
Operation and Maintenance Manual



Bremner Ripon

Model: 107-20

SN: 8873

October 2007

WARRANTY

ARPAC warrants the equipment of its manufacture to be free from defective material or workmanship for a period of one year from date of shipment from the factory, provided that:

1. Such equipment is given normal and proper usage.
2. It is still owned by the original purchaser.
3. The equipment has been operated in accordance with generally approved practice and in accordance with ARPAC's instructions.
4. No repairs, alterations, or replacements have been made by others without ARPAC's written approval.

The purchaser shall notify ARPAC immediately of any defective parts and ARPAC shall take corrective action. If such correction requires the replacement of a defective part or parts, ARPAC will supply them F.O.B. the factory.

ARPAC shall in no event be held liable for damage or delay caused by defective parts and will not accept any charges for work performed by purchaser in making adjustments or repairs to the equipment unless such work has been authorized in writing by ARPAC.

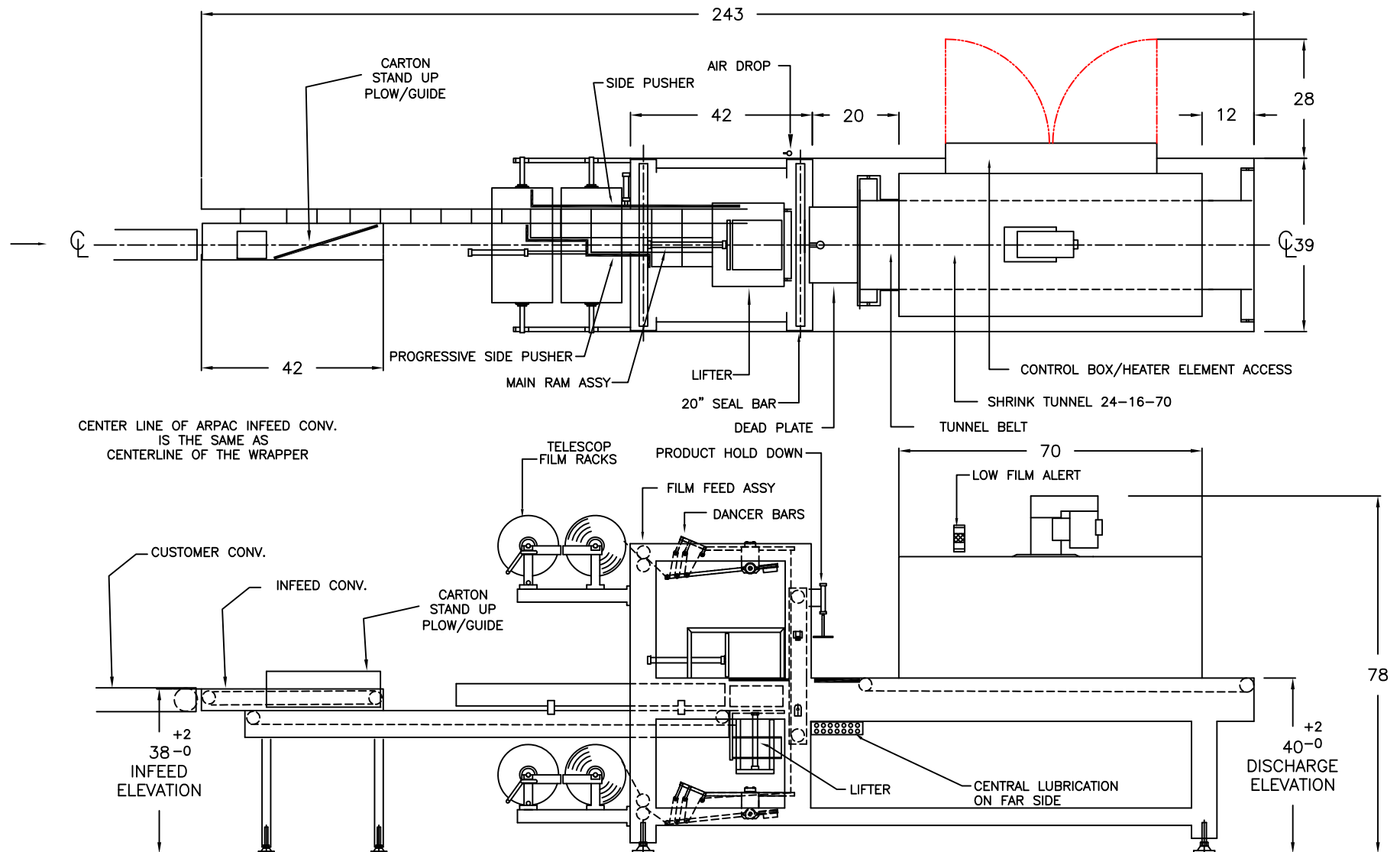
Any equipment or component not of ARPAC's own manufacture is sold under whatever warranty is provided by the maker, to the extent ARPAC is able to enforce such warranty. Such items are not warranted by ARPAC in any way.

When components are sold to be assembled in combination of purchaser's design, the warranty shall be limited to each separate component and shall not apply to any combinations or components.

ARPAC's liability (except as to title) arising out of the supplying of the equipment shall in no case exceed the purchase price of the said equipment. ARPAC makes no guarantee or warranty, expressed or implied, other than as stated above.

ARPAC factory trained, qualified technical services personnel are available for start-up and instructional assistance. If the customer does not utilize ARPAC personnel for this function, ARPAC is only liable for replacement of defective parts, not for labor or expenses necessary to adjust any problems out in the field.

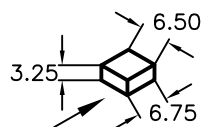
ARPAC personnel are available for ARPAC equipment training either on-site/hands on or in classroom environment, supported by visual aid and literature to be administered under a separate purchase order.



