

Uppgjord (även faktaansvarig om annan) - Prepared (also subject responsible if other)		Nr - No.	
EAB/UKH/HR Magnus Johansson		2/1070-BFE306055 Uen	
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External cables for ANA 901 02/1 standard cabinet configurations

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1REVISION HISTORY

Rev.	Comments
PA3	See minutes 2/1776-BFE 306 055
A	Insert of SS7 cables TSR 491 392-298
B	New picture and new labels on SS7 Server
C	8 SP-ETH cables removed, too many were specified

2INTRODUCTION

This cabling information describes the external cables needed for ANA 901 02 standard cabinet configurations. The internal cabling is described in 1/1070-BFE 306055.

The cables shall be marked according to the marking instruction 10201-BYB 501+.

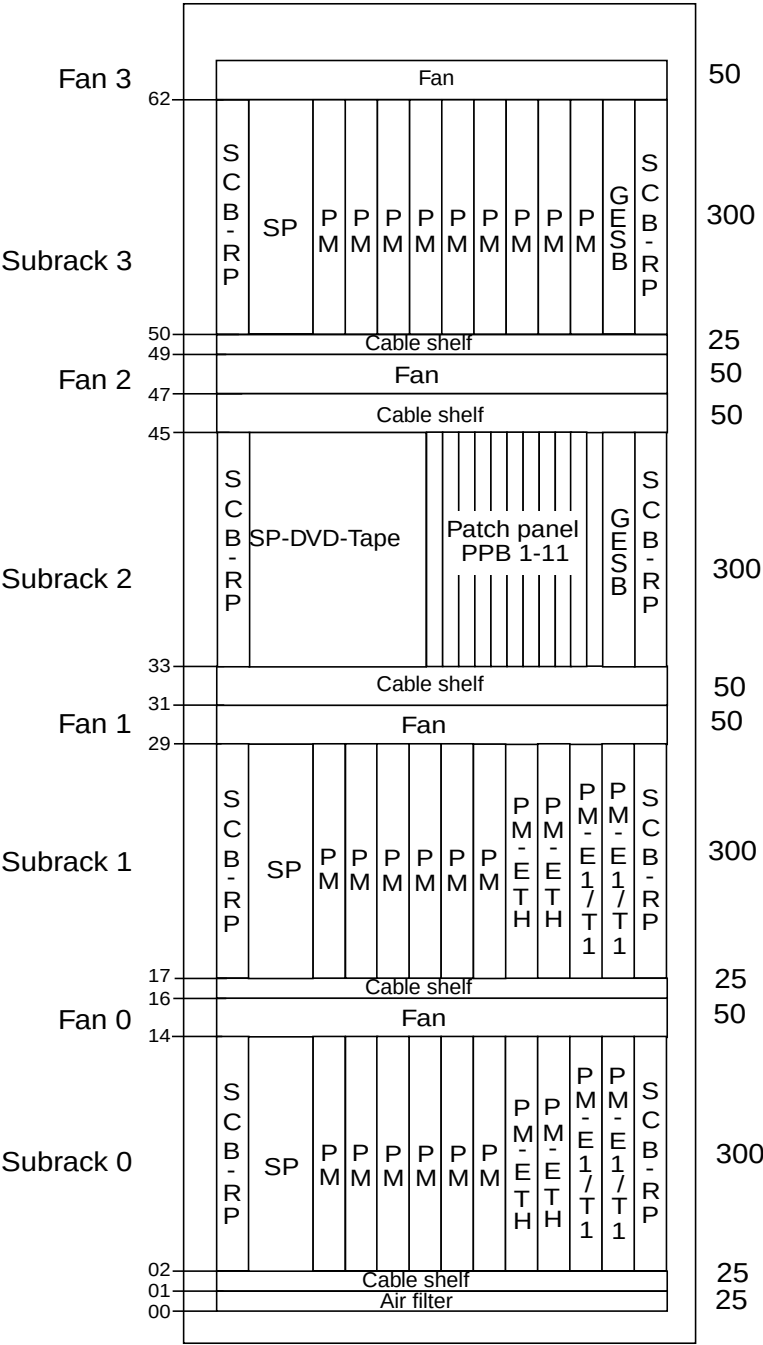
3NODE CONFIGURATION

Smaller nodes (Mini and Midi) consist of different configurations of the base cabinet. For larger nodes (Maxi) an extension cabinet is added. The external cabling described in Table 1 and Table 2 corresponds to Maxi node configurations.

