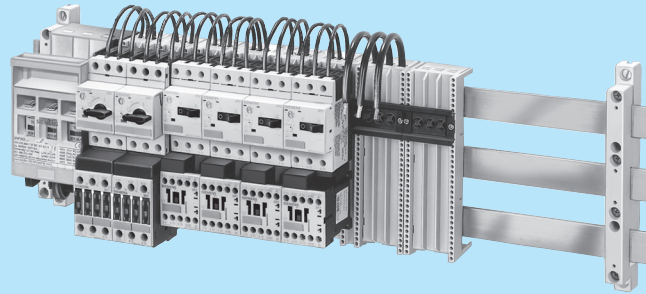


Contents

8US and Fast Bus busbar adapter system

8US1



60 mm system

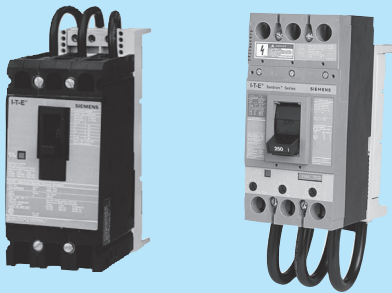
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• Fast Bus adapter shoes	5/7, 5/9, 5/10
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• Copper busbar	5/7, 5/10
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FBCB Fast Bus circuit breakers 3RA1 Fast Bus combination starters



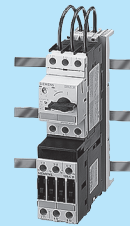
FBCB Fast Bus main and feeder circuit breakers

Page

Selection and ordering data

• Fast Bus circuit breakers	5/7
• Fast Bus adapter shoes	5/6, 5/8

3RA1 Fast Bus combination starters



3RA1 Fast Bus combination starters

Selection and ordering data

- See section 4

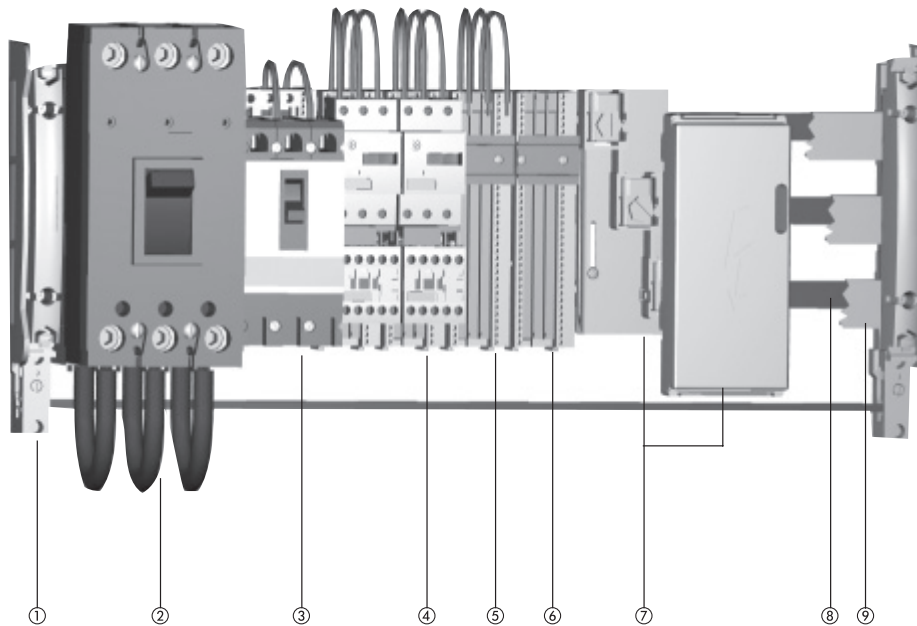
Fast Bus

8US and Fast Bus Busbar Adapter System

Overview

Busbar adapter systems

Busbar adapter systems
with busbar centerline spacing of 40 mm or 60 mm,



60 mm busbar system

for sharp-edged copper busbars
to DIN 46 433,
width 12 mm to 30 mm,
thickness 5 mm and 10 mm

	Page
① Busbar holder End and intermediate holders for flat copper profiles	5/7, 5/10
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③ Fast Bus circuit breakers from 15 to 250A	5/7

