AVANCE III Cabinet

Avance III Wiring
User Manual

Version 001

Bruker BioSpin

The information in this manual may be altered without notice.

This manual was written by

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Rheinstetten, Germany

P/N: Z31812
DWG-Nr.: Z4D10273001

Contents

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 III 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 III console configuration and wiring.

Disclaimer 1.2

The AVANCE III 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, 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 *1.6*

CE

DECLARATION OF CONFORMITY

The undermentioned product

NMR Spectrometer AVANCE III Cabinet
H03128T2

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/EWG) and safety (Low Voltage Electrical
Equipment: 72/23/EWG) regulations.

For the assessment the following norms were applied:

EMI: EN 61326:97+A1:98+A2:01+A3:03
Safety: EN 61 010-1

Tested by: Nemko GmbH

Test report: FS-0603-63703

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

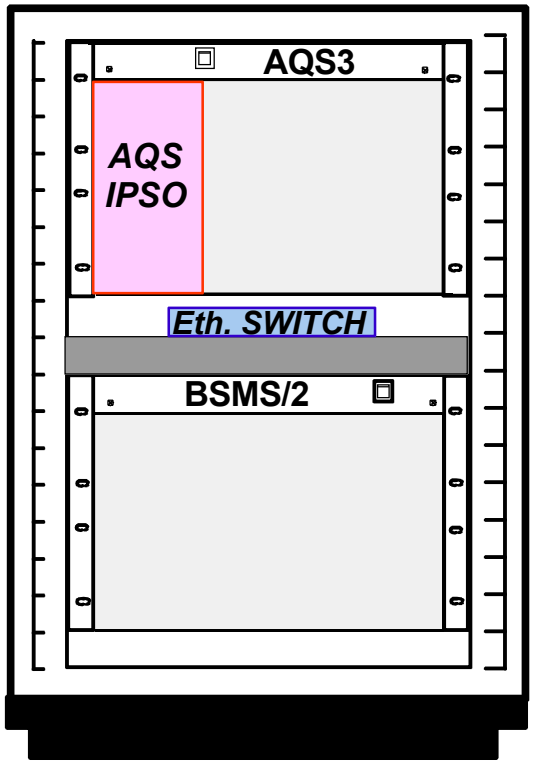
Declaration approved by:

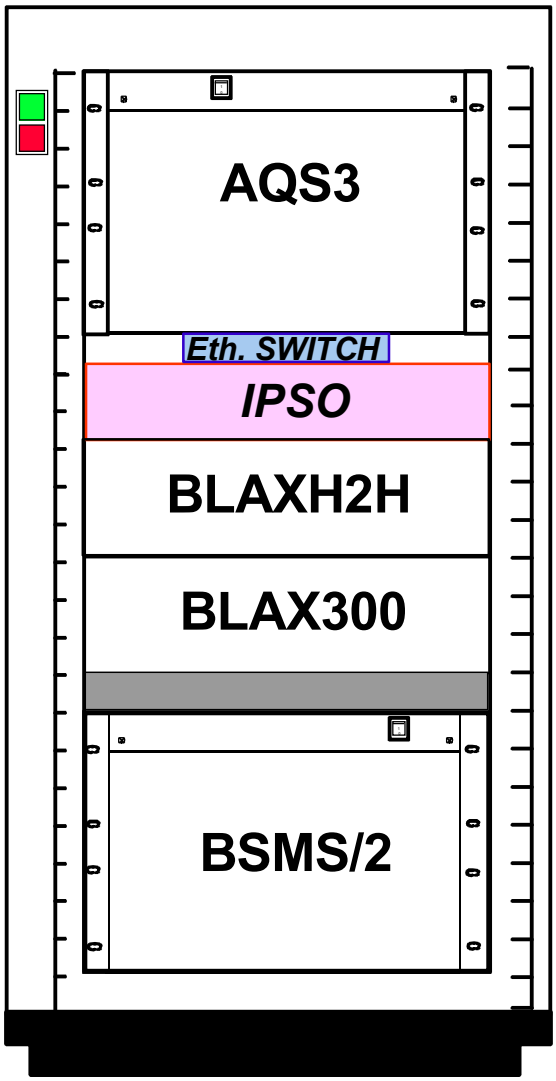
Dr. Tonio Gianotti	Jean Yves Fraval	Werner Schittenhelm
Head of Development	Technical Manager	Direction

