

MODE CLEANER Tower: **location and coding of electrically connected Devices**

CODING CONVENTION: The code is divided in 3 fields. The field separator is a dot. The 3th field is used only when more than one device of the same type is hosted on the same suspension stage.

DeviceType . SuspensionStage . DevicePosition (or Function)

<p>M Motor MV Vertical Motor MH Horizontal Motor MA Angular Motor TM TiltMeter C Coil CV Vertical Coil CH Horizontal Coil T Temperature probe AV Vert. Accelerometer AH Hor. Accelerometer LV Vertical LVDT LH Horizontal LVDT</p>	<p>F0 Filter #0 or top-stage F1 Filter #1 F2 Filter #2 F3 Filter #3 F4 Filter #4 F7 Filter #7 MA Marionette RM Reference Mass BR Bottom Ring</p>	<p>1, 2, 3, ... L Left R Right U Up D Down F Front B Back UL Up Left UR Up Right DL Down Left DR Down Right LL Lateral Left LR Lateral Righth TX ϑ_x degree of freedom TZ ϑ_z degree of freedom Z Z degree of freedom AH1 Hor. Accelerom. #1 AH2 Hor. Accelerom. #2 AH3 Hor. Accelerom. #3 AV1 Vert. Accelerom. #1 AV2 Vert. Accelerom. #2</p>
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Change History

<i>Version</i>	<i>Date</i>	<i>Changes/Reasons</i>	<i>Authors</i>
v1	1999	initial suspension cabling	Ceccanti, Dattilo
v2r1	2may03	added cabling for the marionette gear box	Dattilo, Nenci
v2r2	29may03	corrections to v2r1	Dattilo
v2r3	01jul08	New cabling of the payload, due to the new payload. The new motors of the marionette are now with standard logic (previously were with inverted logic)	Berni, Dattilo, Gherardini
v3r0	aug 2012	Cabling adaptation for Adv: replacement of the pre-existing DB25 with the circular 32-pins peekplugs, added cables for filter F#4. Remains to add cables for IP feet piezos&LVDTs	Berni, Dattilo, Gherardini
v3r1	august – sept 2013	Added cables for IP feet piezos&LVDTs	Berni, Dattilo, Gherardini
v3r2	Feb 2014	Finalized connector location on flanges, added RefMass schemes by Nikhef	Dattilo
V3r3	28jul2016	In occasion of the installation of the new air-side cables, found and fixed a previous error in the labels (ie swap between C.RM.L with C.RM.D and between C.RM.LL and C.RM.LR)	Dattilo, Nenci

19 MOTORS

code	Location (see also drawings in the following)	vacuum cable ID	vacuum cable type	notes
MV.F0.U	top-screw on F#0	J1	STP, AWG26	
MV.F0	fishing-rod on F#0	A1	STP, AWG26	
MV.F4	fishing-rod on F#4	E1	STP, AWG26	new (AdV)
MV.F7	fishing-rod on F#7	F1	STP, AWG26	
MH.F0.1	trolley on inner structure	H1	STP, AWG20	
MH.F0.2	trolley on inner structure	I1	STP, AWG20	
MH.F0.3	trolley on inner structure	H2	STP, AWG20	
MH.F7.1	balancing mass on F#7	R1	PP, AWG24	
MH.F7.2	balancing mass on F#7	R2	PP, AWG24	
MH.MA.TZ	balanc. mass on marion. (for ϑ_z motion)	T1	PP, AWG24	
MH.MA.TX	balanc. mass on marion. (for ϑ_x motion)	T2	PP, AWG24	
MH.MA.Z	Marionetta bottom-gear box. (for Z motion)	T3	STP, AWG26	
MA.F7.U	F#7 top (for rotation)	Q2	PP, AWG24	
MA.F7.D	F#7 bottom (for rotation)	Q1	PP, AWG24	
M.F0.AH1	Hor. Accelerometer on top-stage	O2	STP, AWG26	
M.F0.AH2	Hor. Accelerometer on top-stage	M2	STP, AWG26	
M.F0.AH3	Hor. Accelerometer on top-stage	N2	STP, AWG26	
M.F0.AV1	Vert. Accelerometer on F#0	K1	STP, AWG26	
M.F0.AV2	Vert. Accelerometer on F#0	L1	STP, AWG26	

19 COILS

code	Location (see also drawings in the following)	vacuum cable ID	vacuum cable type	notes
CH.F0.1 CH.F0.2 CH.F0.3	Safety frame ring	G4 G6 G5		
CV.F0.1 CV.F0.2	crossbar on F#0 crossbar on F#0 (fish.rod side)	J2 J3		
CH.F7.1 CH.F7.2 CH.F7.3 CH.F7.4 CV.F7.1 CV.F7.2 CV.F7.3 CV.F7.4	F#7 legs	S1 S3 S5 S7 S2 S4 S6 S8		
C.RM.L C.RM.R C.RM.D C.RM.U C.RM.LL C.RM.LR	reference mass	X1e X1a X1b X1f X1d X1c		new

2 (couple of) THERMAL PROBES

code	location	vacuum cable ID	vacuum cable type	notes
T.F0.1 T.F0.2	antispring back on F#0	A3	STP, AWG24	
T.F7.1 T.F7.2	antispring back on F#7	F2	STP, AWG24	

