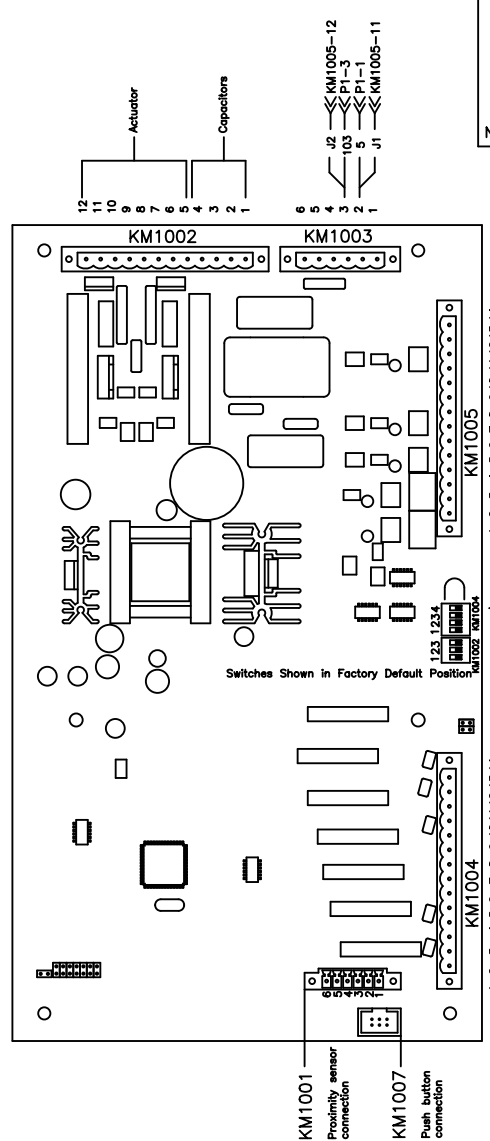


NOTE: CONTACTS SHOWN WITH BREAKER IN THE OPEN POSITION AND READY AUX SWITCHES ARE MECHANICALLY CHARGED WHEN BREAKER IS IN THE OPEN POSITION

FOR CONTROL BOARD PIN FUNCTIONS, REFERENCE SHEET 3



Undervoltage Threshold Voltage Settings
note: Located on Binary Input Board plugged into KM1005

Rated Voltage	Operating Voltage Range
<input type="checkbox"/> 220-240 AC/DC	84-154
<input type="checkbox"/> 110-127 AC/DC	45-70
<input type="checkbox"/> 48-60 DC	21-33
<input type="checkbox"/> Not Used	11-17

NOTE: SHADED PORTION INDICATES SWITCH POSITION

Undervoltage Time Delay Settings (KM1004)

<input type="checkbox"/> U-V Disabled	<input type="checkbox"/> delay: 2s
<input type="checkbox"/> delay: 50ms	<input type="checkbox"/> delay: 3s
<input type="checkbox"/> delay: 0.5s	<input type="checkbox"/> delay: 4s
<input type="checkbox"/> delay: 1s	<input type="checkbox"/> delay: 5s

Auto Open on Declining Capacitor Voltage (KM1004)
 Disabled Enabled

Auxiliary Trip on Processor Failure (KM1002)
 Disabled Enabled

NOTE: SHADED PORTION INDICATES SWITCH POSITION

Time Switch Settings (KM1002)

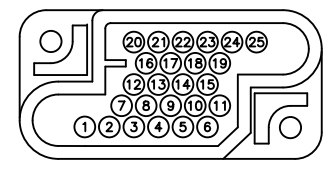
<input type="checkbox"/> 3-Cycle	<input type="checkbox"/> 5-Cycle
----------------------------------	----------------------------------

PIN #	WIRE #	PIN #	WIRE #
1	5	1	9A
2	102	2	10A
3	103	3	700
4	7	4	701
5	6	5	815
6	9	6	816
7	10	7	851
8	15	8	852
9	16	9	855
10	51	10	856
11	52	11	859
12	55	12	860
13	56	13	863
14	59	14	864
15	60	15	813
16	13	16	814
17	14	17	853
18	53	18	854
19	54	19	857
20	57	20	858
21	58	21	861
22	61	22	862
23	62	23	704
24	303	24	705
25	OPEN	25	OPEN

PLUG 1
Toward Center of Breaker

PLUG 2
Toward Outside of Breaker

NOTE: DO NOT USE PIN 1 NOR 25 FOR GROUND.



