Description

The new power distribution system type SVS25 meets all requirements of the automation technology with regard to reliably overcurrent protection and optimised current distribution.

The track-mountable power distribution system SVS25 distributes the voltage potentials supplied by a DC 24 V switch-mode power supply to 8 slots and selectively protects the connected loads by means of the plugged in circuit protector type REF16-S101-DC24V. The SVS25 simplifies wiring and distribution with a load current of 10A per way and a max. total current of 40A in short-circuit-limited DC 24 V applications. 10 protected »+« load outputs and 10 minus terminals per slot help significantly reduce wiring time.

Any load circuit which might be disconnected due to overload or short circuit generates a single signal which will be summarised in a group signal directly on the power distribution system and which will be fed back directly to the control unit.
The line entry for the DC 24 V supply as well as the load output terminals are designed as push-in terminals so that the entire system can be wired quickly and cost-effectively.

Suitable for the following types:

Electronic	**REF16-S101**
circuit protectors	**REF16-S100 (without signalling)**

Features and Benefits

- Systematic integration of protection and distribution functions
- Power distribution and selective protection of DC 24 V load circuits all in one
- Clearly laid-out distribution concept
- Profitability through considerably reduced wiring time
- Reduction of planning, design and installation time
- Ease of maintenance, diagnosis and system extension
- Compact power distribution for compact control cabinets
- 10 plus and minus terminals per slot
- Integral group signalling

Order numbering code

Type		
SVS25	power distribution system for REF16-S	
	● for short-circuit limited DC 24 V applications	
	● max. 40 A cont. load	
	● group signalling terminals X41 included, DC24V / max. 0.5 A, has to be protected separately	
	Max. number of circuit protectors on the distribution system	
	08	8 circuit protectors [F1 ...F8]
		Population, load output, minus and signalling terminals
		001 completely fitted with push-in terminals (max. 2.5 mm², without wire end ferrule)
SVS25	**08 - 001**	ordering example

Accessories: see page "accessories"

Technical data (T$_{amb}$ = 25 °C, U$_B$ = DC 24 V)

Application:	
Modular power distribution system for short circuit current limited DC 24 V applications	

Supply	
Rated voltage:	DC 24 V (18...30 V)
Total current	max. 40 A DC 24 V (+) = X21 1+ / 2+ DC 24 V (-) = X21 1- / 2-
Terminals	2 x 2-pole push-in terminals max. 10 mm², for power supplies integral loop-through, for sub-wiring cable cross section flexible with wire end ferrule (with plastic sleeve) 0.75 – 10 mm² stripped length 18 mm

F-slots	
8 slots for circuit protectors, prepared for types REF16-S101-... / REF16-S100-...F1...F8[1] = terminals X1....X8	

Load outputs, load output (+) and load output (-) per way (X1...X8)	
Rated voltage	DC 24 V (18...30 V)
Current	max. 10 A per terminal block (1 to 10)
Load terminals:	10 x 1/2/3/4//5/6/7/8/9/10 protected per slots F1...F8[1] led out to terminals X1.1...X8.1
Minus terminals:	10 x 1/2/3/4//5/6/7/8/9/10 protected per slots F1...F8[1] led out to terminals X1.2...X8.2
Terminals:	push-in terminal block, 2 x 5-pole max. cable cross section flexible with wire end ferrule (with plastic sleeve) 0.25 – 1.5 mm² flexible with wire end ferrule (without plastic sleeve) 0.25 – 2.5 mm² stripping length 8 mm

[1] When mounted side-by-side and fully equipped with the circuit protectors REF16-Sxxx rated 10A the devices can only carry 80% of their rated load continuously.

Technical data $(T_{amb} = 25\ °C, U_B = DC\ 24\ V)$

Signalling

Rated voltage:	DC 24 V (18 ... 30 V)
Total current	max. 0.5 A

Signal terminal X41 for group signalling

Si 1	External supply + DC 24 V for aux. circuit (max. 0.5 A)
Si 2	Output aux. circuit (max. 0.5 A)
Terminals:	2-pole screw terminals
	push-in terminals max. 2.5 mm^2
	max. cable cross section
	flexible with wire end ferrule
	(with plastic sleeve) 0.25 – 1.5 mm^2
	flexible with wire end ferrule
	(without plastic sleeve) 0.25 – 2.5 mm^2
	stripping length 8 mm

General data

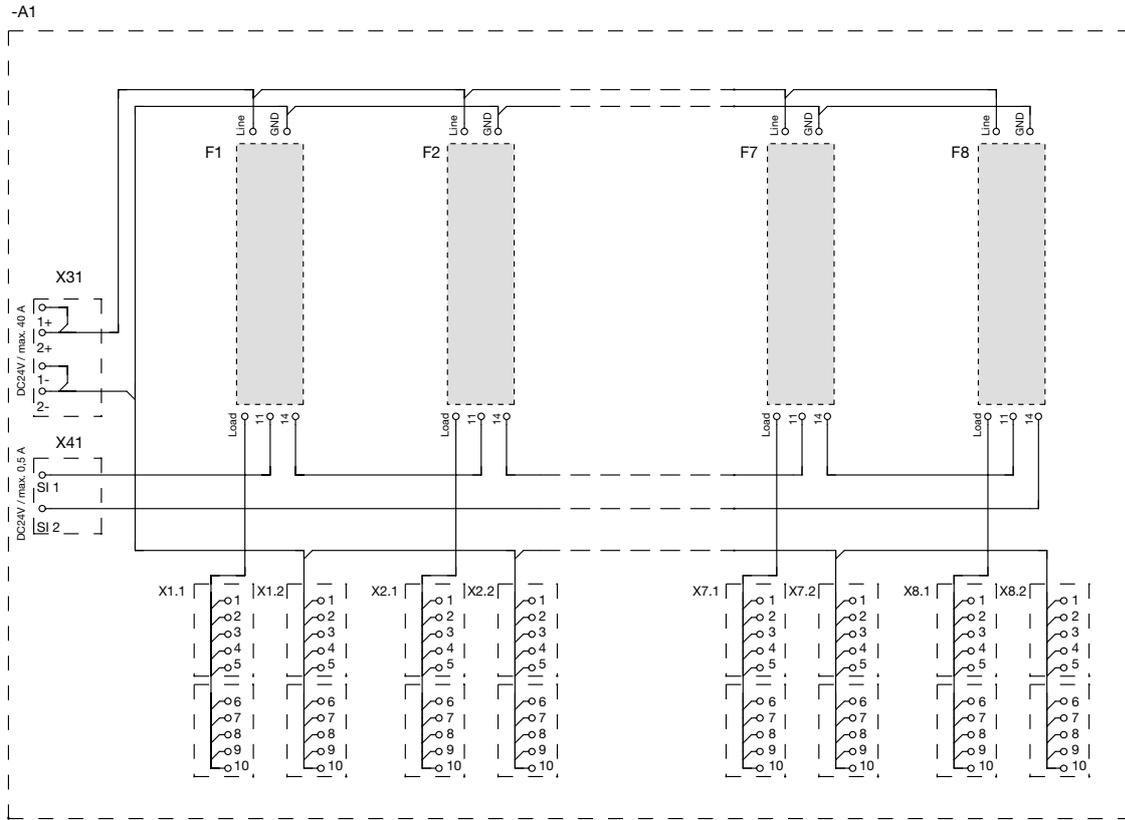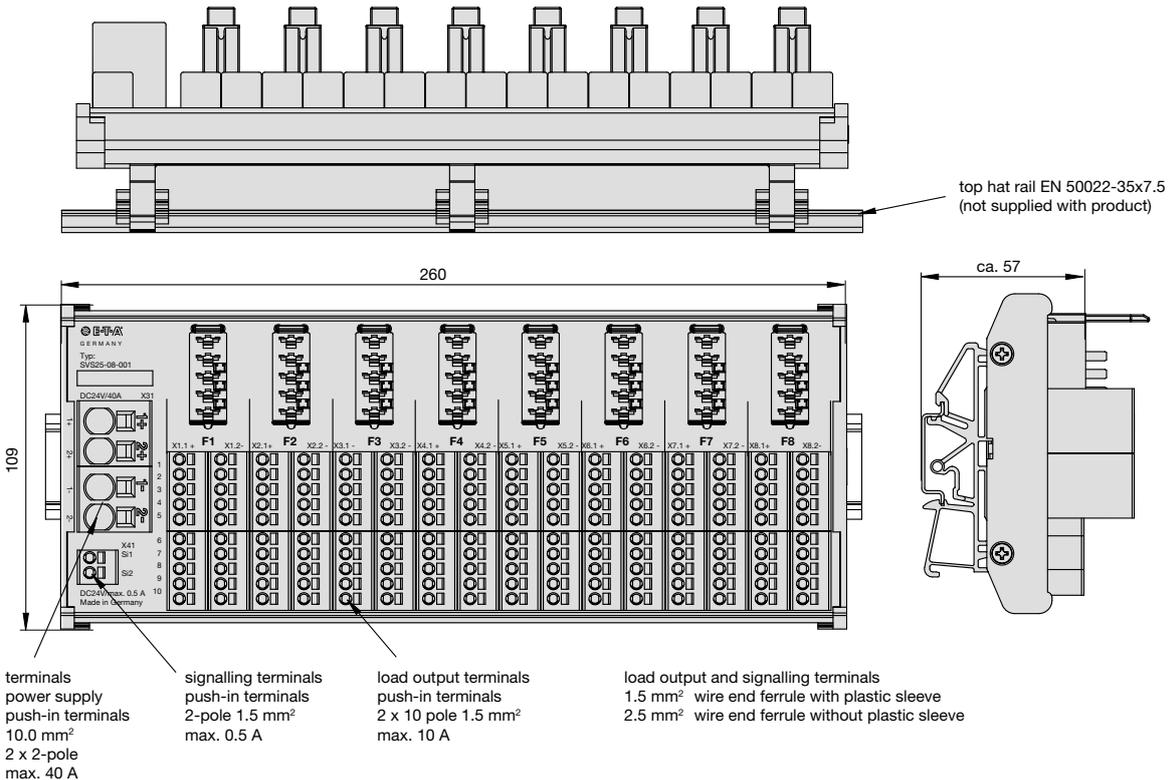|		
Mounting of housing	symmetrical rail to EN 60715 - 35 x 7.5	
Temperature range	0...50 °C (without condensation)	
Storage temperature	-20...+70 °C	
Housing material	moulded	
Degree of protection	terminals	IP20 DIN 40050
	printed circuit board	IP00 DIN 40050 (double coating)
Insulation voltage	DC 250V (pcb)	
Dimensions	see dimensions	
	(tolerances to DIN ISO 286 part 1 IT13)	
Mass	SVS201-08-001	approx. 625 g

Mounting position
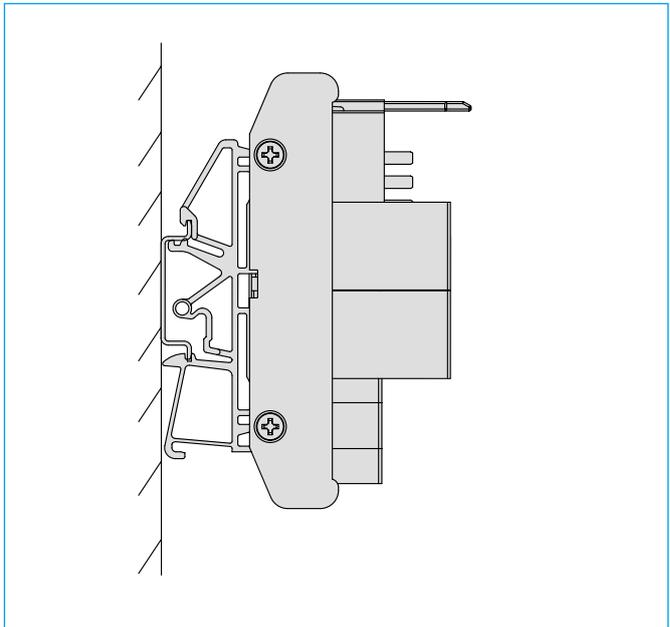
Notes for installation

- The max. total current of 40A per way must not be exceeded
- The user has to ensure that the cable cross section of the load circuit in question complies with the current rating of the used load or circuit protector.
- The technical data of the circuit protector have to be observed.
- In addition special precautions must be taken in the system or machine (e.g. use of a safety PLC) which reliably prevent an automatic re-start of parts of the system (cf. Machinery Directive 2006/42/EG and EN 60204-1, Safety of Machinery). In the event of a failure (short circuit/overload) the load circuit will be disconnected by the circuit protector.
- The power distribution system must only be installed by qualified personnel.
- It is only intended for use with safety extra-low voltage (= 24V DC).
- Only after expert installation must the device be supplied with power.
- After tripping of the circuit protector, before reset, the cause of short circuit or overload has to be remedied.
- The national standards (e.g. for Germany DIN VDE 0100) have to be observed for installation and selection of feed and return cables.
- Connection to a higher or not reliably disconnected voltage can cause hazardous conditions or damages.

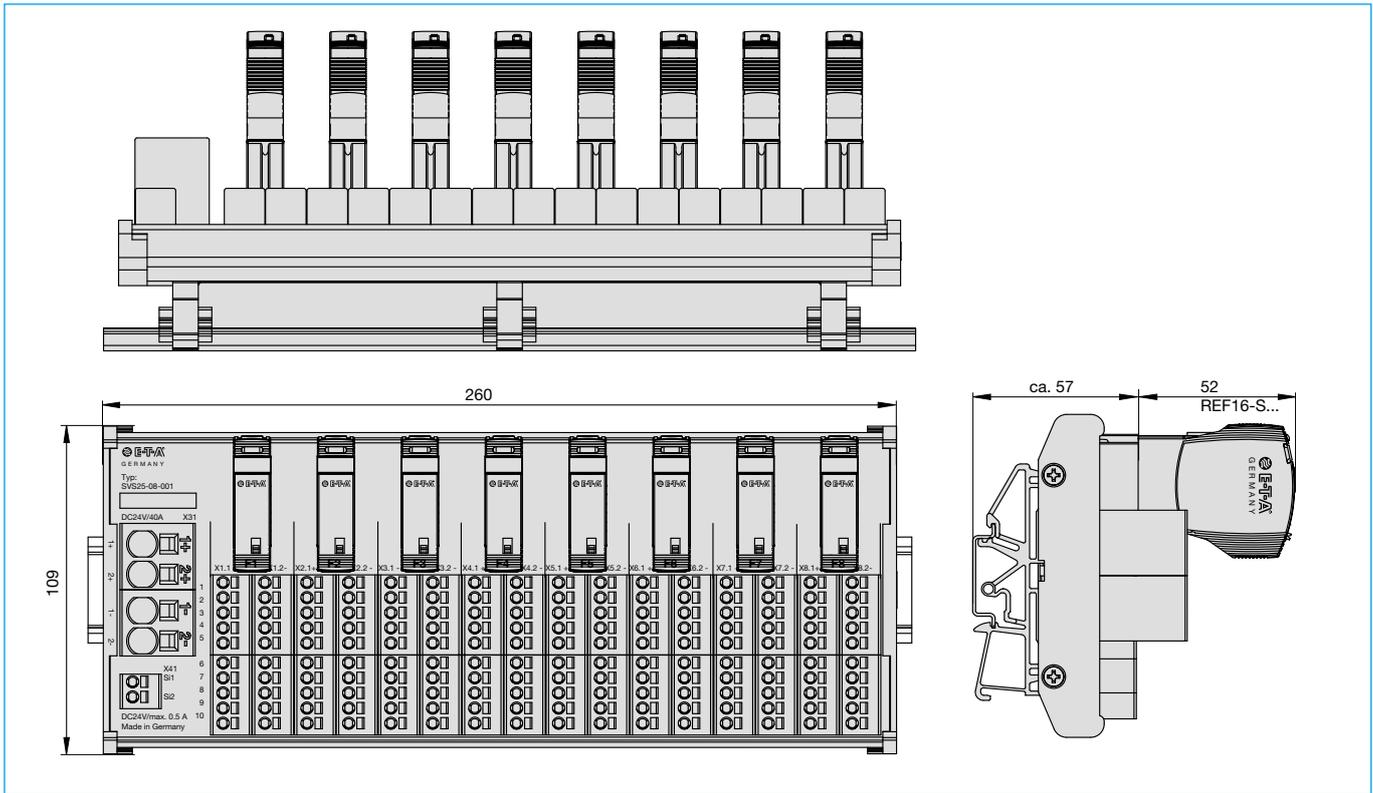1

Schematic diagram SVS25-08-001

Dimensions SVS25-08-001

top hat rail EN 50022-35x7.5
(not supplied with product)

260

109

ca. 57

terminals
power supply
push-in terminals
10.0 mm²
2 x 2-pole
max. 40 A

signalling terminals
push-in terminals
2-pole 1.5 mm²
max. 0.5 A

load output terminals
push-in terminals
2 x 10 pole 1.5 mm²
max. 10 A

load output and signalling terminals
1.5 mm² wire end ferrule with plastic sleeve
2.5 mm² wire end ferrule without plastic sleeve

Please order the required population option separately.

1

SVS25-08-001, empty

SVS25-08-001 fitted with REF16-S...

Please order the required population
option separately.

Application example: jumper instead of circuit protector (e.g. REF16-S101)

If the power distribution system is not completely fitted with circuit breakers, the subsequently open signal way can be closed with the plugged-in jumper type SB-S21-P1-01-2-1A.

The signal way of the group signalisation goes
- after supply of the +DC 24 V potential in X41, Si1
- via the plugged-in juimper and
- via all aux. N/O contacts Si (11) / Si (14) of the used circuit protector types REF16-S101,
- back to the signal output of the group signal X41, Si2

In the OK condition (i.e. all circuit protectors plugged in and operating) the signal way X41, Si1 to X41, Si2 is closed.

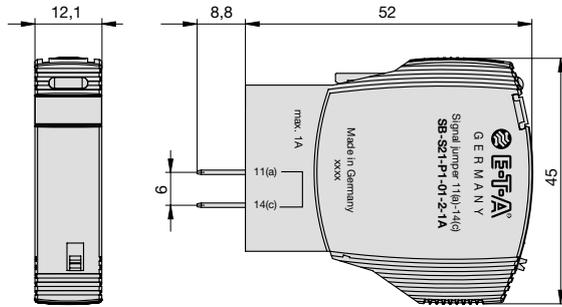## Schematic diagram SVS25-08-001 signal path
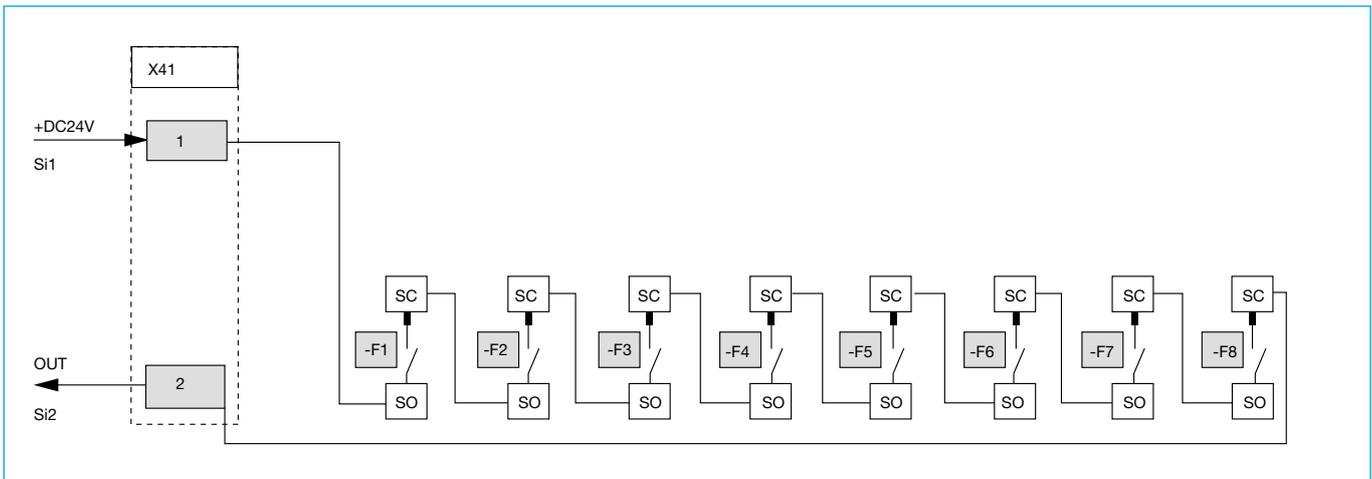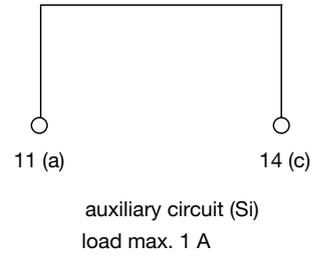

