AVANCE II Cabinet

AVANCE II Wiring
User Manual

Version 001

The information in this manual may be altered without notice.

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This manual was written by

Stéphane Kreiss

Rheinstetten, Germany

P/N: Z31759
DWG-Nr.: 1461001

Contents

Introduction 1

Introduction 1.1

The fundamentally superior precision and stability of fully digital signal generation and processing was introduced and established by the precedent-setting series of AVANCE™ NMR spectrometers. With its digital advantage, the Bruker AVANCE™ series set revolutionary standards for performance, long-term reliability and ease-of-use, whether for routine applications or the most demanding research.

The next-generation Avance II NMR spectrometer series features a second-generation digital receiver technology (2G-DR™), a new milestone in NMR detection fidelity. The 2G-DR provides significant benefits for the most demanding NMR applications, e.g., materials science, polymer analysis, trace analysis, LC-NMR, MR imaging and structural biology, particularly for measurements with Bruker BioSpin's ultrasensitive CryoProbes™.

This manual provides detailed information on the AVANCE II console configuration and wiring.

Disclaimer 1.2

The AVANCE II consoles should only be used for their intended purpose as described in this manual. Use of the unit for any purpose other than that for which it is intended is taken only at the users own risk and invalidates any and all manufacturer warranties.

Service or maintenance work on the consoles must be carried out by qualified personnel.

Only those persons schooled in the operation of Bruker spectrometers should operate the unit.

Read this manual before operating the unit. Pay particular attention to any safety related information.

Safety Issues 1.3

The spectrometer hardware is no more or less hazardous than any typical electronic or pneumatic hardware and should be treated accordingly. Do not remove any of the protective panels from the various units. They are fitted to protect you and should be opened by qualified service personnel only. The main panel at the rear of the console is designed to be removed using two quick release screws, but again, this should only be done by trained personnel. Please note that, unless disconnected, cooling fans on the rear panel will continue to run even with the panel removed.

Warnings and Notes 1.4

There are two types of information notices used in this manual. These notices highlight important information or warn the user of a potentially dangerous situation. The following notices will have the same level of importance throughout this manual.

Note: Indicates important information or helpful hints

WARNING: Indicates the possibility of severe personal injury, loss of life or equipment damage if the instructions are not followed.

Contact for Additional Technical Assistance 1.5

For further technical assistance on the BPSU36-2 unit, please do not hesitate to contact your nearest BRUKER dealer or contact us directly at:

BRUKER BioSpin GMBH
am Silberstreifen
D-76287 Rheinstetten
Germany

Phone: + 49 721 5161 0
FAX: + 49 721 5171 01
Email: nmr-software-support@bruker-biospin.de
Internet: www.bruker-biospin.de

Declaration of Conformity

2

CE

DECLARATION OF CONFORMITY

The undermentioned product

NMR Spectrometer AVANCE MicroBay Console
H03128

conforms to the main requirements
set by the commission for the
Harmonization of Regulations of the EU Member States
with regards to electromagnetic compatibility
(EMI 89/336/EEC) and safety (Low Voltage Electrical
Equipment: 72/23/EEC) regulations.

For the assessment the following norms were applied:

EMI:EN 55 011; EN 50 082-1; EN 61326:1997
Safety: EN 61 010-1

Tested by: ERG Institude
Test report: FS/55.00/1323/9908
Documentation: Z31759 **Docu Standard:** AVANCE # AV Handbook

Manufacturer's Name: Bruker Elektronik D-76287 Rheinstetten
Bruker S.A. F-67166 Wissembourg
Bruker AG CH-8117 Fällanden

Declaration approved by:

Dr. Tonio Gianotti	Jean Yves Fraval	Werner Schittenhelm
Head of Development	Technical Manager	Direction

Rheinstetten
January 10, 2000

CE

DECLARATION OF CONFORMITY

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NMR Spectrometer AVANCE OneBay Console
H03128-1

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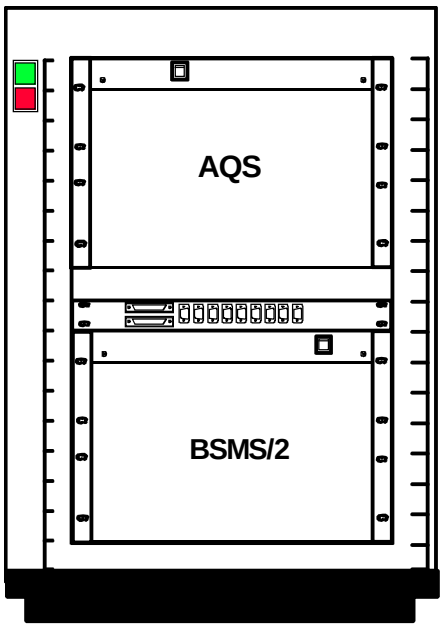
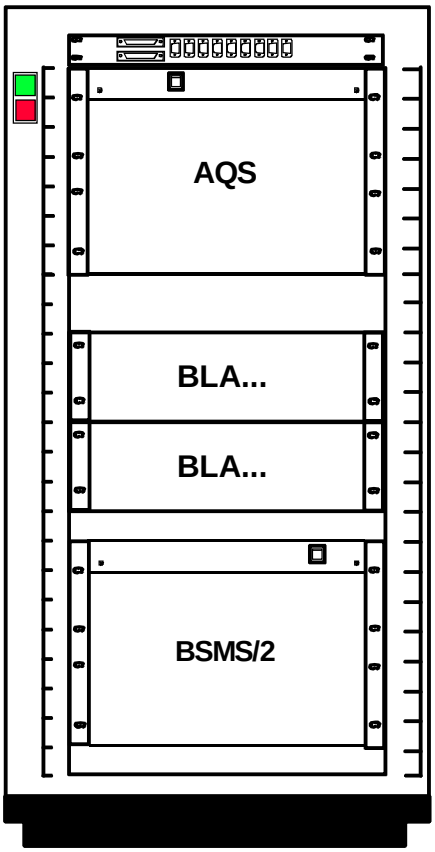
January 10, 2000

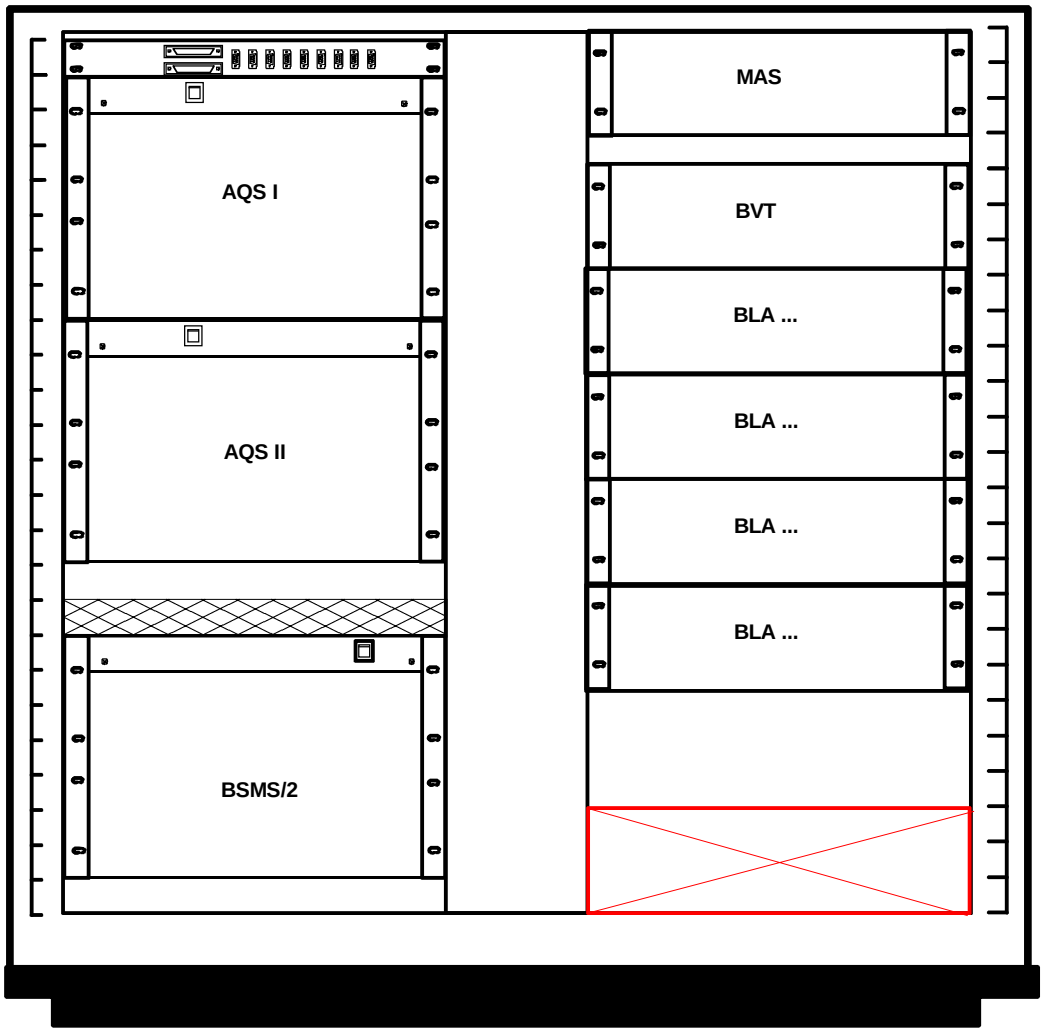
Console Configuration

3




AQS
BLA...
BLA...
BSMS/2

Configuration 1



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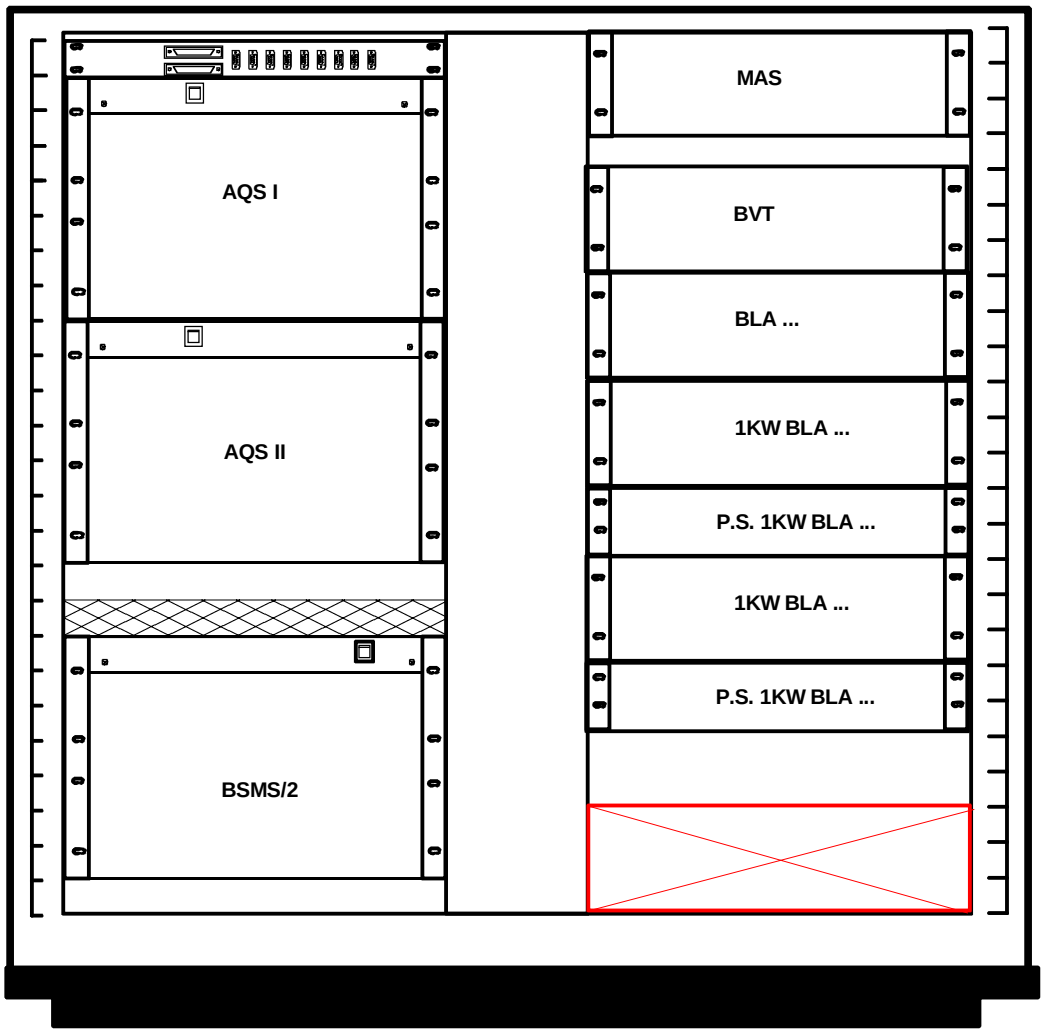


