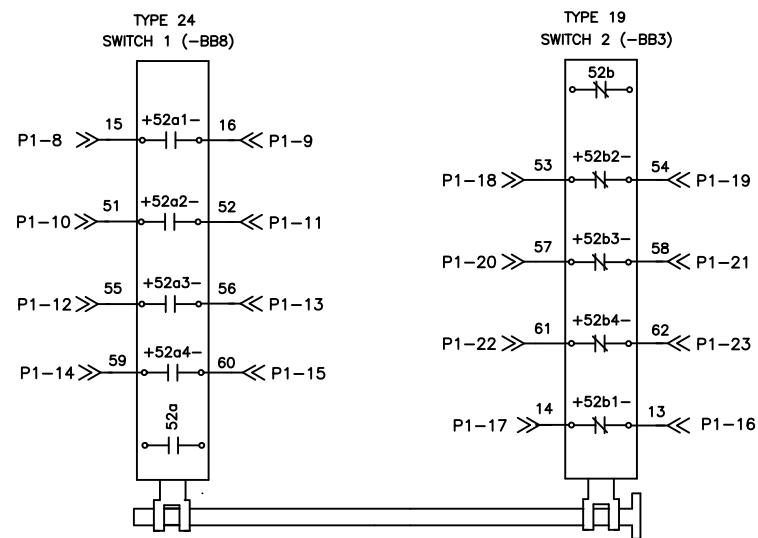
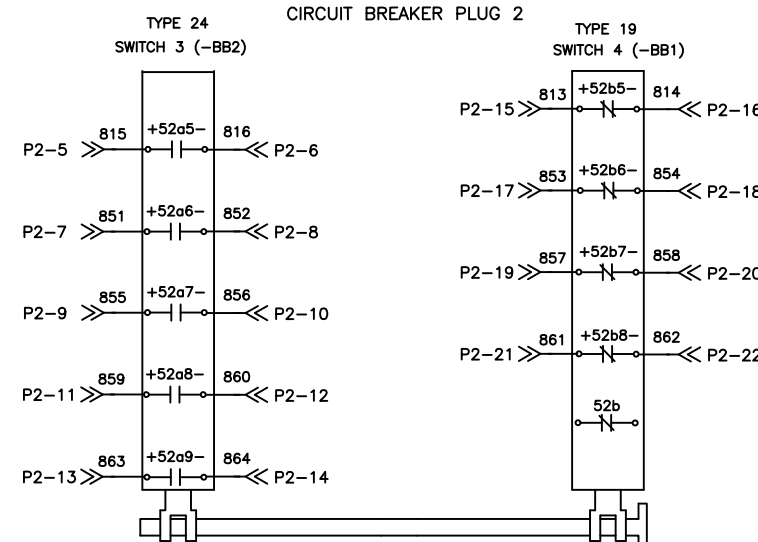


CIRCUIT BREAKER PLUG 1

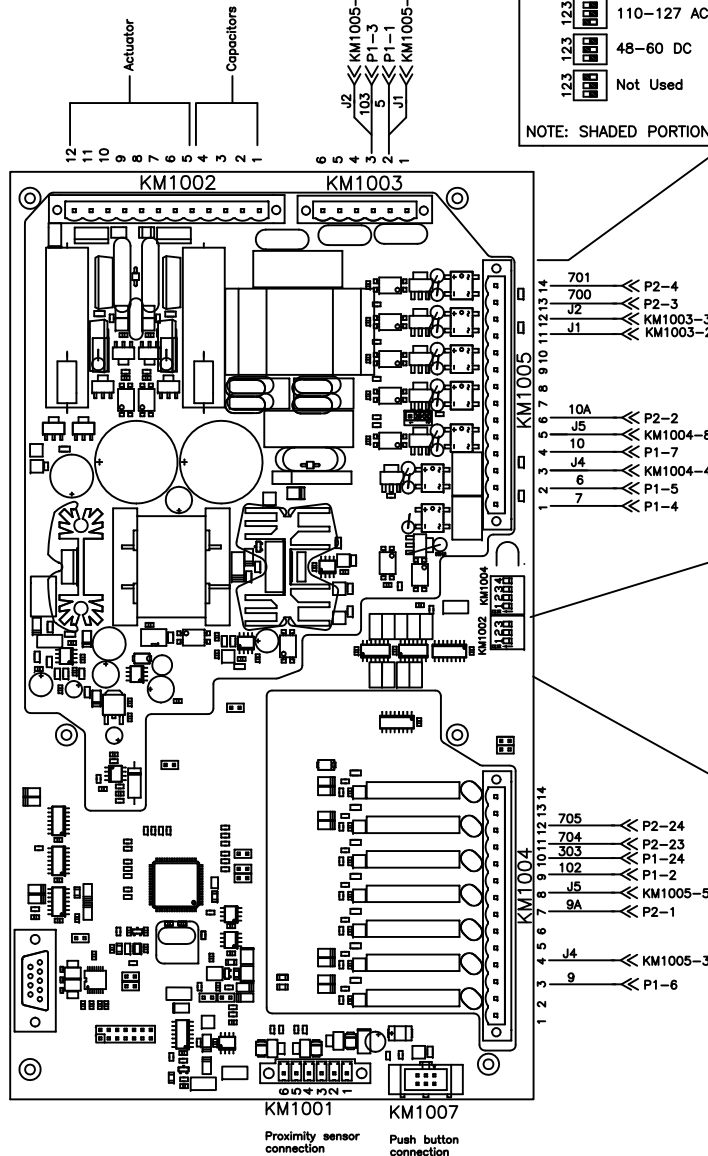


CIRCUIT BREAKER PLUG 2



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
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

