

Notes:
4x2, 3-brk Maintenance Bypass Cabinet with SKRU (floor mount)
 1. Floor mount **Make-Before-Break, 4x2**, Maintenance Bypass Cabinet (MBC), with SKRU for LP33 series (S2) UPS module, 208/120Vac, 3Ø/4W/G.
 2. Main Breakers: MIB & MBB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
 3. UPS Input Breaker: UIB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
 4. Bus: Copper
 5. Neutral: 200%
 6. Aux Contact: 2A/B on MBB breaker only
 7. Control: SKRU with Kirk Key on MBB and MIB breakers.
 8. Equipment ground
 9. Refer to national electric code for acceptable external wiring practice.
 10. An upstream overcurrent protection must be installed at the MBC input (A1,B1,&C1).
 11. The external wiring is rated at 75°C or 90°C.
 12. The external wiring material and labor to be provided and paid by others.
 13. The control and power wirings must be installed in separate conduits.
 14. Refer to **Table 2** for control wiring from MBC to UPS module.
 15. A Customer Interface Card, p/n: 1026645 (IM0268), is required in the UPS module.
 16. To avoid a load dump or damage to the equipment, the transfer sequence instruction nameplate mounted to the MBC's door must be followed
 17. Input Transformer
 17.1. Type: Coil & core Isolation Transformer (IT)
 17.2. KVA rating: See Table 1
 17.3. Winding material: Aluminum
 17.4. Voltage: 480vac (primary-Δ): 208/120vac (secondary- Wye)
 17.5. Temperature rise: 150°C
 17.6. K factor: K13

Table 1: 4x2 Combo, 3-brk Maintenance Bypass Cabinet (MBC) with SKRU (Electrical Control) Breaker Schedule

UPS (KVA) (Series 2)	INPUT XFMR (KVA)	MBC PART NUMBER	BREAKER MODEL (EATON-C)	MBB/MIB (Trip)	UIB (Trip)	kAIC@ 240Vac	MBC Dimensions (W x D x H)
15	15	MBC0122060600-K1IT	EHD3060	60A	60A	18	30.0" x 32.8" x 52.0"
		MBC0122060600-K6IT	ED3060	60A	60A	65	
20	20	MBC0222070700-K1IT	EHD3070	70A	70A	18	30.0" x 32.8" x 75.0"
		MBC0222070700-K6IT	FD3070	70A	70A	65	
30	30	MBC0322121200-K2IT	EDB3125	125A	125A	22	30.0" x 32.8" x 75.0"
		MBC0322121200-K6IT	ED3125	125A	125A	65	
50	60	MBC0522172000-K2IT	EDB3175 EDB3200	175A	200A	22	30.0" x 32.8" x 75.0"
		MBC0522172000-K6IT	ED3175 ED3200	175A	200A	65	
60	70	MBC0622222500-K6IT	JDB3225 JDB3250	225A	250A	65	30.0" x 32.8" x 75.0"
80	100	MBC0822303500-K6IT	KDB3300 KDB3350	300A	350A	65	30.0" x 32.8" x 75.0"
100	120	MBC1022354000-K6IT	KDB3350 KDB3400	350A	400A	65	30.0" x 32.8" x 75.0"

Table 2- SKRU Control Wiring From MBC to UPS module

Terminating point In MBC	Terminating point In UPS	Wire Size	Maximum Voltage & Current	Circuit Function	Note
TB2-1	J6-2 (CIC card)	18AWG	250Vac	SKRU control (Key can be removed if UPS is on bypass)	Twisted pair
TB2-2	J6-3 (CIC card)				
TB2-4	J2-1 (CIC card)	18AWG	24V 1.25A	UPS control (UPS transfer is prohibited during testing)	Twisted pair
TB2-5	J2-3 (CIC card)				