Internal Wiring 4

Figure 4.1. Avance II MicroBay 2 Channel with AQS Preamp Page 1/2

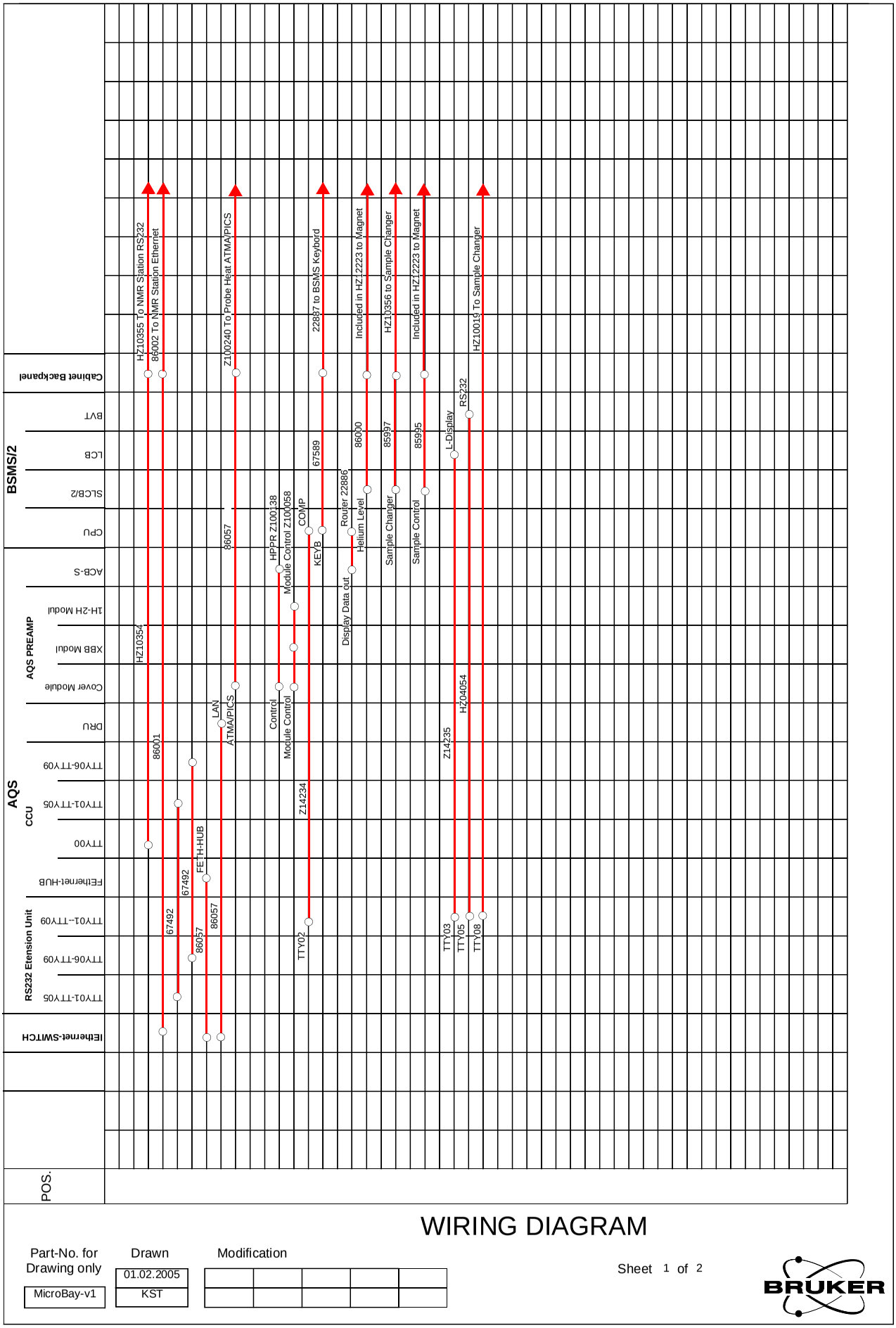
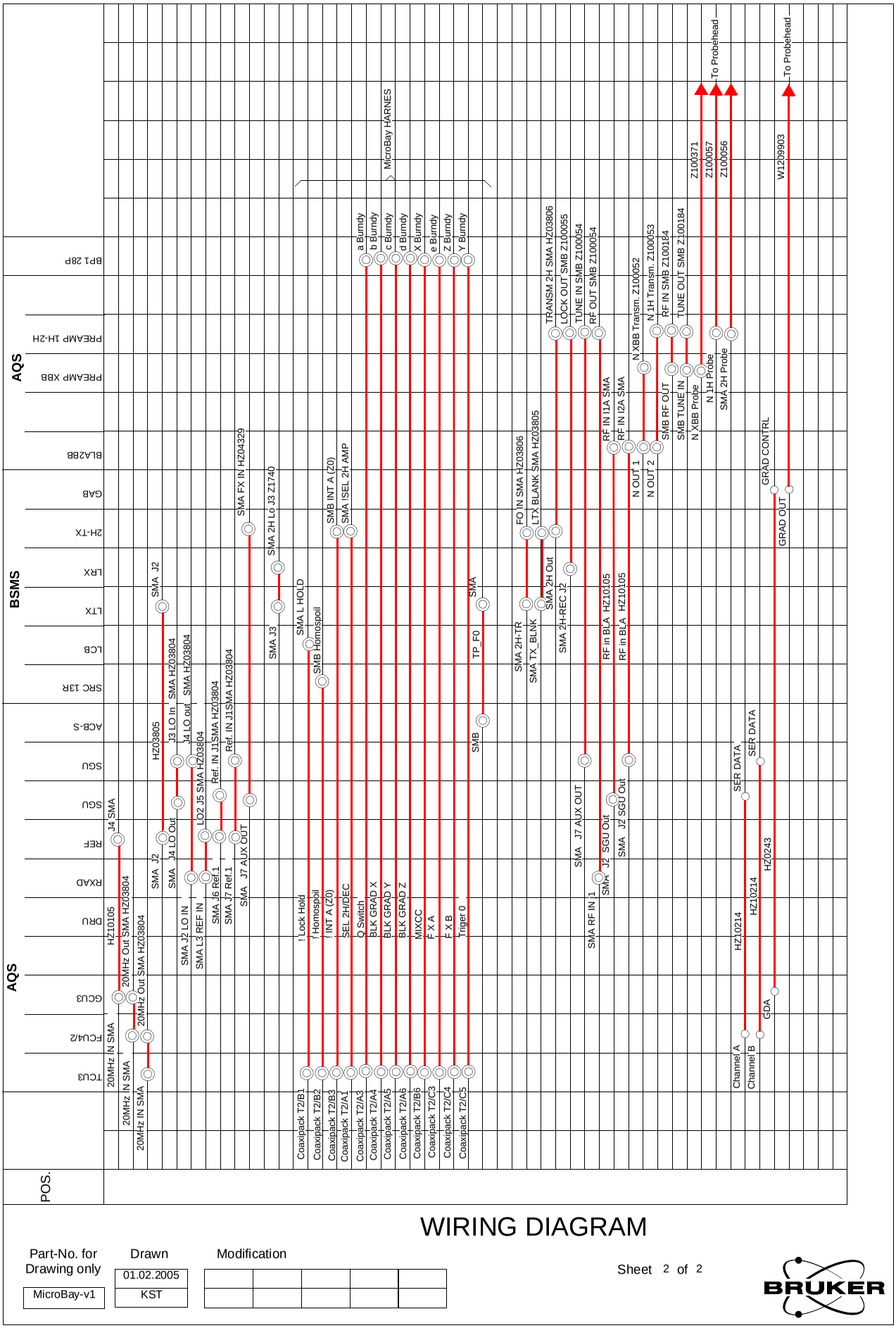


Figure 4.2. Avance II MicroBay 2 Channel with AQS Preamp Page 2/2



WIRING DIAGRAM

Part-No. for Drawing only	Drawn	Modification
MicroBay-v1	01.02.2005 KST	

Sheet 2 of 2

BRUKER

Figure 4.3. Avance II MicroBay 3 Channel With Internal Amplifier & HPPR/2 Page 1/2

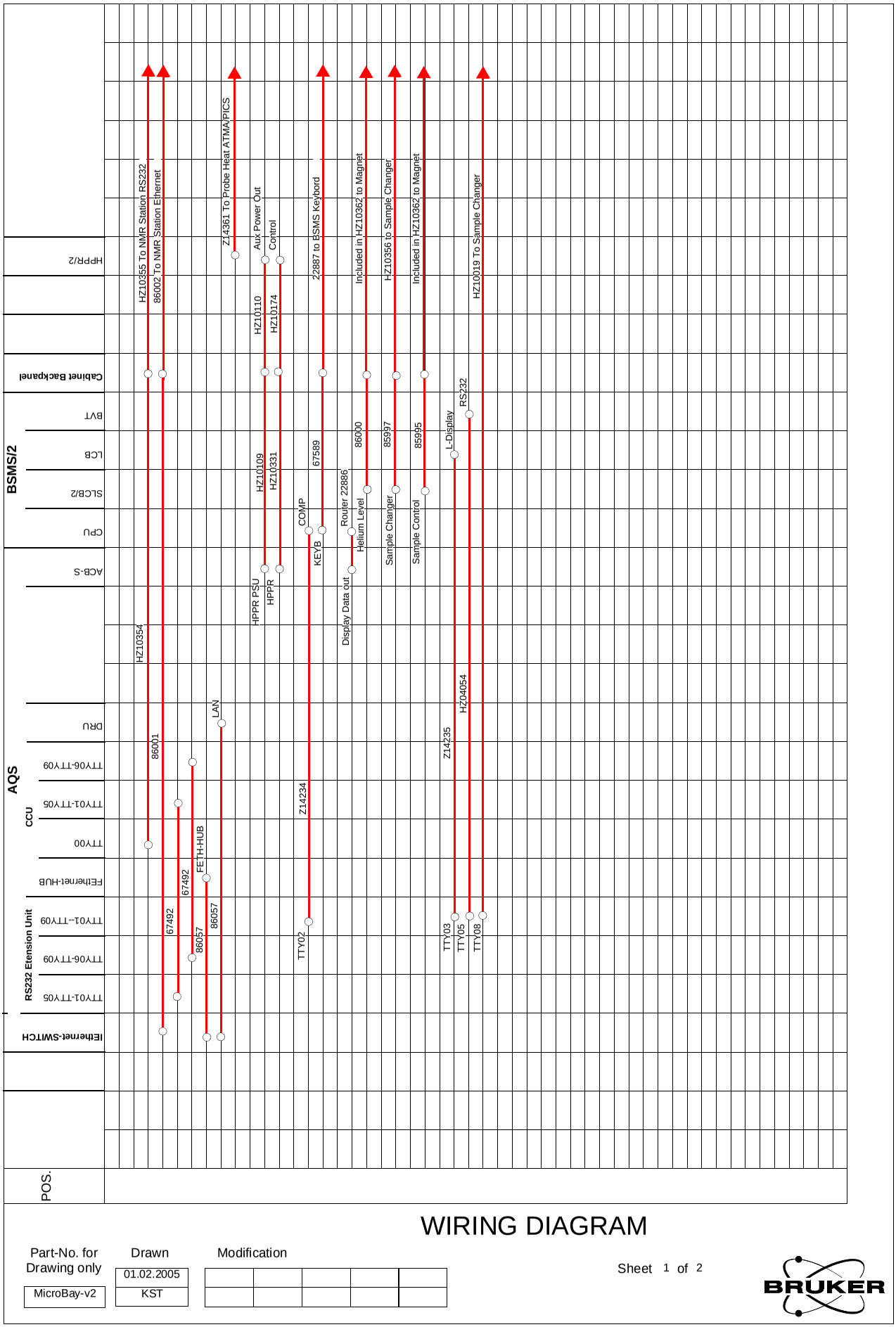


Figure 4.4. Avance II MicroBay 3 Channel With Internal Amplifier & HPPR/2 Page 2/2