Cabinet 0	Cabinet 1
BFE 306 055 Base	BFE 306 056 Extension

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4 BASE CABINET BFE 306 055 CONFIGURATION (MIDI/MAXI)
Cabinet 0



Cabinet dimensions:
H x W x D = 1800 x 600 x 400 mm

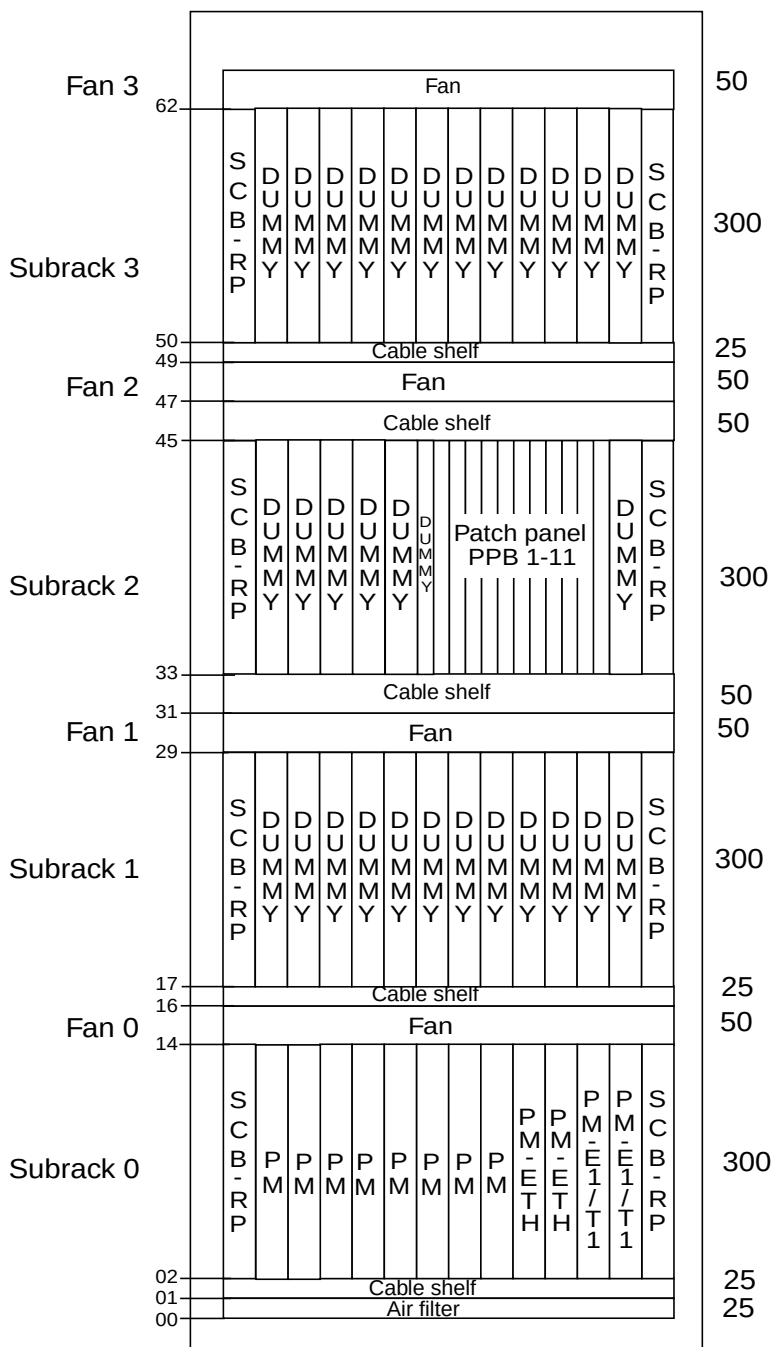
Board widths:
PM = 30 mm
PM-ETH = 30 mm
PM-E1/T1 = 30 mm
SP = 60 mm
SP-DVD-Tape = 165 mm
SCB-RP = 30 mm
GESB = 30 mm
PPB = 15 mm
DUMMY = 15 mm