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④ 3RA1 Combination Starters	see section 5
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⑥ Busbar adapter shoe without wire for holding SIRIUS devices size S00 (12.5 A) to S2 (100 A), or for selfwiring	5/6, 5/8

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⑦ Incoming supply terminals	5/10
⑧ Copper Busbar	5/7, 5/10
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Fast Bus 8US and Fast Bus Busbar Adapter System

Introduction

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General

The Fast Bus Multi-Motor Control system is a 3-phase insulated busbar system used to reduce wire connections and hole drilling when building control panels. SIRIUS 3RV/3RT starter combinations built from components and Siemens circuit breakers use Fast Bus for convenient mounting.

Fast Bus is not new to Siemens. However, due to the narrower SIRIUS starter components, more starters will fit on the same run of Fast Bus.

Features

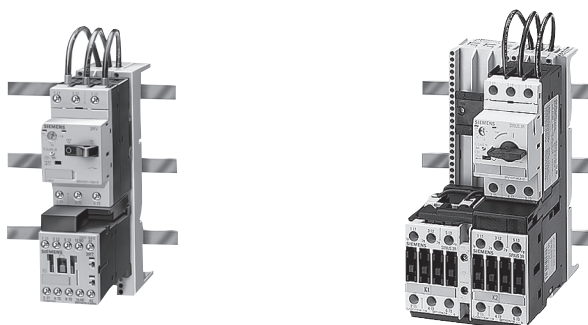
- Simple economical installation
- Compact design
- Requires fewer mounting holes
- Domestic and International approvals
- Touch safe
- Modular design
- Provision for system expansion
- Clip-on shoes provide mechanical and electrical connections to panel mounted busbar
- Main and Feeder breakers mount to busbars

Benefits

- Saves installation time
- Reduces space requirements
- Minimizes layout time
- Allows flexibility for domestic and export business
- Protection for maintenance personnel
- Improves equipment mounting density
- Reduces time and costs associated with system expansion
- Reduces mounting and wiring time and provides trouble free connections
- Allows for quick retrofitting of breakers

How to Select Fast Bus

- 1) Determine the required load.
 - Main lug up to 600A
 - Circuit breakers, 15A to 250A
- If load exceeds 250A, the CB must be separately panel mounted.
- 3) Select 3RV MSP & 3RT contactor components and appropriate adapter shoe or select 3RA factory assemblies.
- 4) Select appropriate length busbar, busbar support kit, insulation covers and any other required components.



General Ratings of Fast Bus System

	IEC	Domestic
Rated operating voltage	690V	600V
Rated insulation voltage, IEC VDE	AC 1000V	N/A
Temperature stability	Up to 105 degrees C	N/A
Busbar support and adapter shoe material	Glass-reinforced polyamide	Same
Color	RAL 7035, light gray	Same

Ampacity

3 single busbars

.19" x .75"	Domestic	362A
5 X 20 mm	IEC	362A

3 double-stacked busbars

.37" x .75"	Domestic	564A
10 x 20 mm	IEC	564A

For technical information on E and F frame circuit breakers used as main and feeder breakers, see section 17

