Thermal circuit breakers for equipment protection

Never replace a fuse again!

E-T-A circuit breaker combinations help you to consistently increase your products’ reliability.

You benefit from:

1. Less malfunction sources.
2. Enhanced overall reliability.
3. Reduced disposition and storage costs.
4. Space-saving design.
5. Rely on consistent technical data!
6. Artless and cost-effective design.

Benefits: Thermal circuit breakers

The most frequently used type of thermal circuit breakers are those for equipment protection. The trip time depends on the height and duration of the overcurrent as well as on the ambient temperature.

Advantages of bimetal-disc-operated circuit breakers:

1. Disc-type snap-action bimetals have a firm contact system.
2. A thermal overstress does not lead to an increase in contact resistance.
3. They are subject to ageing. Over current may be the consequence. Circuit breakers are not always suitable for all electrical loads. This may lead to an increase in contact resistance over time, which could result in fuses becoming inserted. A circuit breaker is thus the more reliable component in this case.

Advantages of bimetal-strip-operated circuit breakers:

1. Their benefits:
2. They are suitable for all electrical loads whose resilience strongly depends on the ambient temperature.
3. Their benefits:
4. They are suitable for all electrical loads whose resilience strongly depends on the ambient temperature.
5. They are suitable for all electrical loads whose resilience strongly depends on the ambient temperature.

Your benefits at a glance

Benefit 1
Reduced malfunction and outages.

Benefit 2
Enhanced overall reliability.

Benefit 3
Reduced disposition and storage costs.

Benefit 4
Space-saving design.

Reduced mounting and wiring time.

Seven in one Example for parts reduction for a 2-pole protection

The E-T-A circuit breaker combination has two options:

- 2 blade fuse, a switch and actuator.
- 2 blade fuse, a switch and avoid switch and actuator.

Disc-type snap-action bimetals have a firm contact system. If the switching temperature is reached through the overcurrent, the strip breaks and thus forces the current to flow.

Blade fuses are a simple type of protective device. They cannot be reset after tripping. As opposed to that, a blown fuse has to be replaced. This can of course not be tested on the electrical circuit before replacement.

Rely on consistent technical data!

If consumers are not disconnected in time, fire hazards are not the immediate consequence. In some cases, internal short circuits, switchgear and switchgear elements may cause sufficient heat to open the protective device. If this potential damage is not detected, the protective device may not operate properly. This is why E-T-A circuit breakers can provide a better security level.

Avoid downtimes!

For the protection of all electrical loads, we recommend to use circuit breakers for all electrical loads, since they are cheaper in use.

Do not take any risks!

Even if E-T-A circuit breaker combinations are relatively easy to fit, you should still take the time to choose the right circuit breaker.

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<table>
<thead>
<tr>
<th>Circuit Breaker/Combination</th>
<th>1110</th>
<th>1410-F</th>
<th>3120</th>
<th>3120 (push button)</th>
<th>X3120 (reach-in)</th>
<th>3130</th>
<th>3130 (push button)</th>
<th>X3120 (reach-in)</th>
<th>3140</th>
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<td>Rated Voltage AC/DC</td>
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