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EXTENSION CABINET BFE 306 056 CONFIGURATION

Cabinet 1



Cabinet dimensions:

H x W x D = 1800 x 600 x 400 mm

Board widths:

PM = 30 mm

PM-ETH = 30 mm

PM-E1/T1= 30 mm

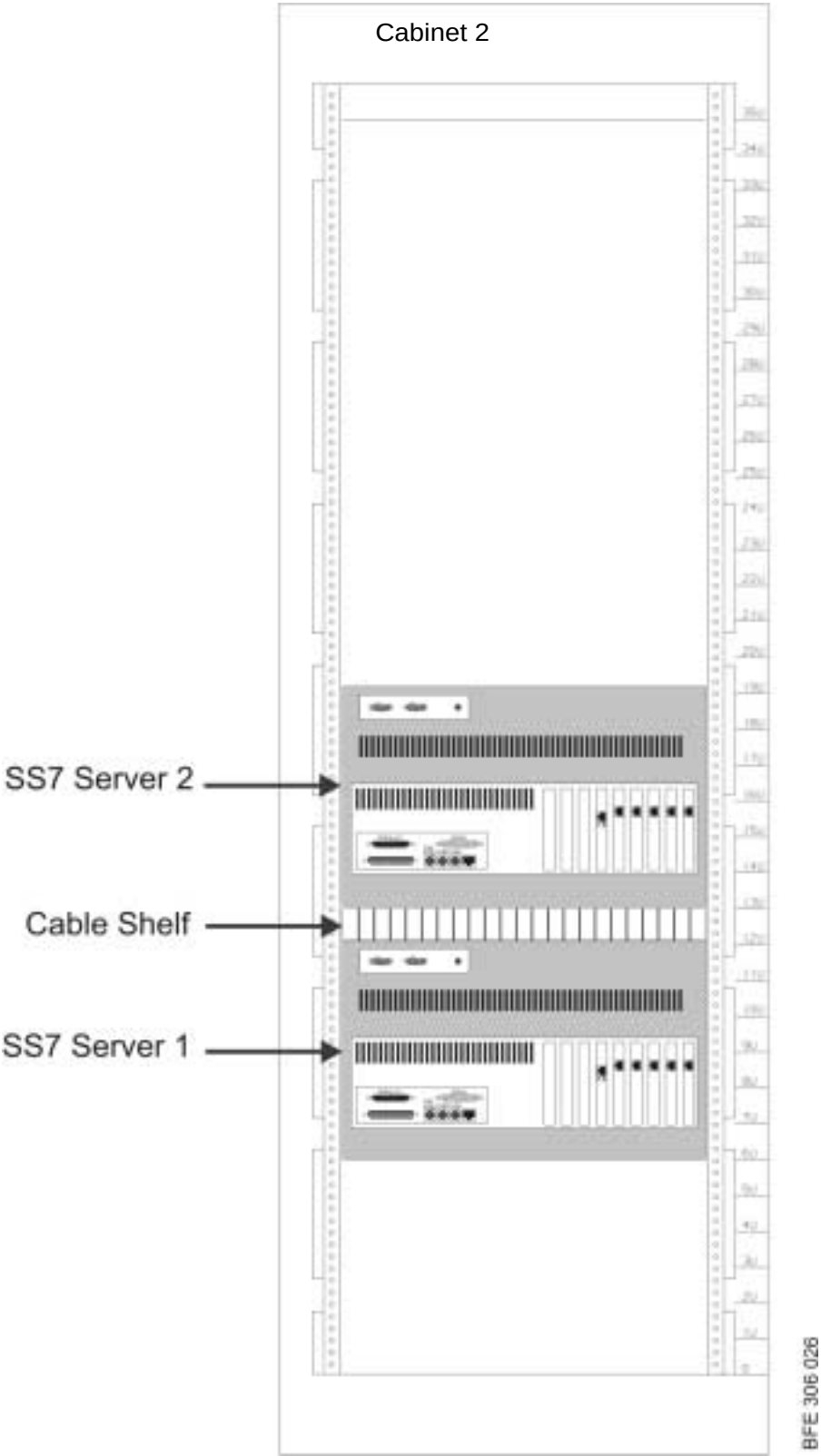
SCB-RP = 30 mm