REAR VIEW OF BREAKER SECONDARY RECEPTACLE TYPICAL

(A01) POINT TO POINT DIAGRAM - OPTIONAL

AMVAC FIXED MOUNT

WIRING DIAGRAM

ABB Inc. Power Technology
Medium Voltage

1B11771

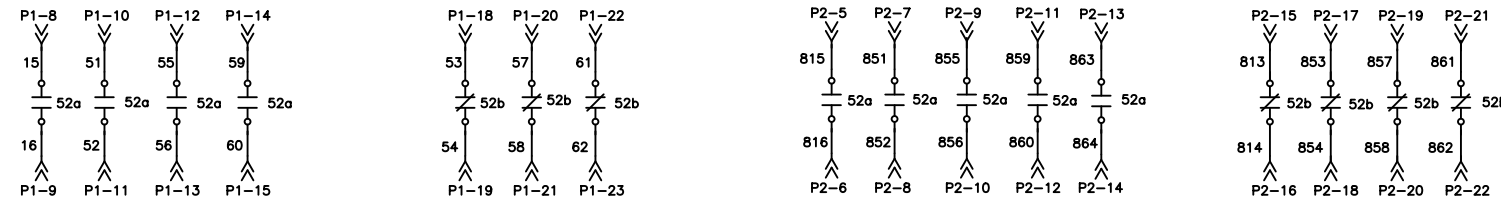
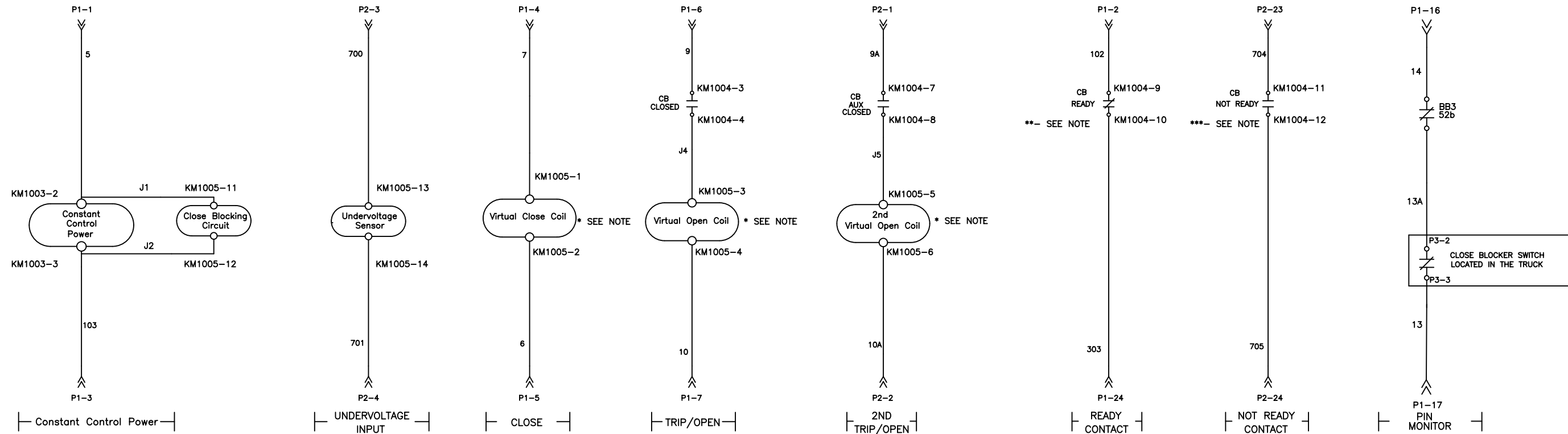
2

SIZE B | SHT 01 | CONT ON 2 | REV

NEXT ASSY: BY: R HOLMES CHD: D LE APP: B GOODIN SHOP ORDER:
 DATE: 1/20/11 DATE: 1/20/11 DATE: 1/20/11

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NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE	NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE
	2				2	COMPLETEY REDRAWN	EG 2/9/11	MM 2/9/11	BG 2/9/11



AUXILIARY CONTACT -BBB - TYPE 24 + AUXILIARY CONTACT -BB3 - TYPE 19 | AUXILIARY CONTACT -BB2 - TYPE 24 + AUXILIARY CONTACT -BB1 - TYPE 19 |

AUXILIARY AVAILABLE FOR CUSTOMER USE

A01 SCHEMATIC WIRING DIAGRAM - OPTIONAL

NOTES:

All contacts are shown with the breaker in the OPEN POSITION & READY unless otherwise specified .

* Coil Monitoring Devices cannot be used and will be recognized as a Close or Open Signal.

** READY Contact is CLOSED when the breaker is ready for operation. "READY" monitors control power, capacitor voltage, Close & Open Coils & uP Watchdog.

