



Tech Support: 800-778-5689

CableGuard
Installation Instructions
Model: GP500-CG Shore Power
Transformer System for CCG
Midshore Patrol Vessels "Hero Class"

Input power 240 +/- 10% VAC 50/60 Hz @ .5A Max.

Test Voltage 500 VDC @ 200uA Max.

Unit to be installed in a "clean" and "dry" environment, in a switchgear or a NEMA type enclosure.

Ambient Temp. -20° F to 140° F

Maximum relative humidity 80% for temperatures up to 31° C decreasing linearly to 50% relative humidity at 40°

Pollution degree 2 Altitude up to 2000m

Wiring: 16 AWG, 600V switchboard wire

MEASUREMENT CATEGORY III

1. Install the wall mount enclosure assembly using the (4) mounting brackets attached to the enclosure.
2. Connect TB terminals (1) and (2) to a 120 VAC power source, per customer drawing SB04AB.
3. Connect TB terminals (3) and (4) to the alarm and monitoring system to provide a primary shore power winding insulation "Alarm" signal, per drawing AM03BA.
4. Connect TB terminal (5) to the shore power transformer primary (L2) input terminal, per customer drawing SB04B.
5. Connect TB terminals (6) and (7) to the alarm and monitoring system to provide a secondary shore power winding insulation "Alarm" signal, per customer drawing AM03BA.
6. Connect TB terminal (8) to the shore power transformer secondary (L2) output terminal, per customer drawing SB04AC.
7. Connect TB terminals (9) and (10) to the shore power breaker UV trip circuits accordingly, per customer drawing SB04AA. (CR1.1 and (CR1.2)
8. TB terminals (11), (12), (13) and (14) are spare terminals.
9. Connect TB terminals (15) and (16) to the 600VAC secondary of the shore power transformer, per customer drawing SB04AA.
10. Connect the ground stud located on the back pan to the ground buss inside the switchgear for a good equipment ground.
11. Proceed with Operating Instructions.



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MEASUREMENT CATEGORY III

1. After installation is completed on the unit, apply voltage to the TB terminals (1), (2) and observe that both the primary and secondary CableGuard green "test on" LEDs turn on.
2. Energize the transformer being tested. Observe that the "TEST ON" green LED's will turn off and the meter indicators will read all the way to infinity.
3. De-energize the transformer being tested. The green "TEST ON" LED's should be illuminated, and the meter indicators will now read the value of the transformer's winding insulation condition.
4. Press the cal. /test button to check proper operation of each CableGuard unit to see if its meter is calibrated correctly. Hold the cal. /test button for approximately 10 to 15 seconds. The meter indicator should first go to the "test" position. Observe that the yellow flashing pre-alarm LED starts flashing approximately 5 to 10 seconds after pressing and holding the "CAL. TEST" button. (The pre-alarm contacts will change state when the yellow LED begins flashing and automatically reset when the yellow LED stops flashing). Then the CableGuard should trip on an alarm condition and the red "ALARM" LED should start flashing, while the green "TEST ON" LED should be off. The alarm and lockout contacts should now have changed state showing an alarm and preventing the shore power breakers from operating.
5. Press the reset button. The CableGuard should return to a test condition. The red "ALARM" LED should stop flashing, while the green "TEST ON" LED should be illuminated. Each meter indicator will now be showing the insulation value of the transformer winding being tested.
6. The system is now ready for normal operation.

