



ELECTRONIC CIRCUIT BREAKERS

Our product portfolio

ELECTRONIC CIRCUIT BREAKERS ESS

Equipment safety in accordance with relevant standards

Meeting the requirements of international standards is imperative in DC 24 V applications for centralised and decentralised control voltages.

In Germany, Europe and North America, EC/EN 60934 and UL 1077 define requirements of circuit breakers for equipment protection. They ensure that function, behaviour and reliability of circuit breakers for equipment protection comply with homogeneous criteria. According to these relevant standards, physical isolation in the event of a failure is mandatory also for DC 24 V load circuits.

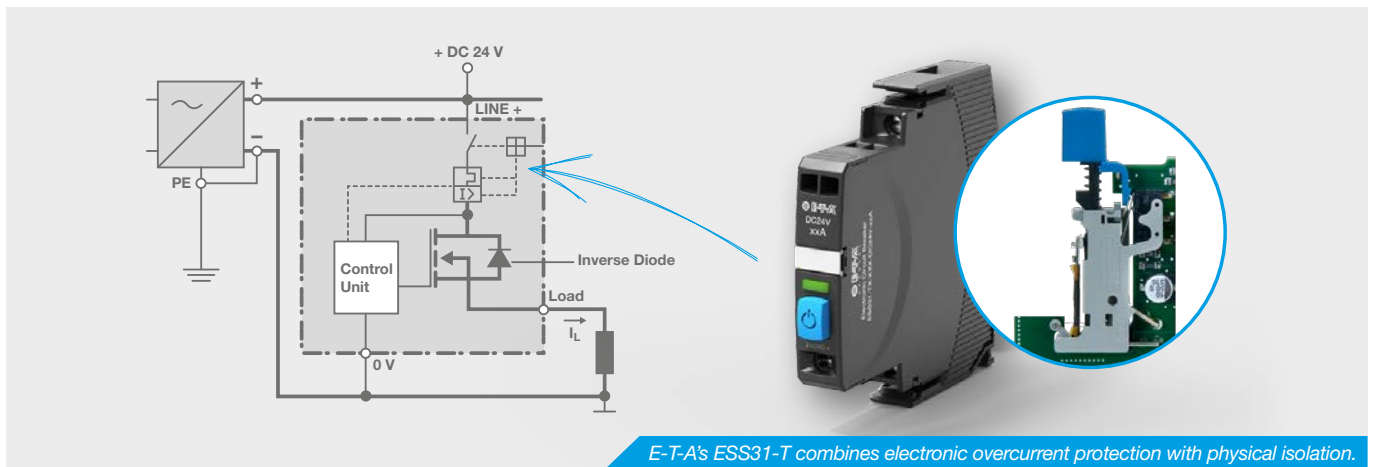
At the same time, physical isolation in accordance with these standards offers more advantages. In any case, it

prevents a failure-caused return supply to the DC 24 V control voltage level after trip or manual disconnection. Physical isolation reliably excludes dangerous system conditions and allows easy trouble-shooting without residual voltage.

All devices of E-T-A's ESS portfolio have a fully-fledged integral bimetal sub-assembly or a relay. In the event of a failure this offers genuine physical isolation of the contacts. In the event of an overcurrent, the load circuit is first

electronically disconnected. A few seconds later, the integral mechanical isolating element also disconnects, thus ensuring physical isolation.

All electronic circuit breakers for equipment protection of the ESS portfolio provide physical isolation and entirely meet the requirements of IEC/EN 60934 and UL 1077.



E-T-A's ESS31-T combines electronic overcurrent protection with physical isolation.

E-T-A's ESS product range has an electronic trip characteristic to ensure optimum protection in the event of a failure. In addition, the trip curves of the ESS devices offer active current limitation. It ensures limitation of the

fault current to a firmly defined value. A simple rule of thumb for electrical planning can be defined as follows: trip current = max. current = current limitation factor typically 1.2 times rated current

The effects a failure such as short circuit or overload in a load circuit can easily be calculated in advance and can already be taken into account in the planning stage.

Approvals	ESS22-T	ESS30-S	ESS31-T
UL 1077	●	●	●
UL 2367		●	●
UL 1310 NEC Class2		●	●
IEC/EN 60934	●	●	●
UL 60947-4-1 listed			●
IEC/EN 60204-1			●



ESS22-T: Double pole protection

The ESS22-T electronic circuit breaker is a single channel device with fixed current ratings. Double pole disconnection allows the use in ungrounded IT systems to EN 60204-1. The ESS22-T is track-mountable and ensures quick and flexible start-up for groups of devices with several DC 24 V circuits.

APPLICATION

- Automation
- Power plants
- Medical equipment
- Steel industry



More Information about the ESS22-T

ESS30-S: Economical and compact

The ESS30-S electronic circuit breaker for equipment protection and supplementary protector is approved to IEC/EN 60934 and UL1077. Besides fixed and adjustable current ratings, the ESS30-S has an NEC Class2 approval to UL 1310 for current ratings up to 3.6 A. The power distribution modules 17plus or 18plus serve as a basis.

APPLICATION

- Automation
- Car production
- Chemistry, oil and gas
- Power plant engineering DC 24 V



More Information about the ESS30-S

ESS31-T: Ready for global use

E-T-A's ESS31-T is a single pole, track-mountable circuit breaker. The housing of the ESS31-T features an integral power distribution. This electronic circuit breaker also has the NEC Class2 approval according to UL1310 as well as UL1077 and IEC/EN 60934.

APPLICATION

- Automation
- Car production
- Machine construction
- Pharmaceuticals and foodstuffs



More Information about the ESS31-T



YOUR BENEFITS

- **Enhanced protection** for your system and connected loads thanks to physical isolation and selective disconnection
- **Increases** system availability through clear failure detection and signalling
- **Flexible use** of the devices through a number of international approvals

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