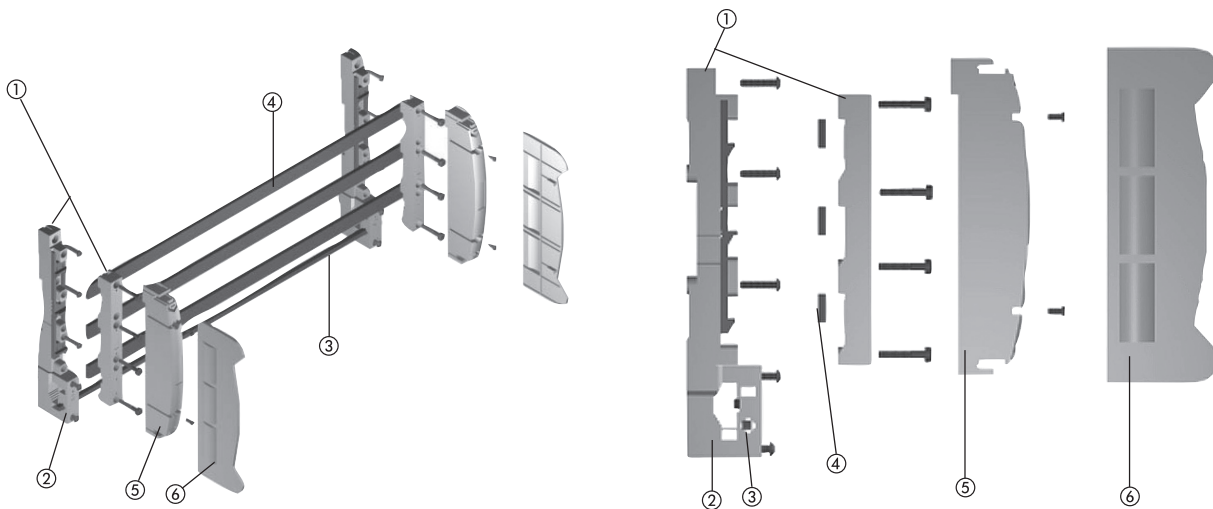
Thermal busbar currents, E-Cu, bare, at 35 °C ambient temperature in accordance with DIN 436711

Busbar dimensions	System	Thermal current at		
		65 °C Busbar temperature A	85 °C Busbar temperature A	105 °C A
12 x 5	40 + 60	188	248	295
15 x 5	40 + 60	222	293	349
20 x 5	60	274	362	430
25 x 5	60	327	432	513
30 x 5	60	379	500	595
12 x 10	40 + 60	302	398	474
20 x 10	60	427	564	670
30 x 10	60	573	756	900

Fast Bus

8US and Fast Bus Busbar Adapter System

Introduction



Fast Bus set-up

The Fast Bus system is designed to be easy to use and to save set up time.

8US Busbar holders

Because the 8US Busbar holders are adjustable, they can be used with a number of different busbar sizes allowing you to standardize on one style of busbar holder for busbars with a width and thickness of 12mm x 5mm up to 30mm x 10 mm thus providing a wide range of current carrying capability.

High quality material

Busbar supports and fuse bases are manufactured from glass-fiber reinforced, thermoplastic polyester with the color RAL 7035, light gray. The material ensures excellent mechanical, chemical and electrical properties. Furthermore, the material has an extremely low flammability and meets the requirements of UL 94 V0.

8WC Busbar and busbar systems

The most common size busbar for applications in the US is the 8WC5026 (20mm x 5mm), however there are other styles available depending on your application.

Busbar systems with 40 mm and 60 mm busbar center-to-center clearance have now become firmly established on the world market. In the US market the 60 mm busbar center-to-center clearance is the more commonly used system.

The permissible busbar temperature is a decisive factor when dimensioning the busbars. The busbar temperature is dependent on the current, the current distribution, the busbar cross-section, the busbar surface, the position of the busbar, the convection and the ambient temperature. The values stated in the table on page 5/3 can only be considered as reference values because the conditions vary with each location. The values

are based on constant current over the whole busbar length.

The trend toward busbars proves most advantageous when the incoming supply is centrally located and the load is distributed symmetrically on both sides.

Simple Fast Bus system

The two illustrations above show the very basic items needed when setting up a Fastbus system.

- ① 8US1 Busbar holder (5/10)
- ② 5SH3 Ground busbar support (shown attached however can be mounted separately 5/10)
- ③ Ground busbar 6mm x 6mm
- ④ 8WC Busbar (8WC5026 shown 5/10) FBB36, FBB60 Busbar (5/7)
- ⑤ 5SH3532 profile holder (Holds top partition slotted 5SH3531/non-slotted 5SH3528, and end cover 5SH3533)
- ⑥ End cover 5SH3533 5/9

Short-circuit strength

The short-circuit strength of the busbar system is dependent on the clearance of the busbar holders and on the busbar cross-section.

The short-circuit strength of the whole system is dependent on the short-circuit strength of the busbars and of the adapters with circuit protection.

Applications

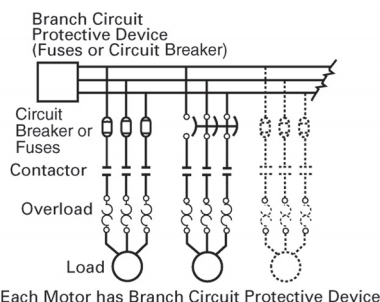
The 8US Fast Bus distribution system is ideal for control panel builders with multiple motor applications. These applications are most common in the material handling, automotive, food processing, pharmaceutical and paper processing industries.

Fast Bus combination starters and group installation assemblies

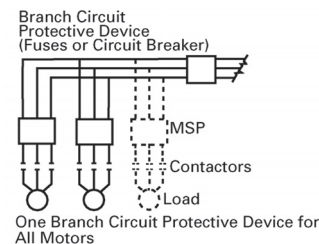
Ratings for Group Installations per NEC 430-53

Group Installation is an approach to building multiple motor control systems in accordance with Section 430-53 of the National Electrical Code. In Group installation, multiple motor starters can be grouped under one short circuit protective device. The 3RV MSP's have been UL listed for use in Group Installations both with and without 3RT contactors when mounted on the Fast Bus system. A 3RT contactor is added when remote operation of the motor is required.

Standard Installation, NEC 430-52



Group Installation, NEC 430-53



MSP Type	Through FLA range Amps	Maximum rating of Group Branch Circuit Protective Device		Short Circuit Current Ratings	
		Fuse	Circuit Breaker	480V	575V
3RV101	0, 11-12	The main fuse should be selected based on the FUSE selection procedure listed below.	The main CB should be selected based on the CIRCUIT BREAKER selection procedure listed below.	65kA	10kA
3RV102	0, 11-12.5			65kA	30kA
3RV103	11-25			65kA	10kA
3RV104	28-100			65kA	30kA

The selection of components for Group Installation is a simple process of the following three steps:

1. Selection of the Branch Circuit Protective Device, fuse or circuit breaker.
2. Selection of the Motor Starter protector based on the motor Full Load Amps.
3. Selection of the 3RT contactor based on the HP and voltage rating of the motor.

Circuit Breaker Selection

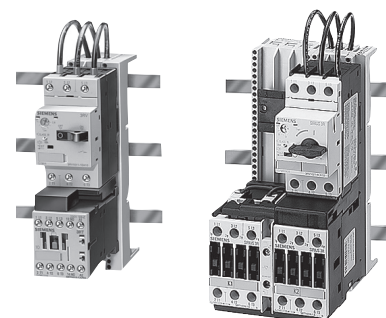
Select a circuit breaker (CB) between:
 Minimum CB size (per NEC430-110):
 Sum of all motor FLC (per NEC table 430-150) x115%.
 Maximum CB size (per NEC430-53c):
 250% x FLC of the largest motor + FLC of all other motors.

Fuse Selection

Calculate the maximum fuse size per NEC430-53c.
 Max Fuse Size = 175% x FLC of largest motor + FLC of all other motors (FLC's from NEC table 430-150).

MSP Type	Through FLA range Amps	Short Circuit Current Ratings (Type E) 1)		
		240V	480Y/277V	600Y/347V
3RV102	0, 11-22	65kA	65kA	30kA
3RV103	11-50	65kA	65kA	25kA
3RV104	28-100	65kA	65kA	30kA (up to 75A)




1) MSP sizes S0 and S3 require additional terminal kits for type E applications. See section 1