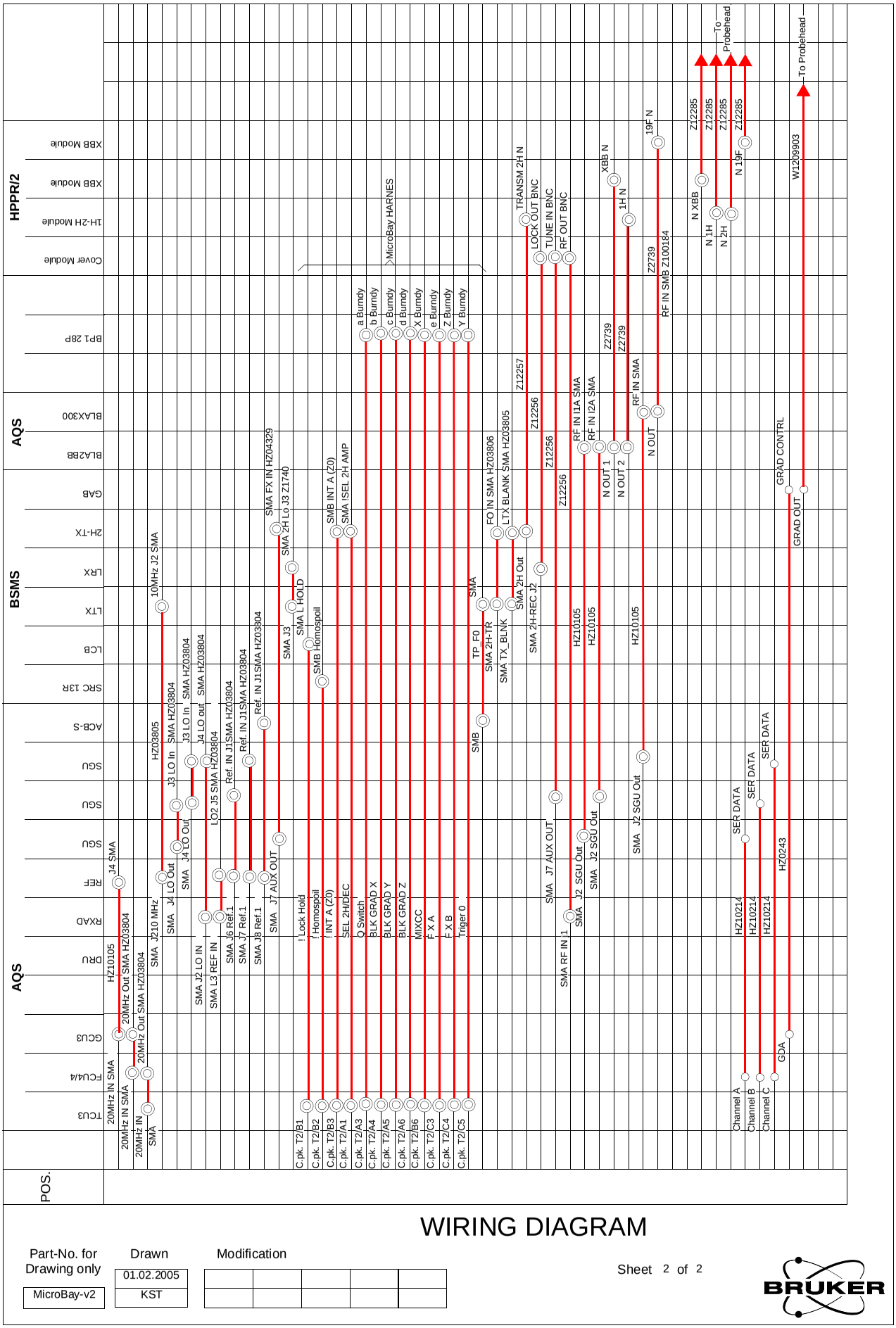


Figure 4.5. Avance II OneBay Wiring Page 1/2

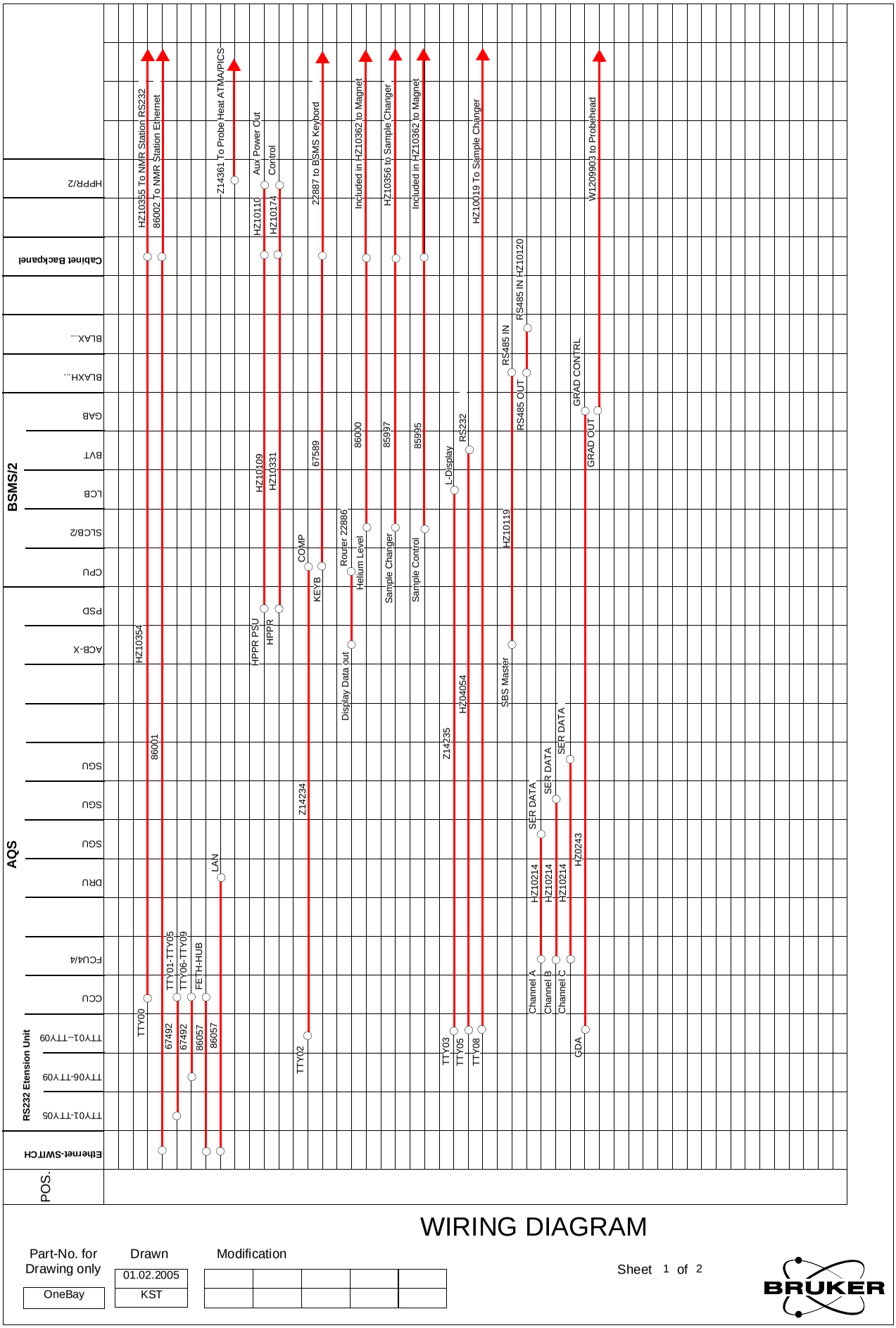


Figure 4.6. Avance II OneBay Wiring Page 2/2

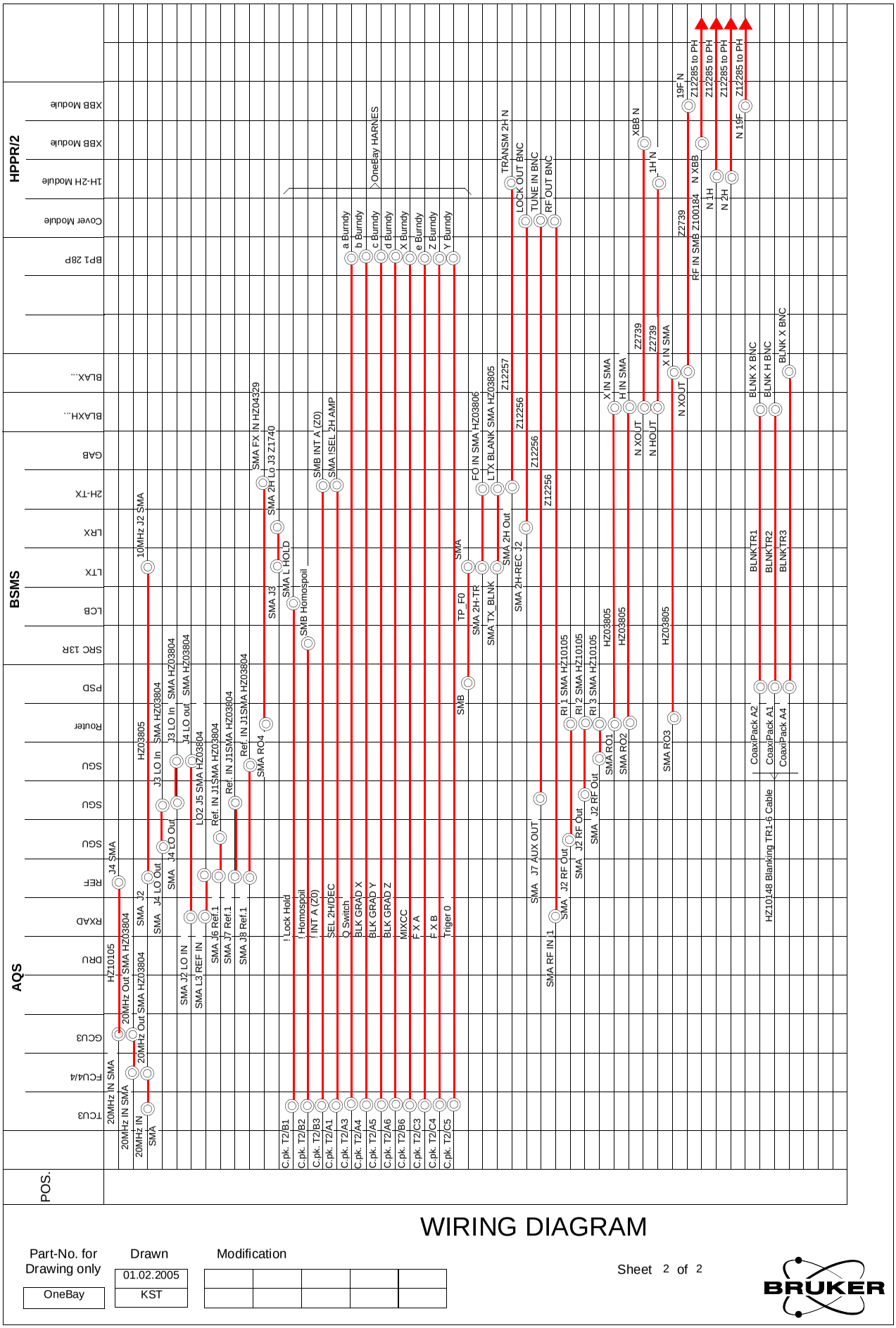


Figure 4.7. Avance II TwoBay 3 Channel HR Wiring Page 1/2

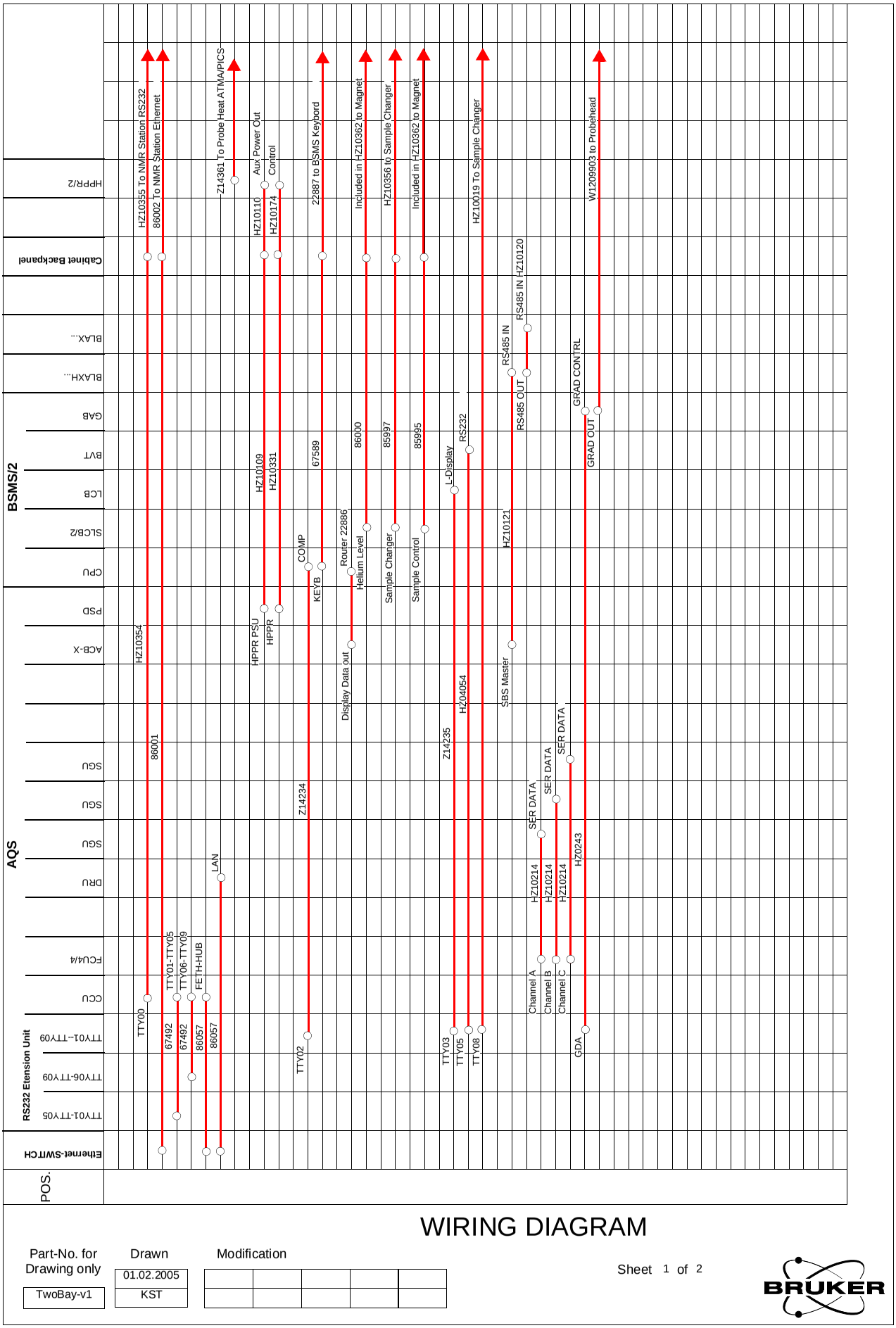


Figure 4.8. Avance II TwoBay 3 Channel HR Wiring Page 2/2

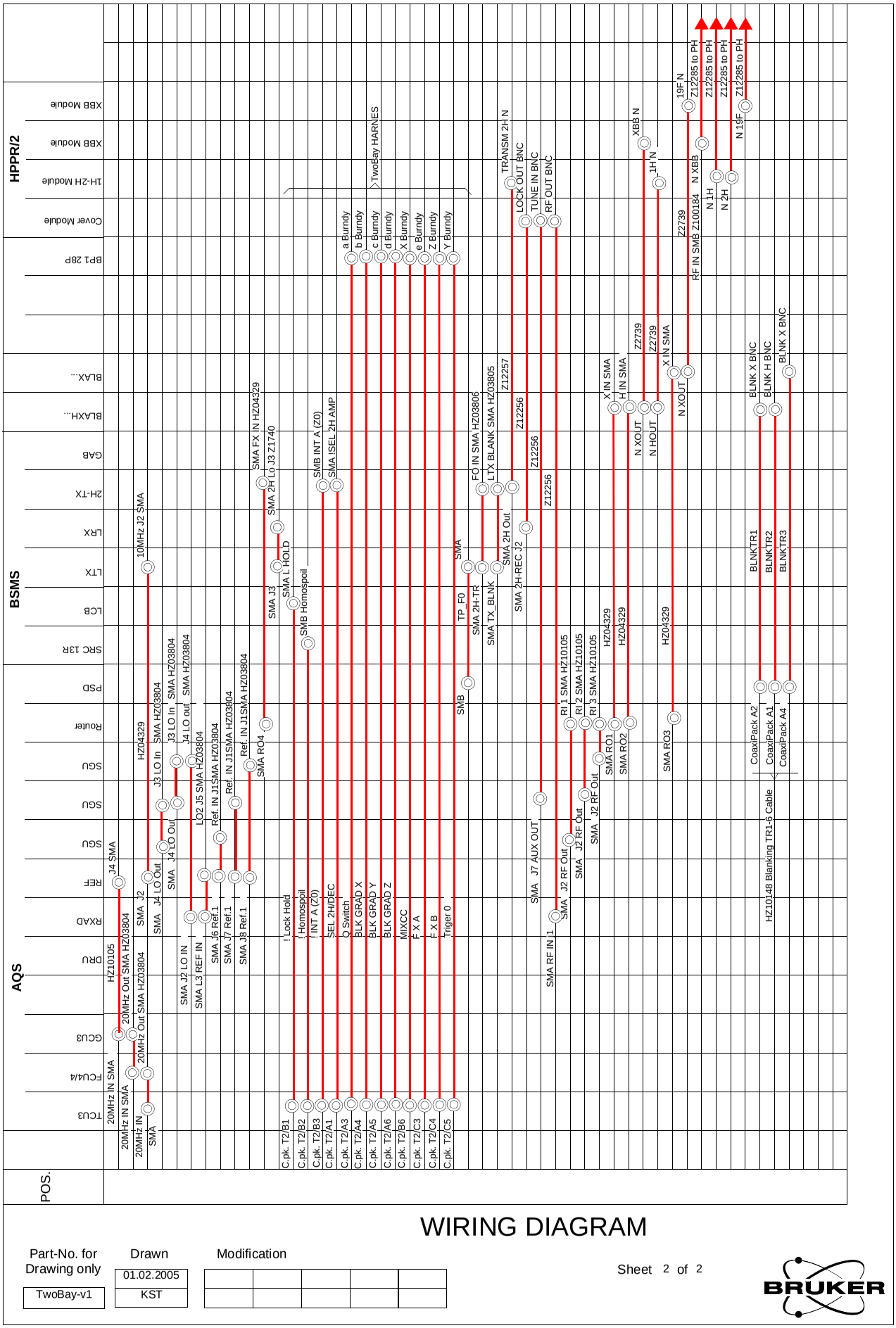


Figure 4.9. Avance II TwoBay 3 Channel Solids Wiring Page 1/3

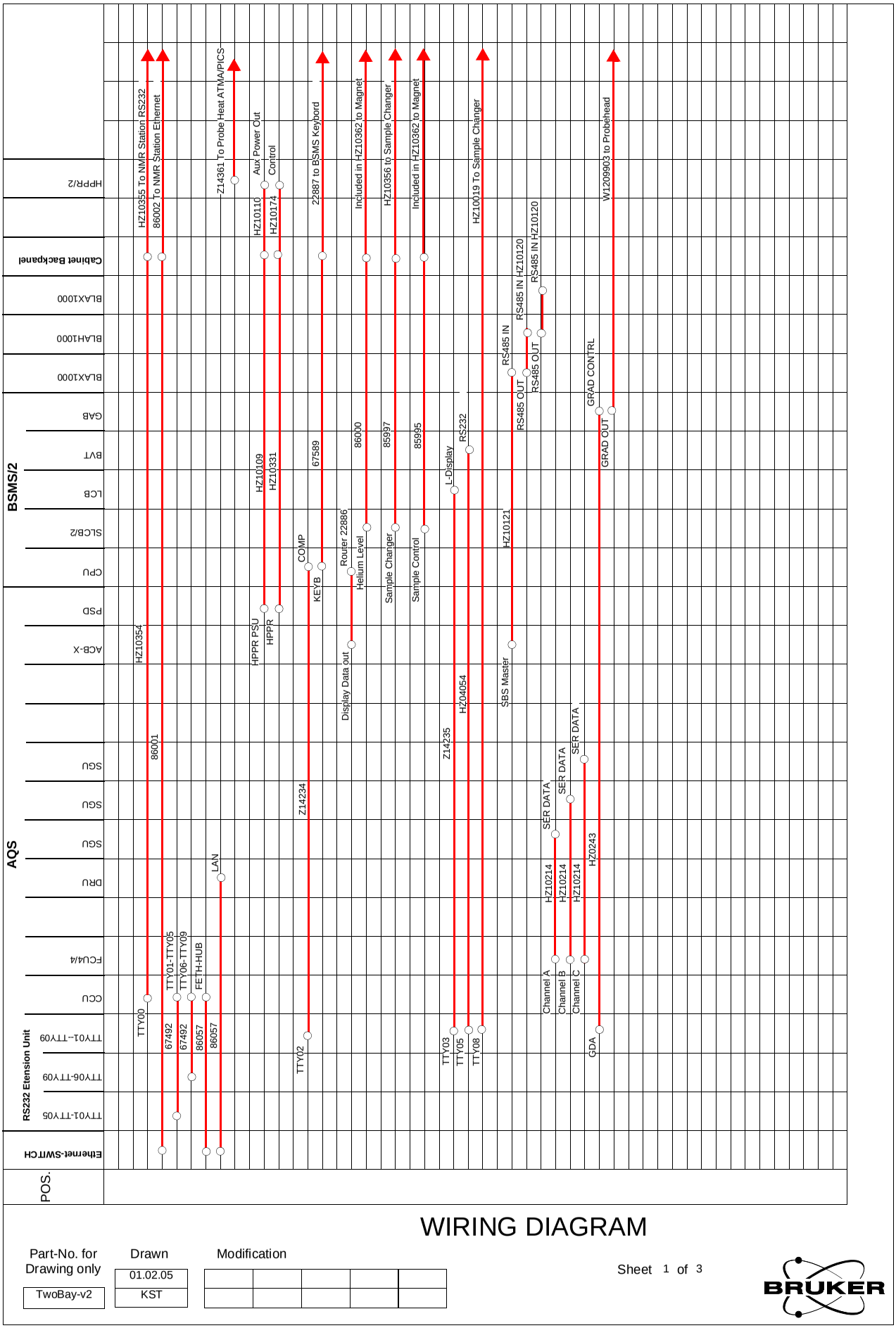


Figure 4.10. Avance II TwoBay 3 Channel Solids Wiring Page 2/3

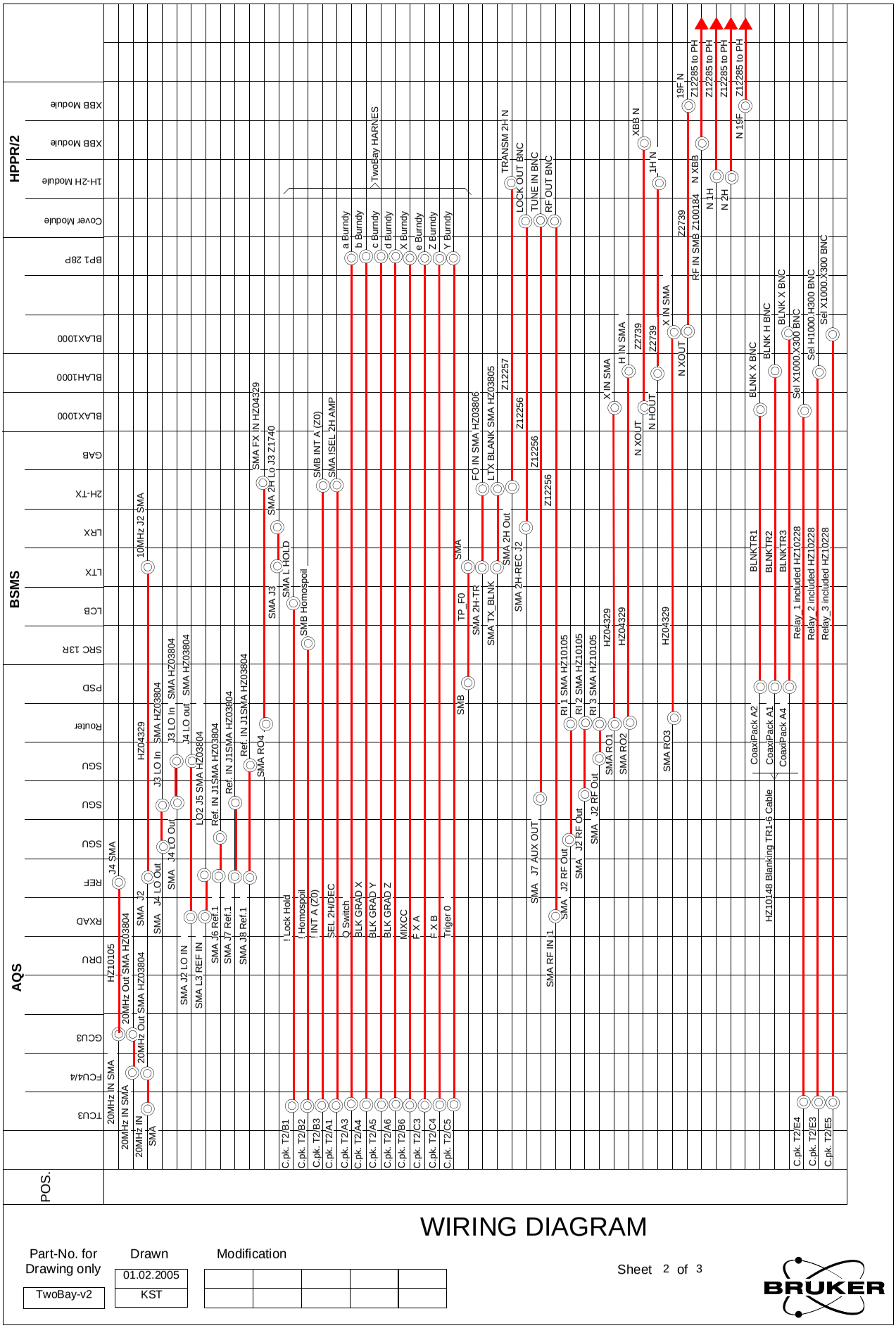
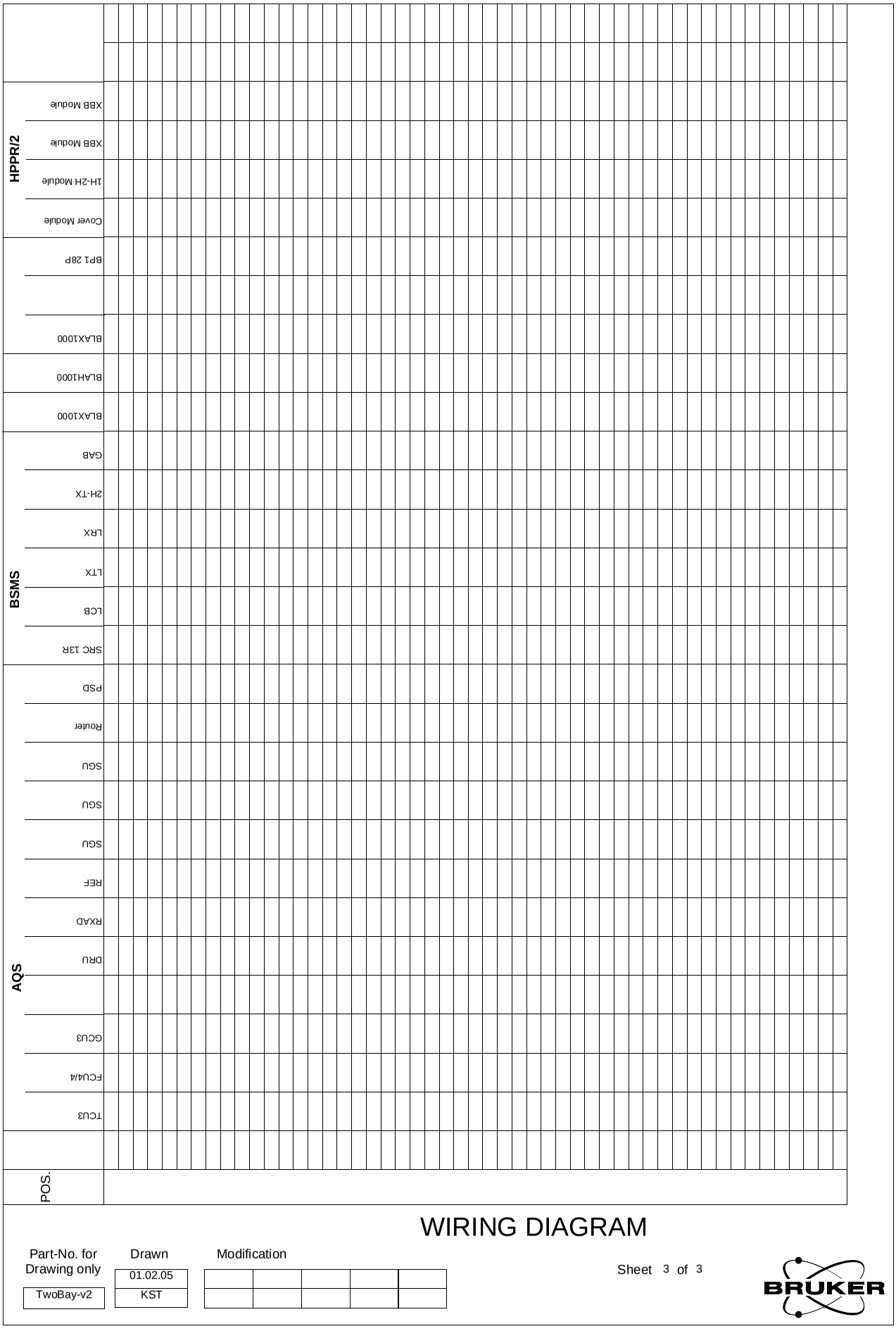


Figure 4.11. Avance II TwoBay 3 Channel Solids Wiring Page 3/3



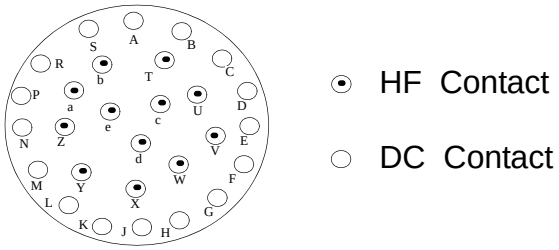