*** NOT READY Contact is CLOSED when the breaker is not ready for operation.

AMVAC FIXED MOUNT

WIRING DIAGRAM

ABB Inc. Power Technology
Medium Voltage

1B11771

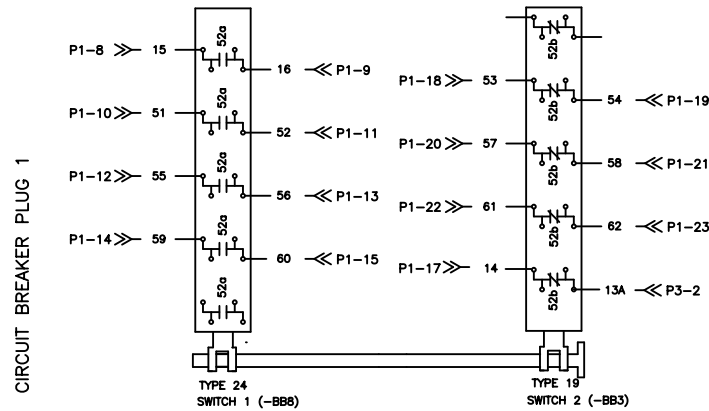
2

SIZE B | SHT 02 | CONT ON 3 | REV

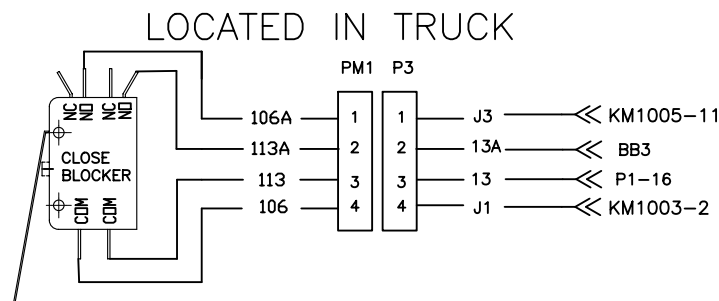
NEXT ASSY: BY: R HOLMES CHD:D LE APP:B GOODIN SHOP ORDER:
DATE: 1/20/11 DATE: 1/20/11 DATE: 1/20/11

TYPE A | PROD 26 | CLASS G | THIS DRAWING IS THE PROPERTY OF ABB Inc. POWER TECHNOLOGY MEDIUM VOLTAGE AND CONTAINS CONFIDENTIAL INFORMATION WHICH MUST NOT BE DUPLICATE USED, OR DISCLOSED OTHER THAN EXPRESSLY AUTHORIZED BY ABB Inc.

NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE	NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE
					2	COMPLETEY REDRAWN	EG 2/9/11	MM 2/9/11	BG 2/9/11

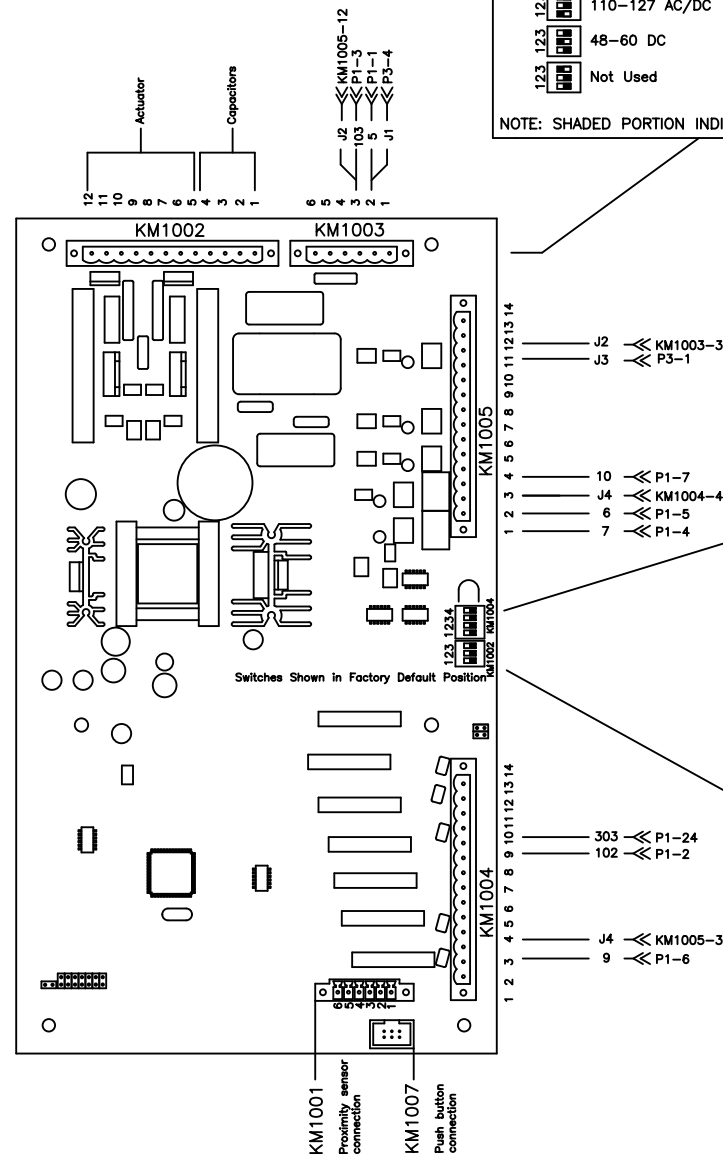


NOTE: CONTACTS SHOWN WITH BREAKER IN THE OPEN POSITION AND READY
AUX SWITCHES ARE MECHANICALLY CHARGED WHEN BREAKER IS IN THE OPEN POSITION