EQUIPMENT MAINTENANCE

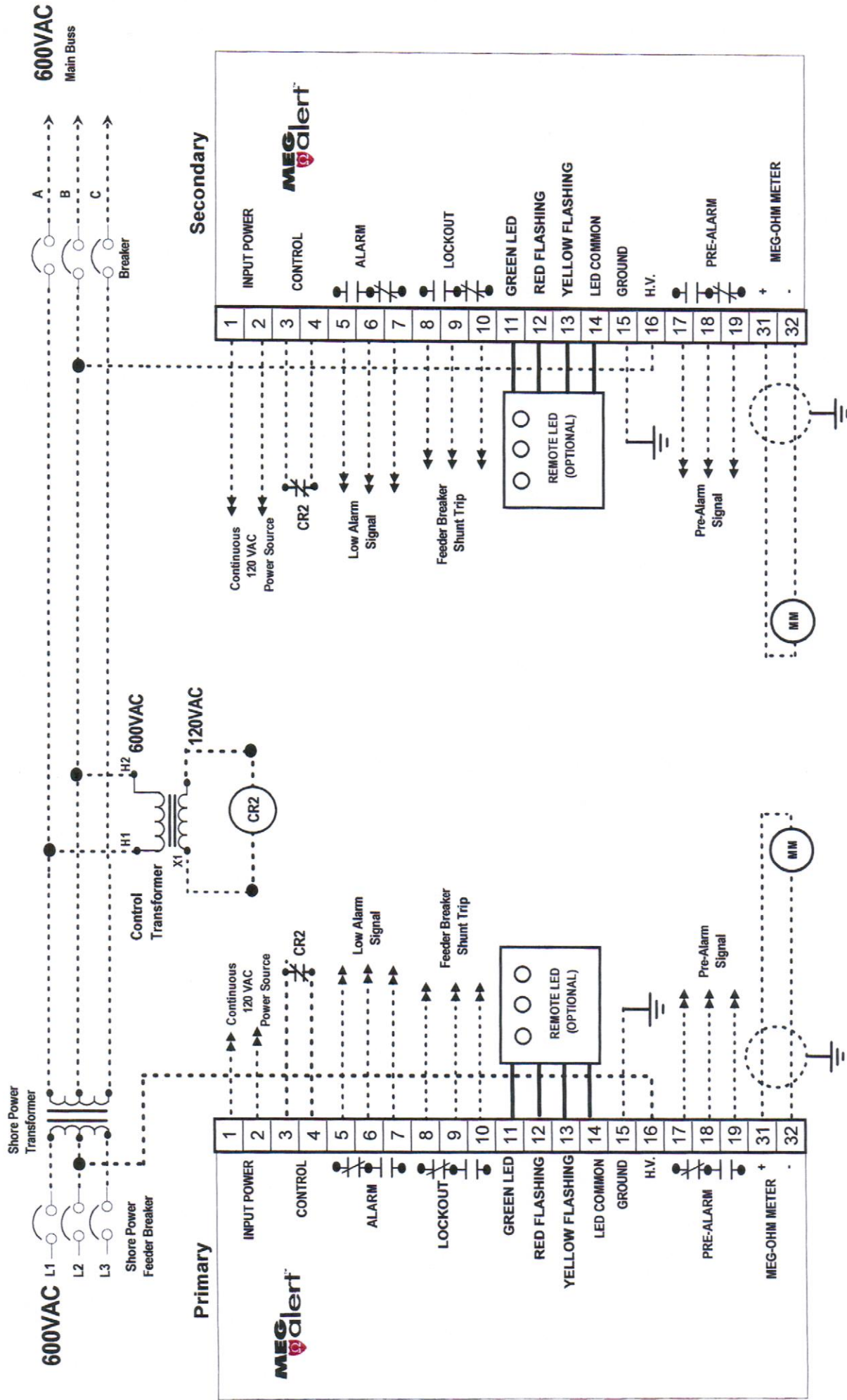
Only Qualified personnel shall perform maintenance of this device.

Before use all cables shall be checked for cracking or damage.

Only a 1.5A 250V AGC fuse shall be used with this device.

WARNING:

Before servicing any equipment being tested with a CableGuard system, one must turn off and lockout the CableGuard power and short the Cable windings to ground in order to remove any possible residual capacitive charge that may be present in the unit.



Typical Shore Power Transformer Primary/Secondary CableGuard System

Designer	Rick Zelm
Contact	Rick Zelm
Model	GP500-CG
Drawing No.	1005-SP
Date	3/30/2017
Scale	None

