBSW-A1								
18		SUBSF-B1	FLOW	SUBS-B1		CV SUBSF-B1			T	---	1s			
						BA SUBSW-A1								
#NV		VWEIGHT-1	PID			BA VWEIGHT-1			T	---	1s			
#NV		SUBS-C1	SETP		Setpt. to ext. SUBS-C1	CS SUBS-C1			T	---	1s			

NO	TAG NAME	TYPE	CASCADE TO	WORK POINT %	LIMITS MINMAX	S H A R E D	USER CHANGES LIMITS MINMAX	DEADBAND %Value	USER CHANGES DEADBAND %	PID PARAMETER XPTITD	S H A R E D	USER CHANGES PID PARAMETER XPTITD	REMARKS USER CHANGES:	C H E C K
1	TEMP-1	PID	JTEMP-1		0.098.3			0.000%0.0 °C		40.020050				
2	JTEMP-1	PID			-100.0100.0			0.000%0.0 °C		10.000				
3	STIRR-1	SETP			1.020.0									
										0.0				
										0.0				
4	pH-1	PID			-100.0100.0			0.500%0.05 pH		30.0300				
5	pO2-1	PIDC	AIR-SP1		0.0100.0			0.000%0.0 %sat		90.0500				
			O2-SP1		0.0100.0					90.0500				
			STIRR-1		1.020.0					150.01000				
			PRESS-1		0.0100.0					24.060				
6	PRESS-1	PID			0.0100.0			0.000%0 mbar		24.060				
7	AIR-OV1	SETP			0.0100.0									
8	AIR-SP1	SETP			0.0100.0									
9	O2-SP1	SETP			0.0100.0									
10	N2-SP1	SETP			0.0100.0									
11	CO2-SP1	SETP			0.0100.0									
12	O2EN-1	SETP			0.0100.0									
15	SUBS-A1	SETP			0.0100.0									
										0.0				
16	SUBS-B1	SETP			0.0100.0									
										0.0				
17	SUBSF-A1	FLOW	SUBS-A1		0.0100.0					25.02000				
18	SUBSF-B1	FLOW	SUBS-B1		0.0100.0					25.02000				
19	VWEIGHT-1	PID			0.0100.0			0.000%0.00 kg		0.200				
20	SUBS-C1	SETP			0.0100.0									

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration	
D 92_CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	CONTROLLER LIST	
E 92_CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92_CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92_CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\DE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	
			Validation:	No	Page: 19 / 32	

CONTROL LOOP	STAGES	START		PARAMETERS				CHECK
		UP	DOWN	ACTIVE CASC	DOWN CONDITION	UP CONDITION	HYSTERESIS	
TEMP-1	1			JTEMP-1	<= 0.0	>= 100.0	600	
pO2-1	1	START		AIR-SP1	<= 0.0	>= 100.0	600	
	2			O2-SP1	<= 0.0	>= 100.0	600	
	3			STIRR-1	<= 0.0	>= 100.0	600	
	4			PRESS-1	<= 0.0	>= 100.0	600	
SUBSF-A1	1			SUBS-A1	<= 0.0	>= 100.0	600	
SUBSF-B1	1			SUBS-B1	<= 0.0	>= 100.0	600	

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration CONTROLLER STAGES	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	Page: 20 / 32
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	
			Validation:	No		

CONTROL LOOP	CASCADE		OUTPUT						RELEASE MODE	REMARKS	CHECK
	NO	ACTIVE CASC	OUT 1	OUT 2	OUT 3	OUT 4	OUT 5	OUT 6			
	5	SUBS-B1	0 %	0 %	0 %	0 %	0 %	0 %			

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration CONTROLLER PROFILES DWG.NO.: CF-501361179-CP C048G m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice DCU4_92_CP_C048G_Print.pdf	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:			
F 92__CP_C048F	2022-08-23	Bernhard Schminke-S	Proj. Man.:			
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014		
			Exceptional:			
			Validation:	No		Page: 21 / 32