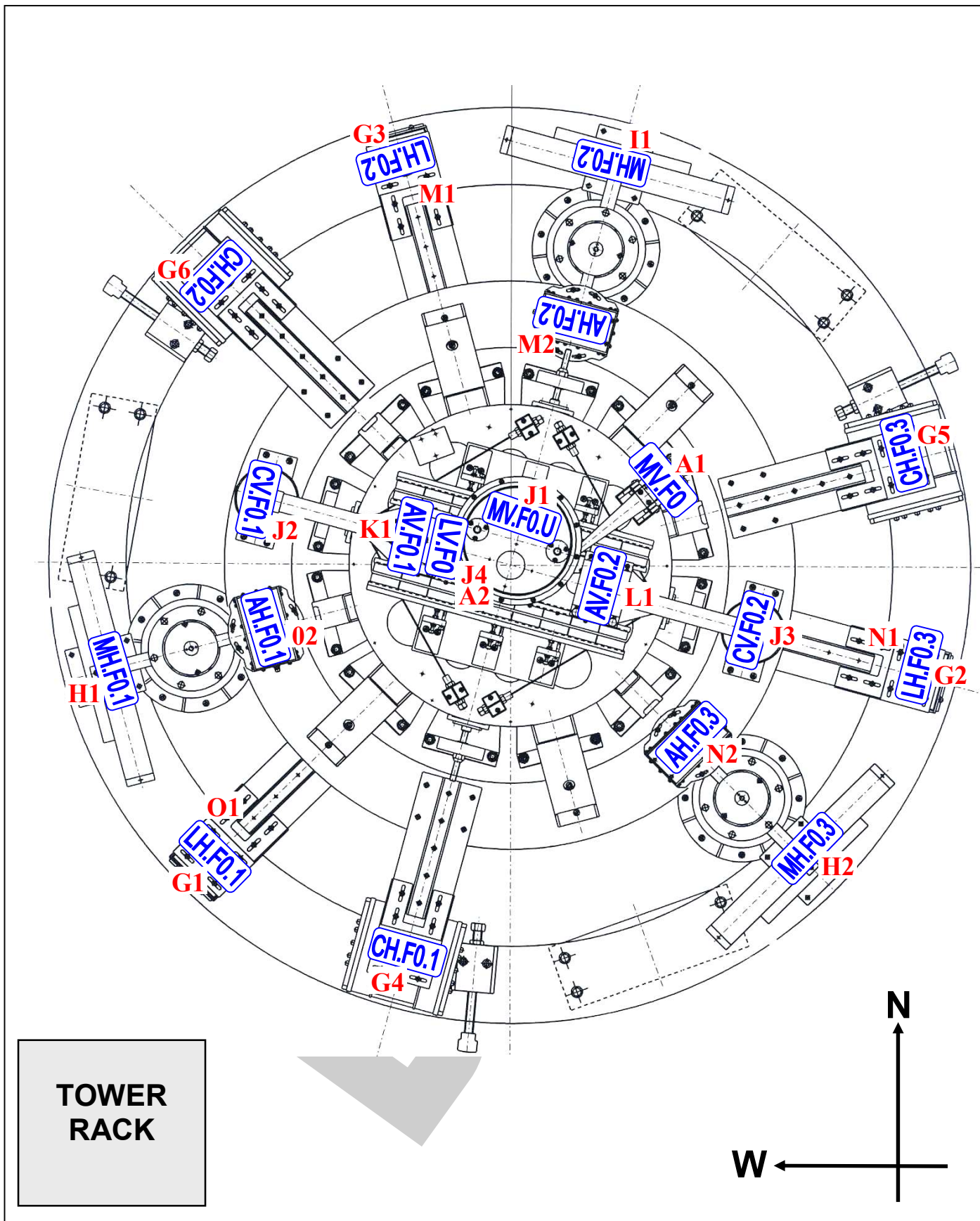
5 ACCELEROMETERS

code	Location (see also drawings in the following)	vacuum cable ID	vacuum cable type	notes
AH.F0.1	top-ring	O2	STP, AWG26	
AH.F0.2	top-ring	M2	STP, AWG26	
AH.F0.3	top-ring	N2	STP, AWG26	
AV.F0.1	crossbar F#0	K1	STP, AWG26	
AV.F0.2	crossbar F#0 (fish.rod side)	L1	STP, AWG26	

9 LVDTs

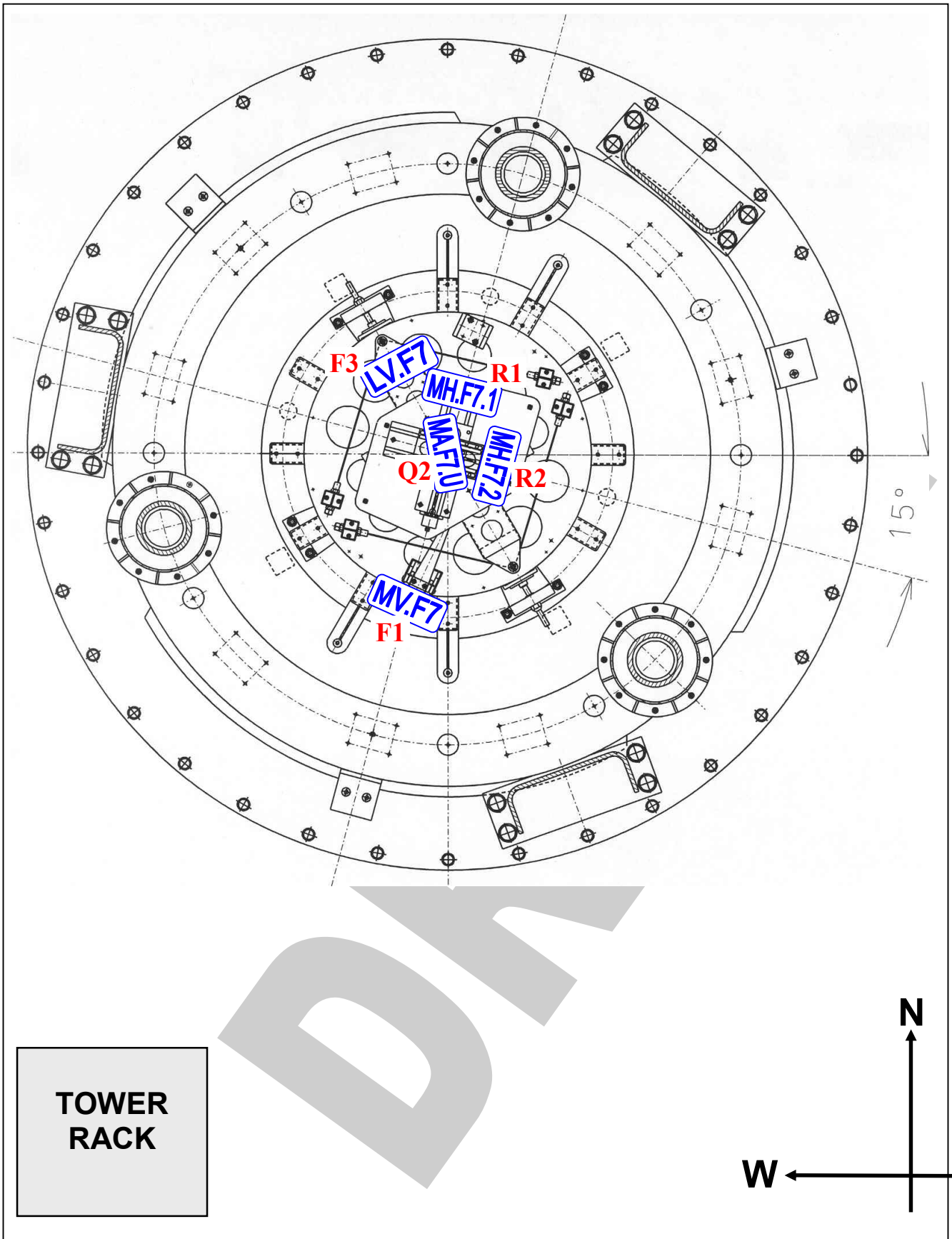
code	Location (see also drawings in the following)	vacuum cable ID	vacuum cable type	notes
LH.F0.1	Primary on top-ring	O1	STP, AWG26	
	Secondary on safety structure	G1	STP, AWG20	
LH.F0.2	Primary on top-ring	M1	STP, AWG24	
	Secondary on safety structure	G3	STP, AWG24	
LH.F0.3	Primary on top-ring	N1	STP, AWG24	
	Secondary on safety structure	G2	STP, AWG24	
LV.F0	primary on F#0 crossbar	J4	STP, AWG26	
	secondary on F#0 body	A2	STP, AWG26	
LV.F4	F#4	E2	STP, AWG26	new (AdV)
LV.F7	F#7	F3	STP, AWG26	
LV.BR.1	Primary on ground	P1	STP, AWG26	new (AdV)
	Secondary on IP foot	P2		
LV.BR.2	Primary on ground	P3	STP, AWG26	new (AdV)
	Secondary on IP foot	P4		
LV.BR.3	Primary on ground	P5	STP, AWG26	new (AdV)
	Secondary on IP foot	P6		

