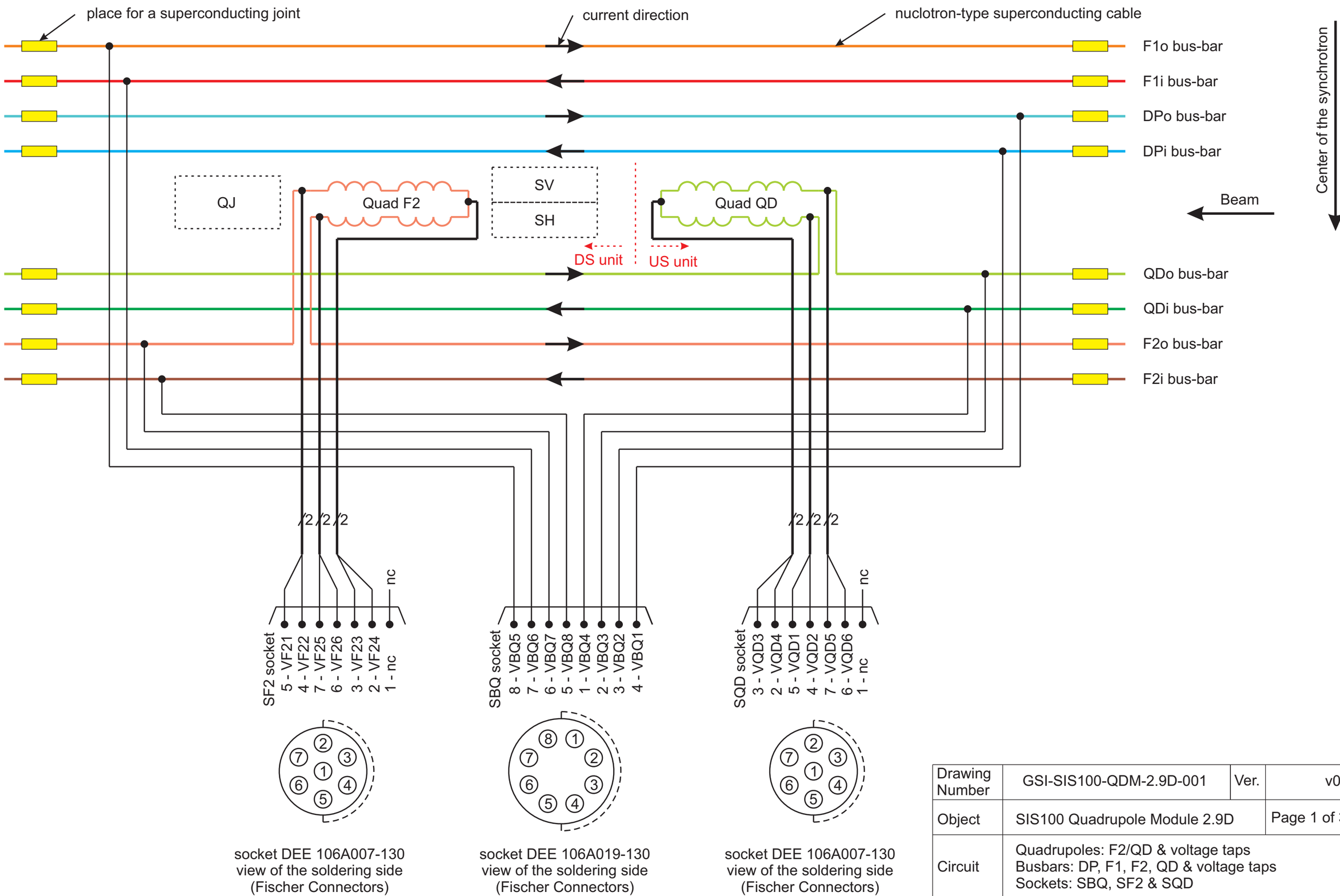
EDMS 1447831 v.7 status Released access Restricted
sis100_qdm_2_9D__14Nov2014.pdf modified 2014-12-02 15:44



socket DEE 106A007-130
view of the soldering side
(Fischer Connectors)

socket DEE 106A019-130
view of the soldering side
(Fischer Connectors)

socket DEE 106A007-130
view of the soldering side
(Fischer Connectors)

Drawing Number	GSI-SIS100-QDM-2.9D-001	Ver.	v03
Object	SIS100 Quadrupole Module 2.9D		Page 1 of 3
Circuit	Quadrupoles: F2/QD & voltage taps Busbars: DP, F1, F2, QD & voltage taps Sockets: SBQ, SF2 & SQD		
Author	P. Szwangruber (PBMT)	Date	2014-Nov-14
Revised	W. Freisleben (PBMT)	Date	2014-Nov-14

Comments: (SV+SH) - steering magnet; QJ - gamma-t jump quadrupole;
voltage tap wire: HH-2619-LH (Axon GmbH); each socket shall receive its own voltage tap bundle; each socket pin (soldering side) shall be covered by 30 mm of shrinking tube (type ATUM-3/1-0); for twisting of voltage tap wires see instrumentation list;
nc - not connected; DS/US - beam down stream/up stream direction;

DS unit

US unit

TSV

SV

SH

TSH

28

QJ

Quad F2

Quad QD

Beam

Center of the synchrotron

superconducting corrector cable
(LTS, insulated strands)

copper wire

current direction

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 aa bb

nc nc nc nc nc nc nc nc nc nc nc nc nc nc nc nc nc nc

SH

SV

2

HTS

Cu

HTS-LTS joint

QJ

SSH socket

nc
1 - nc
3 - VH15
2 - VH16
18 - VH08
7 - VH17
6 - VH18
19 - VH07
9 - VH05
8 - VH06
11 - VH03
10 - VH04
13 - VH01
12 - VH02
5 - VH13
4 - VH14
15 - VH11
14 - VH12
17 - VH09
16 - VH10

SSV socket

8 - VV06
9 - VV05
10 - VV04
11 - VV03
12 - VV02
13 - VV01
4 - VV14
5 - VV13
14 - VV12
15 - VV11
16 - VV10
17 - VV09
3 - VV15
2 - VV16
18 - VV08
7 - VV17
6 - VV18
19 - VV07
1 - nc
nc

socket DEE 107A015-130
view of the soldering side
(Fischer Connectors)

Drawing Number	GSI-SIS100-QDM-2.9D-002	Ver.	v03
Object	SIS100 Quadrupole Module 2.9D		Page 2 of 3
Circuit	Steering magnet & bus-bar & voltage taps Local current leads & voltage taps Gamma-t jump quadrupole Sockets: SSH, SSV		
Author	P. Szwangruber (PBMT)	Date	2014-Nov-14
Revised	W. Freisleben (PBMT)	Date	2014-Nov-14

Comments:

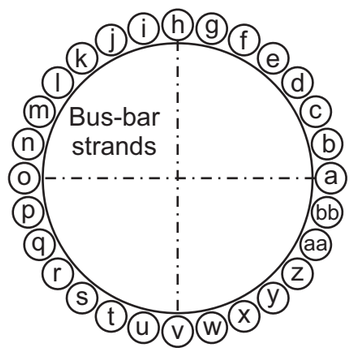
(SV+SH) - steering magnet: SV - vertical coil, SH - horizontal coil; (Cu+HTS) - local current lead; QJ - gamma-t jump quadrupole;
TSV - terminal box for steerer vertical coil, TSH - terminal box for steerer horizontal coil;
nc - not connected; each socket shall receive its own voltage tap bundle; each socket pin (soldering side) shall be covered by 30 mm of shrinking tube (type ATUM-3/1-0); for twisting of voltage tap wires see instrumentation list; voltage tap wire: HH-2619-LH (Axon GmbH);

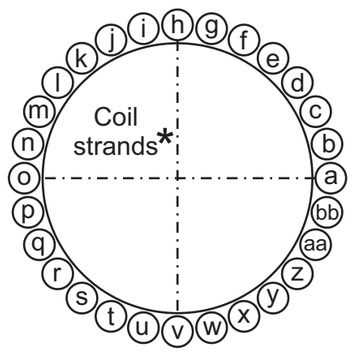
TSH

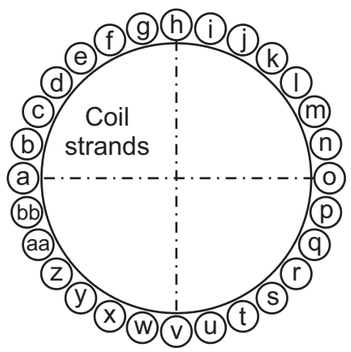
Solder number	Bus-bar strand	Coil strand* (current input)	Coil strand (current output)	Comments
1	a	a	-	current "+"
2	-	b	bb	
3	-	c	aa	
4	-	d	z	
5	-	e	y	
6	-	f	x	
7	-	g	w	
8	e	h	v	"middle" Vtap
9	-	i	u	
10	-	j	t	
11	-	k	s	
12	-	l	r	
13	-	m	q	
14	-	n	p	
15	b-c	-	o	MID "+" (x2)
16	p-q	o	-	MID "-" (x2)
17	o	-	n	current "-"
18	-	p	m	
19	-	q	l	
20	-	r	k	
21	-	s	j	
22	-	t	i	
23	-	u	h	
24	s	v	g	"middle" Vtap
25	-	w	f	
26	-	x	e	
27	-	y	d	
28	-	z	c	
29	-	aa	b	
30	-	bb	a	

TSV

Solder number	Bus-bar strand	Coil strand* (current input)	Coil strand (current output)	Comments
1	h	a	-	current "+"
2	-	b	bb	
3	-	c	aa	
4	-	d	z	
5	-	e	y	
6	-	f	x	
7	-	g	w	
8	l	h	v	"middle" Vtap
9	-	i	u	
10	-	j	t	
11	-	k	s	
12	-	l	r	
13	-	m	q	
14	-	n	p	
15	i-j	-	o	MID "+" (x2)
16	w-x	o	-	MID "-" (x2)
17	v	-	n	current "-"
18	-	p	m	
19	-	q	l	
20	-	r	k	
21	-	s	j	
22	-	t	i	
23	-	u	h	
24	z	v	g	"middle" Vtap
25	-	w	f	
26	-	x	e	
27	-	y	d	
28	-	z	c	
29	-	aa	b	
30	-	bb	a	







Drawing Number	GSI-SIS100-QDM-2.9D-003	Ver.	v03
Object	SIS100 Quadrupole Module 2.9D		Page 3 of 3
Circuit	Connections in terminal boxes: TSH, TSV		

Comments: (SV+SH) - steering magnet: SV - vertical coil, SH - horizontal coil;
TSV - terminal box for steerer vertical coil, TSH - terminal box for steerer horizontal coil;
for detail information (i.e. solder number) see technical drawing of the terminal box: MG-1009693-A-V01;

Author	P. Szwangruber (PBMT)	Date	2014-Nov-14
Revised	W. Freisleben (PBMT)	Date	2014-Nov-14