Switches Shown in Factory Default Position

Undervoltage Time Delay Settings (KM1004)

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

Auto Open on Declining Capacitor Voltage (KM1004)
 Disabled Enabled

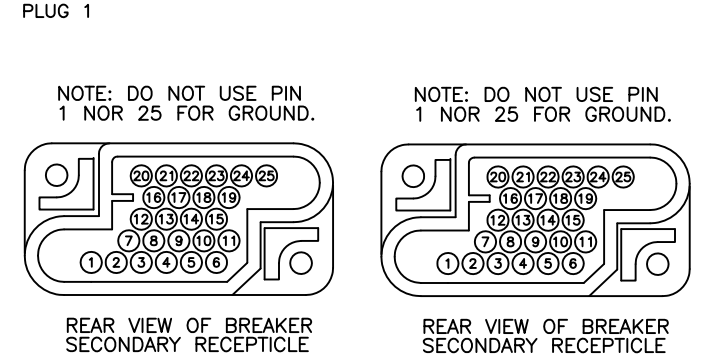
Auxiliary Trip on Processor Failure (KM1002)
 Disabled Enabled

NOTE: SHADED PORTION INDICATES SWITCH POSITION

Time Switch Settings (KM1002)

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

PLUG PIN REF.	WIRE# (AM)	FUNCTION (AM)	PLUG PIN REF.	WIRE# (AM)	FUNCTION (AM)
1-1	5	+ CTRL. PWR.	2-1	9A	+ AUX. TRIP
1-2	102	+ READY	2-2	10A	- AUX. TRIP
1-3	103	- CTRL. PWR.	2-3	700	+UVD
1-4	7	+ CLOSE	2-4	701	-UVD
1-5	6	- CLOSE	2-5	815	+a5
1-6	9	+ TRIP	2-6	816	- a5
1-7	10	- TRIP	2-7	851	+ a6
1-8	15	+ a1	2-8	852	- a6
1-9	16	- a1	2-9	855	+ a7
1-10	51	+ a2	2-10	856	- a7
1-11	52	- a2	2-11	859	+ a8
1-12	55	+ a3	2-12	860	- a8
1-13	56	-a3	2-13	863	+ a9
1-14	59	+a4	2-14	864	- a9
1-15	60	-a4	2-15	813	+ b5
1-16	13	+b1 PIN	2-16	814	- b5
1-17	14	-b1 PIN	2-17	853	+ b6
1-18	53	+b2	2-18	854	- b6
1-19	54	-b2	2-19	857	+ b7
1-20	57	+b3	2-20	858	-b7
1-21	58	-b3	2-21	861	+ b8
1-22	61	+b4	2-22	862	- b8
1-23	62	-b4	2-23	704	+NOT READY
1-24	303	- READY	2-24	705	-NOT READY
1-25	OPEN		2-25	OPEN	



(A01) POINT TO POINT DIAGRAM - OPTIONAL

AMVAC FIXED MOUNT
WIRING DIAGRAM

ABB Inc. Power Technology Medium Voltage

1B11771 E

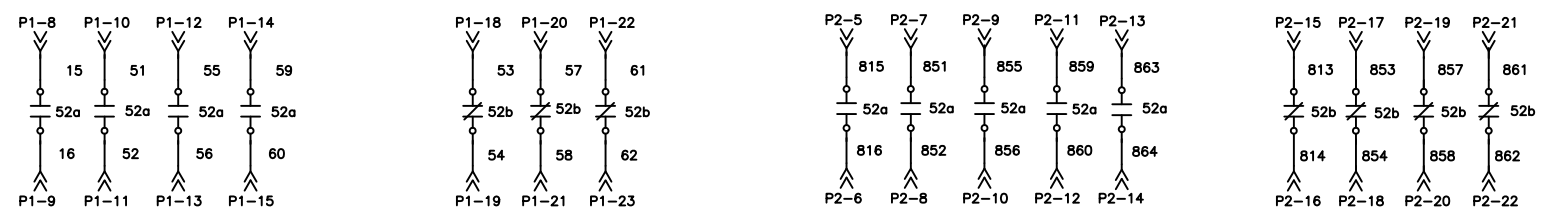
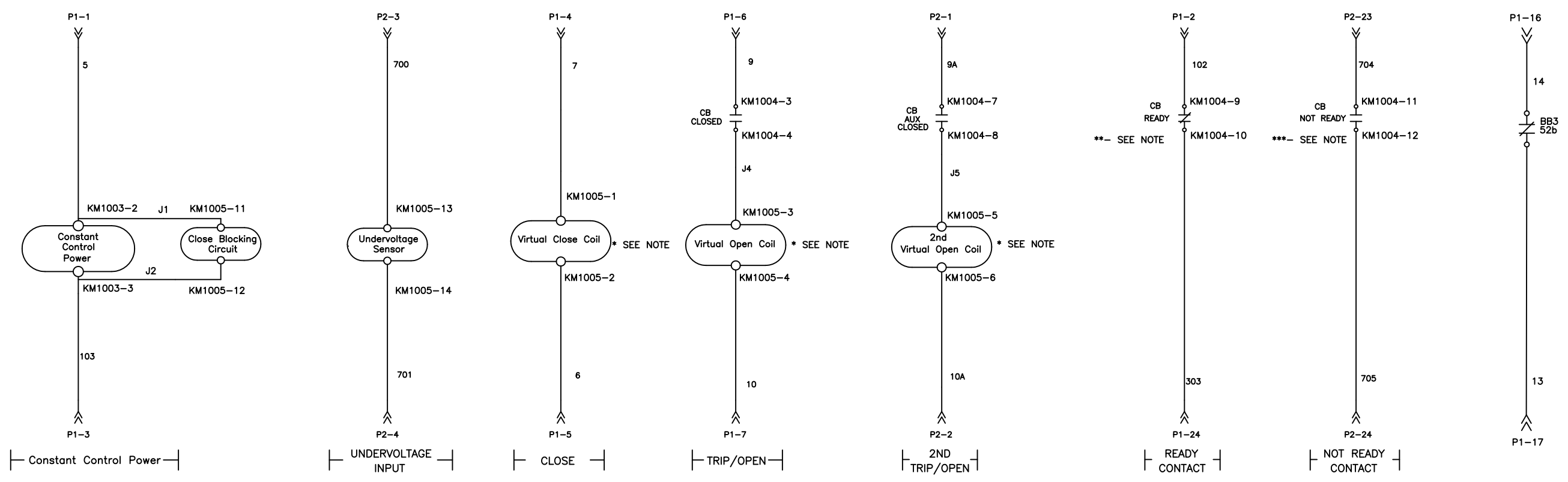
SIZE B SHT 01 CONT ON 2 REV