Figure 4.12. Back Panel BP1 28P

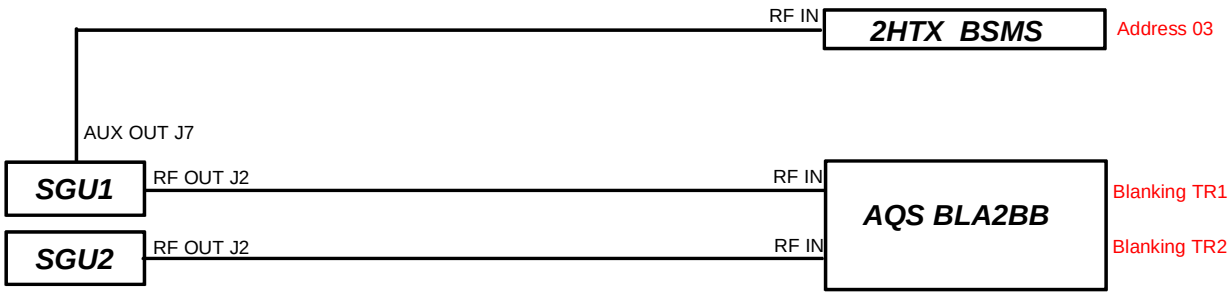
Table 4.1. Signal Name

PIN	COAX Connections
a	Q Switch
b	BLK GRAD X
c	BLK GRAD Y
d	BLK GRAD Z
e	FX A
Z	FX B
Y	Triger 0
X	MIXCC
W	
V	
U	
T	

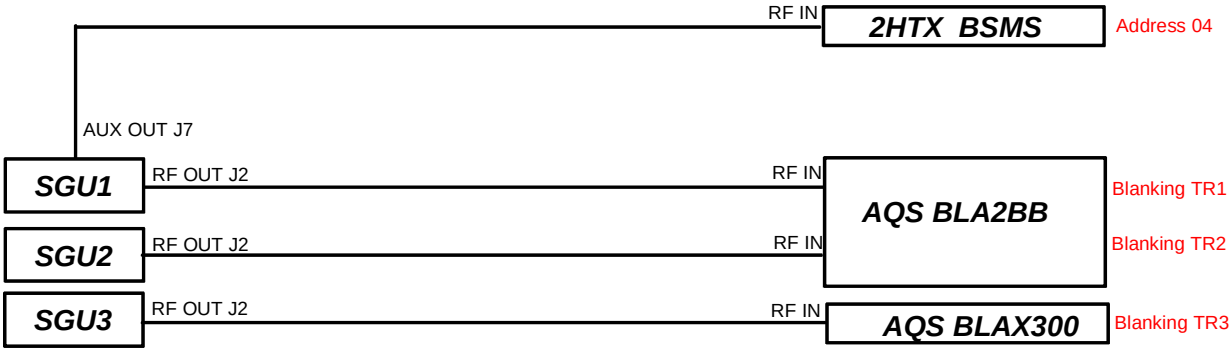
PIN	DC Connections
A	+ 19V
B	GND
C	
D	
E	
F	
G	
H	
J	
K	
L	
M	
N	
P	
R	
S	

Wiring SGU-Router-Amplifier 4.2

2 SGU-BLA2BB-2HTX 4.2.1



3 SGU-BLA2BB&BLAX300-2HTX 4.2.2



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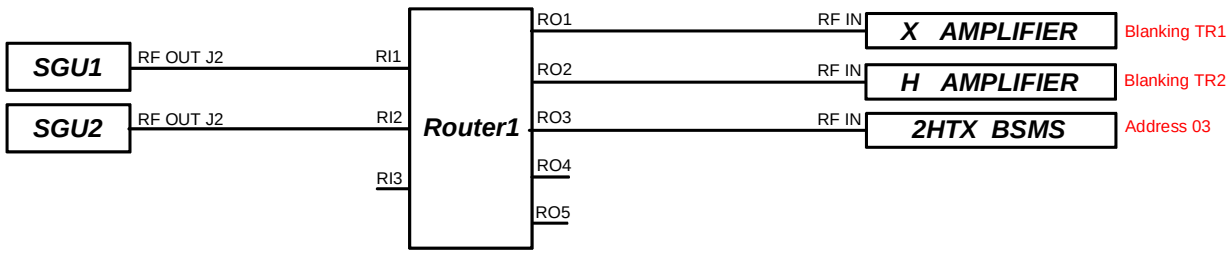
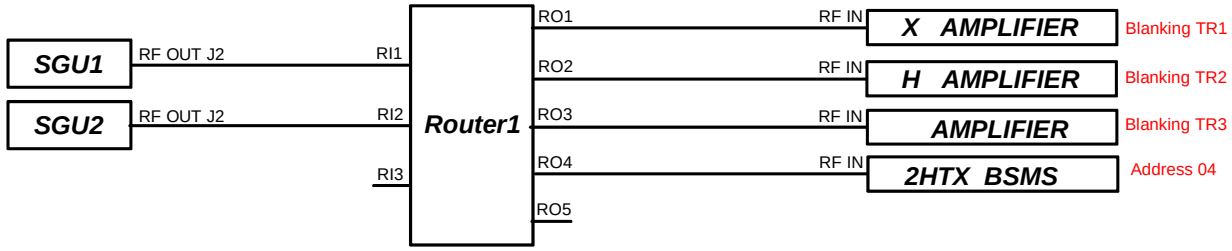


2 SGU-1 Router-3 Amplifier-2HTX 4.2.4



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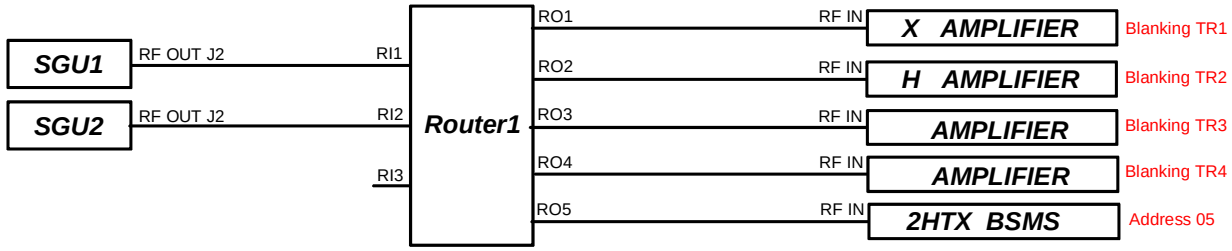
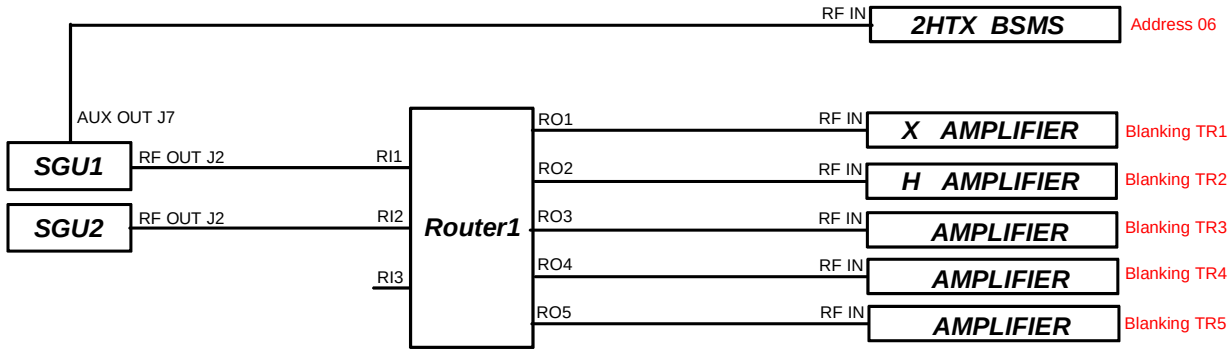
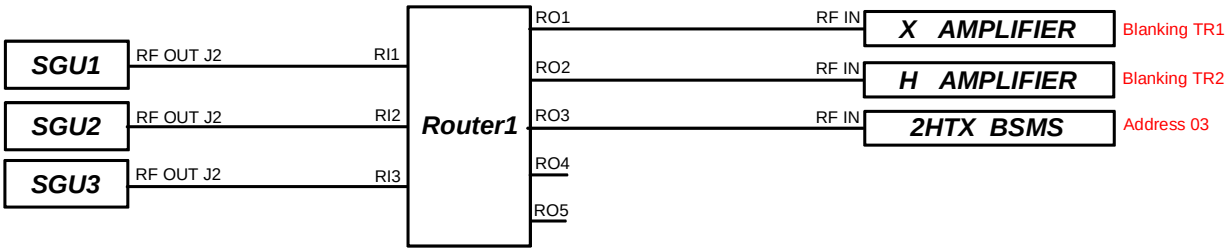


