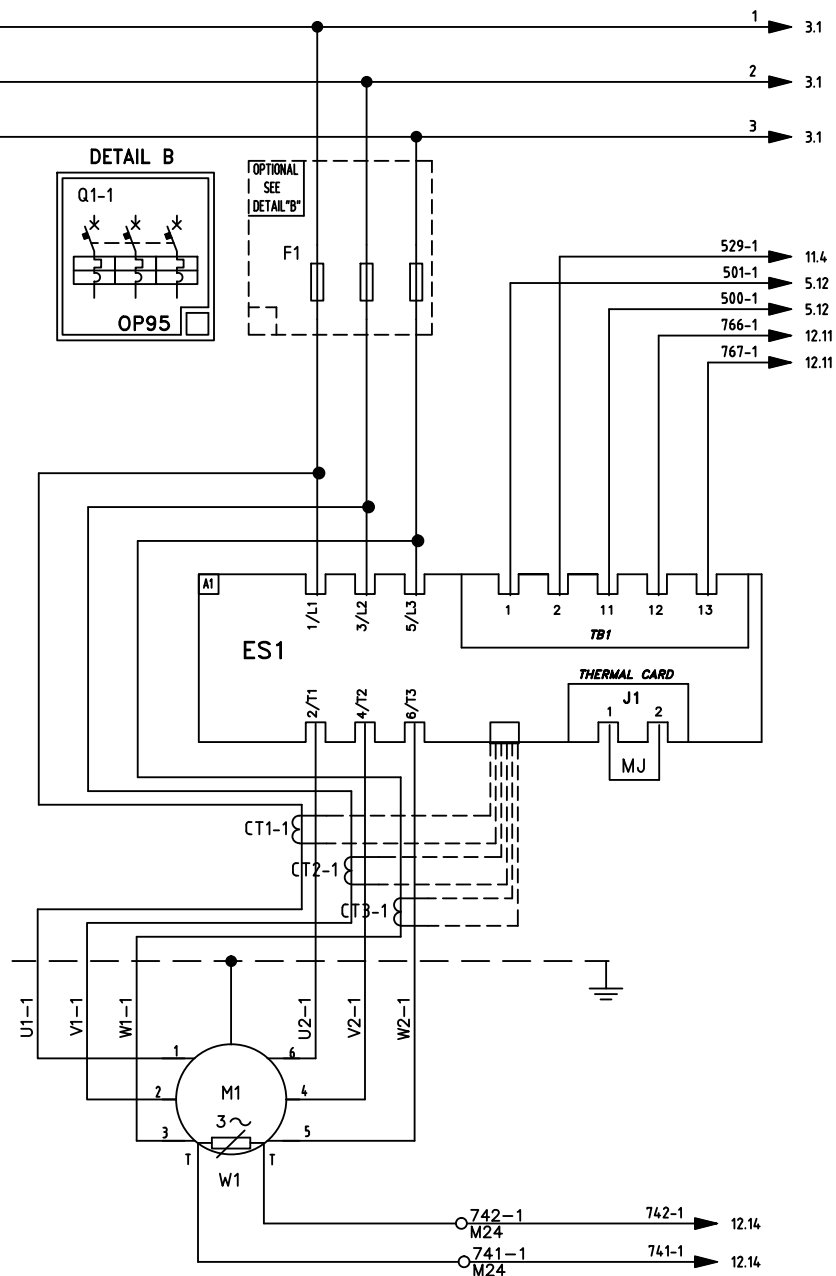
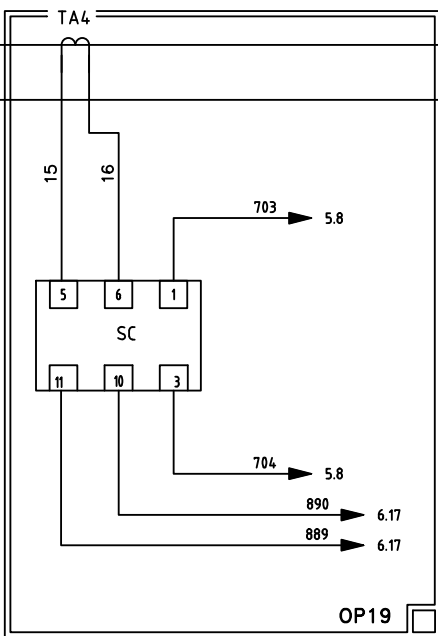
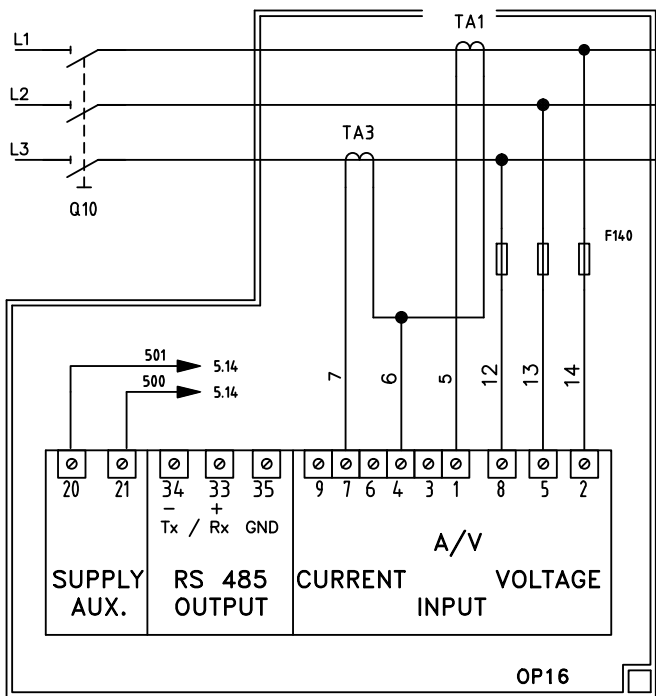
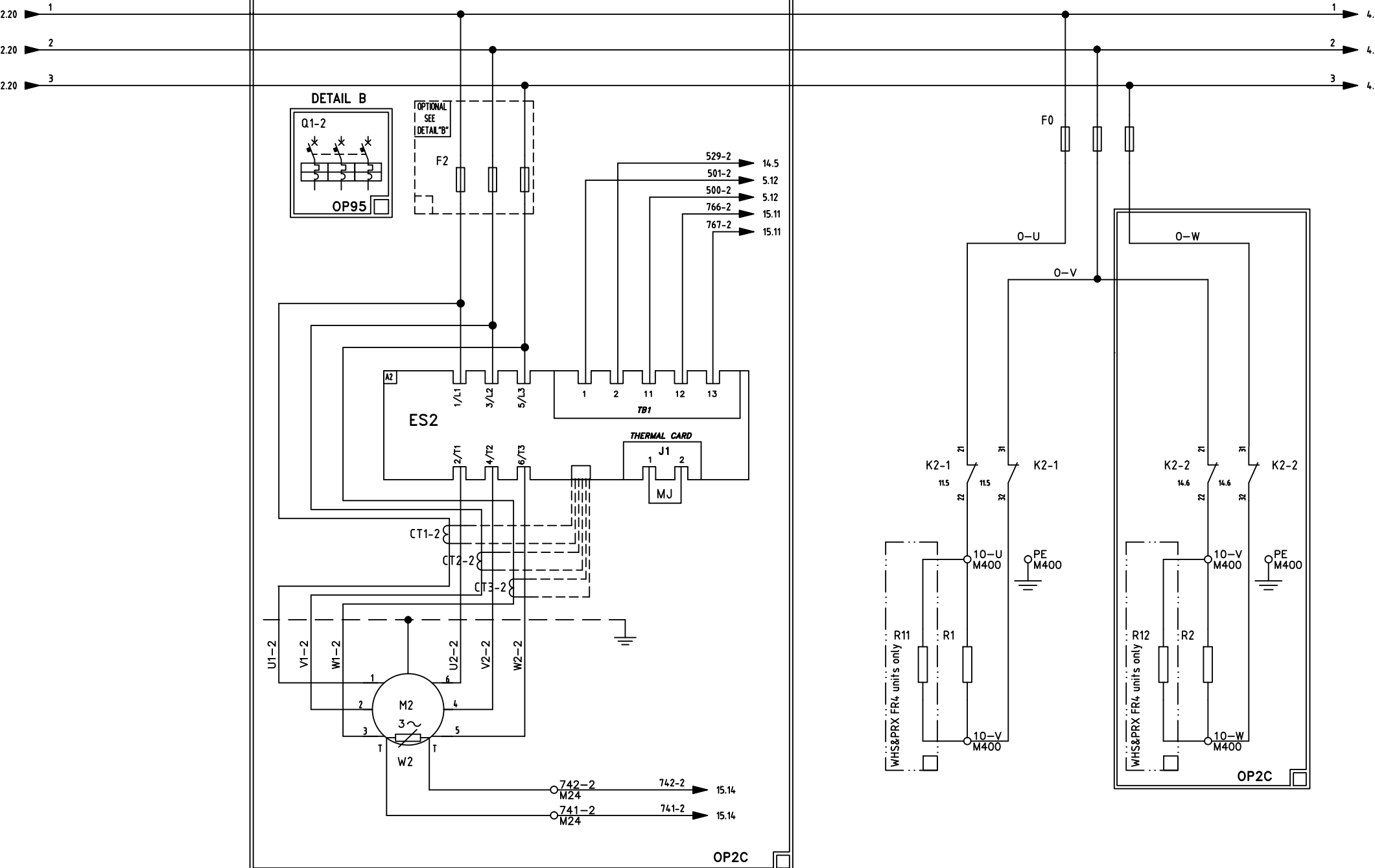
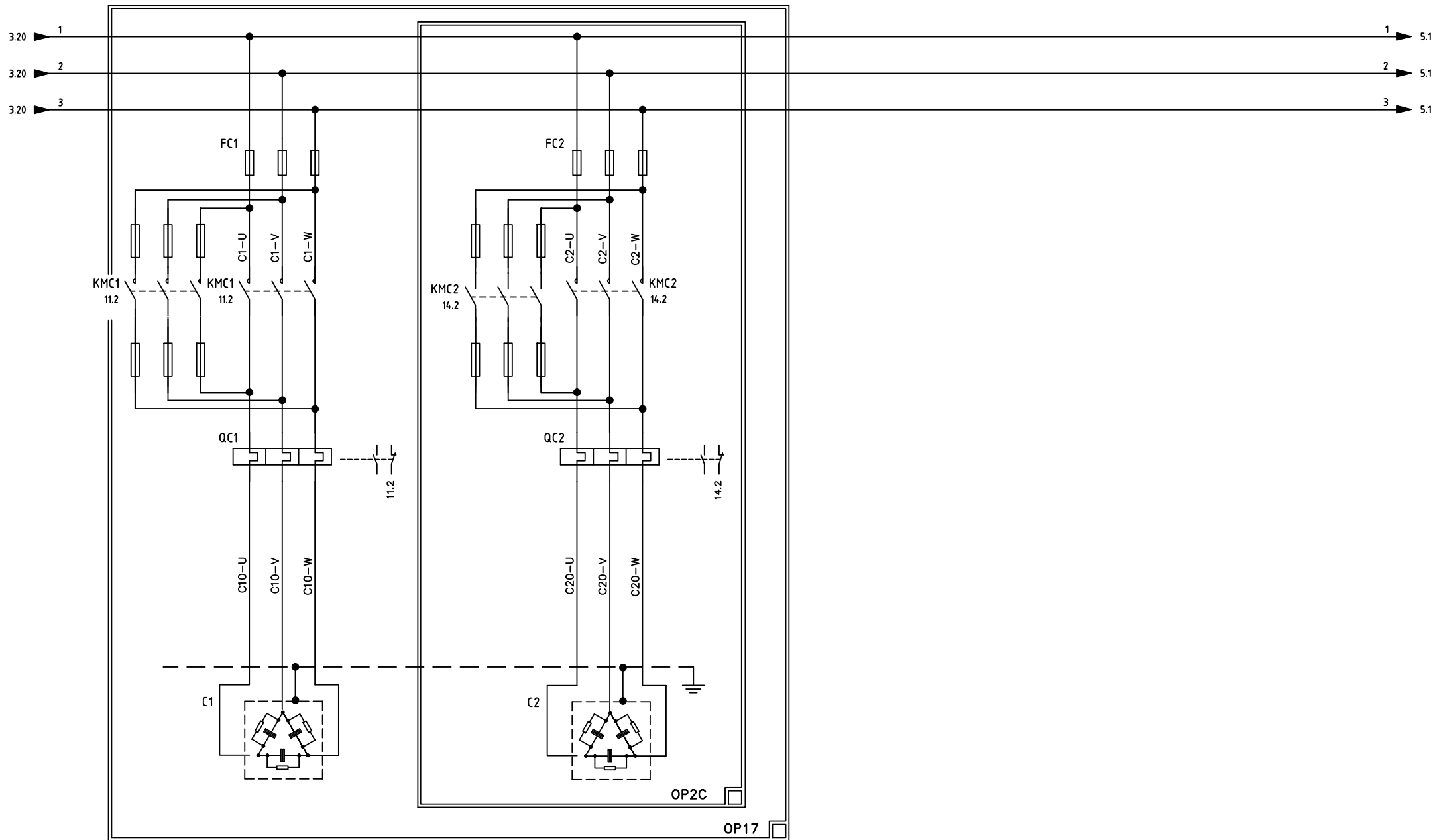