NO.	REVISIONS	BY	CHD.	APP.	NO.	REVISIONS	BY	CHD.	APP.
E	REDRAWN Replace ED2 with updated ver	MBC	Dinh le	BG	10/11/11	10/11/11	10/11/11	10/11/11	10/11/11
D	Cleaned up	MBC	DL	BG	9/15/11	9/15/11	9/15/11	9/15/11	9/15/11
2	COMPLETEY REDRAWN	EG	MM	BG	2/9/11	2/9/11	2/9/11	2/9/11	2/9/11

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.	

DWG. NO.

DWG. NO.



— 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

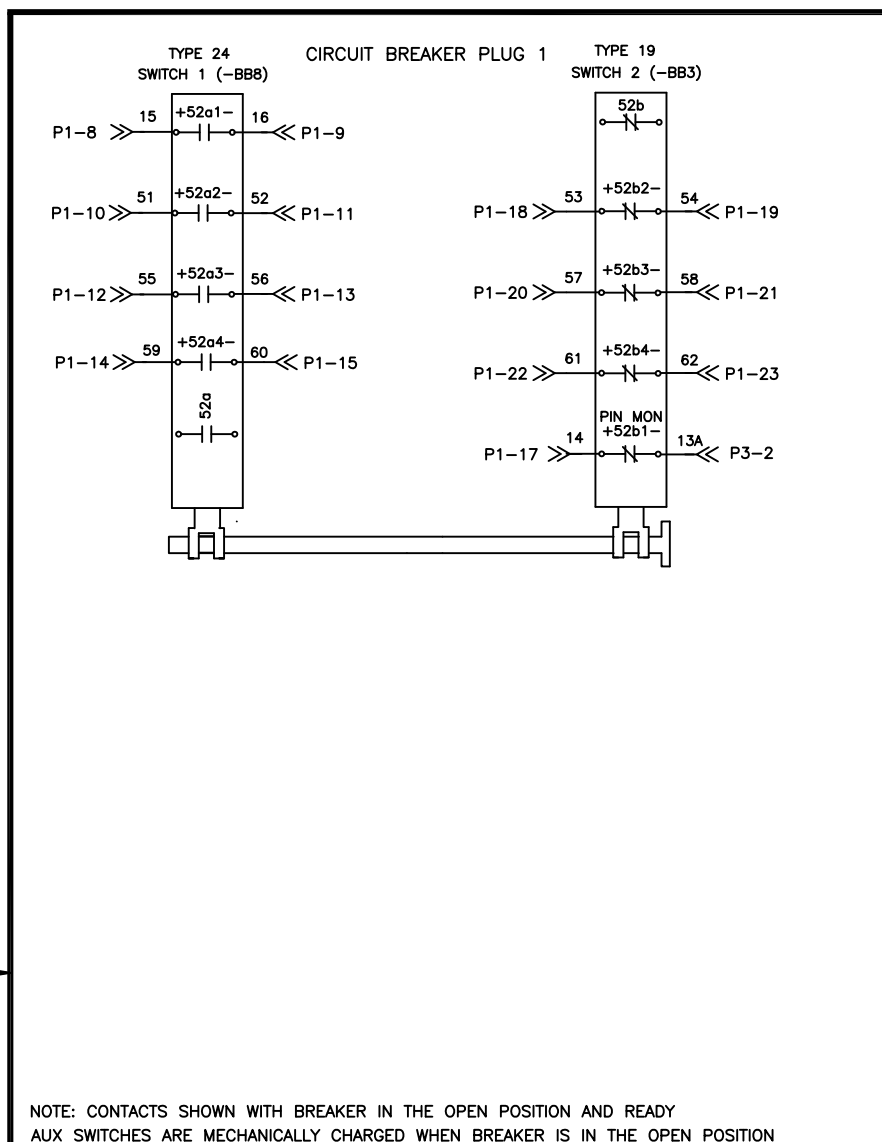
NOTES:
 All contacts are shown with the breaker in the OPEN POSITION & READY unless otherwise specified .
 * Coil Monitoring Devices cannot be used and will be recognized as a Close or Open Signal.
 ** READY Contact is CLOSED when the breaker is ready for operation. "READY" monitors control power, capacitor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