REFERENCE DWG 1B11979

FOR CONTROL BOARD PIN FUNCTIONS, REFERENCE SHEET 3



Undervoltage Threshold Voltage Settings
note: Located on Binary Input Board plugged into KM1005

Rated Voltage	Operating Voltage Range
220-240 AC/DC	84-154
110-127 AC/DC	45-70
48-60 DC	21-33
Not Used	11-17

NOTE: SHADED PORTION INDICATES SWITCH POSITION

Undervoltage Time Delay Settings (KM1004)

U-V Disabled	delay:
	2s
	50ms
	0.5s
	1s
	3s
	4s
	5s

Auto Open on Declining Capacitor Voltage (KM1004)
 Disabled Enabled

Auxiliary Trip on Processor Failure (KM1002)
 Disabled Enabled

NOTE: SHADED PORTION INDICATES SWITCH POSITION

Time Switch Settings (KM1002)

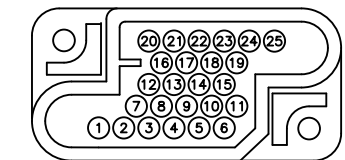
	3-Cycle		5-Cycle
--	---------	--	---------

PIN #	WIRE #	PIN #	WIRE #
1	5	1	9A
2	102	2	10A
3	103	3	700
4	7	4	701
5	6	5	815
6	9	6	816
7	10	7	851
8	15	8	852
9	16	9	855
10	51	10	856
11	52	11	859
12	55	12	860
13	56	13	863
14	59	14	864
15	60	15	813
16	13	16	814
17	14	17	853
18	53	18	854
19	54	19	857
20	57	20	858
21	58	21	861
22	61	22	862
23	62	23	704
24	303	24	705
25	OPEN	25	OPEN

PLUG 1
Toward Center of Breaker

PLUG 2
of Breaker

NOTE: DO NOT USE PIN 1 NOR 25 FOR GROUND.