Rheinstetten: May 09, 2006

Console Configuration

2

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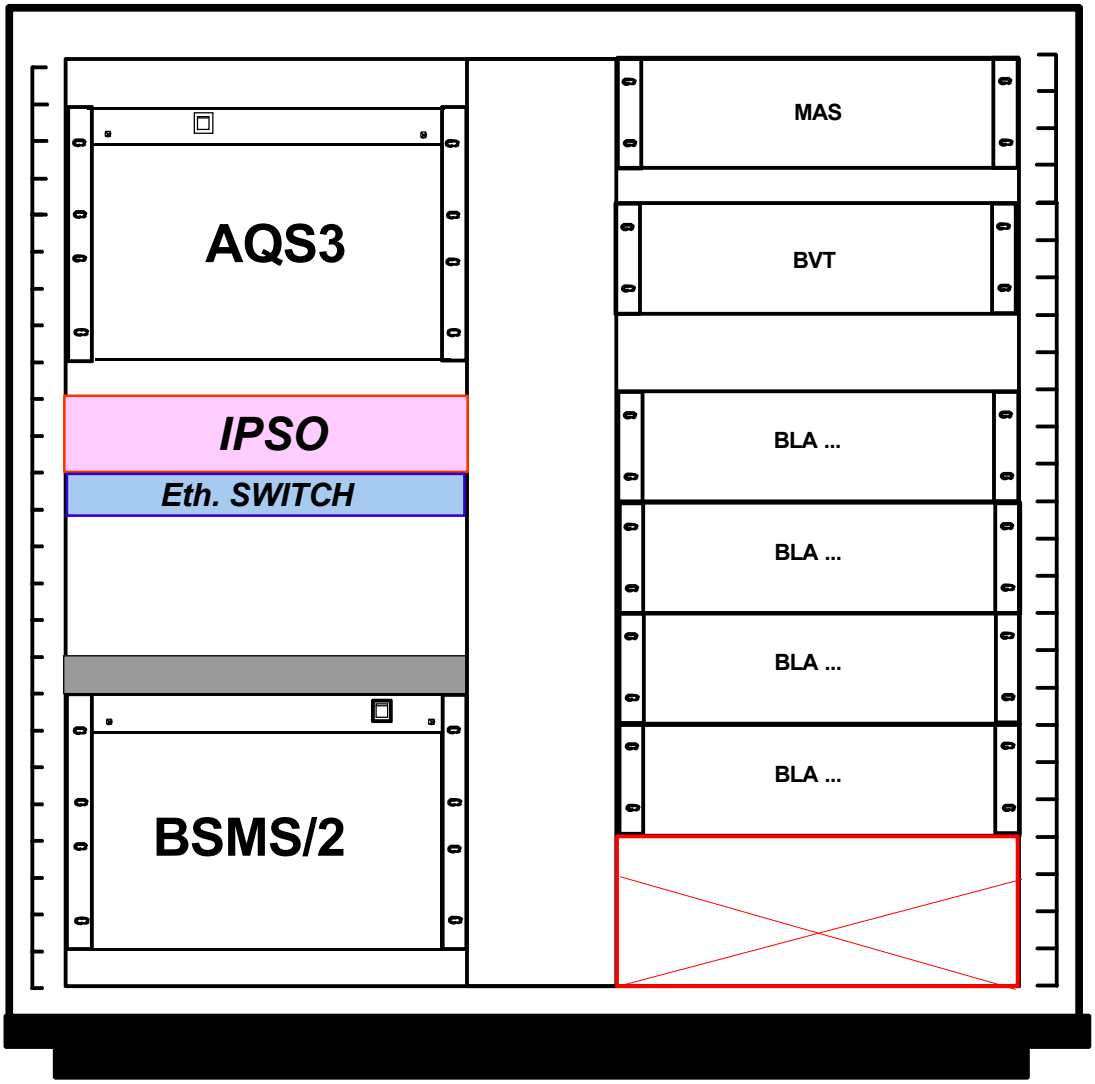
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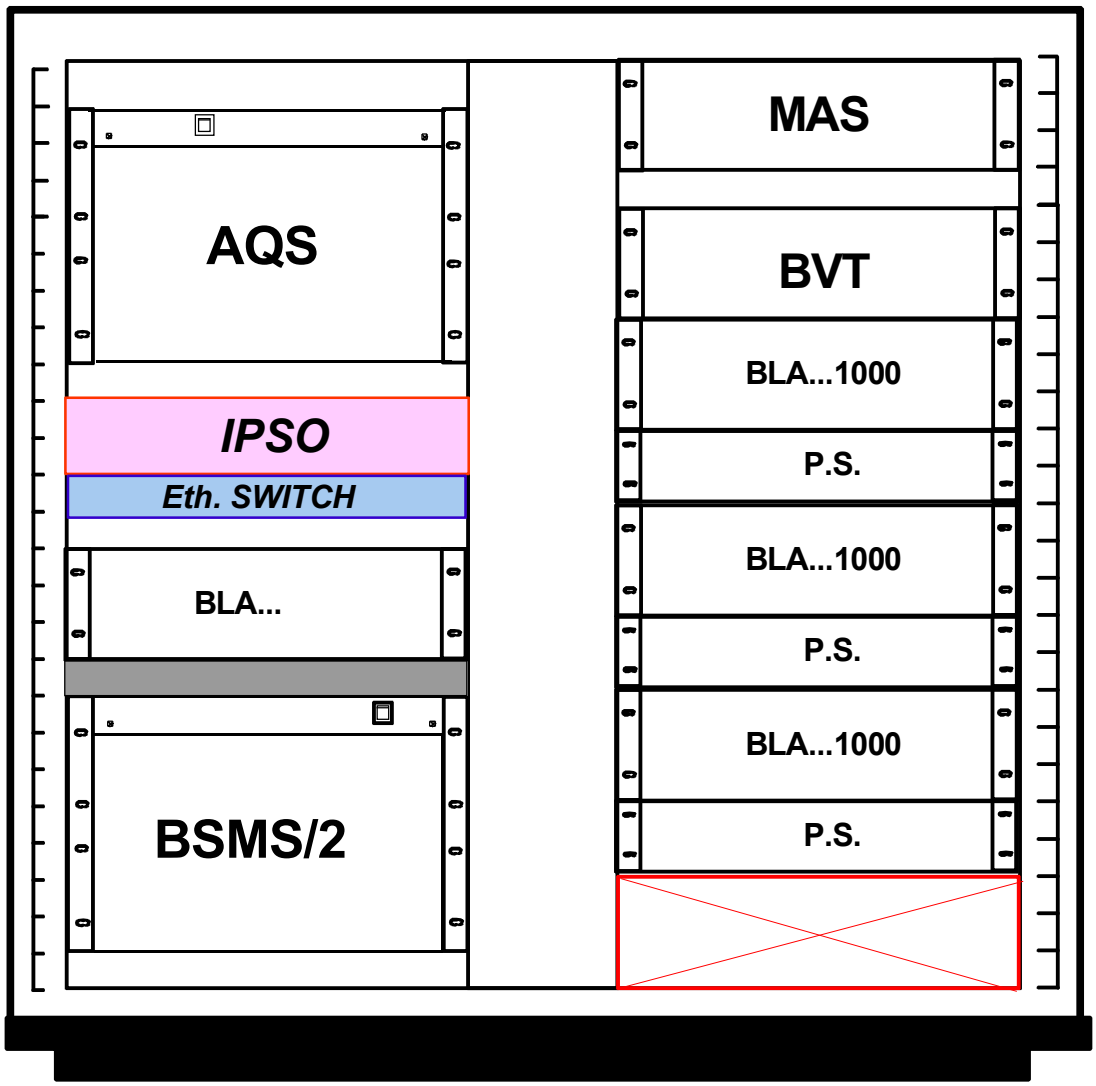
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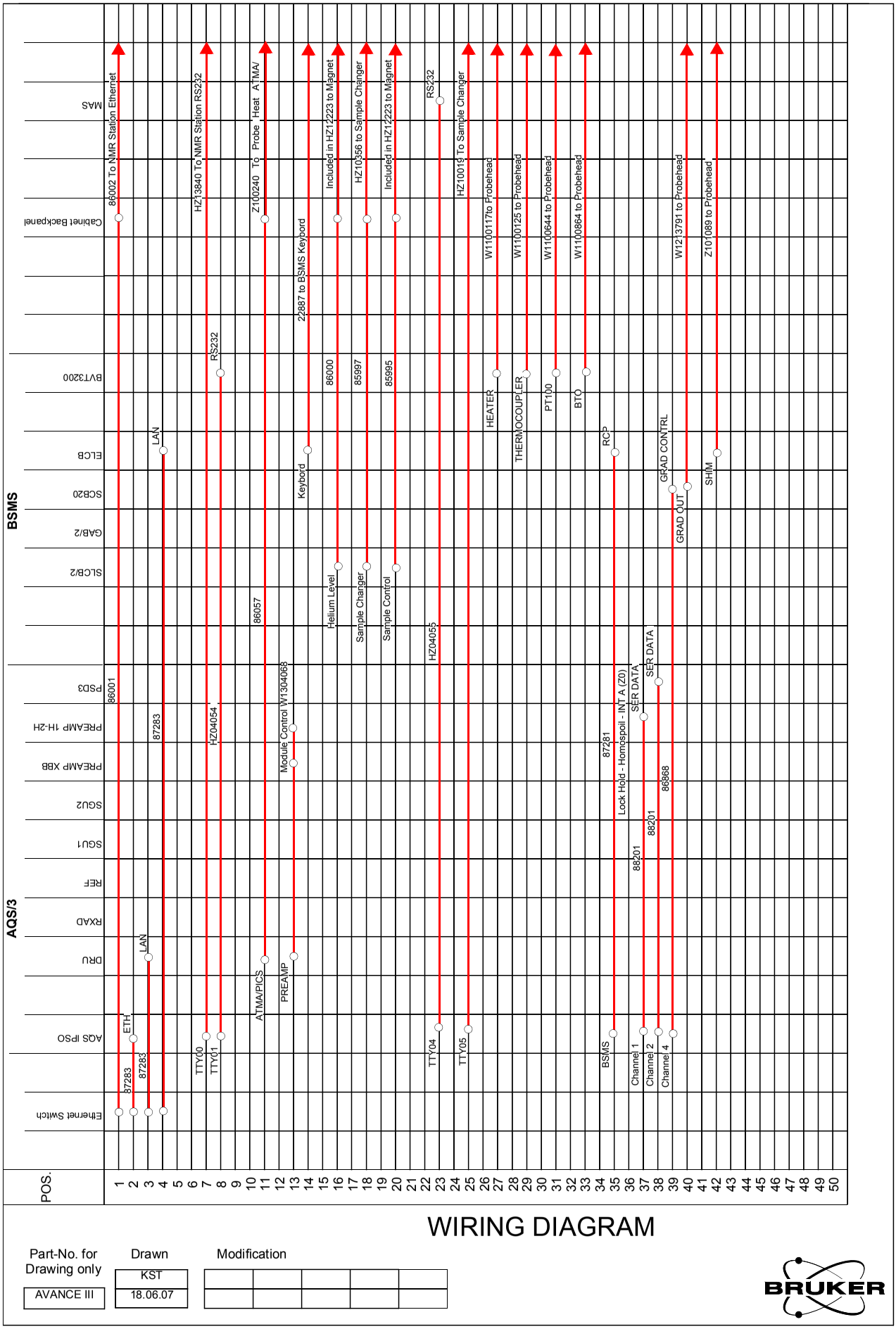
P.S.