AMVAC FIXED MOUNT
 WIRING DIAGRAM

	1B11771		D
	SIZE B	SHT 02	CONT ON 3

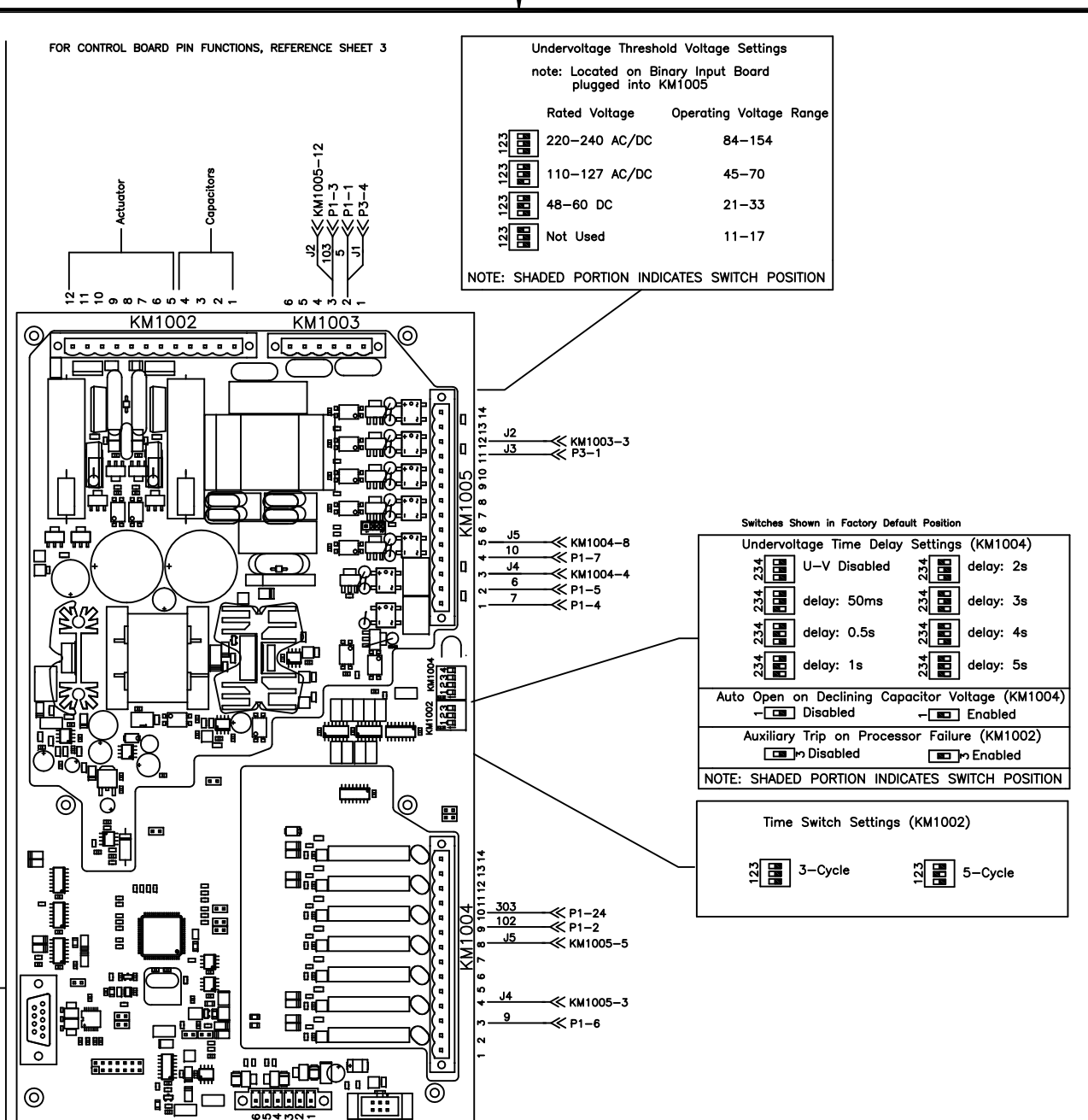
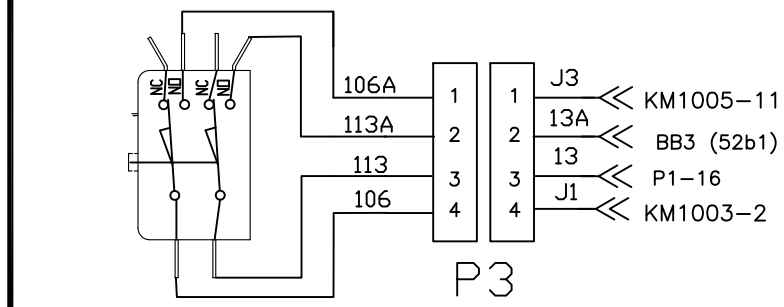
NEXT ASSY:	BY: R HOLMES DATE: 1/20/11	CHD: D LE DATE: 1/20/11	APP: B GOODIN DATE: 1/20/11	SHOP ORDER:
TYPE A	PROD 26	CLASS G	THIS DRAWING IS THE PROPERTY OF ABB Inc. POWER TECHNOLOGY MEDIUM VOLTAGE AND CONTAINS CONFIDENTIAL INFORMATION WHICH MUST NOT BE DUPLICATE USED, OR DISCLOSED OTHER THAN EXPRESSLY AUTHORIZED BY ABB Inc.	

NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE
D	Cleaned to ANSI	MC 9/15/11	DL 9/15/11	BG 9/15/11
2	COMPLETEY REDRAWN	MC 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

CLOSE BLOCKER PIN MONITOR LOCATED IN TRUCK



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

Switches Shown in Factory Default Position

Undervoltage Time Delay Settings (KM1004)

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

Auto Open on Declining Capacitor Voltage (KM1004)

<input type="checkbox"/> Disabled	<input type="checkbox"/> Enabled
-----------------------------------	----------------------------------

Auxiliary Trip on Processor Failure (KM1002)

<input type="checkbox"/> Disabled	<input type="checkbox"/> Enabled
-----------------------------------	----------------------------------

NOTE: SHADED PORTION INDICATES SWITCH POSITION

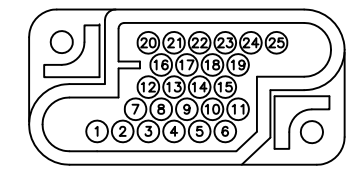
Time Switch Settings (KM1002)

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

PLUG 1

PLUG PIN REF.	WIRE# (AM)	FUNCTION (AM)
1-1	5	+ CTRL. PWR.
1-2	102	+ READY
1-3	103	- CTRL. PWR.
1-4	7	+ CLOSE
1-5	6	- CLOSE
1-6	9	+ TRIP
1-7	10	- TRIP
1-8	15	+ a1
1-9	16	- a1
1-10	51	+ a2
1-11	52	- a2
1-12	55	+ a3
1-13	56	-a3
1-14	59	+a4
1-15	60	-a4
1-16	13	+b1 PIN MONITOR
1-17	14	-b1 PIN MONITOR
1-18	53	+b2
1-19	54	-b2
1-20	57	+b3
1-21	58	-b3
1-22	61	+b4
1-23	62	-b4
1-24	303	- READY
1-25	OPEN	
KM1003-2	J1	CLOSE BLOCKER +
KM1003-3	J2	CLOSE BLOCKER -
KM1005-11	J3	CLOSE BLOCKER +
KM1004-4	J4	TRIP ANTI PUMP
KM1004-8	J5	AUX TRIP ANTI PUMP
P3-2	13A	+b1 PIN MONITOR