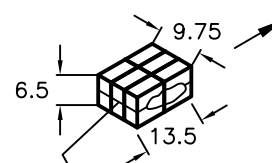
GENERAL NOTES:

INFEED AT 38 +2/-0", DISCHARGE AT 40 +2/-0"
 ELEC. SPECS: 460V-3PH-60Hz
 CONTROL BOX: L/H
 AIR SUPPLY: 80 PSI MIN
 FILM SIZE: 1.5 MIL LDPE

PRODUCT IN



BUNDLE OUT



SEAL LINE

ARPAC		9511 WEST RIVER ST. SCHILLER PARK, IL 60176	
FILENAME s8873	DRAWN BY JW	SCALE: 4:3/8"	SIZE:
DATE 8-21-07	REVISED	APPROVED BY: JW	
MODEL 107-20 AUTOMATIC SLEEVE WRAPPER			
FOR BRENNER		DRAWING NUMBER s8873	

Table of Contents

<u>Section</u>	<u>Page</u>
1 Introduction.....	1-0
Using This Manual	1-1
Manual Design	1-2
2 Safety	2-0
Safety Information	2-1
Personnel Instructions.....	2-1
Energy Hazards	2-2
Guarding and Doors.....	2-3
Interfacing Equipment	2-3
Warning Labels.....	2-4
3 Mechanical Sub-Assemblies	3-0
Film Feed System	3-1
Film Rack	3-1
Film Feed	3-3
Film Dancer	3-4

(Continued on the next page)

Table of Contents

<u>Section</u>	<u>Page</u>
3 Mechanical Sub-Assemblies	3-0
Seal Assembly	3-6
Seal Frame.....	3-6
Seal Bars.....	3-8
Product Accumulation Assemblies.....	3-9
Z-In-Feed Conveyor	3-9
Side Pusher Assembly	3-10
Progressive Pusher Assembly	3-11
Lift & Ram Assembly.....	3-11
Dead Plate & Hold-Down Assembly	3-12
Shrink Tunnel.....	3-13
Tunnel Blower	3-15
4 Operator Controls	4-0
Main Power Disconnect	4-1
Master Air Supply Regulator	4-1
Emergency Stop Push-Pull Button	4-1
Power On Push Button.....	4-2
Cycle Stop/Reset Push Button	4-2

Table of Contents

<u>Section</u>	<u>Page</u>
4 Operator Controls	4-0
Cycle Start Push Button.....	4-2
Manual Seal Push Button.....	4-3
Operator Interface	4-3
Temperature Controllers.....	4-3
Stack Light	4-4
Tunnel Louvers.....	4-4
5 Operating Procedures	5-0
Startup and Shutdown Procedure Descriptions	5-1
Initial Startup.....	5-2
Startup	5-3
Quick Startup	5-4
Emergency Shutdown.....	5-5
Short-Term Shutdown.....	5-6
Long-Term Shutdown.....	5-6
Film Roll Installation & Threading.....	5-7
Product Setup Chart.....	5-13

Table of Contents

<u>Section</u>	<u>Page</u>
5 Operating Procedures	5-0
Adjustments.....	5-14
Machine Temperatures	5-14
Film Roll Centering.....	5-15
Tunnel Louvers	5-15
Operator Interface	5-16
Navigating the Screens	5-16
Selecting Product	5-17
Viewing, Changing and Saving Parameters	5-18
Messages.....	5-20
Timers	5-20
Machine Counters (optional)	5-21
Maintenance.....	5-22
Main Menu	5-24

(Continued on the next page)

Table of Contents

<u>Section</u>	<u>Page</u>
6 Troubleshooting	6-0
Abnormal Running Conditions	6-1
Weak Seal Line	6-2
Film Builds Up On Seal Bars	6-2
Film Does Not Cut Completely	6-3
Seal On Back of Product Opens	6-3
Film is Not Feeding and Film Feed Rollers Turn	6-3
Film is Not Feeding and Film Feed Rollers Do Not Turn	6-4
Excessive Film Feed	6-4
Machine is Ready to Run But Will Not Start	6-4
Poor Shrink Uniformity or No Shrink	6-5
Error Messages	6-6
Wrapper Door Open	6-6
Downstream Interlock	6-6
Main Drive Fault	6-6
Upper Film Supply Almost Empty	6-7
Lower Film Supply Almost Empty	6-7
Web Broken	6-7

(Continued on the next page)

Table of Contents

<u>Section</u>	<u>Page</u>
6 Troubleshooting	6-0
Web Broken	6-8
Detect Excessive Run Time Upper Film Feed	6-7
Detect Excessive Run Time Lowe) Film Feed	6-8
Seal Bar Blocked When Closing	6-8
Cross Seal Bar Temperature Too Low	6-9
Seal Bar Jammed or Seal Bar Closing Time Too Long	6-9
Tunnel Heater Temp Too Low	6-10
Machine Power Off or Emergency Stop Engaged	6-10
In-Feed Drive Fault	6-9
Lifter Jammed	6-10
Main Ram Jammed	6-9
Side Pusher Jammed	6-10
Progressive Pusher Jammed	6-11
7 Maintenance	7-0
Preventive Maintenance	7-1
Preventive Maintenance Schedule	7-1
Cleaning	7-3
Air Line Filters	7-4

Table of Contents

<u>Section</u>	<u>Page</u>
7 Maintenance.....	7-0
Preventive Maintenance.....	7-1
Air Line Lubricators	7-4
Conveyor Belts and Rollers.....	7-5
Drive Chains.....	7-5
Electromagnetic Clutches.....	7-5
Film Feed	7-5
Seal Bars.....	7-5
Seal Frame Chains.....	7-6
Shrink Tunnel	7-6
Heater Element Tray	7-7
Lubrication	7-8
Lubrication Schedule.....	7-8
Air Line Lubricators	7-9
Air Cylinders.....	7-9
Ball Bearings, Ball Bushings	7-9
Trantorque [®] Bushings	7-9
Oilite [®] Bearings or Bushings	7-10

(Continued on the next page)

Table of Contents

<u>Section</u>	<u>Page</u>
7 Maintenance.....	7-0
Lubrication	7-8
Worm Gear Boxes.....	7-10
Drive Chains.....	7-10
Tunnel Cooling Fan Motor.....	7-10
Corrective Maintenance	7-11
Dancer Bar Stops.....	7-11
Dancer Bar Trigger Arm	7-12
Dancer Bar Counterweights	7-14
Seal Bar Removal and Installation	7-15
Seal Bar Alignment.....	7-17
Cold Bar Rebuilding	7-18
Polyethylene Hot Bar Rebuilding.....	7-20
Seal Frame Shock Absorbers	7-23
Seal Frame Squaring	7-25
Heater Element Tray Repair.....	7-28
Tunnel Blower Bearing Replacement.....	7-29
Tunnel Blower Impeller and Shaft Replacement	7-31

Table of Contents

<u>Section</u>	<u>Page</u>
8 Glossary of Terms.....	8-0
9 Service Information	9-0
Field Service Policy	9-1
Installation Policy	9-2
Parts Order Form.....	9-4
10 Mechanical Assembly Drawings	10-0
11 Electrical Information.....	11-0
12 Vendor Information.....	12-0