(A01) POINT TO POINT DIAGRAM - OPTIONAL

AMVAC WIRING DIAGRAM MODEL 4

ABB Inc. Power Technology
Medium Voltage

1B11970

4

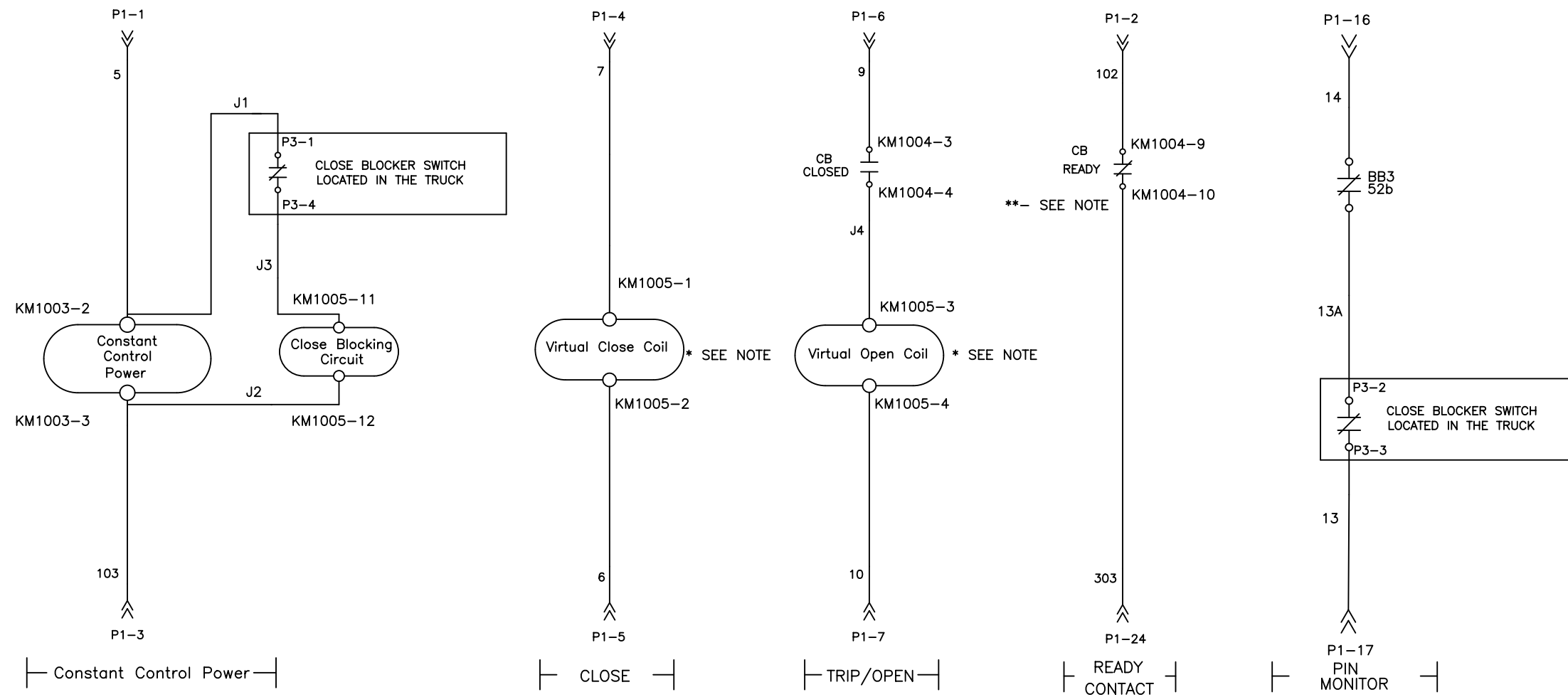
SIZE B SHT 01 CONT ON 02 REV

NEXT ASSY: BY: R HOLMES CHD: D LE
DATE: 7/1/09 DATE: 7/1/09

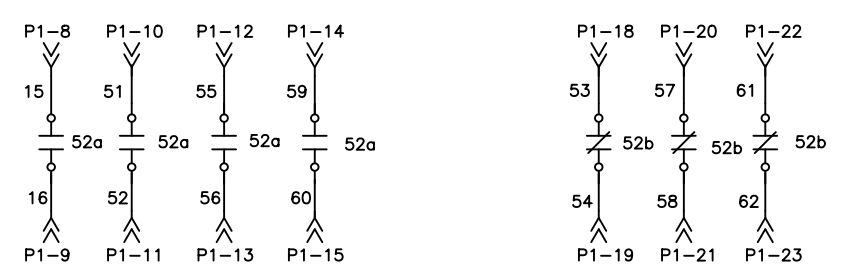
APP: B GOODIN SHOP ORDER:
DATE: 7/1/09

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NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE	NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE
6	CHANGED BLOCKER SWITCH CHANGES TO SCHEMATICS	MBC 3/11/11	MM 3/15/11	BG 3/15/11	4	MUTIPLE CHANGES TO SCHEMATIC	EG 2/2/11	MM 2/2/11	BG 2/2/11
					3	Rearranged aux sw's to match frame	RH 12/6/10	DL 12/6/10	BG 12/6/10
					2	Added notes on dip switch settings	RH 11/21/10	DL 11/21/10	BG 11/21/10



NOTES:
 All contacts are shown with the breaker in the OPEN POSITION & READY unless otherwise specified .
 * Coil Monitoring Devices cannot be used and will be recognized as a Close or Open Signal.
 ** READY Contact is CLOSED when the breaker is ready for operation. "READY" monitors control power, capacitor voltage, Close & Open Coils & uP Watchdog.