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



REAR VIEW OF BREAKER SECONDARY RECEPTACLE

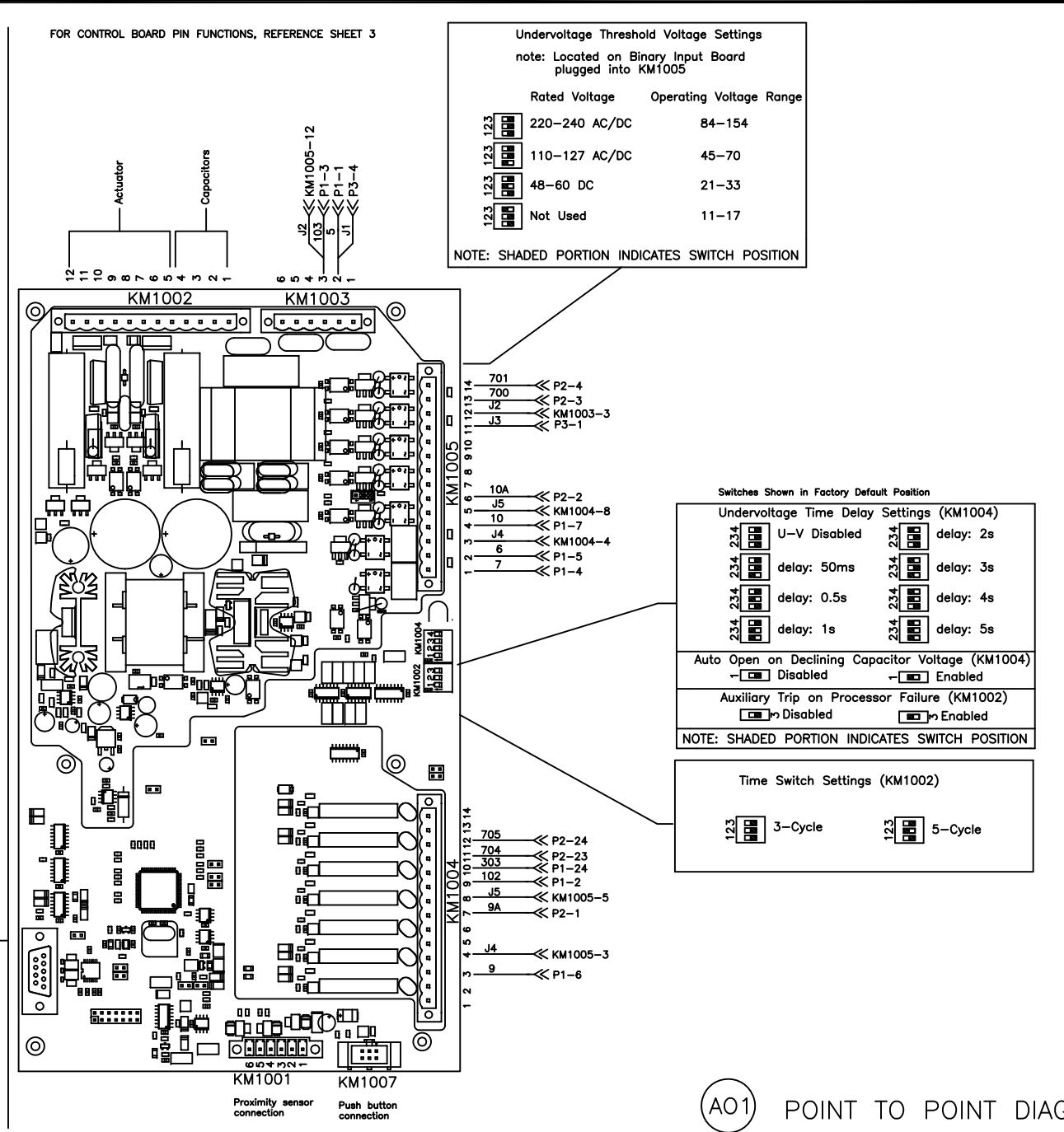
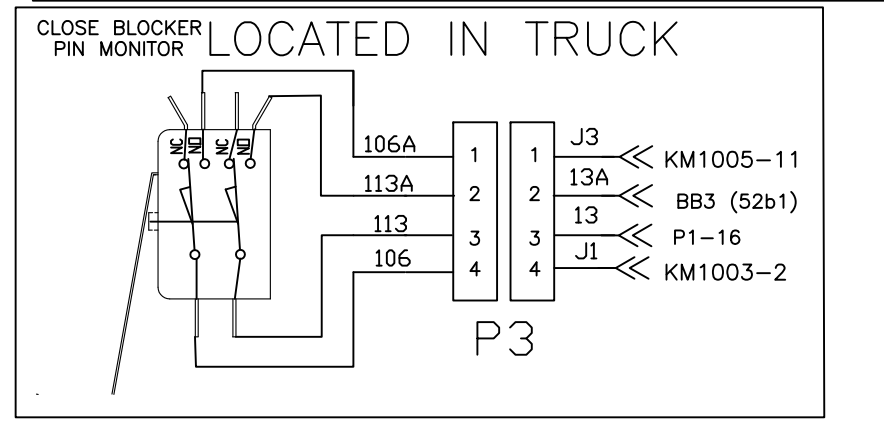
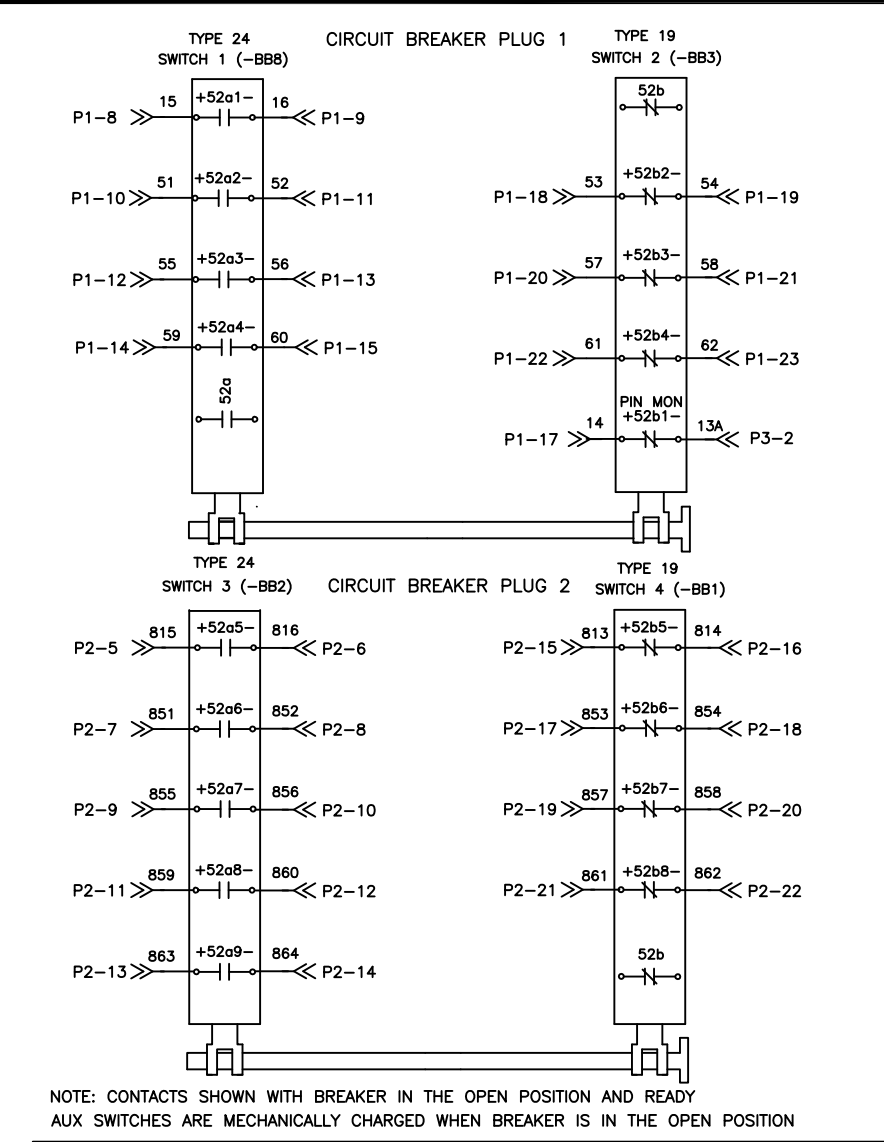
(A01) POINT TO POINT DIAGRAM

AMVAC WIRING DIAGRAM

		1B11970		F	
		SIZE B	SHT 01	CONT ON 02	REV
NEXT ASSY:		BY: R HOLMES	CHD: D LE	APP: B GOODIN	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			

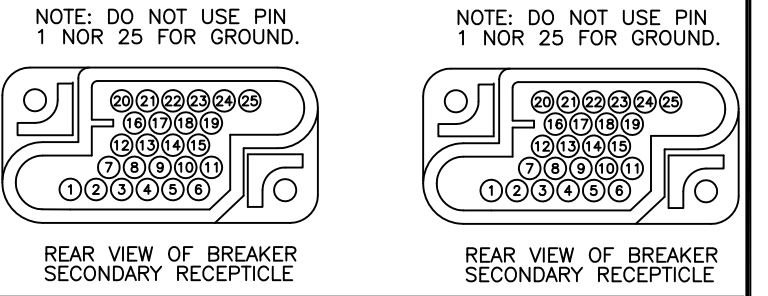
NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE	NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE
4	MULTIPLE CHANGES TO SCHEMATIC	EG 2/2/11	MM 2/2/11	BG 2/2/11	3	Rearranged aux sw's to match frame	RH 12/6/10	DL 12/6/10	BG 12/6/10
3	Added notes on dip switch settings	RH 11/21/10	DL 11/21/10	BG 11/21/10	2				
F	Completely REDRAWN	MBC 10/14/11	TN 10/14/11	JM 10/14/11					

DWG. NO.