Internal Wiring 3

Figure 3.1. Avance III MicroBay 2 Channel with AQS Preamp Page 1/2



WIRING DIAGRAM

Part-No. for Drawing only	Drawn	Modification
AVANCE III	KST 18.06.07	

BRUKER

Figure 3.2. Avance III MicroBay 2 Channel with AQS Preamp Page 2/2

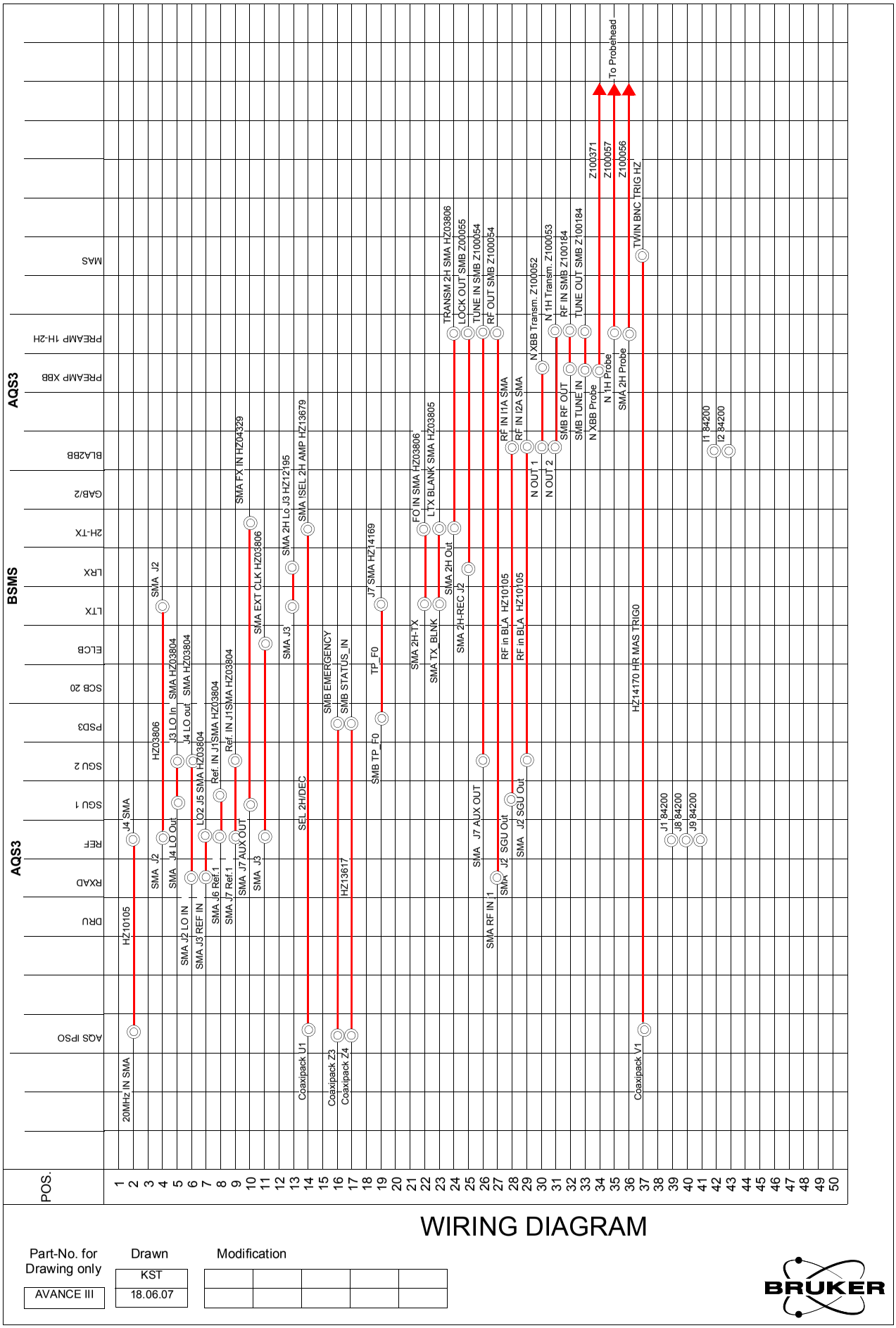
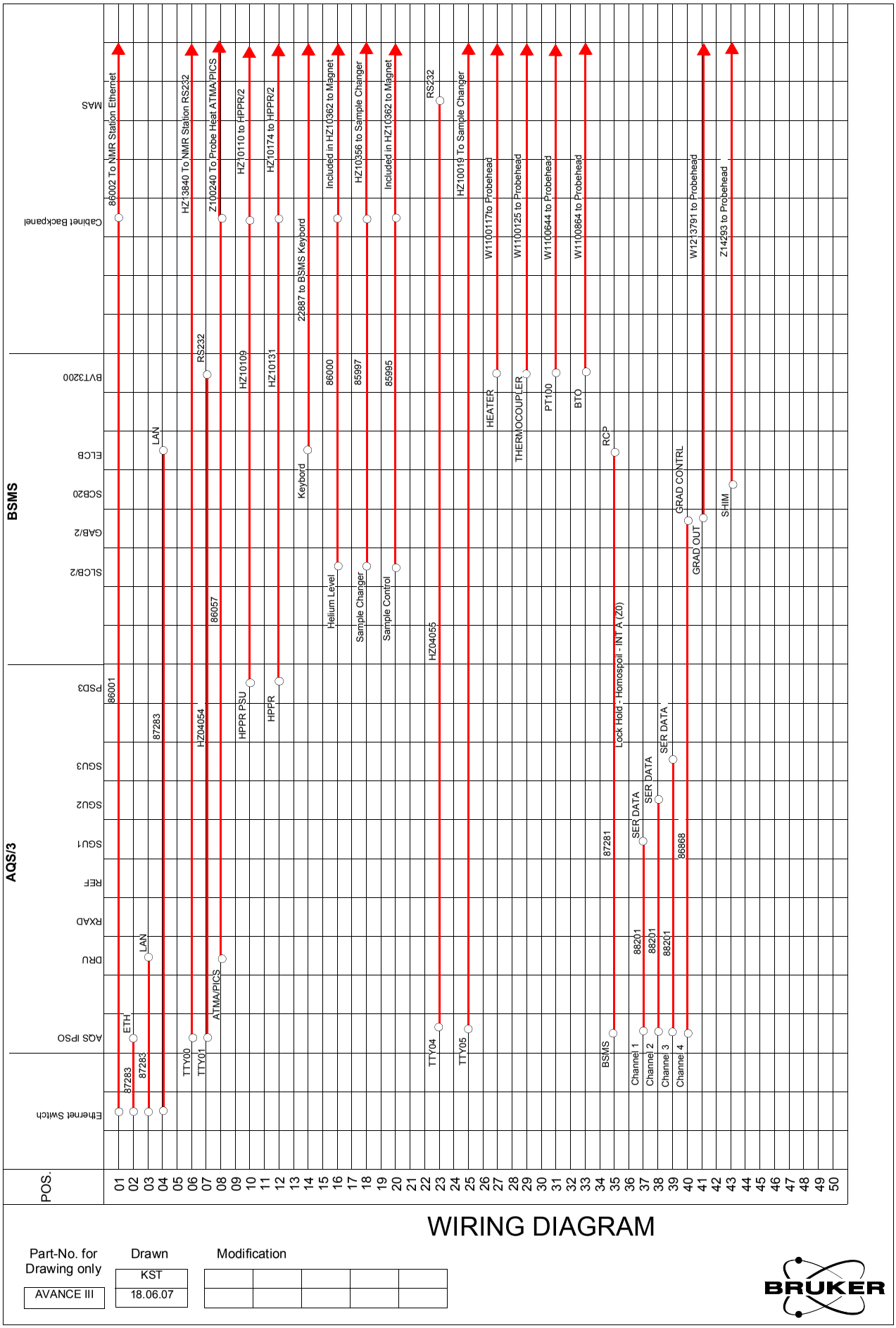


Figure 3.3. Avance III MicroBay 3 Channel with HPPR/2 Page 1/2



WIRING DIAGRAM

Part-No. for Drawing only	Drawn	Modification				
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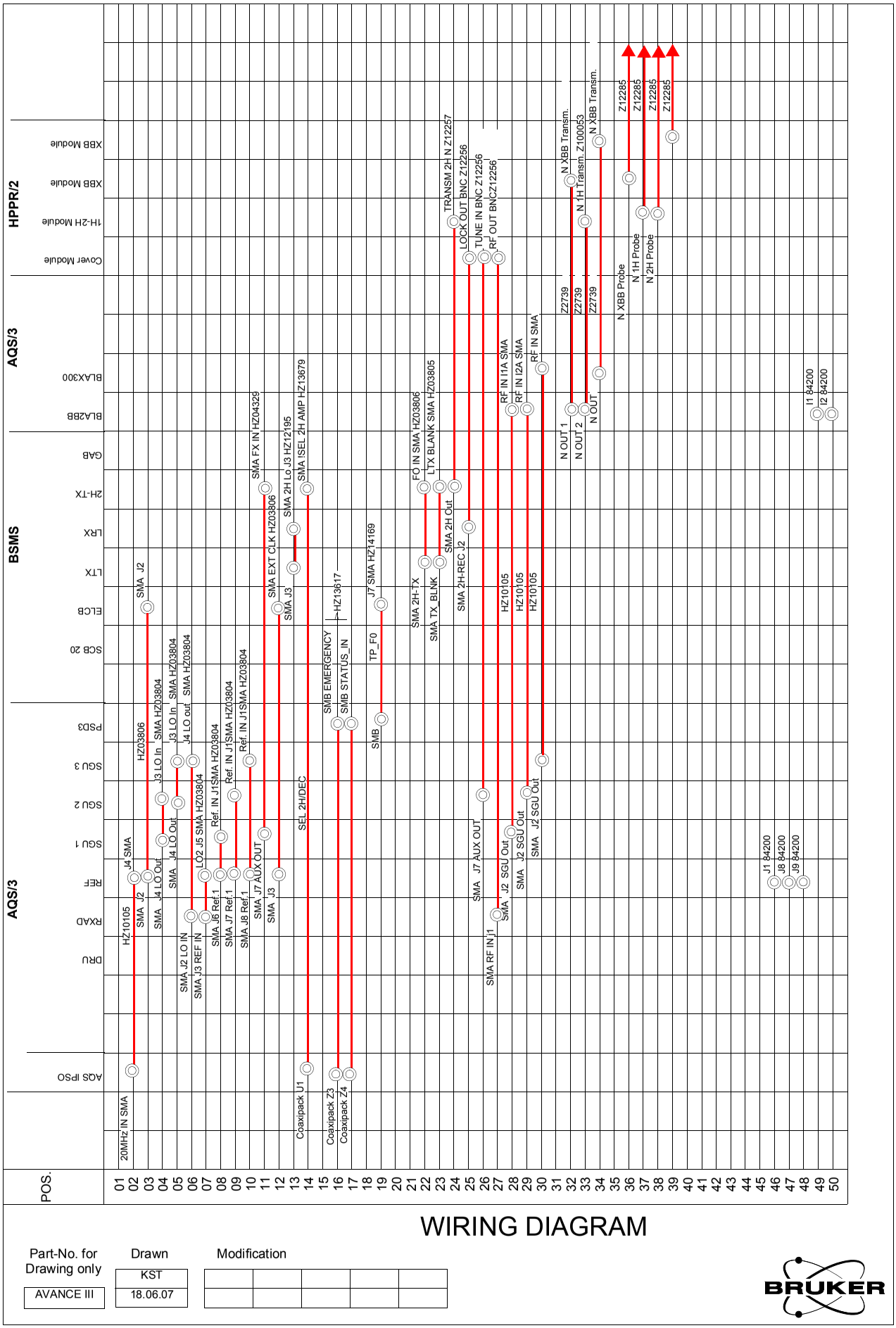
Figure 3.4. Avance III MicroBay 3 Channel with HPPR/2 Page 2/2



WIRING DIAGRAM

Part-No. for Drawing only	Drawn	Modification
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Figure 3.5. Avance III OneBay 3 Channel HR Wiring page 1/2