2 SGU-1 Router-5 Amplifier-2HTX 4.2.6



3 SGU-1 Router-2Amplifier-2HTX 4.2.7



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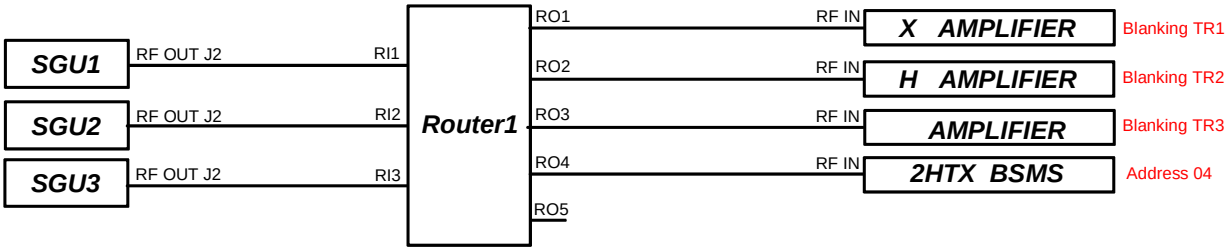

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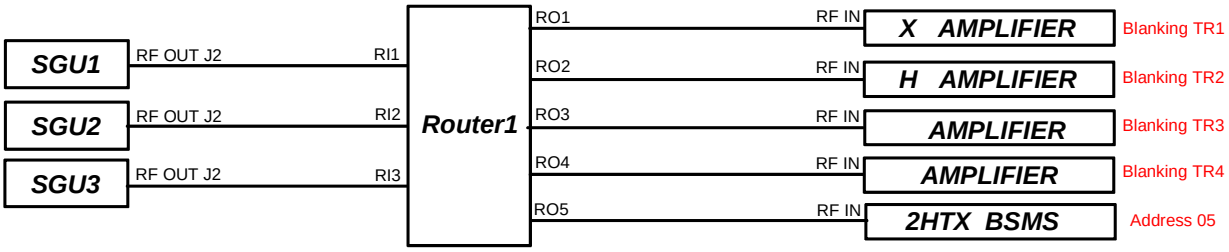

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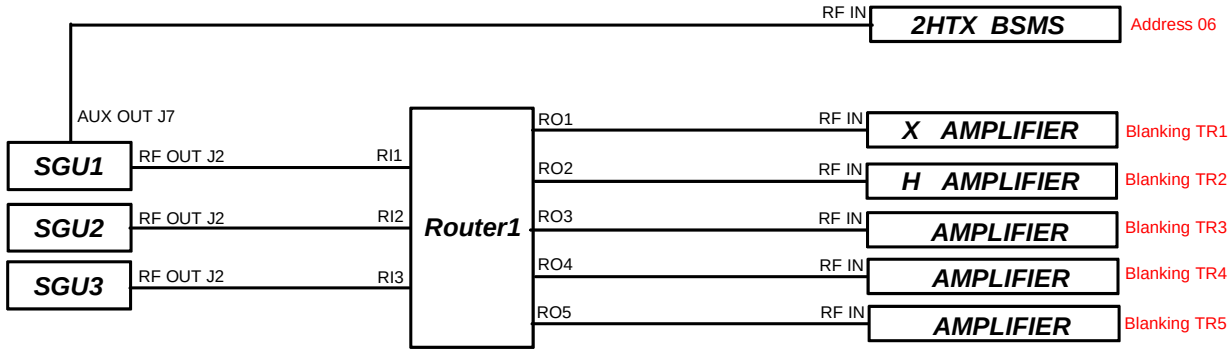

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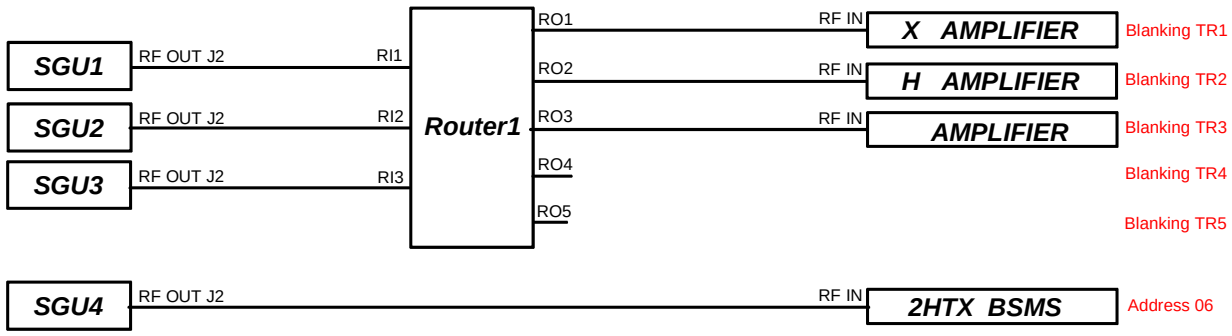

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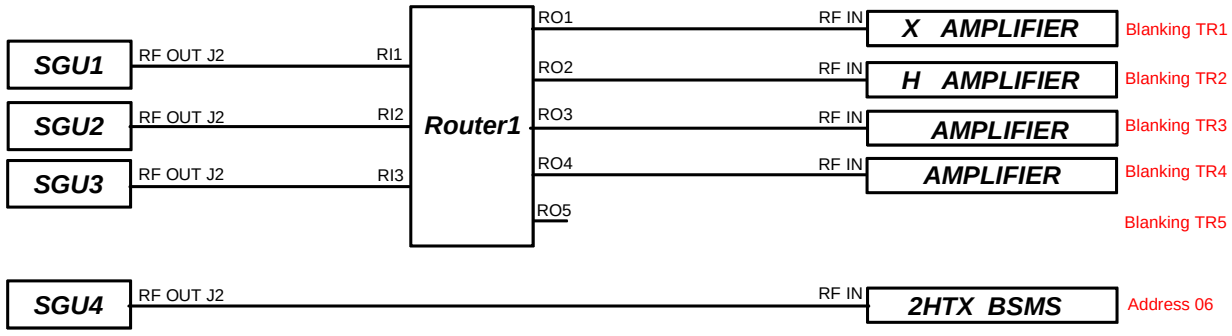

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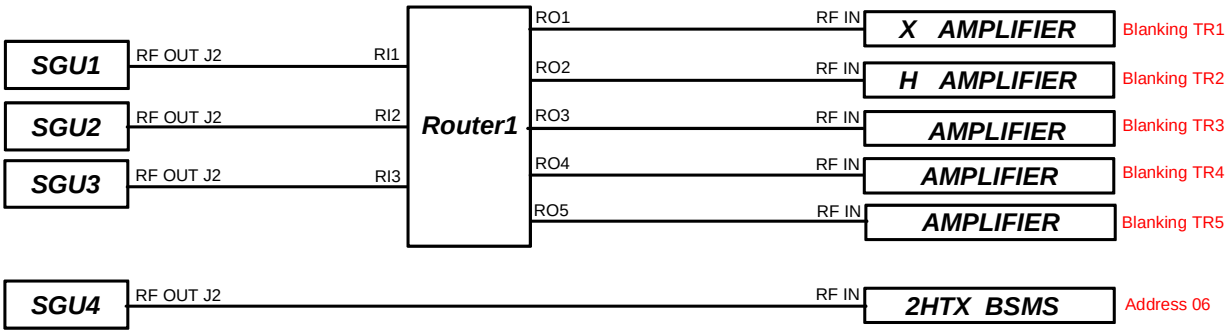
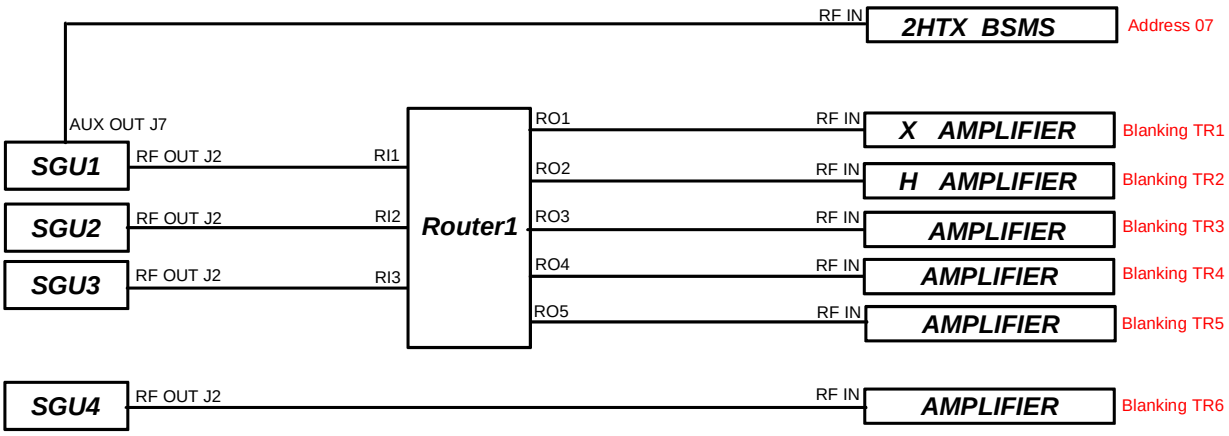


4 SGU-1 Router-6 Amplifier-2HTX *4.2.14*



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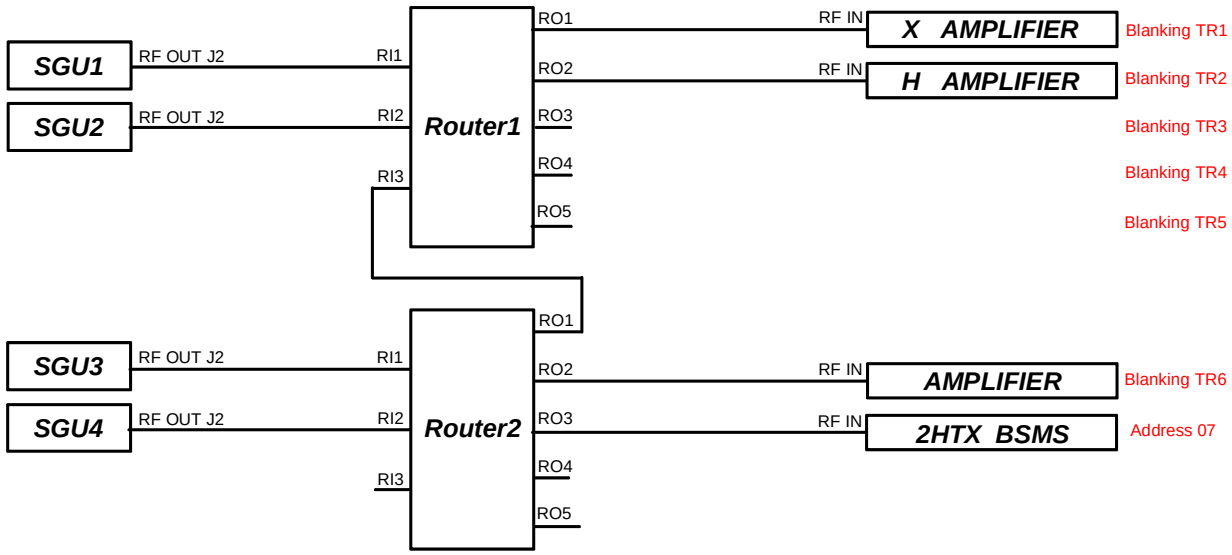

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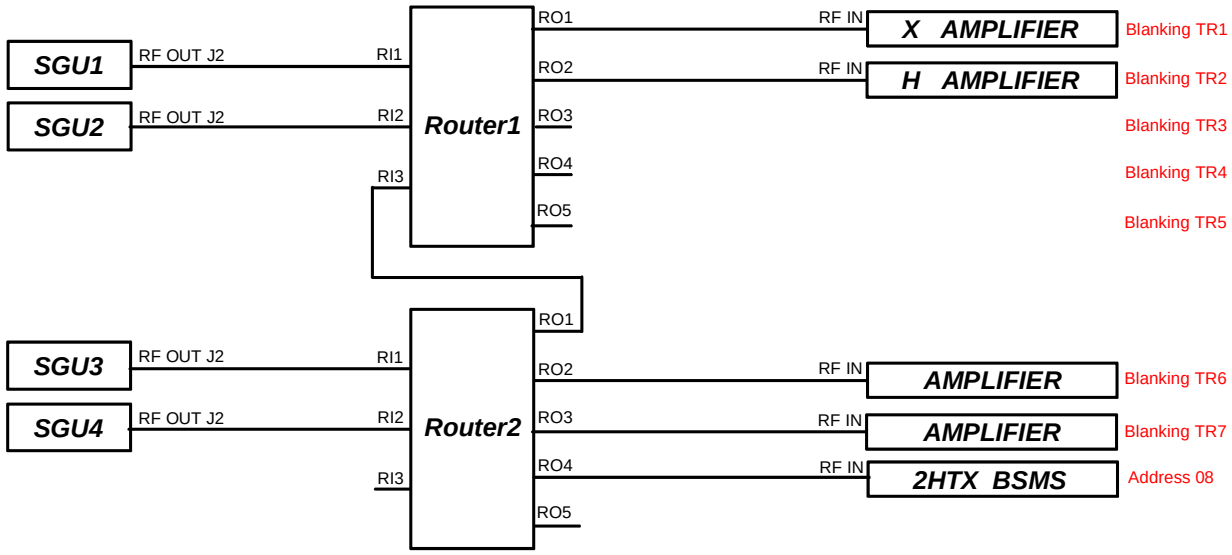