SECTION 11

Electrical Information

Arpac Single Level Electrical BOM

Assembly Part Number/Revision: 8873-ELEC/0
Description: ASSY, ELECT, MACHINE #8873, MODEL 107-20

Model: 107-20
Customer: Bremner

Qty	Mfr Name	Mfr Part Number	Description	Schematic Label	Arpac Part
1.00	ALLEN-BRADLEY	1747-L531	PLC, SLC500, CPU 8KB (5/03)		804005-170
1.00	ALLEN-BRADLEY	1746-P2	PLC, SLC500, POWER SUPPLY AC 5A 120/240VAC 5A@5VDC 0.96A@24VDC		804005-008
1.00	ALLEN-BRADLEY	1746-A7	PLC, SLC500, RACK 07-SLOT		804005-021
3.00	ALLEN-BRADLEY	1746-IB16	PLC, SLC500, DIGITAL 16IN 24VDC SINKING		804005-025
3.00	ALLEN-BRADLEY	1492-CABLE001B	PLC, IFM CABLE 0.1 METER, FOR IB16 DIGITAL 1746 DC I/O MODULES		804993-118
2.00	ALLEN-BRADLEY	1746-0A16	PLC, SLC500, DIGITAL 16OUT 120/240VAC TRIAC		804005-030
2.00	ALLEN-BRADLEY	1492-CABLE001G	PLC, IFM CABLE 0.1 METER, FOR 0A16 DIGITAL 1746 I/O MODULES, G-TYPE		804993-124
5.00	ALLEN-BRADLEY	1492-IFM20-FN	PLC, IFM BASE,DIG I/O MODULES 1746,1756 20 PIN CONNECTOR, NARROW		804993-133
1.00	ALLEN-BRADLEY	1746-N2	PLC, SLC500, SLOT FILLER		804005-034
1.00	ALLEN-BRADLEY	100-C12D10	CONTACTOR, IEC 12A COIL=120VAC 1NO LINE-SIDE-COIL	2MS	804002-002
3.00	ALLEN-BRADLEY	100-C30D10	CONTACTOR, IEC 30A COIL=120VAC 1NO LINE-SIDE-COIL	WMCR,4C,DC	804002-005
1.00	ALLEN-BRADLEY	140M-C2E-B25	CIRCUIT BREAKER, IEC 1.60- 2.5A SER."C" MTR PROT.IEC 1.60-2.5A,C	2CB	804000-123
1.00	ALLEN-BRADLEY	140M-C-AFA20	CONTACT, AUX. 2NO, FRONT MOUNTED FOR USE WITH 140M	2CB	804035-006
1.00	ALLEN-BRADLEY	700-HN123	RELAY, SOCKET, 8 BLADE FOR 2 POLE RELAY, USE W/T 700-HP,FOR LED USE	1CR	804008-103
1.00	ALLEN-BRADLEY	700-HPX2Z24	RELAY, 2 POLE, 8A, 24VDC, DPDT, PIN STYLE RELAY, SOCKET		804008-105
1.00	ALLEN-BRADLEY	700-ADL1R	RELAY, DIODE FOR 700-HP 6-24VDC, W/T LED SURGE SUPPR. USE W/T 804008.103		804008-116
2.00	ALLEN-BRADLEY	700-HLT1L1	RELAY, EXTRA SLIM, SPDT COIL=115VAC 6A W/LED REV-POL&COIL-SURGE-PROTECT	312CR,314CR	804008-107
1.00	ALLEN-BRADLEY	1492-CB3G300	OBSOLETE, (FOR 240V) USE PN 804000-459; CIRCUIT BREAKER, 3P 30A	4CB	804000-049

Assembly Part Number/Revision: 8873-ELEC/0
Description: ASSY, ELECT, MACHINE #8873, MODEL 107-20

Model: 107-20
Customer: Bremner

Qty	Mfr Name	Mfr Part Number	Description	Schematic Label	Arpac Part
2.00	ALLEN-BRADLEY	1492-CB3G100	OBSOLETE, (FOR 240V) USE PN 804000-453; CIRCUIT BREAKER, 3P 10A	7CB	804000-044
1.00	ALLEN-BRADLEY	1492-GH010	CIRCUIT BREAKER, 1P 1.0A 250V IR= 1KA UL1077 HIGH DENSITY	13CB	804000-066
1.00	ALLEN-BRADLEY	1492-CB1G030	OBSOLETE, USE PN 804000-323; CIRCUIT BREAKER, 1P 3A 277V TRIP=06-10,	12CB	804000-003
4.00	ALLEN-BRADLEY	1492-GH050	CIRCUIT BREAKER, 1P 5A 250V IR= 1KA UL1077 HIGH DENSITY	40CB,41CB	804000-073
2.00	ALLEN-BRADLEY	1489-A1C150	CIRCUIT BREAKER, 1P 15A 277V TRIP=05-10 IR=10KA UL489	10CB	804000-328
1.00	ALLEN-BRADLEY	1489-A1C200	CIRCUIT BREAKER, 1P 20A 277V TRIP=05-10 IR=10KA UL489	11CB	804000-329
1.00	ALLEN-BRADLEY	1489-A2D150	CIRCUIT BREAKER, 2P 15A 480V TRIP=10-20 IR=10KA UL489		804000-314
1.00	ALLEN-BRADLEY	140U-H-RVM12B	CIRCUIT BREAKER, ROTARY OPER MECHANISM, H-FRAME BLK HANDLE 12"		804000-296
1.00	ALLEN-BRADLEY	140U-H2C3-C50	CIRCUIT BREAKER, 3P 50A 480V H-FRAME TRIP (THM/MAG)=NOMIN/0500A IR=25KA	MCB	804000-365
1.00	JEFFERSON ELECTRIC	411-0101-000	TRANSFORMER, 1PH 3.0KVA 240/480 120/240 NEMA3R ENCAPSULATED	1T	804024-004
1.00	ALLEN-BRADLEY	1606-XLP50E	POWER SUPPLY 24VDC 2.1AMP		804993-137
2.00	ALLEN-BRADLEY	22A-D4PON104	DRIVE, AC, 2.00HP 460V 3 PH 4.0A POWERFLEX 4 DRIVE	MD	804012-170
1.00	ALLEN-BRADLEY	800T-FXP16RA1	PUSH BUTTON, 30MM MUSHROOM RED ILL 120V PUSH-PULL 1NO/1NC NEMA4 (AC	1PB	804004-003
1.00	ALLEN-BRADLEY	800T-PA16G	PUSH BUTTON, 30MM GUARDED GRN ILL 120V MOMENTARY 1NO/1NC NEMA4	103PB	804004-007
1.00	ALLEN-BRADLEY	800T-B6A	PUSH BUTTON, 30MM EXTENDED RED MOMENTARY 1NO/1NC NEMA4	104PB	804004-008
1.00	ALLEN-BRADLEY	800T-A9A	PUSH BUTTON, 30MM FLUSH YEL MOMENTARY 1NO/1NC NEMA4	105PB	804004-013
1.00	ALLEN-BRADLEY	800T-A1A	PUSH BUTTON, 30MM FLUSH GRN MOMENTARY 1NO/1NC NEMA4	2PB	804004-009
4.00	ALLEN-BRADLEY	800T-X559	LEGEND PLATE, BLANK STANDARD GRAY		804027-001

Assembly Part Number/Revision: 8873-ELEC/0
Description: ASSY, ELECT, MACHINE #8873, MODEL 107-20

Model: 107-20
Customer: Bremner

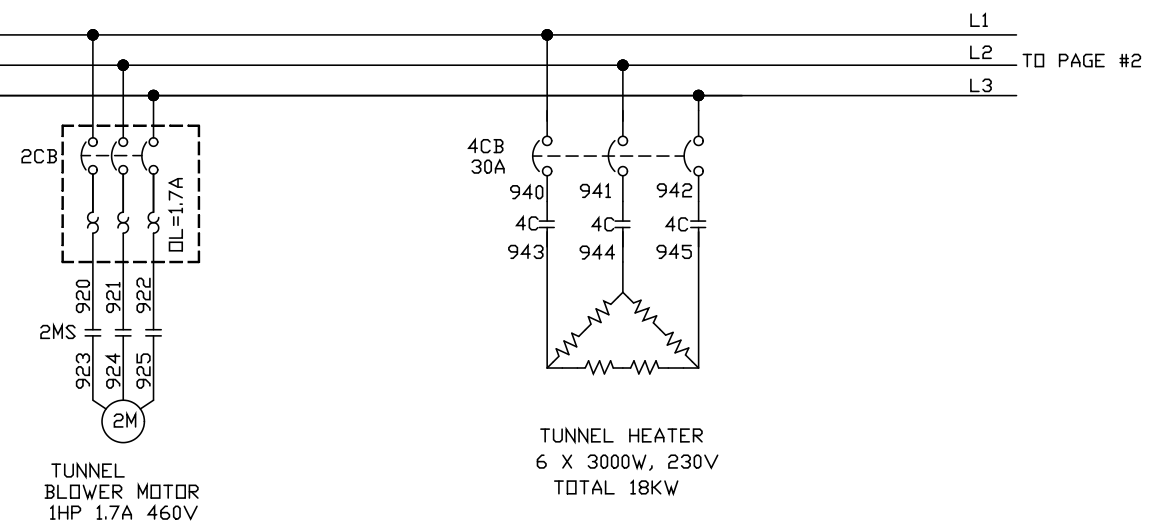
Qty	Mfr Name	Mfr Part Number	Description	Schematic Label	Arpac Part
1.00	ALLEN-BRADLEY	800T-X621	LEGEND PLATE, BLANK STANDARD RED		804027-003
1.00	ARPAC	CP04F-04-1945	OPERATOR INTERFACE, EXOR 4LINE X 20CH ARPAC"LOGO SEE 804018.102 FOR		804018-002
1.00	ARPAC	CA12-6	CABLE, COMMUNICATION, EXOR 6FT RS-232 TO SLC5/03/04		804003-021
2.00	ALLEN-BRADLEY	900-TC16RGTZ25	TEMPERATURE CONTROLLER, SELF TUNING 100-240VAC 7VA SUPPLY,2 RELAY ALARMS	1TC,2TC	804023-037
2.00	WIRE EXPRESS	J20-3-304	WIRE, THERMOCOUPLE, 20 AWG, TYPE J, SEE NOTES FOR SPARE PARTS SALES	1T/C,2T/C	804023-001
5.00	ALLEN-BRADLEY	42EF-P2MPB-F4	PHOTO SENSOR, RETRO-POLAR DC PNP QD RANGE=3M W/6IN-PIGTAIL	201PE-204PE	804007-135
5.00	ALLEN-BRADLEY	92-47	PHOTO SENSOR, REFLECTOR-DISK DIA=1.25IN OK-FOR-POLARIZED-PHOTO	- "-	804007-034
2.00	ALLEN-BRADLEY	42EF-S1MPA-F4	PHOTO SENSOR, DIFFUSE DC PNP QD RANGE=5IN W/6IN-PIGTAIL		804007-136
16.00	ALLEN-BRADLEY	889D-F4BC-5	CABLE, SENSOR QD, 16FT STRAIGHT MICRO 4-PIN BLACK PVC		804003-135
9.00	TURCK	BIM-INT-AG41X-0.2M -RS4.2T	PROXIMITY SENSOR, DC 2-WIRE CYL NO QD CYLINDER-MOUNT W/0.2M-PIGTAIL		804006-117
9.00	TURCK	ASB-9	PROXIMITY SENSOR, ACCESSORY, MOUNTING STRAP 2.25IN (FOR CYLINDER PROX .101)		804006-173
5.00	ALLEN-BRADLEY	872C-DH4NE12-D4	PROXIMITY SENSOR, DC 2-WIRE 4.0MM NO QD 12MM UNSHIELDED SHORT-BARREL	101PRX,106PRX-1 09PRX	804006-130
5.00	ALLEN-BRADLEY	889D-R4BC-5	CABLE, SENSOR QD, 16FT 90-DEGREE MICRO 4-PIN BLACK PVC		804003-139
1.00	CARLO GAVAZZI	RM1A23A50	RELAY, SOLID-STATE 1PST COIL=24+VAC 50A INPUT=24-265VAC OUTPUT=230VAC	1SSR	804008-023
1.00	ALLEN-BRADLEY	855T-BPM40C	LIGHT STACK, 70MM BASE 16IN AL NEMA4 BLK-HOUSING W/CAP-&-GASKET		804017-046
1.00	ALLEN-BRADLEY	855T-B10DN3	STACK LIGHT, UNIT, GRN 120VAC 70MM NEMA4X BLK-HOUSING	308LT	804017-026
1.00	ALLEN-BRADLEY	855T-B10DN4	LIGHT STACK, 70MM RED 120VAC NEMA4X BLK-HOUSING STEADY-INCANDESCENT	309LT	804017-027
1.00	ALLEN-BRADLEY	855T-B10DN5	LIGHT STACK, 70MM AMB 120VAC NEMA4X BLK-HOUSING STEADY-INCANDESCENT	310LT	804017-028