TOP-STAGE devices



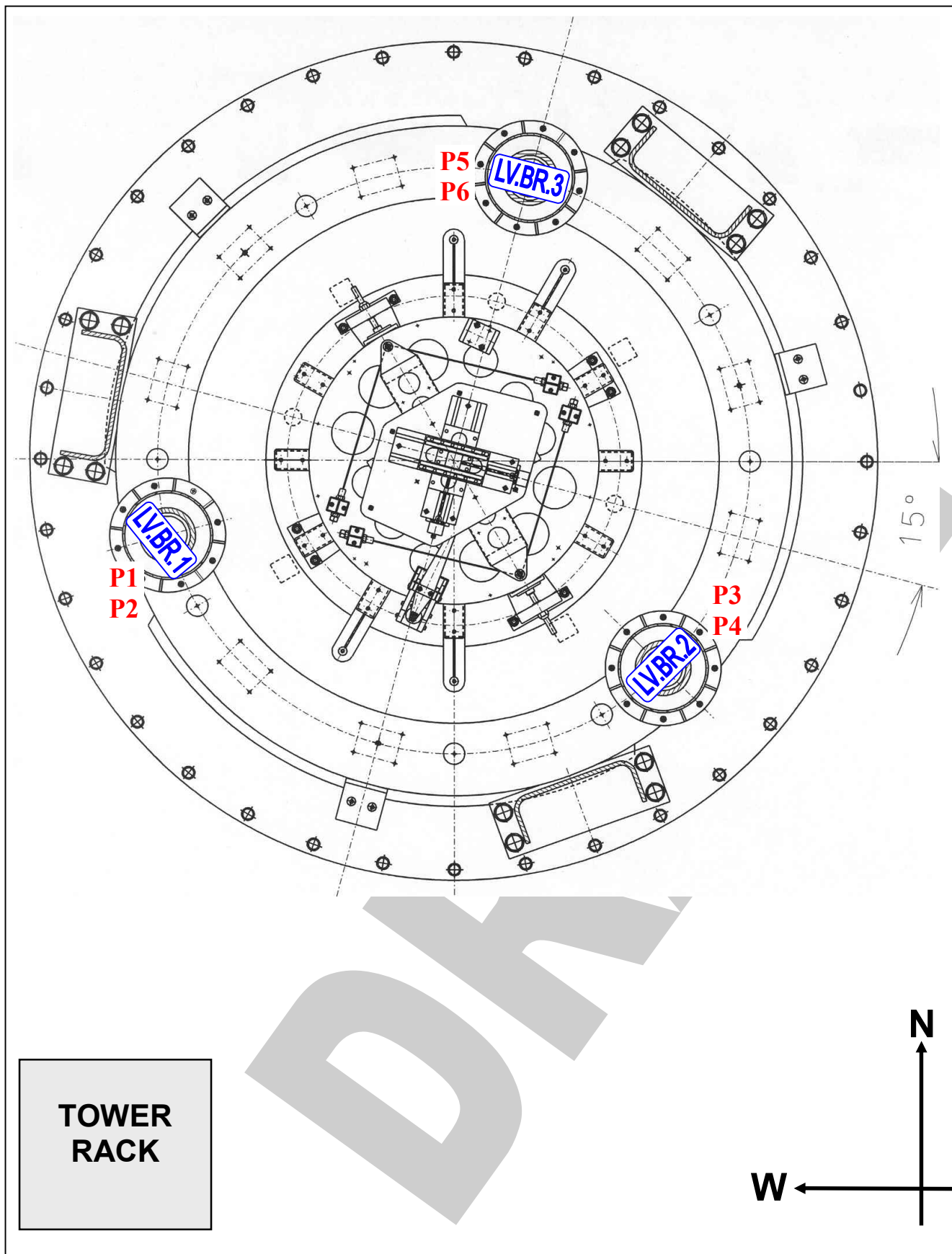
FILTER #7 devices

top view



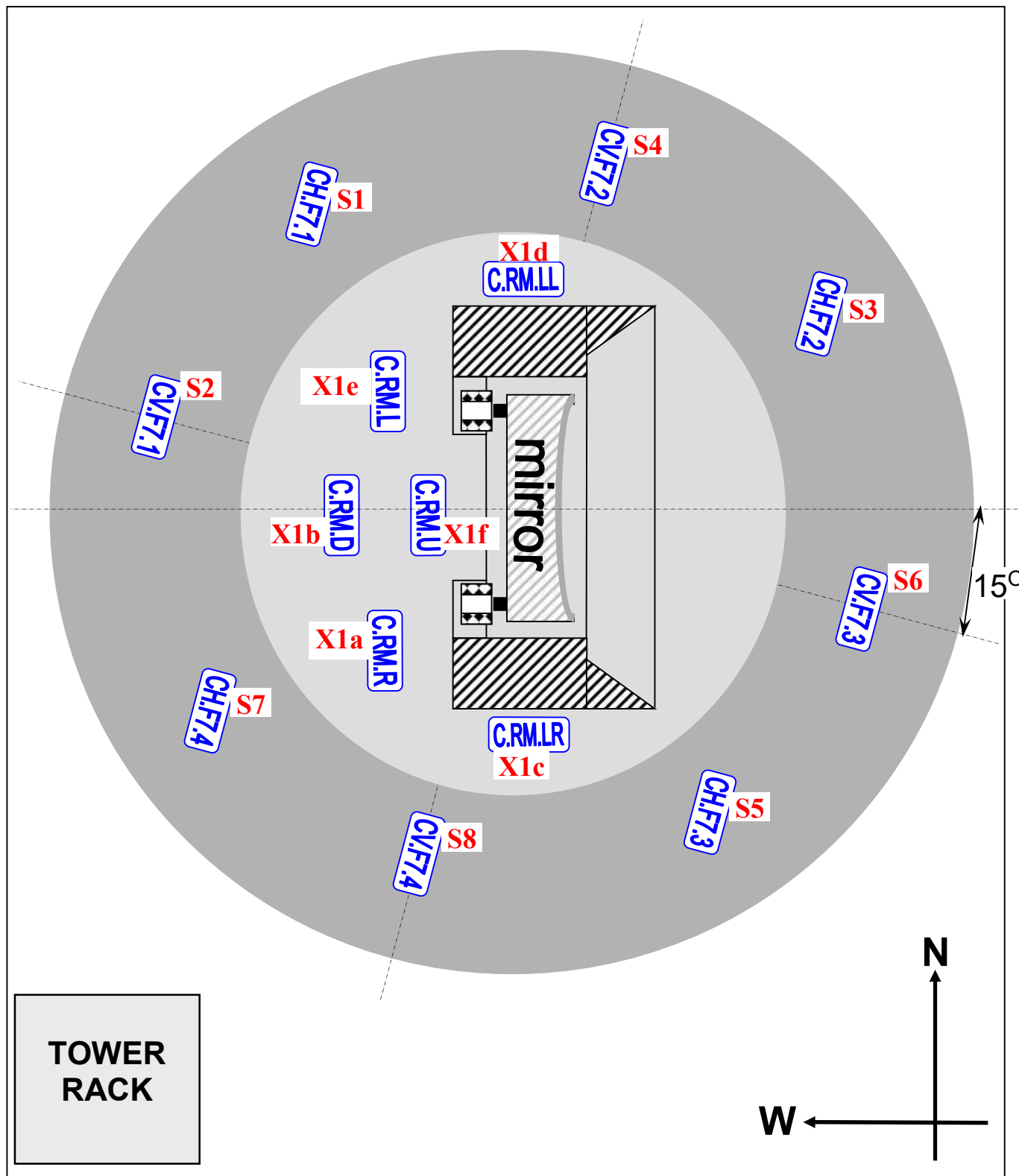
Bottom Ring devices

top view



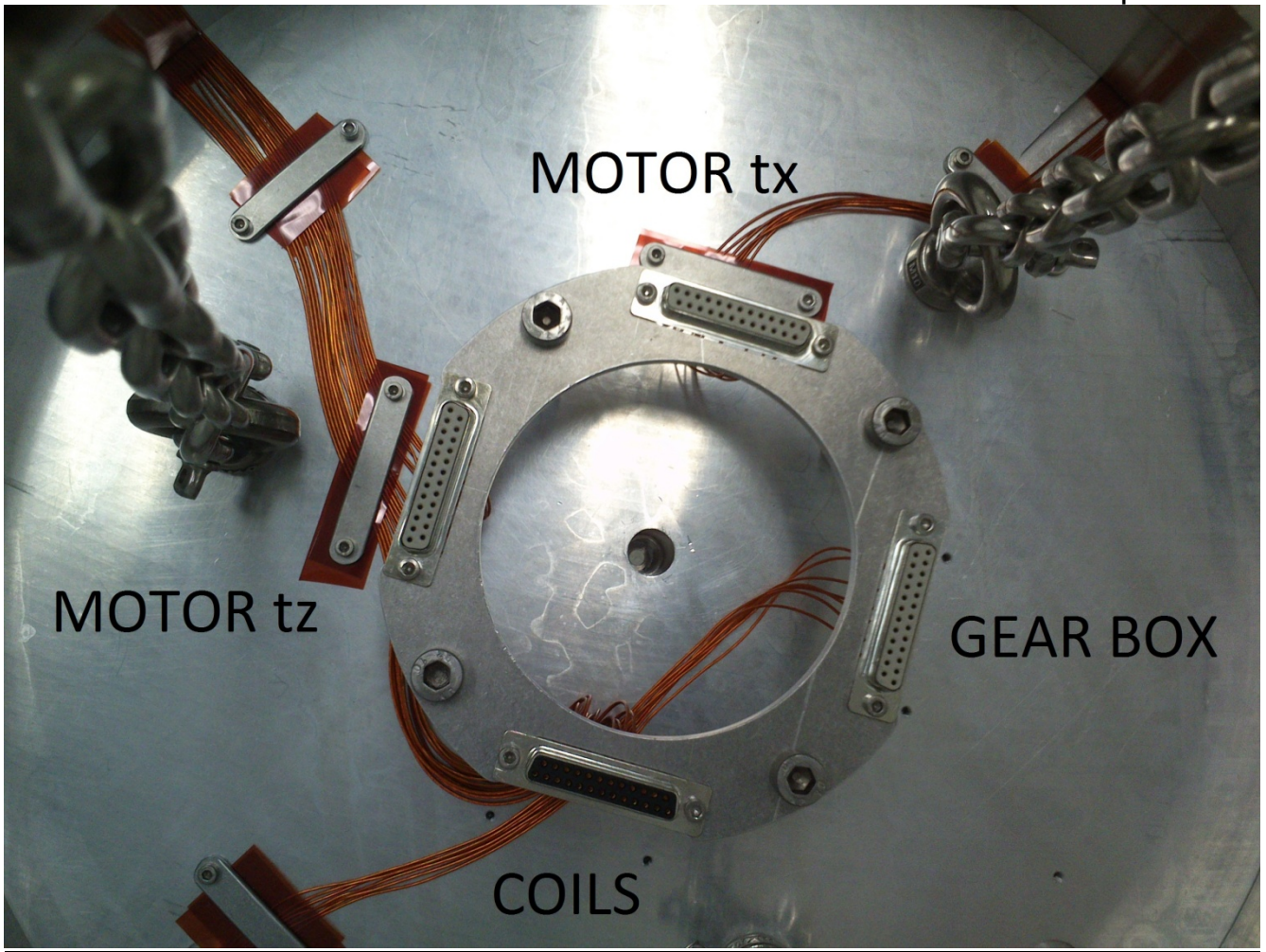
location of F#7 and RefMass coils

top view

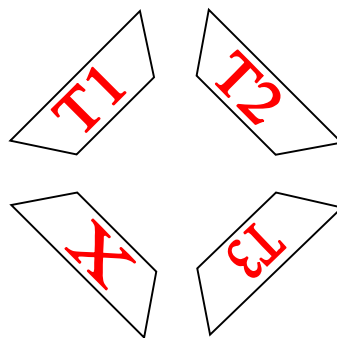


location of Marionette motors and RefMass coils

top view

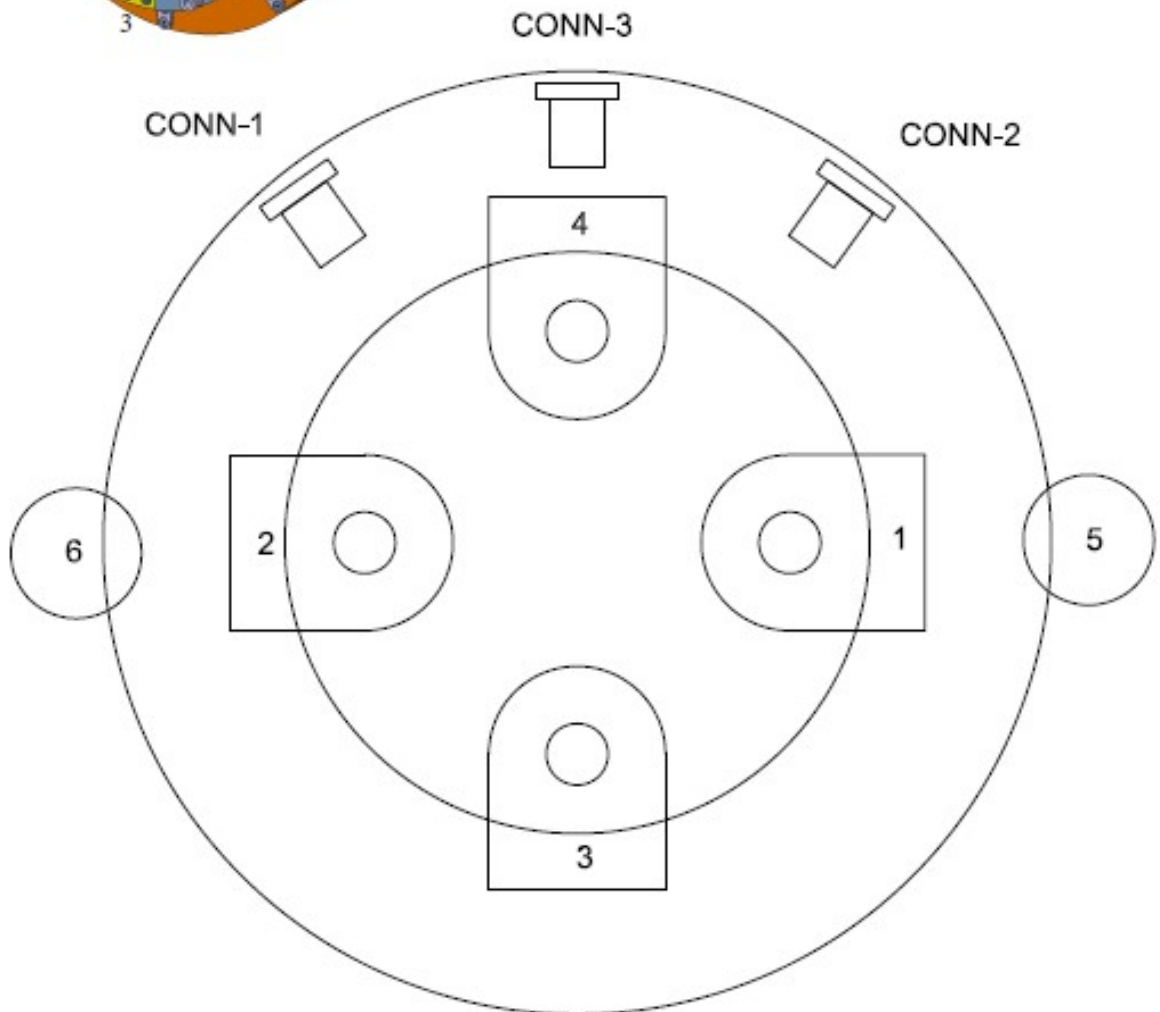
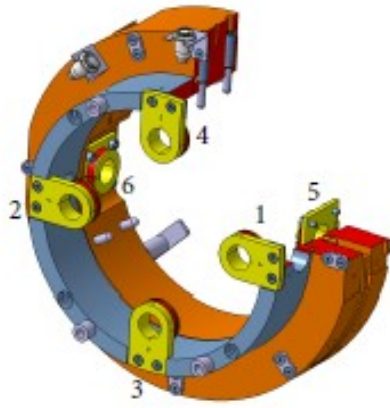


DB25 pinout rearranged and checked on Jan 2014 by F.Berni and F.Gherardini (elog # 31181)