Fast Bus 8US and Fast Bus Busbar Adapter System

60 mm system

Selection and ordering data

for sharp-edged copper busbars to DIN 46 433, width 12 mm to 30 mm, thickness 5 mm and 10 mm		Busbar adapters	Number of mounting rails (35 mm)	Rated current A	Connecting leads AWG	Adapter length mm	Adapter width mm	Rated voltage V	Order No.	List Price \$	Standard Package Quantity	
For SIRIUS devices												
	Direct feeder	Size S00/S0	1	25	12	182	45	690	8US12 51-5DM07	39.00		
		MSP	–	–	–	–	–	–				
		Contactors + overload relay	–	–	–	–	–	–				
		Direct feeder	–	–	–	–	–	–				
		Reversing feeder adapter	–	–	–	–	–	–				
		+ switching device holder	1	–	–	182	45	–	+ 8US12 50-5AM00	40.00		
		+ connection keys (2 units needed for attachment) (packg. with 100 units)	–	–	–	–	–	–	+ 8US19 98-1AA00	1.05 ea.	100	
		Size S00 – Cage Clamp										
		Direct feeder	1	12.5	14	182	45	690	8US12 51-5CM47	39.00		
		Size S2										
	MSP	–	56	8	182	55	690	8US12 61-5FM08	54.00			
	Contactors + overload relay	–	–	–	–	–	–					
	Direct feeder	1	56	8	242	55	690	8US12 61-5FP08	56.00			
	Reversing feeder adapter	1	56	8	242	55	690					
	+ switching device holder 1)	–	–	–	242	55	–	+ 8US12 60-5AP00	35.00			
	+ connection keys (2 units needed for attachment) (packg. with 100 units)	–	–	–	–	–	–	+ 8US19 98-1AA00	1.05 ea.	100		
	Size S3											
	MSP	–	100	Busbars	182	70	to 460 ²⁾	8US11 11-4SM00	102.00			
	MSP	–	80 ⁴⁾	4	182	72	480 ... 690 ³⁾	8US12 11-4TM00	91.00			
	For ED and FD circuit-breakers											
		For E or F frame circuit breakers (includes mounting plate)	–	250	4-2/0	270	108	600	FBS250108	282.00		
		For E or F frame circuit breakers (includes mounting plate) terminals on the bottom of the shoe	–	250	4-2/0	270	108	600	FBS250108M	282.00		
Busbar adapters with supply terminals (at top) for any arrangement of components												
8US12 50-5RM07		1.5 mm ² up to 4 mm ²	1	25	–	182	45	690	8US12 50-5RM07	32.00		
Switching device holders for lateral attachment to busbar adapter of the same length												
	Switching device holder	1	–	–	182	45	–	8US12 50-5AM00	40.00			
	Switching device holder	1	–	–	182	55	–	8US12 60-5AM00	42.00			
	Switching device holder	–	–	–	242	55	–	8US12 60-5AP00	45.00			
	Connection keys (2 units needed for attachment) (packg. with 100 units)	–	–	–	–	–	–	8US19 98-1AA00	1.05 ea.	100		
	Lateral modules for extending busbar adapters and switching device holders of the same length											
	Lateral module	–	–	–	182	13,5	–	8US19 98-2BM00	12.00			
Cross Reference						MLFB	MLFB					
Function												
Adapter shoe w/wire for SIRIUS S00 and S0						FBS2545	8US1251-5DM07					
Adapter shoe w/wire for SIRIUS S2						FBS5055	8US1261-5FM08					
Adapter shoe w/wire for SIRIUS S2 combos						FBS5055L	8US1261-5FP08					
Adapter shoe for SIRIUS S3						FBS10070	8US1111-4SM00					
Adapter shoe w/o wire for SIRIUS S00 and S0						FBS0045	8US1250-5AM00					
Adapter shoe w/o wire for SIRIUS S2						FBS0055	8US1260-5AM00					
Adapter shoe w/o wire for SIRIUS S2 combos						FBS0055L	8US1250-5AP00					



1) Spacer and fixing screws for reverse contactor are included in the scope of supply.
2) ≤ 400 V max. 50 kA, 400 V to 460 V max. 25 kA.