Arpac Single Level Electrical BOM

Assembly Part Number/Revision: 8873-ELEC/0
Description: ASSY, ELECT, MACHINE #8873, MODEL 107-20

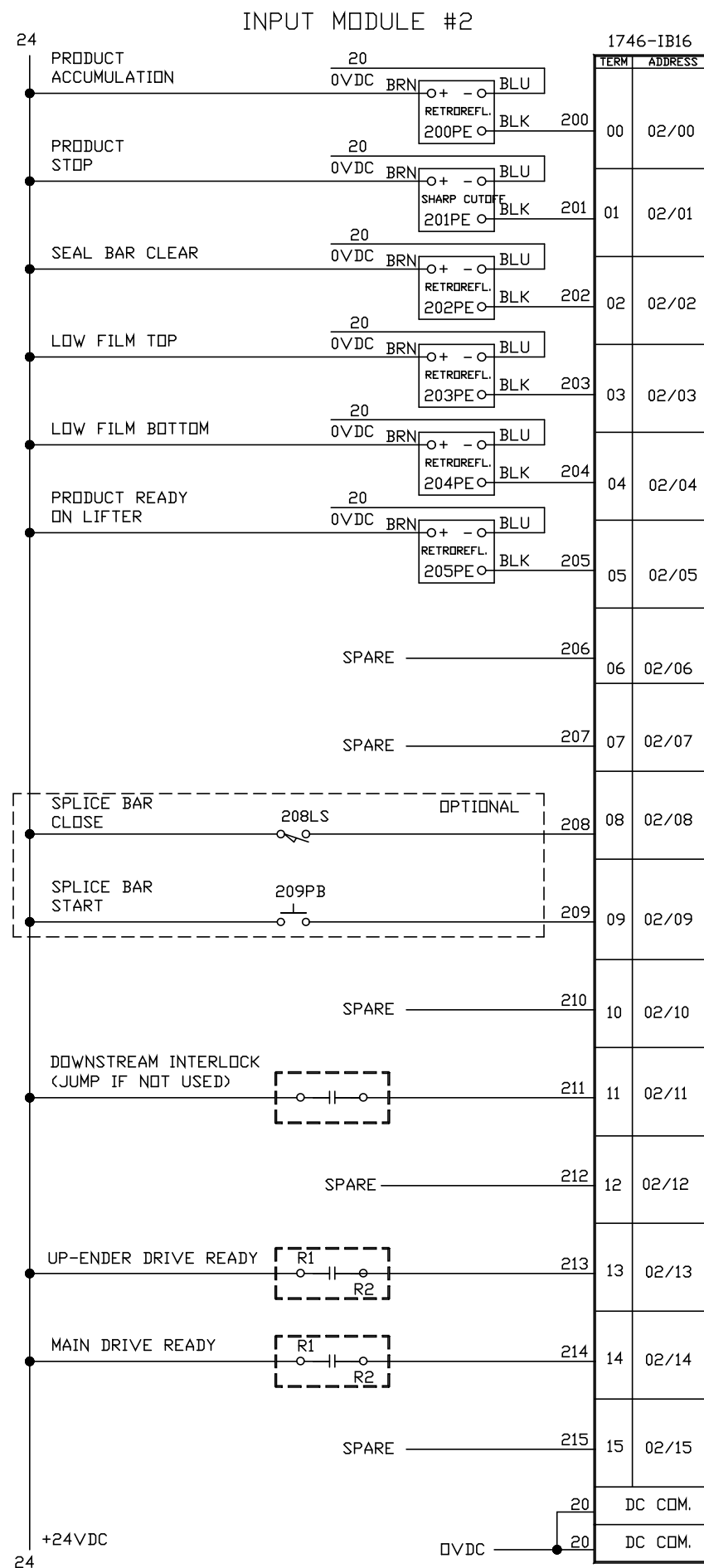
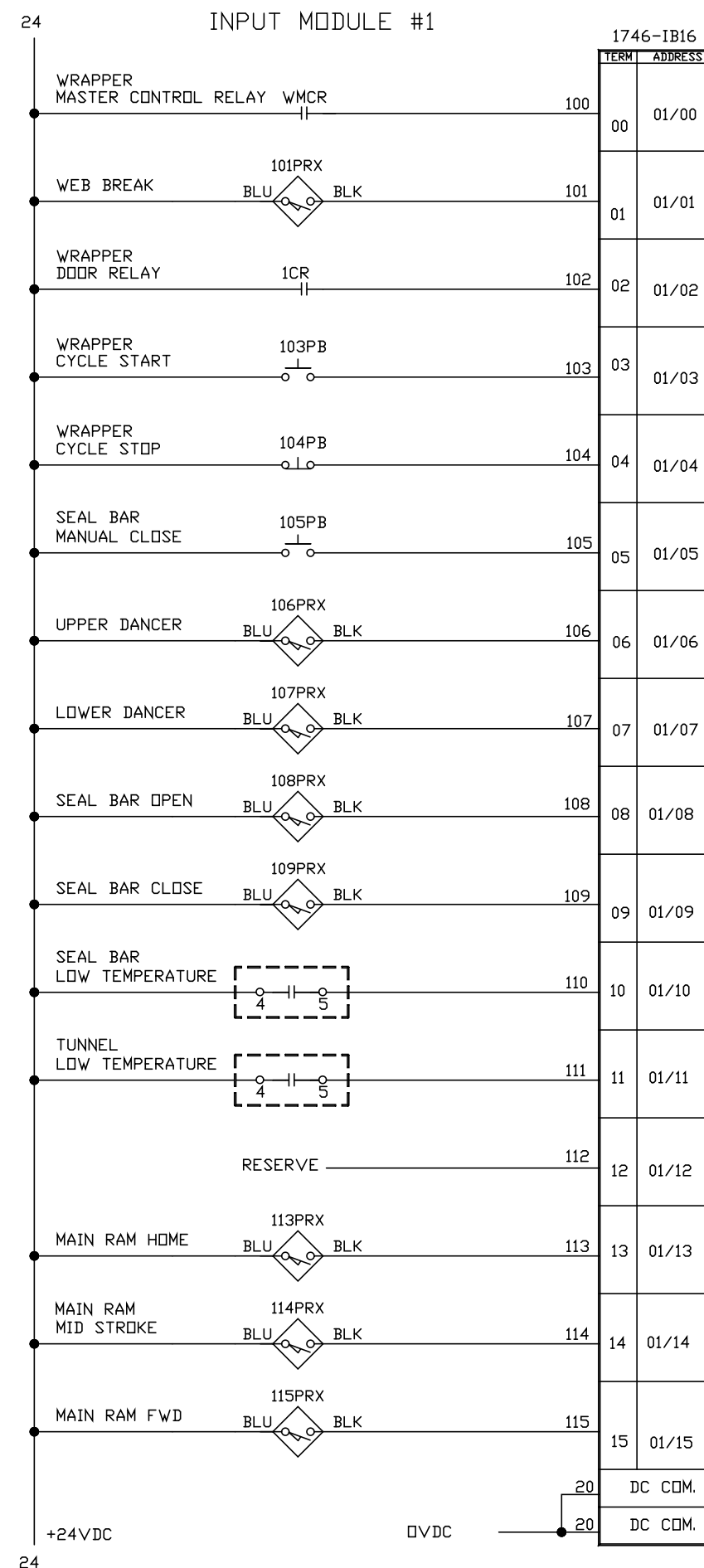
Model: 107-20
Customer: Bremner