Layout of DB25 connectors
on marionette top

RefMass coils

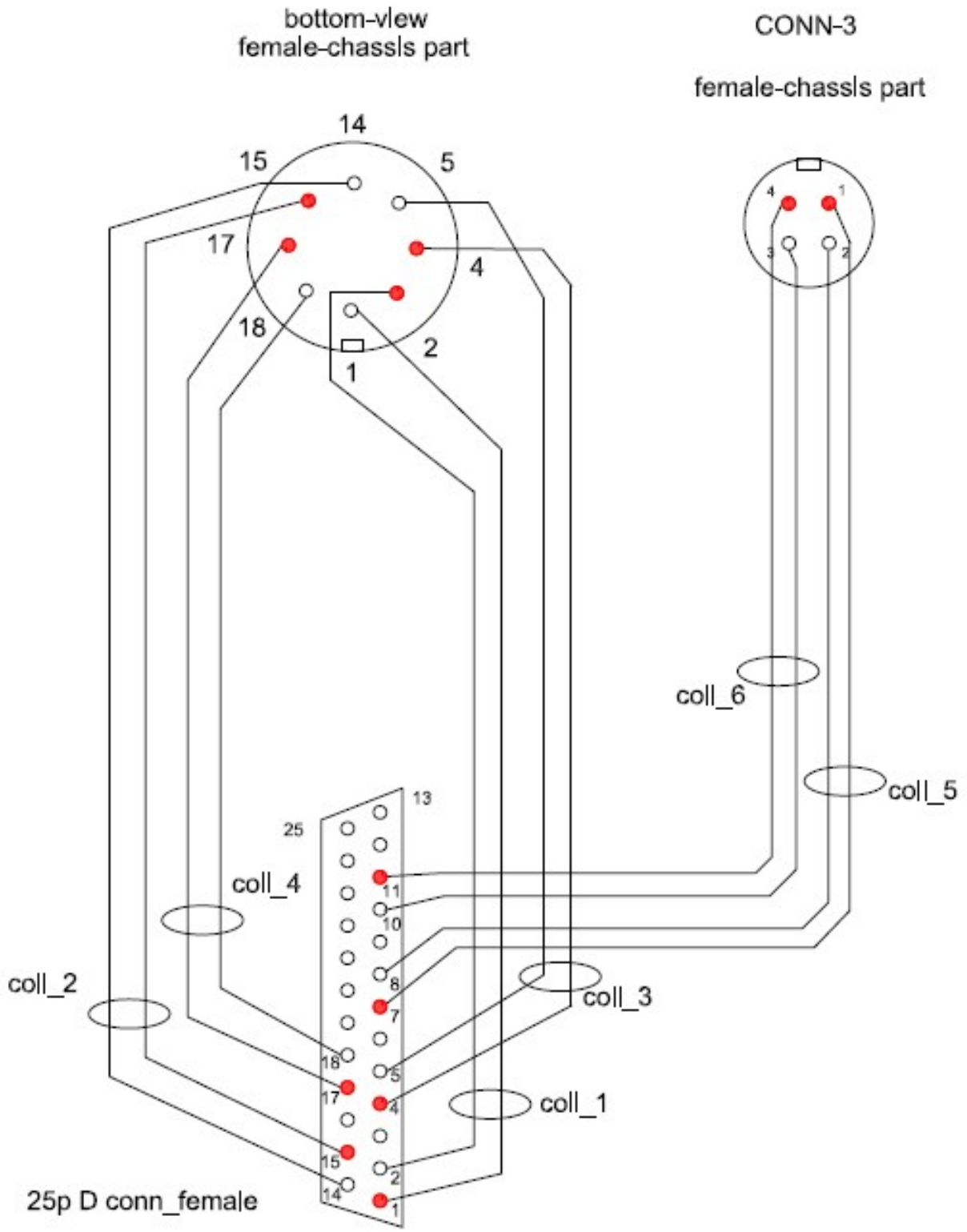


BACK VIEW RM IMC

Input Mode Cleaner
Electrical connections

NIKHEF
Ad Berklen
Date 22-01-2014

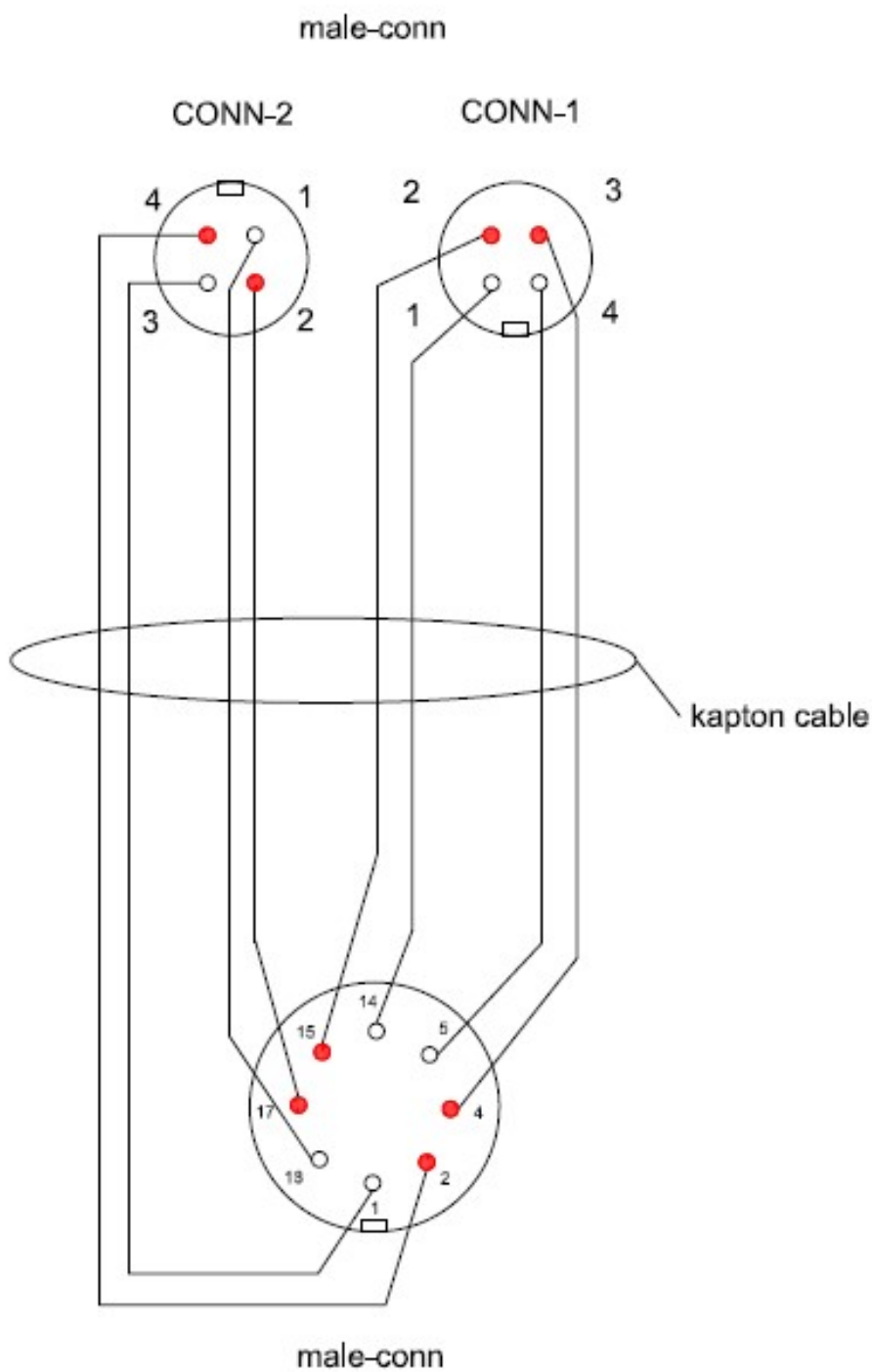
RefMass coils



Input Mode Cleaner
Electrical connections

NIKHEF
Ad Berkien
Date 23-01-2014

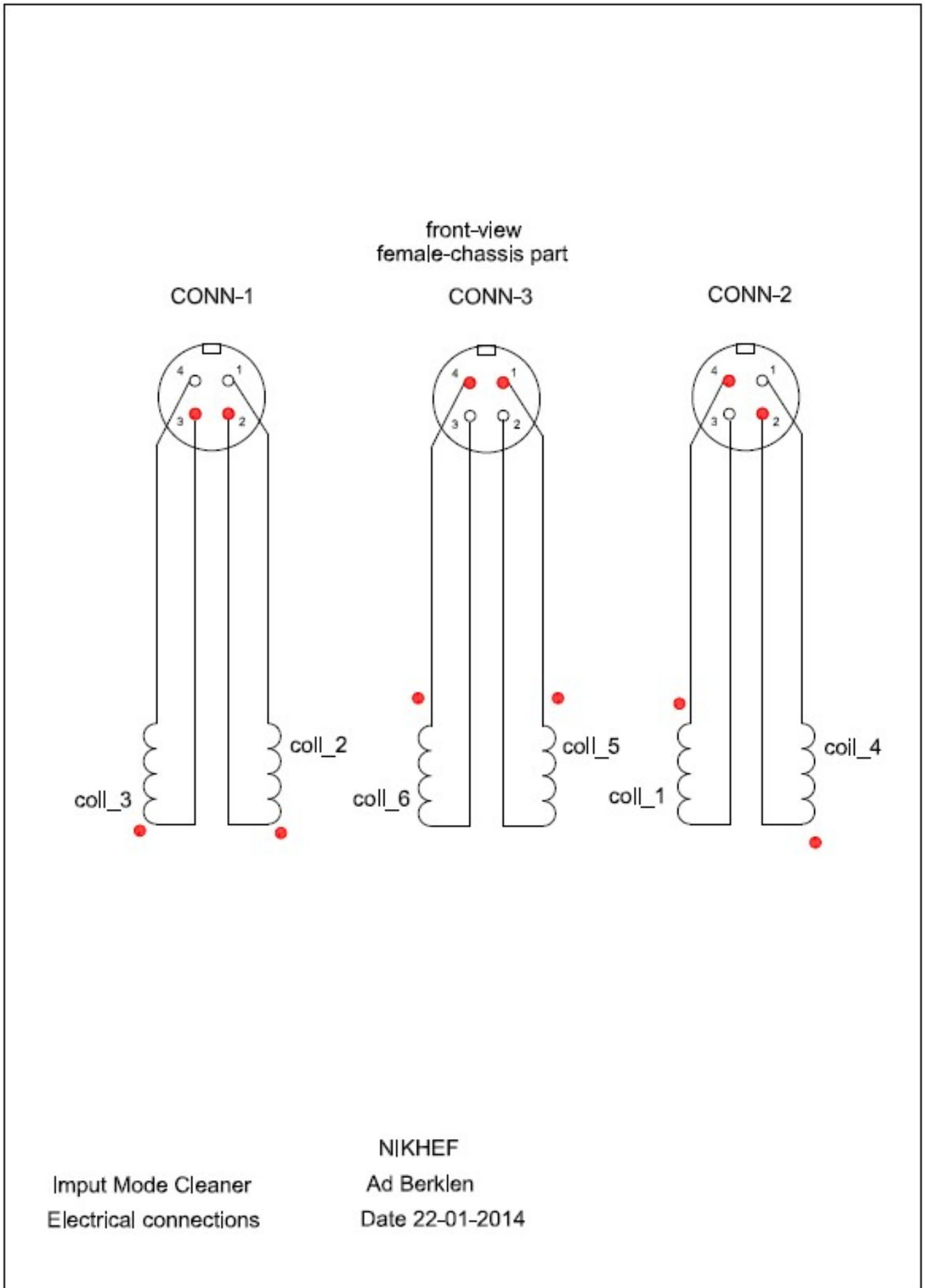
RefMass coils



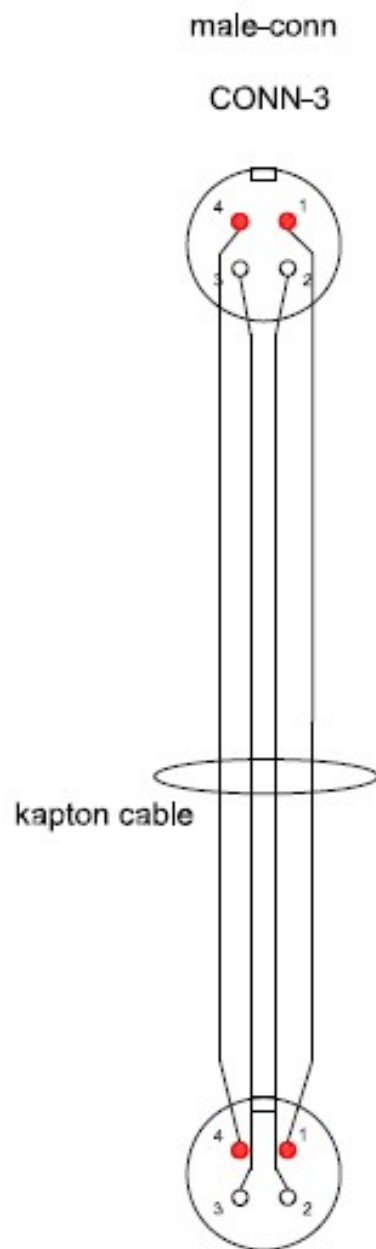
Input Mode Cleaner
Electrical connections

NIKHEF
Ad Berklen
Date 22-01-2014

RefMass coils



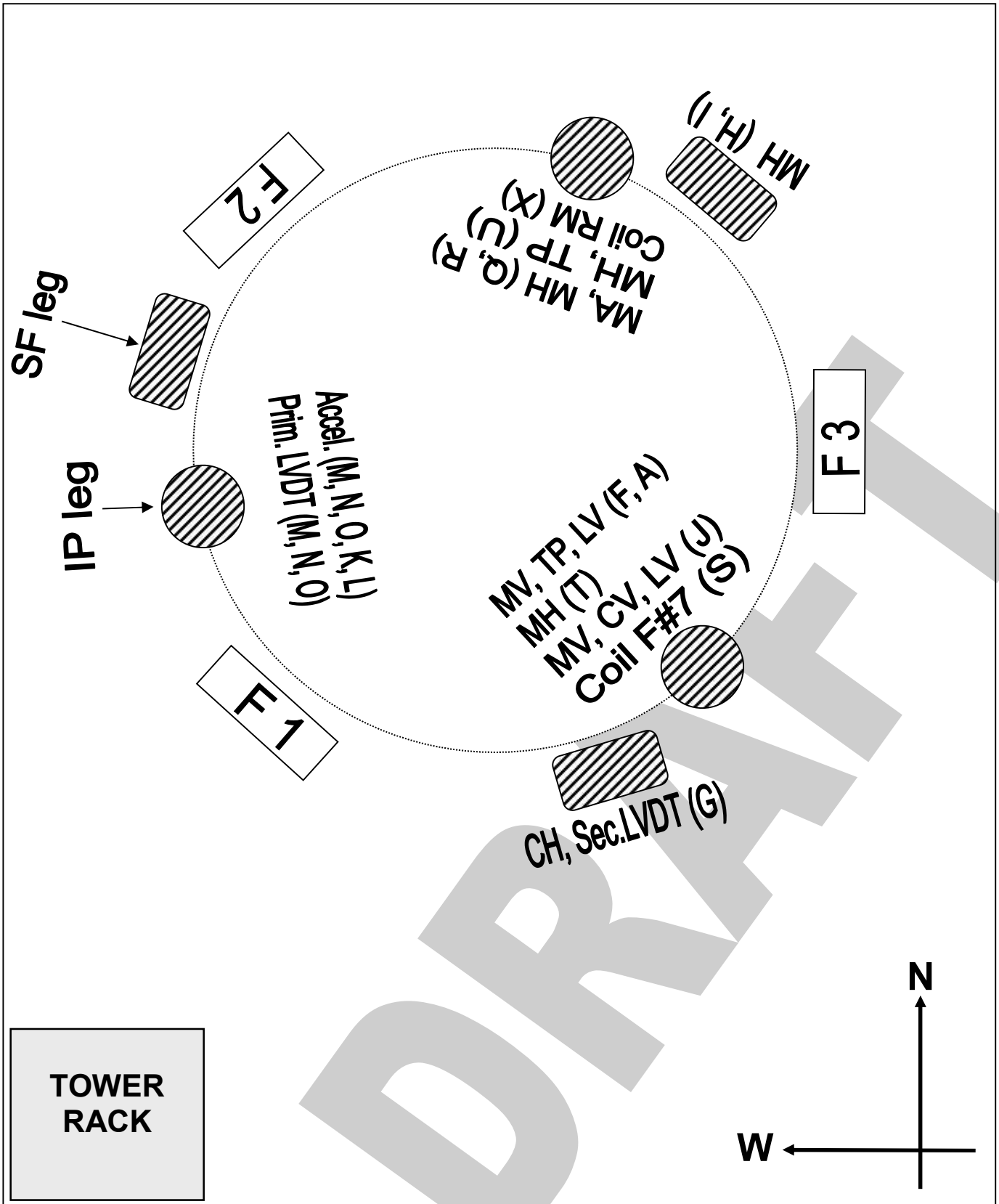
RefMass coils



Input Mode Cleaner
Electrical connections

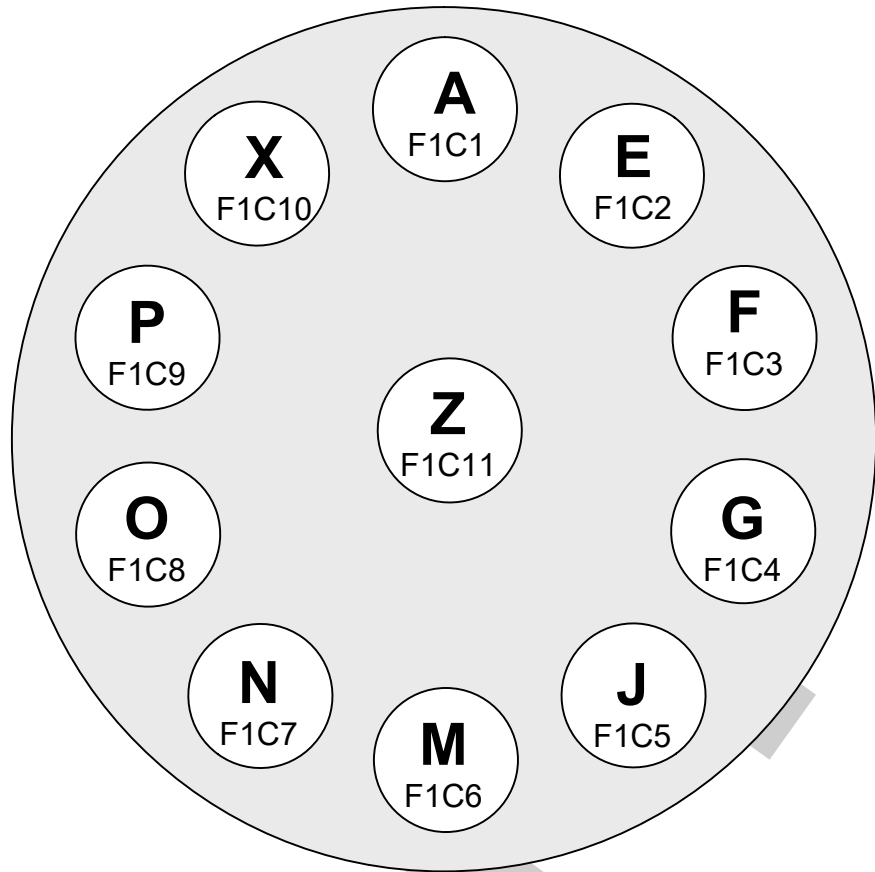
NIKHEF
Ad Berklen
Date 23-01-2014

Cable arrangement along IP legs



Connector location on flanges

Flange **F1**
(air side view)



Flange **F2**
(air side view)

