

# Electronic Circuit Breaker Type ESS20. Optimum protection, minimum size.



# Technical Information.

## Electronic Circuit Breaker Type ESS20.

The ESS20 Electronic Circuit Breaker has a width of only 12.5 mm. It selectively protects all DC 24 V load circuits through a combination of active electronic current limitation and well-proven circuit breaker technology with physical isolation. The ESS20 can be plugged into the E-T-A power distribution socket module 17plus, ensuring ease of installation and a significant reduction in wiring time.

Switch-mode power supplies, which are widely used in industry today, will shut down the output in the event of an overload with the result that one faulty load in the system can lead to complete disconnection of all loads.

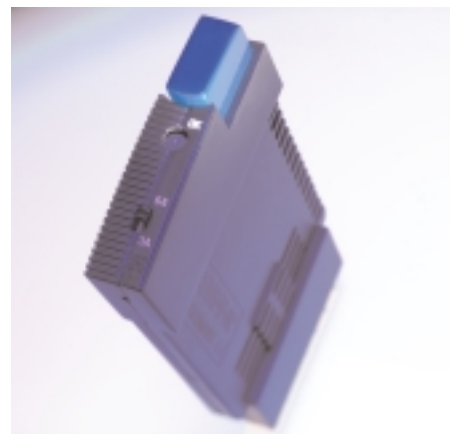
The ESS20 helps to overcome this problem. As the highest possible current is limited to 1.8 times the set rated current of the

circuit breaker it is also possible to switch on even capacitive loads, but they are disconnected only in the event of an overload or short circuit.

The current rating of the circuit breaker (3 A or 6 A) is selected by means of a switch. Failure and status indication are provided by LEDs and integral signal contacts.

### Technical data ESS20

Operating voltage $U_B$	DC 18 V...32 V
Current rating range $I_N$	3 A or 6 A (selectable by means of a switch)
Signalisation	bicolour LED, potential-free signal contact, ON/OFF position of push button
Load output	power-MOSFET switching output (plus switching)
Max. data of load (with 100% ON duty)	DC 24 V / 6 A (resistive, inductive, capacitive, lamp load, 5 A when mounted in series)
Overload disconnection	typically $1.1 \times I_N$
Disconnection times	
- for physical isolation	typ. 5 sec at $I_L > 1.1 \times I_N$
- for electronic disconnection	typ. 5 sec ... 100 sec at $I_L > 1.8 \times I_N$
Short circuit current $I_K$	active current limitation max. $1.8 \times I_N$
Switch-on delay $t_{Start}$	typ. 300 ms
Physical isolation of load circuit	on one pole (switch contact) - by push-push actuation of the blue push button - after electronic fault disconnection (overload, short circuit)



### Features and benefits

- Selective load protection with physical isolation.
- Active current limitation for safe connection of capacitive loads and on overload.
- One unit for two current ratings: 3 A and 6 A (selectable).
- Manual ON/OFF button.
- Clear status and failure indication.
- Width per unit only 12.5 mm.
- Plug-in mounting utilising power distribution system "module 17plus".



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