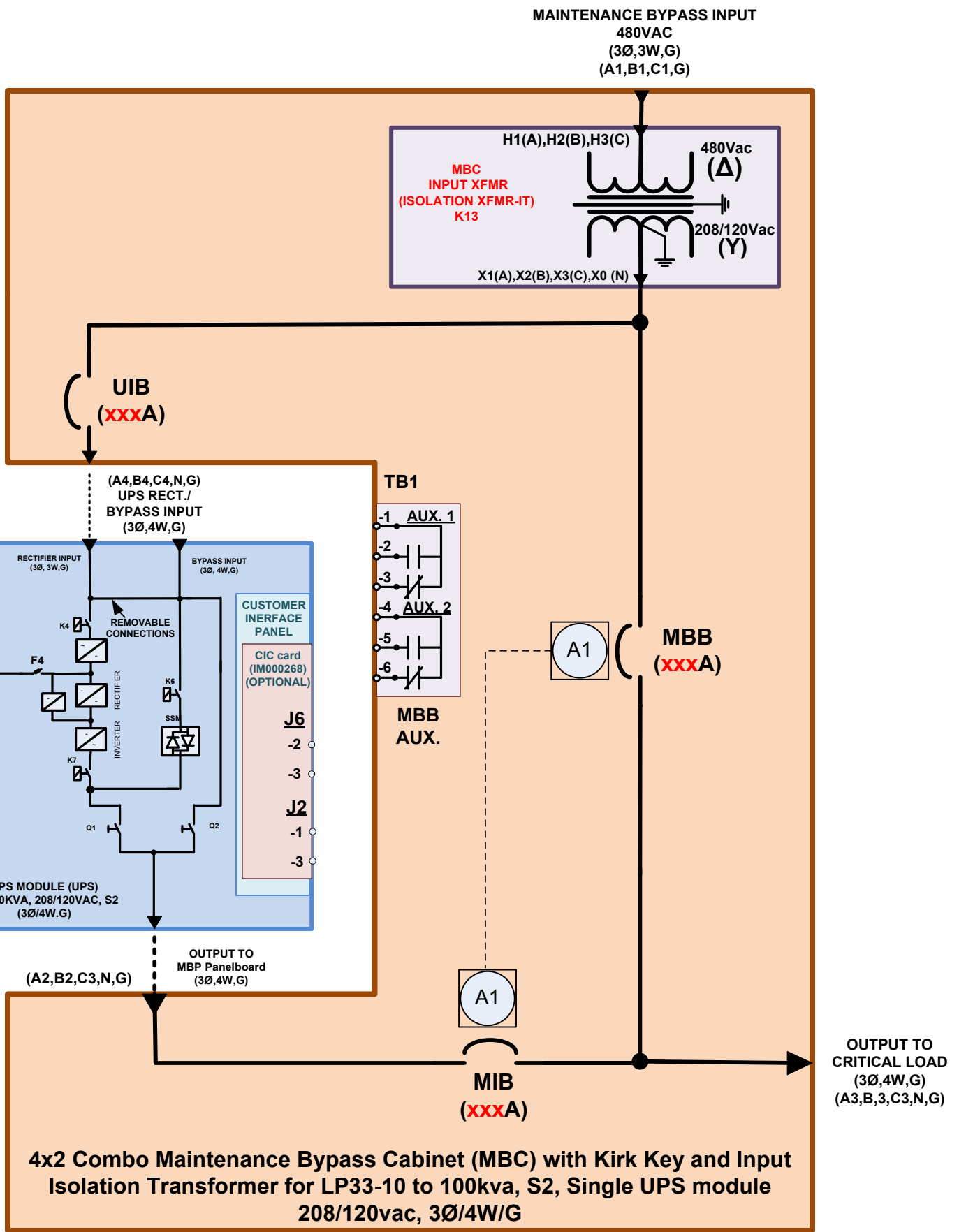
LEGEND:
 MIB: UPS MODULE ISOLATION BREAKER
 MBB: MAINTENANCE BYPASS BREAKER
 UIB: UPS INPUT BREAKER
 IT: ISOLATION TRANSFORMER

LEGEND:
 A1,B1,&C1: MBP Input from Utility, Phase-A, B, & C
 A2,B2,&C2: MBP Input from UPS output, Phase A,B, & C
 A3,B3,&C3: MBP Output to Critical Load, Phase A, B, & C
 A4,B4,&C4: MBP Output to UPS rect./By., Phase A, B, & C
 N: Neutral
 G: Ground

Project Name: STD

Point of Contact:
 Issued by: PH
 Issued date: 11/17/15
 Scale: NONE
 Revised by:
 Revised date:
 Rev. No.: 1.0

Equipment Part Number: See table 1
 Drawing Title: 4x2 combo, 3-brk MBC w SKRU & IT for LP33-10 to 100kva, Series 2 (S2), UPS mod.
 Drawing No.: **1-C3421LxxSU02SITC**
 Sheet No.: 1 of 1