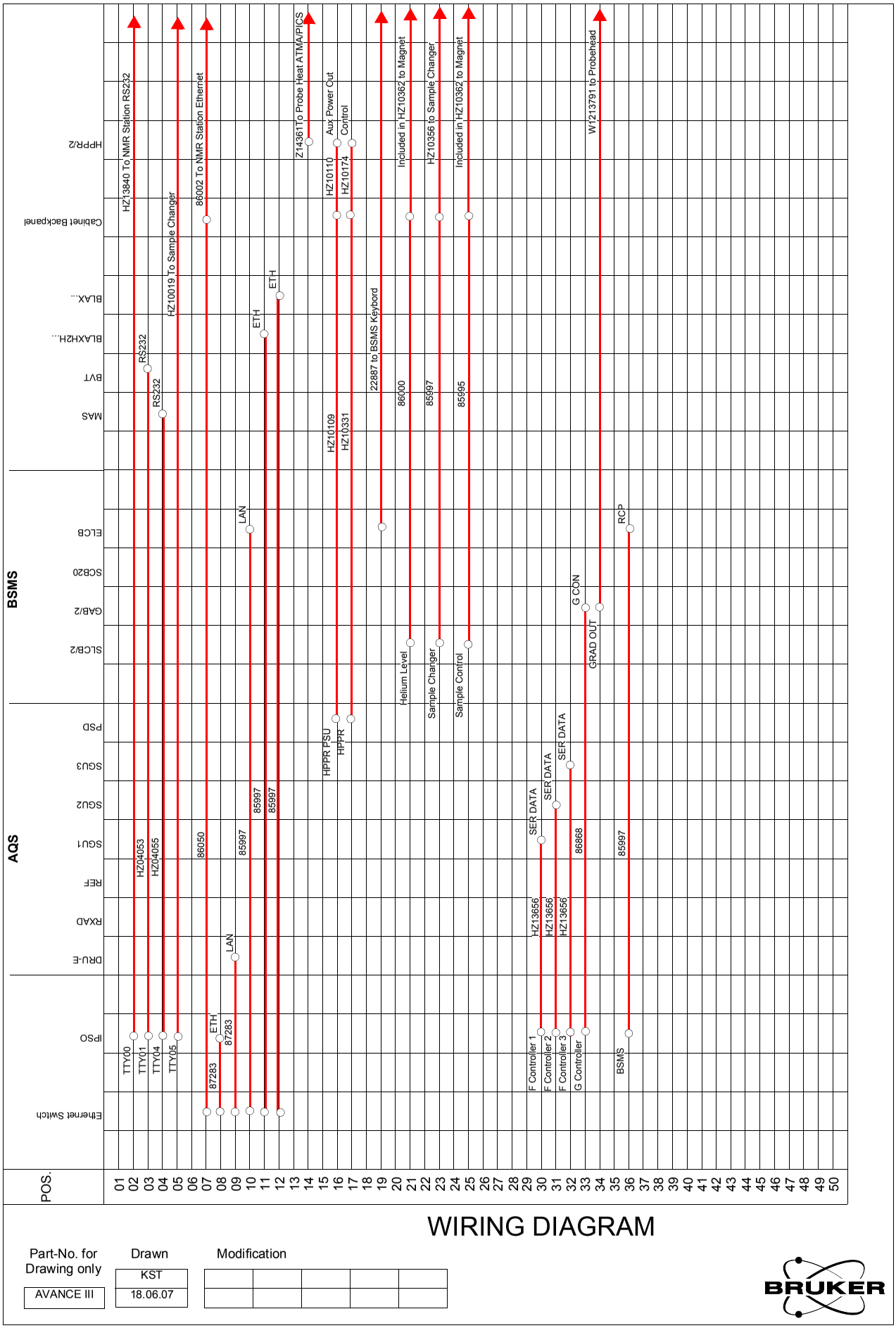


Figure 3.6. Avance III OneBay 3 Channel HR Wiring page 2/2

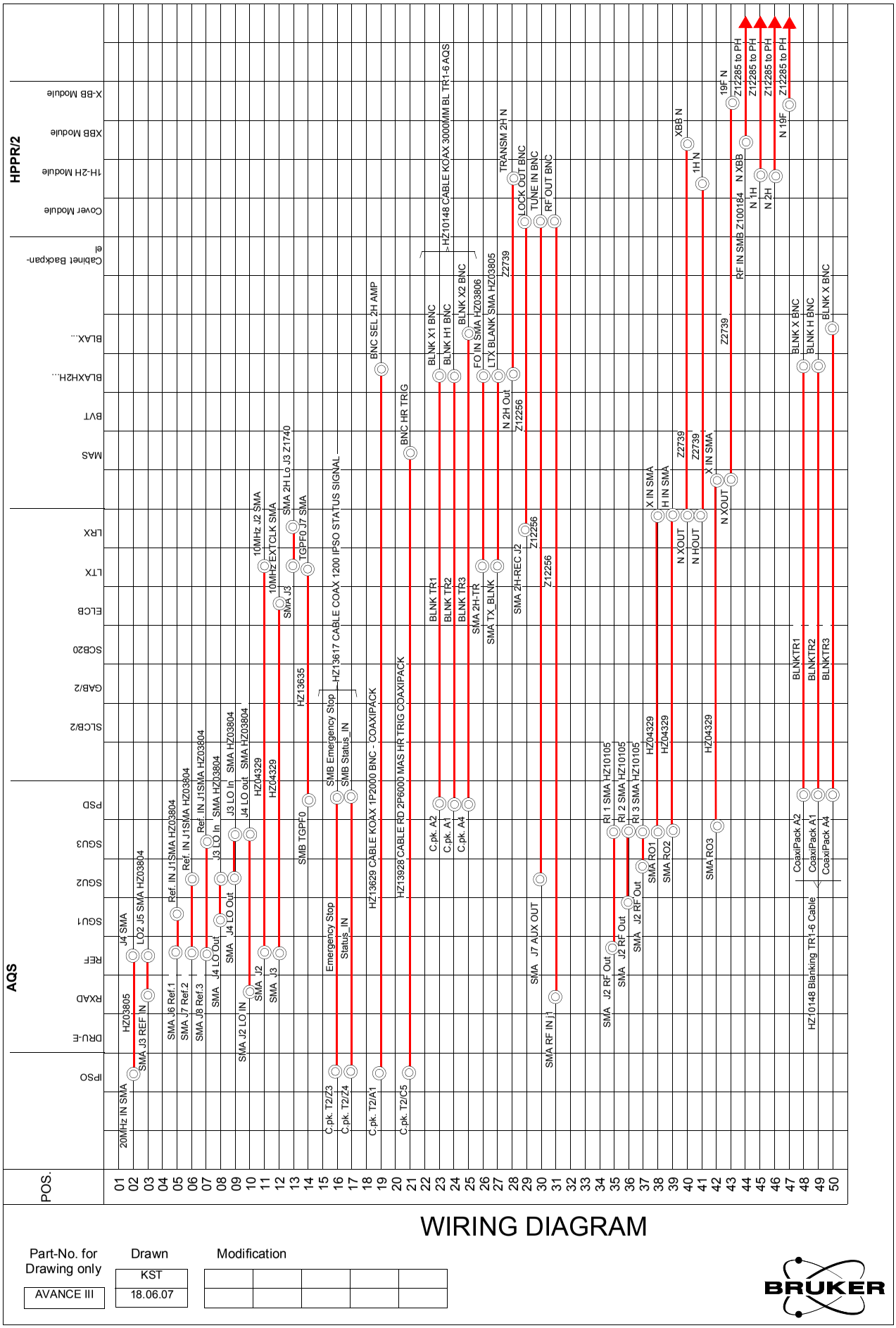


Figure 3.7. Avance III TwoBay 3 Channel HR Wiring page 1/2

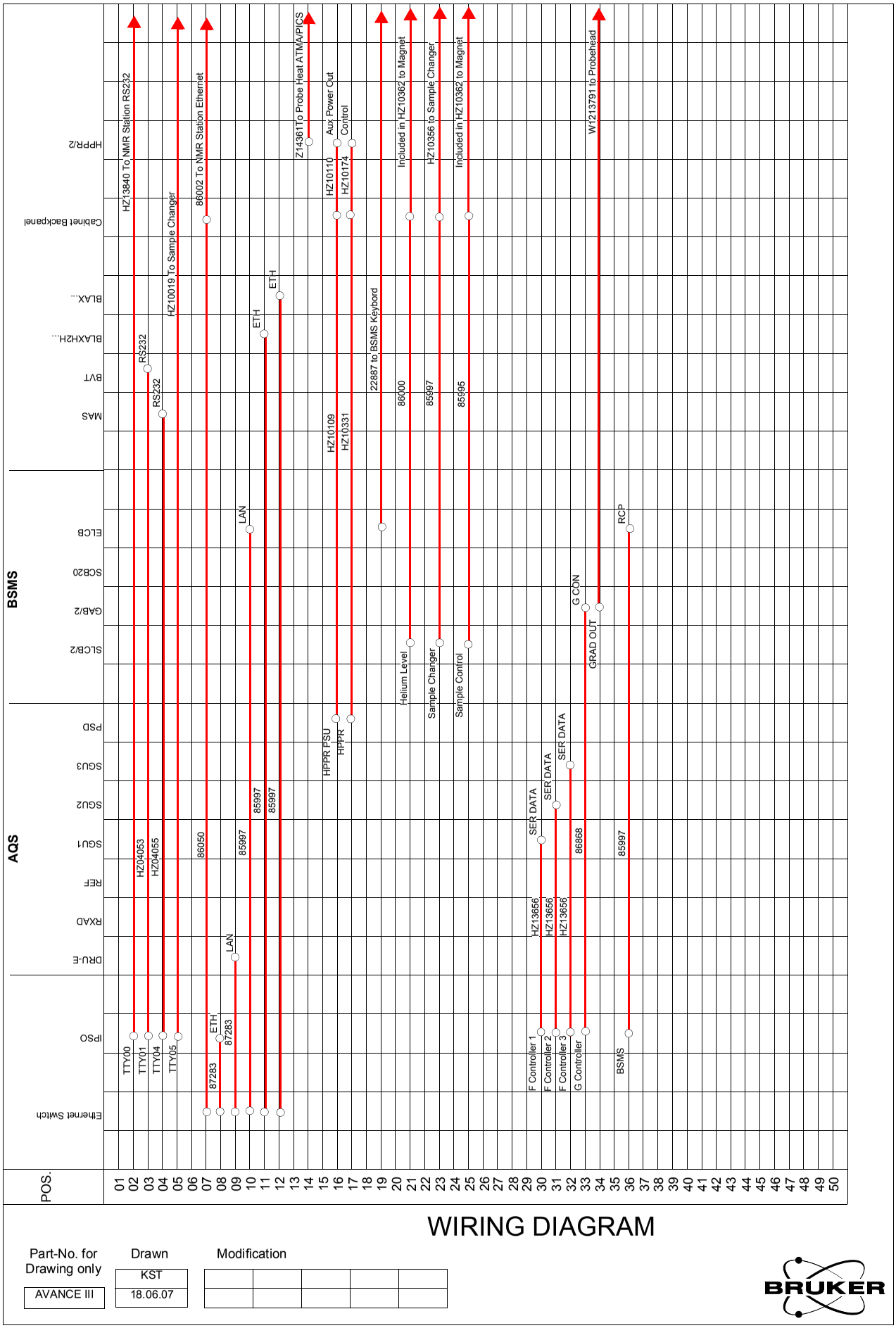
