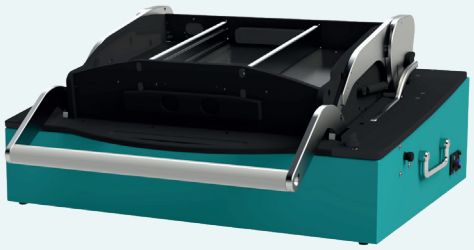
FACT SHEET

MAXIMUM SAFETY FOR HIGH-VOLTAGE TESTS
exclusively for the MMI series

ATX HIGHEND FIXTURE SOLUTIONS

Highest safety standards for a protected test environment in the low- and high-voltage range of the MMI series.

Safety for the operator in the test process is of crucial importance and must be guaranteed at all times. This can be implemented either through your own safety concept or through a concept integrated by ATX, depending on whether your test system allows the live contacts and needles to be disconnected. Depending on the specific requirements, various safety options are available to create a safe working environment and minimize risks to life and limb in increasingly complex test environments.



Targeted hazard analysis for optimum protection for the operator

A comprehensive safety concept for the testing process of fixtures that may be at risk due to voltage ranges (low or high voltage) and mechanical dangers is essential. The required safety modules are selected on the basis of a detailed danger analysis, which is completed by the customer and then evaluated by ATX. By requesting specific data such as voltage values VAC and VDC, maximum currents, information on energy-holding components and the selected test fixture, we jointly define the required safety concept. All safety components can also be purchased individually, depending on which safety measures the customer has already implemented themselves.

Safety component

for voltages > 25 VAC > 60 VDC < 400 VAC (also available as individual components)

Safety switch
Safety switches are used to reliably switch off all voltages when open.

Solenoid interlock
The solenoid interlock ensures that the fixture cannot be opened during the test process until it is released by the test system.

Earthing package | protection class I
The earthing package ensures that all accessible parts that could be live in the event of a fault, as well as low-resistance conductive connections, are integrated into the protective earthing from the inside to the outside.

Isolation package
The isolation package includes plastic hold-down clamps, insulated covers for all low-resistance conductors leading to the outside and relevant openings.

Safety boxes Optional
The safety box takes over the complete safety control, including guard locking, interrogation of the BNS/BNP 260 safety sensors and disconnection of live contacts/needles (>25 VAC/ >60 VDC) or their power supply. It is required as soon as the test system has no possibility of switching off the voltages via safety-compliant relays.

for voltages > 400 VAC/ VDC < 1000 VAC

Fully isolated test fixture
For voltages > 400 VAC/VDC < 1000 VAC, our test fixtures are fully isolated so that no conductive parts reach the outside via the test chamber. All necessary basic safety components are already included. An S3E or S7E safety box can be added as an option if required. However, guard locking is only required if the test object contains energized components.

for voltages > 1000 VAC/ 1500 VDC

Individual safety concepts
We create individual safety concepts for voltages above 1000 VAC / 1500 VDC.

General data

Product:	Safety components
Product family:	Security
Product category:	Security packages
Product type:	Value-added component
Retrofittable:	Yes

Technical data

Voltage ranges:	Low and high voltage
Dangers:	according DIN 50191-2010
Directive:	2006/42/EG
ESD-compliant:	Yes, up to 400 V
ROHs-conformity:	Yes

Compatibility

MMI series | Standalone or interchangeable system

Dangers

Fixtures/ test specimens with voltages
>25 VAC / > 3 mA
>60 VDC / > 12 mA
or energy-holding components with energy
< 0.350 Joule from voltages >25/60 VAC/VDC

Fixtures / test specimens with mechanical, optical, radiation or thermal dangers

Click here to go directly to our security solutions.

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The ATX security concept at a glance

Regardless of your requirements and the voltages you work with, we offer you the necessary safety components for every application to make your test processes safe and protect the operator.

Basic safety components

for voltages >25 VAC / >3 mA or >60 VDC / >12 mA (also available as individual components)

Basic Components

Safety switch
Art. 100707

Required for components without energy-holding components with energy <0.350 Joule and voltages >25 VAC / >60 VDC.

- Ensures reliable disconnection of all voltages when open.

Solenoid interlock
Art. 120489

Required for energy-holding components with energy >0.350 Joule and voltages >25 VAC / >60 VDC.

- In conjunction with the HVMU (High Voltage Monitoring Unit), prevents the adapter from opening before the absence of charge on the capacitor has been reliably measured. (HVMU in the validation process)
- Prevents accidental opening of the adapter during the test process

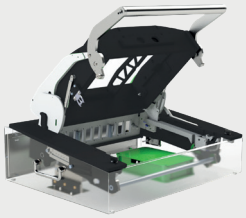
Earthing package
Art. 120484

- Aluminum rear panel with earthing studs
- Protective earthing of all conductive parts that can be touched from the outside
- Test report of the earthing measurement

Isolation package
Art. 120487

- Isolated test chamber
- Plastic hold-down device
- No opening > 2.4 mm to the test chamber = Protection class IP30C

Optional



Safety boxes S3E / S7E
Art. 120516 | 120517

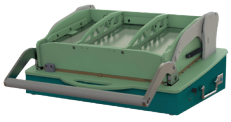
- takes over the complete safety control
- incl. guard locking and monitoring of the safety sensors BNS/BNP 260
- Disconnection of the live contacts/needles or their power supply (3x 400 VAC/VDC 9 A)

Safety components

for voltages > 400 VAC < 1000 VAC

Our isolated test fixtures already contain all the necessary basic safety components.

- for voltages > 400 VAC or < 1000 VAC
- No conductive parts to the outside
- Including all basic safety components
- Disconnection of live contacts/needles or their power supply by optional safety boxes S3E or S7E



MMI-CI | Art. 100694

Moving plate: 445 x 310 mm
Usable area: 390 x 265 mm
Force: 1200 N (600 needles á 2N)

MMI-DVI | Art. 100290

Moving plate: 530 x 330 mm
Usable area: 480 x 285 mm
Force: 1200 N (600 needles á 2N)

MMI-HVI | Art. 100183

Moving plate: 800 x 600 mm
Usable area: 745 x 560 mm
Force 1200 N (600 needles á 2N)

for voltages > 1000 VAC > 1500 VDC

For voltages above 1000 VAC or 1500 VDC, we recommend an individual safety concept. Depending on the voltage level, further safety measures may be required, e.g. compliance with the necessary clearances, creepage distances, breakdown distances, etc.

Click here to go directly to our security solutions.

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