PLUG 2 Toward Outside of Breaker			PLUG 1 Toward Center of Breaker		
PLUG PIN REF.	WIRE# (AM)	FUNCTION (AM)	PLUG PIN REF.	WIRE# (AM)	FUNCTION (AM)
2-1	9A	+ AUX. TRIP	1-1	5	+ CTRL. PWR.
2-2	10A	- AUX. TRIP	1-2	102	+ READY
2-3	700	+UVD	1-3	103	- CTRL. PWR.
2-4	701	-UVD	1-4	7	+ CLOSE
2-5	815	+a5	1-5	6	- CLOSE
2-6	816	- a5	1-6	9	+ TRIP
2-7	851	+ a6	1-7	10	- TRIP
2-8	852	- a6	1-8	15	+ a1
2-9	855	+ a7	1-9	16	- a1
2-10	856	- a7	1-10	51	+ a2
2-11	859	+ a8	1-11	52	- a2
2-12	860	- a8	1-12	55	+ a3
2-13	863	+ a9	1-13	56	-a3
2-14	864	- a9	1-14	59	+a4
2-15	813	+ b5	1-15	60	-a4
2-16	814	- b5	1-16	13	+b1 PIN MONITOR
2-17	853	+ b6	1-17	14	-b1 PIN MONITOR
2-18	854	- b6	1-18	53	+b2
2-19	857	+ b7	1-19	54	-b2
2-20	858	-b7	1-20	57	+b3
2-21	861	+ b8	1-21	58	-b3
2-22	862	- b8	1-22	61	+b4
2-23	704	+NOT READY	1-23	62	-b4
2-24	705	-NOT READY	1-24	303	- READY
2-25	OPEN		1-25	OPEN	

KM1003-2	J1	CLOSE BLOCKER +
KM1003-3	J2	CLOSE BLOCKER -
KM1005-11	J3	CLOSE BLOCKER +
KM1004-4	J4	TRIP ANTI PUMP
KM1004-8	J5	AUX TRIP ANTI PUMP
P3-2	13A	+b1 PIN MONITOR



(A01) POINT TO POINT DIAGRAM - OPTIONAL

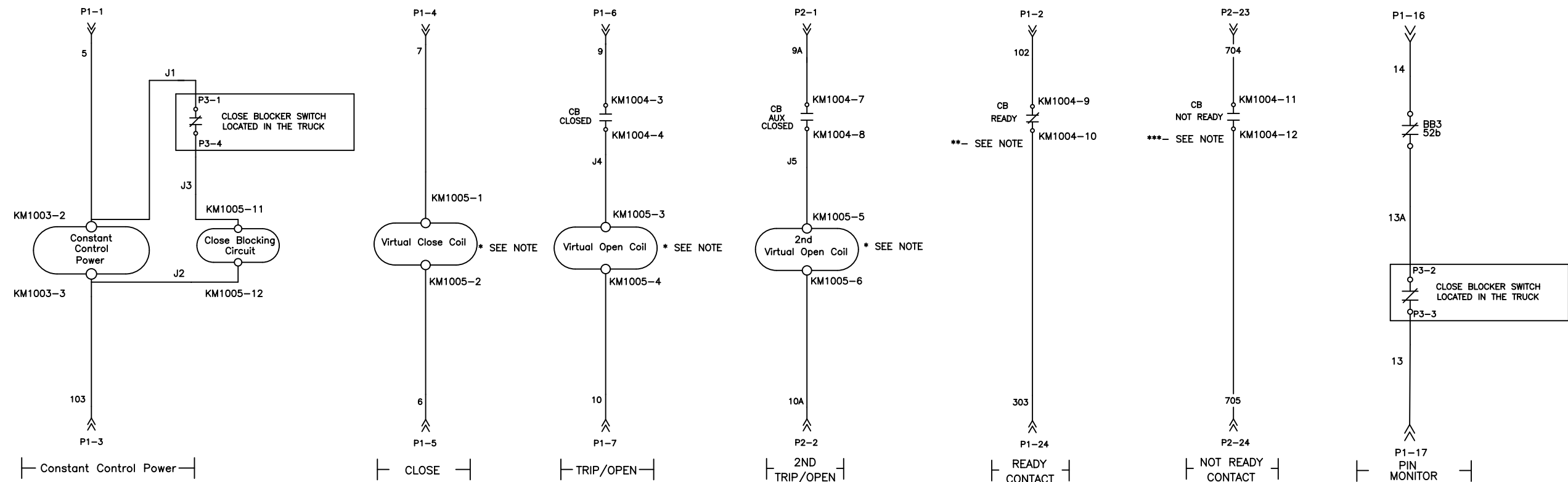
AMVAC WIRING DIAGRAM

MODEL 4

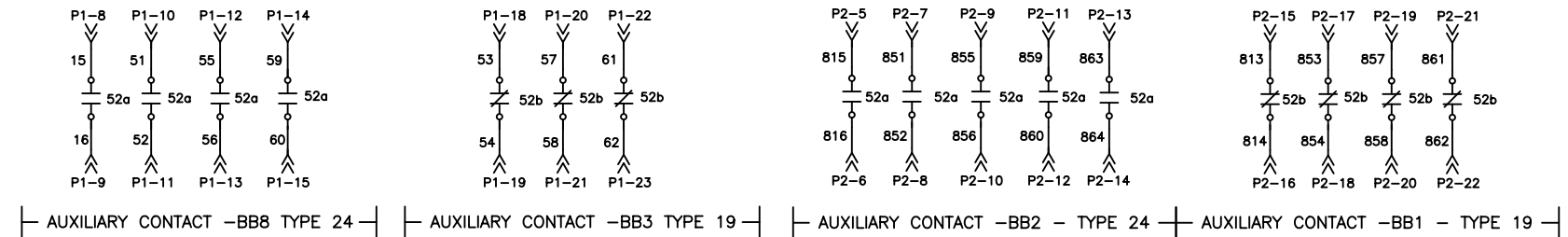
NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE	NO.	REVISIONS	BY DATE	CHD. DATE	APP. DATE
5	ADDED "MODEL 4" TO TITLE CHANGES TO SCHEMATICS	EG	2/2/11	MM	2/2/11	BG	2/2/11		
4	Reassigned aux sw's to match frame	RH	12/6/10	DL	12/6/10	BG	12/6/10		
3	corrected aux sw pin assignments	RH	12/3/10	DL	12/3/10	BG	12/3/10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

Power Technology Medium Voltage	1B11971		F
	SIZE B	SHT 01	CONT ON 02
NEXT ASSY:	BY: R HOLMES	CHD'S BOUNSAV	APP'E DULLNI
	DATE: 7/1/09	DATE: 7/1/09	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.

DWG. NO.



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.

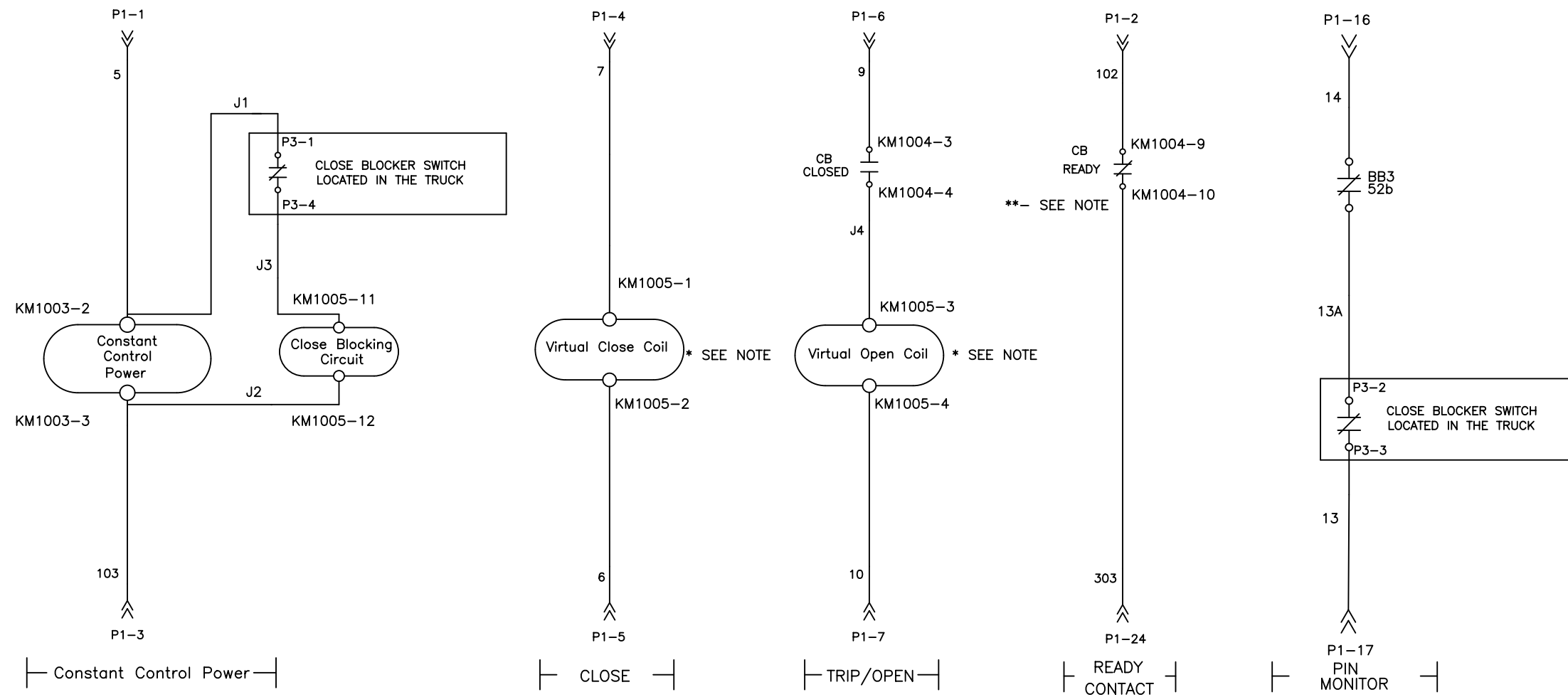
(A01) SCHEMATIC WIRING DIAGRAM - OPTIONAL

AMVAC WIRING DIAGRAM

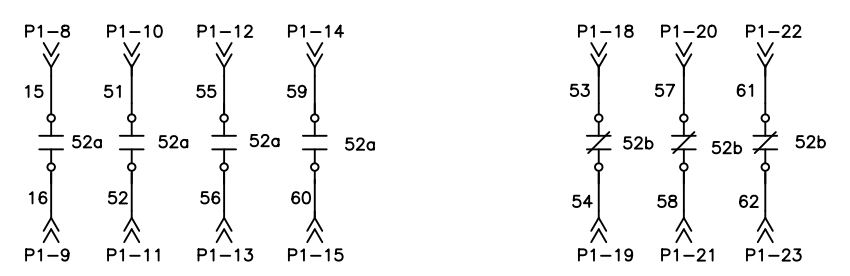
MODEL 4

		1B11971		2	
		SIZE B	SHT 02	CONT ON 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	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



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