

## Description

The SVS04 power distribution system for symmetrical DIN rail mounting is designed to distribute power from a switch-mode power supply to 4 or 8 channels. Selective protection of the load output circuits is provided by the plug-in type circuit breakers installed. With a max. load current of 8A per channel and a max. total current of 40A the SVS04 provides ease of wiring in short circuit current limited DC24V applications. Five protected "L+" load outputs per way and 15 or 30 minus terminals significantly reduce wiring time enormously.

Electronic circuit breaker ESS20-003, electronic circuit protector ESX10-103 and thermal-magnetic circuit breakers 2210-S21 are all suitable for use with the SVS04, plugging directly into the sockets provided for each of the 4 or 8 outputs.

## Ordering information

### Type

- SVS04** power distribution system for types ESS20-003, ESX10-103, 2210-S21
- for short circuit current limited DC 24 V applications
  - max. 40 A continuous load
  - one integral circuit breaker (CB1): overcurrent protection of group signalisation, red LED flashes upon trip of CB1
  - including 1 insulated wire bridge Y 303 881 08
  - accessories: jumper SB-S11-P1-01-1-1A  
for unused ways, please order separately

### Version, max. number of circuit breakers on the power distribution system

- 04** 4 circuit breakers F1...F4
- 08** 8 circuit breakers (F1...F8)

### Fitted versions

- B10** standard: fitted with screwless spring-loaded terminals (max. 2.5 mm<sup>2</sup>, without wire end ferrule)
- B20** fitted with plug-in type screw terminals (max. 2.5 mm<sup>2</sup>, without wire end ferrule)
- C10** fitted with pcb terminals, spring-loaded terminals (max. 2.5 mm<sup>2</sup>, without wire end ferrule)

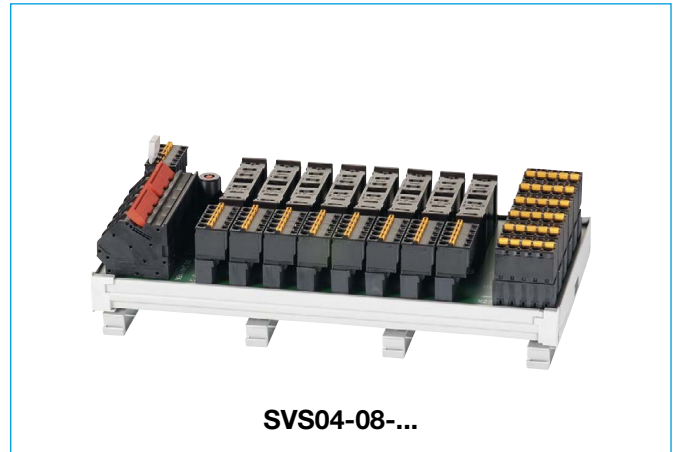
### Minus terminals

- 15 minus terminals
- K01** 30 minus terminals (only for SVS04-08)

### Special marking

- SB01** with marked terminals  
entry line +++/--  
remaining terminals 1/2/3/4/5

SVS04 - 04 - B10 - K01 - SB01



## Technical data

### DC 24 V supply

DC 24 V terminals, 2x3 terminals (screwless terminals max. 10 mm<sup>2</sup>), for current supply

- DC 24 V (+) = (X21) +/+/+
- DC 24 V (-) = (X21) -/-/-

Integral loop-through, for wiring and additional connection of an external buffer module.

### F positions

Number of ways for circuit breakers, suitable for types ESS20-003, ESX10-103, 2210-S21

- SVS04-04... F1...F4 = terminals X1...X4
- SVS04-08... F1...F8 = terminals X1...X8

Plug jumper SB-S11-P1-01-1-1A into unused ways (please order separately, see accessories)

### Load outputs

5 x L+ protected per position F1...F4 (F1...F8), led through terminals X1...X4 (X1...X8), max. 2.5 mm<sup>2</sup> load current max. 8 A per position

### Signalisation

signalisation terminal X31, 5-pole, max. 2.5 mm<sup>2</sup>

- +: DC 24 V feed from terminal X21, protected by integral circuit breaker CB1  
total current max. 0.5 A  
group signalisation:
- S: line feed DC 24 V, insert insulated wire bridge Y 303 881 08 (bulk shipped) between + and GR
- AS: output of group signalisation  
two-group signalisation
- GR: line feed, insert insulated wire bridge Y 303 881 08 (bulk shipped) between + and GR
- AS: output group A (X5...X8)
- B: output group B (X1...X4)

### Minus terminals

3 x 5 terminals (X22, X23, X24) or  
6 x 5 terminals (X22, X23, X24, X25, X26, X27): version K01

### Termination

For signalisation, load outputs and minus terminals:

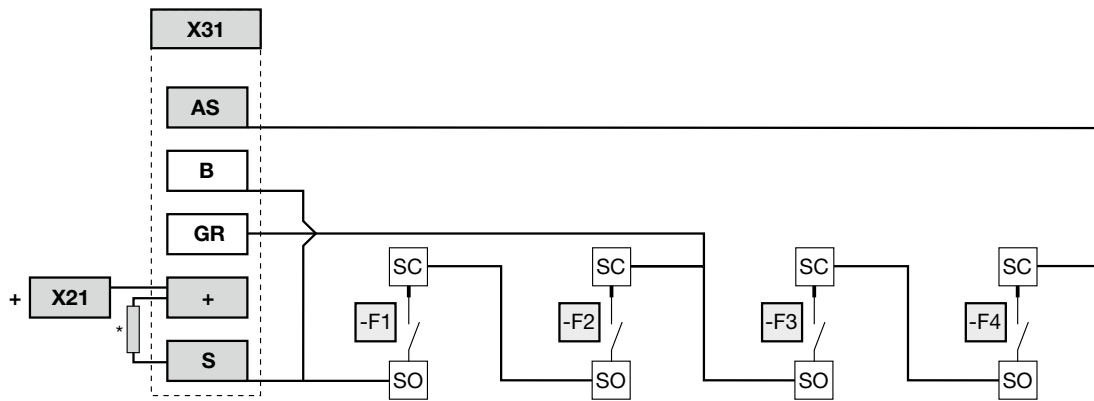
- B10: screwless spring-loaded terminals max. 2.5 mm<sup>2</sup>, with integral test socket
- B20: plug-in type screw terminals max 2.5 mm<sup>2</sup>, with integral test socket
- C10: pcb terminal/spring-loaded terminal max. 2.5 mm<sup>2</sup>, with integral test socket

### General data

- protection class to DIN 40050: IP20
- insulation co-ordination to IEC 60934: 0.5 kV
- pollution degree 2
- dielectric strength AC 500 V
- temperature range: 0...50 °C (without condensation)
- for symmetrical DIN rail mounting EN50022 – 35 x 7.5
- dimensions: see dimensional drawings

**Wiring example: SVS04-04... with ESS20-003 and group signalisation**

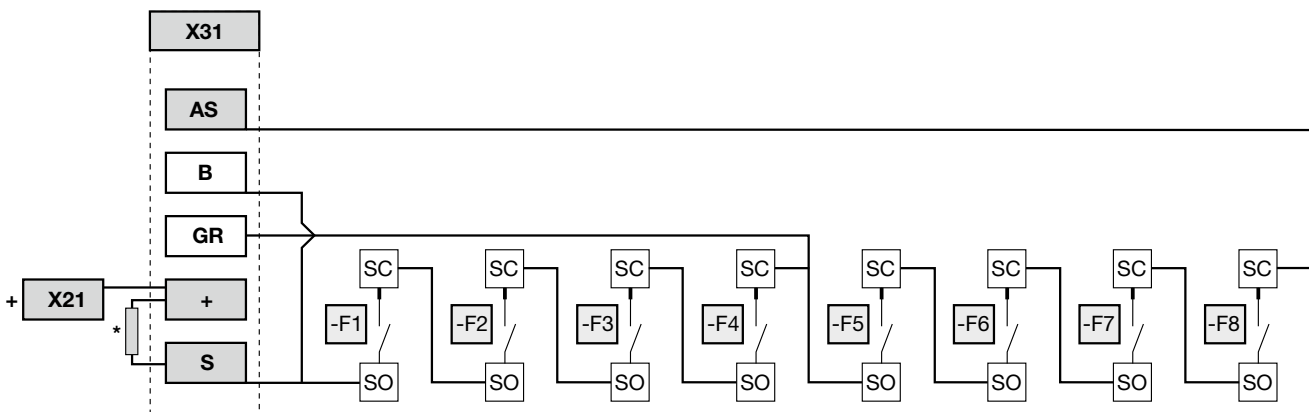
Signal path of group signalisation from F1 to F4



- X 31**     **signalisation terminal**
- AS        signal output group signal
- +         +DC 24 V from terminal 21, internally prewired and protected by CB1
- S         line feed group signalisation with insulation bridge\*
- SC / SO    auxiliary contact ESS20-003, make contact

**Wiring example: SVS04-08... with ESS20-003 and group signalisation**

Signal path of group signalisation from F1 to F8

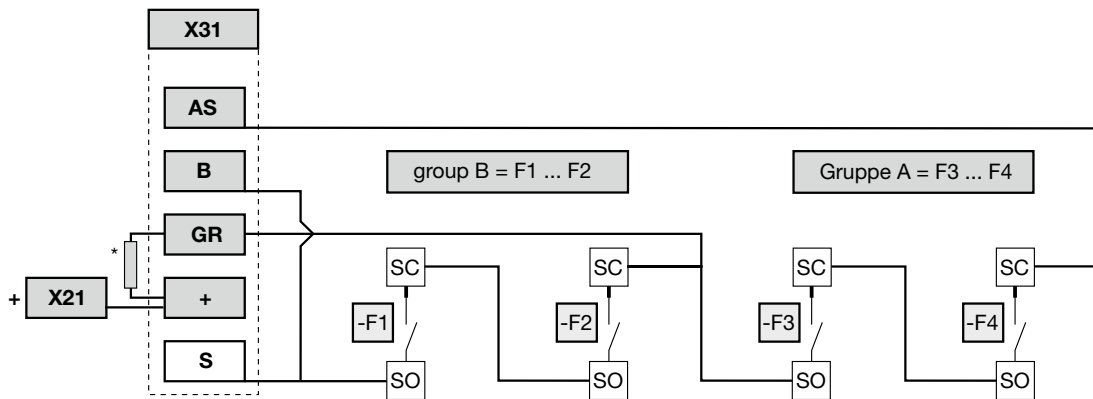


- X 31**     **signalisation terminal**
- AS        signal output group signal
- +         +DC 24 V from terminal 21, internally prewired and protected by CB1
- S         line feed group signalisation with insulation bridge\*
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Wiring example: SVS04-04... with ESS20-003 and two-group signalisation

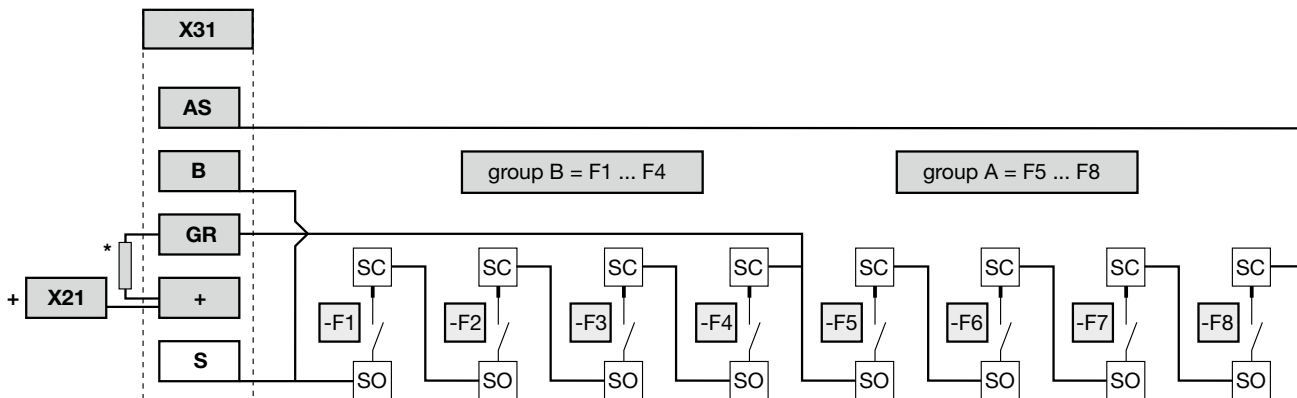
Signal path of two-group signalisation  
from F1 to F2 = group B, from F3 to F4 = group A



- X31** signalisation terminal
- AS signal output group A (F3 ... F4)
- B signal output group B (F1 ... F2)
- + +DC 24 V from terminal 21, internally prewired and protected by CB1
- GR line feed two-group signalisation with insulation bridge\*
- SC/SO auxiliary contact ESS20-003, make contact

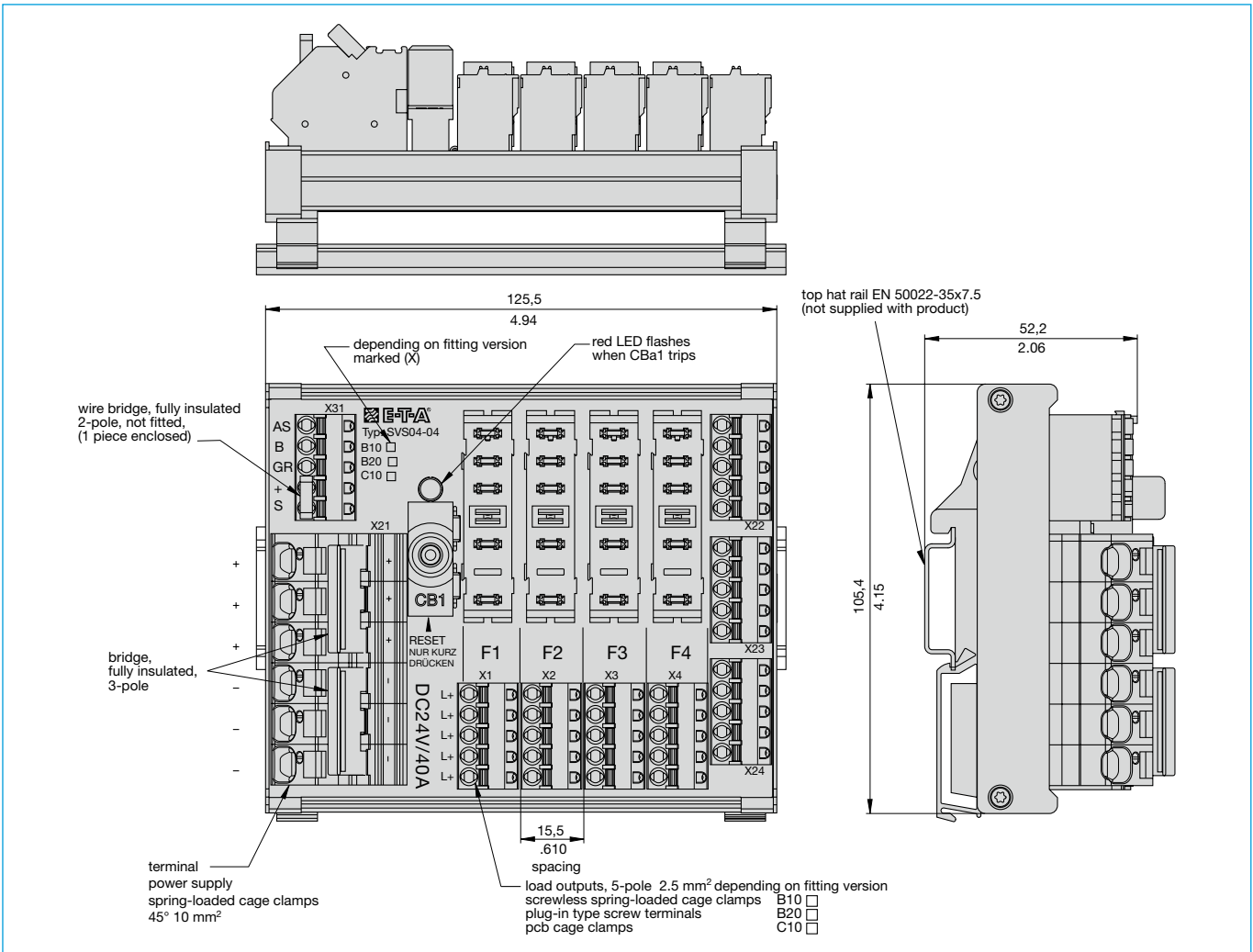
Wiring example: SVS04-08... with ESS20-003 and two-group signalisation

Signal path of two-group signalisation  
from F1 to F4 = group B, from F5 to F8 = group A

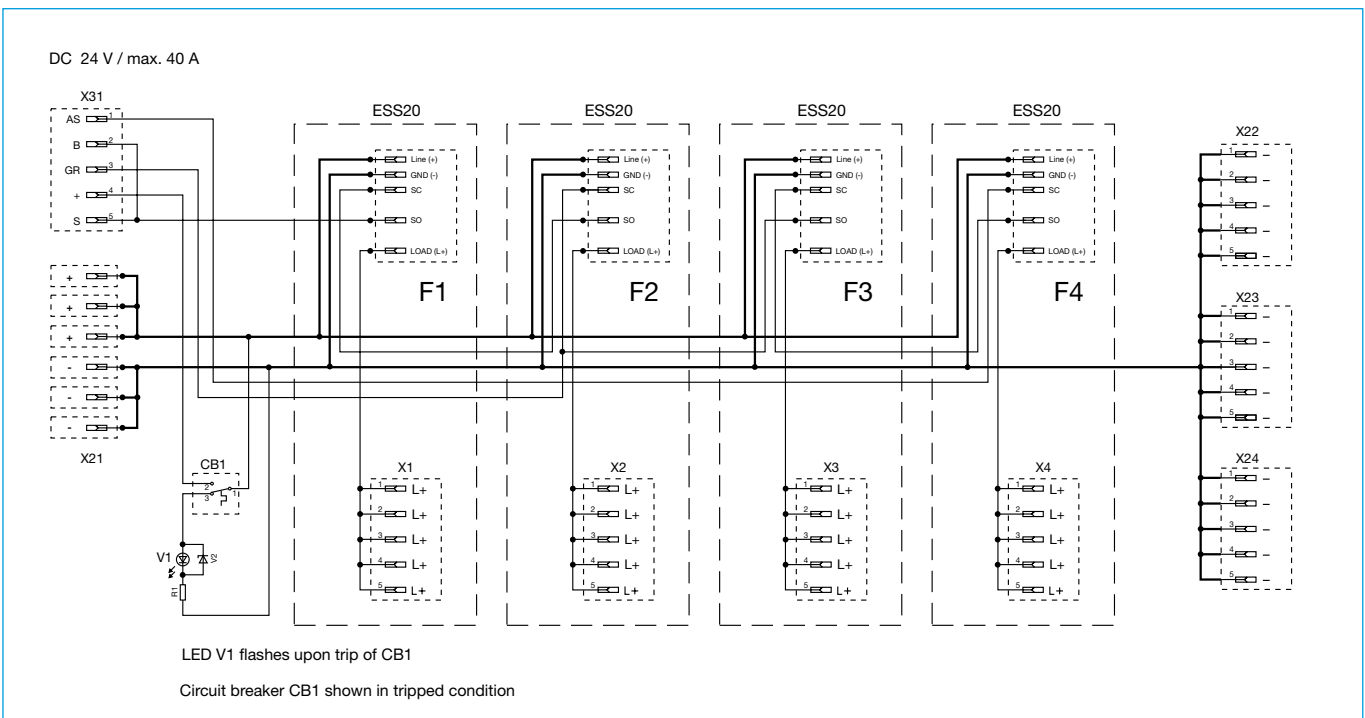


- X31** signalisation terminal
- AS signal output group A (F5 ... F8)
- B signal output group B (F1 ... F4)
- + +DC 24 V from terminal 21, internally prewired and protected by CB1
- GR line feed two-group signalisation with insulation bridge\*
- SC/SO auxiliary contact ESS20-003, make contact

**Dimensions SVS04-04-... (with 15 minus terminals)**

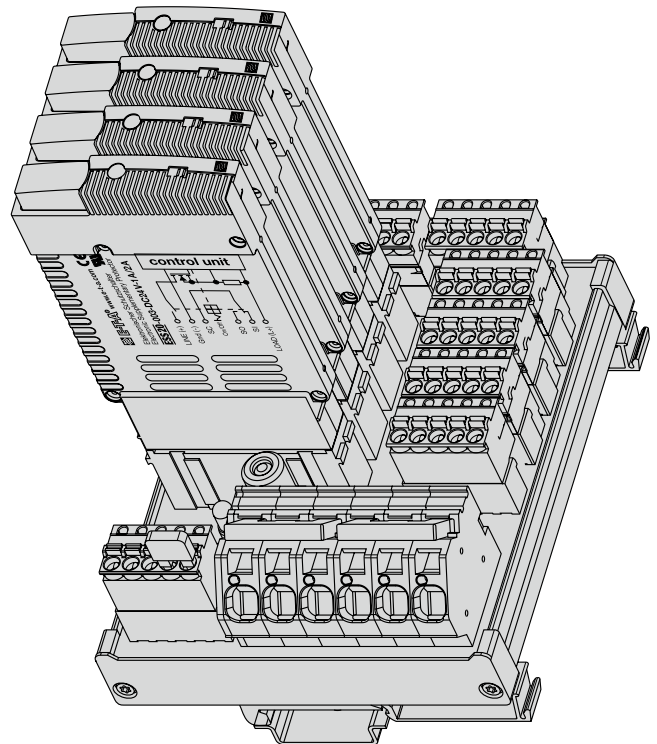
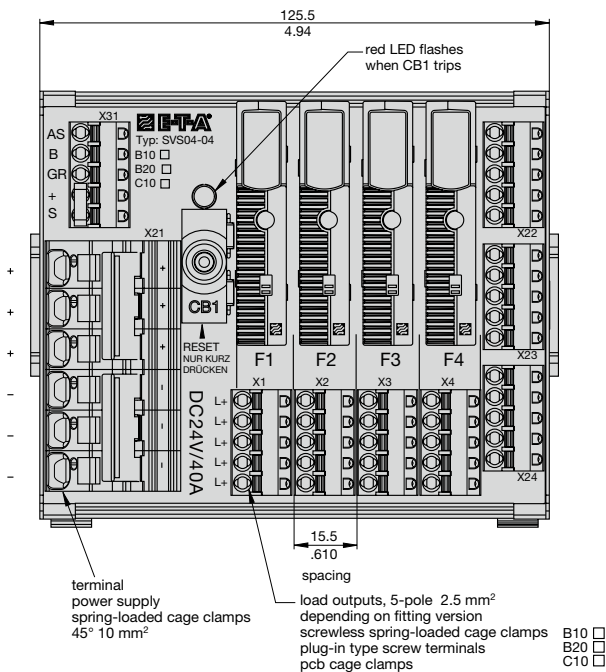
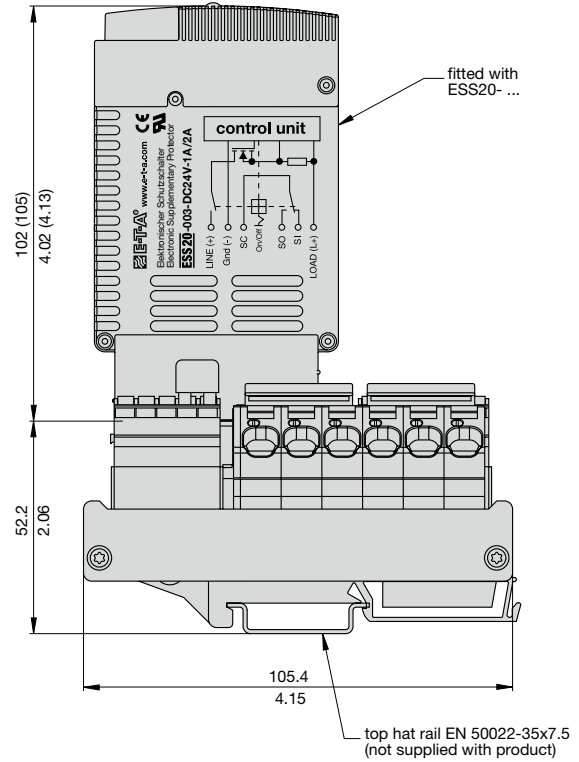
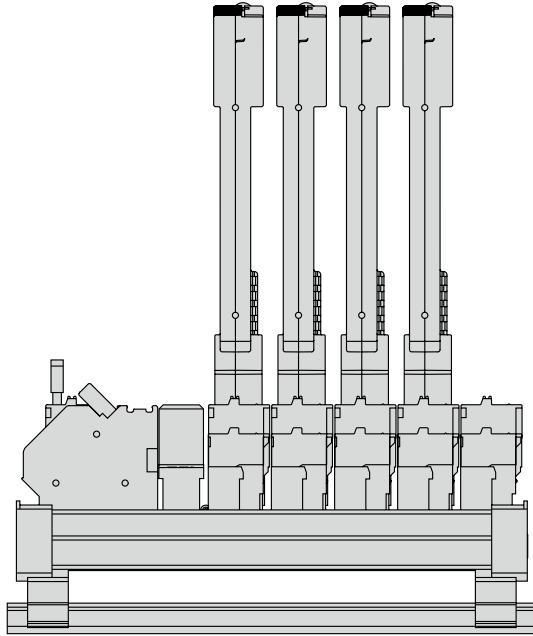


**Schematic diagram SVS04-04-... (fitted with ESS20-003)**



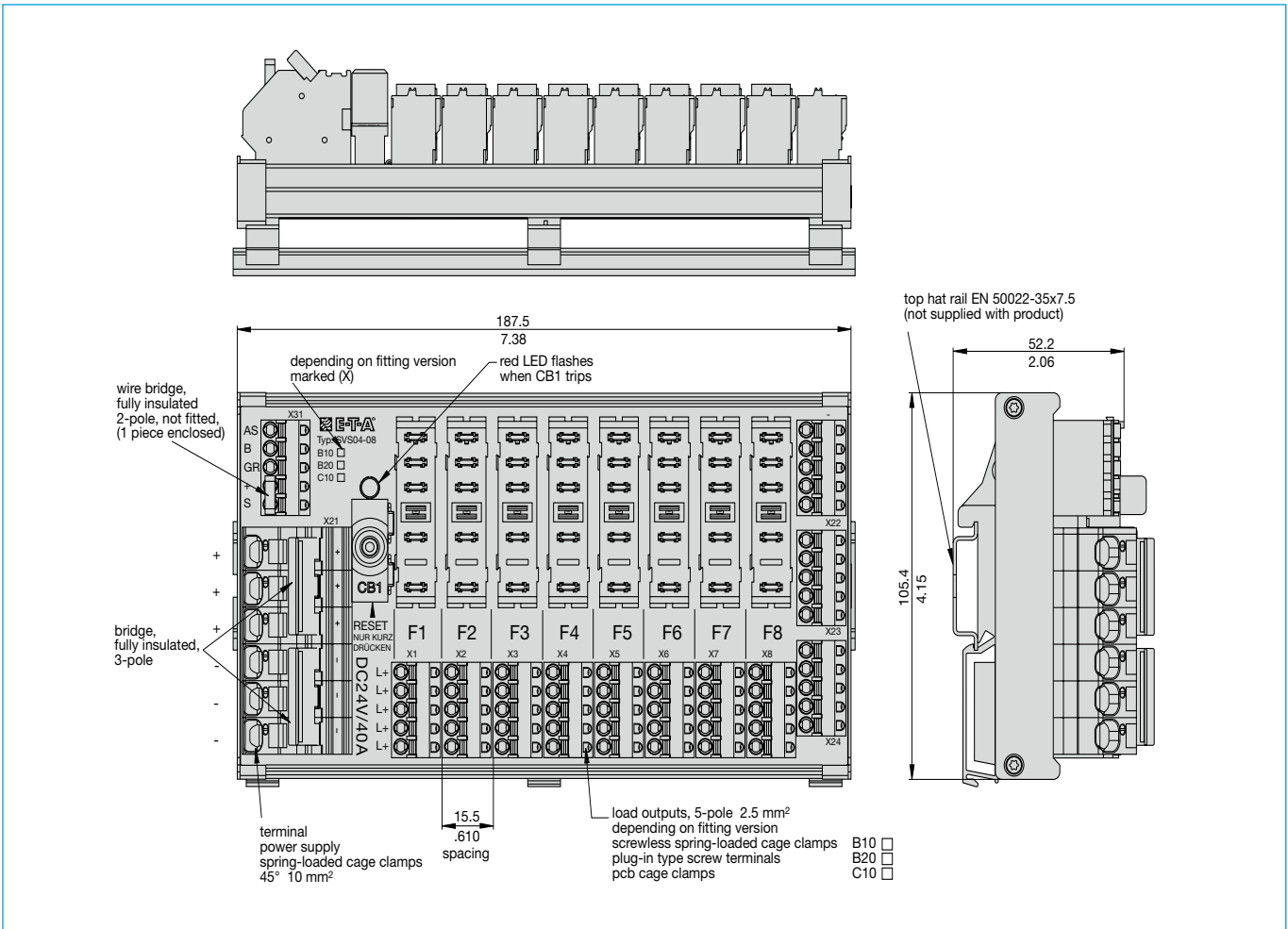
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**Dimensions SVS04-04-..., fitted with ESS20-003**

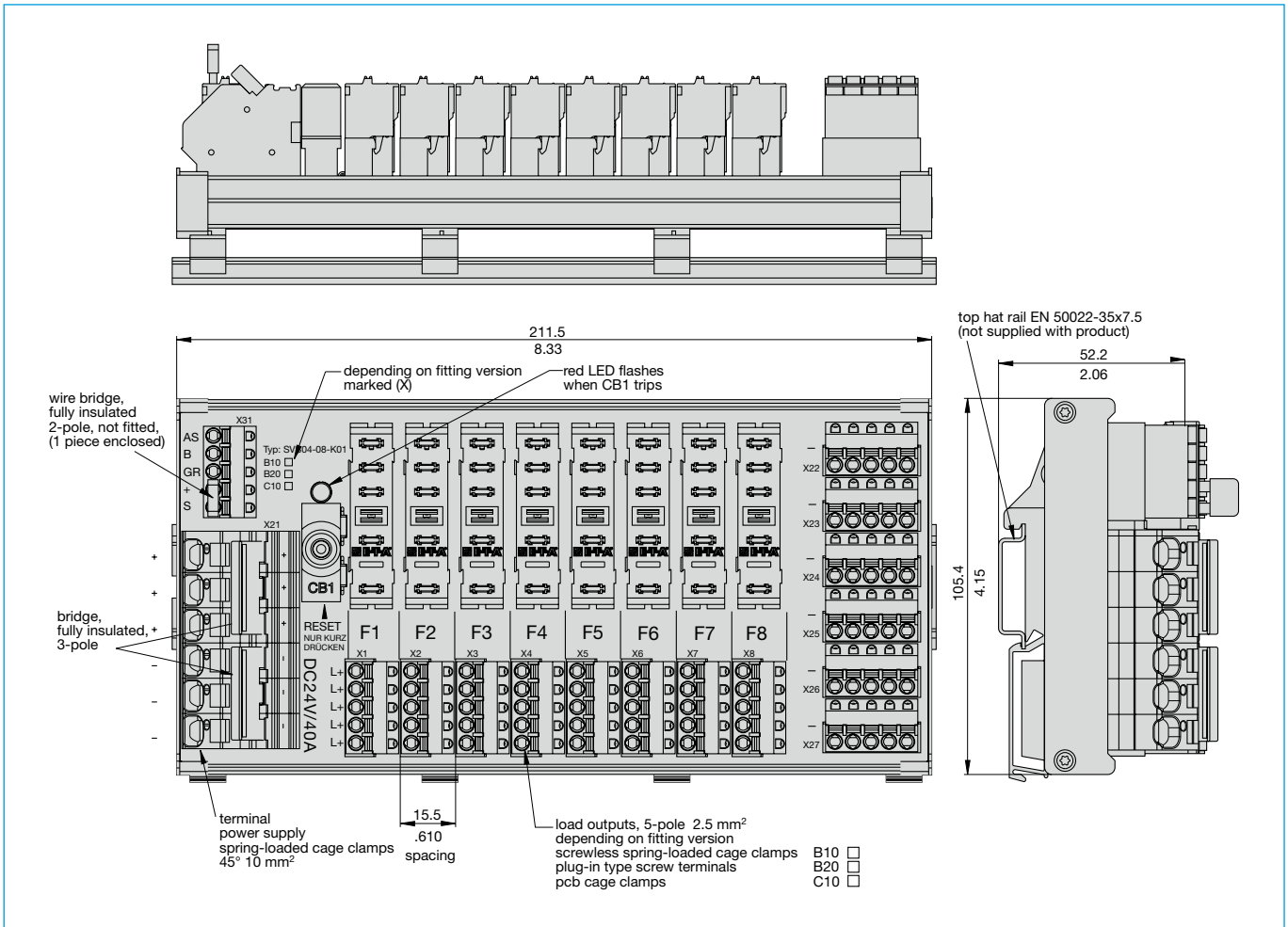


This is a metric design and millimeter dimensions take precedence (  $\frac{mm}{inch}$  )

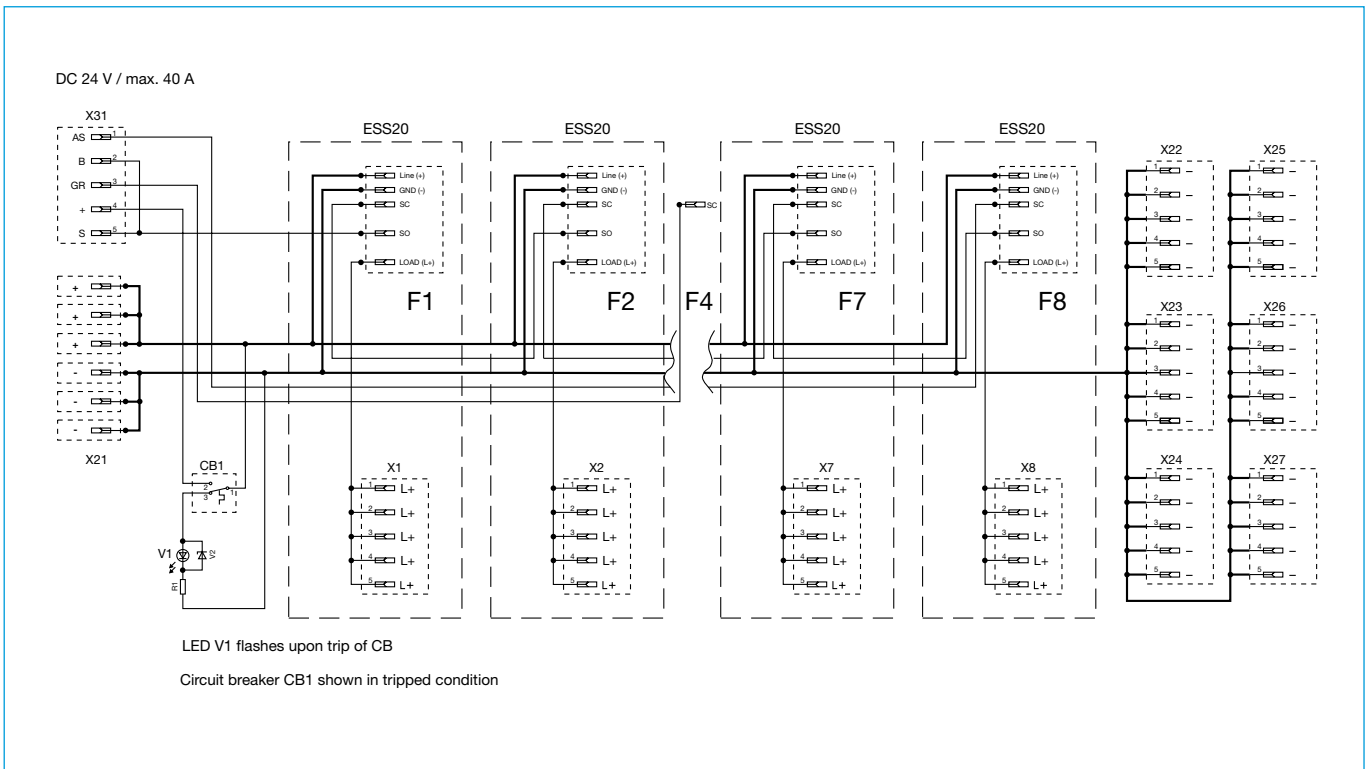
**Dimensions SVS04-08-... (with 15 minus terminals)**



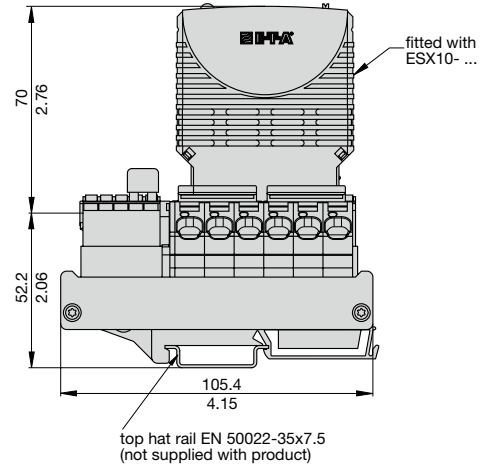
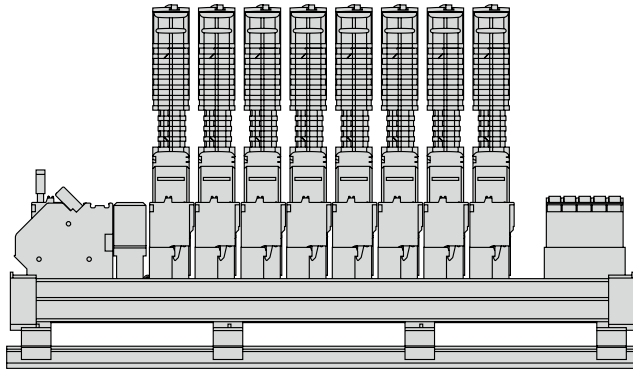
**Dimensions SVS04-08... K01 (with 30 minus terminals)**



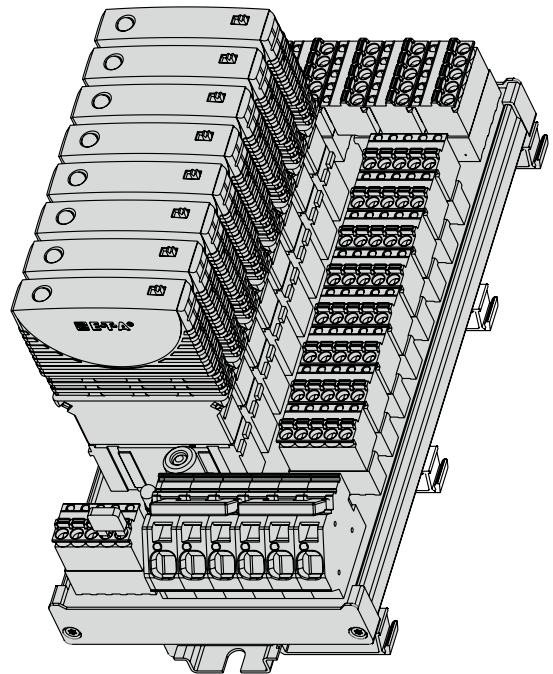
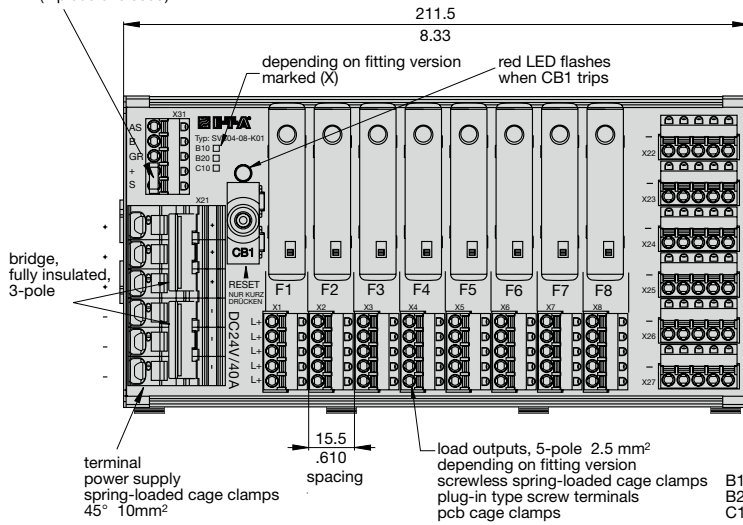
**Schematic diagram SVS04-08... K01 (fitted with ESS20-003)**



**Dimensions SVS04-08... K01, fitted with ESX10-103**



wire bridge, fully insulated 2-pole, not fitted, (1 piece enclosed)



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This is a metric design and millimeter dimensions take precedence (mm / inch)



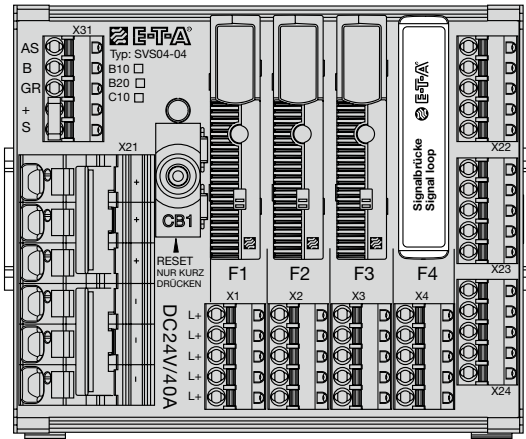
## Application example for jumper to replace

The signalling pathway of the group signalisation is as follows:

- feed-in of +DC 24 V potential in X31 (»+« terminal) via in-built overcurrent protection CB1
- via all signal contacts of the fitted circuit breakers type ESS20-003
- back to signal output of group signalisation X31 (»AS«)

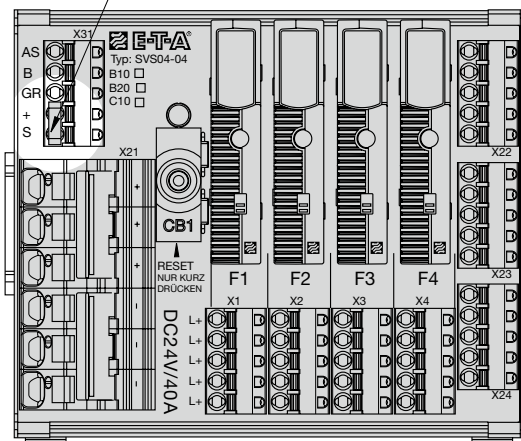
In operating condition (i.e. all circuit breakers plugged in and functional) the signalling pathway X31 from »+« to »AS« is closed.

**If the distribution rail is not completely fitted with ESS20-003, the open pathway »+« to »AS« may be closed by means of a jumper type SB-S11-P1-01-1-1A**



## Application example for insulated wire bridge

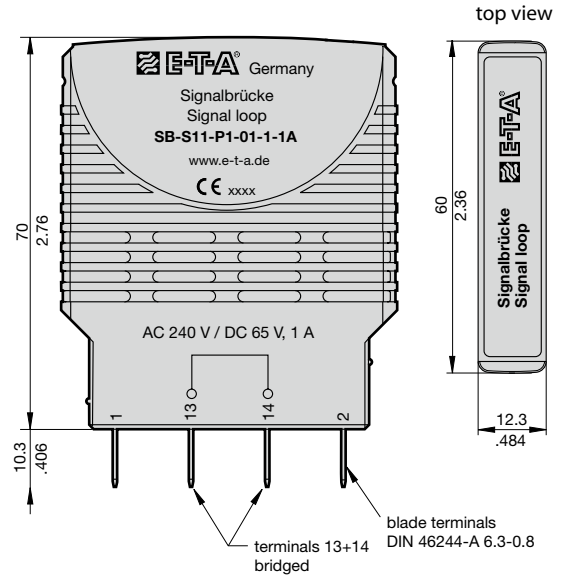
**Terminal X31 (group signalisation)**  
wire bridge from (+) to (SC)  
internal +DC24V feed for signalisation  
Thus plus potential of terminal X21+ is connected to (S)



This is a metric design and millimeter dimensions take precedence (mm / inch)

## Accessories

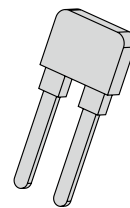
### Jumper SB-S11-P1-01-1-1A



### Insulated wire bridge Y 303 881 08

1 piece of the insulated wire bridge are supplied with the power distribution system. The insulated wire bridges may be used for:

- terminal X31: internal DC 24 V feed for group signalisation wire bridge from (+) to (S) signal path protected by CB1
- terminal X31: internal DC 24 V feed for two-group signalisation wire bridge from (+) to (GR) signal path protected by CB1





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