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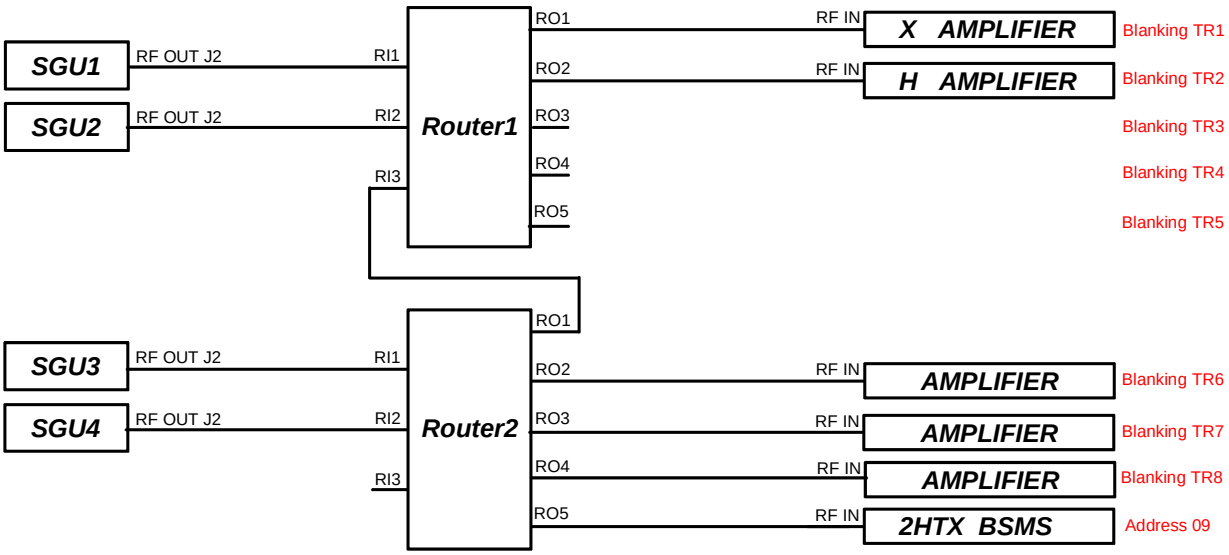
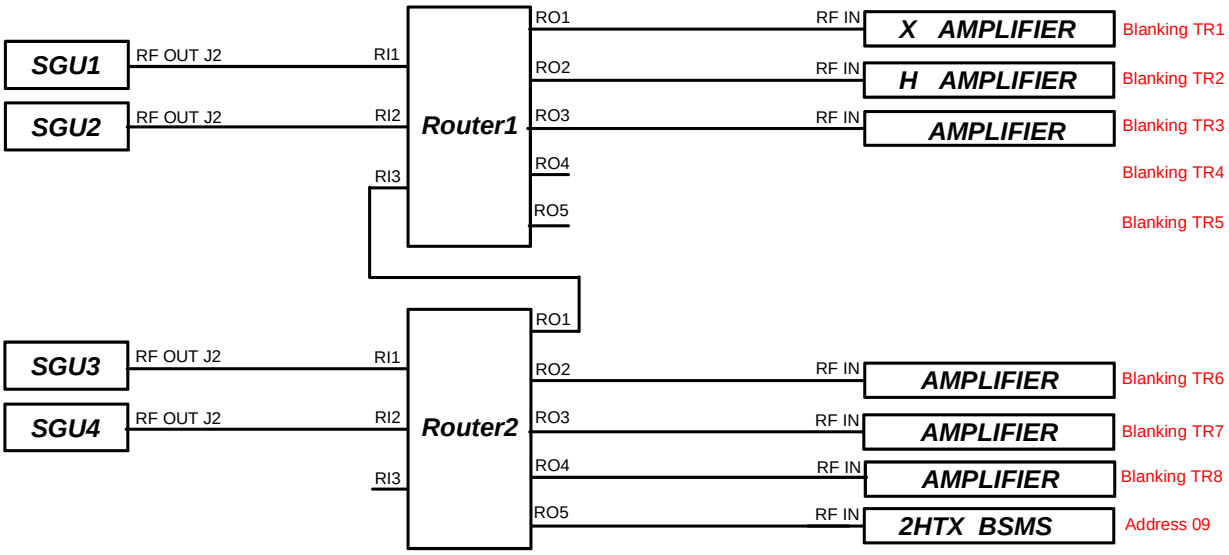


4 SGU-2 Router-6 Amplifier-2HTX *4.2.18*



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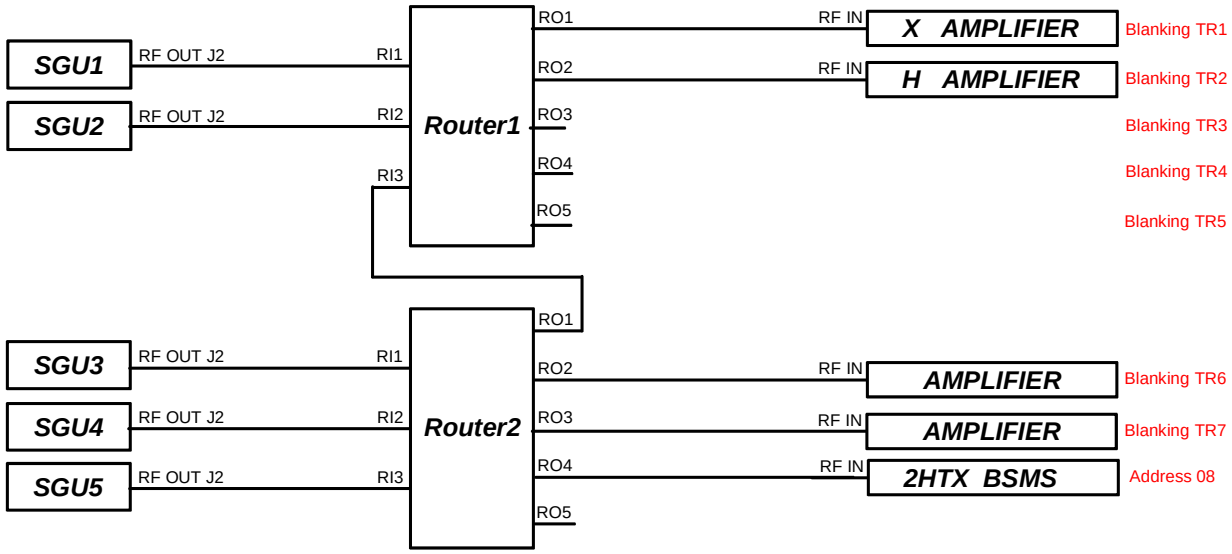

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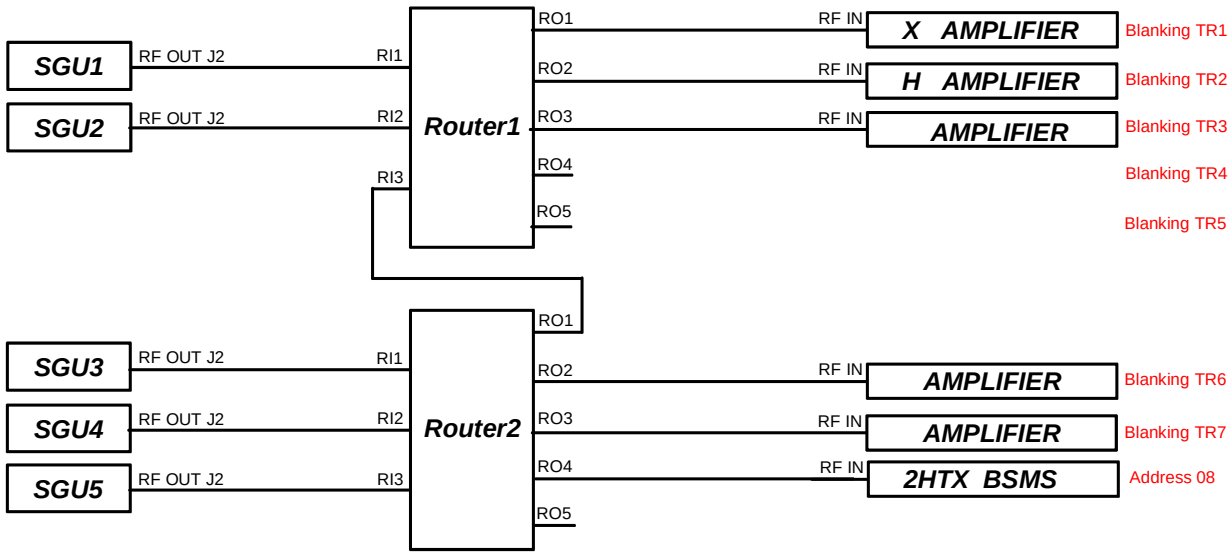

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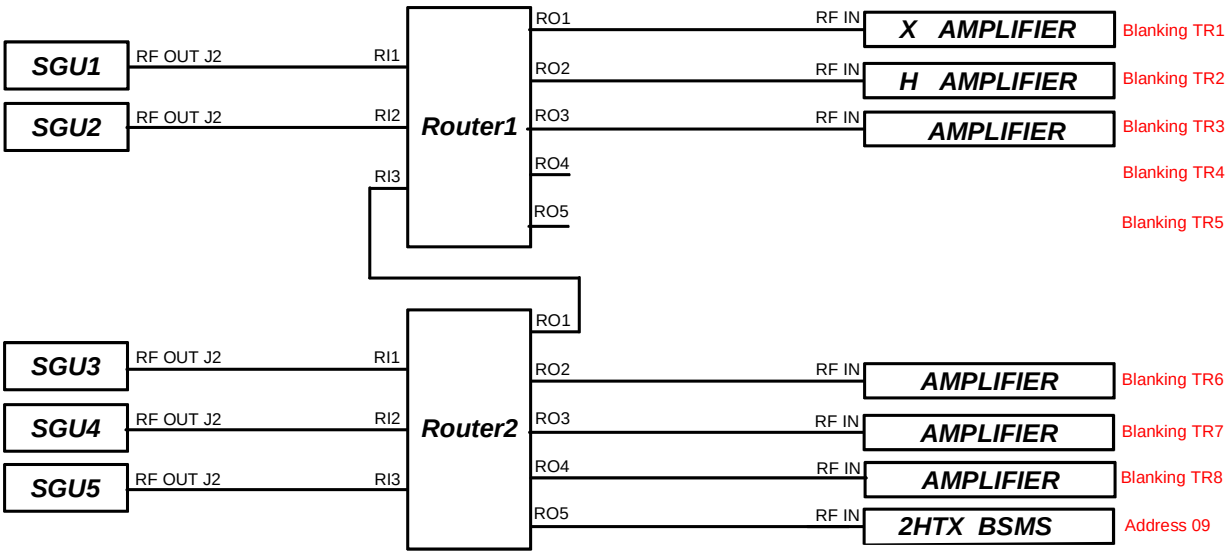

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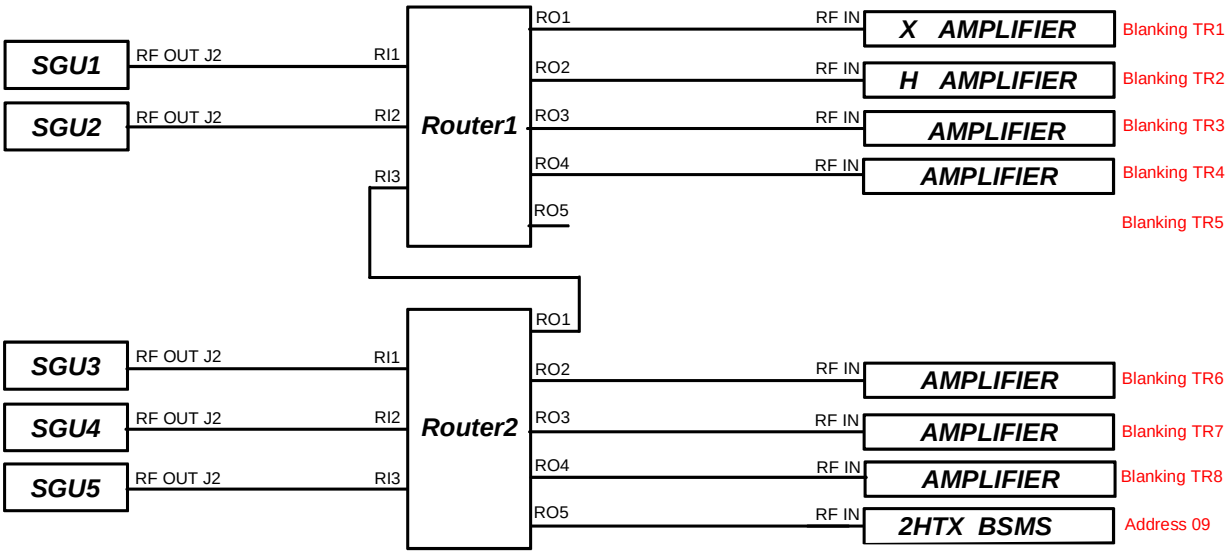

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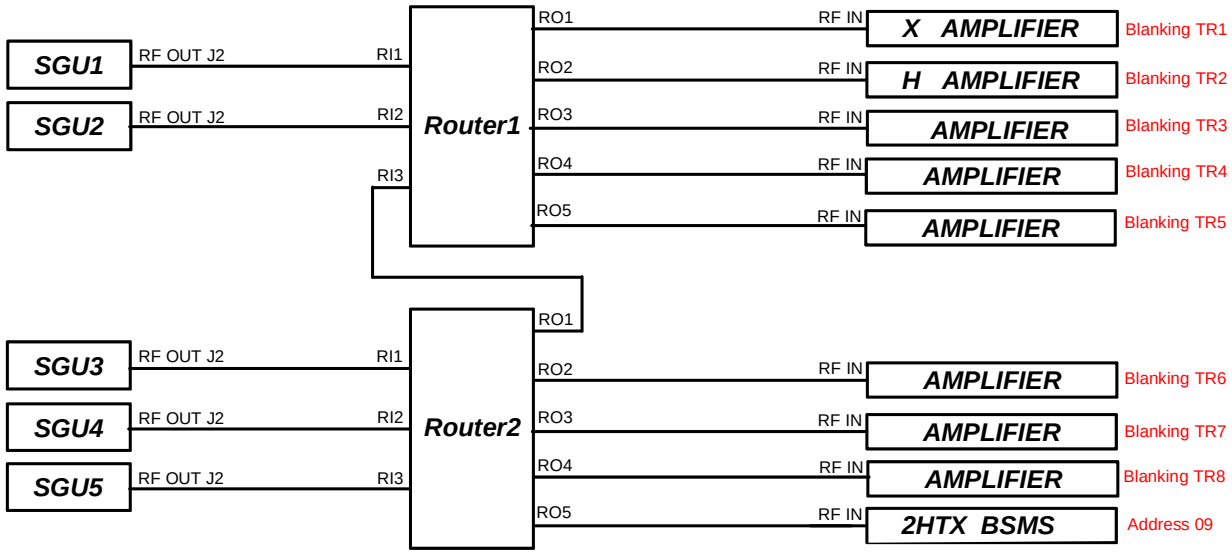

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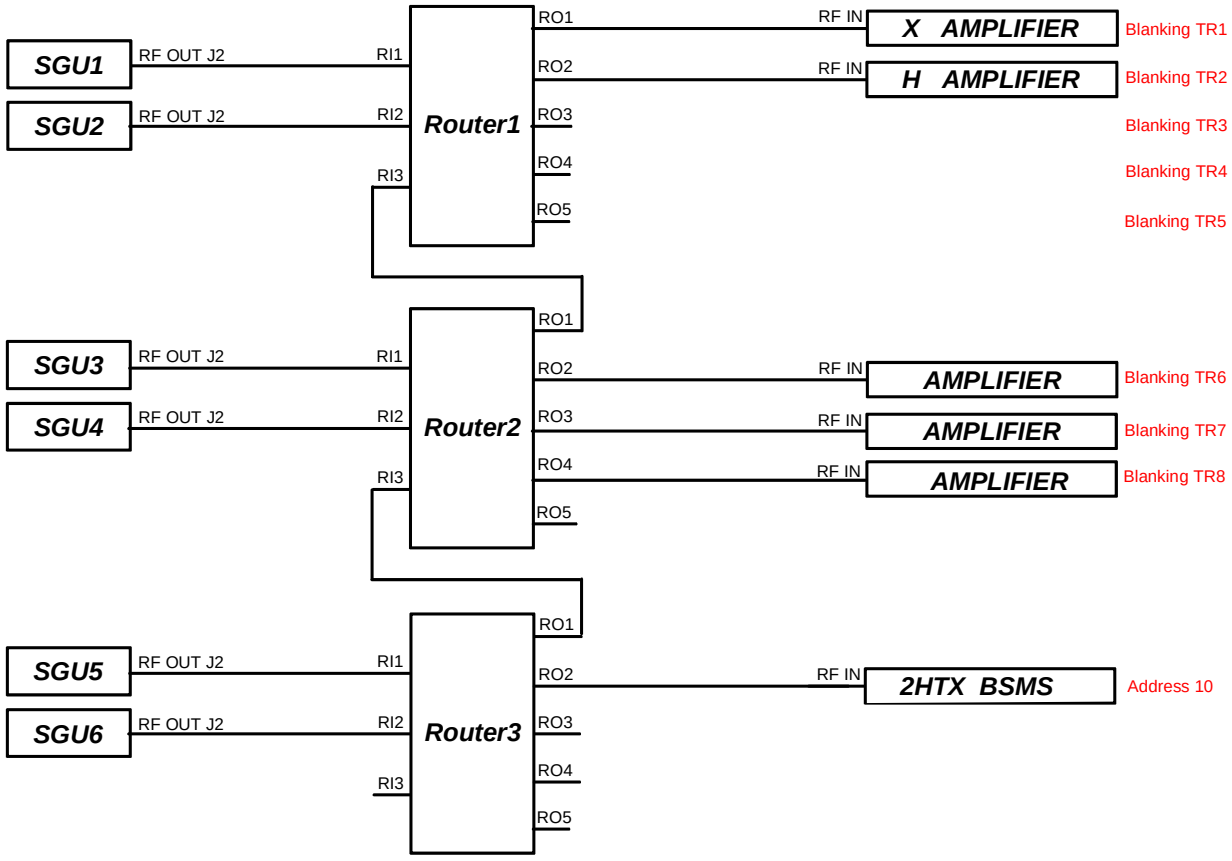

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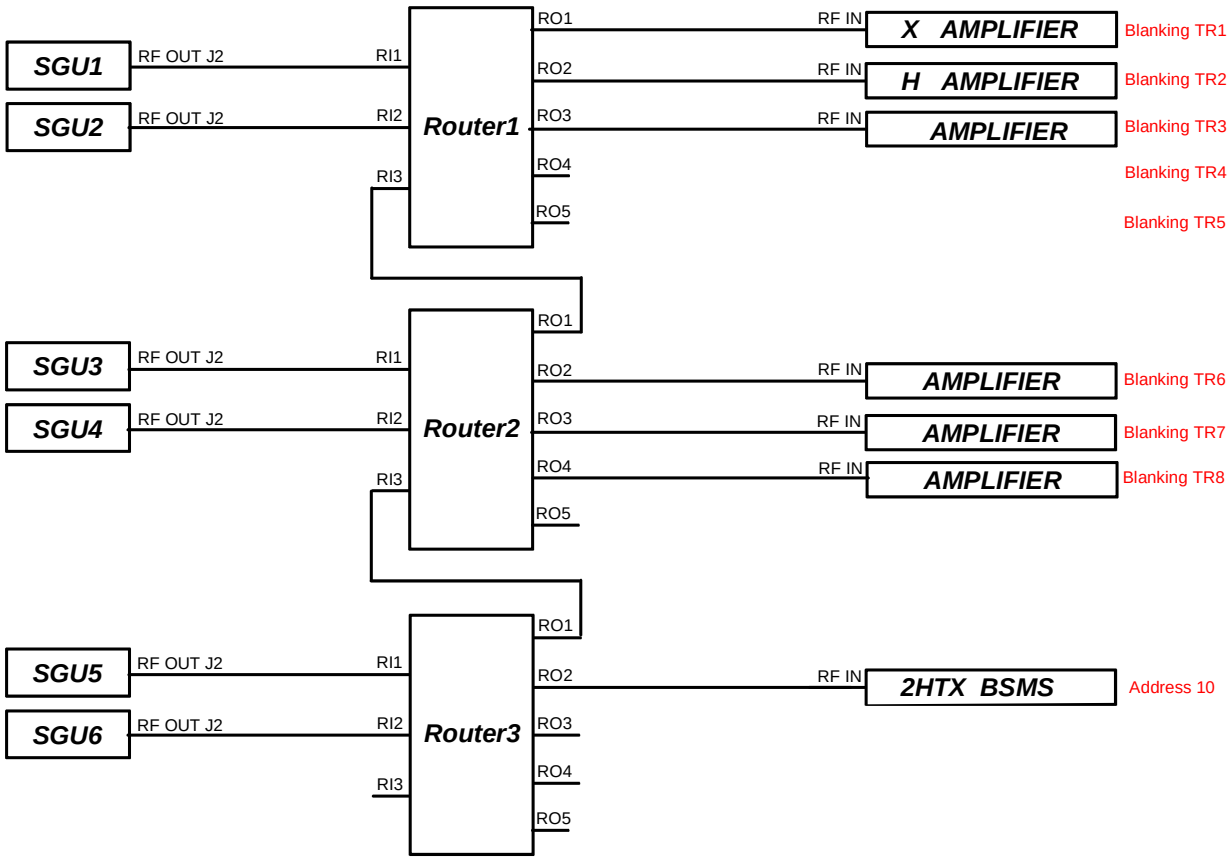

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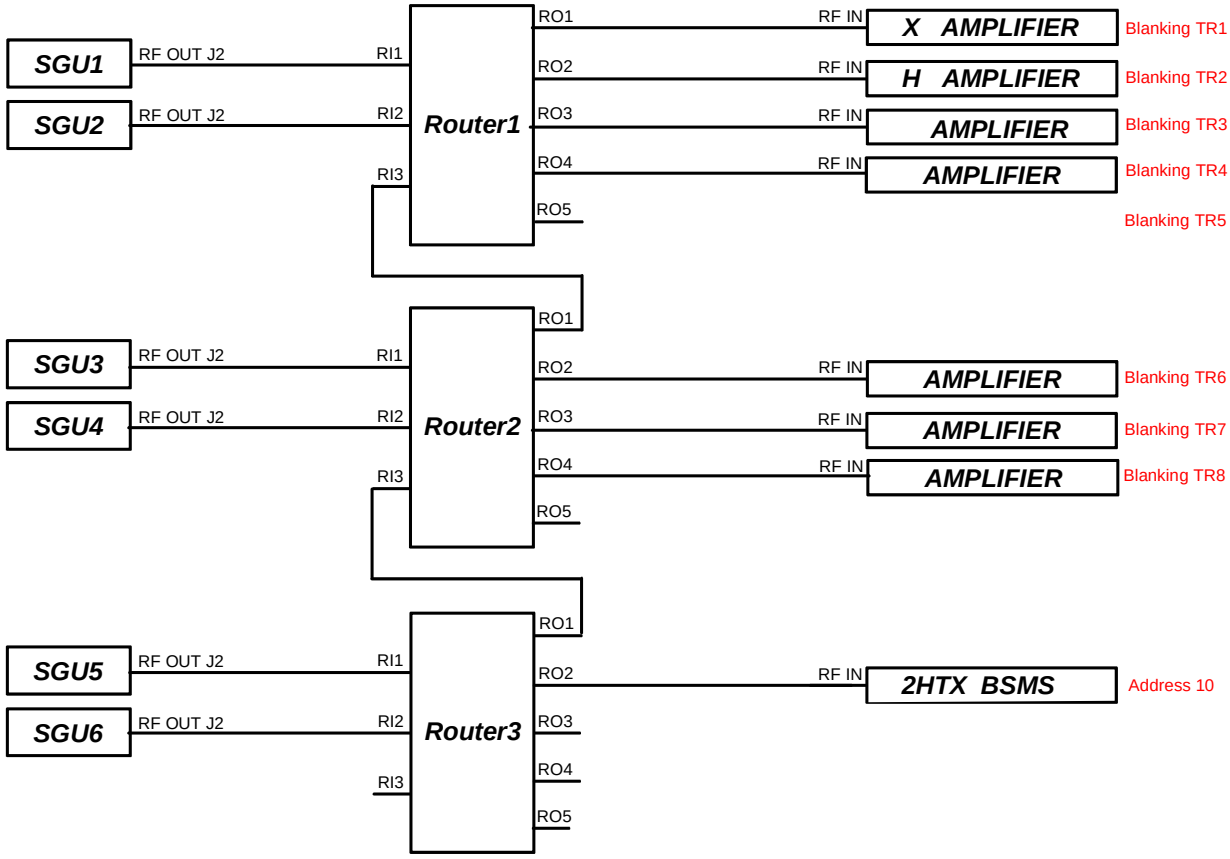
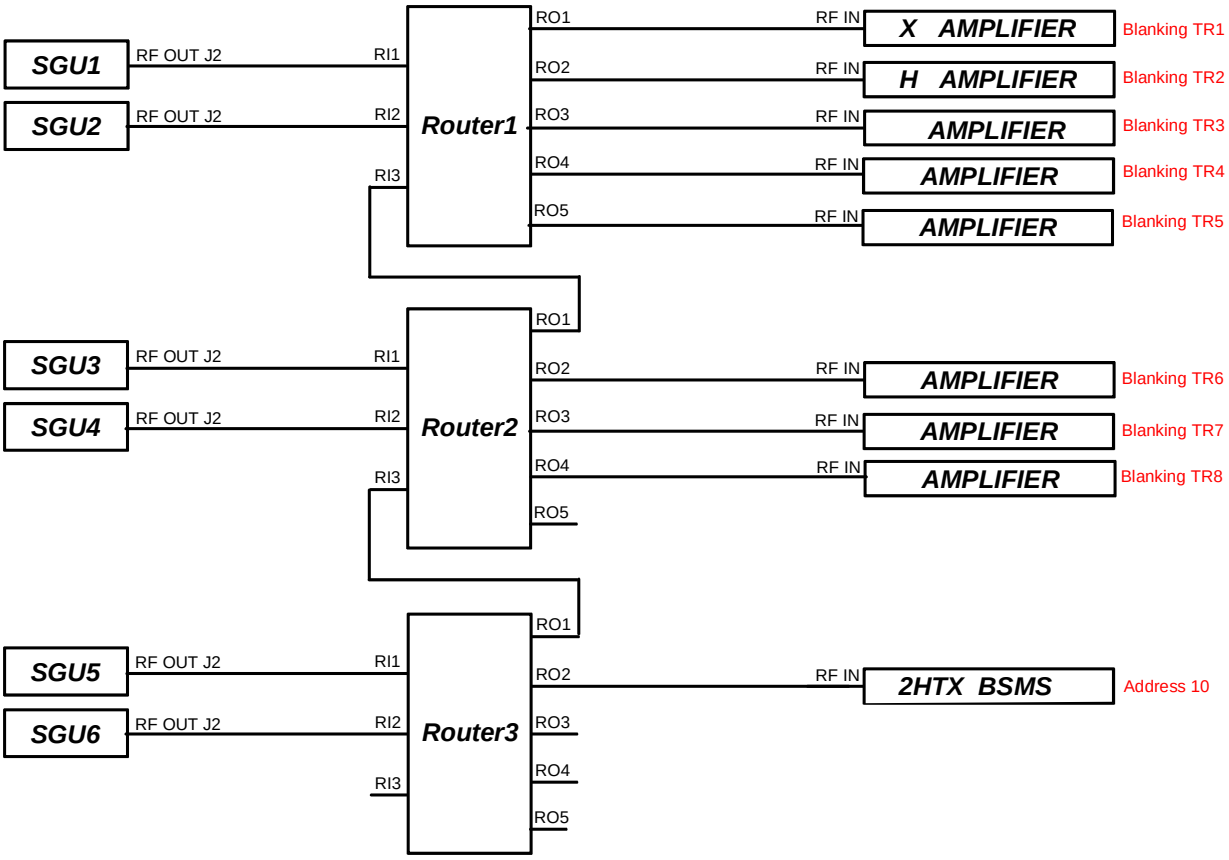


6 SGU-3 Router-8 Amplifier-2HTX *4.2.27*



Main Power Wiring

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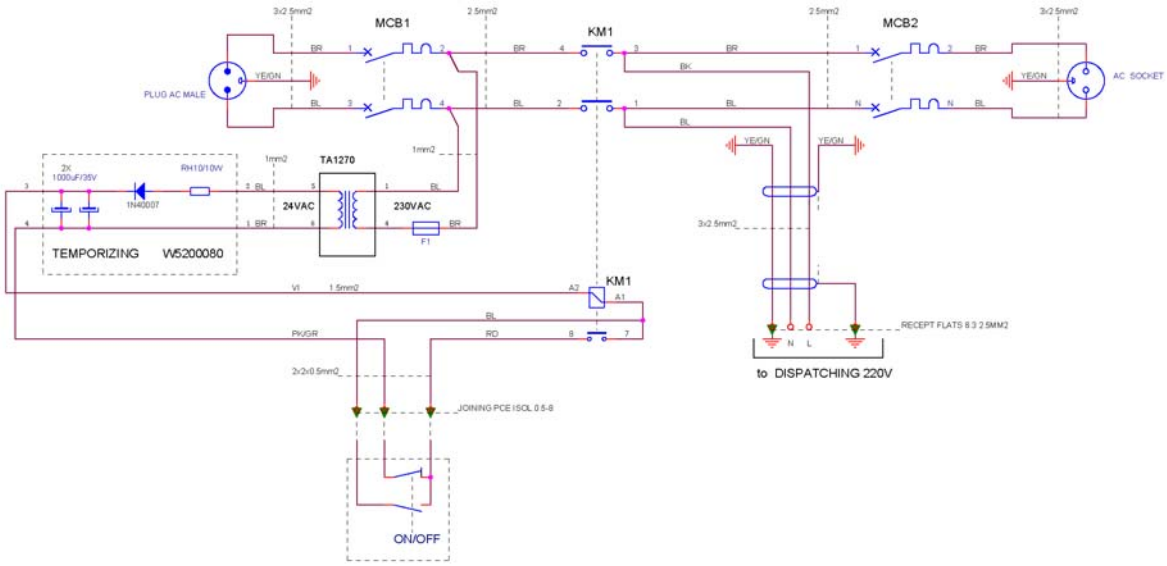
Safety Box *W5200101*



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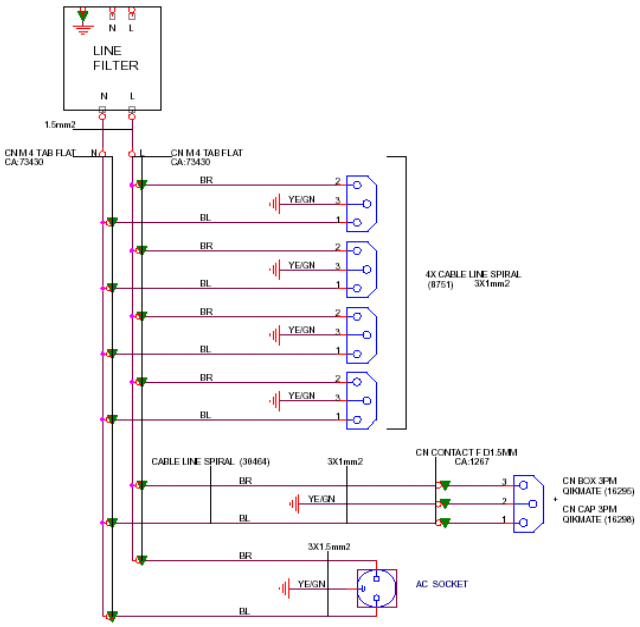
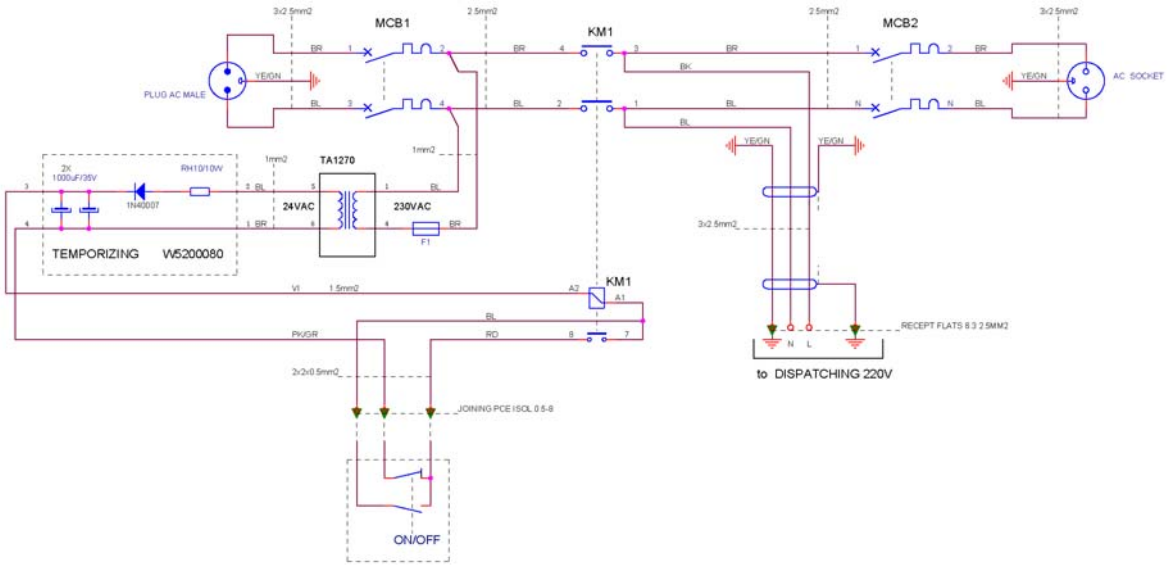


AVANCE OneBay *5.2*

Safety Box *W5200101*



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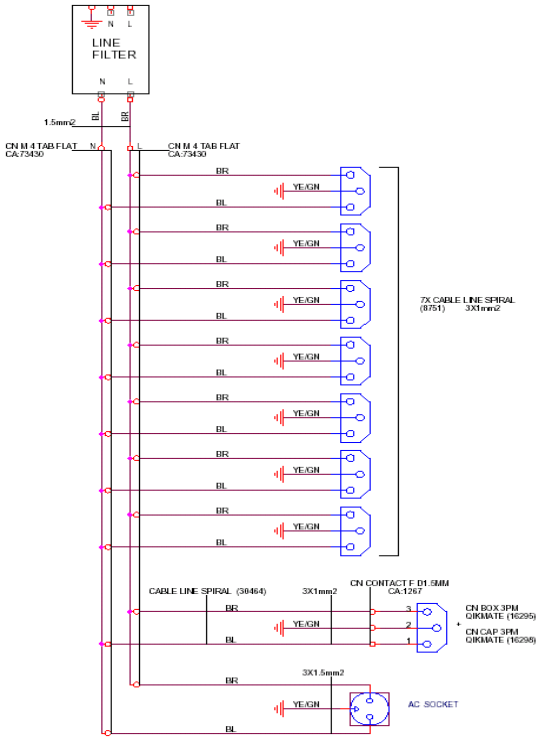

AVANCE TwoBay Singel Phase 230V 16A *5.3*

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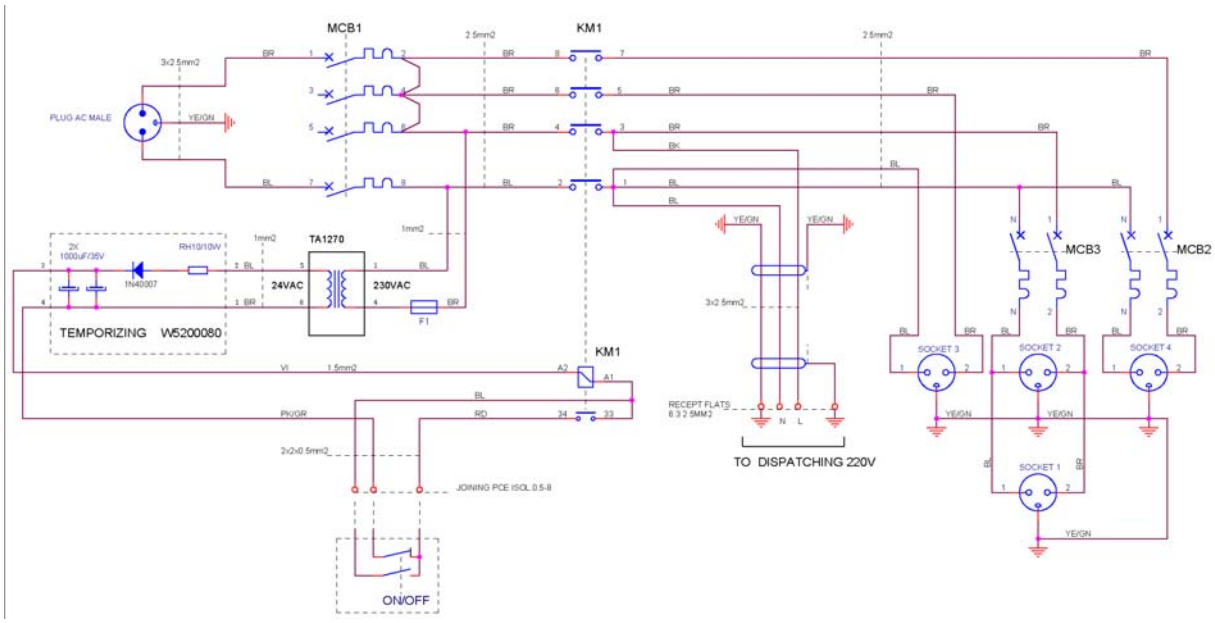

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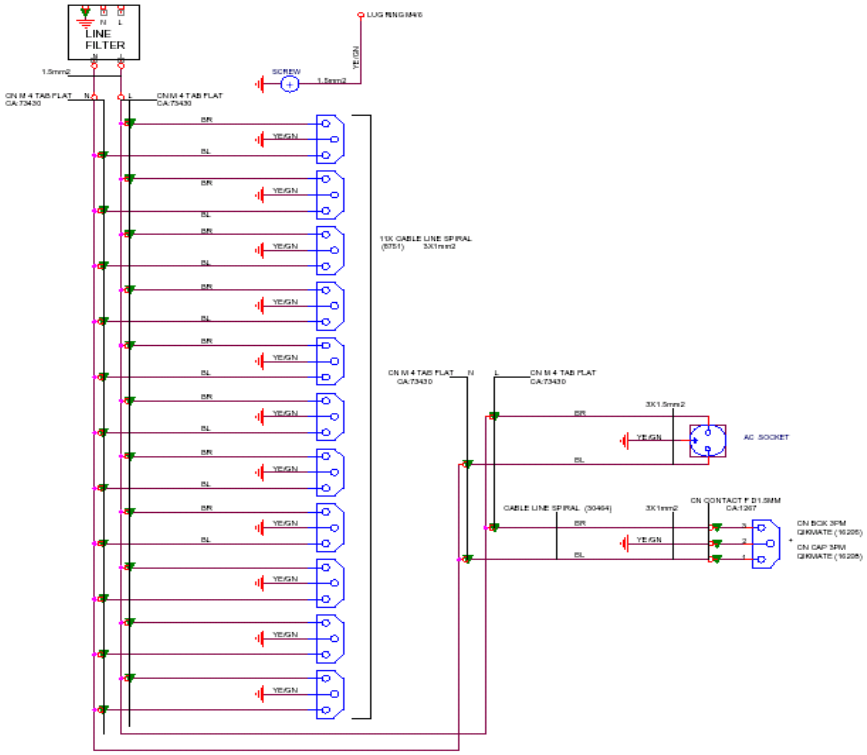
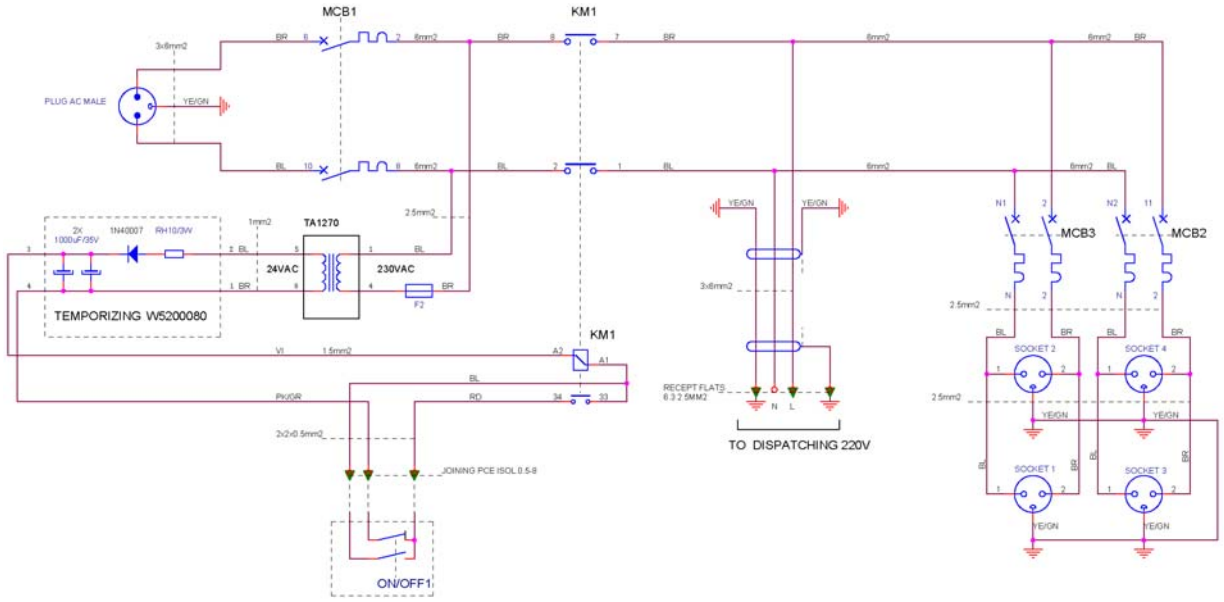


AVANCE TwoBay Singel Phase 230V 32A *5.4*

Safety Box *W1212915*



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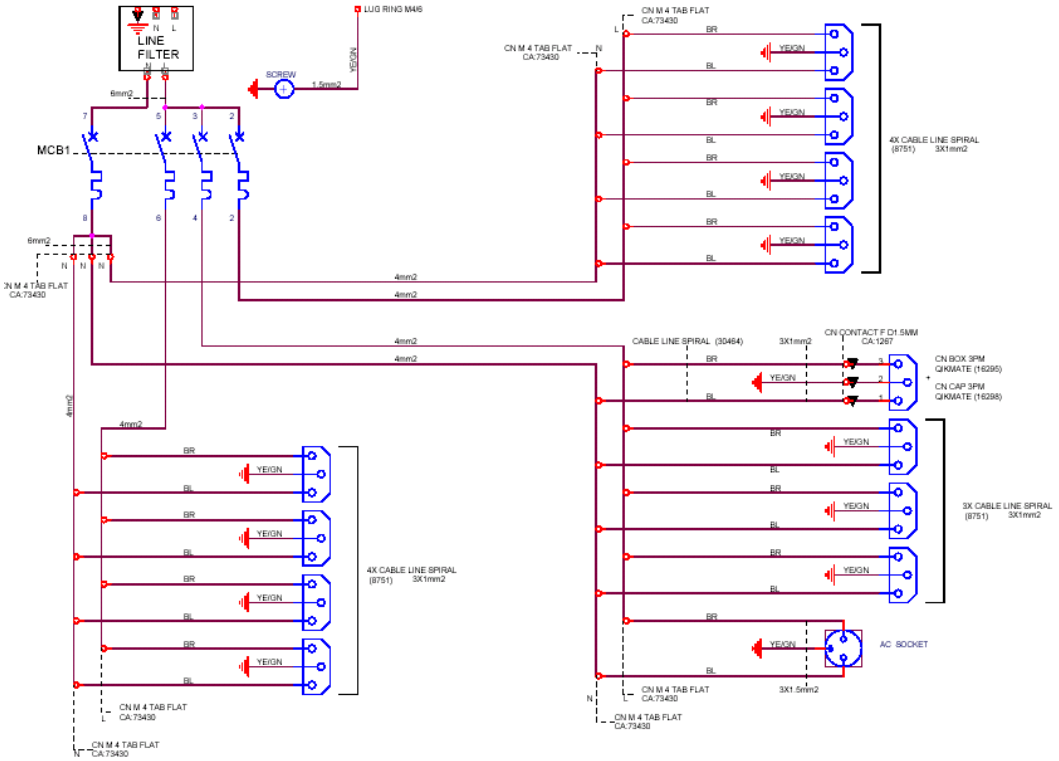

AVANCE TwoBay Three Phase 400V 3x16A *5.5*

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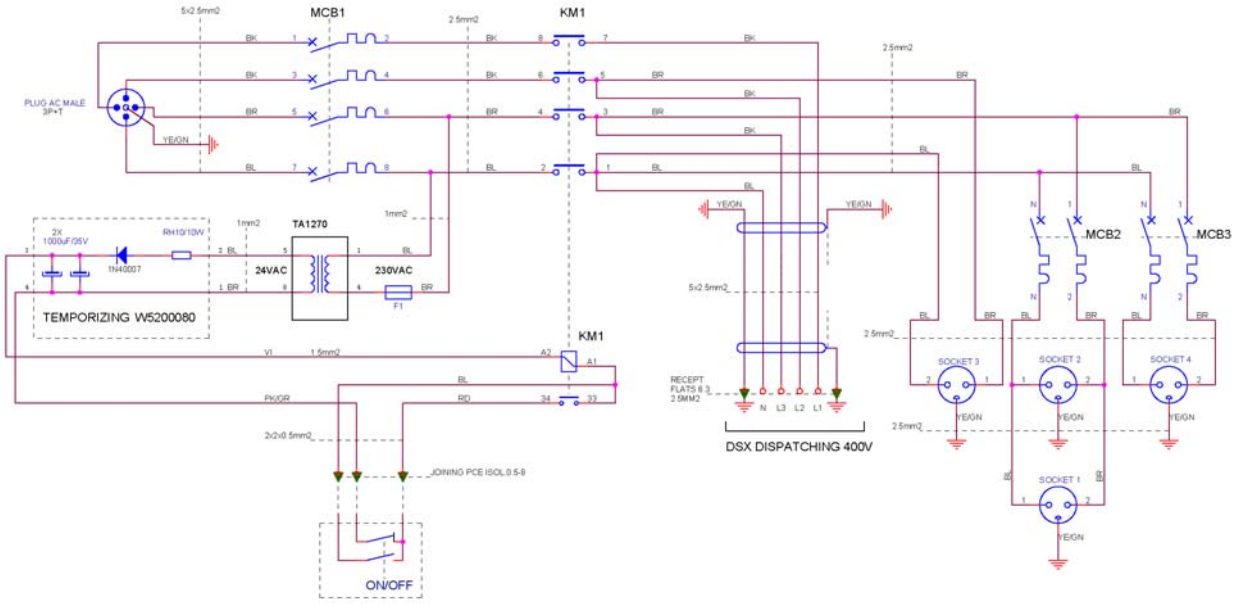

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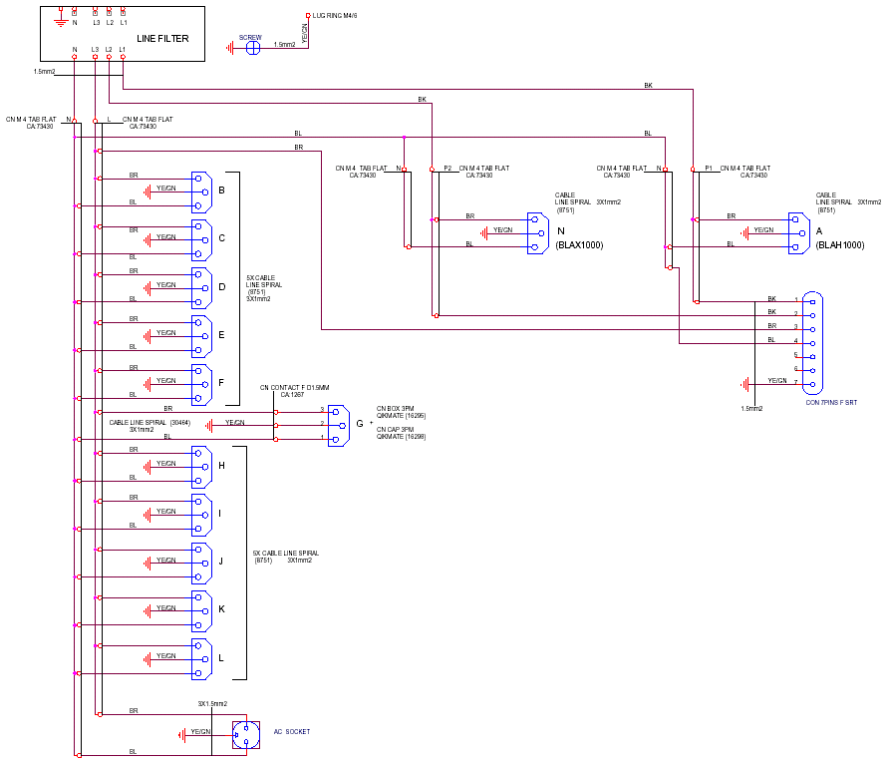

Main Power Wiring

Figures

Figures

Tables

Tables

Notes: