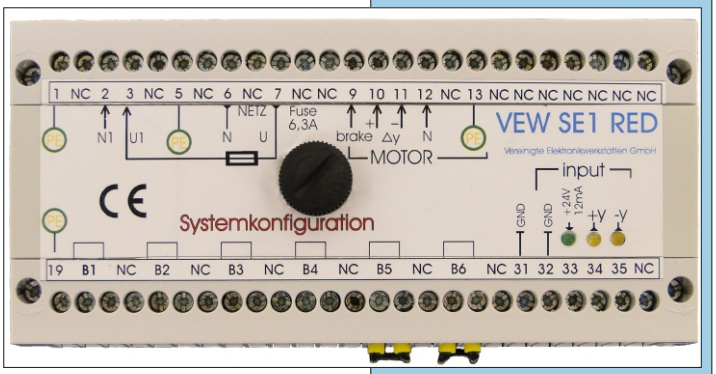
Compact power electronic for S&F variable speed drive VEW SE1 RED

Redesign

The original three-point power electronics SE1 from the manufacturer H&B or S&F can be replaced by a completely dimension-, function- and terminal-compatible redesign, plug-and-play.
The VEW SE1 RED in the switch panel housing for mounting rail mounting acts as a switching amplifier to control actuators with single-phase induction motors up to 400VA, or synchromotors up to 50VA.
The actuator is positioned using binary output signals from a higher-level controller.
The binary control signals can be provided by "current-supplying" outputs or galvanically isolated by optocouplers or relays.
The control signals are signaled by LEDs at the inputs of the SE1 RED.



The inputs of the SE1 RED are monitored by internal logic by blocking identical control signals on both inputs at the same time. The motor drive operated on the SE1 is controlled by electrically large power triacs.
The motor control is preceded by the signal to release the electromechanical motor brake.
After the end of a binary control signal, the motor of the SE1 is automatically braked electrically with a short, counter-rotating rotary pulse.
Then the electromechanical motor brake is released and fixes the drive at a standstill.
Both measures, early release and electrical braking of the motor, act against premature wear of the brake linings of the electromechanical brake.
In contrast to single-phase induction motors, synchronous motors reverse the direction of rotation in a much shorter time, so that the automatic electrical opposing field brake can be switched off by opening the corresponding setting bridge. These bridges are accessible on the terminal strip.
A zero-pass control of the triacs as well as an LCR protective circuit at the outputs for the motor connection effectively suppresses possible EMV-distribution when switching the motors.
An excitation capacitor corresponding to the motor power is connected to the drive.
The SE1 is protected by a 6.3A F fuse in the mains input.
The device provides the 24 V DC system voltage for external wiring at a terminal.
The control pulses and the system voltage are displayed with LEDs.
An SZ1 module can be connected upstream of the SE1.

Technical data:

Input voltage	: 230V AC 50Hz +10-15%, 5VA
Binary inputs	: Bin1 = nom. +24V (+12...36V), Bin 0 = 0V (-2...+5V)
Power output	: 230V AC max. 400VA, min. 25VA
Housing	: Plastic IP20, control panel W150 D120 H72mm, cap rail

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