Qty	Mfr Name	Mfr Part Number	Description	Schematic Label	Arpac Part
6.00	SENTROL	115-7Y-12J	SWITCH, DOOR, MAGNETIC INTERLOCK PREWIRED 1NO FLEX CABLE		804025-019
6.00	NEWARK	V130LA10A	SUPPRESSOR, METAL OXIDE VARISTOR, MADE BY HARRIS		804020-007
2.00	PROMAX	CM-3508	RECTIFIER, BRIDGE 35.0A 800V		804001-001
1.00	VORTEC	711	VORTEC FOR COOLING CAB		803041
1.00	AIR-MITE	S2240-120/60	VALVE,2WAY,120VAC 60HZ,CABINET COOLING 120 V 60 HZ		800096
1.00	ARPAC	1407	WIRING MAT'L PER MACHINE TYPICAL NORMAL USAGE		999999-003
1.00	HOFFMAN	A306010WFLP	ENCLOSURE, 30X 60X 10 NEMA12 2DR WALL-MOUNTED WIDE-FRONT		804014-023
1.00	HOFFMAN	A60P30	ENCLOSURE, 60X 30 SUBPANEL 57.00X27.00		804014-024



* 8873-000 *

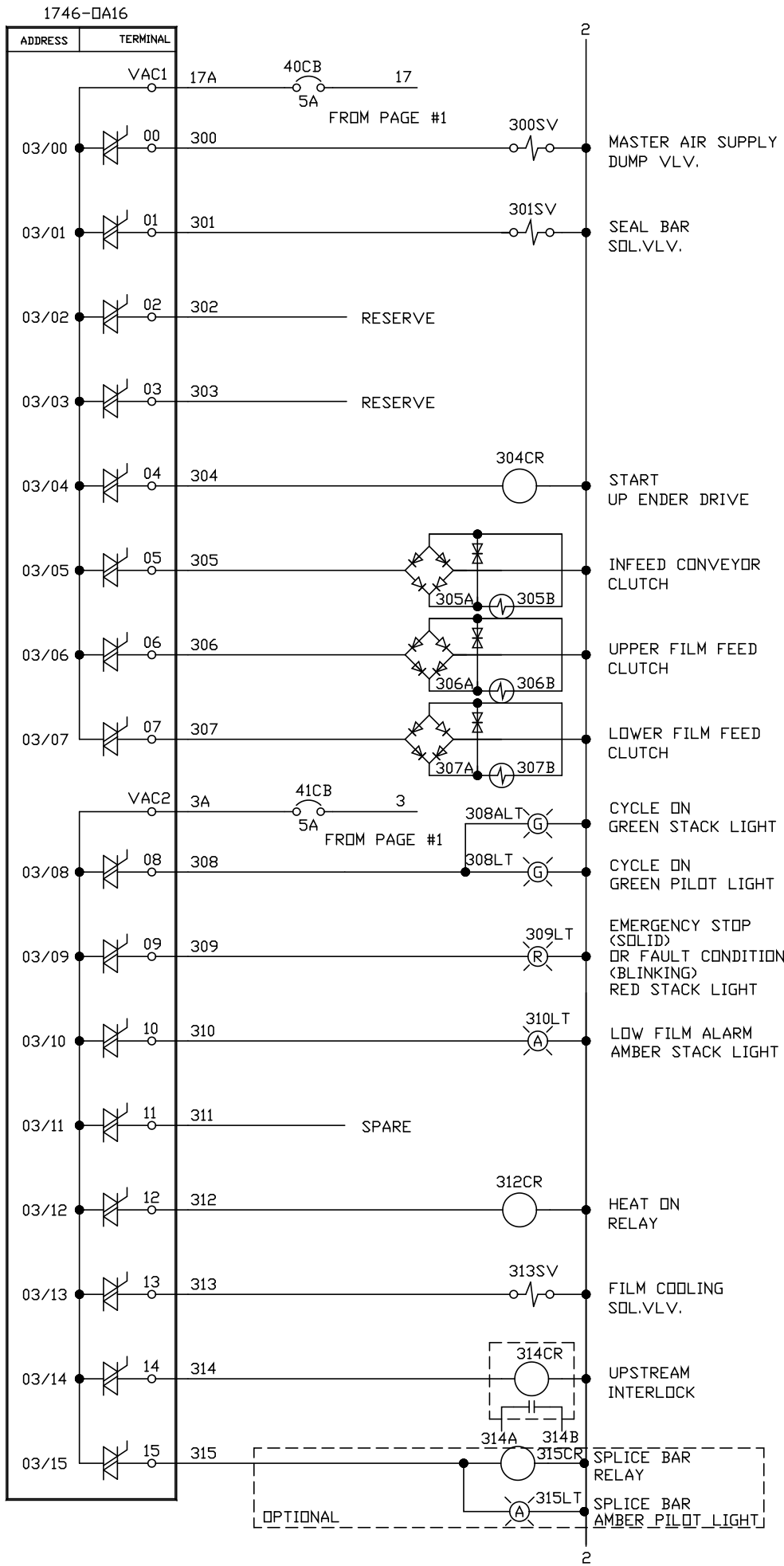
	
* REV. A	ELECTRICAL SCHEMATIC
DESIGNER: DBM	
MODEL: 107-20	
BREMNER RIPON	
DRAWING NUMBER: 8873-99-01	



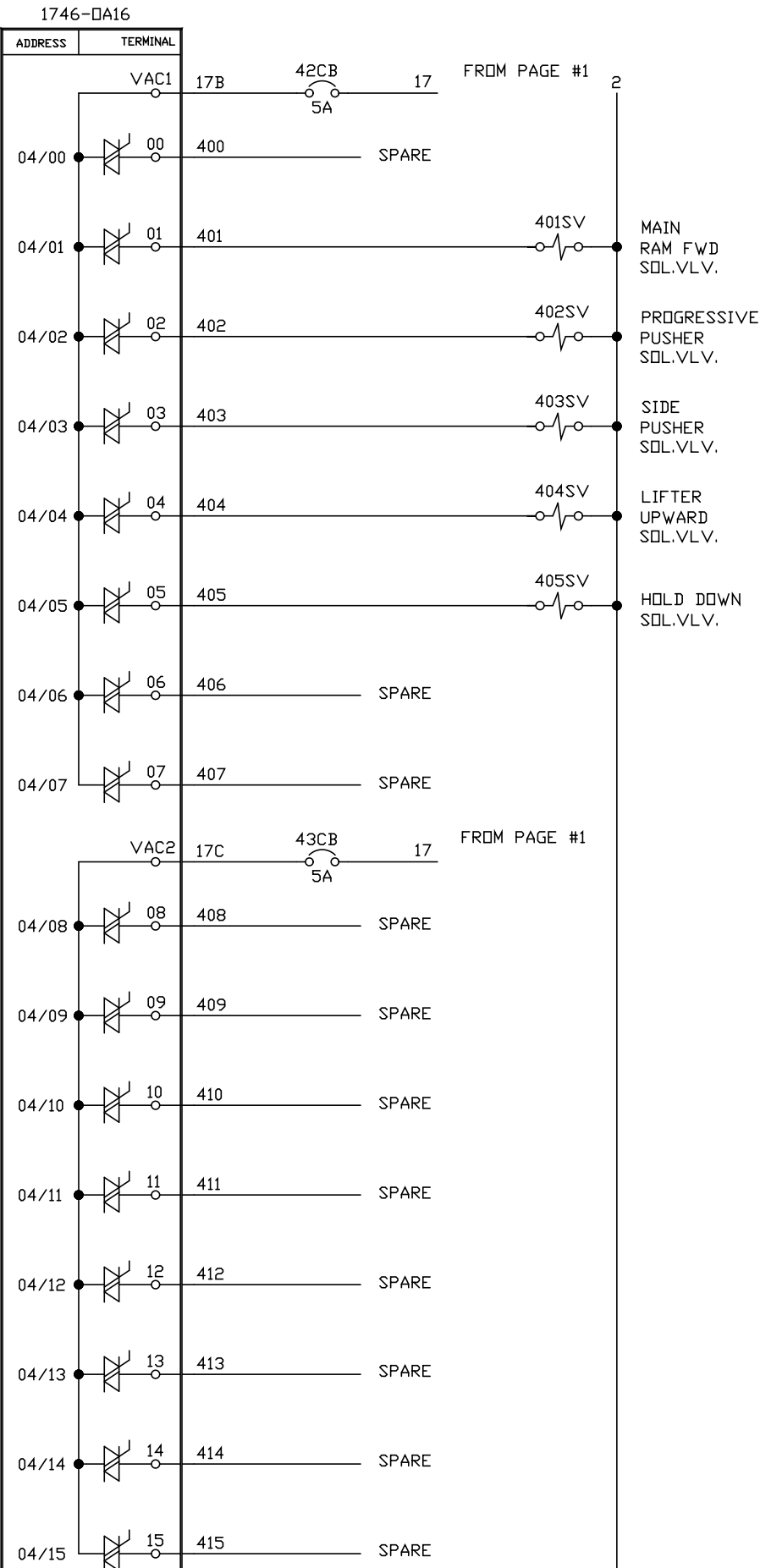
ARPAC GROUP

REV. A	ELECTRICAL SCHEMATIC	SIZE: A
DESIGNER: DBM		DATE: 09-18-07
MODEL: 107-20		SHEET: 3 OF 6
BREMNER RIPON		DRAWING NUMBER: 8873-99-03

