

Warnings and Cautions

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1

Warnings in Nokia Flexi EDGE BTS documentation

Warnings are used to alert the user to precautions needed to protect people. Warnings concern, for example, information about dangerous voltages or actions that could result in bodily harm or injury. A warning is used to alert the user to an imminently hazardous situation that could result in death or serious injury.

The symbol denoting a warning is presented below.



Warning

This is a warning!

1.1

Handling the base station



Warning

The module is heavy. Take care when lifting the module.



Warning

Risk of personal injury. Do not touch the fans.



Warning

The cabinets are heavy. Additional personnel or lifting equipment may be needed when the cabinets are moved, unpacked, or lined up. In addition, follow any local regulations applicable to the installation.



Warning

A fully equipped cabinet is heavy. Make sure that the hoisting belt or rope is sufficiently strong.



Warning

The equipment is heavy. Take care when lifting it.



Warning

Base Transceiver Station (BTS) cabinets have sharp edges. Take care when working with or near the BTS.

1.2 Handling, installing, and replacing units



Warning

Risk of short circuit. Make sure that all the breakers on the power distribution unit (PDU) front panel are in the OFF position before you connect the cables.



Warning

Dust may come off the filter when it is moved. Always use respiratory protective equipment when changing the filter. Handle a used filter with care to prevent the contaminants from entering the environment.



Warning

The front panels of the modules are hot during operation. If Flexi EDGE BTS modules are not installed in a cabinet, front covers must be used during operation for safety reasons and should only be removed temporarily for maintenance.



Warning

Rotating fan blades can cause personal injury. If Flexi EDGE BTS modules are not installed in a cabinet, back covers must be used during operation for safety reasons and should only be removed temporarily for maintenance.

1.3 Dangerous voltages



Warning

Danger of lethal voltages! Make sure that the mains power breaker is off, and that the cabinet is properly earthed (grounded), before removing any connections from the cabinet.



Warning

The power cable must be connected before power is applied to the system.



Warning

Danger of hazardous voltages and electric shock! When installing the battery bridges, make sure the tool does not touch metal.

1.4 Batteries



Warning

Risk of explosion if the battery is replaced with an incorrect type. Replace the battery with the correct type.



Warning

Risk of burns due to short circuit. Be careful during battery installation. Do not wear any metal accessories. Do not short circuit the plus and minus poles.

1.5 Electromagnetic fields and RF power



Warning

This equipment generates electromagnetic fields. If performing installation or maintenance procedures on a base transceiver station (BTS), make sure that the transmitter is switched off.



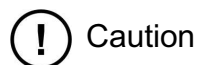
Warning

The antenna generates electromagnetic fields at radio frequencies. Do not cross the compliance boundary.

2

Cautions in Nokia Flexi EDGE BTS documentation

Cautions are used to denote possible damage to equipment but no danger to personnel. The symbol denoting a caution is presented below.

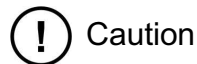


Caution

This is a caution!

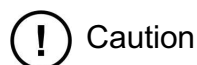
2.1

Handling the base station



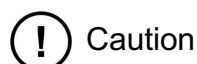
Caution

Excess torsion damages the casings. In wall and pole installation, do not install more than two modules per plinth.



Caution

Incorrect installation may lead to damage to the modules. The modules must be installed with the front panels facing left or right. Do not install the modules with the front panels facing up or down.



Caution

The modules may be damaged if operated for a long time in the upper ambient temperature range. Replace a faulty unit as soon as possible.



Caution

To ensure proper cooling, pay attention to the fan installation position. The air movement should be inside the cabinet.



Caution

The retaining hooks are fragile. Do not carry the unit by the retaining hooks.



Caution

A fully equipped cabinet weighs approximately 365 kg. Make sure that the hoisting belt or rope is sufficiently strong.



Caution

The fans may break if the module core rests on the fans when it is out of the casing. Do not rest the core on the fans.



Caution

The modules will be damaged if the radio transmitter (TX) cables are connected to the radio receiver (RX) cables. Ensure that the RF cables are connected correctly.



Caution

The rear stopper is fragile. Do not attempt to lift the plinth using the rear stopper.

⚠ Caution

Electrostatic discharge (ESD) may damage the equipment. Wear an ESD wrist strap when handling the power distribution unit (PDU).

⚠ Caution

Electrostatic discharge (ESD) may damage the equipment. Wear an ESD wrist strap when handling the external alarm connection box.

⚠ Caution

Electrostatic discharge (ESD) may damage the modules. Always wear an ESD wrist strap when handling the modules.

⚠ Caution

Electrostatic discharge (ESD) may damage the modules. Wear an ESD wrist strap or use a corresponding method when handling the modules. The ESD wrist strap does not work before the plinth is grounded.

⚠ Caution

Electrostatic discharge (ESD) may damage the modules. Wear an ESD wrist strap or use a corresponding method when handling the modules. The ESD wrist strap does not work before the cabinet is grounded.

⚠ Caution

Activating the BTS SW may temporarily disrupt any transmission Hub traffic passing through the BTS site, if the BTS SW package includes changed Transmission SW.

⚠ Caution

New transmission sub-modules may be damaged and will not operate correctly if they are replaced when the base transceiver station (BTS) power is switched on. Switch off the Nokia Flexi EDGE BTS before replacing the transmission sub-modules.

⚠ Caution

The use of long screws may damage the modules. Do not use screws longer than M5 x 10.

⚠ Caution

If the Dual TRX Module carries the BCCH transceiver (TRX) or provides power for the Dual Duplexer Module, the whole sector may be disabled. In these cases, block the sector.

⚠ Caution

If the Dual Duplexer Module is connected to the Dual TRX Module that carries the BCCH transceiver (TRX), the whole sector may be disabled. In this case, block the sector.

⚠ Caution

If the Remote Tune Combiner Module is connected to the Dual TRX Module that carries the BCCH transceiver (TRX), the whole sector may be disabled. In this case, block the sector.

⚠ Caution

Risk of damage to equipment. If the base transceiver station (BTS) is exposed to weather conditions, install the modules so that the system module power terminals are facing down.

2.2 Connecting cables

! Caution

Incorrect cables and seals may not provide secured weather protection. In outdoor installations, including the outdoor cabinet, use only tested IP55 class outdoor cables with seals provided by Nokia. This is also recommended for indoor installations.

! Caution

Cables may be damaged if they are caught in the front panel cover. When you install the front panel cover, ensure that the cables are not caught in the front panel cover.

! Caution

Risk of damage to cables. Route the cables for each module so that they do not interfere with installation or removal of other modules.

! Caution

Do not overbend cables. The minimum bending diameter for the cables is listed in the appendix Bending diameter for cables.

! Caution

If bus cables are looped back to the system module, ongoing calls may be dropped or a module may freeze until the loop is removed. Do not loop bus cables back to the system module.

! Caution

Risk of damage to equipment. The caps are sealed tight to provide adequate weather protection. If the caps cannot be removed by hand, carefully remove the caps with gripping pliers and pull straight back to prevent damage to the connectors.

! Caution

To avoid damage to the cable, do not lift the dual duplexer module by the pre-installed cable.

! Caution

If water leaks into the outdoor mechanics, the transmission equipment may fail. To help prevent water leakage, feed the cables through the bottom cable entries in wall and pole mounting, and through the bottom cable entry holes in stack installation.
