

NOKIA

**Installation Work Check List,
Generic BSC and TCSM2
Installation**

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Summary of changes

Changes between document issues are cumulative. Therefore, the latest document issue contains all changes made to previous issues.

Changes between issues 1-1 and 2-0

Contents checked and updated for S10 release.

Issue 1-1

Document identification changed to DN00155634 Issue 1-1 from CAM 44250/1(V) en

Issue 1

CAM 44250/1 en, the first approved version for S9 release. /This document is an updated version of the document ASXX 0049/2 en (13 Dec 1996)./

1

Work Check List, Generic BSC and TCSM2 Installation and related documents

The purpose of the installation work is to check the delivery, to install the BSC or TCSM2 to the site, to prepare the network element and to check that the site is ready for commissioning. The purpose of the *Work Check List, Generic BSC and TCSM2 Installation* is to ensure the quality of installation work. It provides the *Check list* and *Certificate of completion* for checking the installation of the BSC. The *Check list* is updated after each work phase. Also, the *Site Deficiency Report* and *Failure Report* (Nokia standard form) are generated during the work.

The following documents are referred to in the *Check list*.

<i>Engineering for BSC</i>	DN9981715 (CAM 87748)
<i>Installation Site Requirements for BSC and TCSM2</i>	DN9815143 (CAM 70386)
<i>Installing BSC and TCSM2</i>	DN9815167 (CAM 28858)
<i>BSC2 and TCSM2, Jumper Settings of the Plug-in Units</i>	DN98613475 (CAM 22849)
<i>Site Documents</i>	
<i>Packing List</i>	
<i>Despatch Note</i>	

2 Check list

The tables in the following sections provide check lists to be updated after each work phase.

2.1 Preparing for installation

Installation phase and related documents	Completed
Check the availability of the documents needed for installation. Acquire missing documents. <i>Installing BSC and TCSM2, Chapter 2</i>	
Check the availability of the tools needed for installation. Acquire missing tools. <i>Installing BSC and TCSM2, Chapter 2</i>	

2.2 Preparing the equipment room

Installation phase and related documents	Completed
Check that installation room is cleaned. Check that basic work such as installing lights, fire extinguishing equipment and air conditioning are completed. <i>Installing BSC and TCSM2, Chapter 4</i>	
Check ventilation of the equipment room. Check the temperature of the equipment room to be within the limits allowed by the DX 200 system. <i>Installing BSC and TCSM2, Chapter 4</i>	
Check the materials of the floors and desks in the equipment room to be antistatic. <i>Installing BSC and TCSM2, Chapter 4</i>	

Installation phase and related documents	Completed
Check the conformance of the room to the installation floor plan drawing. Record the differences. <i>Installing BSC and TCSM2, Chapter 4</i> <i>Site Documents, Equipment layout</i>	
Protect the gangways in the exchange room with cardboard. <i>Installing BSC and TCSM2, Chapter 4</i>	
Mark out the positions of the rack rows and other equipment on the floor. <i>Installing BSC and TCSM2, Chapter 4</i>	
Check the routes for external cabling and install cable ladders. Record the differences to drawings. <i>Installing BSC and TCSM2, Chapter 4</i>	
Make the needed additional holes in raised floors. Clean the room. Correct installation floor plan.	

2.3 Unpacking and inspecting the equipment

Installation phase and related documents	Completed
Check visually the transport packages for external damages. Record the possible damages. <i>Installing BSC and TCSM2, Chapter 4</i> <i>Packing list / Despatch Note</i>	
Remove equipment from the transport packages. Check the number of cases against the <i>Packing List</i> . Record shortcomings. <i>Installing BSC and TCSM2, Chapter 4</i> <i>Packing list / Despatch Note</i>	
Inspect the equipment for external and internal damages. Record the possible damages. <i>Installing BSC and TCSM2, Chapter 4</i>	

2.4 Installing the free standing racks

Installation phase and related documents	Completed
Adjust the rack feet to the initial length. Place the rack frames at their positions according to the floor markings. <i>Installing BSC and TCSM2, Chapter 5</i>	
Attach the rack frames to each other with support angles. Do the horizontal and vertical adjustments of the racks. <i>Installing BSC and TCSM2, Chapter 5</i>	
Tighten the locknuts of the rack feet. <i>Installing BSC and TCSM2, Chapter 5</i>	

2.5 Installing the floor rails

Installation phase and related documents	Completed
Attach rails to the floor according to the floor markings. <i>Installing BSC and TCSM2, Chapter 6</i>	
Check that there is insulation between the floor rail and attachment screws and tighten the screws. <i>Installing BSC and TCSM2, Chapter 6</i>	
Use ohmmeter to check that the attachment screws are not electrically connected to the rail. The total leak resistance of all floor rails to the grounding busbar must be at least 100 Ω . <i>Installing BSC and TCSM2, Chapter 6</i>	

2.6 Installing rack frames on the floor rails

Installation phase and related documents	Completed
Remove the adjustable feet. <i>Installing BSC and TCSM2, Chapter 6</i>	
Mount the other rack frames on floor rail. Attach the rack frames to one other with support angles. Do the horizontal and vertical adjustments of the racks. Screw the attachment screws tight enough to prevent the rack frames from moving. <i>Installing BSC and TCSM2, Chapter 6</i>	
Tighten the rack attachment screws only after the whole rack row has been mounted on rails and the upper support structure has been completed. <i>Installing BSC and TCSM2, Chapter 6</i>	
Install the cable racks (R2A1-S), if used. <i>Installing BSC and TCSM2, Chapter 6</i>	
Install the cable conduits (CC19V), if used. <i>Installing BSC and TCSM2, Chapter 6</i>	
Install the cable conduits between rack rows, if used. <i>Installing BSC and TCSM2, Chapter 6</i>	

2.7 Grounding (earthing) the racks

Installation phase and related documents	Completed
Ground (earth) the BSC according to the installation instructions. <i>Installing BSC and TCSM2, Chapter 7</i> <i>Site Documents, Grounding Principles for BSC2 and TCSM2</i>	
Interconnect the racks by three grounding cables. <i>Installing BSC and TCSM2, Chapter 7</i>	
Check connection between rectifier plus terminal and main earthing bus bar. <i>Installing BSC and TCSM2, Chapter 7</i>	
Connect the earthing network to main earthing bus bar. <i>Installing BSC and TCSM2, Chapter 7</i>	

2.8 Installing side plates and other structures

Installation phase and related documents	Completed
Install the upper frame structures of the rack. <i>Installing BSC and TCSM2, Chapter 8</i>	
Install the side plates. <i>Installing BSC and TCSM2, Chapter 8</i>	
Install the cable conduit. <i>Installing BSC and TCSM2, Chapter 8</i>	
Install the cable rack. <i>Installing BSC and TCSM2, Chapter 8</i>	
Install the horizontal cable conduits. <i>Installing BSC and TCSM2, Chapter 8</i>	
Install the cartridges <i>Installing BSC and TCSM2, Chapter 8</i>	

2.9 Connecting power supply

Installation phase and related documents	Completed
Connect and mark the main supply wires according to the installation instructions. <i>Installing BSC and TCSM2, Chapter 9</i>	
Check the internal power cabling. <i>Installing BSC and TCSM2, Chapter 9 Site Documents, Interconnection Cables</i>	
Check that the main fuses are correctly dimensioned. <i>Installing BSC and TCSM2, Chapter 9</i>	
Measure the supply voltage coming to the racks (-48 V or -60 V) behind the terminal blocks of the racks. Check that the PSA switches are in OFF position. <i>Installing BSC and TCSM2, Chapter 9</i> Voltage: _____	

2.10 Interconnection cabling

Installation phase and related documents	Completed
Check interconnection cables according to the interconnection cables list. Record the differences. <i>Site Documents, Interconnection Cables</i>	
Connect interconnection cables between racks. Settle the cables appropriately and neatly and tie them with no sharp bends. Check fastening of the connectors. <i>Installing BSC and TCSM2, Chapter 10</i> <i>Site Documents, Interconnection Cables</i>	

2.11 Equipping the cartridges with plug-in units

Installation phase and related documents	Completed
Check the code plug positions. Record and correct the differences according to jumper setting instructions. <i>Installing BSC and TCSM2, Chapter 12</i> <i>Site Documents, Equipment List</i>	
Use wrist band earthing device! Leave the plug-in units unconnected. Insert all the plug-in units (including I/O devices) in the cartridges after checking of identification labels. <i>Installing BSC and TCSM2, Chapter 12</i> <i>Site Documents, Equipment List</i>	
Install the power supply units. <i>Installing BSC and TCSM2, Chapter 12</i>	
Switch power supply units on. Check the function of the units from the LEDs. <i>Installing BSC and TCSM2, Chapter 12</i>	

2.12 Cabling to environment

Installation phase and related documents	Completed
Prepare and install the cables for peripheral devices. <i>Installing BSC and TCSM2</i> , Chapter 13 <i>Site Documents, Interconnection Cables</i>	
Prepare PCM and X.25 cables to proper length and install connectors. <i>Installing BSC and TCSM2</i> , Chapter 13 <i>Site Documents, Interconnection Cables</i>	
Settle and tie PCM and X.25 cables neatly. <i>Installing BSC and TCSM2</i> Chapter 13	
Cut the cables to proper length and connect to the DDF/MDF. <i>Installing BSC and TCSM2</i> , Chapter 13	
Install the alarm lamp panel and alarm cables. <i>Installing BSC and TCSM2</i> , Chapter 13	
Ground and tie the outgoing cables in the grounding element. <i>Installing BSC and TCSM2</i> , Chapter 13	

2.13 Installing the doors

Installation phase and related documents	Completed
Install and fit the doors. <i>Installing BSC and TCSM2</i> , Chapters 14 and 15	

2.14 Attaching the labels

Installation phase and related documents	Completed
Attach labels onto racks and other structures. <i>Installing BSC and TCSM2</i> , Chapter 16	

2.15 Installing the lamp panel

Installation phase and related documents	Completed
Install the lamp panel and alarm cables (only BSC) <i>Installing BSC and TCSM2, Chapter 17</i>	

2.16 Finishing

Installation phase and related documents	Completed
Remove all temporary markings.	
Check the corrections in drawings used during the installation. <i>Site Documents, Cartridge positions</i>	
Clean the installation site.	
Fill in <i>Certificate of completion</i> , see the <i>Appendix</i> .	

Appendix A.

A.1 Certificate of completion

CUSTOMER NAME _____ DELIVERY NO. _____ SITE NAME _____ SITE NO. _____	SITE ADDRESS _____ _____ _____																																																			
SOFTWARE RELEASE _____	_____ _____																																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%; padding: 5px;">STAGE</th> <th style="width: 10%; padding: 5px;">COMPLETE/ OK (Initials)</th> <th style="width: 10%; padding: 5px;">COMMENTS/ DEFICIENCY</th> </tr> </thead> <tbody> <tr><td style="padding: 2px 5px;">Preparing for installation</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Preparing the equipment room</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Unpacking and inspecting the equipment</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Installing the free standing racks</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Installing the floor rails</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Installing rack frames on the floor rails</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Grounding (earthing)</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Installing side plates</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Connecting power supply</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Interconnection cabling</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Equipping of cartridges with plug-in units</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Cabling to environment</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Installing the doors</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Attaching labels</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Installing the lamp panel</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> <tr><td style="padding: 2px 5px;">Finishing</td><td style="padding: 2px 5px;">_____</td><td style="padding: 2px 5px;">_____</td></tr> </tbody> </table>	STAGE	COMPLETE/ OK (Initials)	COMMENTS/ DEFICIENCY	Preparing for installation	_____	_____	Preparing the equipment room	_____	_____	Unpacking and inspecting the equipment	_____	_____	Installing the free standing racks	_____	_____	Installing the floor rails	_____	_____	Installing rack frames on the floor rails	_____	_____	Grounding (earthing)	_____	_____	Installing side plates	_____	_____	Connecting power supply	_____	_____	Interconnection cabling	_____	_____	Equipping of cartridges with plug-in units	_____	_____	Cabling to environment	_____	_____	Installing the doors	_____	_____	Attaching labels	_____	_____	Installing the lamp panel	_____	_____	Finishing	_____	_____	
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Date _____

Network element installed by _____
 (Also Print Name)

Customer _____
 (Also Print Name)