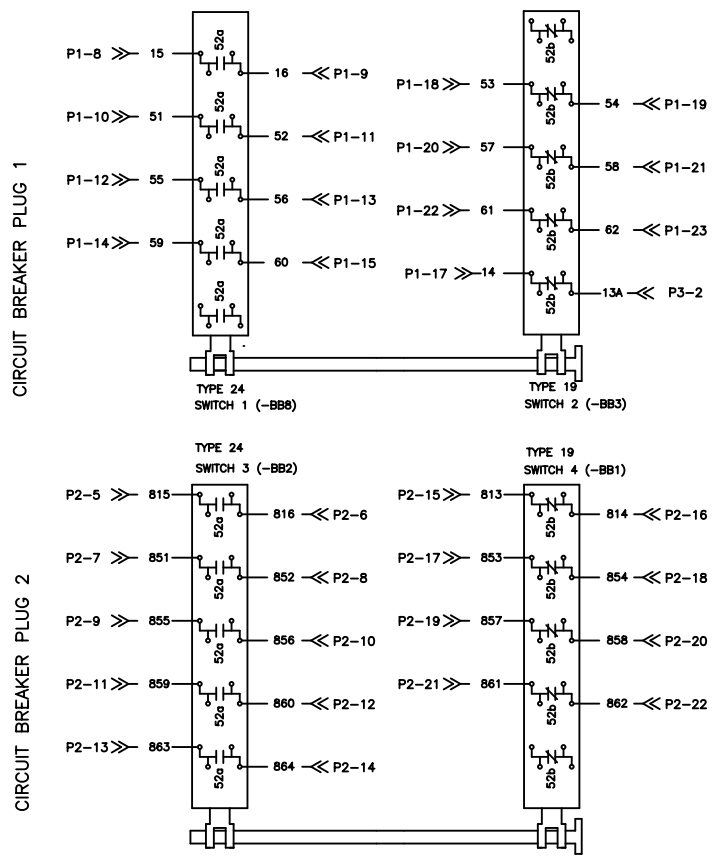


AUXILIARY CONTACT S1 - TYPE 24 | AUXILIARY CONTACT S2 - TYPE 19 |
 AUXILIARY AVAILABLE FOR CUSTOMER USE

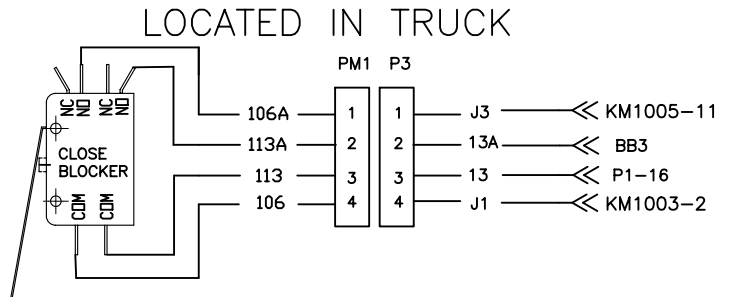
(A01) SCHEMATIC WIRING DIAGRAM - STANDARD

AMVAC WIRING DIAGRAM MODEL 4			
ABB Inc. <i>Power Technology</i> <i>Medium Voltage</i>		1B11970	2
SIZE B	SHT 02	CONT 0N 03	REV
NEXT ASSY:	BY: R HOLMES DATE: 7/1/09	CHD: S BOUNSAV DATE: 7/1/09	APP: E DULLNI DATE: 7/1/09
TYPE A	PROD 26	CLASS G	THIS DRAWING IS THE PROPERTY OF ABB Inc. POWER TECHNOLOGY MEDIUM VOLTAGE AND CONTAINS CONFIDENTIAL INFORMATION WHICH MUST NOT BE DUPLICATE USED, OR DISCLOSED OTHER THAN EXPRESSLY AUTHORIZED BY ABB Inc.

NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE
2	ADDED "MODEL 4" TO TITLE CHANGES TO SCHEMATICS	EG 2/2/11	MM 2/2/11	BG 2/2/11

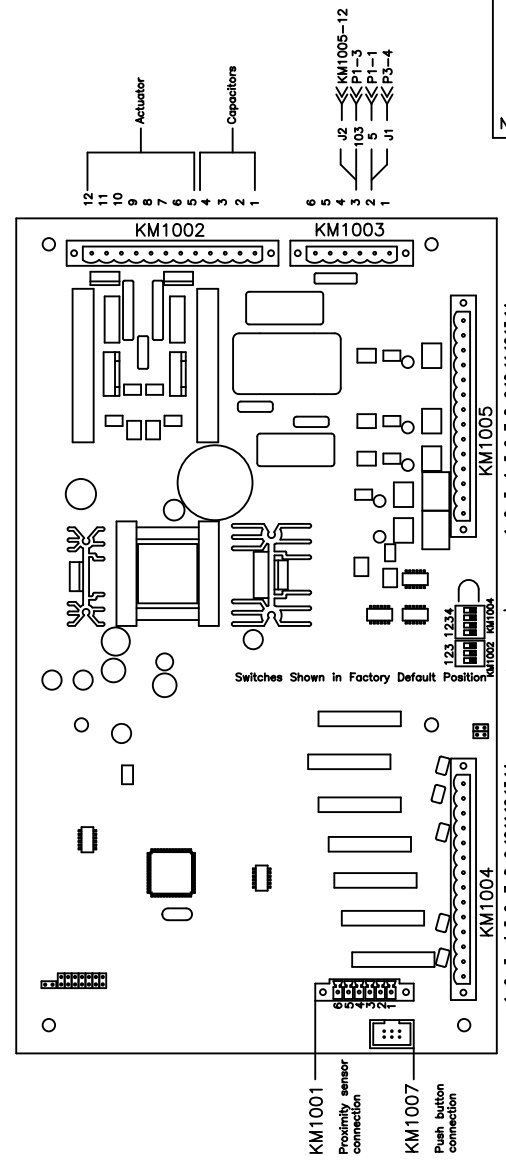


NOTE: CONTACTS SHOWN WITH BREAKER IN THE OPEN POSITION AND READY
AUX SWITCHES ARE MECHANICALLY CHARGED WHEN BREAKER IS IN THE OPEN POSITION