- Notes:**
- 4x2, 3-brk Maintenance Bypass Cabinet with Kirk Key Interlock (floor mount)**
1. Floor mount **Make-Before-Break, 4x2**, Maintenance Bypass Cabinet (MBC), with Kirk Key for LP33 series (S2) UPS module, 208/120Vac, 3Ø/4W/G.
 2. Main Breakers: MIB & MBB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
 3. UPS Input Breaker: UIB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
 4. Bus: Copper
 5. Neutral: 200%
 6. Aux Contact: 2A/B on MBB breaker only
 7. Control: Single Kirk Key on MBB and MIB breakers.
 8. Equipment ground
 9. Refer to national electric code for acceptable external wiring practice.
 10. An upstream overcurrent protection must be installed at the MBC input (A1, B1, & C1).
 11. The external wiring is rated at 75°C or 90°C.
 12. The external wiring material and labor to be provided and paid by others.
 13. The control, if any, and power wirings must be installed in separate conduits.
 14. To avoid a load dump or damage to the equipment, the transfer sequence instruction nameplate mounted to the MBC's door must be followed
 15. Input Transformer
 - 15.1. Type: Coil & core Isolation Transformer (IT)
 - 15.2. KVA rating: See Table 1
 - 15.3. Winding material: Aluminum
 - 15.4. Voltage: 480vac (primary-Δ): 208/120vac (secondary- Wye)
 - 15.5. Temperature rise: 150°C
 - 15.6. K factor: K13

Table 1: 4x2 Combo, 3-brk Maintenance Bypass Cabinet (MBC) with Kirk Key Interlocked Breaker Schedule

UPS (KVA) (Series 2)	INPUT XFMR (KVA)	MBC PART NUMBER	BREAKER MODEL (EATON-C)	MBB/MIB (Trip)	UIB (Trip)	kAIC@ 240Vac	MBC Dimensions (W x D x H)
15	15	MBC0122060600-L1IT	EHD3060	60A	60A	18	30.0" x 32.8" x 52.0"
		MBC0122060600-L6IT	ED3060	60A	60A	65	
20	20	MBC0222070700-L1IT	EHD3070	70A	70A	18	30.0" x 32.8" x 75.0"
		MBC0222070700-L6IT	FD3070	70A	70A	65	
30	30	MBC0322121200-L2IT	EDB3125	125A	125A	22	
		MBC0322121200-L6IT	ED3125	125A	125A	65	
50	60	MBC0522172000-L2IT	EDB3175	175A	200A	22	
		MBC0522172000-L6IT	ED3175	175A	200A	65	
60	70	MBC0622222500-L6IT	JDB3225	225A	250A	65	
80	100	MBC0822303500-L6IT	KDB3300	300A	350A	65	
100	120	MBC1022354000-L6IT	KDB3350	350A	400A	65	

4x2 Combo Maintenance Bypass Cabinet (MBC) with Kirk Key and Input Isolation Transformer for LP33-10 to 100kva, S2, Single UPS module 208/120vac, 3Ø/4W/G

LEGEND:
 MIB: UPS MODULE ISOLATION BREAKER
 MBB: MAINTENANCE BYPASS BREAKER
 UIB: UPS INPUT BREAKER

LEGEND:
 A1,B1,&C1: MBP Input from Utility, Phase-A, B, & C
 A2,B2,&C2: MBP Input from UPS output, Phase A, B, & C
 A3,B3,&C3: MBP Output to Critical Load, Phase A, B, & C
 A4,B4,&C4: MBP Output to UPS rect./By., Phase A, B, & C
 N: Neutral
 G: Ground