[illegible][illegible]

S_FVESS-1
S_EVESS-1
PHOLD-1
CM-1
HFOAM-1

X L L - L
L X L - L
L L X -
- - - X
L L - - X

CHECK

RECP1
RECP2
RECP3
RECP4

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration SEQUENCES DWG.NO.: CF-501361179-CP C048G m:\DE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice DCU4_92_CP_C048G_Print.pdf	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:			
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Si	Proj. Man.:			
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014		
			Exceptional:			
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System:	BIOSTAT Cplus
Customer:	Uni Münster / D
Order No.:	
Proj. Man.:	
DCU Ser. No.:	>07100 /2014
Exceptional:	
Validation:	No

DCU4 Configuration SEQUENCES

DWG.NO.:
CF-501361179-CP_C048G
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biotech

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PRG NO	PRG NAME	OPERATING SETPOINT(S)				OPERATING TIMER(S)		REMARKS	C H E C K
		NO	LABEL	PROCESS VALUE	VALUE	ALARM	NO LABEL VALUE		
1	S_FVESS-1	1	STEMP	TEMP-1	121.0	DISABLE	1 STIME 00:30:00	Steri. Full Vessel	
		2	FTEMP	TEMP-1	37.0	DISABLE	2 MAXTIME 01:30:00		
2	S_EVESS-1	1	STEMP	TEMP-1	121.0	DISABLE	1 STIME 00:30:00	Steri Empty Vessel	
		2	FTEMP	TEMP-1	37.0	DISABLE	2 MAXTIME 01:30:00		
3	PHOLD-1	1	TEST PRESS	PRESS-1	1200	DISABLE	1 TEST TIME 00:30:00	Pressure Hold	
		2	RELEASE PRESS	PRESS-1	200	DISABLE			
4	CM-1						1 00:30:00	All Controller mode off	
5	HFOAM-1						1 00:30:00	Background Phase	

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration SEQUENCE GENERAL	
D 92_CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E 92_CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92_CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92_CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	Page: 23 / 32
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	
			Validation:	No		

PRG NO	PRG NAME	SETPOINT 1 to 10				SETPOINT 11 to 20				SETPOINT 21 to 30				C H E C K
		NO	PROCESS VALUE	SET POINT	LOW LIMIT	NO	PROCESS VALUE	SET POINT	LOW LIMIT	NO	PROCESS VALUE	SET POINT	LOW LIMIT	
1	S_FVESS-1	1	TEMP-1	121.0	120.9									☐
2	S_EVESS-1	1	TEMP-1	121.0	120.9									☐

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration SEQUENCE SETPOINT TABLE	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	
			Validation:	No		Page: 24 / 32