REFERENCE DWG 1B11979

FOR CONTROL BOARD PIN FUNCTIONS, REFERENCE SHEET 3



Undervoltage Threshold Voltage Settings
note: Located on Binary Input Board plugged into KM1005

Rated Voltage	Operating Voltage Range
123 123 123 <input type="checkbox"/> 220-240 AC/DC	84-154
123 123 123 <input type="checkbox"/> 110-127 AC/DC	45-70
123 123 123 <input type="checkbox"/> 48-60 DC	21-33
123 123 123 <input type="checkbox"/> Not Used	11-17

NOTE: SHADED PORTION INDICATES SWITCH POSITION

Undervoltage Time Delay Settings (KM1004)

U-V Disabled	delay: 2s
<input type="checkbox"/> U-V Disabled	<input type="checkbox"/> delay: 2s
<input type="checkbox"/> delay: 50ms	<input type="checkbox"/> delay: 3s
<input type="checkbox"/> delay: 0.5s	<input type="checkbox"/> delay: 4s
<input type="checkbox"/> delay: 1s	<input type="checkbox"/> delay: 5s

Auto Open on Declining Capacitor Voltage (KM1004)
 Disabled Enabled

Auxiliary Trip on Processor Failure (KM1002)
 Disabled Enabled

NOTE: SHADED PORTION INDICATES SWITCH POSITION

Time Switch Settings (KM1002)

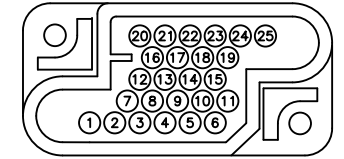
<input type="checkbox"/> 3-Cycle	<input type="checkbox"/> 5-Cycle
----------------------------------	----------------------------------

PIN #	WIRE #	PIN #	WIRE #
1	5	1	9A
2	102	2	10A
3	103	3	700
4	7	4	701
5	6	5	815
6	9	6	816
7	10	7	851
8	15	8	852
9	16	9	855
10	51	10	856
11	52	11	859
12	55	12	860
13	56	13	863
14	59	14	864
15	60	15	813
16	13	16	814
17	14	17	853
18	53	18	854
19	54	19	857
20	57	20	858
21	58	21	861
22	61	22	862
23	62	23	704
24	303	24	705
25	OPEN	25	OPEN

PLUG 1
Toward Center
of Breaker

PLUG 2
Toward Outside
of Breaker

NOTE: DO NOT USE PIN 1 NOR 25 FOR GROUND.