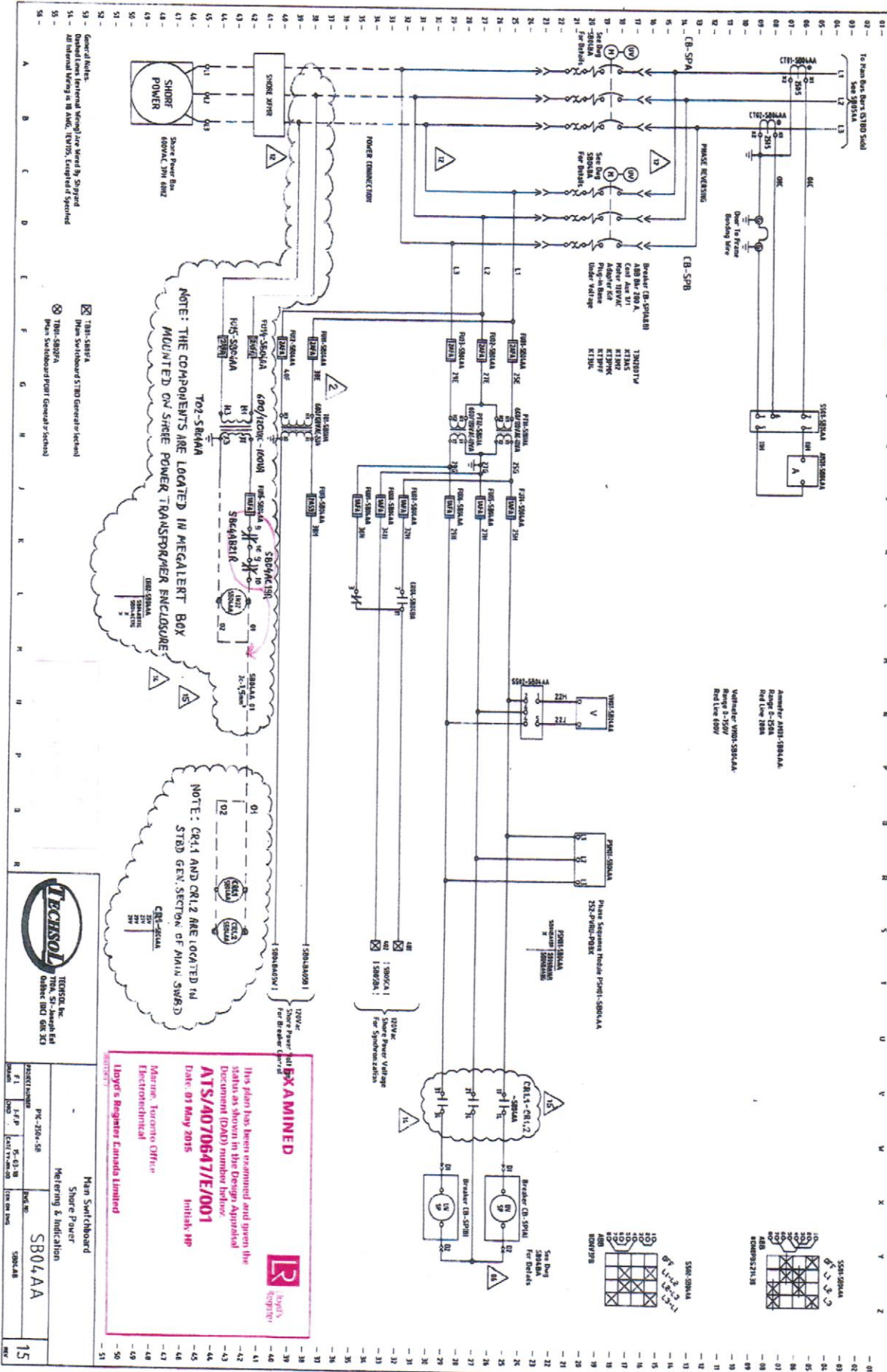


Meg-Alert, Inc.
8766 Frank Drive
Minocqua, WI 54568
715-356-1499

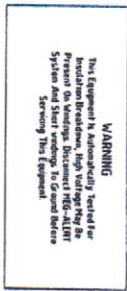
LEGEND

- M Motor Starter
- MM Meg-Ohm Meter
- Remote Alarm
- Remote Start Relay
- Shielded Wires
- Customer Provided Wiring

SECTION SB: SWITCHBOARD



15



Initials: **HP**

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53 -- General Notes.
54 -- Dashed Lines (external Wiring) Are Wired By Shipyard
54 -- All Internal Wiring Is IIS AWG, TEWDS, Excepted if Specified