PR NO	PRG	STP NO.	START STOP	STEP CONDITION	AND OR	BRANCH CONDITION	AND OR	JMP	PHASE DISP.	MESSAGE TEXT 1 - 4	MSG TYPE	TIM 1	TIM 2	TIM 3	TIM 4	REMARKS	CHECK
1	S_FVESS-1	1	START						MANOP	Prepare system for Heat-up	No	reset	reset	start			
		2		OpInp OK	AND				HEAT1					reset			
				TIME3>0:00:05													
		3		TEMP-1 >= 98.0°C					HEAT2								
		4		PV > PV TABLE					STERI			start	start				
		5							STERI								
		6		PV < PV TABLE		TIME1>OpTime1		8	PV UNDERLIMIT			hold					
						TIME2>OpTime2											
		7		PV > PV TABLE		TIME2>OpTime2		8	LIMITS OK			cont					
		8		NEVER		ALWAYS		5									
		9		TIME2>OpTime2		TIME1>OpTime1		10	MAX OVER	Max. Time Over	Alert	hold	hold				
		10	STOP						MANOP			hold	hold		start		
		11		TIME4>0:00:01					COOL1						reset		
		12		TEMP-1 <= 98.0°C					COOL2								
		13		TEMP-1 <= OpSetp2					READY	Sterilization finished	Alert						
		14		OpInp ACK					END								
2	S_EVESS-1	15	START						MANOP	Prepare system for Heat-up	No	reset	reset	start			
		16		OpInp OK	AND				HEAT1					reset			
				TIME3>0:00:05													
		17		TEMP-1 >= 98.0°C					HEAT2								
		18		PV > PV TABLE	AND				STERI			start	start				
				TEMP-1 >= OpSetp1													
		19							STERI								
		20		PV < PV TABLE		TIME1>OpTime1	OR	22	PV UNDERLIMIT			hold					
						TIME2>OpTime2											
		21		PV > PV TABLE		TIME2>OpTime2		22	LIMITS OK			cont					
		22		NEVER		ALWAYS		19									
		23		TIME2>OpTime2		TIME1>OpTime1		24	MAX OVER	Max. Time Over	Alert	hold	hold				
		24	STOP						MANOP			hold	hold	hold	start		
		25		TIME4>0:00:01					COOL1						reset		
		26		TEMP-1 <= 98.0°C					COOL2								
		27		TEMP-1 <= OpSetp2					READY	Sterilization finished	Alert					Sterilization finish	
		28		OpInp ACK					END								
3	PHOLD-1	29	START						MANOP	Pressurize vessel	No						
		30		OpInp OK					PRESS								
VER. CFG.IDENT.:				DATE:	NAME:	System: BIOSTAT Cplus			DCU4 Configuration SEQUENCES			sartoriusstedim biotech					
D 92_CP_C048D				2022-08-17	Bernhard.Schminke	Customer: Uni Münster / D											
E 92_CP_C048E				2022-08-22	Lukas Hutter	Order No.:			DWG.NO.:			m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice					
F 92_CP_C048F				2022-08-23	Bernhard Schminke-S	Proj. Man.:			CF-501361179-CP_C048G								
G 92_CP_C048G				2022-08-24	Stefan Mende	DCU Ser. No.: >07100 /2014			m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice			Page: 25 / 32					
						Exceptional:			DCU4_92_CP_C048G_Print.pdf								
						Validation: No											

PR NO	PRG	STP NO.	START STOP	STEP CONDITION	AND OR	BRANCH CONDITION	AND OR	JMP	PHASE DISP.	MESSAGE TEXT 1 - 4	MSG TYPE	TIM 1	TIM 2	TIM 3	TIM 4	REMARKS	CHECK
		31		PRESS-1 > OpSetp1					HOLD			start					
		32	STOP	TIME1>OpTime1					RLEAS			hold					
		33		PRESS-1 < OpSetp2					READY	PHOLD finished	Alert						
		34		OpInp ACK					END								
4	CM-1	35	START						MASTER CL STOP			start					
		36		TIME1>0:00:01					SLAVE CL STOP			start					
		37		TIME1>0:00:01					SLAVE CL STOP								
		38	STOP														
5	HFOAM-1	39	START	DI HIFOAM-1 Alarm					LOCK								
		40	STOP	DI HIFOAM-1 Alarm OFF					RLEAS								
		41							READY								

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	SEQUENCES	
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	
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[illegible]