Point of Contact:
 STD

Equipment Part Number:
 See table 1

Issued by: PH
 Issued date: 11/178/15
 Scale: NONE

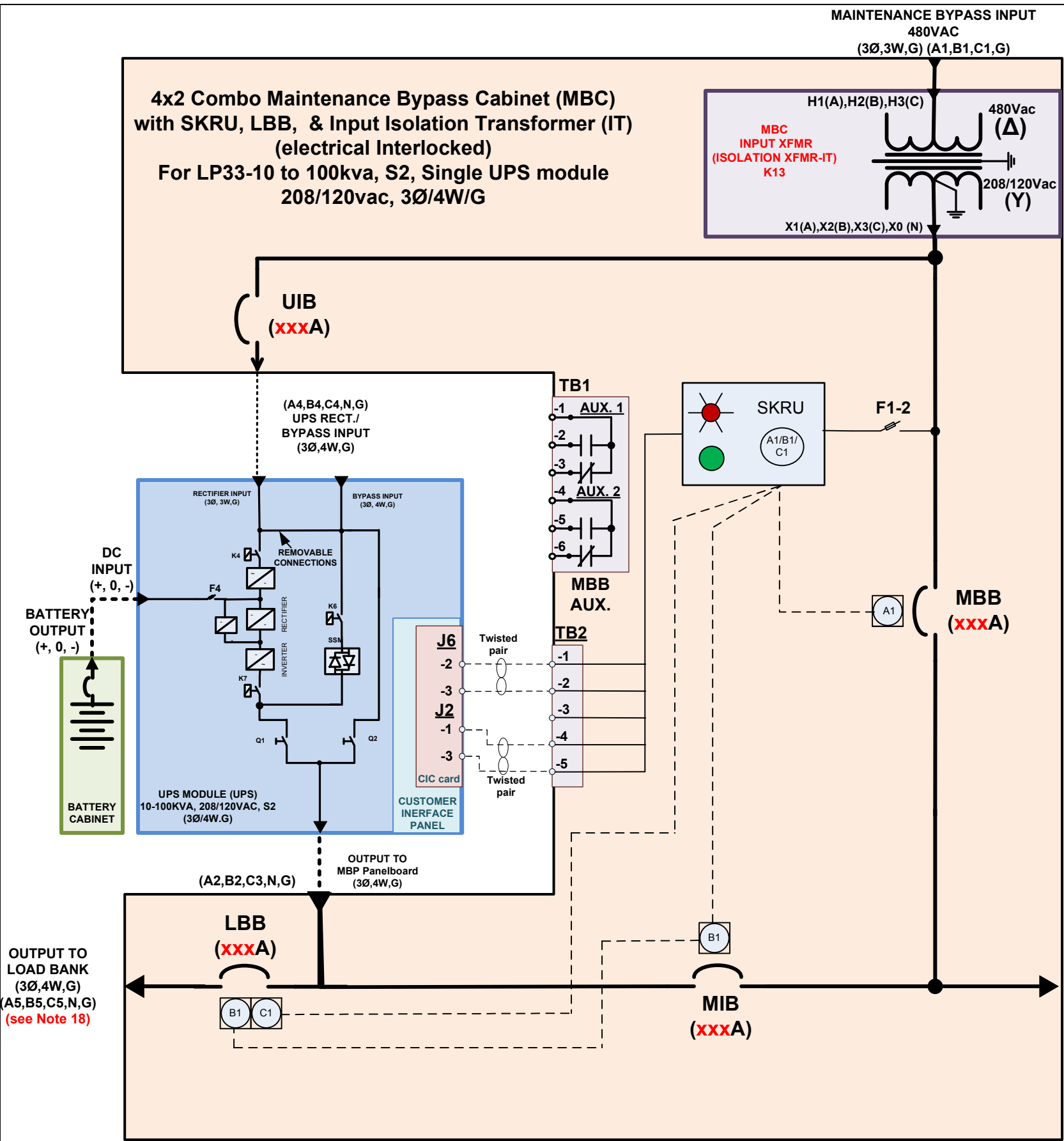
Revised by:
 Revised date:
 Rev. No.: 1.0

Drawing Title:
 4x2 combo, 3-brk MBC w Kirk Key & IT for LP33-10 to 100kva, Series 2 (S2), UPS mod.

Drawing No.: **1-C3421LxxSU02KITC**

Sheet No.: 1 of 1

4x2 Combo Maintenance Bypass Cabinet (MBC) with SKRU, LBB, & Input Isolation Transformer (IT) (electrical Interlocked)
For LP33-10 to 100kva, S2, Single UPS module 208/120vac, 3Ø/4W/G



Notes:

4x2, 3-brk Maintenance Bypass Cabinet with SKRU (floor mount)