PPB = 15 mm

DUMMY = 15 and 30 mm

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6 SS7 EXTENSION CABINET BFE 306 026 CONFIGURATION



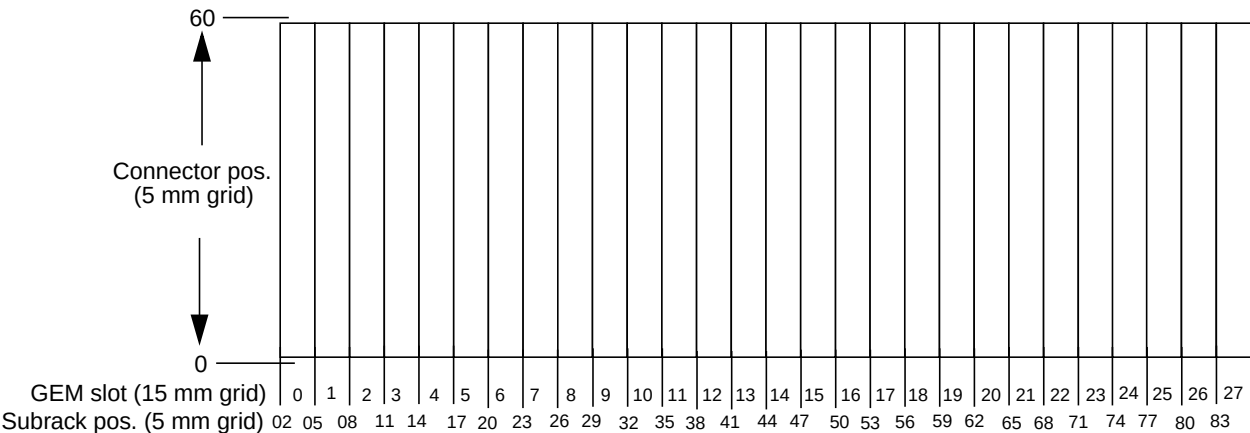
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7 CABLE TYPES AND CABLE POSITIONS

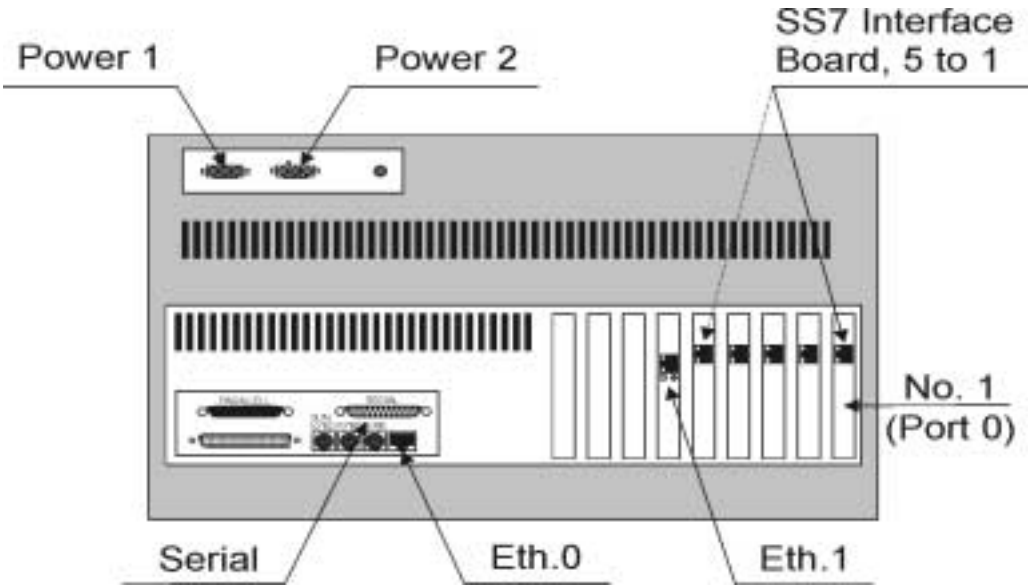
The recommended maximum length of all external cables is 30 m. There is one exception: The modem cables from the RS-232 interfaces (e.g. TSR 909 058) shall not exceed 10 m.

Shorter cables may be chosen from the specified lengths in GASK.

7.1 GEM BOARD AND CONNECTOR POSITIONS



7.2 SS7 (AXMP) SERVER CONNECTOR POSITIONS



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7.3 BASE CABINET BFE 306 055 EXTERNAL CABLING (MINI/MIDI/MAXI)

Table 1 describes the external cabling of a Maxi node configured base cabinet. Cable lengths are node dependent and are determined in the project engineering phase for each node.

Table 1: Base cabinet BFE 306 055 external cabling

From				Cable	To
Cabinet No.	Subrack pos.	Connector hor. pos.	Connector vert. pos.		
1. PM-ETH 100Base-TX: Patch panel --> Router Two alternatives: (8-pol concept --> RJ45, straight) (8-pol concept --> RJ45, cross-over)					
0	0333	48	33	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	48	37	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	51	33	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	51	37	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	54	33	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	54	37	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	57	33	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	57	37	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	60	33	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	60	37	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	63	33	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	63	37	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	66	33	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	66	37	TSR 491 0274/xx TSR 491 0275/xx	Router

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Table 1: Base cabinet BFE 306 055 external cabling

From				Cable	To
Cabinet No.	Subrack pos.	Connector hor. pos.	Connector vert. pos.		
0	0333	69	33	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	72	33	TSR 491 0274/xx TSR 491 0275/xx	Router
2. Network redundancy 100Base-TX: Patch panel --> Router Two alternatives: (8-pol concept --> RJ45, straight) (8-pol concept --> RJ45, cross-over)					
0	0333	48	49	TSR 491 0274/xx TSR 491 0275/xx	Router
0	0333	51	49	TSR 491 0274/xx TSR 491 0275/xx	Router
3. SP-ETH 100Base-TX: Patch panel --> Router (8-pol concept --> RJ45, straight)					
0	0333	48	41	TSR 491 0274/xx	Router
0	0333	51	41	TSR 491 0274/xx	Router
0	0333	54	41	TSR 491 0274/xx	Router
0	0333	57	41	TSR 491 0274/xx	Router
4. SS7: Patch panel --> Signalling network Two alternatives: (8-pol concept(17.5mm) --> 8-pol concept(17.5mm),straight110 ohm) (8-pol concept(17.5mm) --> 8-pol concept(17.5mm),cross 110 ohm) (8-pol concept(17.5mm) --> RJ-45, straight 110 ohm) (8-pol concept(17.5mm) --> RJ-45, crossed 110 ohm) (8-pol concept(17.5mm) --> open end 110 ohm) (8-pol concept(17.5mm) --> 2 * BNC connectors, 75 ohm imp. coax))					
0	0333	42	24	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	42	28	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network

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Table 1: Base cabinet BFE 306 055 external cabling

From				Cable	To
Cabinet No.	Subrack pos.	Connector hor. pos.	Connector vert. pos.		
0	0333	42	32	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	42	36	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	42	40	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	42	44	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	42	48	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	42	52	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	45	24	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	45	28	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network

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Table 1: Base cabinet BFE 306 055 external cabling

From				Cable	To
Cabinet No.	Subrack pos.	Connector hor. pos.	Connector vert. pos.		
0	0333	45	32	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	45	36	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	45	40	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	45	44	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	45	48	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
0	0333	45	52	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
5. RS-232: Patch panel --> Modem (8-pol concept --> 9-pol D-sub, female)					
0	0333	54	49	TSR 909 058/xx	Modem
0	0333	57	49	TSR 909 058/xx	Modem
6. External alarms: Patch panel --> Alarm sensor (8-pol concept --> free end)					
0	0333	51	45	TSR 491 0268/xx	Alarm sensor
0	0333	54	45	TSR 491 0268/xx	Alarm sensor
0	0333	57	45	TSR 491 0268/xx	Alarm sensor
0	0333	60	45	TSR 491 0268/xx	Alarm sensor

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Table 1: Base cabinet BFE 306 055 external cabling

From				Cable	To
Cabinet No.	Subrack pos.	Connector hor. pos.	Connector vert. pos.		
0	0333	63	45	TSR 491 0268/xx	Alarm sensor
0	0333	66	45	TSR 491 0268/xx	Alarm sensor
0	0333	69	45	TSR 491 0268/xx	Alarm sensor
0	0333	72	45	TSR 491 0268/xx	Alarm sensor

7.4

EXTENSION CABINET BFE 306 056 EXTERNAL CABLING

Table 2 describes the external cabling of a Maxi node configured extension cabinet. Cable lengths are node dependent and are determined in the project engineering phase for each node.

Table 2: Extension cabinet BFE 306 056 external cabling

From				Cable	To
Cabinet No.	Subrack pos.	Connector hor. pos.	Connector vert. pos.		
1. PM-ETH 100Base-TX: Patch panel --> Router Two alternatives: (8-pol concept --> RJ45, straight) (8-pol concept --> RJ45, cross-over)					
1	0333	48	33	TSR 491 0274/xx TSR 491 0275/xx	Router
1	0333	48	37	TSR 491 0274/xx TSR 491 0275/xx	Router
1	0333	51	33	TSR 491 0274/xx TSR 491 0275/xx	Router
1	0333	51	37	TSR 491 0274/xx TSR 491 0275/xx	Router
2. SS7 E1/T1: Patch panel --> Signalling network Five alternatives: (8-pol concept(17.5mm) --> 8-pol concept(17.5mm),straight110ohm) (8-pol concept(17.5mm) --> 8-pol concept(17.5mm),cross 110 ohm) (8-pol concept(17.5mm) --> RJ-45, straight 110 ohm) (8-pol concept(17.5mm) --> RJ-45, crossed 110 ohm) (8-pol concept(17.5mm) --> open end 110 ohm) (8-pol concept(17.5mm) --> 2 * BNC connectors, 75 ohm imp. coax))					

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Table 2: Extension cabinet BFE 306 056 external cabling

From				Cable	To
Cabinet No.	Subrack pos.	Connector hor. pos.	Connector vert. pos.		
1	0333	42	24	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
1	0333	42	28	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
1	0333	42	32	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
1	0333	42	36	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
1	0333	42	40	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
1	0333	42	44	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
1	0333	42	48	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
1	0333	42	52	TSR 491 392/xx TSR 491 393/xx TSR 491 396/xx TSR 491 397/xx TSR 491 398/xx TSR 264 02/xx	Signalling network
3. External alarms: Patch panel --> Alarm sensor (8-pol concept --> free end)					

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Table 2: Extension cabinet BFE 306 056 external cabling

From				Cable	To
Cabinet No.	Subrack pos.	Connector hor. pos.	Connector vert. pos.		
1	0333	51	45	TSR 491 0268/xx	Alarm sensor
1	0333	54	45	TSR 491 0268/xx	Alarm sensor
1	0333	57	45	TSR 491 0268/xx	Alarm sensor
1	0333	60	45	TSR 491 0268/xx	Alarm sensor
1	0333	63	45	TSR 491 0268/xx	Alarm sensor
1	0333	66	45	TSR 491 0268/xx	Alarm sensor
1	0333	69	45	TSR 491 0268/xx	Alarm sensor
1	0333	72	45	TSR 491 0268/xx	Alarm sensor

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7.5 SS7 (AXMP) SERVER

Table 3 describes the external cabling of a Maxi node configured extension cabinet. Cable lengths are node dependent and are determined in the project engineering phase for each node.

Table 3: SS7 cabinet BFE 306 026 external cabling

From				Cable	To
Cabinet No.	Subrack pos.	Connector hor. pos.	Connector vert. pos.		
SS7 Interface Cable: SS7 server --> Signalling network Five alternatives					
SS7 Interface cable: SS7 server --> Signalling network Two alternatives:					
(RJ 48--> RJ-48, straight 120 Ohm, TSR 432 39)					
(RJ 48--> RJ-48, straight 100 Ohm, TSR 432 40)					
2	1	1*	9u	TSR 432 39/xx TSR 432 40/xx	Signalling network
2	1	2*	9u	TSR 432 39/xx TSR 432 40/xx	Signalling network
2	1	3*	9u	TSR 432 39/xx TSR 432 40/xx	Signalling network
2	1	4*	9u	TSR 432 39/xx TSR 432 40/xx	Signalling network
2	1	5*	9u	TSR 432 39/xx TSR 432 40/xx	Signalling network
2	2	1*	16u	TSR 432 39/xx TSR 432 40/xx	Signalling network
2	2	2*	16u	TSR 432 39/xx TSR 432 40/xx	Signalling network
2	2	3*	16u	TSR 432 39/xx TSR 432 40/xx	Signalling network
2	2	4*	16u	TSR 432 39/xx TSR 432 40/xx	Signalling network
2	2	5*	16u	TSR 432 39/xx TSR 432 40/xx	Signalling network

** According to positions in figure in chapter SS7 (AXmp) server connector positions on page 6, of the SS7 interface boards*

7.6 ALARM PANEL CABLE KIT

These cables and converters are included with the alarm panel in one kit, the product number for this kit is NTM 101 537. In that document structure you will find the necessary information for installing and mounting the kit to the system.

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7.7 ON-SITE SERVICE CABLE KIT

Table 4 describes the on-site service cable kit that should be available at each node. The on-site service kit has the product number NTM 101 529.

Table 4: On-site service cable kit

Cable	Qty
1. PM console cable (Male DSUB25 --> FemaleDSUB25)	
05-0145 (Direktronik) Extension cable	1
2. Null modem adapter (Male DSUB25 --> Female DSUB25)	
14-1060 (Direktronik)	1
3. Adapter (Male DSUB25 --> Male DSUB25)	
14-2040 (Direktronik)	1
4. Adapter (Female DSUB25 --> Female DSUB25)	
14-2050 (Direktronik)	1
5. Adapter (Male DSUB9 --> Male DSUB9)	
14-2171 (Direktronik)	1
6. Adapter (Femle DSUB9 --> Female DSUB9)	
14-2172 (Direktronik)	1
7. Adapter (Male DSUB25 --> Female DSUB9)	
10-1201 (Direktronik)	2
8. Data cartridge	
KDY 425 07	6
9. Cleaning tape	
KDY 425 08	1

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Table 4: On-site service cable kit

Cable	Qty
10. Serial cable, micro Dsub	
TSR 487 14/2000 (Direktronik)	2
11. LAN cable, straight (Sofix 20mm --> RJ-45)	
TSR 491 0274/10000	1
12. LAN cable, cross-over (Sofix 20mm --> RJ-45)	
TSR 491 0275/10000	1