PR NO	PRG	STP NO.	PHASE DISP.	TV401/501 1V406/V506 1V601 1V605 1V687/V688 1V381 1V382 VALVE-D1 TMPON-1 HEAT-1 COOL-1 STRON-1 VALVE-A1 VALVE-B1 VALVE-C1 PUMP-B1 PUMP-C1 PUMP-D1 PUMP-A1 VALVE-E1 1DO21	REMARKS	CHECK
1	S_FVESS-1	1	MANOP	- - - - -		
1		2	HEAT1	0 1 0 1 1 - - - - 0 - - - - -		
1		3	HEAT2	0 1 0 1 1 - - - - 0 - - - - -		
1		4	STERI	0 1 0 1 1 - - - - 0 - - - - -		
1		5	STERI	0 1 0 1 1 - - - - 0 - - - - -		
1		6	PV UNDERLIMIT	0 1 0 1 1 - - - - 0 - - - - -		
1		7	LIMITS OK	0 1 0 1 1 - - - - 0 - - - - -		
1		8		0 1 0 1 1 - - - - 0 - - - - -		
1		9	MAX OVER	0 1 0 1 1 - - - - 0 - - - - -		
1		10	MANOP	0 1 0 1 1 - - - - 0 - - - - -		
1		11	COOL1	1 0 0 0 1 - - - - 0 - - - - -		
1		12	COOL2	1 0 1 0 1 - - - - 0 - - - - -		
1		13	READY	1 0 1 0 0 - - - - -		
1		14	END	- - - - -		
2	S_EVESS-1	15	MANOP	- - - - -		
2		16	HEAT1	0 1 0 1 1 1 1 - - - 0 - - - - -		
2		17	HEAT2	0 1 0 1 1 1 1 - - - 0 - - - - -		
2		18	STERI	0 1 0 1 1 1 1 - - - 0 - - - - -		
2		19	STERI	0 1 0 1 1 1 1 - - - 0 - - - - -		
2		20	PV UNDERLIMIT	0 1 0 1 1 1 1 - - - 0 - - - - -		
2		21	LIMITS OK	0 1 0 1 1 1 1 - - - 0 - - - - -		
2		22		0 1 0 1 1 1 1 - - - 0 - - - - -		
2		23	MAX OVER	0 1 0 1 1 1 1 - - - 0 - - - - -		
2		24	MANOP	0 1 0 1 1 1 1 - - - 0 - - - - -		
2		25	COOL1	1 0 0 0 1 0 0 - - - 0 - - - - -		
2		26	COOL2	1 0 1 0 1 0 0 - - - 0 - - - - -		
2		27	READY	1 0 1 0 0 0 0 - - - - -		
2		28	END	- - - - -		
3	PHOLD-1	29	MANOP	0 - 0 - - - - -		
3		30	PRESS	1 - 0 - - - - -		
3		31	HOLD	0 - 0 - - - - -		
3		32	RLEAS	0 - 1 - - - - -		
3		33	READY	0 - 1 - - - - -		
3		34	END	- - - - -		

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration SEQUENCES	
D 92_CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	DWG.NO.:	
E 92_CP_C048E	2022-08-22	Lukas Hutter	Order No.:		CF-501361179-CP C048G	
F 92_CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		m:\DE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	
G 92_CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	DCU4_92_CP_C048G_Print.pdf	
			Exceptional:			
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PR NO	PRG	STP NO.	PHASE DISP.	1V401/501 1V406/V506 1V601 1V605 1V687/V688 1V381 1V382 VALVE-D1 TMPON-1 HEAT-1 COOL-1 STRON-1 VALVE-A1 VALVE-B1 VALVE-C1 PUMP-B1 PUMP-C1 PUMP-D1 PUMP-A1 VALVE-E1 1DO21	REMARKS	CHECK
4	CM-1	35	MASTER CL STOP	- - - - -		
4		36	SLAVE CL STOP	- - - - -		
4		37	SLAVE CL STOP	- - - - -		
4		38		- - - - -		
5	HFOAM-1	39	LOCK	0 - - - - -		
5		40	RLEAS	1 - - - - -		
5		41	READY	- - - - -		

VER. CFG.IDENT.:	DATE:	NAME:	System:	BIOSTAT Cplus	DCU4 Configuration	
D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	SEQUENCES	
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	Page: 30 / 32
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TREND

CHANNEL	TYPE	INPUT	C H E C K
1	PV	TEMP-1	
2	PV	JTEMP-1	
3	PV	pH-1	
4	PV	pO2-1	
5	PV	PRESS-1	
6	PV	AIR-OV1	
7	PV	AIR-SP1	
8	PV	CO2-SP1	
9	OFF		
10	OFF		
11	OFF		
12	OFF		
13	OFF		
14	OFF		
15	OFF		
16	OFF		
17	OFF		
18	OFF		
19	OFF		
20	OFF		
21	OFF		
22	OFF		
23	OFF		
24	OFF		
25	OFF		
26	OFF		
27	OFF		
28	OFF		
29	OFF		
30	OFF		
31	OFF		
32	OFF		

