

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 mm², without wire end ferrule)
- B20** fitted with plug-in type screw terminals (max. 2.5 mm², without wire end ferrule)
- C10** fitted with pcb terminals, spring-loaded terminals (max. 2.5 mm², without wire end ferrule)

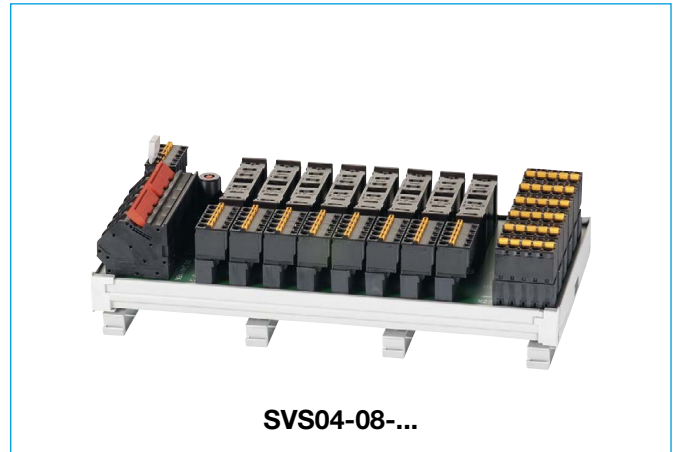
Minus terminals

- 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 mm²), 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 mm² load current max. 8 A per position

Signalisation

signalisation terminal X31, 5-pole, max. 2.5 mm²

- +: 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:

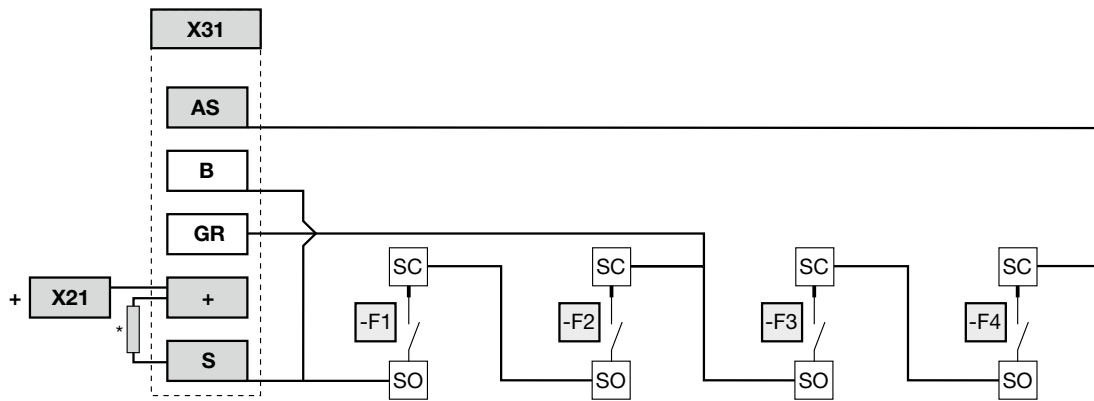
- B10: screwless spring-loaded terminals max. 2.5 mm², with integral test socket
- B20: plug-in type screw terminals max 2.5 mm², with integral test socket
- C10: pcb terminal/spring-loaded terminal max. 2.5 mm², with integral test socket

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

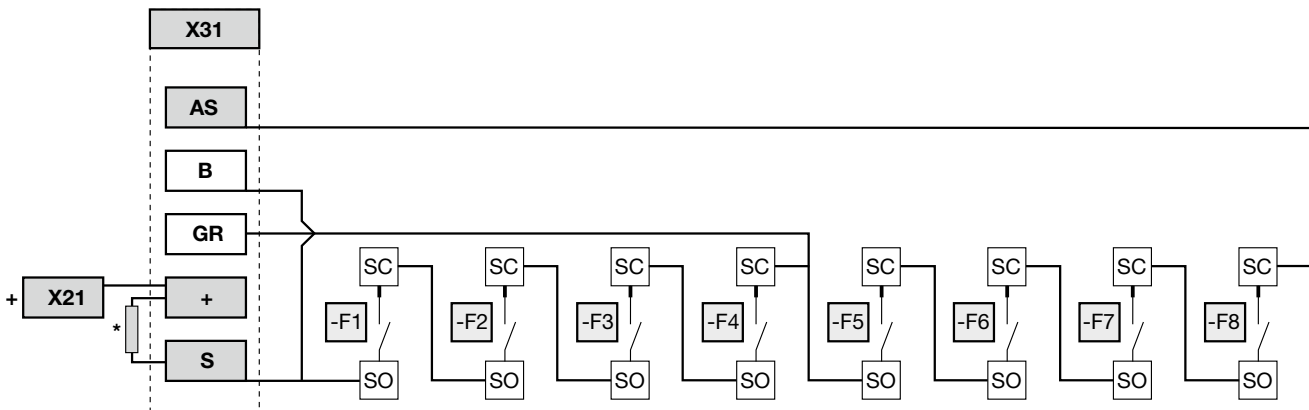
Signal path of group signalisation from F1 to F4



- 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

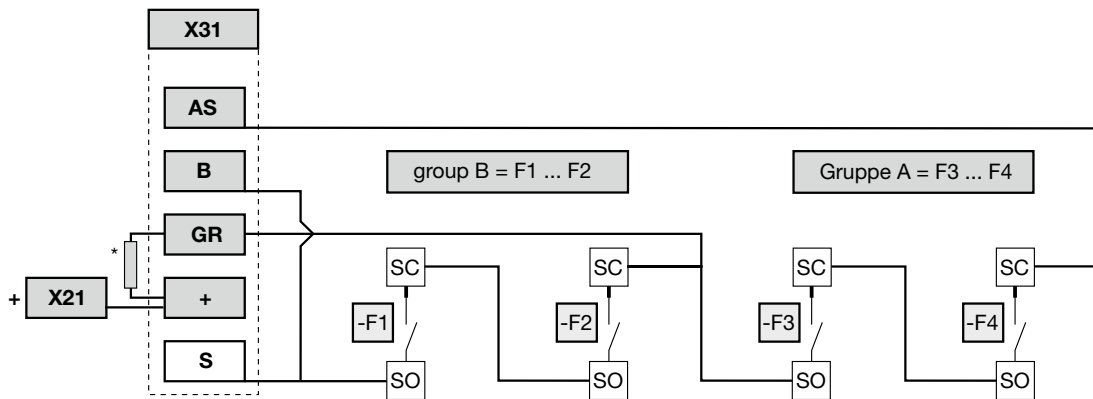


- X 31** **signalisation terminal**
- AS signal output group signal
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- SC / SO auxiliary contact ESS20-003, make contact

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

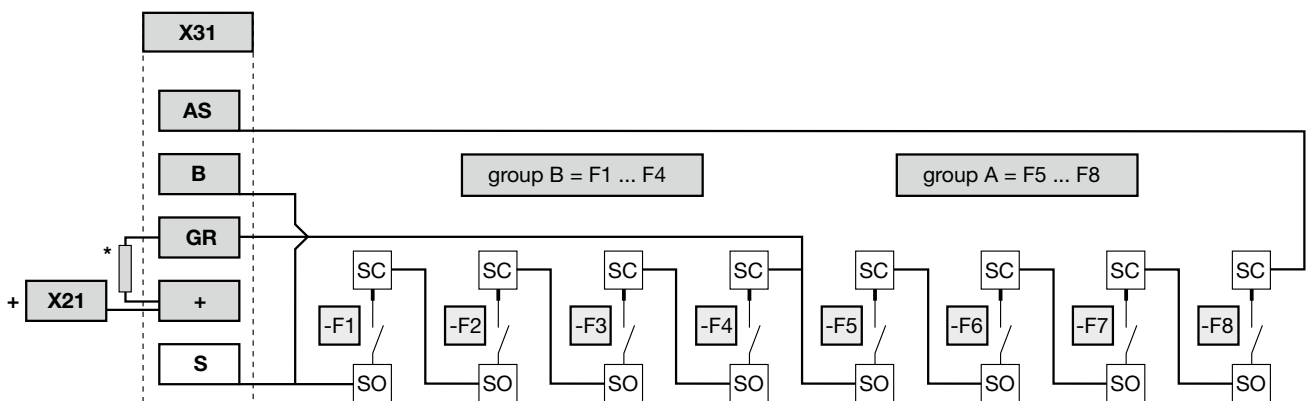
Signal path of two-group signalisation
from F1 to F2 = group B, from F3 to F4 = group A



- 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

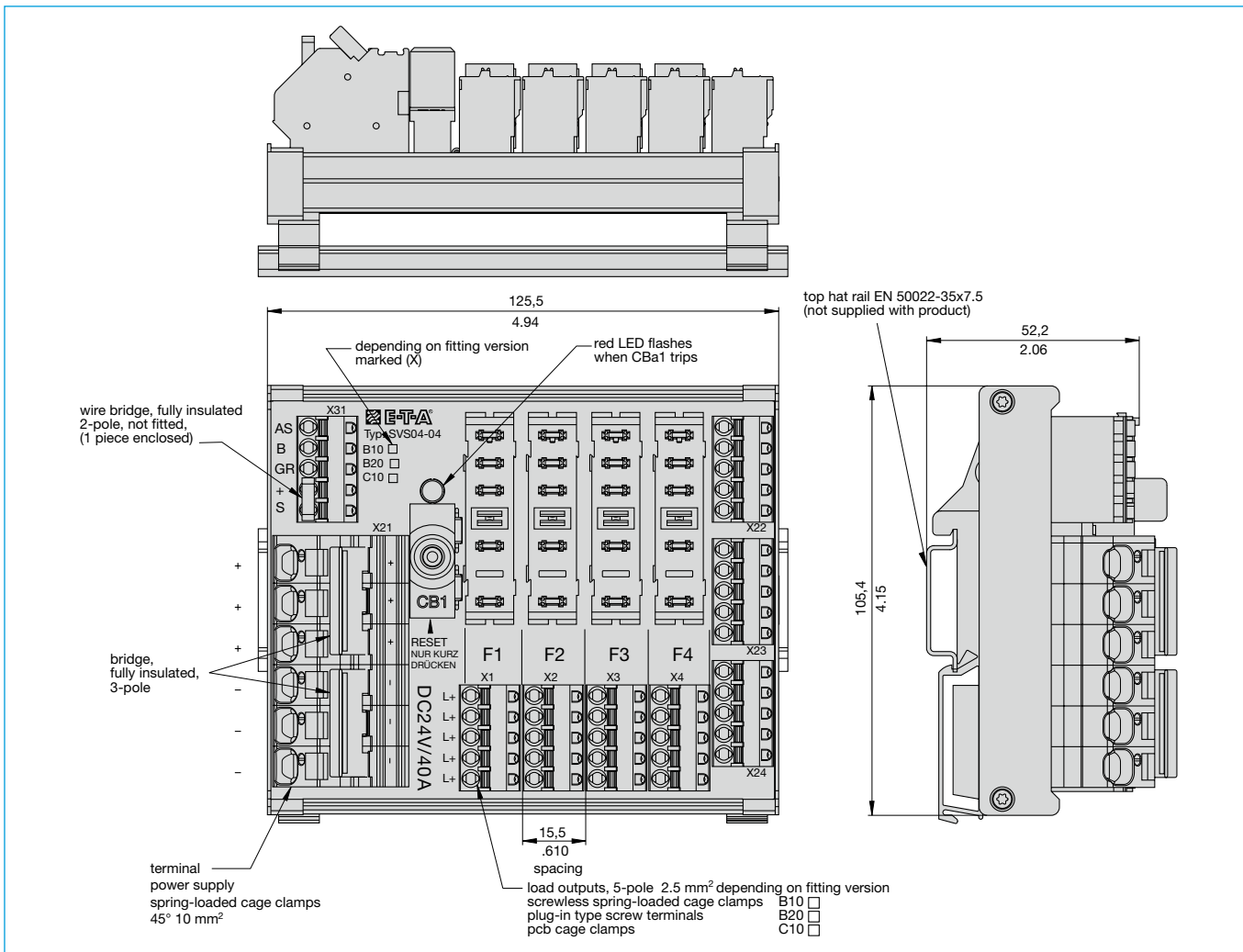
Wiring example: SVS04-08... with ESS20-003 and two-group signalisation

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

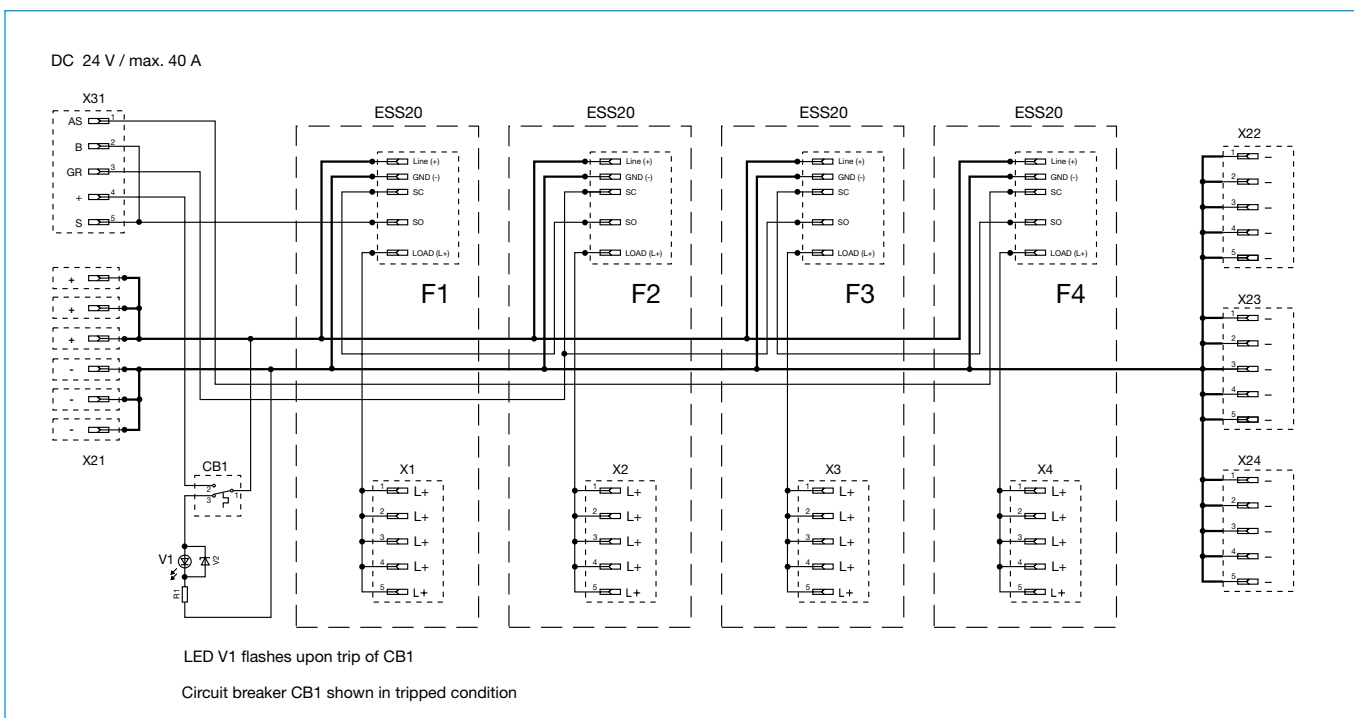


- X31** signalisation terminal
- AS signal output group A (F5 ... F8)
- B signal output group B (F1 ... F4)
- + +DC 24 V from terminal 21, internally prewired and protected by CB1
- GR line feed two-group signalisation with insulation bridge*
- SC/SO auxiliary contact ESS20-003, make contact

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

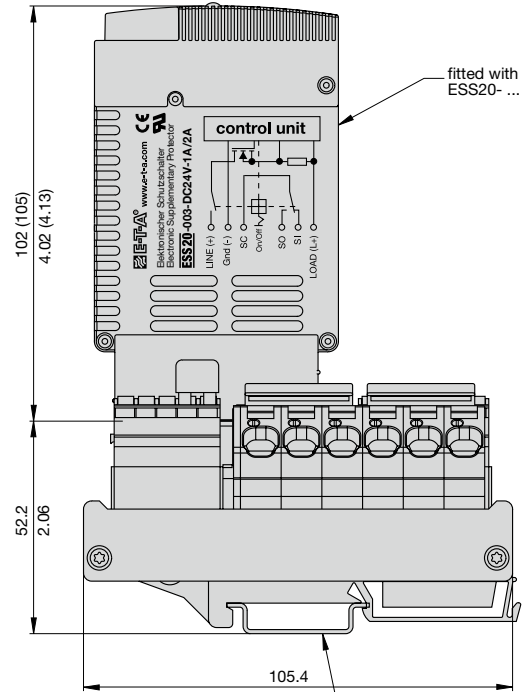
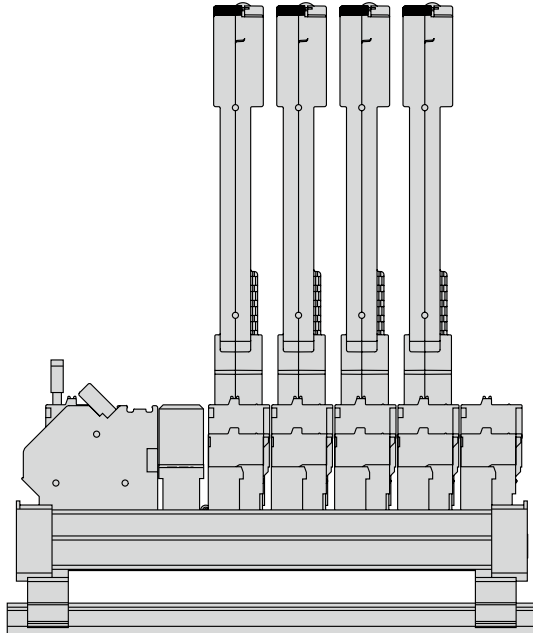


Schematic diagram SVS04-04-... (fitted with ESS20-003)



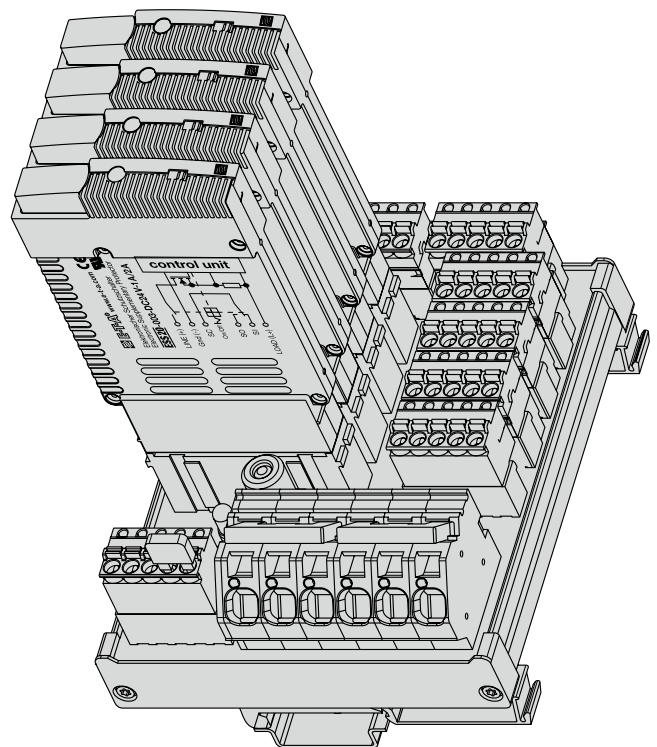
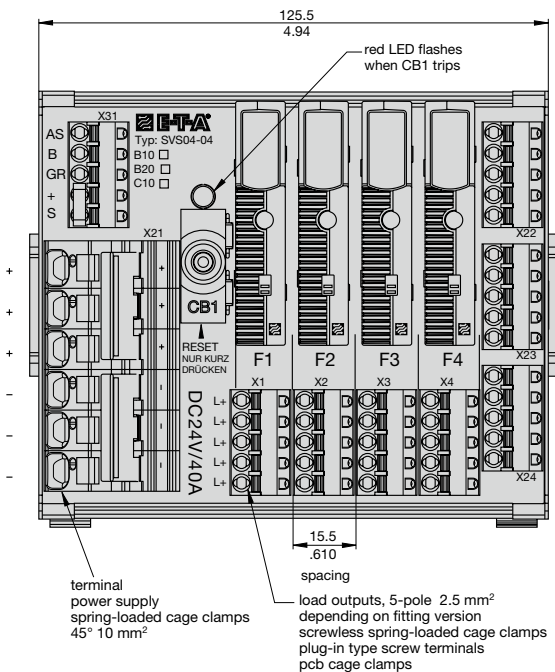
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Dimensions SVS04-04-..., fitted with ESS20-003



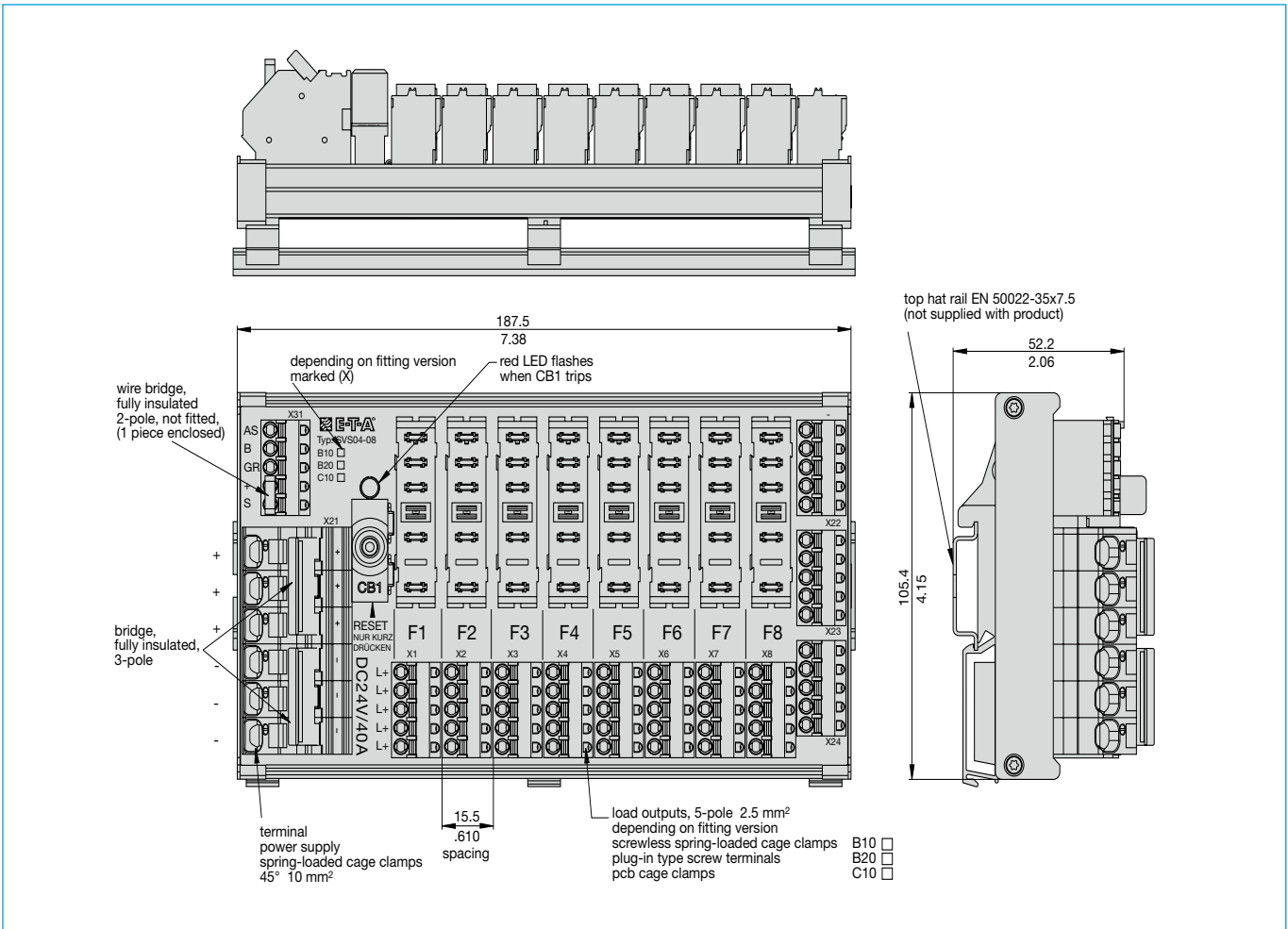
fitted with ESS20- ...