1. Floor mount **Make-Before-Break, 4x2**, Maintenance Bypass Cabinet (MBC), with SKRU for LP33 series (S2) UPS module, 208/120Vac, 3Ø/4W/G.
2. Main Breakers: MIB & MBB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
3. UPS Input Breaker: UIB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
4. Load Bank Breaker: LBB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
5. Bus: Copper
6. Neutral: 200%
7. Aux Contact: 2A/B on MBB breaker only
8. Control: SKRU with Kirk Key on MBB and MIB breakers.
9. Equipment ground
10. Refer to national electric code for acceptable external wiring practice.
11. An upstream overcurrent protection must be installed at the MBC input (A1, B1, & C1).
12. The external wiring is rated at 75°C or 90°C.
13. The external wiring material and labor to be provided and paid by others.
14. The control and power wirings must be installed in separate conduits.
15. Refer to **Table 2** for control wiring from MBC to UPS module.
16. A Customer Interface Card, p/n: 1026645 (IM0268), is required in the UPS module.
17. To avoid a load dump or damage to the equipment, the transfer sequence instruction nameplate mounted to the MBC's door must be followed
18. To avoid overheat the input transformer the combined load bank testing load and Critical load currents must not be exceed the UPS rating current.
19. Input Transformer
 - 19.1. Type: Coil & core Isolation Transformer (IT)
 - 19.2. KVA rating: See Table 1
 - 19.3. Winding material: Aluminum
 - 19.4. Voltage: 480vac (primary-Δ): 208/120vac (secondary- Wye)
 - 19.5. Temperature rise: 150°C
 - 19.6. K factor: K13

Table 1: 4x2 Combo 3-brk Maintenance Bypass Cabinet (MBC) w/ SKRU (Electrical Control) & LBB Breaker Schedule

	INPUT XFMR (KVA)	MBC PART NUMBER	BREAKER MODEL (EATON-C)	MBB/MIB/LBB (Trip)	UIB (Trip)	kAIC@ 240Vac	MBC Dimensions (W x D x H)
15	15	MBC01220606L0-K1IT	EHD3060	60A	60A	18	TBD
		MBC01220606L0-K6IT	ED3060	60A	60A	65	
20	20	MBC02220707L0-K1IT	EHD3070	70A	70A	18	TBD
		MBC02220707L0-K6IT	FD3070	70A	70A	65	
30	30	MBC03221212L0-K2IT	EDB3125	125A	125A	22	TBD
		MBC03221212L0-K6IT	ED3125	125A	125A	65	
50	60	MBC05221720L0-K2IT	EDB3175	175A	200A	22	TBD
		MBC05221720L0-K6IT	ED3175	175A	200A	65	
60	70	MBC06222225L0-K6IT	JDB3225	225A	250A	65	TBD
80	100	MBC08223035L0-K6IT	KDB3300	300A	350A	65	TBD
100	120	MBC10223540L0-K6IT	KDB3350	350A	400A	65	TBD

Table 2- SKRU Control Wiring From MBC to UPS module

Terminating point In MBC	Terminating point In UPS	Wire Size	Maximum Voltage & Current	Circuit Function	Note
TB2-1	J6-2 (CIC card)	18AWG	250Vac	SKRU control (Key can be removed if UPS is on bypass)	Twisted pair
TB2-2	J6-3 (CIC card)				
TB2-4	J2-1 (CIC card)	18AWG	24V 1.25A	UPS control (UPS transfer is prohibited during testing)	Twisted pair
TB2-5	J2-3 (CIC card)				

LEGEND:
 MIB: UPS MODULE ISOLATION BREAKER
 MBB: MAINTENANCE BYPASS BREAKER
 UIB: UPS INPUT BREAKER
 LBB: LOAD BANK BREAKER
 IT: ISOLATION TRASFORMER