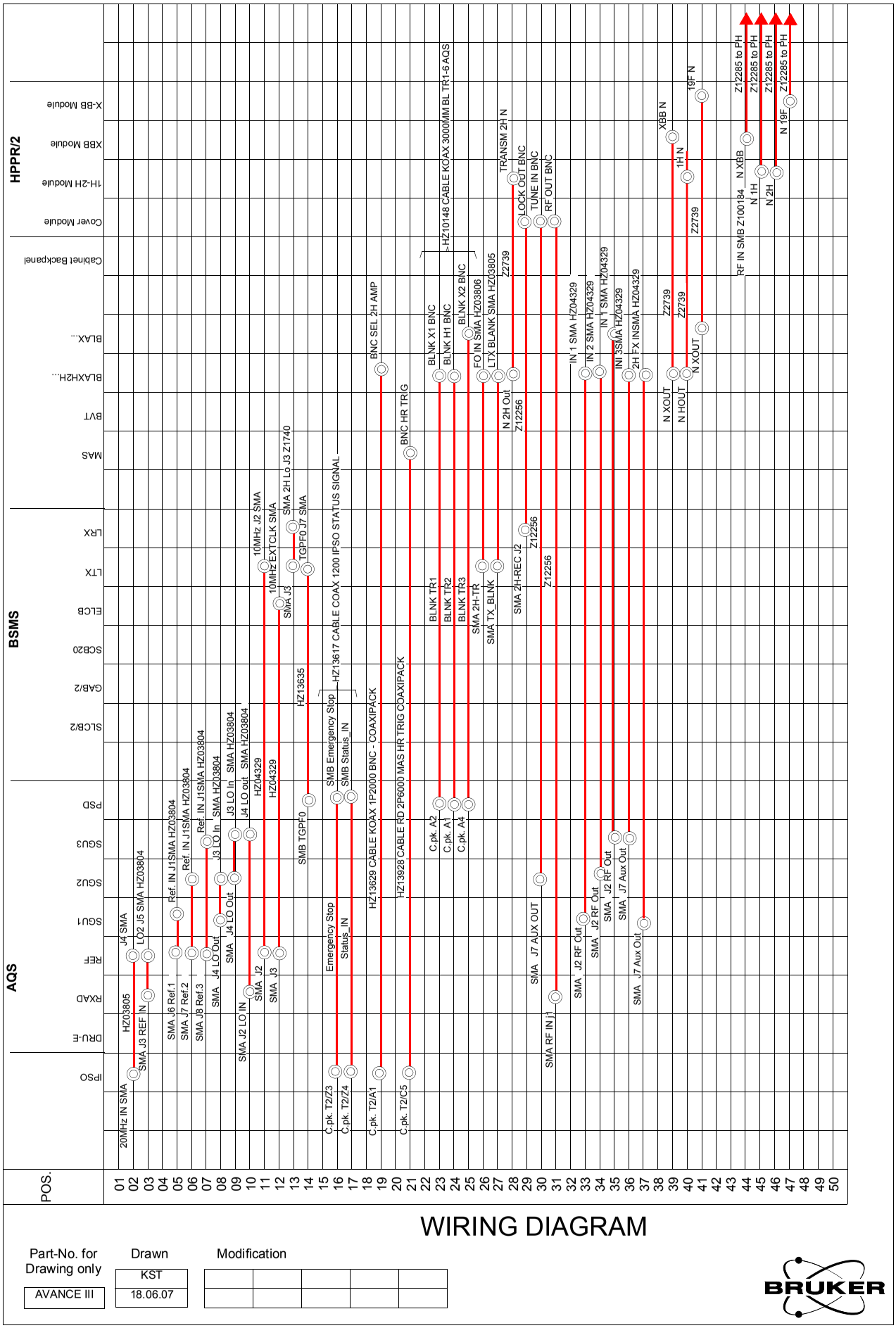


Figure 3.8. Avance III TwoBay 3 Channel HR Wiring page 2/2



WIRING DIAGRAM

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Figure 3.9. Avance III TwoBay 3 Channel Solids Wiring page 2/1

