Connection instructions for the Cutler Hammer 12/24 or 16/32 Buck and Boost Transformers 0.5kVA, 0.75kVA, 1.0kVA, 1.5kVA, 2.0kVA and 3.0kVA to all single-phase Heartland equipment.

**To Buck Voltage (12/24 –12V) or (16/32 –16V)**
1. Connect two ground leads together and fasten to bolt on buck booster unit.
2. Connect BLACK lead from wall to BLACK lead from bed to H4.
4. Connect H1, X2 and X4 to RED lead from bed.
5. Connect X1 and X3 to RED lead from wall.

**To Buck Voltage (12/24 –24V) or (16/32 –32V)**
1. Connect two ground leads together and fasten to bolt on buck booster unit.
2. Connect BLACK lead from wall to BLACK lead from bed to H4.
3. Connect X2 to X3.
5. Connect H1 and X4 to RED lead from bed.
6. Connect X1 to RED lead from wall.

**To Boost Voltage (12/24 +12V) or (16/32 +16V)**
1. Connect two ground leads together and fasten to bolt on buck booster unit.
2. Connect BLACK lead from wall to BLACK lead from bed to H4.
4. Connect H1, X2 and X4 to RED lead from wall.
5. Connect X1 and X3 to RED lead from bed.

**To Boost Voltage (12/24 +24V) or (16/32 +32V)**
1. Connect two ground leads together and fasten to bolt on buck booster unit.
2. Connect BLACK lead from wall to BLACK lead from bed to H4.
4. Connect X2 to X3.
5. Connect X4 and H1 to RED lead from wall.
6. Connect X1 to RED lead from bed.
Regulating Voltage
3 Phase Page 1

Connection instructions for the Cutler Hammer 12/24 or 16/32 Buck and Boost Transformers .5kva, .75kva, 1.0kva, 1.5kva, 2.0kva and 3.0kva to all 3-phase Heartland equipment.

To Buck Voltage (12/24 –12V) or (16/32 –16V)
1. TRANSFORMER #1
2. Connect two ground leads together and fasten to bolt on buck booster unit.
3. Connect BLACK lead from wall to BLACK lead from bed to H4.
5. Connect H1, X2 and X4 to RED lead from bed.
6. Connect X1 and X3 to RED lead from wall.
7. TRANSFORMER #2
8. Connect two ground leads together and fasten to bolt on buck booster unit.
9. Connect BLACK lead from wall to BLACK lead from bed to H4.
11. Connect H1, X2 and X4 to BLUE lead from bed.
12. Connect X1 and X3 to BLUE lead from wall.

To Buck Voltage (12/24 –24V) or (16/32 –32V)
1. TRANSFORMER #1
2. Connect two ground leads together and fasten to bolt on buck booster unit.
3. Connect BLACK lead from wall to BLACK lead from bed to H4.
4. Connect X2 to X3.
5. Connect H2 to H3.
6. Connect H1 and X4 to RED lead from bed.
7. Connect X1 to RED lead from wall.
8. TRANSFORMER #2
9. Connect two ground leads together and fasten to bolt on buck booster unit.
10. Connect BLACK lead from wall to BLACK lead from bed to H4.
11. Connect X2 to X3.
13. Connect H1 and X4 to BLUE lead from bed.
14. Connect X1 to BLUE lead from wall.
Regulating Voltage
3 Phase Page 2

To Boost Voltage (12/24 +12V) or (16/32 +16V)
1. TRANSFORMER #1
2. Connect two ground leads together and fasten to bolt on buck booster unit.
3. Connect BLACK lead from wall to BLACK lead from bed to H4.
5. Connect H1, X2 and X4 to RED lead from wall.
6. Connect X1 and X3 to RED lead from bed.
7. TRANSFORMER #2
8. Connect two ground leads together and fasten to bolt on buck booster unit.
9. Connect BLACK lead from wall to BLACK lead from bed to H4.
11. Connect H1, X2 and X4 to BLUE lead from wall.
12. Connect X1 and X3 to BLUE lead from bed.

To Boost Voltage (12/24 +24V) or (16/32 +32V)
1. TRANSFORMER #1
2. Connect two ground leads together and fasten to bolt on buck booster unit.
3. Connect BLACK lead from wall to BLACK lead from bed to H4.
5. Connect X2 to X3.
6. Connect X4 and H1 to RED lead from wall.
7. Connect X1 to RED lead from bed.
8. TRANSFORMER #2
9. Connect two ground leads together and fasten to bolt on buck booster unit.
10. Connect BLACK lead from wall to BLACK lead from bed to H4.
12. Connect X2 to X3.
13. Connect X4 and H1 to BLUE lead from wall.
14. Connect X1 to BLUE lead from bed.