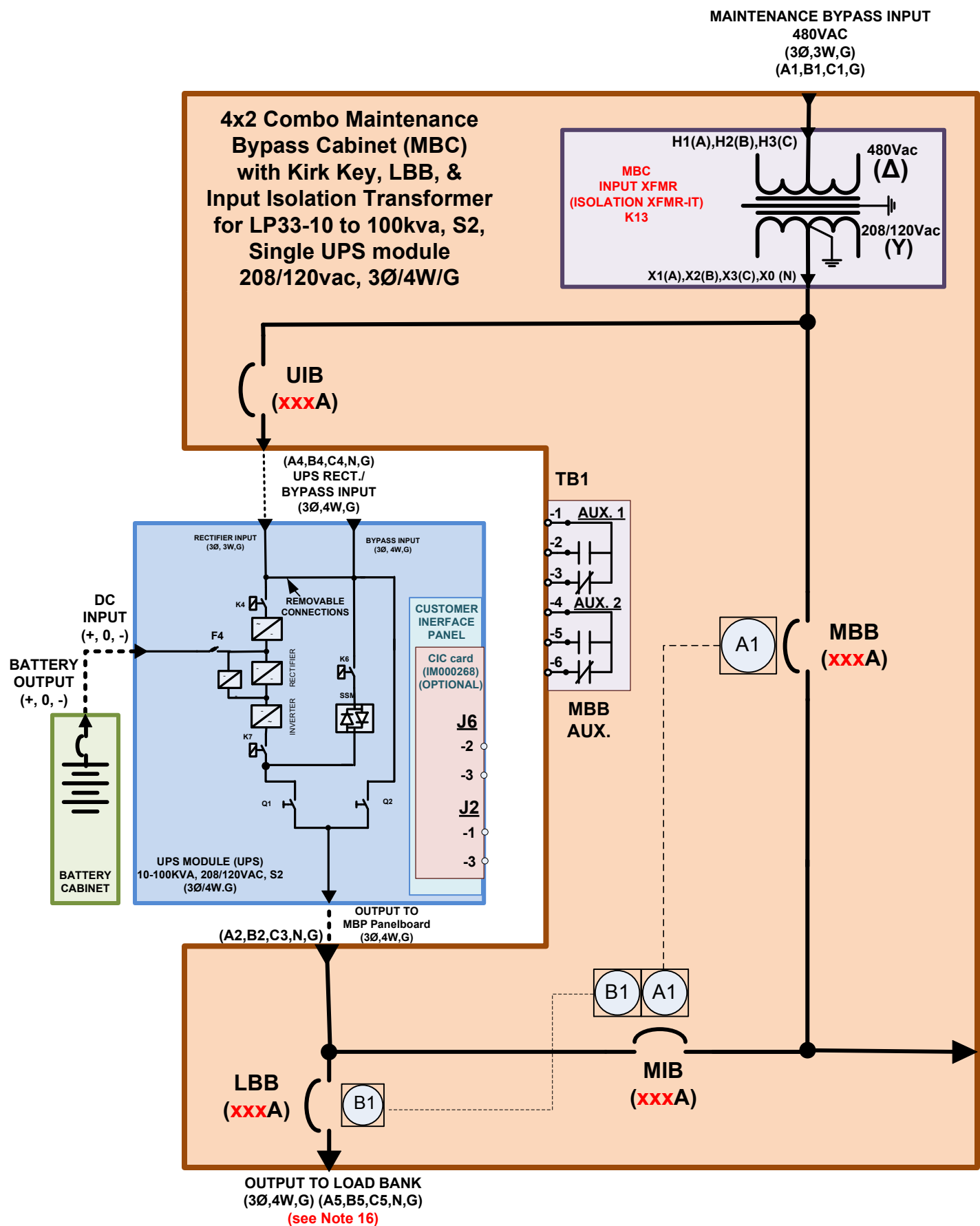
LEGEND:
 A1,B1,&C1: MBC Input from Utility, Phase-A, B, & C
 A2,B2,&C2: MBC Input from UPS output, Phase A,B, & C
 A3,B3,&C3: MBC Output to Critical Load, Phase A, B, & C
 A4,B4,&C4: MBC Output to UPS rect./By., Phase A, B, & C
 A5,B5,&C5: MBC Output to Load Bank, Phase A, B, & C
 N: Neutral
 G: Ground

Project Name: STD

Point of Contact: PH
 Issued by: PH
 Issued date: 11/17/15
 Scale: NONE
 Revised by:
 Revised date:
 Rev. No.: 1.0

Equipment Part Number: See table 1
 Drawing Title: 4x2, 3-brk MBC w SKRU,LBB, & IT for LP33-10 to 100kva, Series 2 (S2), UPS mod.
 Drawing No.: **1-C3421LxxSUL2SITC**
 Sheet No.: 1 of 1

4x2 Combo Maintenance Bypass Cabinet (MBC) with Kirk Key, LBB, & Input Isolation Transformer for LP33-10 to 100kva, S2, Single UPS module 208/120vac, 3Ø/4W/G