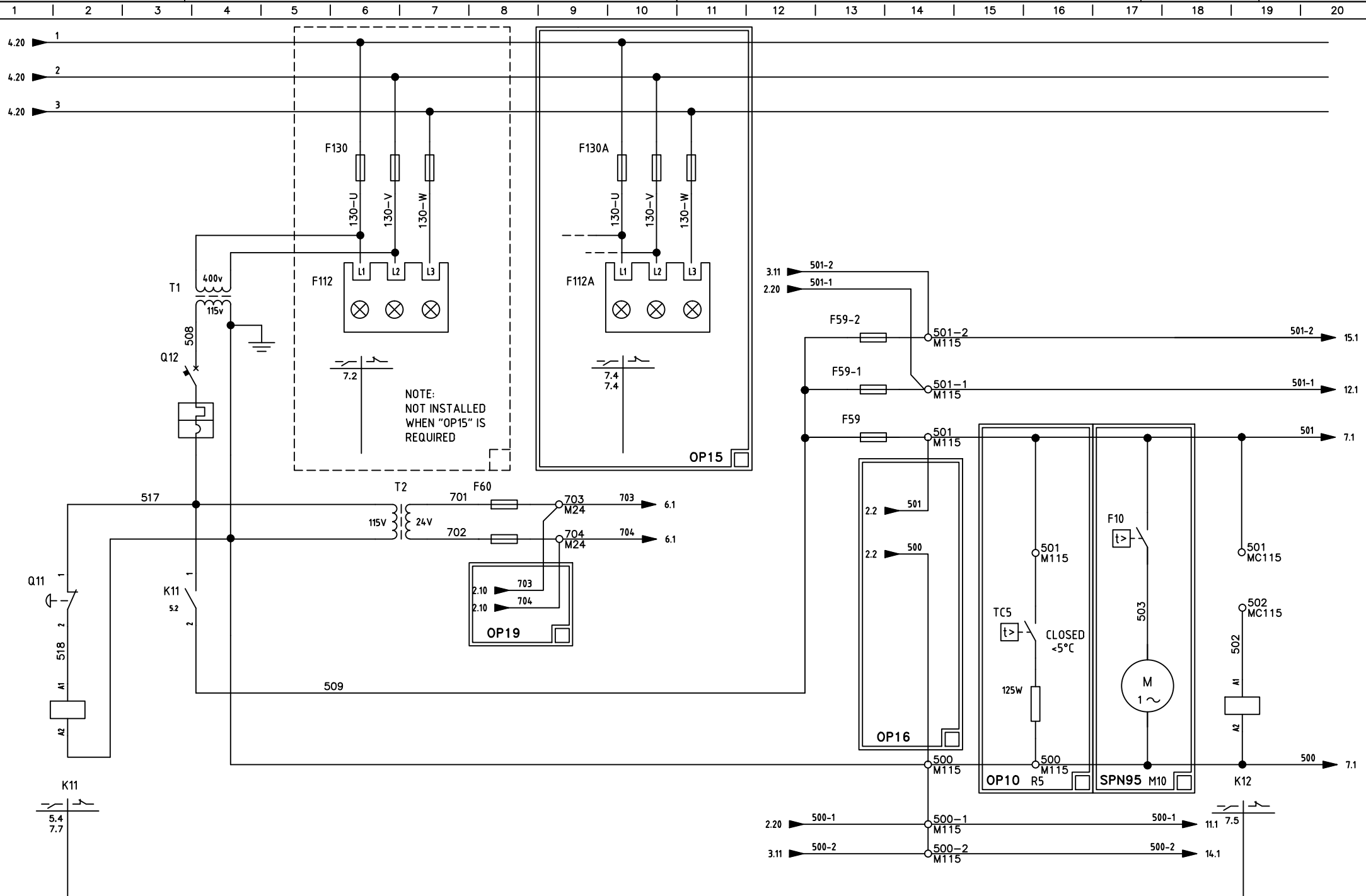


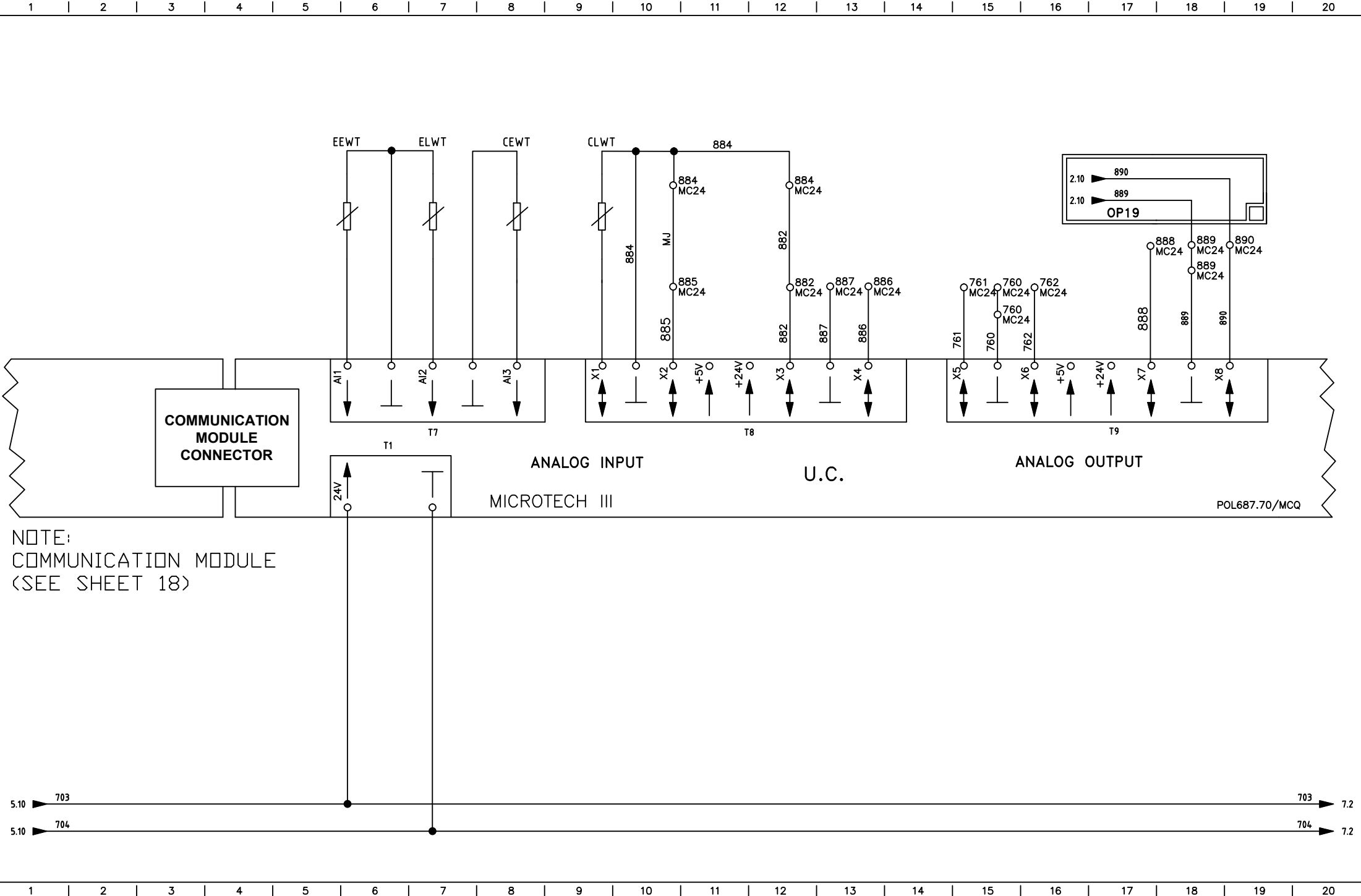
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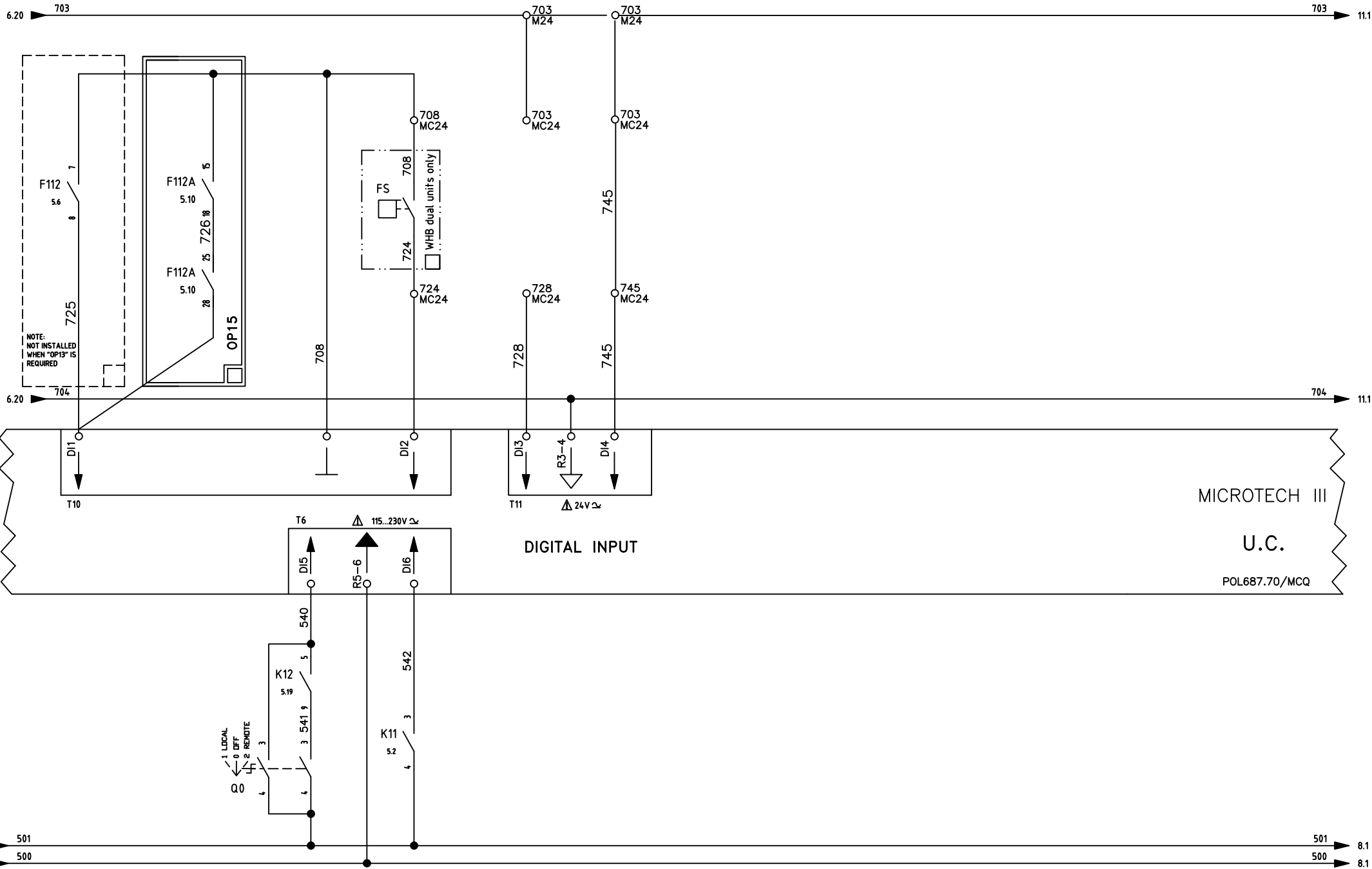


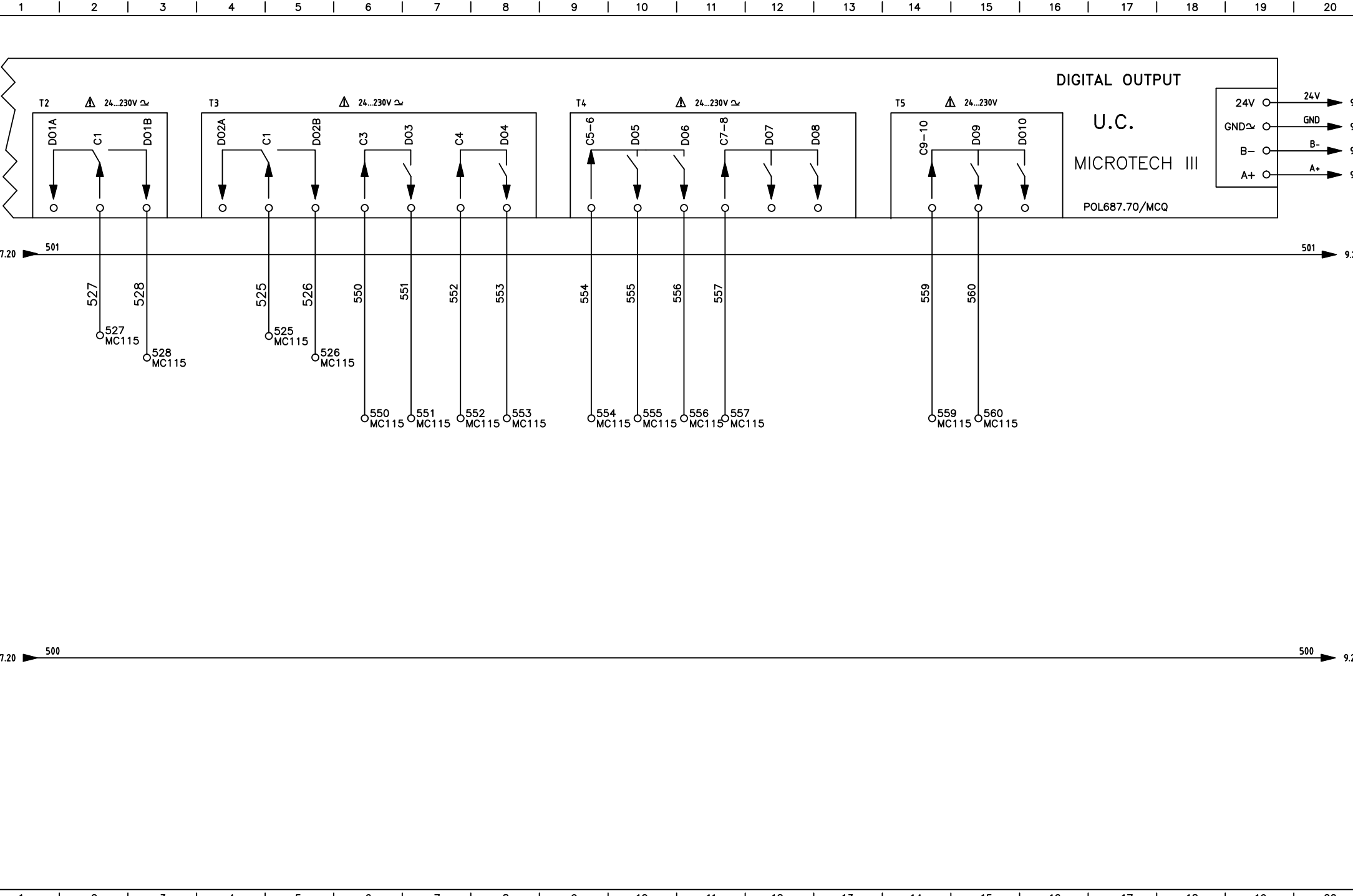
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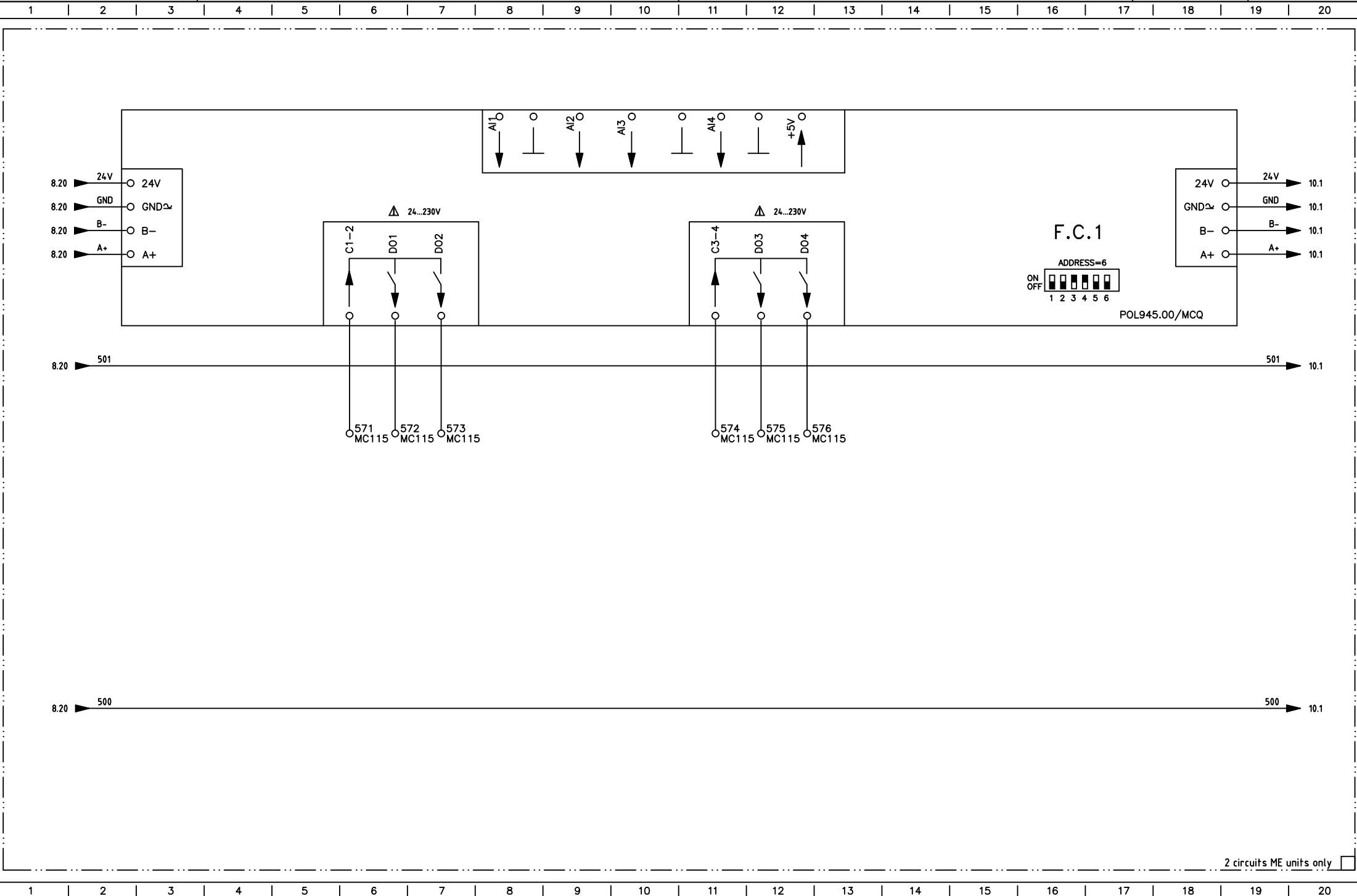


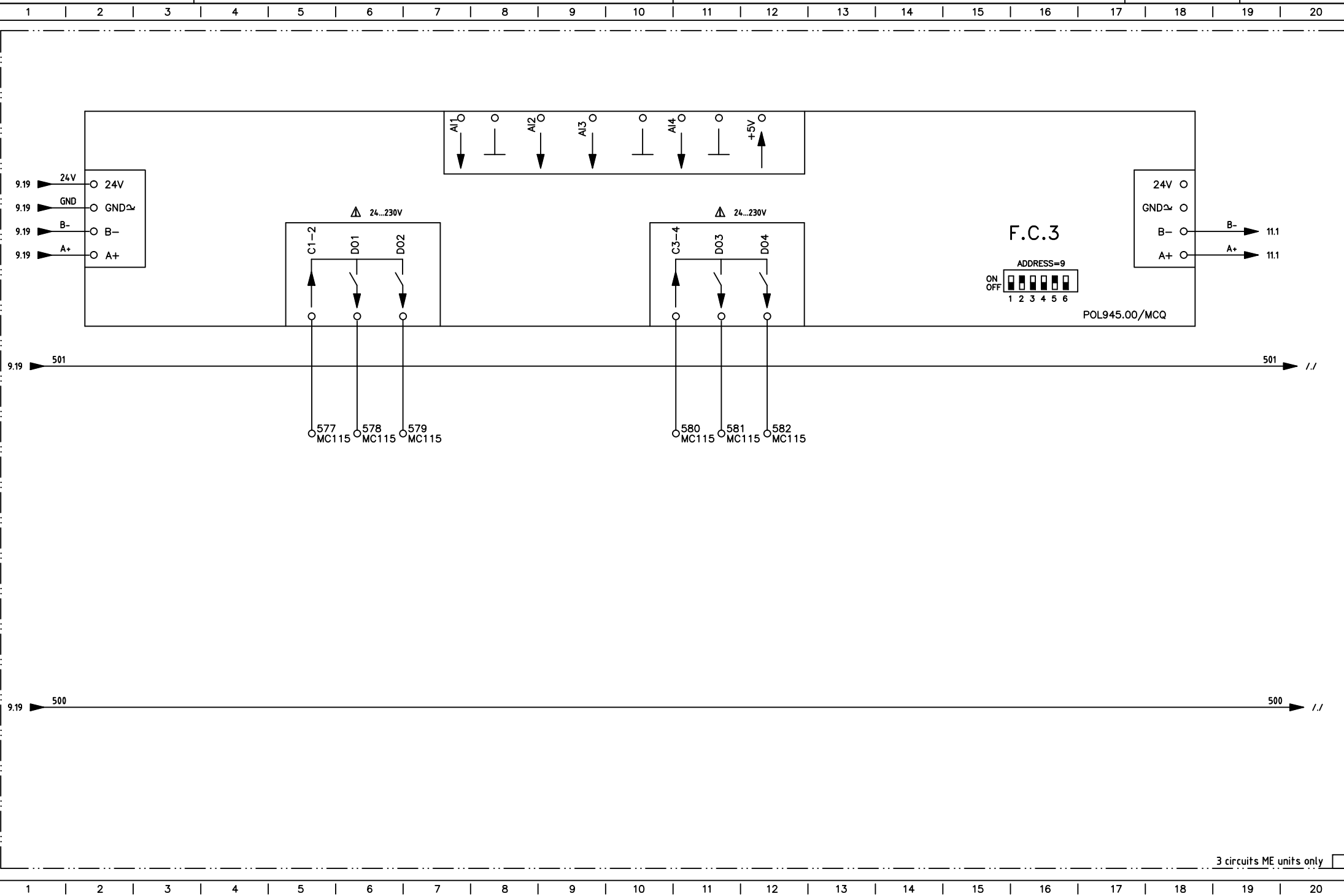


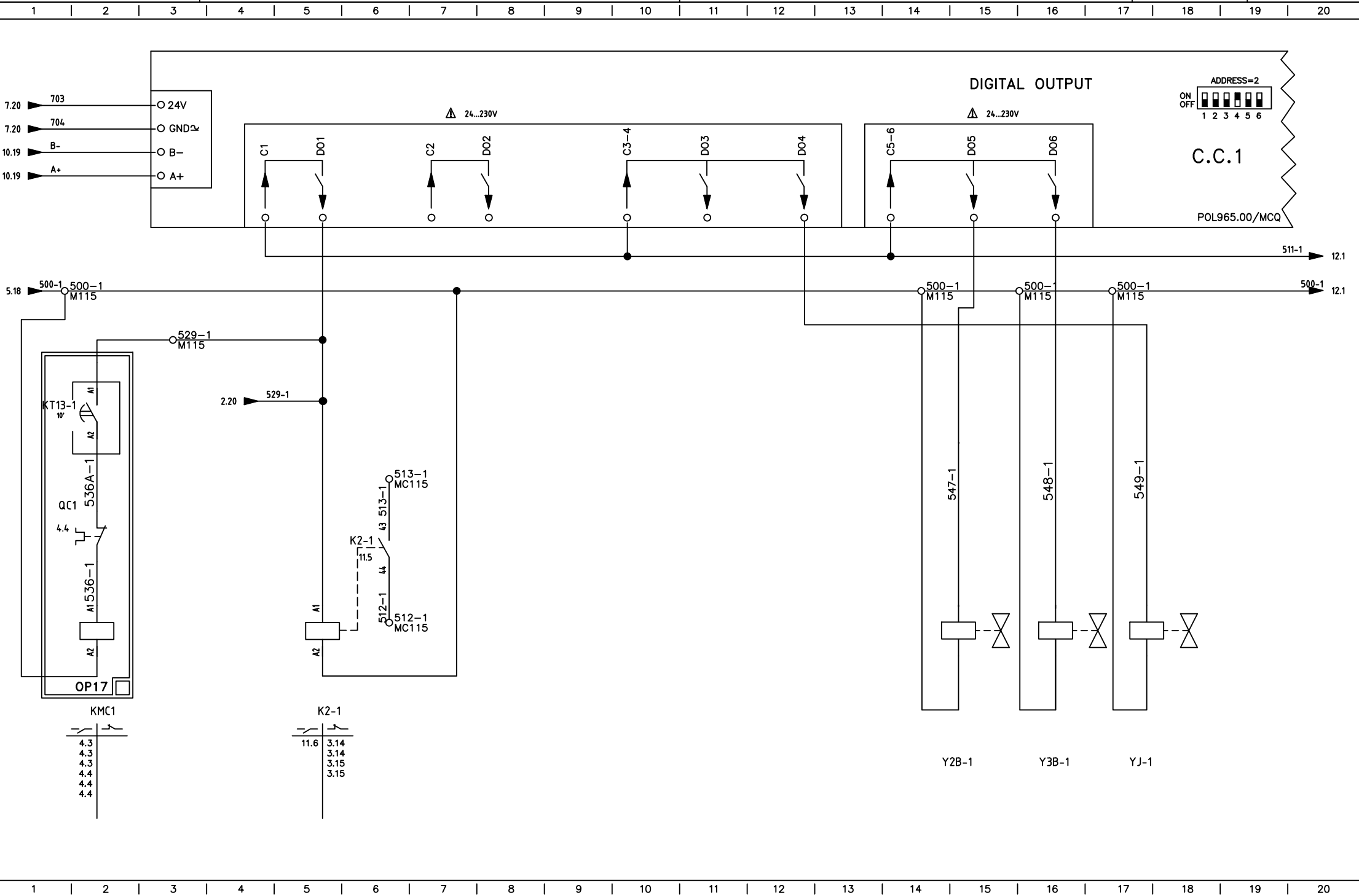


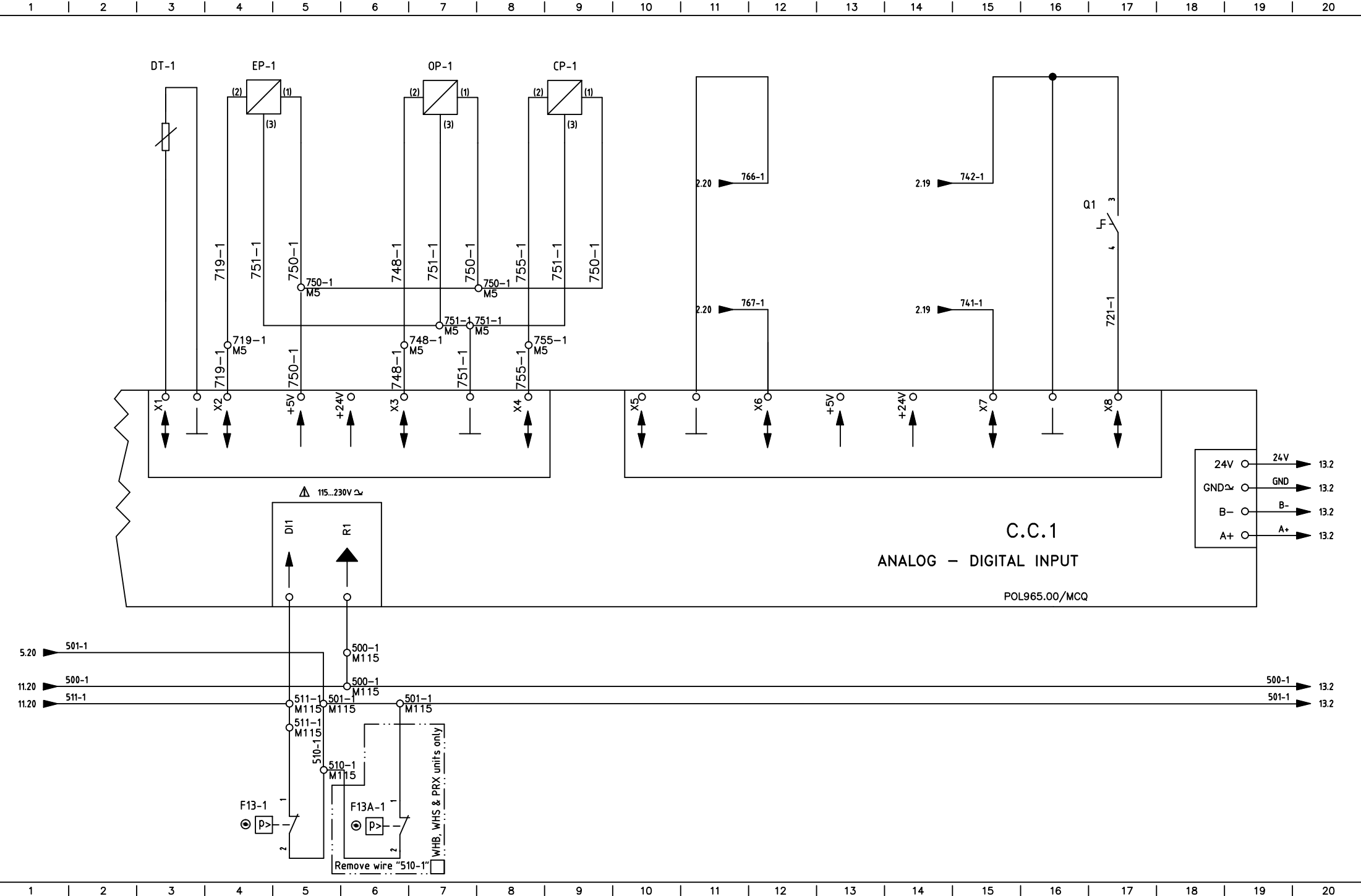


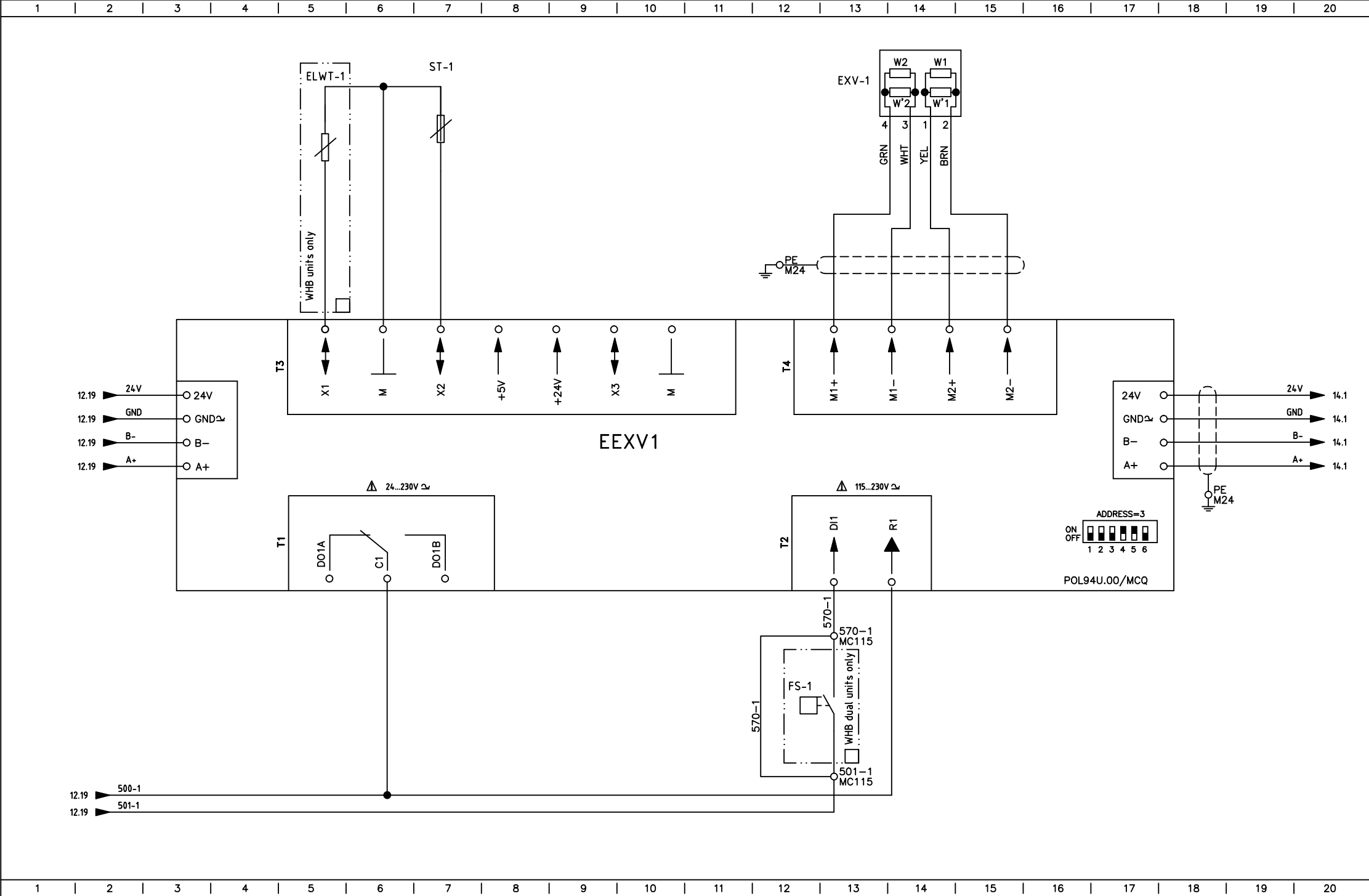


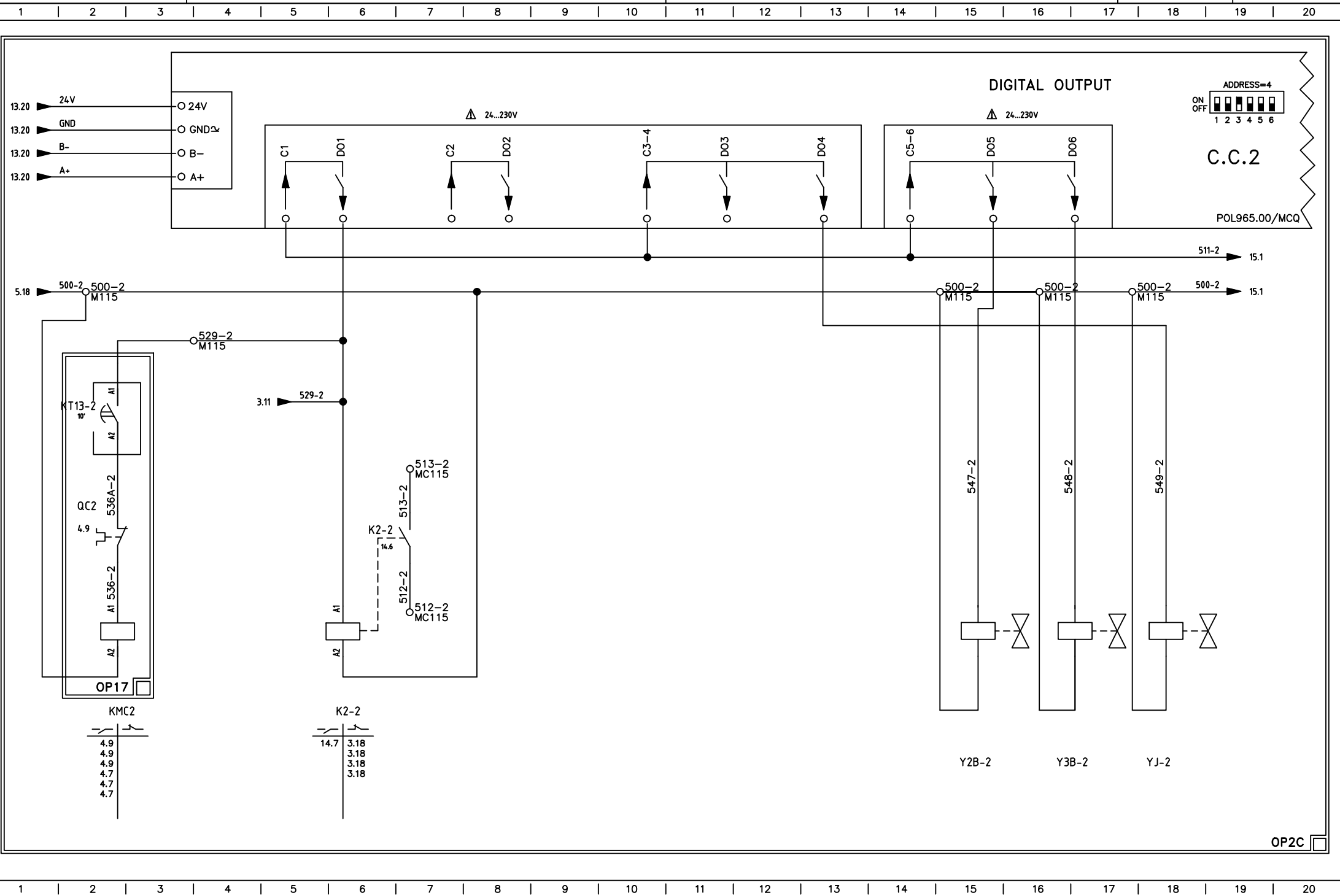


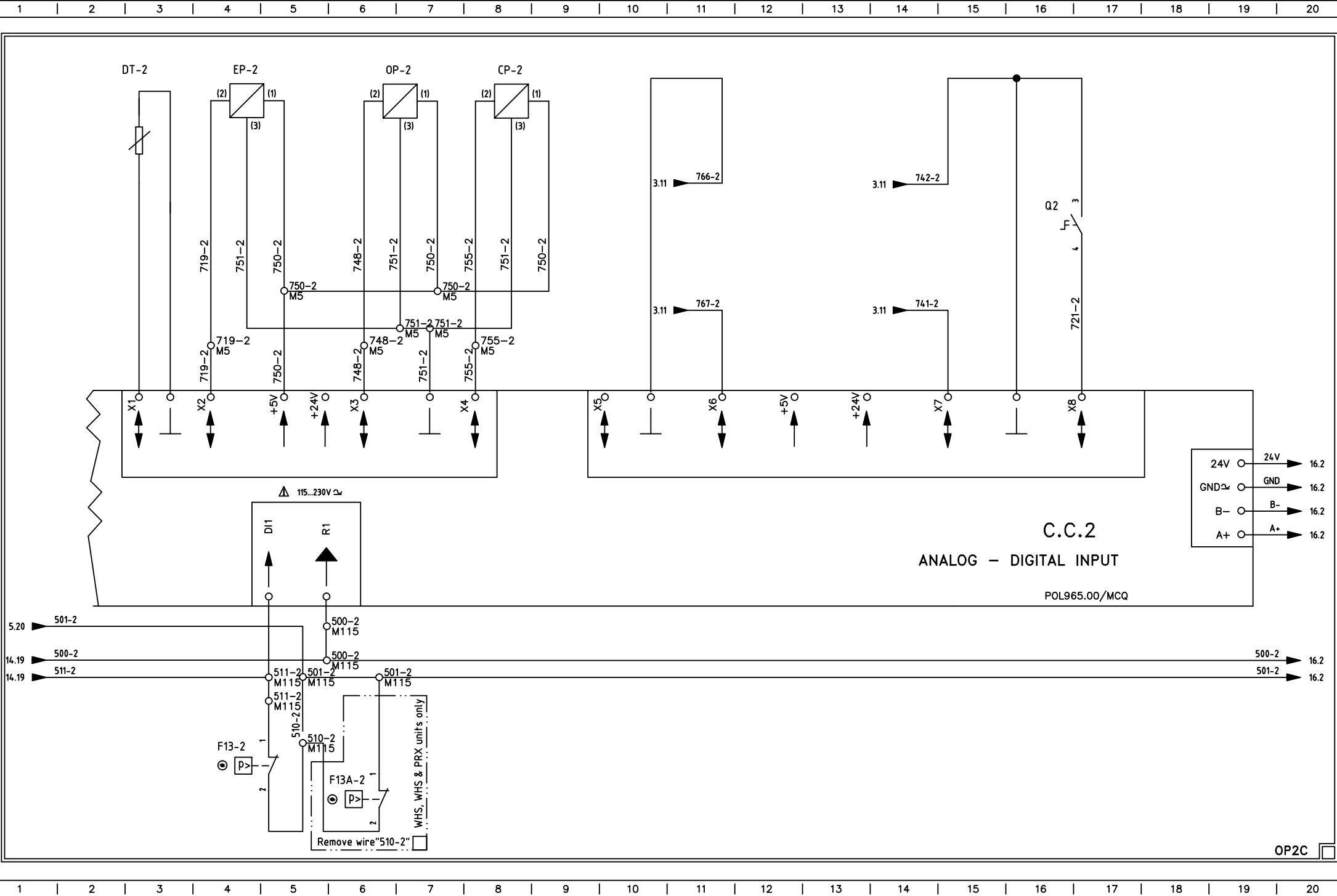


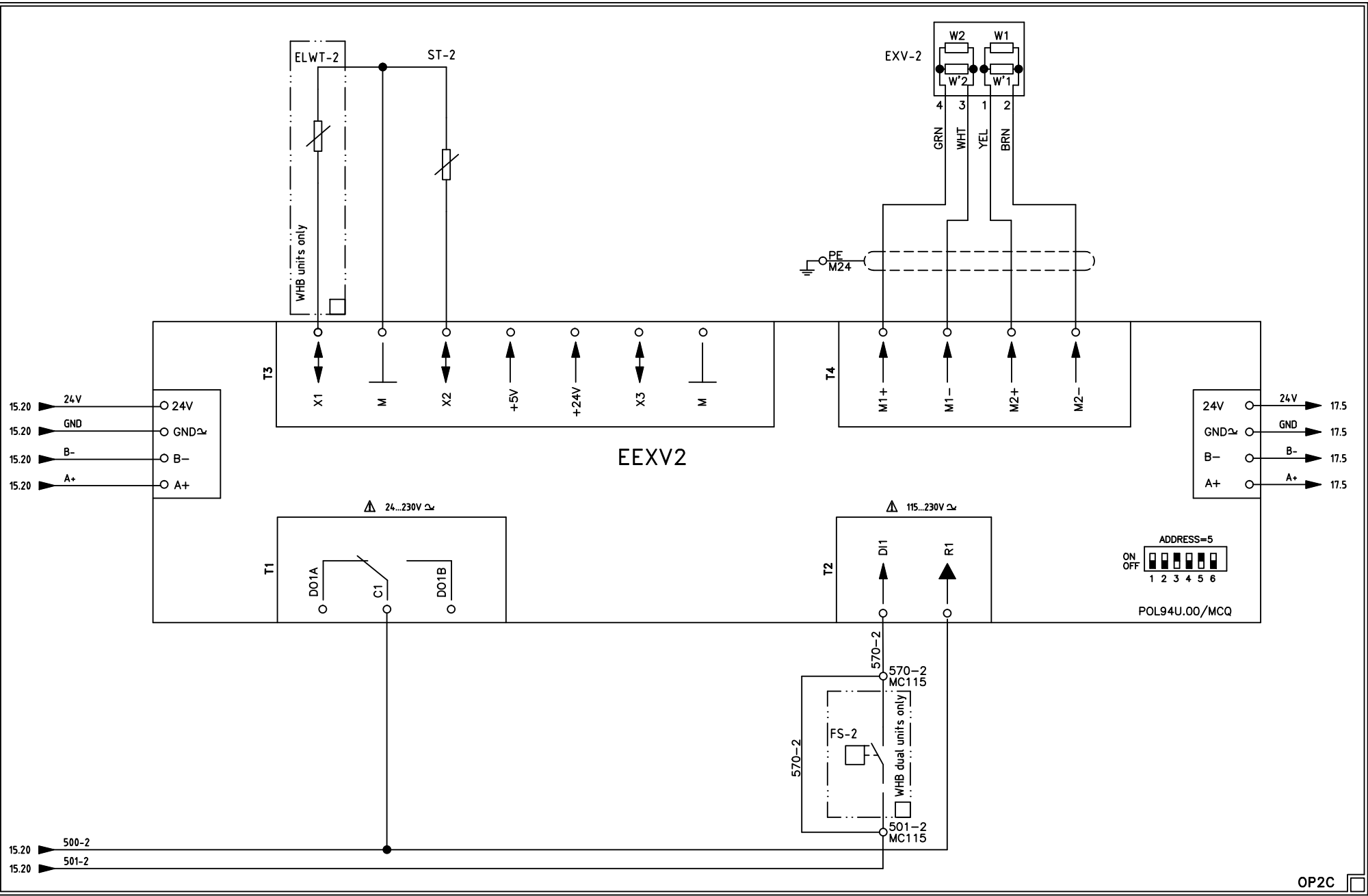


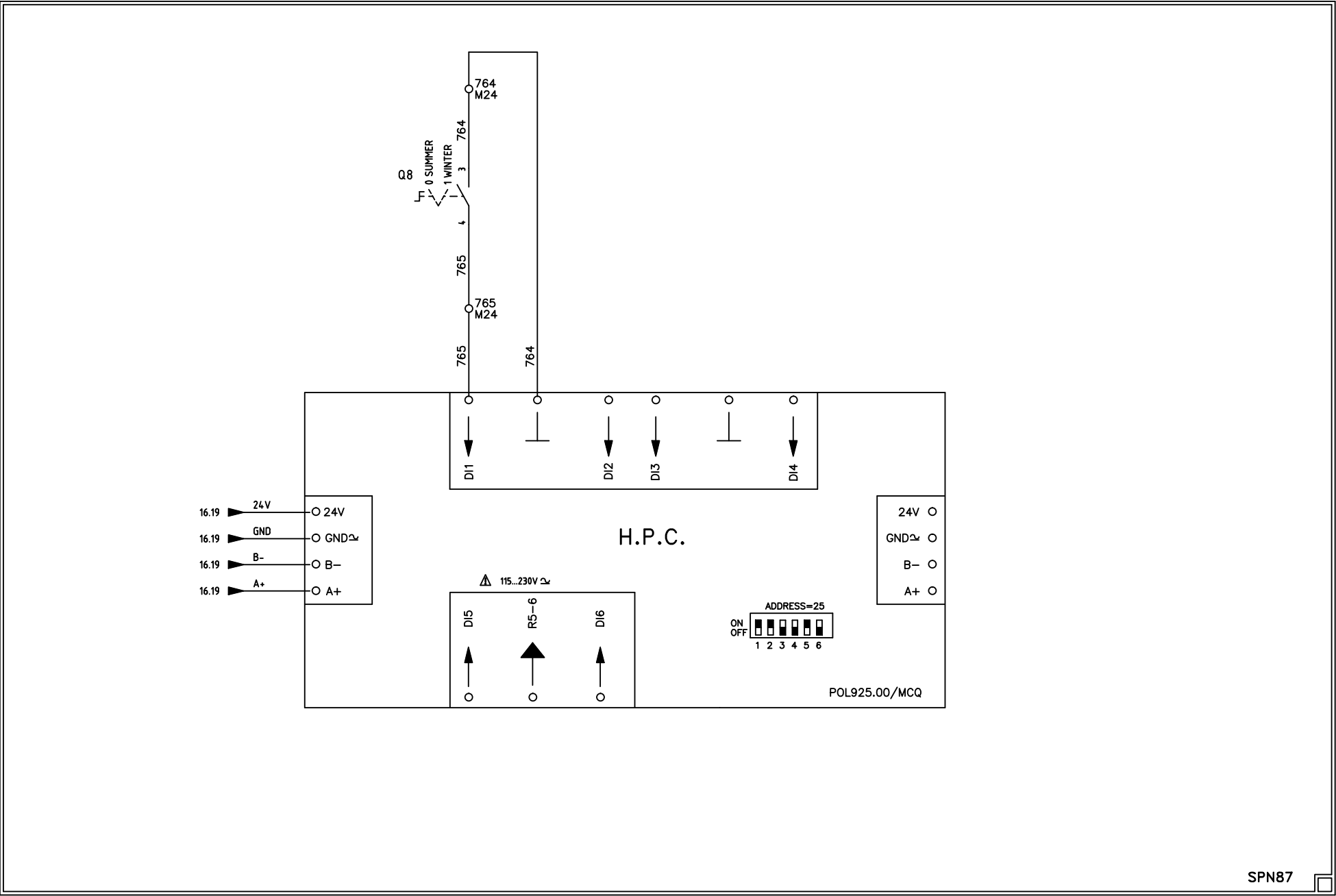


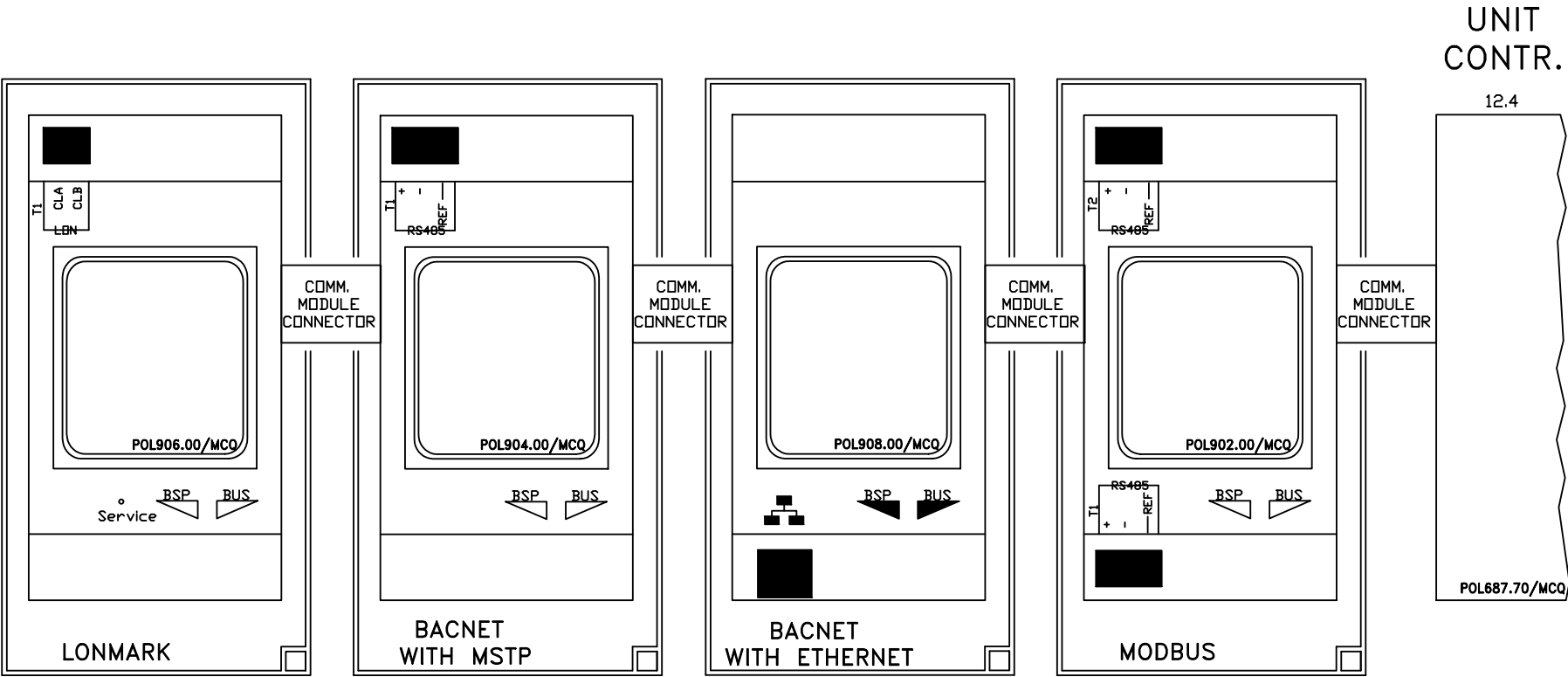












- NOTES:
- 1. ANY OF THESE COMMUNICATION MODULES CAN DIRECTLY CONNECT TO THE LEFT SIDE OF THE UNIT CONTROLLER.
 - 2. COMMUNICATION MODULES CAN CONNECT TO EACH OTHER.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

QG - M400

QG	-	M400	400V	PE	PE	PE	315
QG	-	M400	400V	PE	PE	PE	319
QG	-	M400	400V	10-U	10-U	10-U	314
QG	-	M400	400V	10-V	10-V	10-V	315
QG	-	M400	400V	10-V	10-V	10-V	317
QG	-	M400	400V	10-W	10-W	10-W	318

QG - M115

QG	-	M115	115V	500	500	500	516
QG	-	M115	115V	500	500	500	514
QG	-	M115	115V	500-1	500-1	500-1	514
QG	-	M115	115V	500-1	500-1	500-1	917
QG	-	M115	115V	500-1	500-1	500-1	915
QG	-	M115	115V	500-1	500-1	500-1	914
QG	-	M115	115V	500-1	500-1	500-1	106
QG	-	M115	115V	500-1	500-1	500-1	106
QG	-	M115	115V	500-1	500-1	500-1	91
QG	-	M115	115V	500-2	500-2	500-2	186
QG	-	M115	115V	500-2	500-2	500-2	186
QG	-	M115	115V	500-2	500-2	500-2	1216
QG	-	M115	115V	500-2	500-2	500-2	1214
QG	-	M115	115V	500-2	500-2	500-2	1217
QG	-	M115	115V	500-2	500-2	500-2	514
QG	-	M115	115V	500-2	500-2	500-2	122
QG	-	M115	115V	501	501	501	516
QG	-	M115	115V	501	501	501	514
QG	-	M115	115V	501-1	501-1	501-1	514
QG	-	M115	115V	501-1	501-1	501-1	106
QG	-	M115	115V	501-1	501-1	501-1	105
QG	-	M115	115V	501-2	501-2	501-2	185
QG	-	M115	115V	501-2	501-2	501-2	514
QG	-	M115	115V	501-2	501-2	501-2	186
QG	-	M115	115V	510-1	510-1	510-1	105
QG	-	M115	115V	510-2	510-2	510-2	185
QG	-	M115	115V	511-1	511-1	511-1	105
QG	-	M115	115V	511-1	511-1	511-1	105
QG	-	M115	115V	511-2	511-2	511-2	185
QG	-	M115	115V	511-2	511-2	511-2	185
QG	-	M115	115V	529-1	529-1	529-1	93
QG	-	M115	115V	529-2	529-2	529-2	124

QG - M24

QG	-	M24	24V	SHIELDED	SHIELDED	SHIELDED	1118
QG	-	M24	24V	SHIELDED	SHIELDED	SHIELDED	1112
QG	-	M24	24V	PE	PE	PE	1412
QG	-	M24	24V	703	703	703	59
QG	-	M24	24V	703	703	703	710
QG	-	M24	24V	703	703	703	78
QG	-	M24	24V	704	704	704	59
QG	-	M24	24V	741-1	741-1	741-1	217
QG	-	M24	24V	741-2	741-2	741-2	39
QG	-	M24	24V	742-1	742-1	742-1	217
QG	-	M24	24V	742-2	742-2	742-2	39
QG	-	M24	24V	764	764	764	158
QG	-	M24	24V	765	765	765	158

QG - M5

QG	-	M5	5V	719-1	719-1	719-1	104
QG	-	M5	5V	719-2	719-2	719-2	184
QG	-	M5	5V	748-1	748-1	748-1	106
QG	-	M5	5V	748-2	748-2	748-2	186
QG	-	M5	5V	750-1	750-1	750-1	108
QG	-	M5	5V	750-1	750-1	750-1	105
QG	-	M5	5V	750-2	750-2	750-2	185
QG	-	M5	5V	750-2	750-2	750-2	187
QG	-	M5	5V	751-1	751-1	751-1	107
QG	-	M5	5V	751-1	751-1	751-1	107
QG	-	M5	5V	751-2	751-2	751-2	187
QG	-	M5	5V	751-2	751-2	751-2	187
QG	-	M5	5V	755-1	755-1	755-1	108
QG	-	M5	5V	755-2	755-2	755-2	188

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
			G	ITEM	DESCRIPTION											Fg/Sh	Q.ty			
				A/V	ENERGY METER											2	1			
				C1	POWER FACTOR CORRECTION 1											4	1			
				C2	POWER FACTOR CORRECTION 2											4	1			
				C.C.1	CONTROL COMPRESSOR 1											11	1			
				C.C.2	CONTROL COMPRESSOR 2											14	1			
				CEWT	CONDENSATOR ENTERING WATER TEMPERATURE											6	1			
				CLWT	CONDENSATOR LEAVING WATER TEMPERATURE											6	1			
				CP-1	CONDENSER PRESSURE TRANSDUCER 1											12	1			
				CP-2	CONDENSER PRESSURE TRANSDUCER 2											15	1			
				CT1-1	CURRENT TRANSFORMER											2	1			
				CT1-2	CURRENT TRANSFORMER											3	1			
				CT2-1	CURRENT TRANSFORMER											2	1			
				CT2-2	CURRENT TRANSFORMER											3	1			
				CT3-1	CURRENT TRANSFORMER											2	1			
				CT3-2	CURRENT TRANSFORMER											3	1			
				DT-1	DISCHARGE TEMP. SENSOR 1											12	1			
				DT-2	DISCHARGE TEMP. SENSOR 2											15	1			
				EEWT	EVAPORATOR ENTERING WATER TEMPERATURE											6	1			
				EEXV1	EXPANSION COMPRESSOR 1											13	1			
				EEXV2	EXPANSION COMPRESSOR 2											16	1			
				ELWT	EVAPORATOR LEAVING WATER TEMPERATURE											6	1			
				ELWT-1	EVAPORATOR LEAVING WATER TEMP. SENSOR 1											13	1			
				ELWT-2	EVAPORATOR LEAVING WATER TEMP. SENSOR 2											16	1			
				EP-1	EVAPORATOR PRESSURE TRANSDUCER 1											12	1			
				EP-2	EVAPORATOR PRESSURE TRANSDUCER 2											15	1			
				ES1	SOFT-STARTER # 1											2	1			
				ES2	SOFT-STARTER # 2											3	1			
				EXV-1	ELECTRONIC EXPANSION VALVE 1											13	1			
				EXV-2	ELECTRONIC EXPANSION VALVE 2											16	1			
				F0	COMPRESSOR HEATER FUSES											3	1			
				F1	COMPRESSOR FUSES 1											2	1			
				F2	COMPRESSOR FUSES 2											3	1			
				F10	THERMOSTAT (CLOSED >30°C)											5	1			
				F13-1	MECH. HIGH PRESSURE SWITCH 1											12	1			
				F13-2	MECH. HIGH PRESSURE SWITCH 2											15	1			
				F13A-1	MECH. HIGH PRESSURE SWITCH 1											12	1			
				F13A-2	MECH. HIGH PRESSURE SWITCH 2											15	1			
				F59	PROTECTION FUSE											5	1			
				F59-1	PROTECTION FUSE											5	1			
				F59-2	PROTECTION FUSE											5	1			
				F60	PROTECTION FUSE											5	1			
				F112	PHASE VOLT MONITOR											5	1			
				F112A	UNDER/OVERVOLTAGE CONTROL											5	1			
				F130	AUXILIARY PROTECTION FUSES											5	1			
				F130A	UNDER/OVERVOLTAGE CONTROL FUSE											5	1			
				F140	PHASE VOLT MONITOR FUSE											2	1			
				F.C.1	REMOTE FANS CONTROL BOARD											9	1			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	

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ITEMDESCRIPTIONFg/ShQ.ty

F.C.3REMOTE FANS CONTROL BOARD101

FC1POWER FACTOR CORRECTION FUSES 141

FC2POWER FACTOR CORRECTION FUSES 241

FSEVAPORATOR FLOW SWITCH 171

FS-1EVAPORATOR FLOW SWITCH 1131

FS-2EVAPORATOR FLOW SWITCH 2161

H.P.C.HEAT PUMP CONTROLLER171

HL1ALARM SIGNAL LIGHT251

HL2ALARM SIGNAL LIGHT251

HL3ALARM SIGNAL LIGHT251

HL4ALARM SIGNAL LIGHT251

K2-1AUXILIARY RELAY111

K2-2AUXILIARY RELAY141

K11CONTACTOR51

K12AUXILIARY RELAY51

KMC1POWER FACTOR CORRECTION CONTACTORS 1111

KMC2POWER FACTOR CORRECTION CONTACTORS 2141

KPCCONDENSER WATER PUMP251

KPE-1PUMP CONTACT251

KPE-2PUMP CONTACT251

KREXTERNAL FAULT251

KRF2/2REMOTE FAN 2/2 FREE CONTACT251

KRF2/3REMOTE FAN 2/3 FREE CONTACT251

KRF2/4REMOTE FAN 2/4 FREE CONTACT251

KRF3/2REMOTE FAN 3/2 FREE CONTACT251

KRF3/3REMOTE FAN 3/3 FREE CONTACT251

KRF3/4REMOTE FAN 3/4 FREE CONTACT251

KRF2/1REMOTE FAN 2/1 FREE CONTACT251

KRF3/1REMOTE FAN 3/1 FREE CONTACT251

KT13-1TIME DELAY RELAY111

KT13-2TIME DELAY RELAY141

M1COMPRESSOR 121

M2COMPRESSOR 231

OP2C2 COMPRESSOR UNIT31

OP15VARIABLE PHASE MONITOR51

OP16ENERGY METER21

OP17POWER FACTOR CORRECTION41

OP19CURRENT LIMIT21

OP95COMPRESSOR CIRCUIT BREAKER21

OP-1OIL PRESSURE TRANSDUCER 1121

OP-2OIL PRESSURE TRANSDUCER 2151

Q0UNIT ON - OFF71

Q1CIRCUIT SWITCH 1121

Q2CIRCUIT SWITCH 2151

Q5DOUBLE SETPOINT251

Q8HEAT PUMP SWITCH171

Q10MAIN SWITCH21

1234567891011121314151617181920

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SCO = Standard Compressor Fuse + Overcurrent						
ITEM		3118-R134a	3120-R134a	3121-R134a	3122-R134a	3123-R134a
		HSS3118	HSS3120	HSS3121	HSS3122	HSS3123
F1,F2,F3		100 A gG NH00	125 A gG NH00	125 A gG NH00	160 A gG NH00	200 A gG NH1
F5-1,2,3	Set (OP11)	49 A	58 A	65 A	74 A	88 A
F1,F2,F3	Set (OP95)	84 A	101 A	112 A	127 A	152 A

SCO = Standard Compressor Fuse + Overcurrent					
ITEM		3216-R134a	3218-R134a	3220-R134a	3221-R134a
		HSA167	HSA179	HSA197	HSA203
FLA		112 A	134 A	161 A	182 A
F1,F2,F3		160 A gG NH00	160 A gG NH00	200 A gG NH1	250 A gG NH1
F5-1,2,3	Set (OP11)	68 A	82 A	98 A	111 A
F1,F2,F3	Set (OP95)	118 A	141 A	169 A	191 A

SCO = Standard Compressor Fuse + Overcurrent					
ITEM		4221-R134a	4222-R134a	4223-R134a	4224-R134a
		HSA205	HSA220	HSA235	HSS4224
F1,F2,F3		250 A gG NH1	315 A gG NH2	355 A gG NH2	400 A gG NH2
F5-1,2,3	Set (OP11)	119 A	147 A	172 A	195 A
F1,F2,F3	Set (OP95)	205 A	254 A	296 A	337 A

3200-Fr4 (R410A)	SCO = Standard Compressor Fuse + Overcurrent									
	ITEM		3216-R410	3218-R410	3220-R410	3221-R410	4221-R410	4222-R410	4223-R410	4224-R410
			HSW167	HSW179	HSW197	HSW203	HSA205	HSA220	HSA235	HSS4224
	F1,F2,F3		250A gG NH1	250A gG NH1	315A gG NH2	355A gG NH2	355A gG NH2	500A gG NH3	630A gG NH3	0
	F5-1,2,3	Set (OP11)	115 A	137 A	167 A	189 A	198 A	236 A	279 A	0 A
	F1,F2,F3	Set (OP99)	198 A	236 A	288 A	326 A	341 A	407 A	481 A	0 A

3100	OP17 Power Factor Correction - Capacitor + Overcurrent					
	ITEM	3118-R134a	3120-R134a	3121-R134a	3122-R134a	3123-R134a
		HSS3118	HSS3120	HSS3121	HSS3122	HSS3123
	FC1,2,3	25 A gG E18	25 A gG E18	25 A gG E18	25 A gG E18	35 A gG E18
	QC1,2,3	16 A	16 A	16 A	16 A	25 A

3200	OP17 Power Factor Correction - Capacitor + Overcurrent				
	ITEM	3216-R134a	3218-R134a	3220-R134a	3221-R134a
		HSA167	HSA179	HSA197	HSA203
	FC1,2,3	35 A gG E18	35 A gG E18	35 A gG E18	35 A gG E18
	QC1,2,3	25 A	25 A	25 A	25 A

Fr4	OP17 Power Factor Correction - Capacitor + Overcurrent				
	ITEM	4221-R134a	4222-R134a	4223-R134a	4224-R134a
		HSA205	HSA220	HSA235	HSS4224
	FC1,2,3	50 A gG E18	63 A gG E18	63 A gG E18	63 A gG E18
	QC1,2,3	30 A	40 A	40 A	40 A

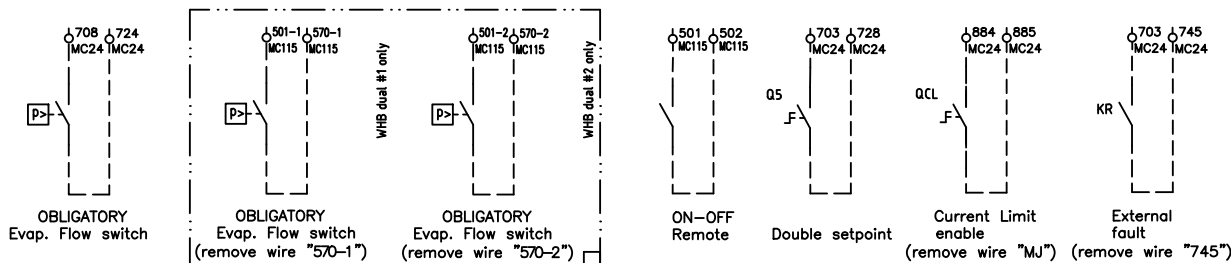
3200-Fr4 (R410A)	OP17 Power Factor Correction - Capacitor + Overcurrent								
	ITEM	3216-R410	3218-R410	3220-R410	3221-R410	4221-R410	4222-R410	4223-R410	4224-R410
		HSW167	HSW179	HSW197	HSW203	HSA205	HSA220	HSA235	HSS4224
	FC1,2,3	50 A gG E18	50 A gG E18	50 A gG E18	50 A gG E18	63 A gG E18	63 A gG E18	63 A gG E18	63 A gG E18
	QC1,2,3	30 A	30 A	30 A	30 A	40 A	40 A	40 A	40 A

CF = Control Fuses + Transformer			
ITEM	1 Comp	2 Comp	3 Comp
F0	2 A gG E14	4 A gG E14	4 A gG E14
F140	2 A gG E14	2 A gG E14	2 A gG E14
F130/F130A	4 A gG E14	4 A gG E14	10 A gG E14
T1	500 VA	500 VA	1000 VA
Q12	4 A 6kA - C	4 A 6kA - C	8 A 6kA - C
T2	200 VA	200 VA	200 VA
F59	4 A gG CH10	4 A gG CH10	4 A gG CH10
F59-1	4 A gG CH10	4 A gG CH10	4 A gG CH10
F59-2	-	4 A gG CH10	4 A gG CH10
F59-3	-	-	4 A gG CH10
F60	4 A gG CH10	4 A gG CH10	4 A gG CH10

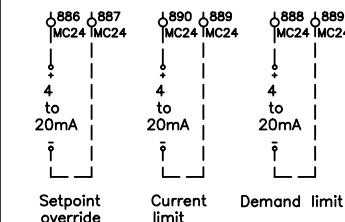
Option	Description
OP10	Evaporator Heater
OP11	Thermal Relay
OP15	Variable Phase monitor
OP16	Energy Meter
OP17	Power Factor Correction
OP19	Current limit
OP95	Compressor Circuit Breaker
OP2C	2 compressors unit
SPN87	Heat Pump Version
SPN95	Forced Ventilatin

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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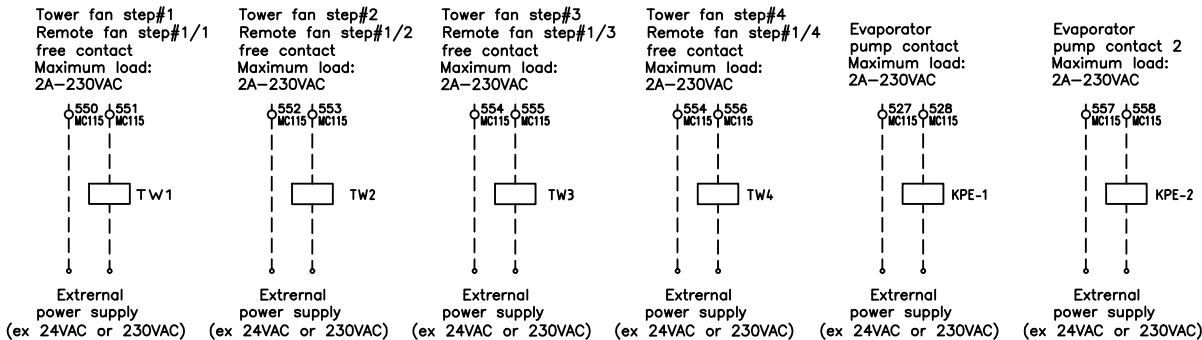
Digital input terminals



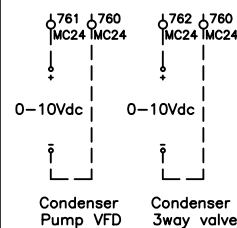
Analog input terminals



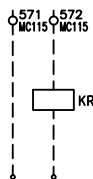
Digital output terminals



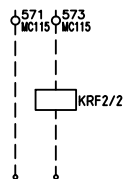
Analog output terminals



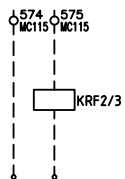
Remote fan step#2/1 free contact
Maximum load:
2A-230VAC



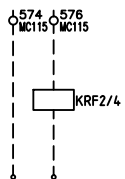
Remote fan step#2/2 free contact
Maximum load:
2A-230VAC



Remote fan step#2/3 free contact
Maximum load:
2A-230VAC

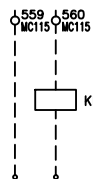


Remote fan step#2/4 free contact
Maximum load:
2A-230VAC

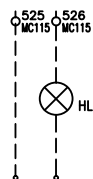


2 circuits ME units only

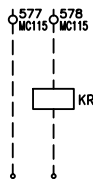
Condenser pump free contact
Maximum load:
2A-230VAC



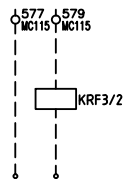
Alarm NO (default)
Maximum load:
2A-230VAC



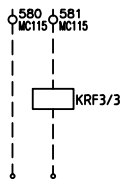
Remote fan step#3/1 free contact
Maximum load:
2A-230VAC



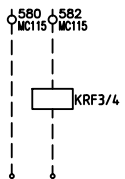
Remote fan step#3/2 free contact
Maximum load:
2A-230VAC



Remote fan step#3/3 free contact
Maximum load:
2A-230VAC

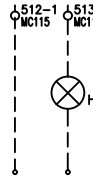


Remote fan step#3/4 free contact
Maximum load:
2A-230VAC

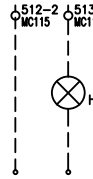


3 circuits ME units only

Compressor#1 Status
Maximum load:
10A-230VAC

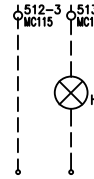


Compressor#2 Status
Maximum load:
10A-230VAC



OP2C

Compressor#3 Status
Maximum load:
10A-230VAC



OP3C

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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