

FBX - Secondary Distribution Switchgear

Cables test device

EN *Operating instructions*

AMTNoT232-02_REV00





presentation

Each Functional Unit C is equipped with a cables test device.
 This device allows for cable testing or searching for a fault on the cables, whilst avoiding the withdrawal of the plug-in connectors.
 It is protected by a mobile panel (1).
 An instruction label (2) shows the order of operations.

Tools necessary:

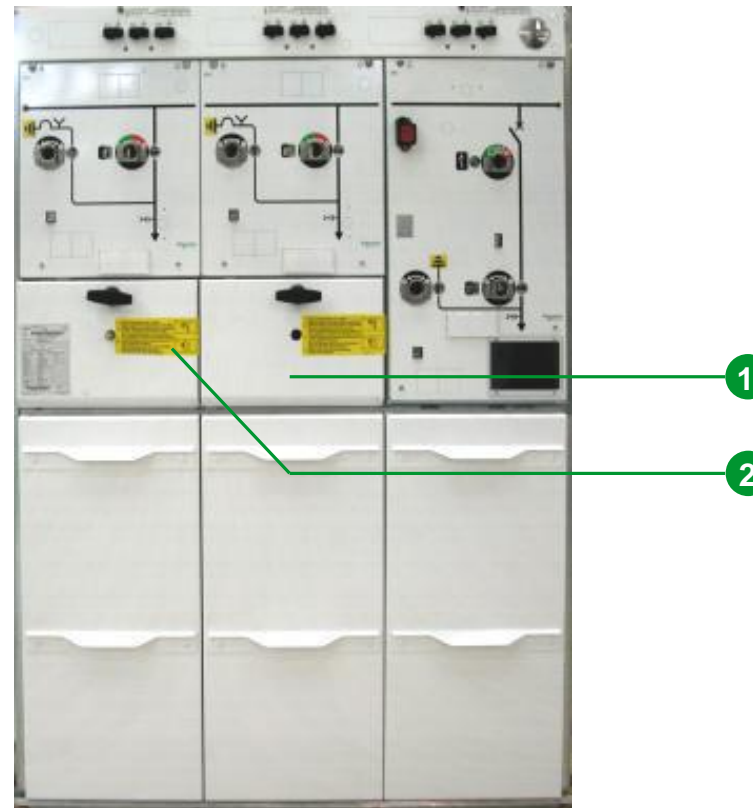
- Open-ended spanner size 10; 16
- Ratchet wrench + extension + 13 mm socket

Accessories not supplied:

- Earthing device
- Insulating gloves

AVIS

Additional information to that given in instruction manuals AMTNoT131-02 and AMTNoT132-02.





Symbols and conventions



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

Caution: you will find all the symbols below throughout the document, indicating the hazard levels depending on the different types of situation.



DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result** in death or serious injury.



WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result** in death or serious injury.



CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result** in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.



Safety rules



DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- Beware of potential hazards, and carefully inspect the work area for tools and objects that may have been left inside the equipment.

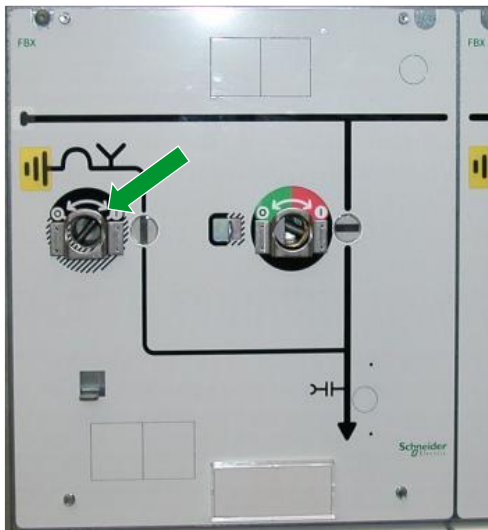
Failure to follow these instructions can result in death, serious injury, or equipment damage.

Intervention conditions for a cables test

| Intervention | Busbar | Câbles | Interrupteur | Sectionneur de terre |
|--------------|--------------|--------------|--------------|----------------------|
| Normale | De-energized | De-energized | Open | Closed |
| Possible | Energized | De-energized | Open | Closed |

Locking out of the Functional Unit

Any locking-out operation must be carried out in accordance with the special rules for the network concerned..



Lock-out Functional Unit C:
switch open, earthing switch closed.



Remove the locking out padlocks.



Lift the pull control device to unlock the panel.
Pull out the panel to the right.



Pull the panel forwards to remove.
Note: A second instructions label (3) describes the rest of the operation.



Preliminary steps

S0

Preparation for the cables test

S1

Fitting the earthing braids in place

S2

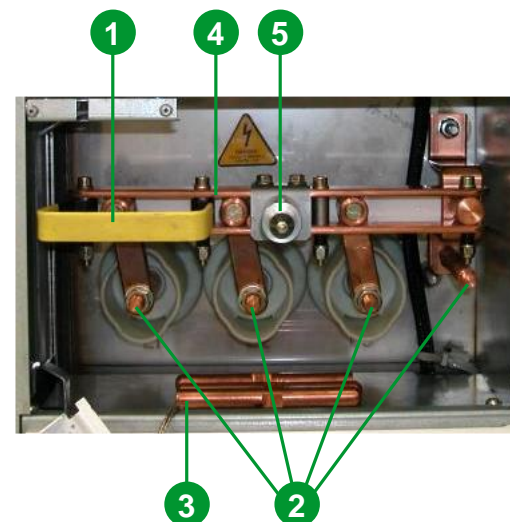
Testing

S3

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Extract the panel and leave it to hang at the end of its earth connection wire.



