Bruker Avance 300 AV300

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SUPERCONDUCTING
ULTRASHIELD™
NMR MAGNET SYSTEM
Coil Number BZH 89/300/70A
Dewar Number D 232/54-3046

BRUKER

UltraShield™ NMR Magnet System **UltraShield™ 300 MHz/54 mm long hold**

3 Superconducting NMR Magnet 300/70A

3.1 Characteristic Data 89- 300/70A

Proton Frequency	300	MHz
Central Field	7.05	Tesla
Coil Inductance	14.4	Henry
Magnetic Energy	52	kJoule
Magnetic center from top flange *)	459	mm
Main Coil Heater Current	120	mA
Shim Coil Heater Current	150	mA

		Magnet-Test	System-Test	Customer Site	
Magnet Current	A	83,7		83.8	8407
X-Shim Current	A	+1,13		+2.0	+1.5
Y-Shim Current	A	+7,66		[illegible]	7.66
Z-Shim Current	A	-7,27		[illegible]	-8.0
XZ-Shim Current	A	+0,96		+1.0	-.72
YZ-Shim Current	A	-0,14		[illegible]	-2.0
XY-Shim Current	A	-1,18		[illegible]	-1.79
X^2-Y^2-Shim Current	A	-1,81		-1.81	
Z^2-Shim Current	A	-5,93		[illegible]	-5.1
Z^3-Shim Current	A	-3,32		[illegible]	-3.38
Frequency change due to Z^2-Shim	kHz	+5,49			
Magnetic center from top flange	mm	464		464	
RT Shim System Angle **)	Deg	90°		90°	
Visa		PMA			

Important: During charging Z and Z^2 shim heaters must be permanently ON

Remarks: Magnetsystem is NMR tested!

*) Approximate values (mechanical drawings) after cool down.

**) Measured from the right-hand He stack to the cable input of the RT shim system.

3.3 Resistance Measurements

88-300/70A

Measurements at room temperature with the current lead mounted in the cryostat:					
from	A	Connector A	39,5	OHM	Main Heater
to	L	Connector B			
from	C	Connector A	4,0	OHM	Z Heater
to	L	Connector B			
from	E	Connector A	4,0	OHM	X Heater
to	L	Connector B			
from	F	Connector A	3,9	OHM	Y Heater
to	L	Connector B			
from	H	Connector A	3,9	OHM	XZ Heater
to	L	Connector B			
from	J	Connector A	3,8	OHM	YZ Heater
to	L	Connector B			
from	K	Connector A	3,8	OHM	XY Heater
to	L	Connector B			
from	L	Connector A	3,6	OHM	X^2-Y^2 Heater
to	L	Connector B			
from	D	Connector A	3,8	OHM	Z^2 Heater
to	L	Connector B			
from	K	Connector B	3,4	OHM	Z^3 Heater
to	L	Connector B			
from	A,B	Connector B	4,3	OHM	Shim Coils +/-
to	D,E	Connector B			
from	+	High Curr. Conn.	1,0	OHM	High Current to Sense +
to	H	Connector B			
from	+	High Curr. Conn.	7,4	OHM	Main Coil
to	-	High Curr. Conn.			
from	-	High Curr. Conn.	0,9	OHM	High Current to Sense -
to	J	Connector B			
from	H	Connector B	7,9	OHM	Sense + Sense -
to	J	Connector B			
from	A,B	Connector B	>30M	OHM	Shim Coil to Heater common
to	L	Connector B			
from	D,E	Connector B	>30M	OHM	Shim Coil to Maincoil
to	H	Connector B			
from	H	Connector B	>30M	OHM	Sense to Heater common
to	L	Connector B			
from		the Connectors	>30M	OHM	Insulation Magnet to Dewar
to		the Ground			
At room temperature with connection lead for the ACD* mounted in the cryostat:					
from	K	Connector ACD*	111	OHM	Upper Temperature Sensor PT100
to	J	Connector ACD*			
from	A	Connector ACD*	110	OHM	Lower Temperature Sensor PT100
to	B	Connector ACD*			