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

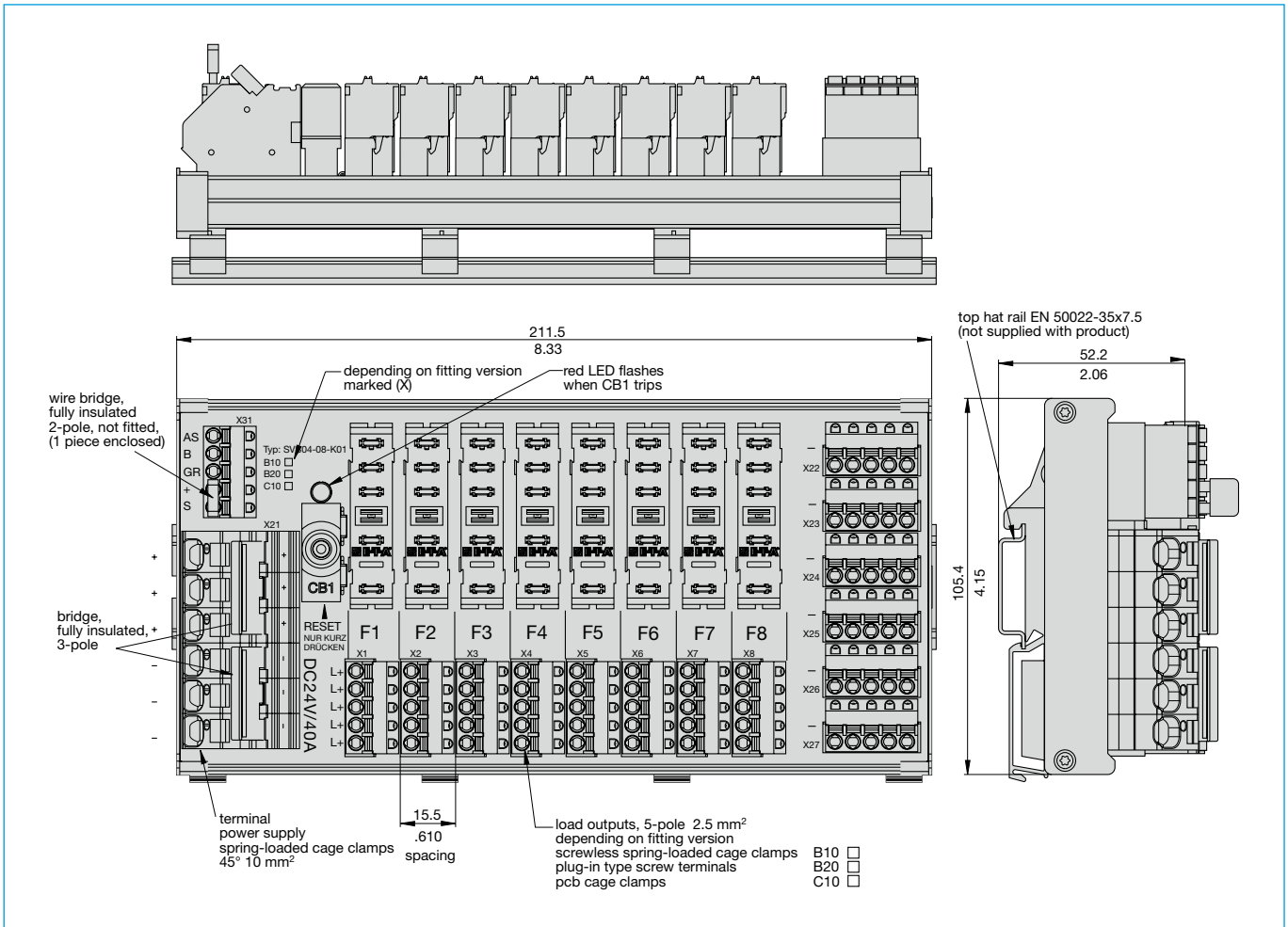


This is a metric design and millimeter dimensions take precedence ($\frac{mm}{inch}$)