Notes:

4x2, 3-brk Maintenance Bypass Cabinet (MBC) with Kirk Key Interlock, LBB, & IT (floor mount)

1. Floor mount **Make-Before-Break, 4x2**, Maintenance Bypass Cabinet (MBC), with Kirk Key, LBB, Input Isolation Transformer for LP33 series (S2) UPS module, 208/120Vac, 3Ø/4W/G.
2. Main Breakers: MIB & MBB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
3. UPS Input Breaker: UIB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
4. Load Bank Breaker: LBB (xxxAT), 80% molded case, manually operated breaker. Refer to **Table 1** for breaker current rating.
5. Bus: Copper
6. Neutral: 200%
7. Aux Contact: 2A/B on MBB breaker only
8. Control: Single Kirk Key on MBB and MIB breakers.
9. Equipment ground
10. Refer to national electric code for acceptable external wiring practice.
11. An upstream overcurrent protection must be installed at the MBC input (A1, B1, & C1).
12. The external wiring is rated at 75°C or 90°C.
13. The external wiring material and labor to be provided and paid by others.
14. The control, if any, and power wirings must be installed in separate conduits.
15. To avoid a load dump or damage to the equipment, the transfer sequence instruction nameplate mounted to the MBC's door must be followed
16. To avoid overheat the input transformer the combined load bank testing load and Critical load currents must not be exceed the UPS rating current.
17. Input Transformer
 - 17.1. Type: Coil & core Isolation Transformer (IT)
 - 17.2. KVA rating: See Table 1
 - 17.3. Winding material: Aluminum
 - 17.4. Voltage: 480vac (primary-Δ): 208/120vac (secondary- Wye)
 - 17.5. Temperature rise: 150°C
 - 17.6. K factor: K13

Table 1: 4x2 Combo 3-brk Maintenance Bypass Cabinet (MBC) with Kirk Key, LBB, & IT Breaker Schedule

	INPUT XFMR (KVA)	MBC PART NUMBER	BREAKER MODEL (EATON-C)	MBB/MIB/LBB (Trip)	UIB (Trip)	kAIC@ 240Vac	MBC Dimensions (W x D x H)
15	15	MBC01220606L0-L1IT	EHD3060	60A	60A	18	TBD
		MBC01220606L0-L6IT	ED3060	60A	60A	65	
20	20	MBC02220707L0-L1IT	EHD3070	70A	70A	18	TBD
		MBC02220707L0-L6IT	FD3070	70A	70A	65	
30	30	MBC03221212L0-L2IT	EDB3125	125A	125A	22	TBD
		MBC03221212L0-L6IT	ED3125	125A	125A	65	
50	60	MBC05221720L0-L2IT	EDB3175	175A	200A	22	TBD
		MBC05221720L0-L6IT	ED3175	175A	200A	65	
60	70	MBC06222225L0-L6IT	JDB3225 JDB3250	225A	250A	65	TBD
80	100	MBC08223035L0-L6IT	KDB3300 KDB3350	300A	350A	65	TBD
100	120	MBC10223540L0-L6IT	KDB3350 KDB3400	350A	400A	65	TBD

LEGEND:
 MIB: UPS MODULE ISOLATION BREAKER
 MBB: MAINTENANCE BYPASS BREAKER
 UIB: UPS INPUT BREAKER
 LBB: LOAD BANK BREAKER
 IT: ISOLATION TRANSFORMER

LEGEND:
 A1, B1, & C1: MBC Input from Utility, Phase-A, B, & C
 A2, B2, & C2: MBC Input from UPS output, Phase A, B, & C
 A3, B3, & C3: MBC Output to Critical Load, Phase A, B, & C
 A4, B4, & C4: MBC Output to UPS rect./By., Phase A, B, & C
 A5, B5, & C5: MBC Output to Load Bank, Phase A, B, & C
 N: Neutral
 G: Ground

Point of Contact:

STD



Issued by:

PH

Revised by:

Issued date:

11/17/15

Revised date:

Scale:

NONE

Rev. No.:

1.0

Equipment Part Number:

See table 1

Drawing Title:

4x2 combo, 3-brk MBC w KK, LBB & IT for LP33-10 to 100kva, Series 2 (S2), UPS mod

Drawing No.:

1-C3421LxxSUL2KITC

Sheet No.:

1 of 1