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D 92__CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D	DOCUMENTATION	
E 92__CP_C048E	2022-08-22	Lukas Hutter	Order No.:		DWG.NO.:	
F 92__CP_C048F	2022-08-23	Bernhard Schminke-Sr	Proj. Man.:		CF-501361179-CP C048G	
G 92__CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014	m:\IDE05-Autom-Std-Prod\8_Configurations\Cplus\V92\1_Serie\CP_CXXX\CP_C000.ice	
			Exceptional:		DCU4_92_CP_C048G_Print.pdf	Page: 31 / 32
			Validation:	No		

AI	:	Analog Input
SE	:	Sensor Input
TO	:	Totalizer Input
BA	:	Balance Input
SP	:	Setpoint Controller
SL	:	Serial Input
AR	:	Arithmetic Function
DC	:	Digital Counter
CS	:	Controller Setpoint
CV	:	Controller Value
#NV	:	PV/CL is not used in HMI

RS	:	Raw Signal
PV	:	Process Value

STAT.	:	Status Signal
LO	:	0V
HI	:	5V if DIM, 24V if DOM

SP.	:	Setpoint
OUT.	:	Controller Output
PV.	:	Process Value

MR.	:	Measurement Range
OUT.	:	Timer Output
TIM.	:	Controller Output
ON	:	Controller On

PV<	:	Process-Value < reference value
PV>	:	Process-Value > reference value
PVAL	:	Process-Value alarm (as long as alarm state)
PVNA	:	Process-Value alarm (as long as alarm not acknowledged)
DIHI	:	Digital input high state
DILO	:	Digital input low state
DIAL	:	Digital input alarm (as long as alarm state)
DINA	:	Digital input alarm (as long as alarm not acknowledged)

See Manual <<FUNCTION CONFIGURATION>>

See Manual <<FUNCTION CONFIGURATION>>

COMM	:	Common alarm
CS	:	System error
COMPV	:	Common alarm process-value only
COMDI	:	Common alarm digital inputs only

PID	:	PID Controller
PIDC	:	PID Cascade Controller
PIDP	:	PID Cascade Profile Controller (SartoMix)
SP	:	Setpoint Controller
TIM	:	Timer (Antifoam)
LEV	:	Double Input Level Controller
2SP	:	Double Setpoint Controller
AI	:	Analog Input
AO	:	Analog Output
DI	:	Digital Input
DO	:	Digital Output
ShA	:	Shared Analog Output
ShD	:	Shared Digital Output
CS	:	Controller Setpoint
CV	:	Controller Value
AR	:	Arithmetic Function
DC	:	Digital Counter
+/- [inv]	:	Control Direction [Inverted Active State]

T	:	Total Profile
1	:	Output = 100% if Mode: off
2	:	P/PI switch over
3	:	Setpoint addition to Output
4	:	Multiple Servo Controllers
5	:	Output = Working Point in Deadband
6	:	Controller Direction Inverted
7	:	Working Point = 100%
8	:	Flow Controller
9	:	Switchable Input
A	:	O2 Enrichment Function
B	:	Slave Controller(s) Mode
C	:	Auto Output Share
SHARED	:	Controller No sharing its Limit or PID set

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D_92_CP_C048D	2022-08-17	Bernhard.Schminke	Customer:	Uni Münster / D		
E_92_CP_C048E	2022-08-22	Lukas Hutter	Order No.:			
F_92_CP_C048F	2022-08-23	Bernhard Schminke-S	Proj. Man.:			
G_92_CP_C048G	2022-08-24	Stefan Mende	DCU Ser. No.:	>07100 /2014		
			Exceptional:			
			Validation:	No		Page: 32 / 32