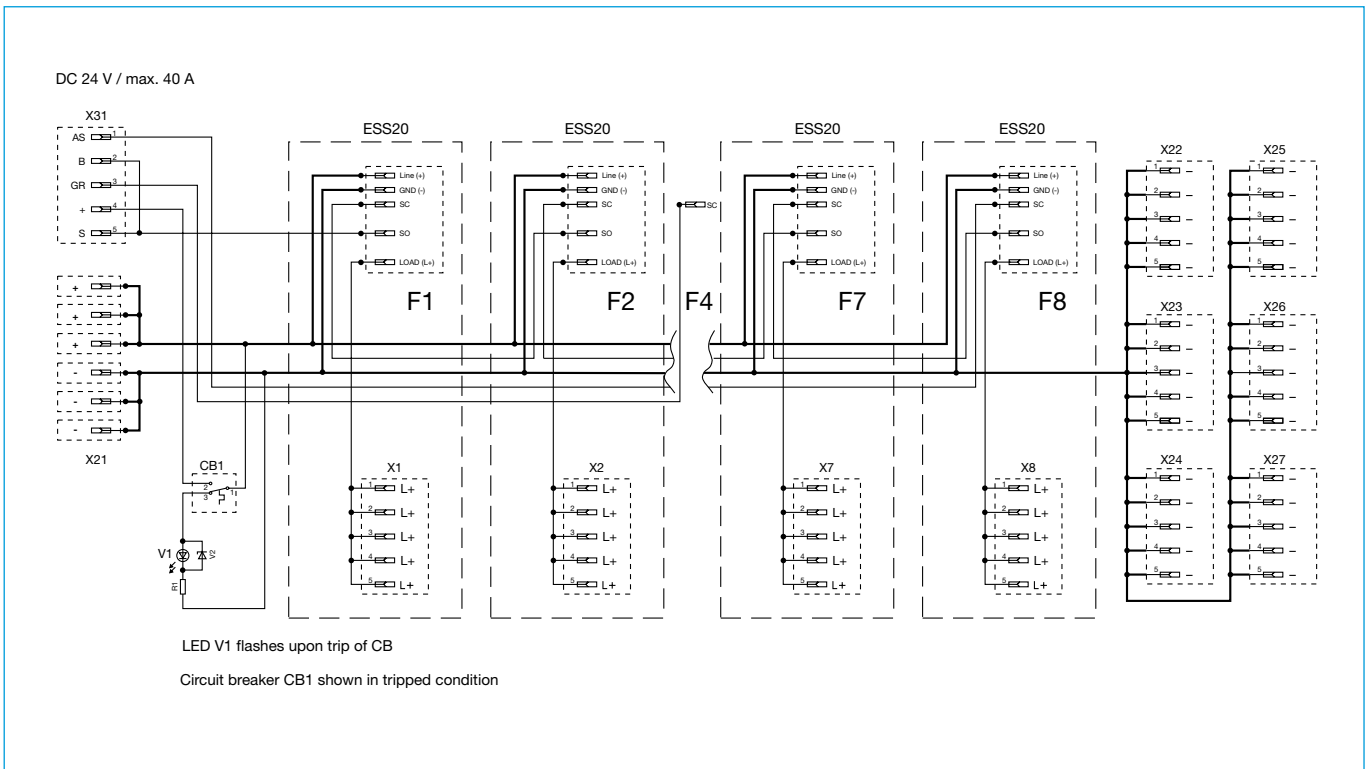
Dimensions SVS04-08-... (with 15 minus terminals)



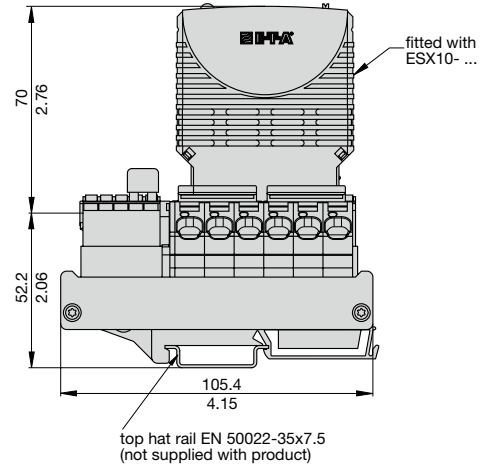
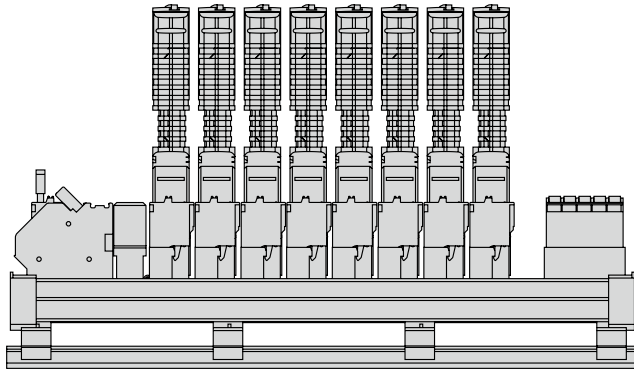
Dimensions SVS04-08... K01 (with 30 minus terminals)



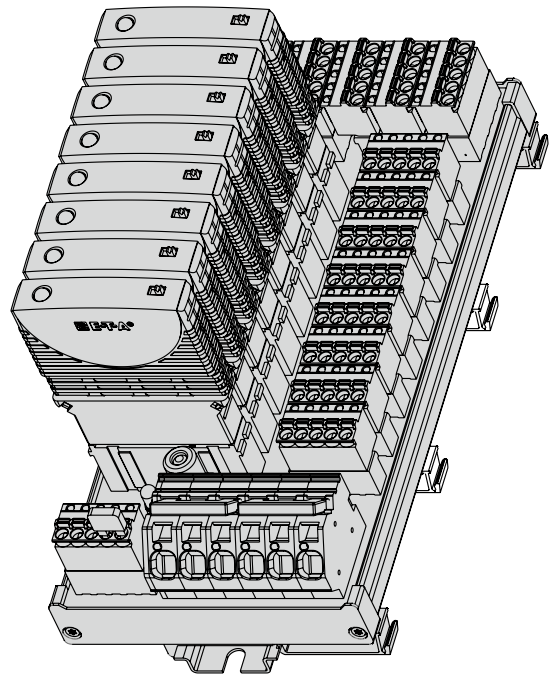
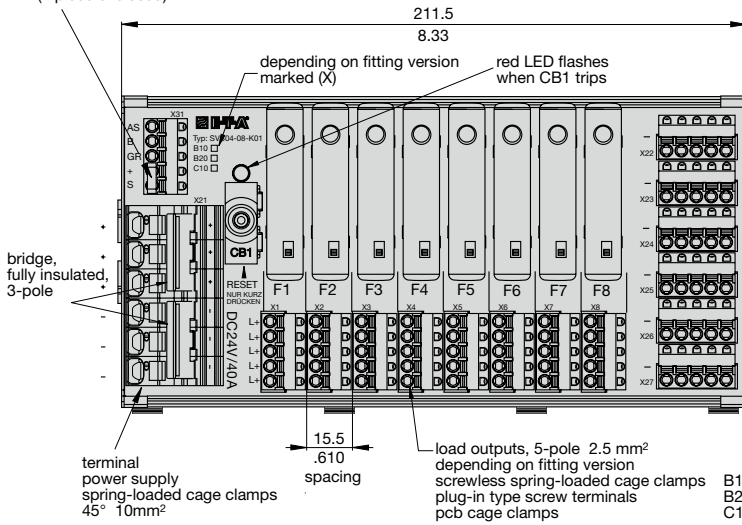
Schematic diagram SVS04-08... K01 (fitted with ESS20-003)



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)

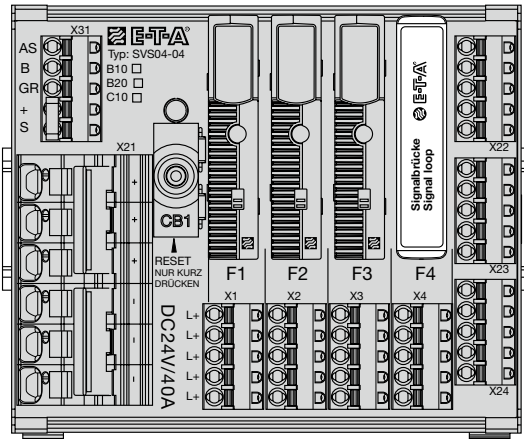
Application example for jumper to replace

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«)

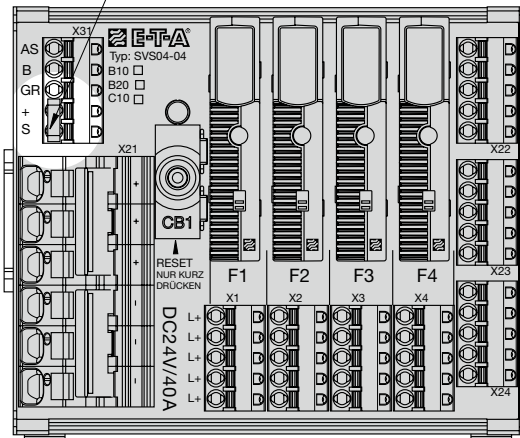
In operating condition (i.e. all circuit breakers plugged in and functional) the signalling pathway X31 from »+« to »AS« is closed.

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

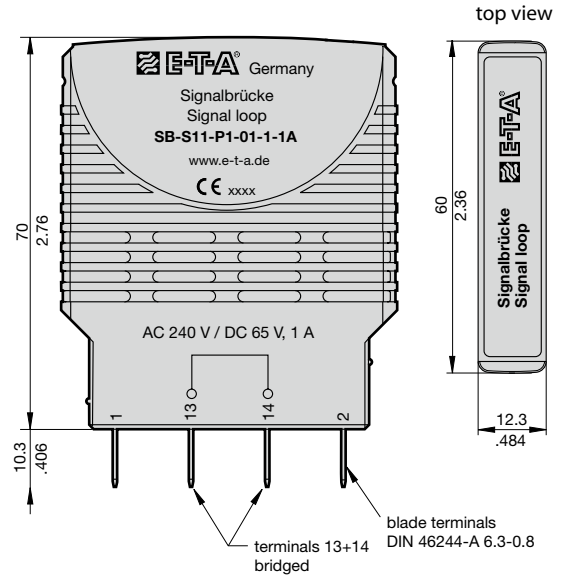
Terminal X31 (group signalisation)
wire bridge from (+) to (SC)
internal +DC24V feed for signalisation
Thus plus potential of terminal X21+ is connected to (S)



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

Accessories

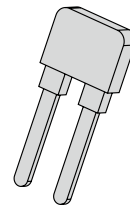
Jumper SB-S11-P1-01-1-1A



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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