REAR VIEW OF BREAKER
SECONDARY RECEPTACLE
TYPICAL

(A01) POINT TO POINT DIAGRAM - OPTIONAL

AMVAC WIRING DIAGRAM MODEL 4

ABB Inc. Power Technology
Medium Voltage

1B11971

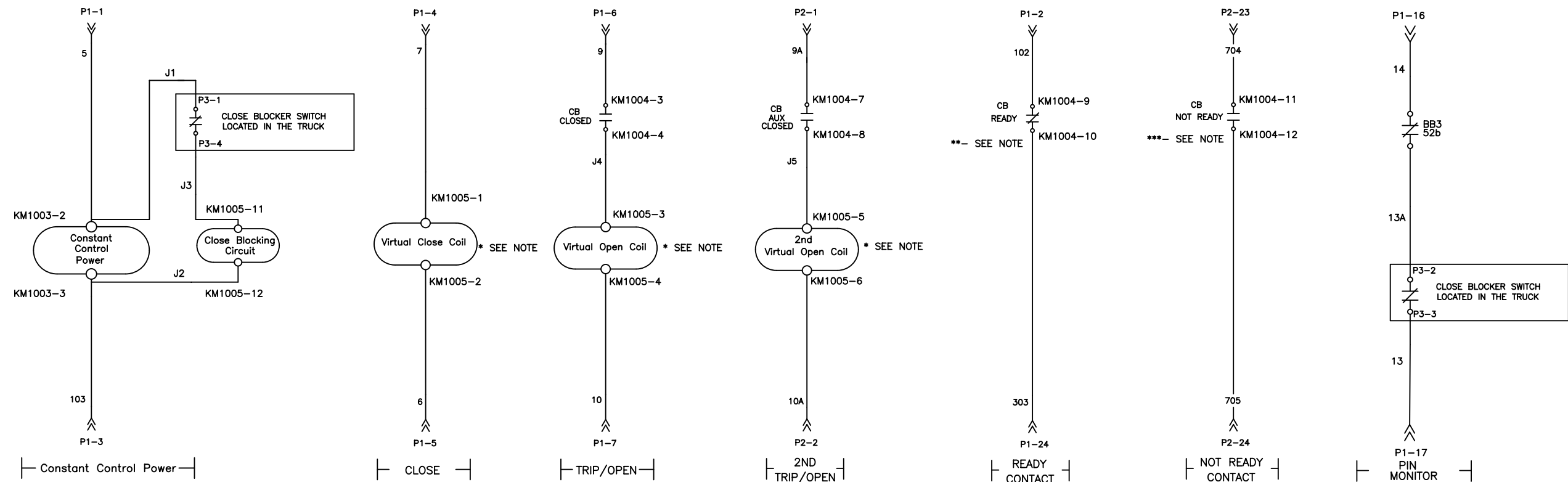
6

SIZE B SHT 01 CONT 01 02 REV

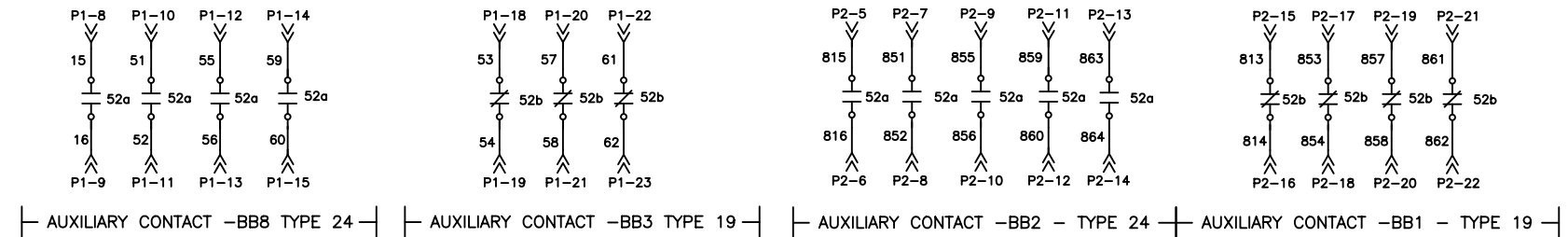
NEXT ASSY: BY: R HOLMES CHD'S BOUNSAV APP'E DULLNI SHOP ORDER:
DATE: 7/1/09 DATE: 7/1/09 DATE: 7/1/09

TYPE PROD CLASS THIS DRAWING IS THE PROPERTY OF ABB Inc. POWER TECHNOLOGY MEDIUM VOLTAGE AND CONTAINS CONFIDENTIAL INFORMATION WHICH MUST NOT BE DUPLICATE USED, OR DISCLOSED OTHER THAN EXPRESSLY AUTHORIZED BY ABB Inc.
A 26 G

NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE	NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE
5	ADDED "MODEL 4" TO TITLE CHANGES TO SCHEMATICS	MBC 3/11/11	MM 2/2/11	BG 2/2/11	5	EG 2/2/11 MM 2/2/11 BG 2/2/11			
4	Reassigned aux sw's to match frame				4	RH 12/6/10 DL 12/6/10 BG 12/6/10			
3	corrected aux sw pin assignments				3	RH 12/3/10 DL 12/3/10 BG 12/3/10			
2	Added notes on dip switch settings				2	RH 11/21/10 DL 11/21/10 BG 11/21/10			
6	CHANGED BLOCKER SWITCH CHANGES TO SCHEMATICS								



DWG. NO.



NOTES:
 All contacts are shown with the breaker in the OPEN POSITION & READY unless otherwise specified .
 * Coil Monitoring Devices cannot be used and will be recognized as a Close or Open Signal.
 ** READY Contact is CLOSED when the breaker is ready for operation. "READY" monitors control power, capacitor voltage, Close & Open Coils & uP Watchdog.
 *** NOT READY Contact is CLOSED when the breaker is not ready for operation.

(A01) SCHEMATIC WIRING DIAGRAM - OPTIONAL

AMVAC WIRING DIAGRAM
 MODEL 4

		1B11971		2	
		SIZE B	SHT 02	CONT 03	REV
NEXT ASSY:		BY: R HOLMES DATE: 7/1/09	CHD: S BOUNSAV DATE: 7/1/09	APPE DULLNI DATE: 7/1/09	SHOP ORDER:
TYPE	PROD	CLASS	THIS DRAWING IS THE PROPERTY OF ABB Inc. POWER TECHNOLOGY MEDIUM VOLTAGE AND CONTAINS CONFIDENTIAL INFORMATION WHICH MUST NOT BE DUPLICATE USED, OR DISCLOSED OTHER THAN EXPRESSLY AUTHORIZED BY ABB Inc.		

NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE
2	ADDED "MODEL 4" TO TITLE MULTIPLE CHANGES TO SCHEMATICS	EG 2/2/11	MM 2/2/11	BG 2/2/11