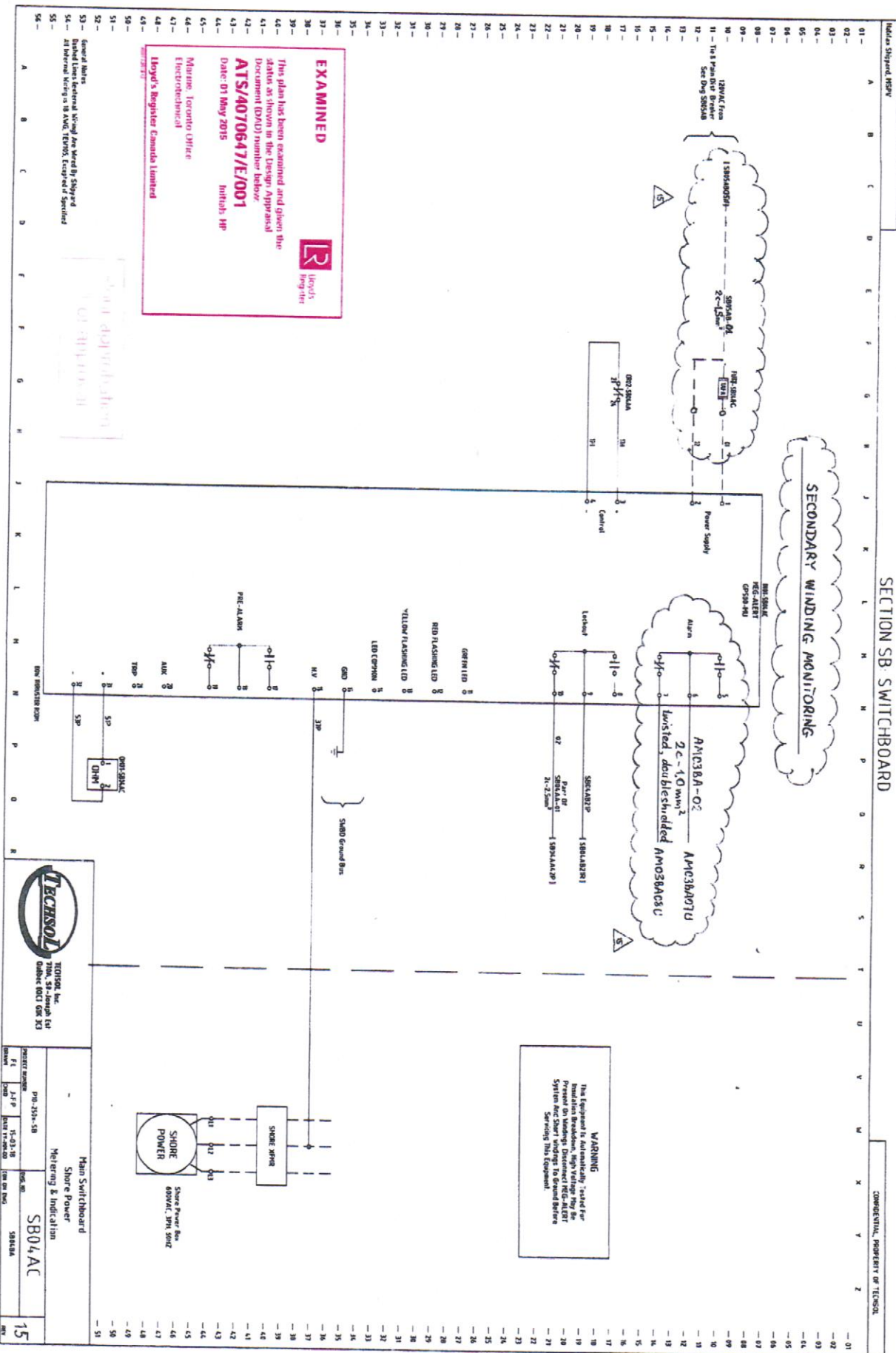


770A, St-Joseph Est
Outbox (AQ) GOK 303

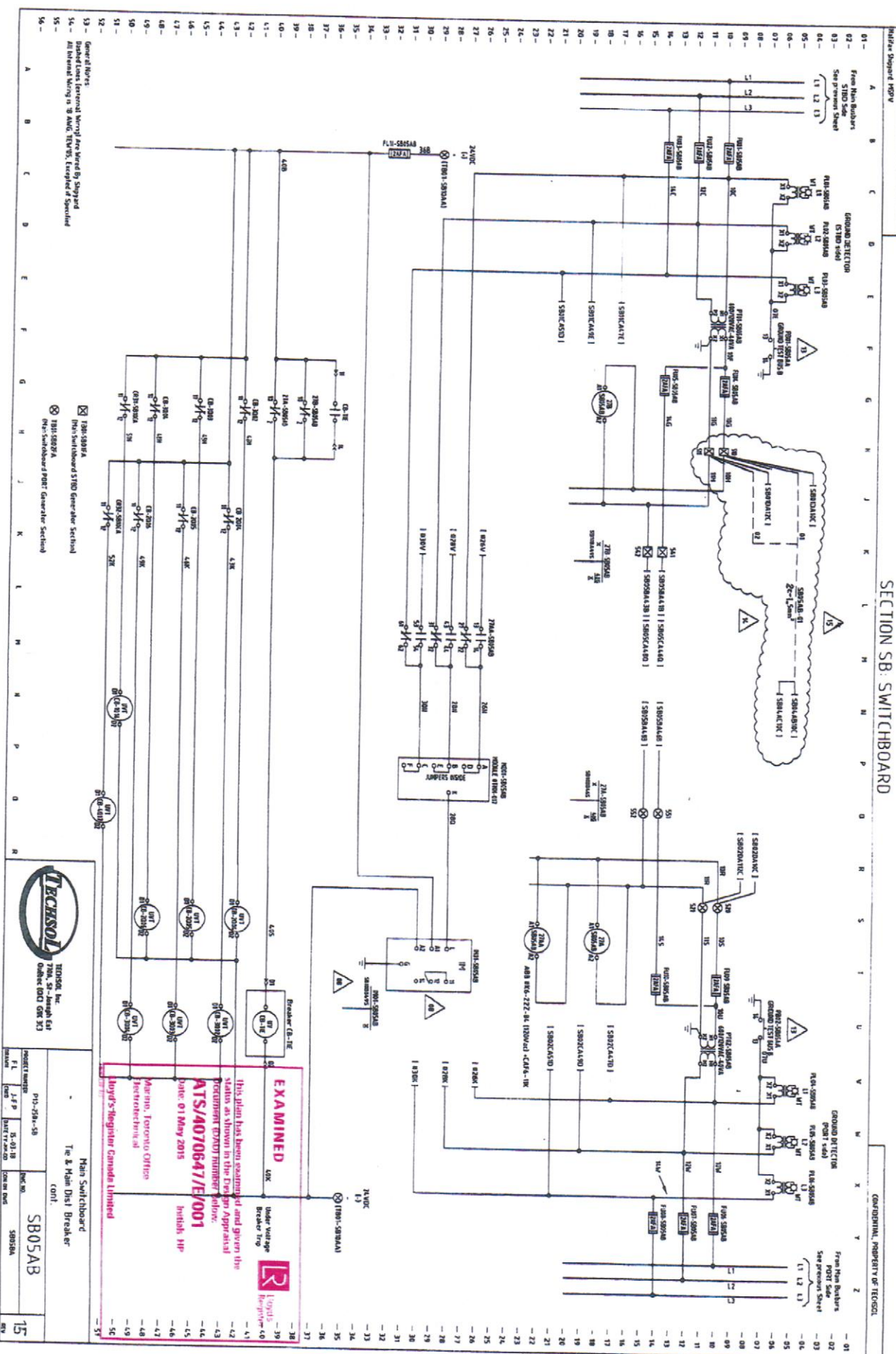
Main Switchboard		SB04AB										
Share Power												
Metering & Indication												
<p>P11C-250A-5B</p> <table border="1"> <tr> <td>PROJECT NUMBER</td> <td>DATE</td> </tr> <tr> <td>F.L.</td> <td>J-F.P.</td> </tr> <tr> <td>STATUS</td> <td>5-63-18</td> </tr> <tr> <td>DATE</td> <td>04/07/2004</td> </tr> <tr> <td>CON. OR. ENG.</td> <td></td> </tr> </table>			PROJECT NUMBER	DATE	F.L.	J-F.P.	STATUS	5-63-18	DATE	04/07/2004	CON. OR. ENG.	
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SECTION SB SWITCHBOARD

CONFIDENTIAL, PROPERTY OF TECOSOL



CONFIDENTIAL, PROPERTY OF TECOSON



SECTION AM: ALARM AND MONITORING SYSTEM

CONFIDENTIAL PROPERTY OF TENSOL

Module Object: MDPV

61- A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

62- [AM03BA-01] AM03BA-01

63- [AM03BA-02] AM03BA-02

64- [AM03BA-03] AM03BA-03

65- [AM03BA-04] AM03BA-04

66- [AM03BA-05] AM03BA-05

67- [AM03BA-06] AM03BA-06

68- [AM03BA-07] AM03BA-07

69- [AM03BA-08] AM03BA-08

70- [AM03BA-09] AM03BA-09

71- [AM03BA-10] AM03BA-10

72- [AM03BA-11] AM03BA-11

73- [AM03BA-12] AM03BA-12

74- [AM03BA-13] AM03BA-13

75- [AM03BA-14] AM03BA-14

76- [AM03BA-15] AM03BA-15

77- [AM03BA-16] AM03BA-16

78- [AM03BA-17] AM03BA-17

79- [AM03BA-18] AM03BA-18

80- [AM03BA-19] AM03BA-19

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82- [AM03BA-21] AM03BA-21

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90- [AM03BA-29] AM03BA-29

91- [AM03BA-30] AM03BA-30

92- [AM03BA-31] AM03BA-31

93- [AM03BA-32] AM03BA-32

94- [AM03BA-33] AM03BA-33

95- [AM03BA-34] AM03BA-34

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EXAMINED

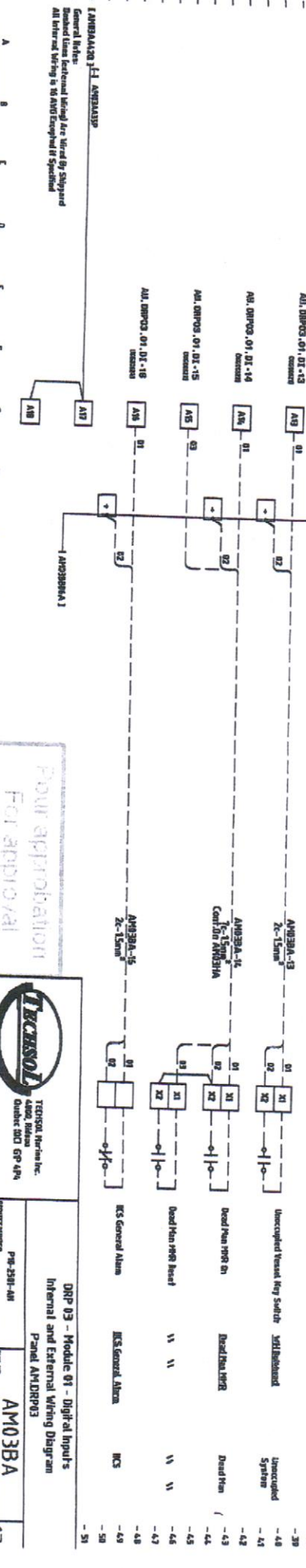
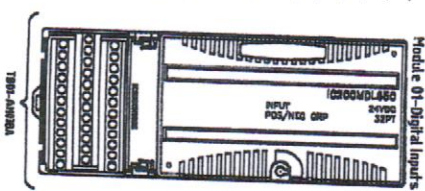


This plan has been examined and given the status as shown in the Design Approval Document (DAD) number below:
ATS/4070647/E/001
 Date: 01 May 2015
 J. P. H. H. P.

Lloyd's Register Canada Limited

5. Electrical Toronto Office

5. Electrical Toronto Office



For approval



DRP 03 - Module 01 - Digital Inputs
 Internal and External Wiring Diagram
 Panel AM03BA