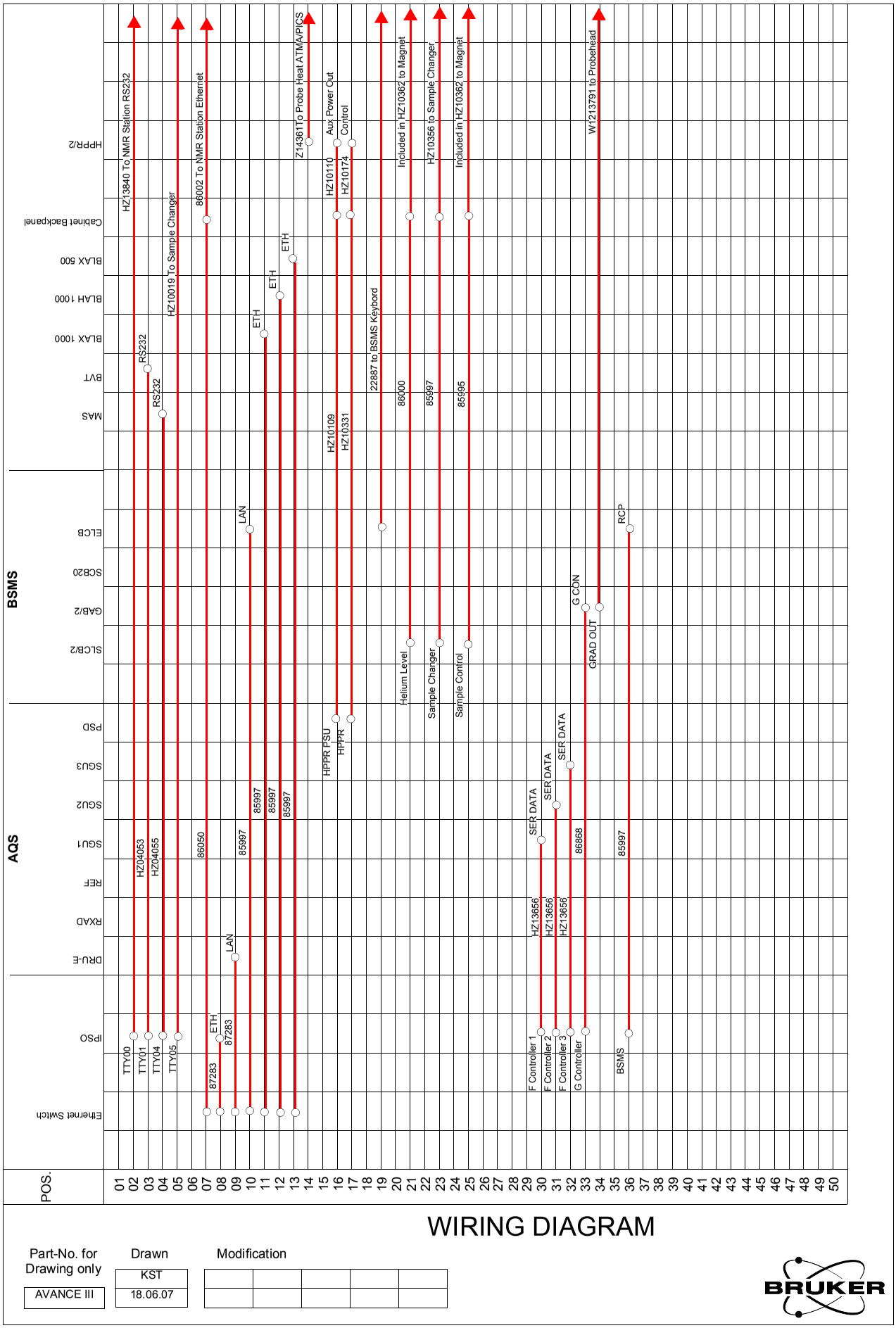
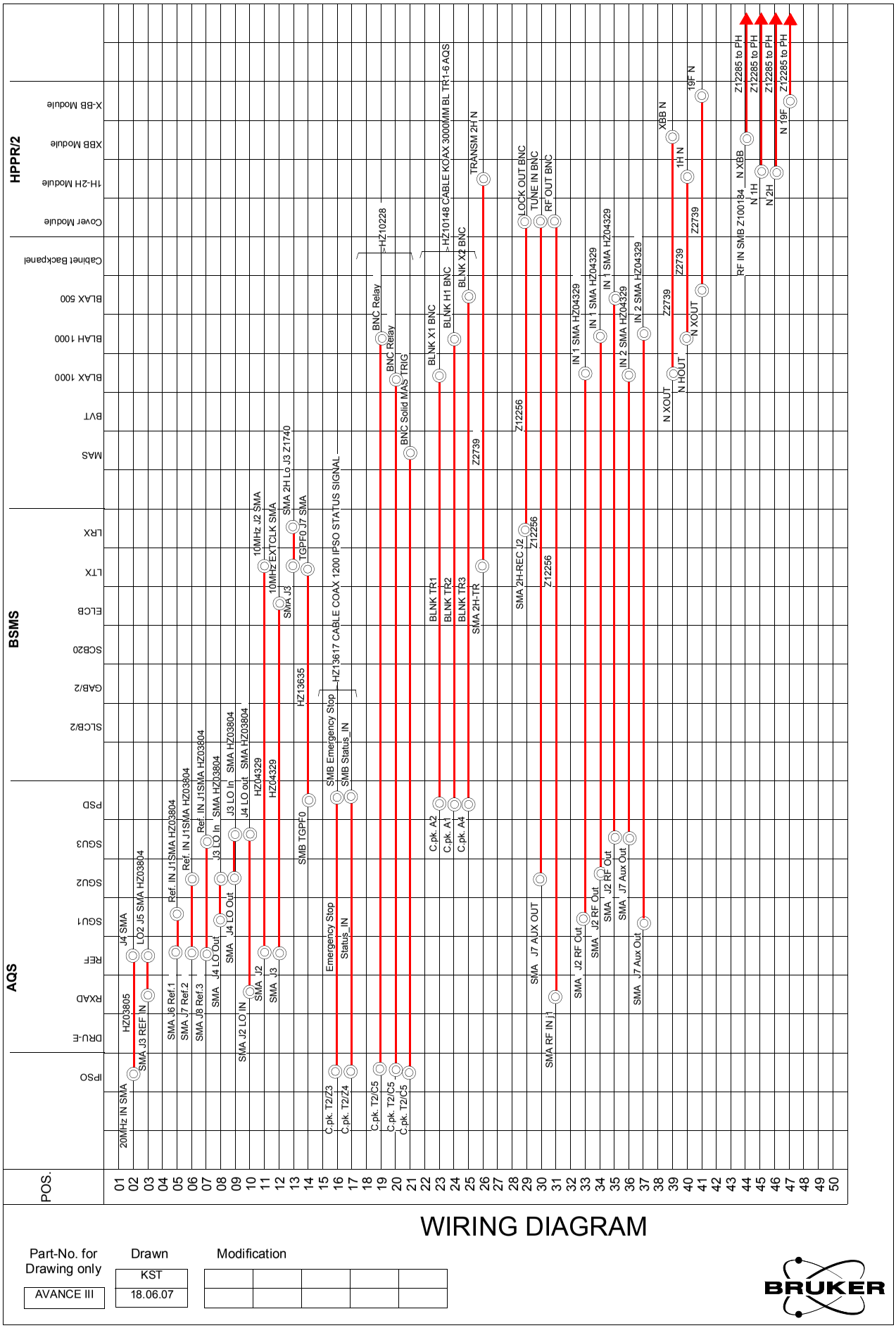
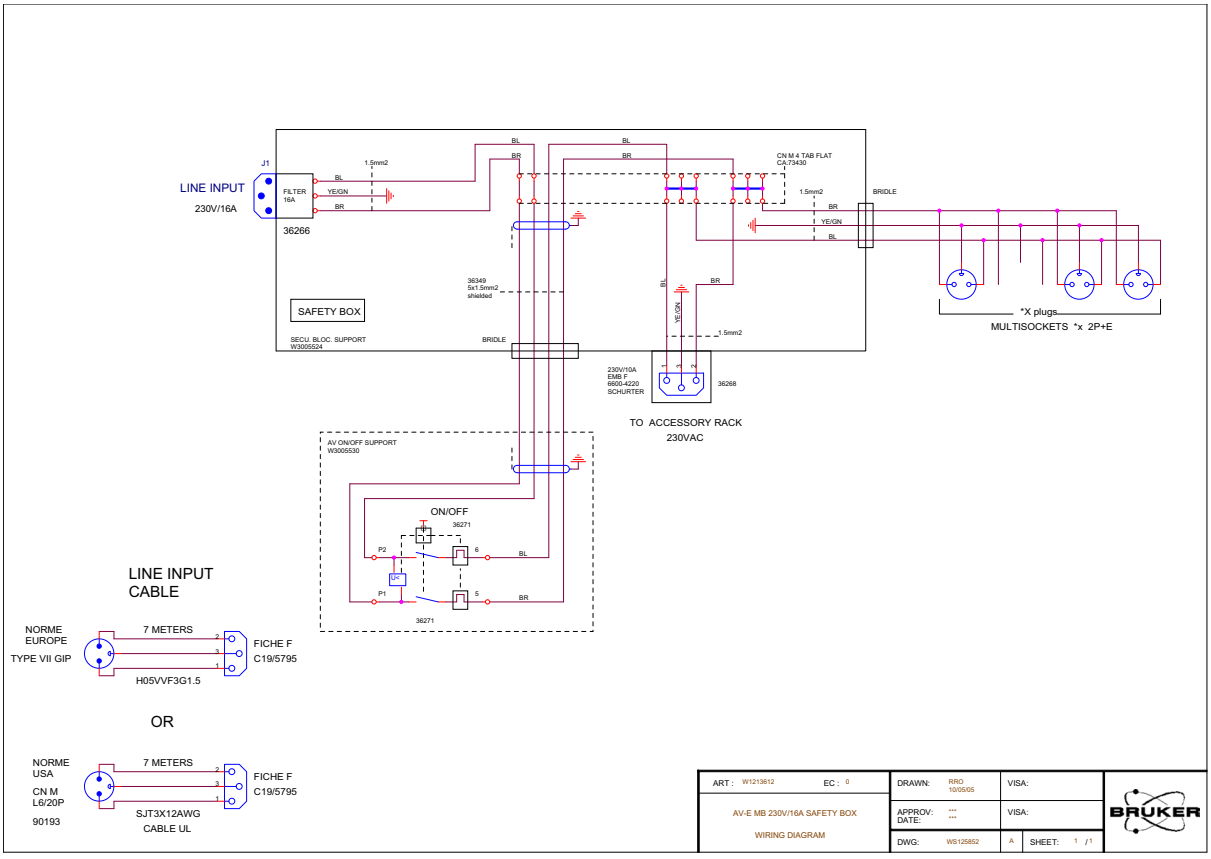


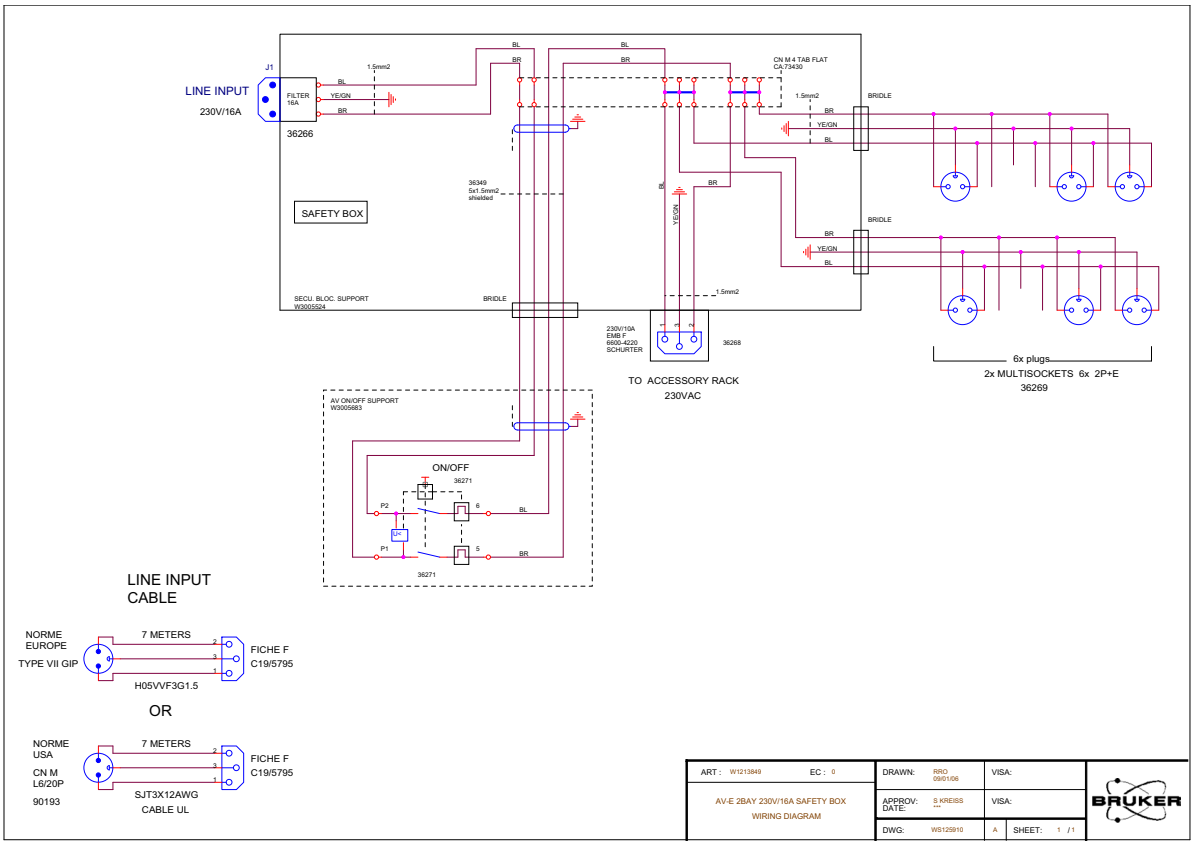
Figure 3.10. Avance III TwoBay 3 Channel Solids Wiring page 2/2



