

The edge of circuit breakers over fuses

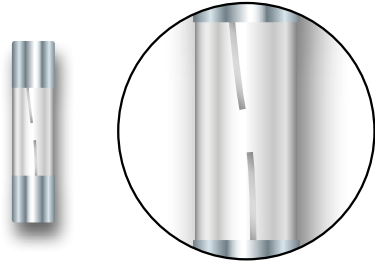
Circuit breakers

Consistently ready for use



Fuses

Defective after their first use



Important to know:

Fuses are not suitable for protecting motors, transformers and low voltage lines against overloads.

Circuit breakers with a thermally delayed trip curve are ideal for protecting motors, transformers and low voltage lines in the event of an overload. In contrast, fuses are only suitable for short circuit protection due their high overload limit and very fast trip curve.

Fuses tolerate high inrush current peaks, but only to a very limited extent.

Circuit breakers with a delayed bimetal operated trip mechanism are unaffected by inrush peaks.

Benefits: The circuit breaker's current rating can be specified directly to the load requirements.

Fuses, however, can only handle inrush current peaks by selecting high (oversized) current ratings.

Four aces to win the game



Consistent equipment uptime

Circuit breakers can quickly and easily be reset after overcurrent trip.



High reliability of your equipment

In the event of a failure, multipole circuit breakers always interrupt the circuit across all poles, i.e. completely. They protect the user against electrocution.



Low operational costs of your equipment

Lower procurement, inventory management, disposal, and service expenses.



Cost reduction

E-T-A circuit breaker/switch combinations and appliance inlet modules help reduce components and lower mounting and wiring time as well as material planning and inventory costs.

Holding all the aces Circuit breakers instead of fuses



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Your trump card to ensure high equipment availability



Consistent Uptime

- Circuit breakers can quickly and easily be reset after overcurrent trip. Time-consuming fuse replacement is eliminated.
- Circuit breakers provide a clear status indication.
- Circuit breakers have a stable trip characteristic. Machine downtimes due to nuisance tripping are minimised.

Your benefits: **Satisfied customers**

What satisfied customers offer:

- repeat purchases (brand loyalty)
- high recommendation rate
- positive reviews
- very good published test results (by non-profit consumer organisations)



Your ace in the hole for unrivalled equipment reliability



Enhancing reliability

- In the event of a failure, multi-pole circuit breakers always interrupt the circuit across all poles. The live phase conductor is reliably disconnected.
- Circuit breakers ensure consistently reliable overcurrent protection. The wrong replacement fuses, however, can have fatal consequences.
- Unlike fuses, circuit breakers can safely be reset.

Your benefits: **Positive reputation in safety and preventing product rejects**

The perfect card to reduce your equipment's operational costs



Cutting costs

- No procurement and inventory costs for replacement fuses.
- No service costs for replacing fuses.
- No waste disposal costs - fuses are electronic waste. They must be disposed of properly.

Your benefits: **Be known as a manufacturer of high-end products for professional users**

Taking the trick with cost reduction



Reducing components

E-T-A circuit breaker/switch combinations and appliance inlet modules help reduce components and limit mounting and wiring time as well as material planning and inventory costs.

Circuit breaker/switch combination:

Two functions in one component

- ON/OFF switch
- overcurrent protection

Example:
E-T-A circuit breaker/switch combination **8345-F**



Circuit breaker/switch combination with add-on modules:

Three functions in one component

- ON/OFF switch
- overcurrent protection
- undervoltage release and remote trip

Example:
E-T-A circuit breaker/switch combination **3120-N** with undervoltage release module



Appliance inlet modules

Up to five functions in a single component

- ON/OFF switch
- overcurrent protection
- undervoltage release and remote trip
- IEC appliance inlet
- line filter

Example:
E-T-A appliance inlet module **X3120-A**



Ten-in-one

Reducing parts when specifying 2-pole protection



And not to forget:

Less single parts also means fewer possible failures leading to less testing time in production.