OUTPUT MODULE #3



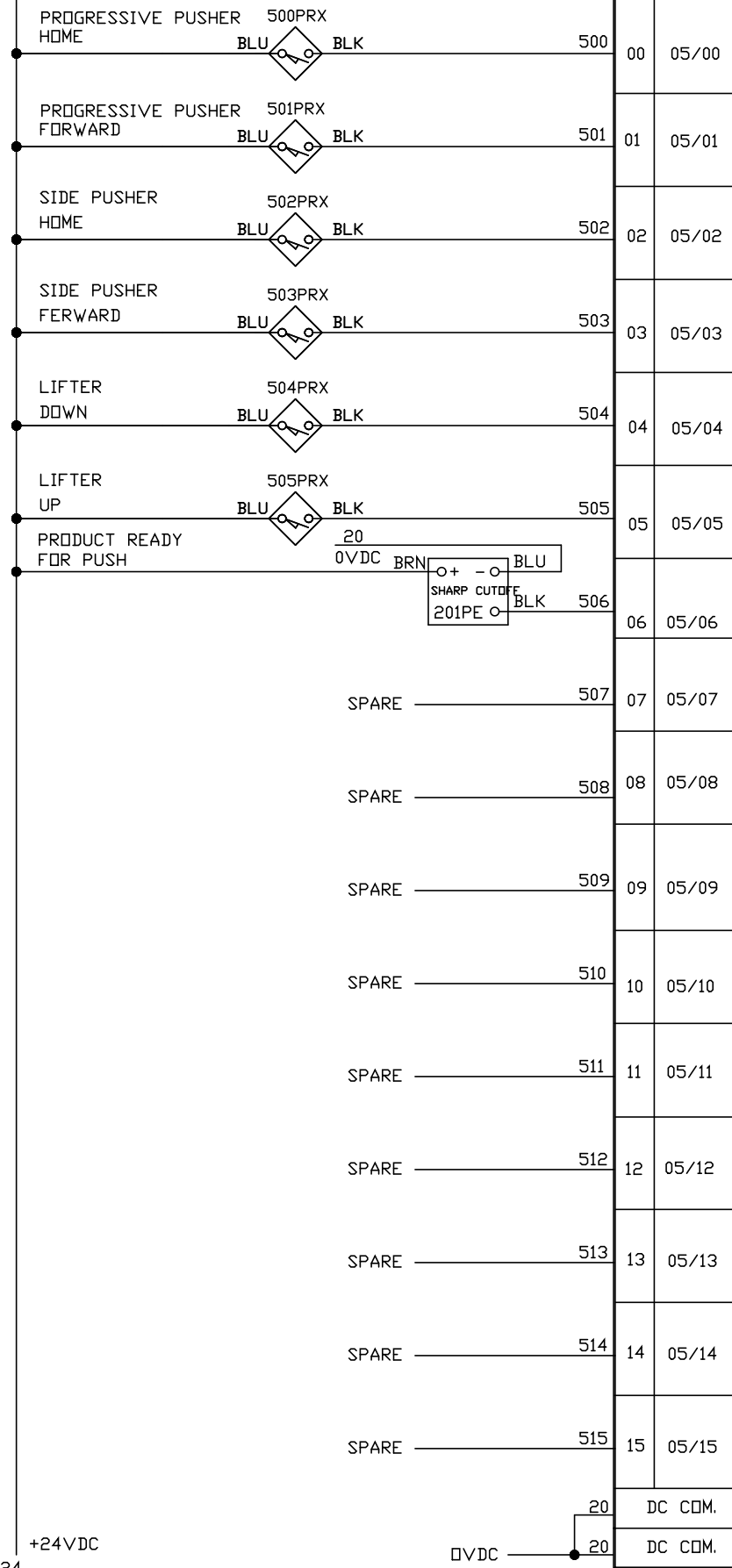
OUTPUT MODULE #4



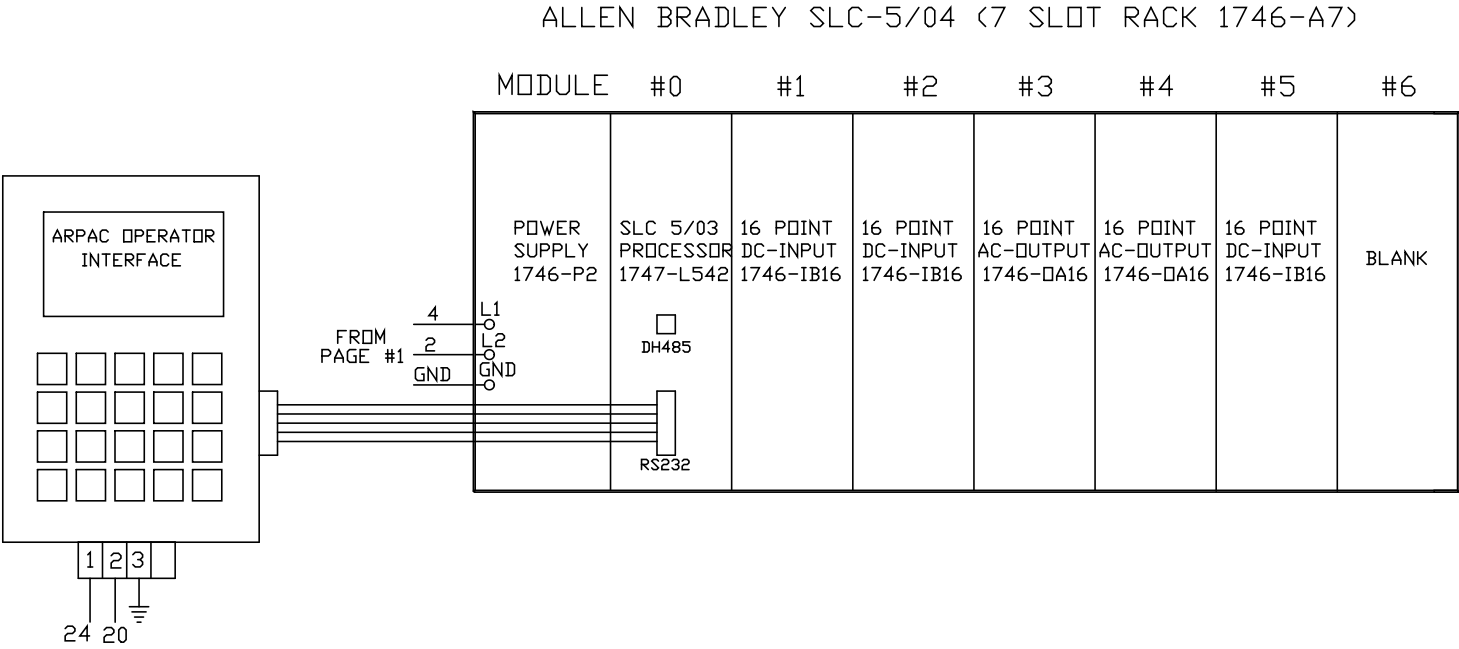
		
REV. A	ELECTRICAL SCHEMATIC	SIZE: A
DESIGNER: DBM		DATE: 09-18-07
MODEL: 107-20		SHEET: 4 OF 6
BREMNER RIPON		DRAWING NUMBER: 8873-99-04

24

1746-IB16



REV. A		ELECTRICAL SCHEMATIC	SIZE: A
DESIGNER: DBM			DATE: 09-18-07
MODEL: 107-20			SHEET: 5 OF 6
BREMNER RIPON			DRAWING NUMBER: 8873-99-05





REV. A	ELECTRICAL SCHEMATIC	SIZE: A
DESIGNER: DBM		DATE: 09-18-07
MODEL: 107-20		SHEET: 6 OF 6
BREMNER RIPON		DRAWING NUMBER: 8873-99-06

SECTION 12

Vendor Information

The CD ROM on the next page contains all of the OEM literature used on the machine. The files are in Adobe Reader .pdf format and require that Adobe Reader be installed on your PC to read the files. You can download this reader program for free from:

<http://www.adobe.com/products/acrobat/readstep2.html>