Main Power Wiring 4

AVANCE III MicroBay & OneBay 230V 16A 4.1

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FILTER 16A
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SAFETY BOX
SECU. BLOC. SUPPORT W3005524
BRIDLE
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CN M 4 TAB FLAT CA:73430
1.5mm2
BRIDLE
BRIDLE
230V/10A EMB F 6600-4220 SCHURTER
36268
TO ACCESSORY RACK 230VAC
6x plugs
2x MULTISOCKETS 6x 2P+E
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ON/OFF
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OR
NORME USA
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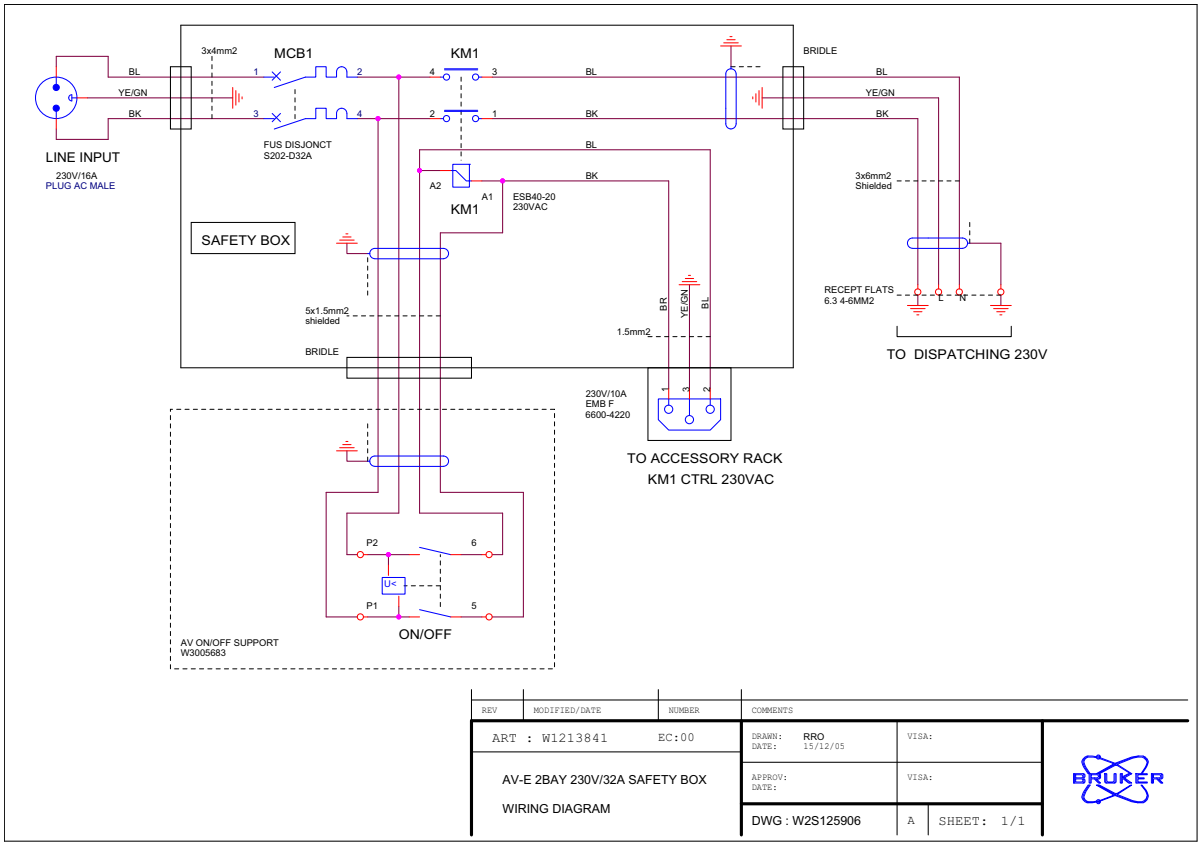
BRUKER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KM1
ESB40-20
230VAC
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shielded
BRIDLE
1.5mm2
BR
YE/GN
BL
230V/10A
EMB F
6600-4220
TO ACCESSORY RACK
KM1 CTRL 230VAC
3x6mm2
Shielded
RECEPT FLATS
6.3 4-6MM2
TO DISPATCHING 230V
P2
P1
U<
ON/OFF
AV ON/OFF SUPPORT
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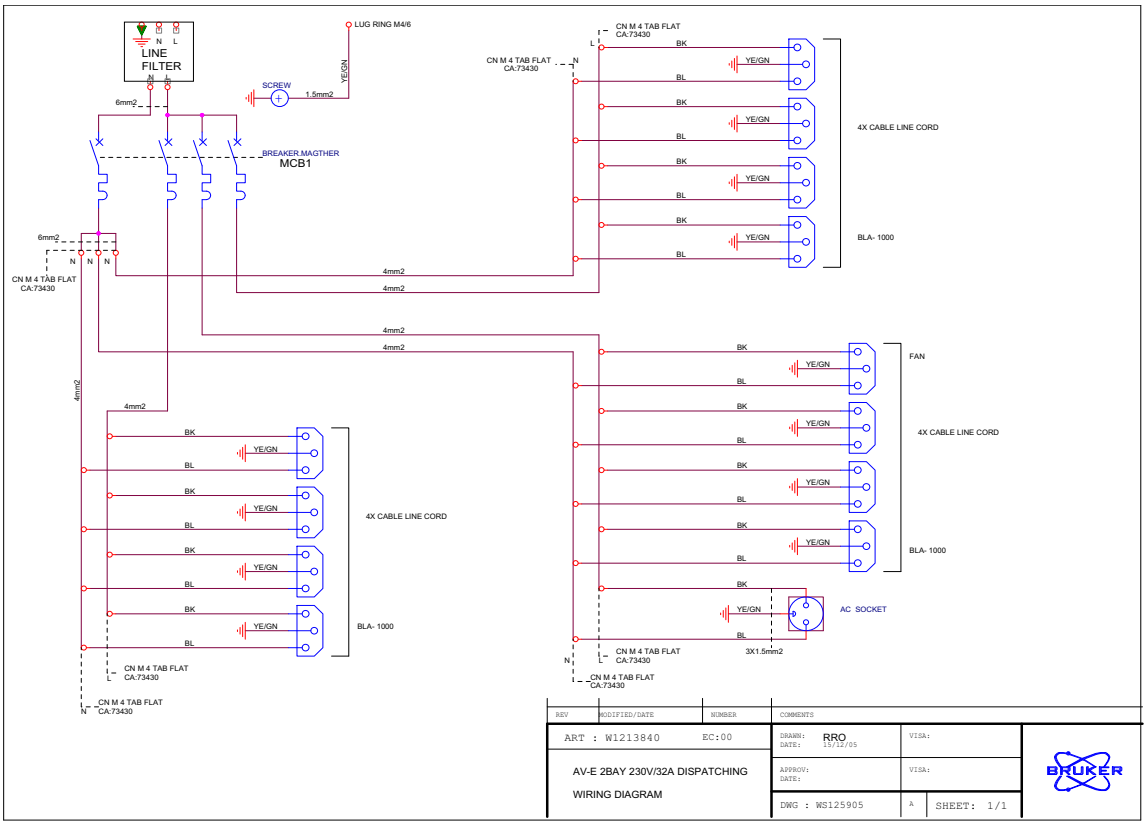