SVS25-08-xxx with REF16-S101… and SB-S21-P1-01-2-1A
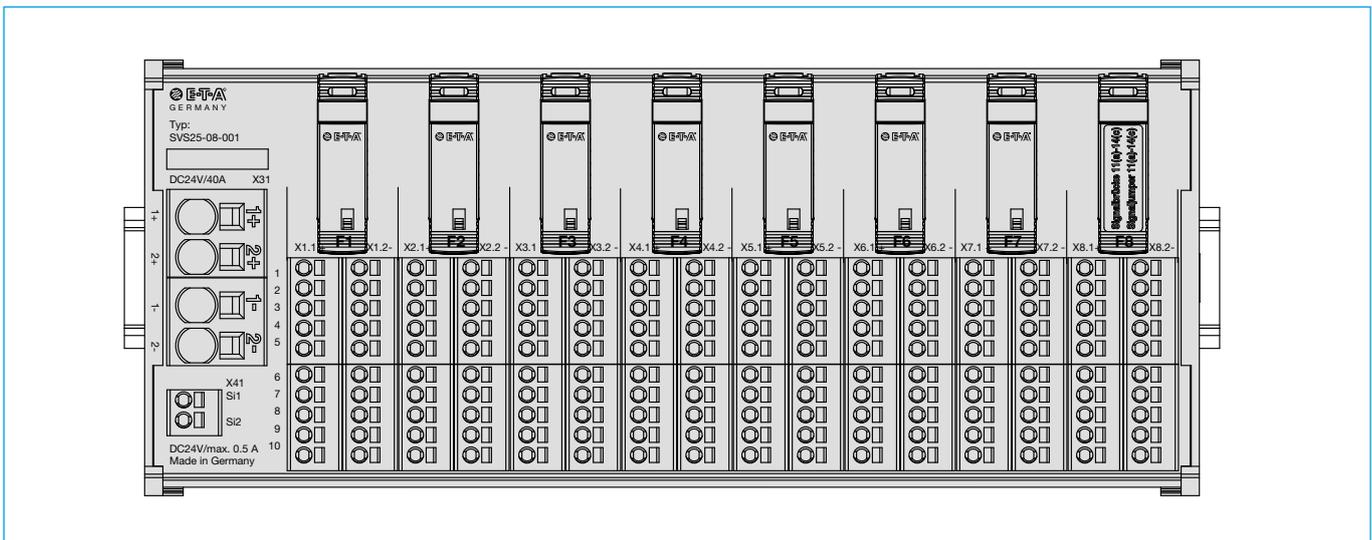
Jumper SB-S21-P1-01-2-1A

Accessories

Jumper:
for insertion in empty slots instead of circuit breakers for bridging the looped-through auxiliary contacts (series connection)
SB-S21-P1-01-2-1A

12,1   8,8   52

max. 1A

Made in Germany
xxxx

11(a)
14(c)

Signal jumper 11(a)-14(c)
SB-S21-P1-01-2-1A
E·T·A
GERMANY

45

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Schematic diagram

11 (a)   14 (c)

auxiliary circuit (Si)
load max. 1 A