- 1 - Handle used to disconnect the removable earthing device.
- 2 - Extender screw locations
- 3 - Emplacement for four extenders
- 4 - Removable earthing device
- 5 - Location of locking device



Preliminary steps

S0

Preparation for the cables test

S1

Fitting the earthing braids in place

S2

Testing

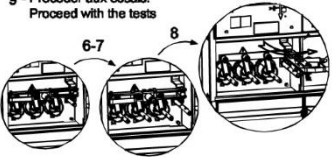
S3

Ref : AMTNoT232-02-Rev.00

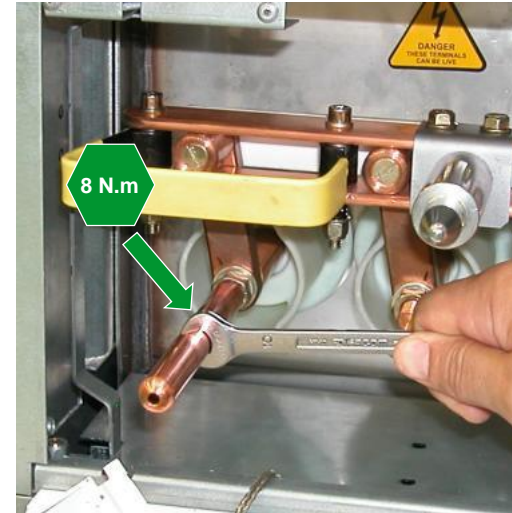
**CAUTION**

The opening of the earthing switch device must be realized only when the grounding clamps is linked and in position.

- 6 - Visser les 4 tiges en cuivre à 8Nm.
Assemble the 4 copper rods at 8Nm.
7 - Mettre en place le pavé de terre puis le dispositif d'injection.
Install the earthing points and then the Injection device
8 - Ouvrir le dispositif de mise à la terre à l'aide de la poignée.
Open the earthing bars with the handle
9 - Procéder aux essais.
Proceed with the tests



Respect the order of operations as shown on the instruction plate (3).



Screw in and tighten each extension (10 mm open-ended spanner).



The 4 extensions screwed on prevent the panel from being fitted back on.



Fit the main earthing clamp to the right hand extender, which is the earth.



Preliminary steps

S0

Preparation for the cables test

S1

Fitting the earthing braids in place

S2

Testing

S3

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Tighten the grounding clamp.



Position and tighten the grounding clamps on each phase.

**CAUTION**

Ensure that the clamps are positioned as shown in the 2 following views.



The tightening clamps must be vertical, directed towards the bottom.



Position the clamps at the end of each extension.



Preliminary steps

S0

Preparation for the cables test

S1

Fitting the earthing braids in place

S2

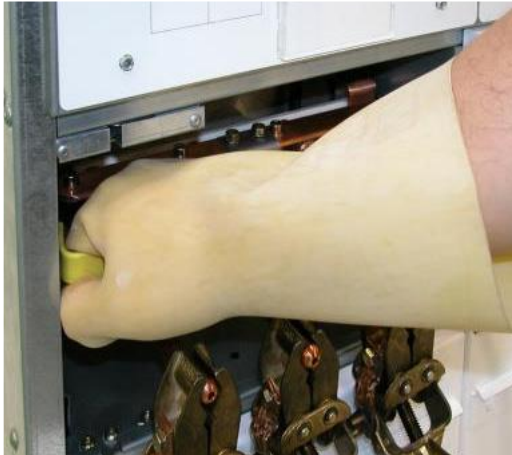
Testing

S3

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**CAUTION**

Insulating gloves must be worn for all the operations which follow.



Grab the handle on the removable earthing switch device.



Pull the assembly forwards to open the earthing switch.



The earthing switch must be completely open and in abutment on the right side of the compartment.



Connect the test equipment cable to the end of the Phase L3 extender.

Preliminary
steps

S0

Preparation
for the cables
test

S1

Fitting the
earthing braids
in place

S2

Testing

S3

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Loosen then remove the earthing
block clamp from Phase L3.



Proceed with the test on L3.
On completion of the tests, refit
The earthing clamp.
Disconnect the test cable.

NOTICE

Repeat the operation for the other
two phases.



Preliminary
steps

S0

Preparation
for the cables
test

S1

Fitting the
earthing braids
in place

S2

Testing

S3

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At the end of the tests



Use insulating gloves.
Reclose the removable earthing
device.



Disconnect end remove the earthing
block.
Loosen the four extenders and store
them in their compartment.



Refit the panel.
Note: If the removable earthing
device is incorrectly closed it will
not be possible to refit the panel.

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