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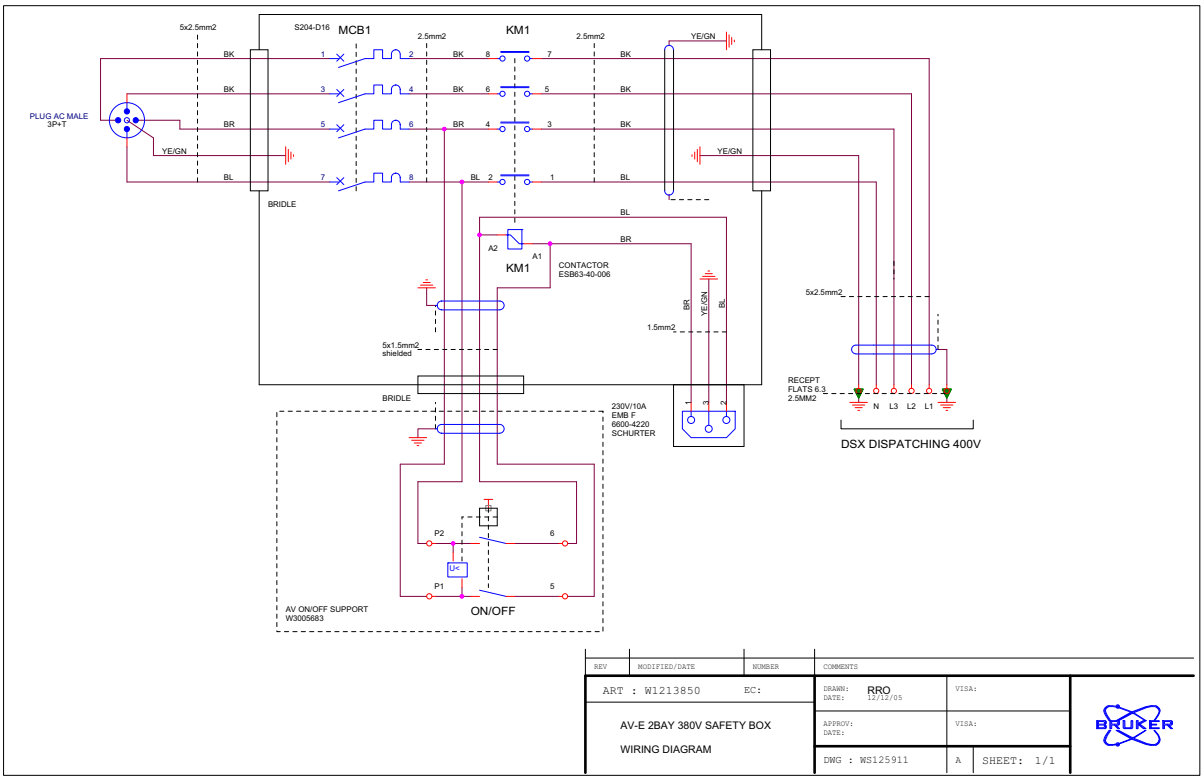
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BR
BL
YE/GN
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A2
A1
KM1
CONTACTOR
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EMB F
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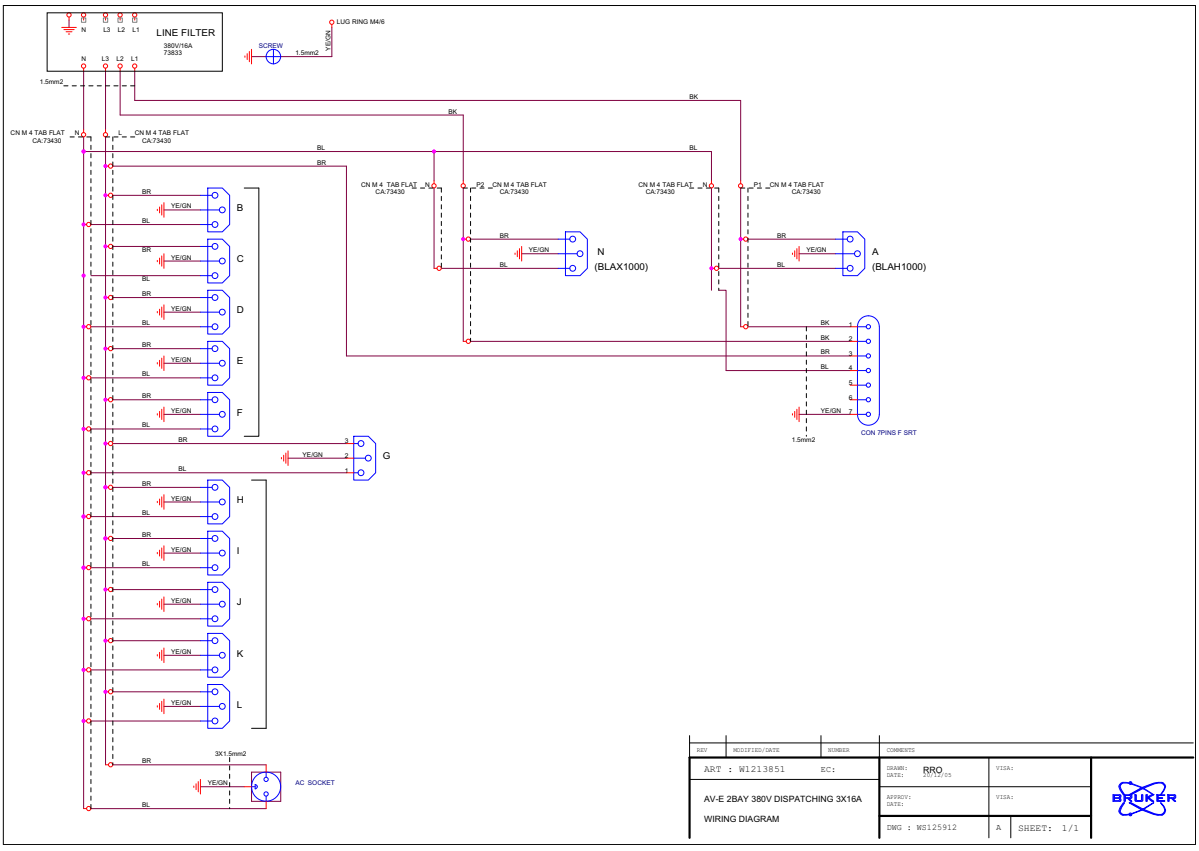
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B
C
D
E
F
G
H
I
J
K
L
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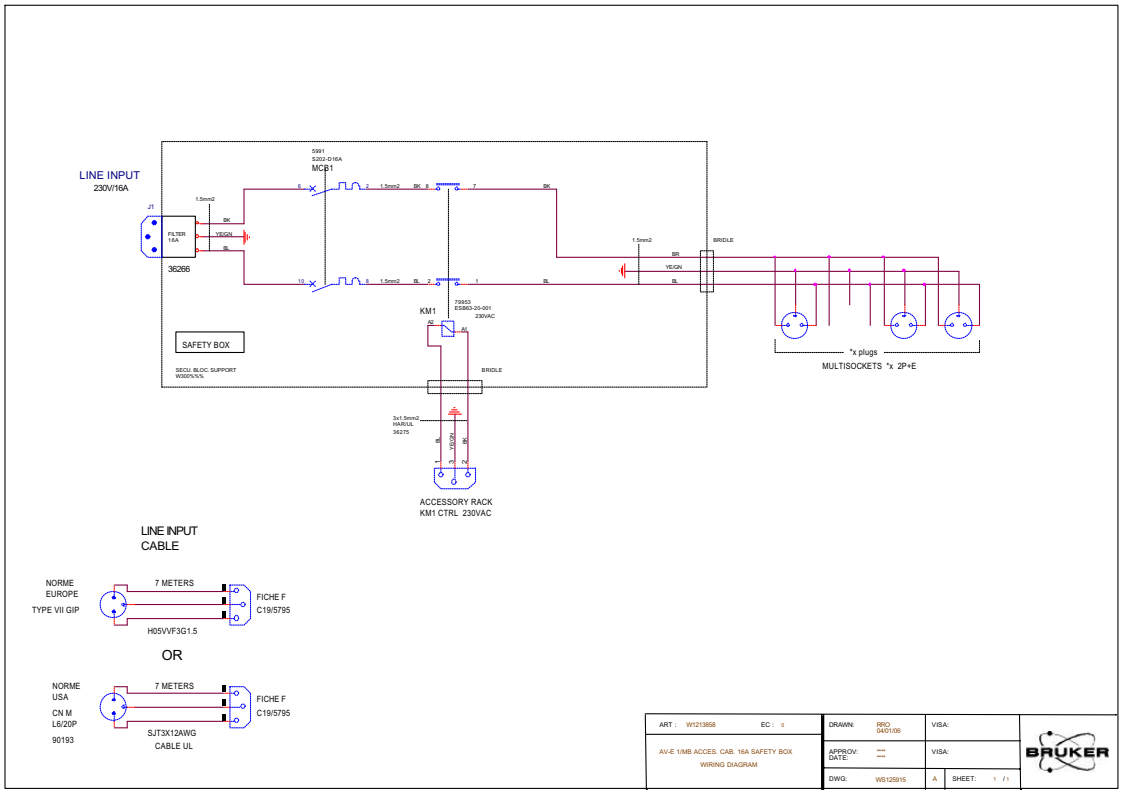
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SAFETY BOX
SECU. BLOC SUPPORT
W320/5/5/5
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79953
ES863-20-001
230VAC
A2
A1
BRIDLE
3x1.5mm2
HARUL
36275
ACCESSORY RACK
KM1 CTRL 230VAC
*x plugs
MULTISOCKETS *x 2P+E
LINE INPUT
CABLE
NORME
EUROPE
TYPE VII GIP
7 METERS
FICHE F
C19/5795
H05VVF3G1.5
OR
NORME
USA
CN M
L6/20P
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BRUKER

Main Power Wiring

Notes: