




03	15/03/2007	Following SAT comments
02	15/12/2006	LSHL-01 / PU-01 & F-01 wiring numbers
01	25/08/2006	Components list / WF1 loop valve by V.F.C. / DI loop valve removed
00	02/08/2006	Original release
INDICE	DATE	MODIFICATION

Vérifié par: <b>PJ</b> 	Dessiné par: <b>JP</b> 
Checked by:	Drawn by:

 <p><b>LANCER</b></p> <p>30 Boulevard de l'Industrie Zone Industrielle De Pahin 31170 TOURNEFEUILLE FRANCE Tél : (33) 05.61.15.11.11, Fax : (33) 05.61.15.16.16</p>	Numéro de plan: <b>E665991P</b>
	Drawing number: <b>E665991P</b>
	Numéro de Tag: <b>09-GW-001</b>
	Tag number: <b>09-GW-001</b>

Type de laveur: <b>1600 PRO DPSS</b>	Numéro de série: <b>62070049</b>
Washer type:	Serial number:

**ELECTRICAL DIAGRAM**

**AGILENT TECHNOLOGIES**

**1 / 28**

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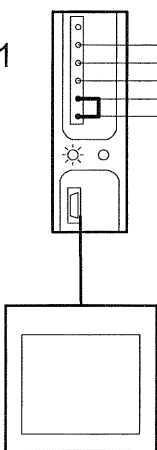
AX1

ALLEN BRADLEY

1746-A7

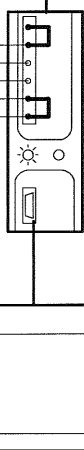
	0	1	2	3	4	5	6
AX2	AX3	IX1	OX1	OX2	IX2	IX3	IX4
54							
ALLEN BRADLEY 1746-P2	ALLEN BRADLEY 1747-L542	ALLEN BRADLEY 1746-IB16	ALLEN BRADLEY 1746-OW16	ALLEN BRADLEY 1746-OW16	ALLEN BRADLEY 1746-N14	ALLEN BRADLEY 1746-N14	ALLEN BRADLEY 1746-NR4

CI-01

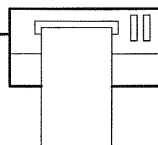


IO-01

CI-02



IO-02



PR-01

1

2

3

4

5

6

7

8

9

10

A

B

C

D

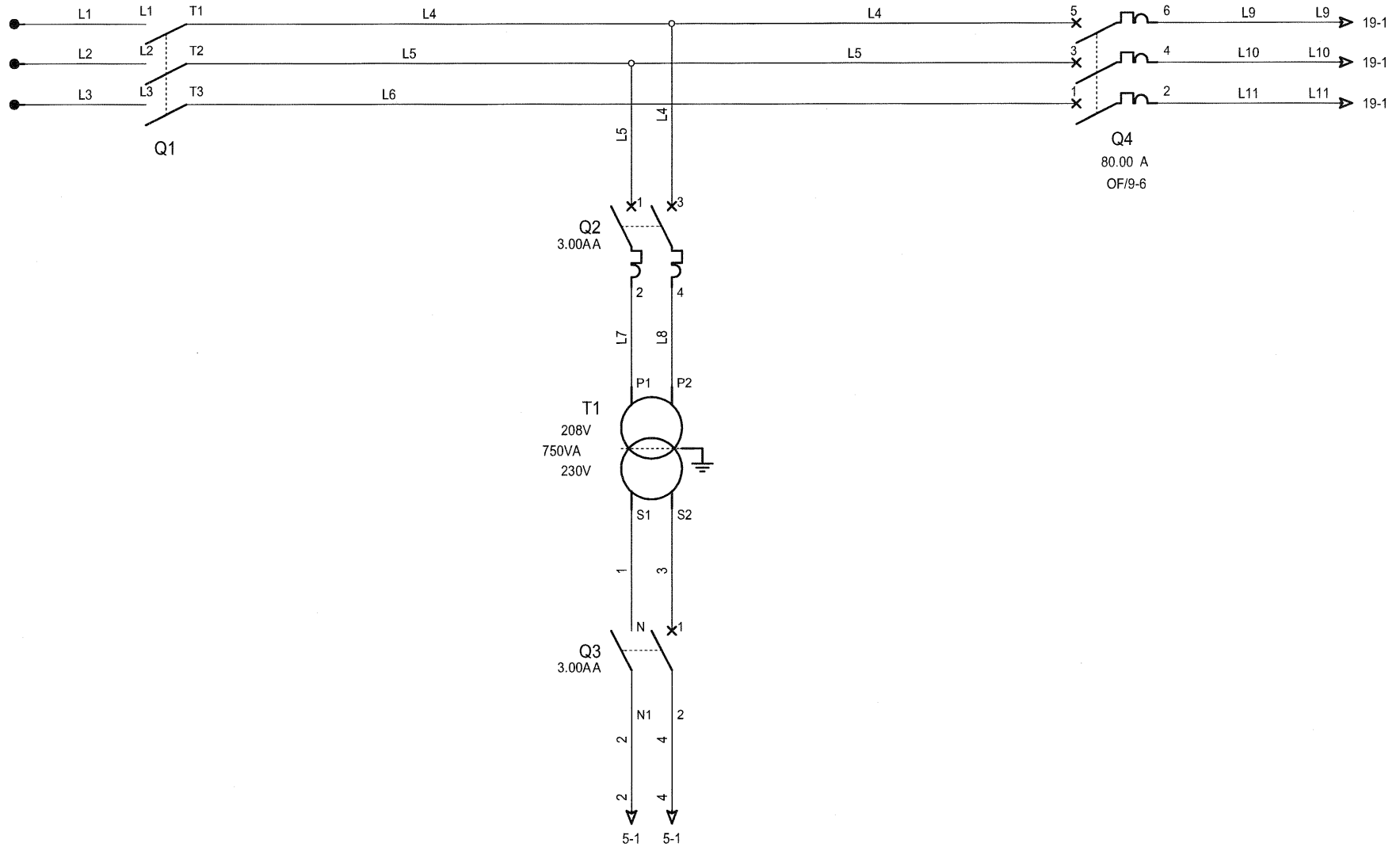
E

MAIN SWITCH

CIRCUIT BREAKER  
-----  
CONTROL CIRCUIT

CIRCUIT BREAKER  
-----  
POWER CIRCUIT

208V  
60Hz  
3-phase+PE



A

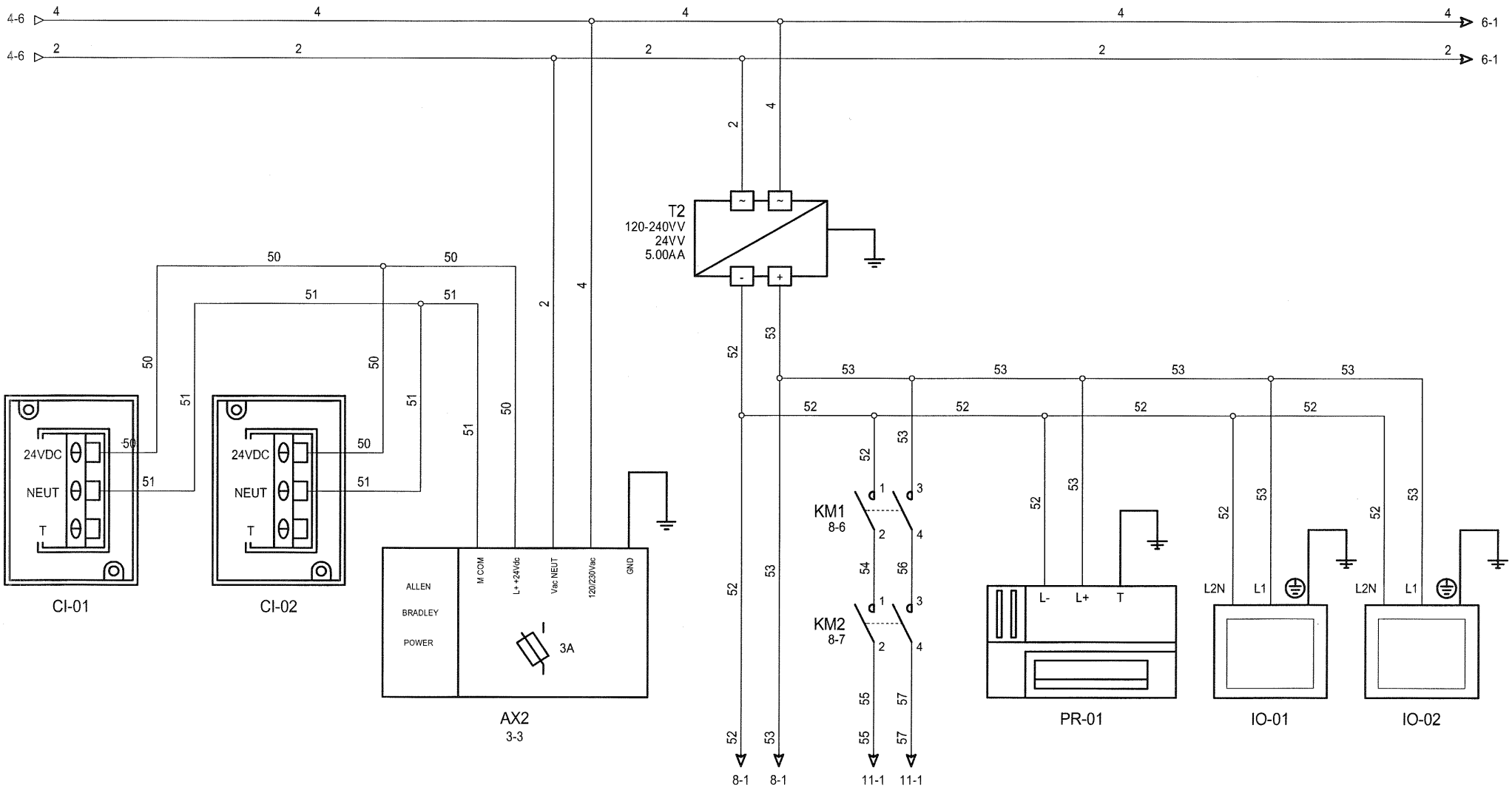
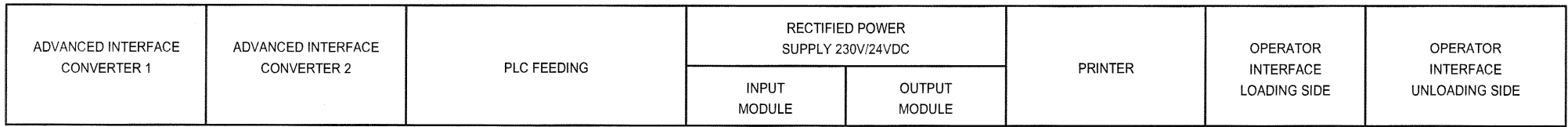
B

C

D

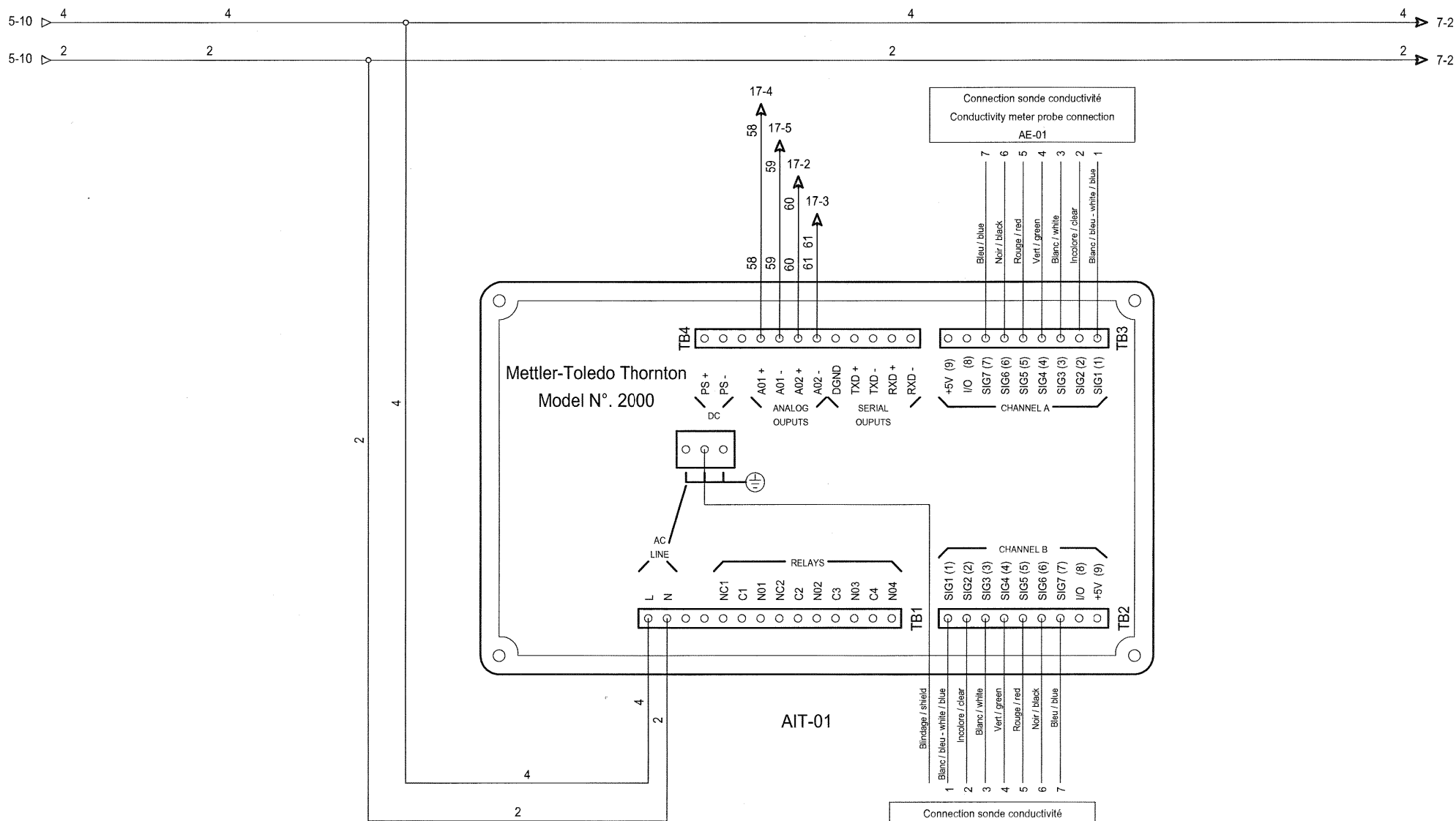
E

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10



1      2      3      4      5      6      7      8      9      10

CONDUCTIVITYMETER



Mettler-Toledo Thornton  
Model N° 2000

Connection sonde conductivité  
Conductivity meter probe connection  
AE-01

- 7 Bleu / blue
- 6 Noir / black
- 5 Rouge / red
- 4 Vert / green
- 3 Blanc / white
- 2 Incolors / clear
- 1 Blanc / bleu - white / blue

AIT-01

Connection sonde conductivité  
Conductivity meter probe connections  
AE-02

CHANNEL B

- 1 Blindage / shield
- 2 Blanc / bleu - white / blue
- 3 Incolors / clear
- 4 Blanc / white
- 5 Vert / green
- 6 Rouge / red
- 7 Noir / black
- 8 Bleu / blue
- 9 +5V (9)

1 2 3 4 5 6 7 8 9 10



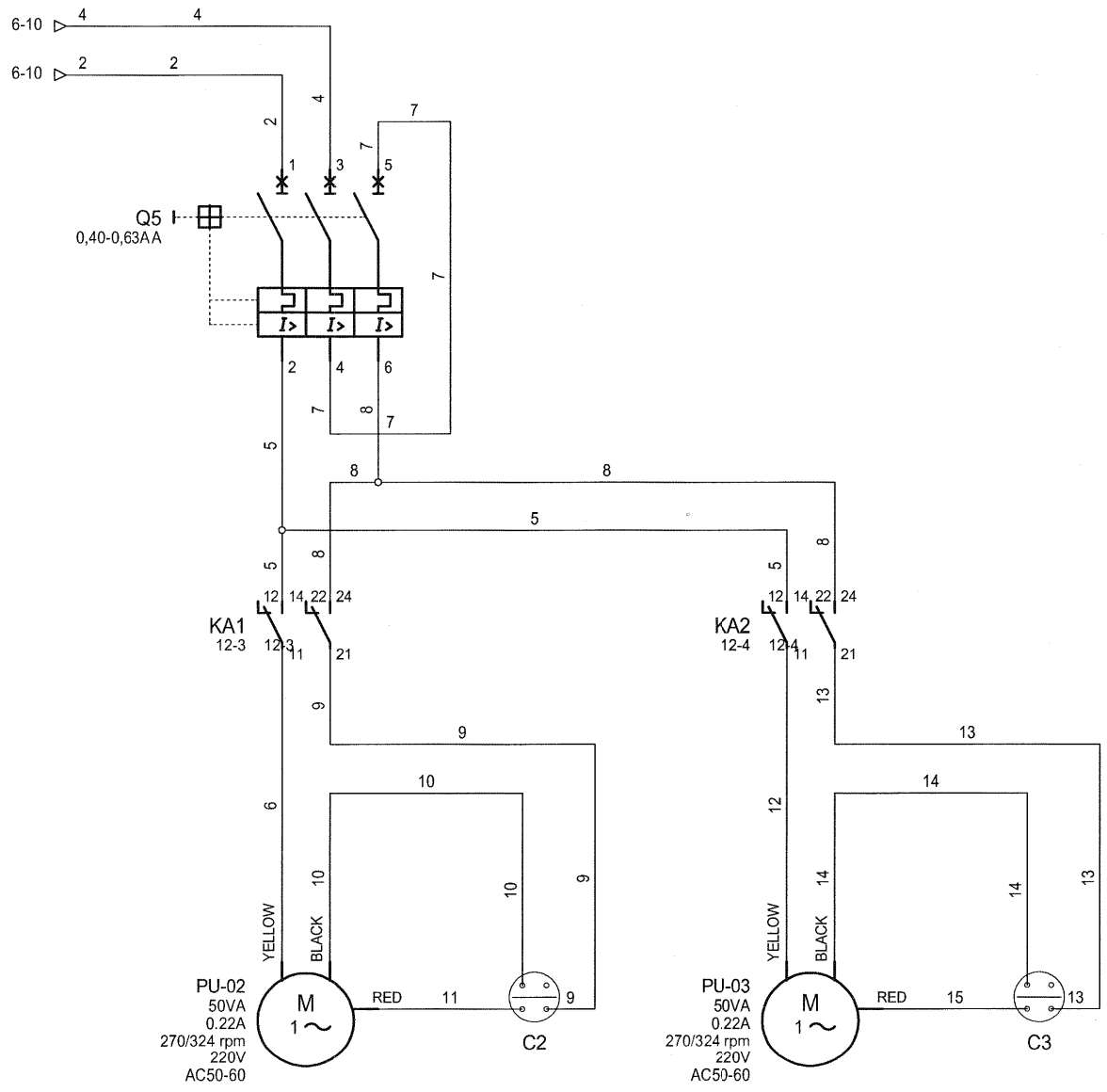
1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES

CONDUCTIVITYMETER

Numéro de plan: E665991P  
Drawing number:

Indice: 03  
Issue:

ACID DOSING PUMP                      DETERGENT DOSING PUMP



A  
B  
C  
D  
E

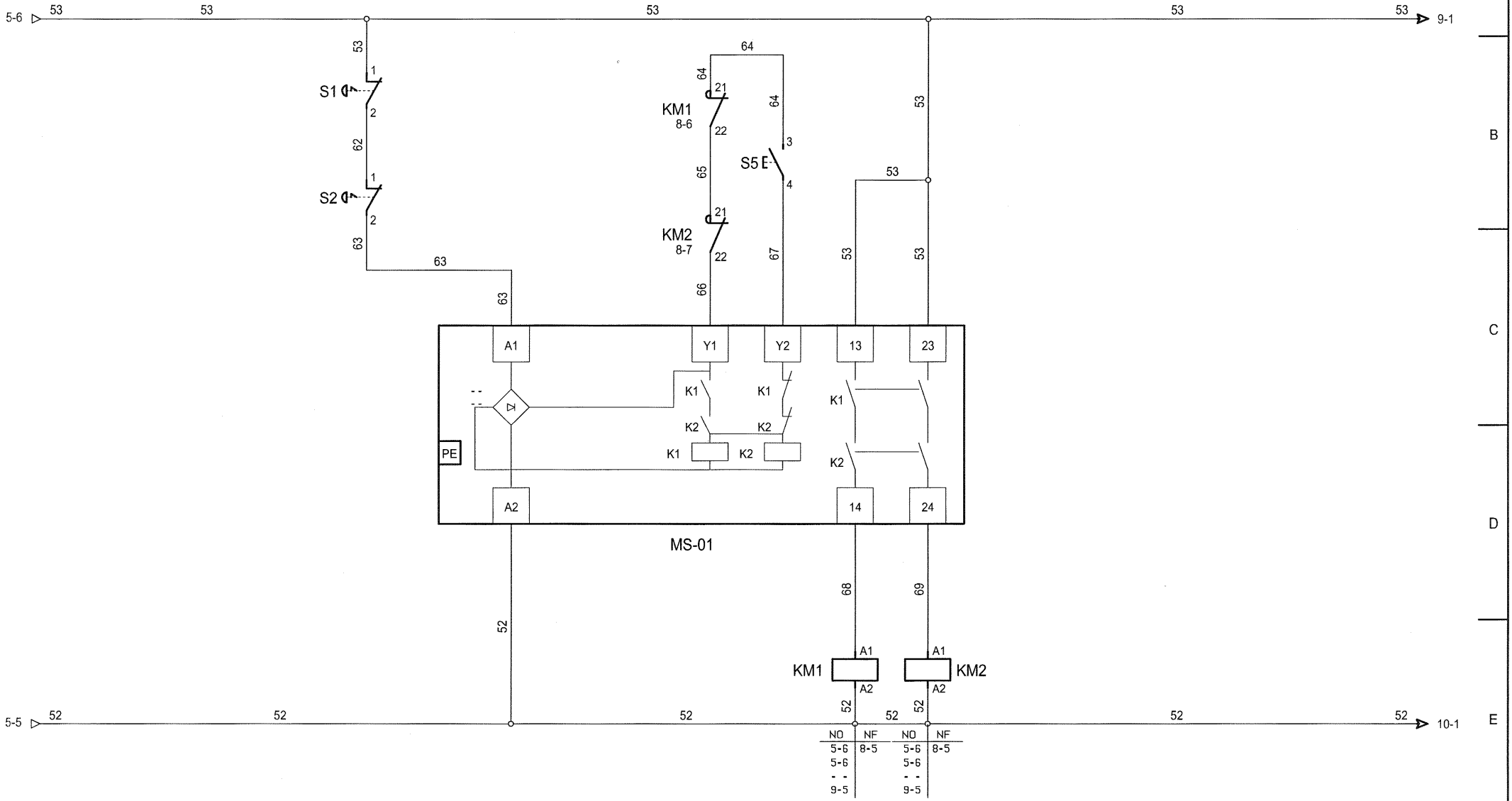
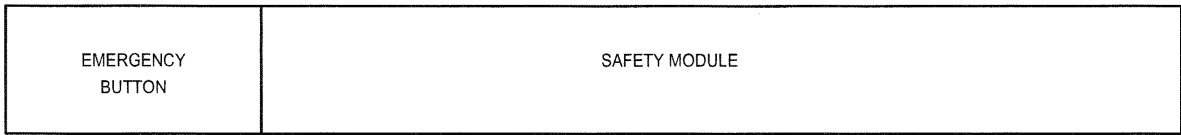
1    2    3    4    5    6    7    8    9    10



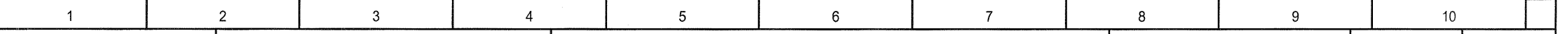
1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES

DOSING PUMPS

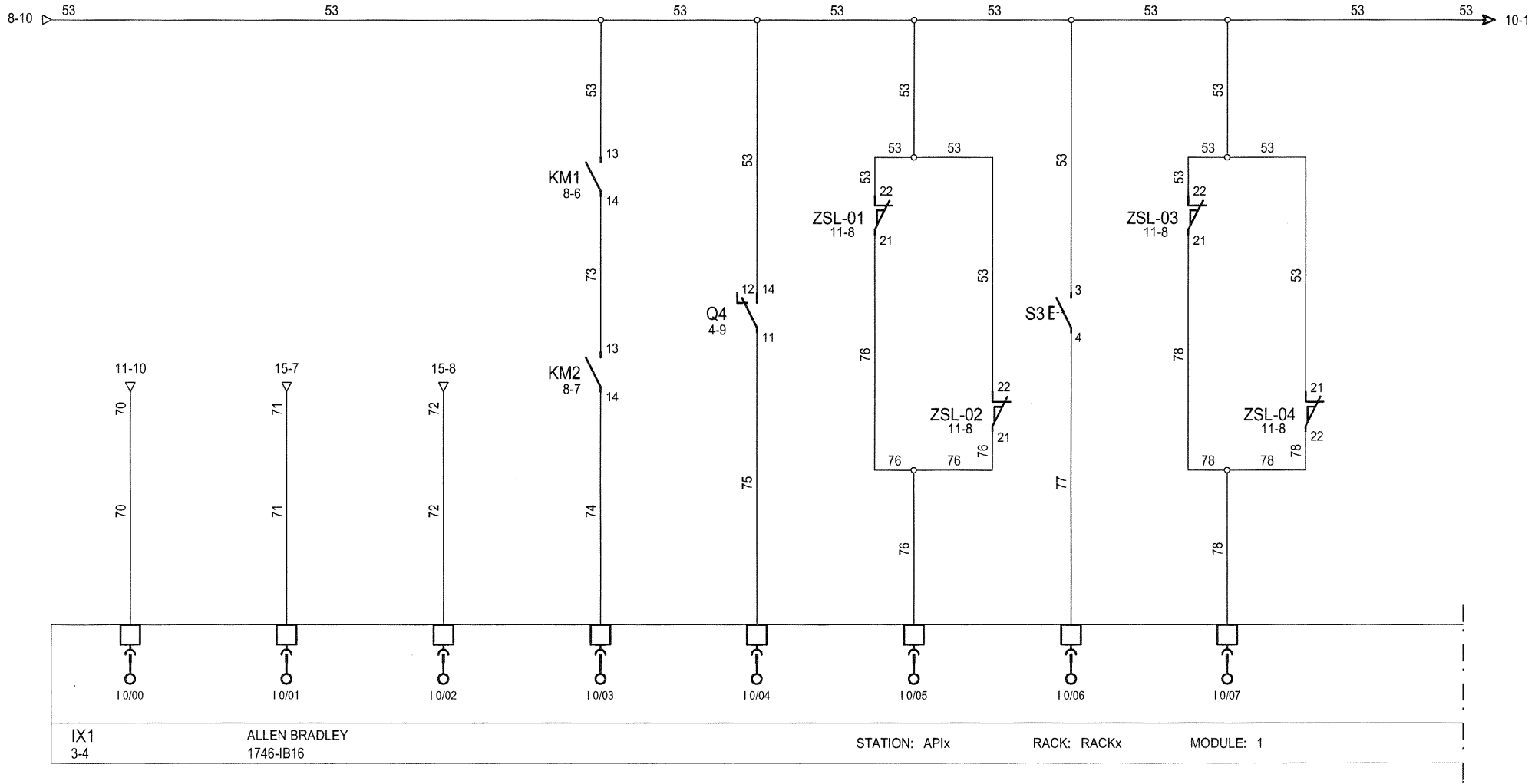
Número de plan:	E665991P	Indice:	03	7 / 28
Drawing number:		Issue:		



NO	NF	NO	NF
5-6	8-5	5-6	8-5
5-6		5-6	
...		...	
9-5		9-5	



SAFETY PRESSURE SWITCH	MINIMUM LEVEL PRESSURE SWITCH	FILLING PRESSURE SWITCH	EMERGENCY BUTTON SIGNAL	POWER CIRCUIT BREAKER CONTACT	DOOR SWITCH ----- LOADING SIDE	LOADING SIDE DOOR OPENING BUTTON	DOOR SWITCH ----- UNLOADING SIDE
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1      2      3      4      5      6      7      8      9      10



1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES

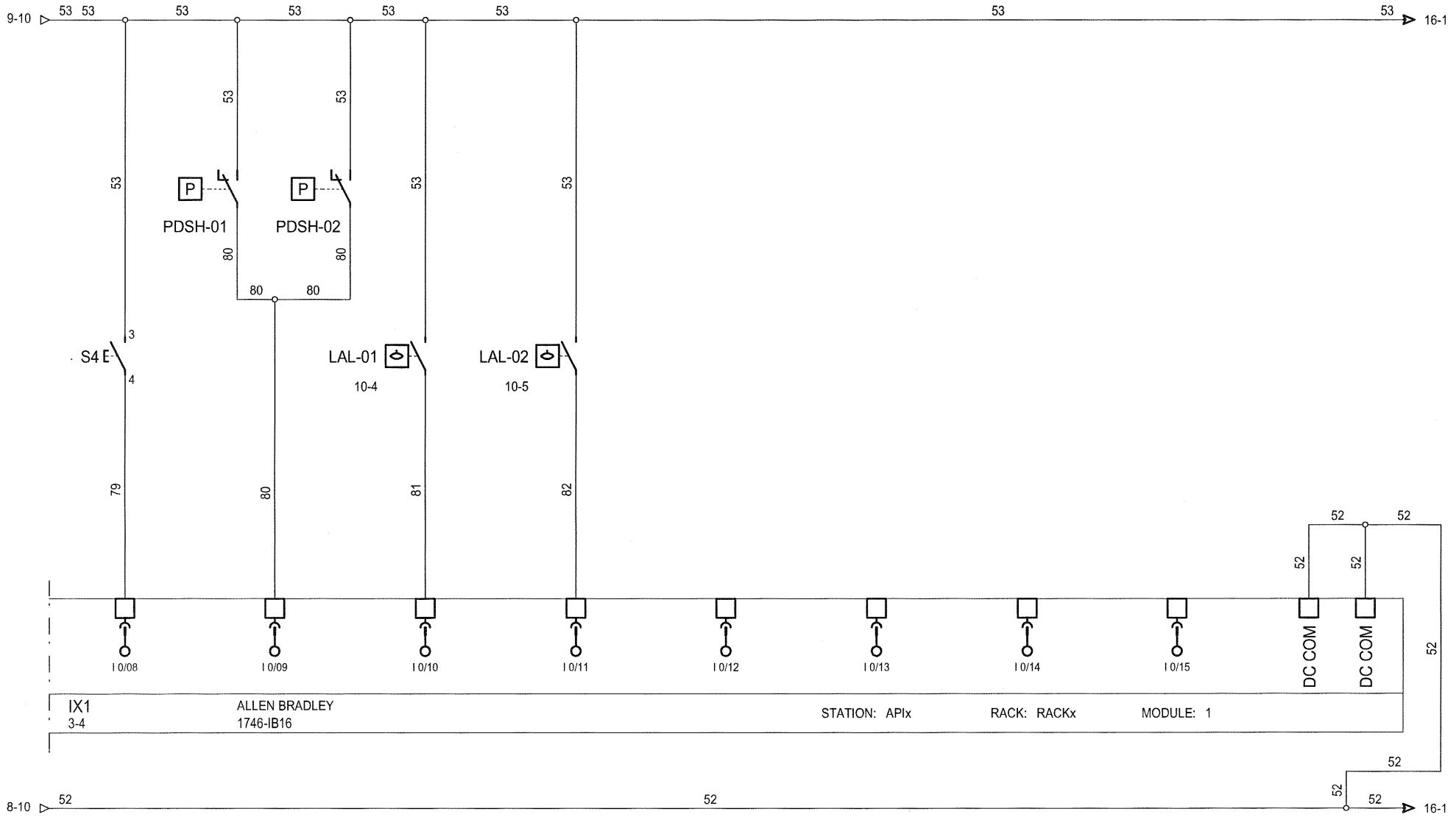
MODULE 2 - 16 DIGITAL INPUTS (1/2)

Numéro de plan: E665991P  
Drawing number:

Indice: 03  
Issue:

9 / 28

UNLOADING SIDE DOOR OPENING BUTTON	HEPA FILTER PRESSURE SWITCH	ACID FLOAT	DETERGENT FLOAT
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1      2      3      4      5      6      7      8      9      10



1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES

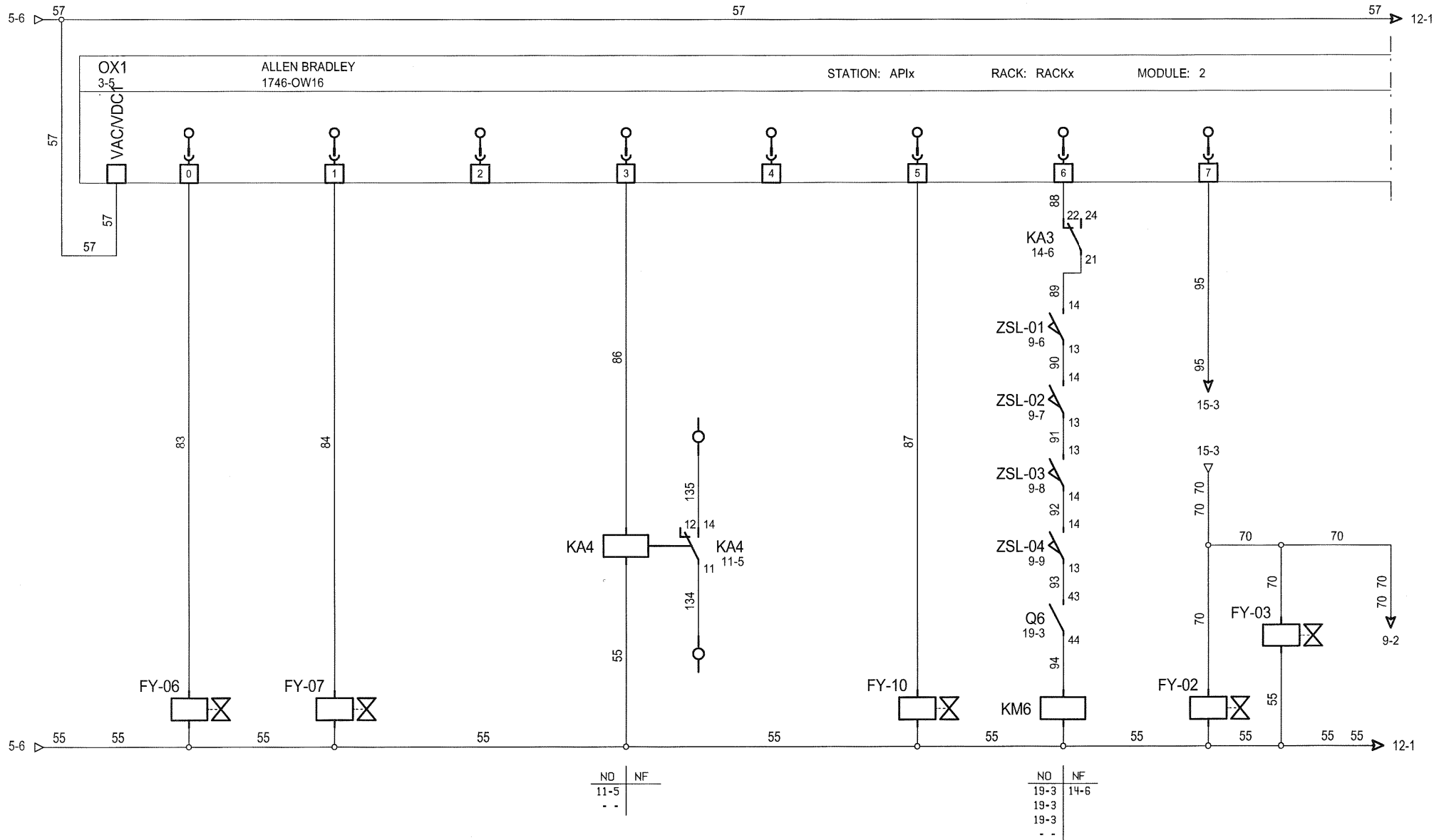
MODULE 2 - 16 DIGITAL INPUTS (2/2)

Numéro de plan: E665991P  
Drawing number:

Indice: 03  
Issue:

10 / 28

DI WATER VALVE	WFI VALVE	WFI LOOP VALVE	DRAIN COOLING WATER	RECYCLING PUMP	DRAIN
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A

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B

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C

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D

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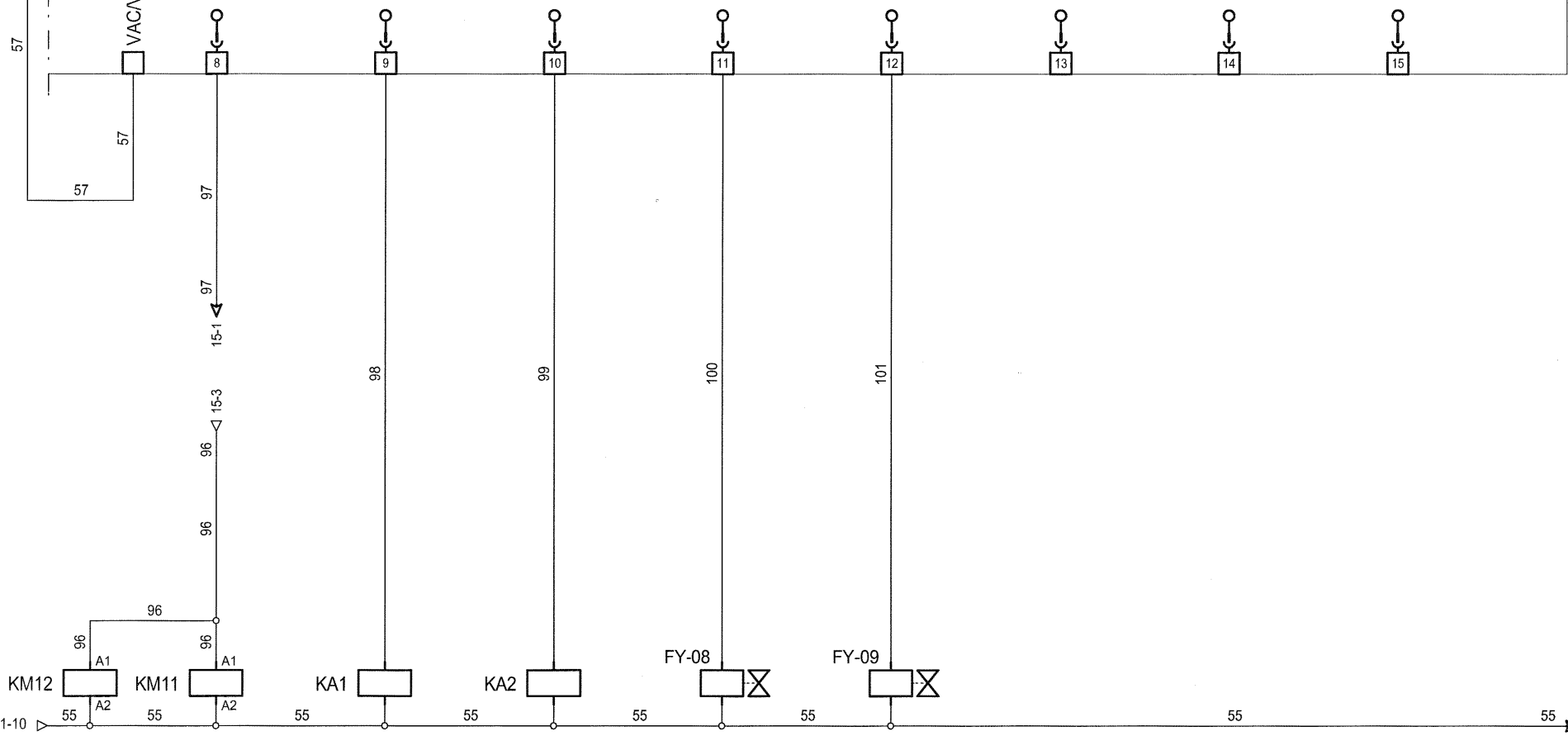
E

1    2    3    4    5    6    7    8    9    10

WATER HEATING	ACID DOSING PUMP	DETERGENT DOSING PUMP	ACID NON RETURN VALVE	DETERGENT NON RETURN VALVE
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11-10 57 57 57 13-1

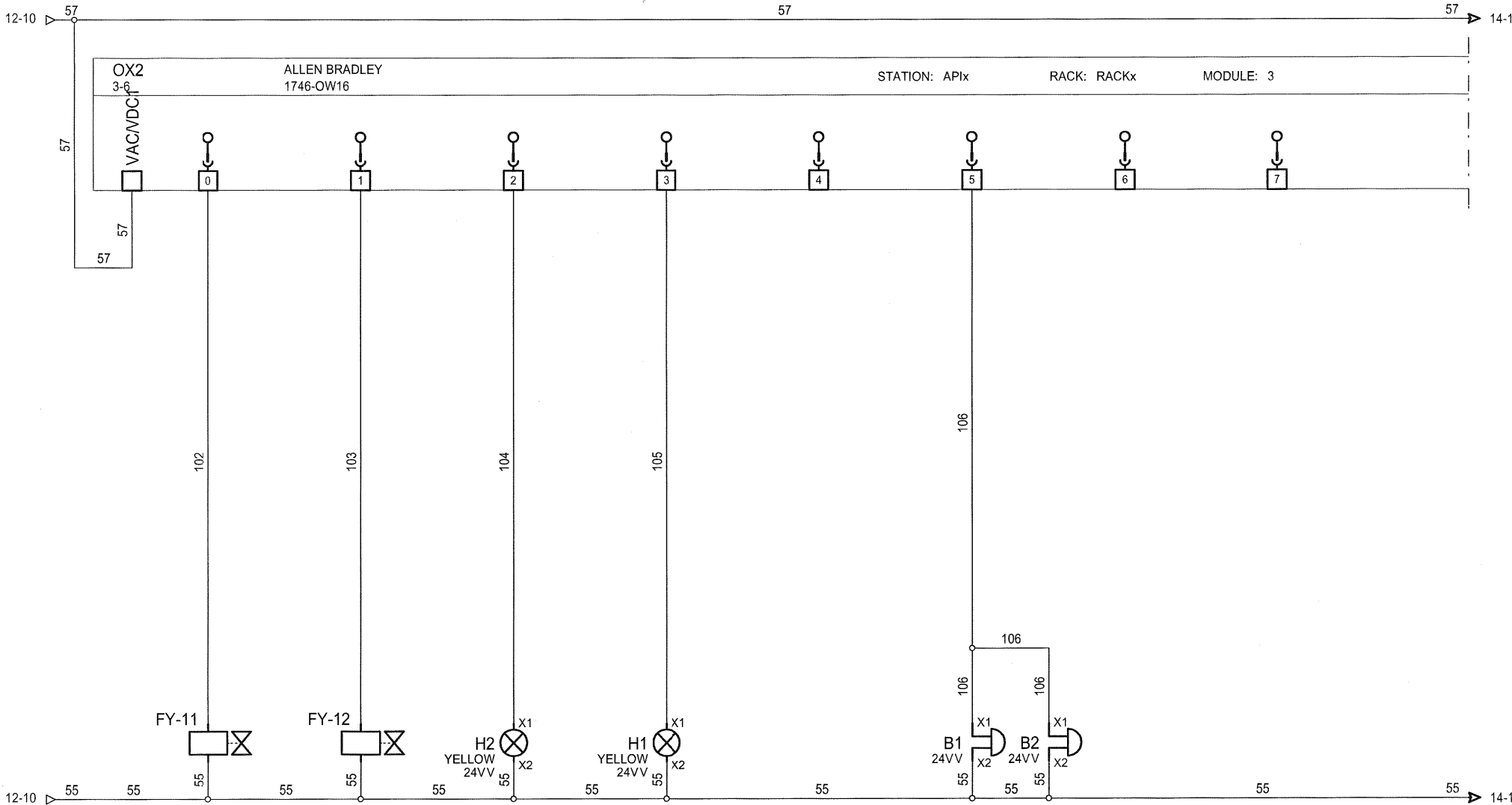
OX1 3-5      ALLEN BRADLEY 1746-OW16      STATION: APIx      RACK: RACKx      MODULE: 2



NO	NF	NO	NF	NO	NF	NO	NF
21-6	--	21-4	--	7-3	--	7-5	--
21-6	--	21-4	--	7-3	--	7-5	--
21-6	--	21-4	--	7-3	--	7-5	--
--	--	--	--	--	--	--	--

1      2      3      4      5      6      7      8      9      10

LOADING DOOR LOCKING	UNLOADING DOOR LOCKING	OPENED LOADING DOOR LIGHT	OPENED UNLOADING DOOR LIGHT	BUZZER
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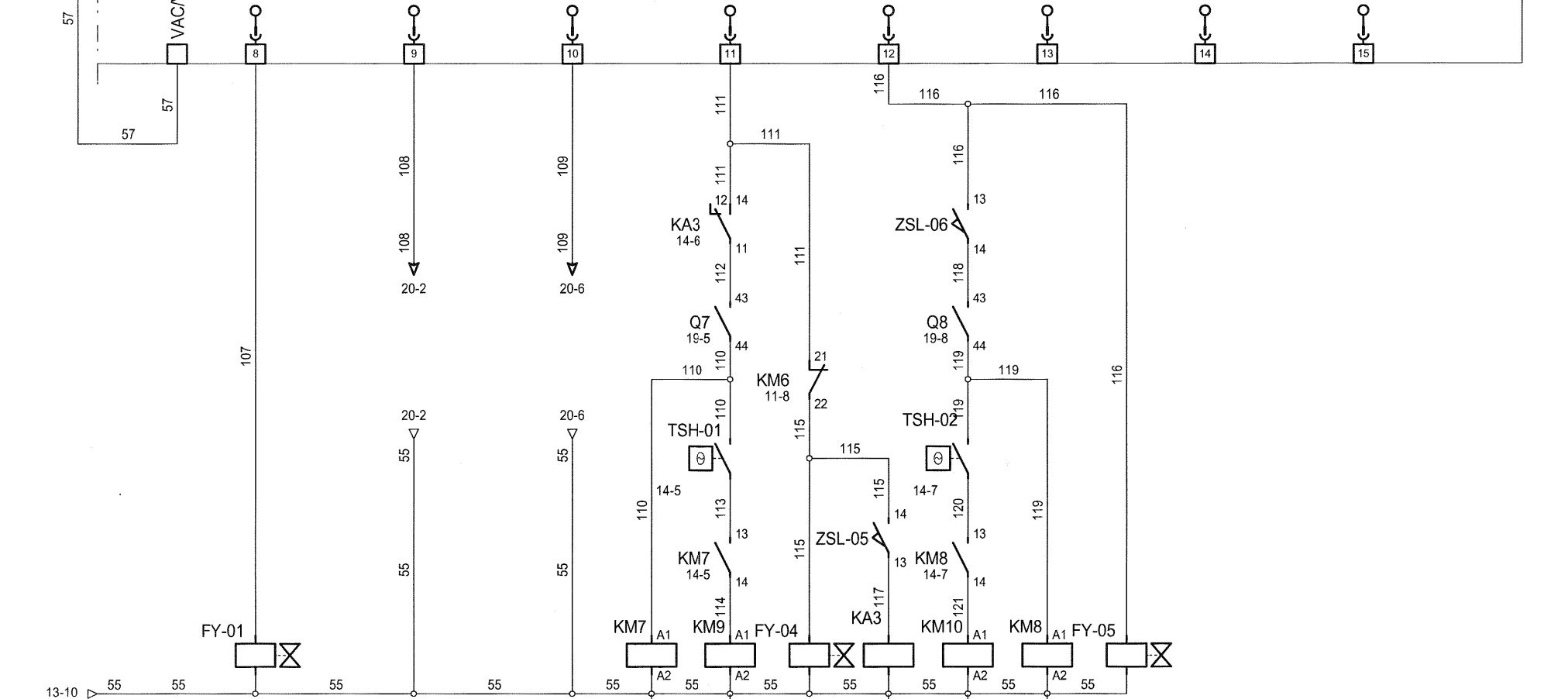
A  
B  
C  
D  
E

1 2 3 4 5 6 7 8 9 10

PUMP OUTLET VALVE	COLUMN SOLID STATE RELAY	CHAMBER SOLID STATE RELAY	COLUMN DRYING	CHAMBER DRYING
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13-10 57 → 57 → 15-1

OX2 3-6      1746-OW16      STATION: APIx      RACK: RACKx      MODULE: 3



NO	NF	NO	NF	NO	NF	NO	NF	NO	NF
19-5	--	20-3	--	14-5	20-7	--	19-8	--	--
19-5	--	20-3	--	11-8	20-7	--	19-8	--	--
19-5	--	20-3	--		20-7	--	19-8	--	--
14-5	--	--	--		--	--	14-7	--	--

1      2      3      4      5      6      7      8      9      10



1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES

MODULE 4 - 16 OUTPUTS (2/2)

Número de plan: E665991P  
Drawing number:

Indice: 03  
Issue:

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**HEATING / SAFETY PRESSURE SWITCH**

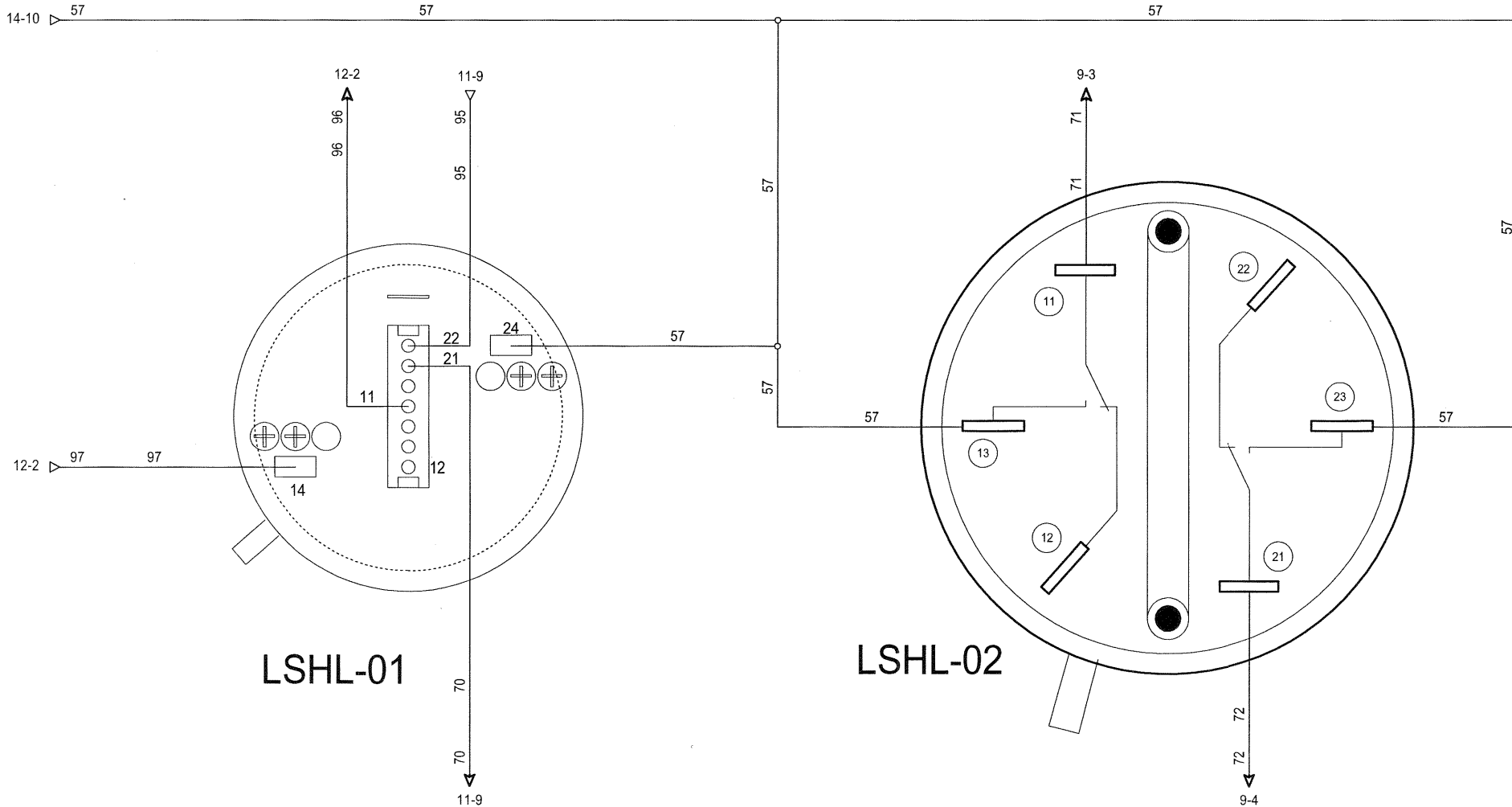
Heating: 100 / 50 mm column of water

Safety: 200 / 160 mm column of water

**MINIMUM LEVEL / FILLING PRESSURE SWITCH**

Minimum level: 80 / 30 mm column of water

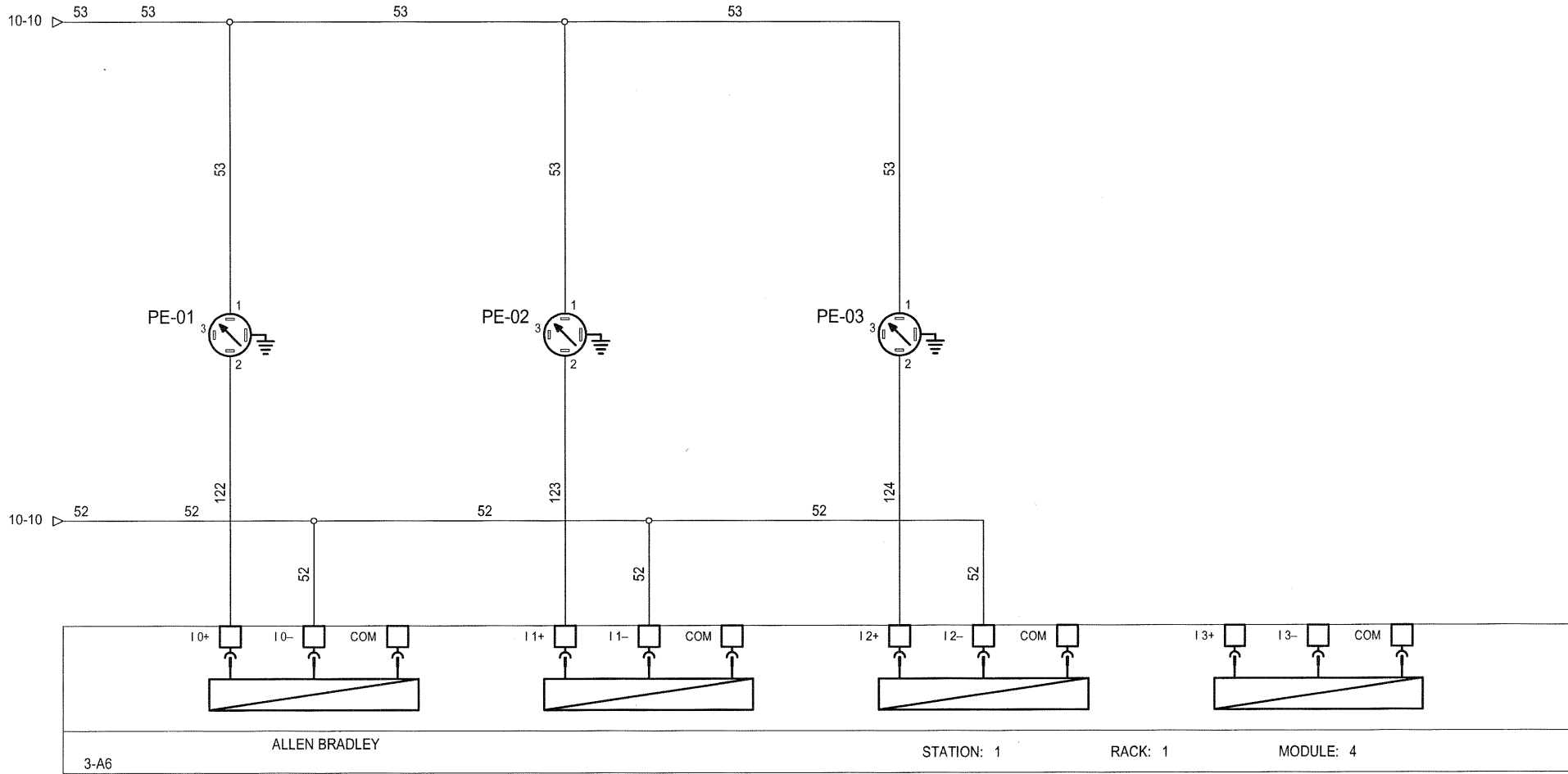
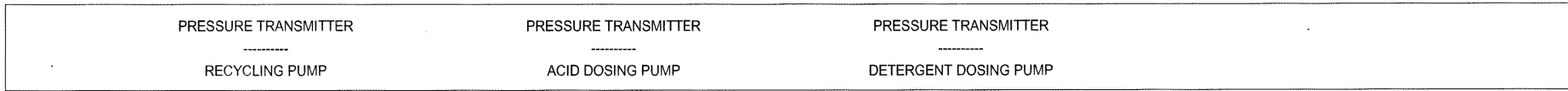
Filling: 115 / 70 mm column of water



**LSHL-01**

**LSHL-02**

1 2 3 4 5 6 7 8 9 10



A

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B

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C

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D

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E

1      2      3      4      5      6      7      8      9      10

CONDUCTIVITYMETER  
CHEMICAL VERIFICATION

CONDUCTIVITYMETER  
FINAL RINSE

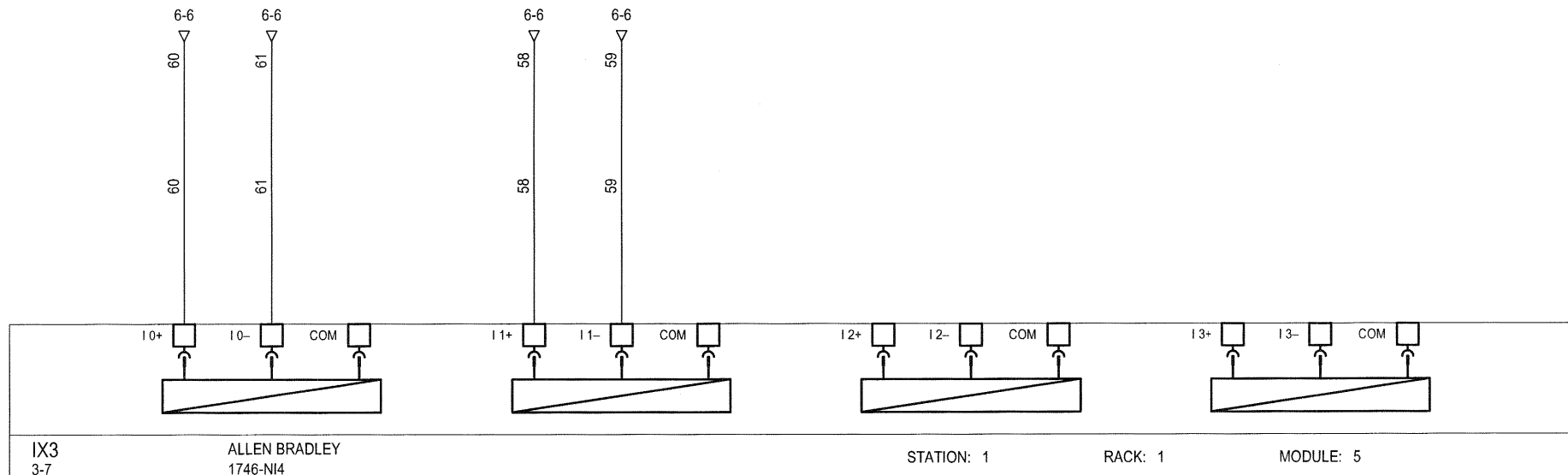
A

B

C

D

E



1 2 3 4 5 6 7 8 9 10



1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES

MODULE 6 - 4 ANALOG INPUTS

Numéro de plan:

E665991P

Indice:

03

Drawing number:

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WATER TEMPERATURE PROBE                      COLUMN DRYING TEMPERATURE PROBE                      CHAMBER DRYING TEMPERATURE PROBE

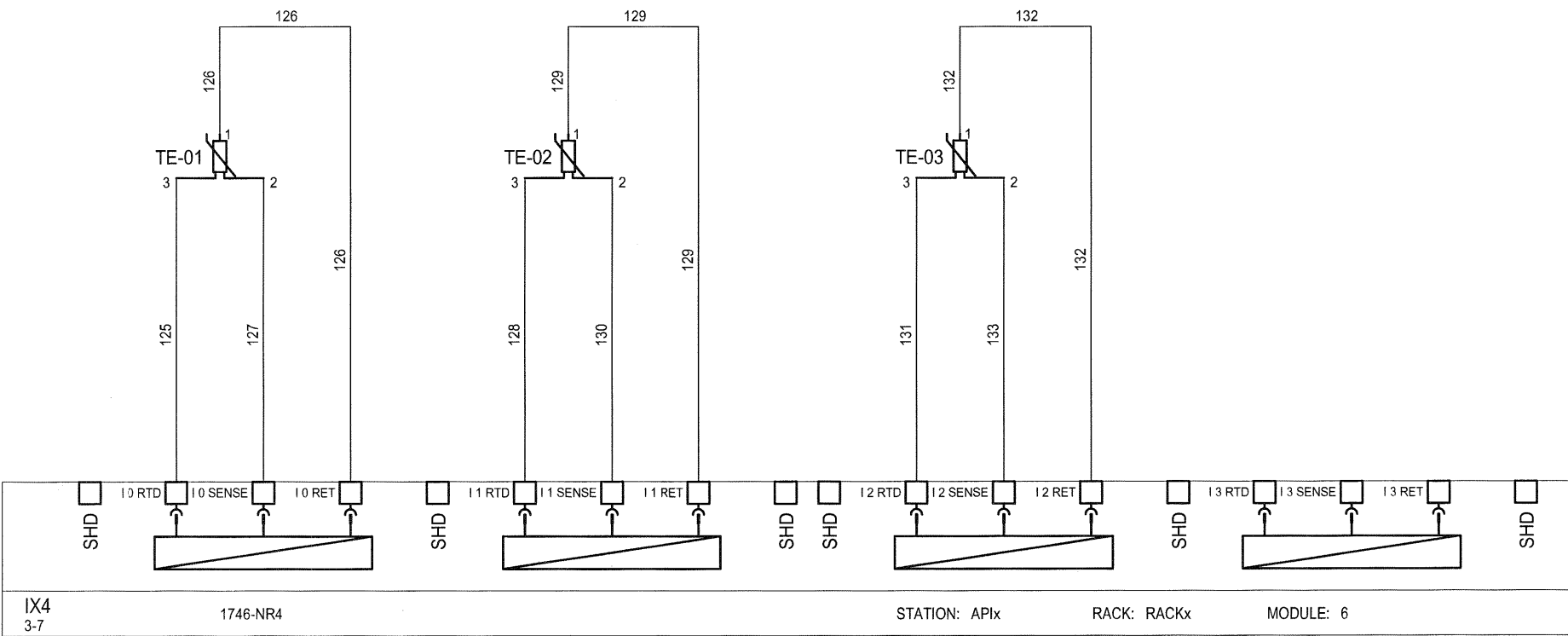
A

B

C

D

E



1      2      3      4      5      6      7      8      9      10



1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES

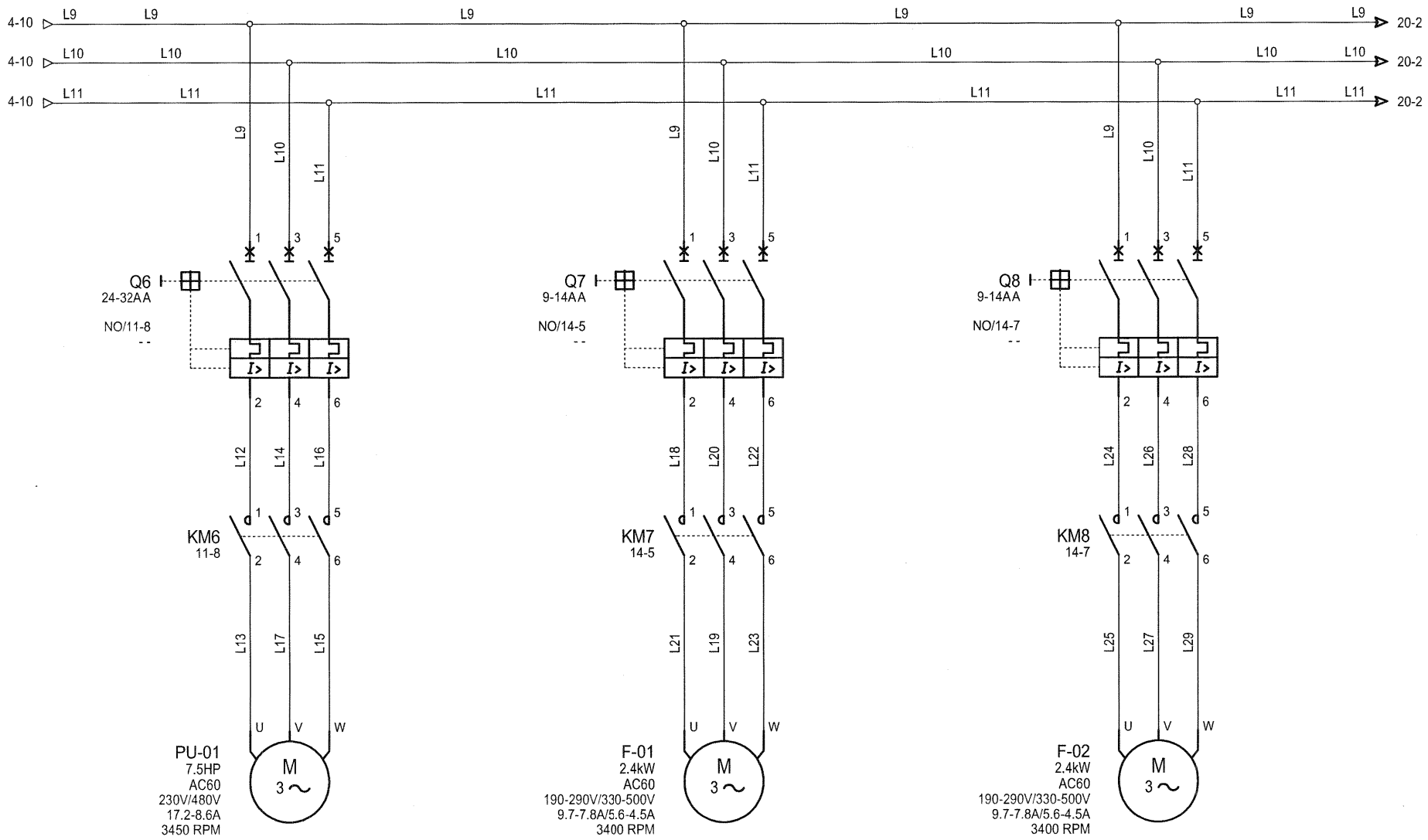
MODULE 7 - 4 RTD INPUTS

Numéro de plan: E665991P  
Drawing number:

Indice: 03  
Issue:

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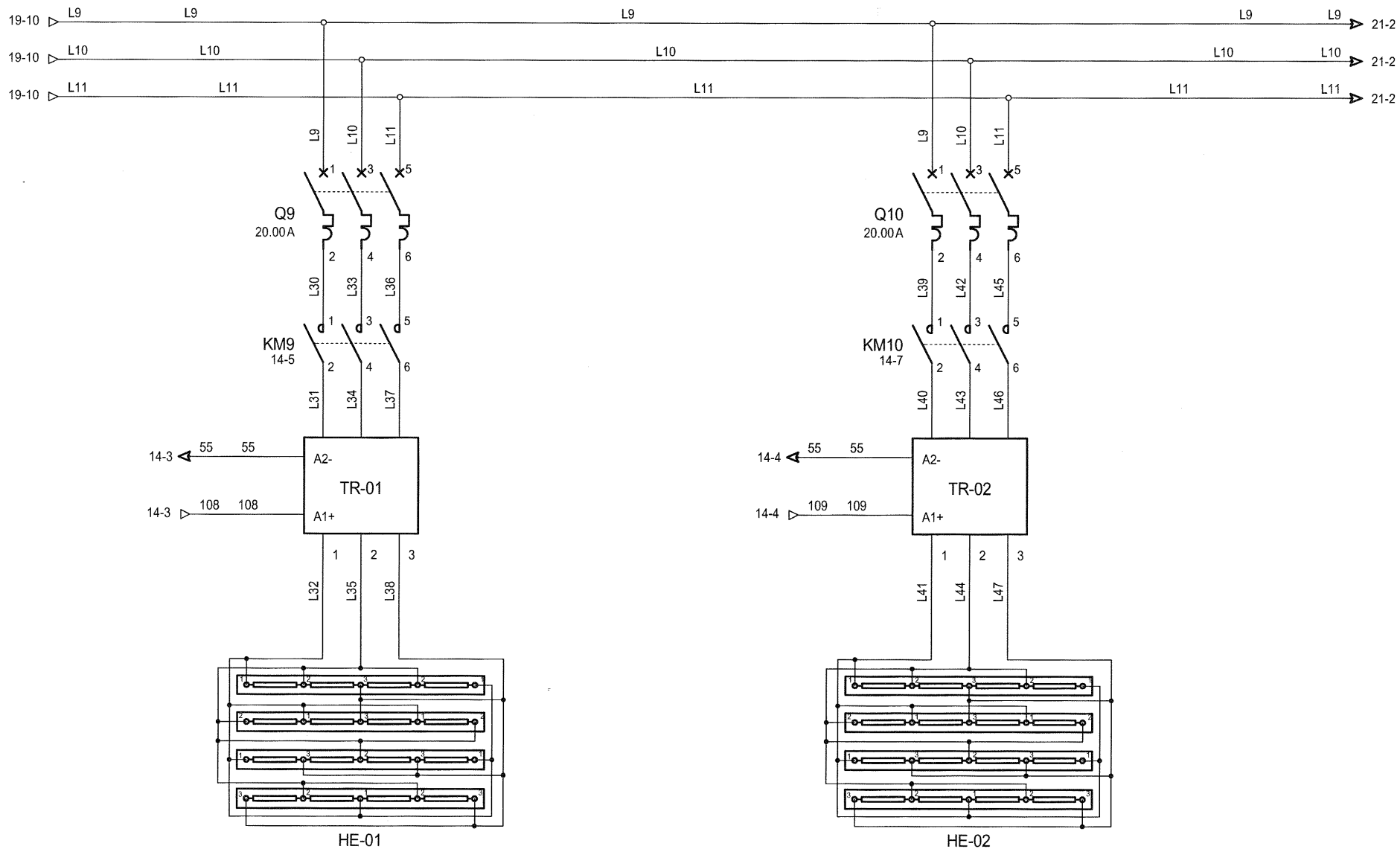
RECYCLING PUMP	COLUMN DRYING FAN	CHAMBER DRYING FAN
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1      2      3      4      5      6      7      8      9      10

AIR HEATING BANK  
COLUMN DRYING

AIR HEATING BANK  
CHAMBER DRYING



A  
B  
C  
D  
E

1      2      3      4      5      6      7      8      9      10



1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES

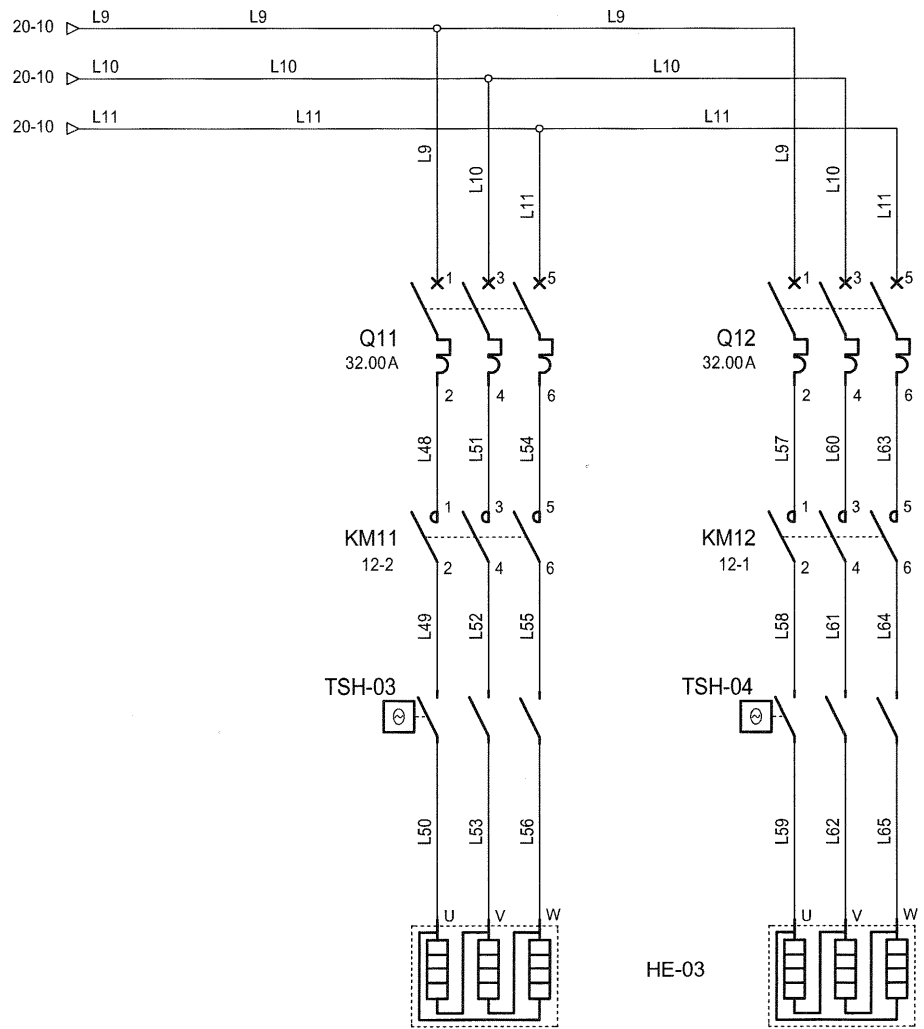
POWER CIRCUIT - DRYING

Numéro de plan: E665991P  
Drawing number:

Indice: 03  
Issue:

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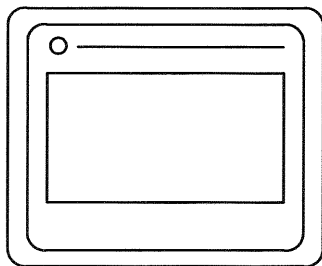
ELECTRICAL IMMERSION HEATER



A  
B  
C  
D  
E

1      2      3      4      5      6      7      8      9      10

IO-01



S5



SWITCH ON  
BUTTON

S1



EMERGENCY  
BUTTON

S3



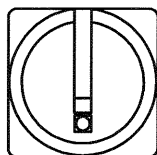
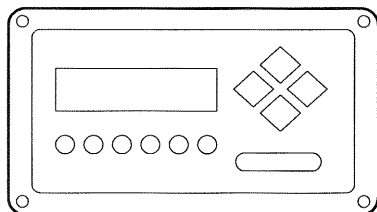
DOOR  
OPENING  
BUTTON

H1



OPENED  
DOOR  
LIGHT

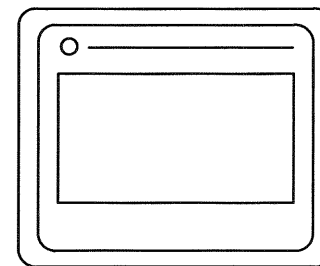
AIT-01



Q1

LOADING SIDE

IO-02



S2



EMERGENCY  
BUTTON

S4

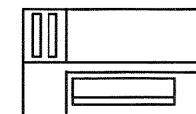


DOOR  
OPENING  
BUTTON

H2



OPENED  
DOOR  
LIGHT



PR-01

UNLOADING SIDE

1

2

3

4

5

6

7

8

9

10

A

B

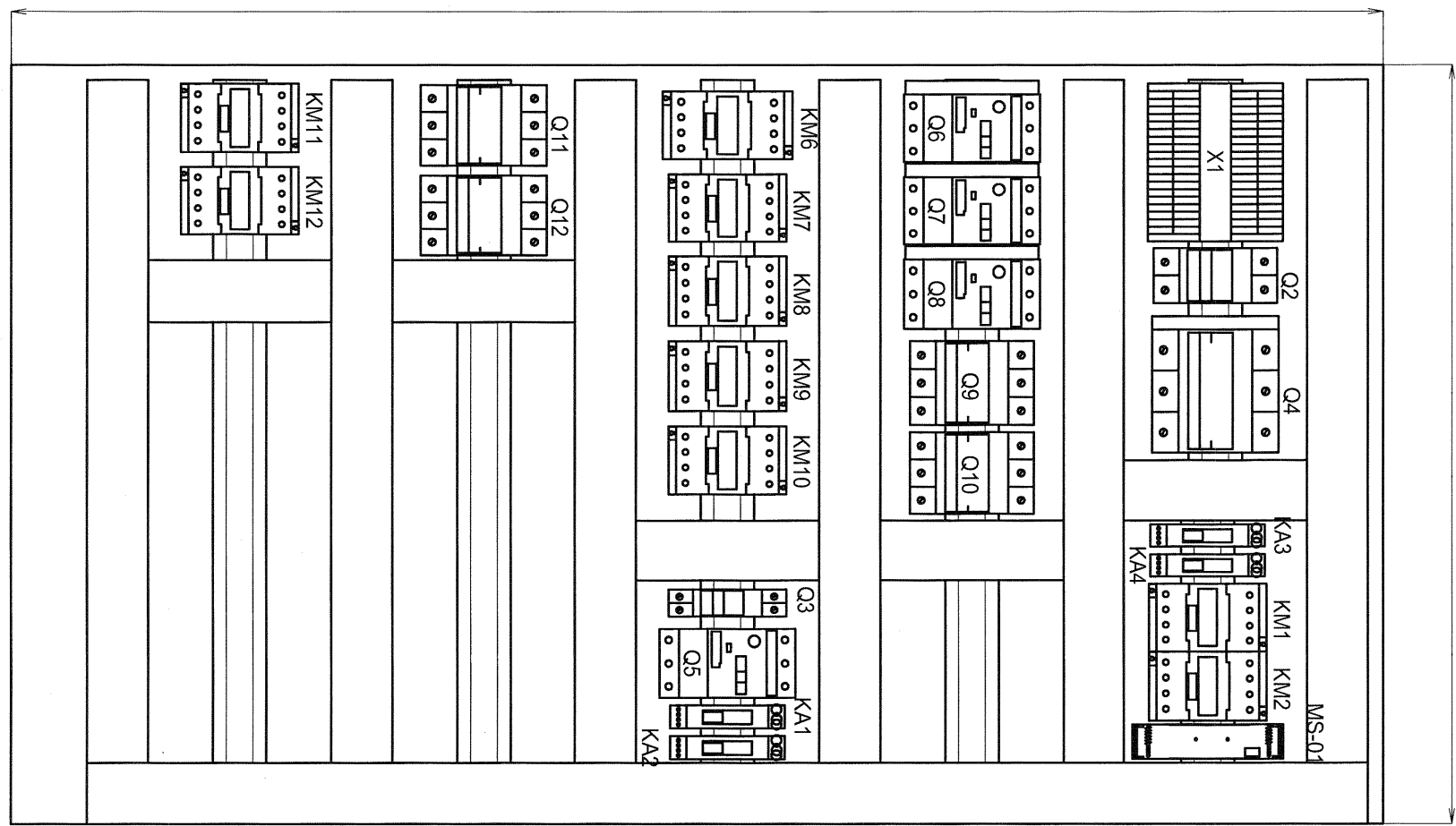
C

D

E

900 mm

500 mm



STAINLESS STEEL CABINET

1	2	3	4	5	6	7	8	9	10
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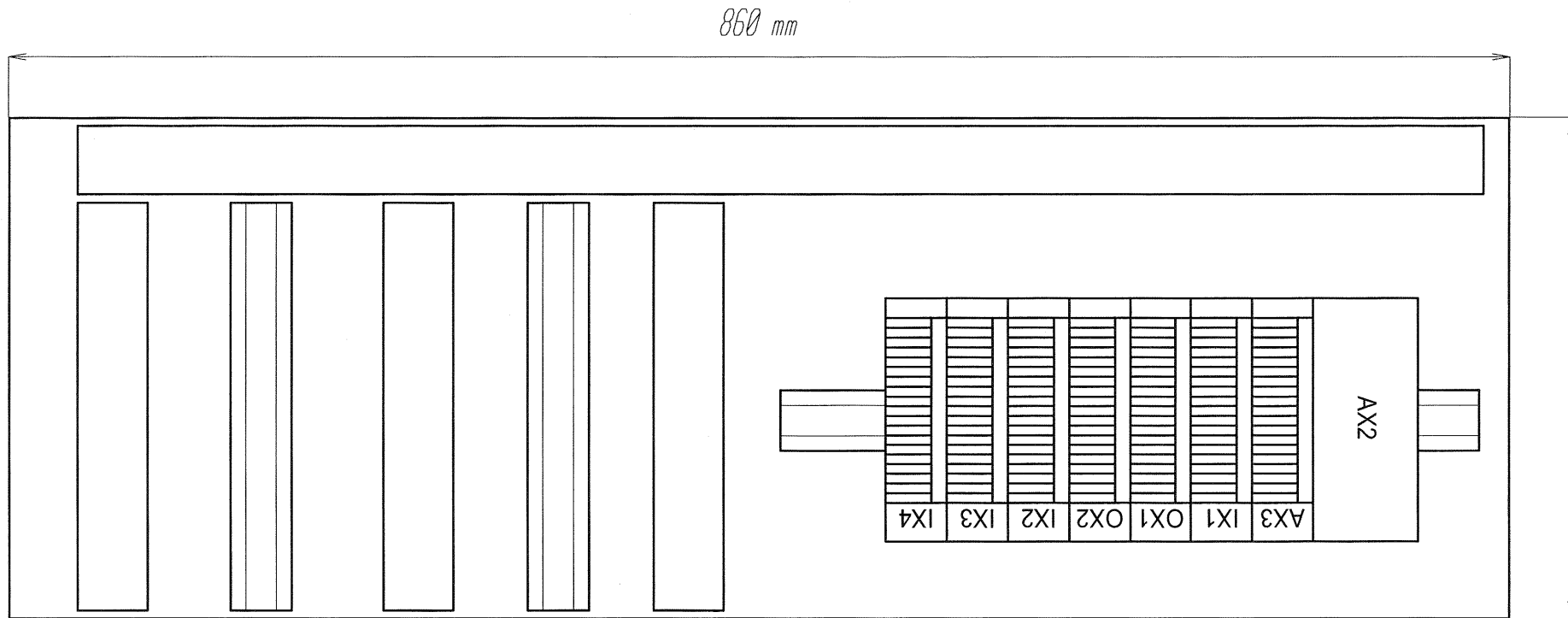


1600 PRO DPSS / 62070049  
 AGILENT TECHNOLOGIES

POWER ELECTRICAL BOX

Numéro de plan: **E665991P**  
 Drawing number:

Indice: **03**  
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1 2 3 4 5 6 7 8 9 10



**LANCER**

**1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES**

**CONTROL ELECTRICAL BOX**

Número de plan:

**E665991P**

Drawing number:

Índice:

**03**

Issue:

**24 / 28**

A

B

C

D

E

LABEL	SHEETS	DESIGNATION	REFERENCE	SUPPLIER	LANCER CODE
AIT-01	6	CONDUCTIVITY PROBE CABLE	1010-66	THORNTON	28100006
	6	0,1cm-1 CONSTANT CELL CONDUCTIVITY PROBE	243E+223	THORNTON	28050012
	6	CONDUCTIVITYMETER PROBE CABLE	58 08 0202	THORNTON	28100021
	6	10cm-1 CONSTANT CELL CONDUCTIVITY PROBE	244-633	THORNTON	28040058
	6	CONDUCTIVITYMETER	2000	THORNTON	28050018
AX1	3	7-SLOTS CHASSIS	1746-A7	ALLEN BRADLEY	18060047
AX2	3	120/220VAC (70W) PLC POWER FEEDING	1746-P2	ALLEN BRADLEY	27040005
AX3	3	SCL 5/04 PROCESSOR MODULE	1747-L542	ALLEN BRADLEY	27050004
B1	13	Ø22 INTERMITTENT BUZZER 24VAC/VDC	107.010.75	WERMA	39060005
B2	13	Ø22 INTERMITTENT BUZZER 24VAC/VDC	107.010.75	WERMA	39060005
CI-01	5	AIC+ ADVANCED INTERFACE CONVERTER	1761-NET-AIC	ALLEN BRADLEY	27050014
CI-02	5	AIC+ ADVANCED INTERFACE CONVERTER	1761-NET-AIC	ALLEN BRADLEY	27050014
F-01	19	COMPRESSOR 60Hz-2,40kW	SV 8.190/1-01 (60HZ)	BECKER	23070011
F-02	19	COMPRESSOR 60Hz-2,40kW	SV 8.190/1-01 (60HZ)	BECKER	23070011
H1	13	BULB 24VCC FOR ZB4BV6	20100082		20100082
	13	LIGHT MODULE DIRECT SUPPLY BA9S <250V	ZB4BV6	TELEMECANIQUE	39050030
	13	HEAD LIGHT	ZB4BV05	TELEMECANIQUE	39050039
H2	13	HEAD LIGHT	ZB4BV05	TELEMECANIQUE	39050039
	13	BULB 24VCC FOR ZB4BV6	20100082		20100082
	13	LIGHT MODULE DIRECT SUPPLY BA9S <250V	ZB4BV6	TELEMECANIQUE	39050030
HE-01	20	PTC BANK 230°C 1750W-230V	PTC 3944-01	VULCANIC	24010029
HE-02	20	PTC BANK 230°C 1750W-230V	PTC 3944-01	VULCANIC	24010029
IO-01	5	PANELVIEW 600 OPERATOR TERMINAL	2711-T6C9L1	ALLEN BRADLEY	39040062
IO-02	5	PANELVIEW 600 OPERATOR TERMINAL	2711-T6C9L1	ALLEN BRADLEY	39040062
IX1	3	24VCC 16 INPUT MODULE	1746-IB16	ALLEN BRADLEY	27010030
IX2	3	4 ANALOG INPUT MODULE	1746-NI4	ALLEN BRADLEY	27010029
IX3	3	4 ANALOG INPUT MODULE	1746-NI4	ALLEN BRADLEY	27010029
IX4	3	RTD ANALOG INPUT MODULE	1746-NR4	ALLEN BRADLEY	27020005
KA1	12	SAFETY MODULE (DIODE + GREEN LED)	RZM 021RB	TELEMECANIQUE	20030099
	12	PLUG IN RELAY SOCKET	RSZ E1S48M	TELEMECANIQUE	20100158
	12	PLUG IN RELAY (2CO) 24VDC	RSB 2A080BD	TELEMECANIQUE	20030098
KA2	12	SAFETY MODULE (DIODE + GREEN LED)	RZM 021RB	TELEMECANIQUE	20030099

A  
B  
C  
D  
E

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10



1600 PRO DPSS / 62070049  
AGILENT TECHNOLOGIES

COMPONENTS LIST (1/4)

Número de plan: E665991P  
Drawing number:

Indice: 03  
Issue:

LABEL	SHEETS	DESIGNATION	REFERENCE	SUPPLIER	LANCER CODE
	12	PLUG IN RELAY SOCKET	RSZ E1S48M	TELEMECANIQUE	20100158
	12	PLUG IN RELAY (2CO) 24VDC	RSB 2A080BD	TELEMECANIQUE	20030098
KA3	14	SAFETY MODULE (DIODE + GREEN LED)	RZM 021RB	TELEMECANIQUE	20030099
	14	PLUG IN RELAY (2CO) 24VDC	RSB 2A080BD	TELEMECANIQUE	20030098
	14	PLUG IN RELAY SOCKET	RSZ E1S48M	TELEMECANIQUE	20100158
KM1	8	CONT 3P 9A 1C+1O 24VDC	LC1D09BD	TELEMECANIQUE	20030075
KM10	14	CONT 3P 9A 1C+1O 24VDC	LC1D09BD	TELEMECANIQUE	20030075
KM11	12	CONT 18A 1C+1O 24V CC LPL	LC1D18BD	TELEMECANIQUE	20030077
KM12	12	CONT 18A 1C+1O 24V CC LPL	LC1D18BD	TELEMECANIQUE	20030077
KM2	8	CONT 3P 9A 1C+1O 24VDC	LC1D09BD	TELEMECANIQUE	20030075
KM6	11	CONT 3P 25A 1C+1O 24VDC	LC1D25BD	TELEMECANIQUE	20030078
KM7	14	CONT 3P 9A 1C+1O 24VDC	LC1D09BD	TELEMECANIQUE	20030075
KM8	14	CONT 3P 9A 1C+1O 24VDC	LC1D09BD	TELEMECANIQUE	20030075
KM9	14	CONT 3P 9A 1C+1O 24VDC	LC1D09BD	TELEMECANIQUE	20030075
LAL-01	10	1 CONTACT LEVEL DETECTOR	MDDN-4LA01	SICCOM	28010001
LAL-02	10	1 CONTACT LEVEL DETECTOR	MDDN-4LA01	SICCOM	28010001
LSHL-01	15	DOUBLE PRESSURE SWITCH (heating - safety)	A2	COMPRA ELEC	28020079
LSHL-02	15	DOUBLE PRESSURE SWITCH (minimum level - filling)	PD4D	EATON	28020080
MS-01	8	SAFETY MODULE 2C 24VDC	XPS-AC5121	TELEMECANIQUE	20060012
OX1	3	16 RELAY OUTPUT MODULE	1746-OW16	ALLEN BRADLEY	27010047
OX2	3	16 RELAY OUTPUT MODULE	1746-OW16	ALLEN BRADLEY	27010047
PDSH-01	10	AIR DIFFERENTIAL PRESSURE SWITCH	LGW10A4	DUNGS	28020056
PDSH-02	10	AIR DIFFERENTIAL PRESSURE SWITCH	LGW10A4	DUNGS	28020056
PR-01	5	PRINTER	AP24XS-40-V	ABLE SYSTEMS LIMITED	39010005
PU-01	19	PUMP 7.5HP 60Hz	35K505W385 (60HZ)	WUKESHA	23010091
PU-02	7	PERISTALTIC DOSING PUMP TYPE 314	036.8863.000+033.4451.00n	WATSON MARLOW	23030022
PU-03	7	PERISTALTIC DOSING PUMP TYPE 314	036.8863.000+033.4451.00n	WATSON MARLOW	23030022
Q1	4	MAIN SWITCH 3P 63A	3LD2 504 0TK-53	SIEMENS	20010097
Q10	20	CIRCUIT BREAKER 3P 20A C 5KA 480V	24469	MERLIN GERIN	19010103
Q11	21	CIRCUIT BREAKER 3P 32A C 10kA 400V	006491	LEGRAND	19010020
Q12	21	CIRCUIT BREAKER 3P 32A C 10kA 400V	006491	LEGRAND	19010020
Q2	4	CIRCUIT BREAKER 2P 3A C 6KA 440V	24198	MERLIN GERIN	19010034

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LABEL	SHEETS	DESIGNATION	REFERENCE	SUPPLIER	LANCER CODE
Q3	4	CIRCUIT BREAKER 1P+N 3A C 4.5kA 230V	21021	MERLIN GERIN	19010003
Q4	4	AUXILIARY CHANGEOVER SWITCH 6A-250V	007350	LEGRAND	19010069
	4	CIRCUIT BREAKER 3P 80A C 10KA 400V	006495	LEGRAND	19010089
Q5	7	0.4-0.63A MOTOR CIRCUIT BREAKER	GV2ME04	TELEMECANIQUE	19010051
Q6	19	AUX CONTACT 1C+1O GV2M CIRCUIT BREAKER	GVAN11	TELEMECANIQUE	20030026
	19	MOTOR CIRCUIT BREAKER 24-32A	GV2ME32	TELEMECANIQUE	19010079
Q7	19	AUX CONTACT 1C+1O GV2M CIRCUIT BREAKER	GVAN11	TELEMECANIQUE	20030026
	19	9-14A MOTOR CIRCUIT BREAKER	GV2ME16	TELEMECANIQUE	19010056
Q8	19	AUX CONTACT 1C+1O GV2M CIRCUIT BREAKER	GVAN11	TELEMECANIQUE	20030026
	19	9-14A MOTOR CIRCUIT BREAKER	GV2ME16	TELEMECANIQUE	19010056
Q9	20	CIRCUIT BREAKER 3P 20A C 5KA 480V	24469	MERLIN GERIN	19010103
S1	8	MUSHROOM HEAD	ZB4BS944	TELEMECANIQUE	20100090
	8	BODY WITH NC CONTACT	ZB4BZ102	TELEMECANIQUE	20010084
S2	8	MUSHROOM HEAD	ZB4BS944	TELEMECANIQUE	20100090
	8	BODY WITH NC CONTACT	ZB4BZ102	TELEMECANIQUE	20010084
S3	9	BODY WITH NO CONTACT	ZB4BZ101	TELEMECANIQUE	20010082
	9	BLACK HEAD FOR PUSHBUTTON	ZB4BA2	TELEMECANIQUE	20010088
S4	10	BLACK HEAD FOR PUSHBUTTON	ZB4BA2	TELEMECANIQUE	20010088
	10	BODY WITH NO CONTACT	ZB4BZ101	TELEMECANIQUE	20010082
S5	8	BODY WITH NO CONTACT	ZB4BZ101	TELEMECANIQUE	20010082
	8	BLACK HEAD FOR PUSHBUTTON	ZB4BA2	TELEMECANIQUE	20010088
T1	4	TRANSFORMER 208V/230V 750VA	ESO 612 SP	ESO	25010007
T2	5	RECTIFIED POWER SUPPLY 120-240VAC/24VDC 5A	ABL6 RF2405G2	TELEMECANIQUE	27040014
TE-01	18	SIMPLE PT100 TEMP CLASS B, PROBE LENGTH 150	P0600552	ATEXIS	28040046
TE-02	18	SIMPLE PT100 TEMP CLASS B, PROBE LENGTH 150	P0600552	ATEXIS	28040046
TE-03	18	SIMPLE PT100 TEMP CLASS B, PROBE LENGTH 150	P0600552	ATEXIS	28040046
TR-01	20	40A THREE PHASE SOLID STATE RELAY	SWT861230	CELDUC	20060006
TR-02	20	40A THREE PHASE SOLID STATE RELAY	SWT861230	CELDUC	20060006
TSH-03	21	165°C SAFETY THERMOSTAT	0080630	STIEBEL ELTRON	28040001
TSH-04	21	165°C SAFETY THERMOSTAT	0080630	STIEBEL ELTRON	28040001
X1	23	DISTRIBUTION BLOCK 4P 125A	004886	LEGRAND	22040068
ZSL-01	9	LIMIT SWITCH	XCK-T2102G11	TELEMECANIQUE	20020010

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