3) 480 V to 525 V max. 30 kA, 525 V to 690 V max. 12 kA.
4) 80 A UL 100 A IEC

Fast Bus 8US and Fast Bus Busbar Adapter System

60 mm system




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Description	Order No.	List Price \$
Busbar kits		
 <p>FBB36</p> <p>① Copper Busbar FBB36 includes: Qty. (3) 36 inches long x 5mm x 20mm Tinned Copper Busbar FBB60 includes: Qty. (3) 60 inch long x5mm x 20mm Tinned Copper Busbar Qty. (1) FBSXP - Intermediate support kit</p>	FBB36	118.00
	FBB60	226.00
 <p>FBS400</p> <p>Busbar Support Kit End Support Kit - FBS400 includes: Qty.(2) - 5SH3533 End Covers Qty.(2) - 5SH3532 Holder for Edge Profile and End Covers Qty.(2) - 8US1923-2AA01 3Pole Busbar holder with Outside Fixing</p>	FBS400	93.00
	FBG36	120.00
<p>Ground Busbar and Support Kit (not shown) FBG36 Includes: Qty.(2) - 5SH3506 - Ground Busbar Holders Qty.(1) - 36 inch long x 6mm x 6mm Busbar (135A) FBG60 Includes: Qty.(2) - 5SH3506 - Ground Busbar Holders Qty.(1) - 60 inch long x 6mm x 6mm Copper Busbar (135A)</p>	FBG60	168.00
	FBSXP	37.00
<p>Intermediate Support and Cover FBSXP - Intermediate support kit includes: Qty.(1) 8US1923-2AA01 Busbar holder with Outside Fixing Qty.(1) 5SH3532 Holder for Edge Profile and End Covers</p>	FBSXP	37.00
<p>Power Take-Off Support and Cover Rated 80 ams; wire size 16-6 AWG</p>	FBSPT080	44.00

Selection and ordering data

FBCB Fast Bus circuit breakers
- Offer a full range of circuit breakers from 15A to 250A pre-assembled on 60mm fast-bus adapter shoes and ready to place on the busbar.





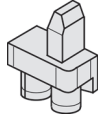
Also a full range of main circuit breakers from 100A to 250A come in pre-packaged kits that include the circuit breaker, fastbus adapter with mounting plate and mounting hardware.

Design	Breaker frame	Order No.	List Price \$
Circuit breakers			
 <p>FBCB030</p> <p>Feeder 3 pole/600V with Fast Bus "snap on" adapter shoes (wires from shoe to breaker on top side)</p>	15 amp	ED	FBCB015 360.00
	20 amp	ED	FBCB020 360.00
	25 amp	ED	FBCB025 360.00
	30 amp	ED	FBCB030 360.00
	35 amp	ED	FBCB035 360.00
	40 amp	ED	FBCB040 360.00
	45 amp	ED	FBCB045 360.00
	50 amp	ED	FBCB050 360.00
	60 amp	ED	FBCB060 360.00
	70 amp	ED	FBCB070 449.00
	80 amp	ED	FBCB080 449.00
Feeder circuit breakers			
 <p>FBCB100</p> <p>3 pole/600V with bolt on shoes (wires from shoe to breaker on top side)</p>	100 amp	ED	FBCB100 526.00
	125 amp	ED	FBCB125 1271.00
	150 amp	FXD	FBCB150 1283.00
	175 amp	FXD	FBCB175 1335.00
	200 amp	FXD	FBCB200 1335.00
	225 amp	FXD	FBCB225 1335.00
	250 amp	FXD	FBCB250 2093.00
	Main circuit breakers		
 <p>FBCB250M</p> <p>3 pole/600V with bolt on shoes (wires from shoe to breaker on bottom side)</p>	100 amp	ED	FBCB100M 526.00
	125 amp	ED	FBCB125M 1271.00
	150 amp	FXD	FBCB150M 1283.00
	175 amp	FXD	FBCB175M 1335.00
	200 amp	FXD	FBCB200M 1335.00
	225 amp	FXD	FBCB225M 1335.00
	250 amp	FXD	FBCB250M 2093.00

① UL recognized to nominal rating of 362 Amps.

Fast Bus 8US and Fast Bus Busbar Adapter System

Adapter shoes and accessories

Illustration	Adapter Shoes Provide mechanical mounting and electrical power connection to busbar system.	Width	Length	For use with Device Type	Catalog No	List Price \$
 FBS2545	With wire: 25 amp rated (12AWG)	45 mm	182 mm	3RV101, 3RV102	FBS2545	39.00
	With wire: 50 amp rated	55 mm	185 mm	3RV103	FBS5055	54.00
		55 mm	242 mm		FBS5055L	56.00
 FBS0045	With terminals for wire size #10-#6: 80 amp rated	72 mm	182 mm	FBCB15-80	FBS8072	77.00
	With wire: 100 amp rated	70 mm	182 mm	3RV104	FBS10070	102.00
	With terminals for wire #4-2/0 Includes mounting plate for mounting E or F frame breakers Rated 250 amps (terminals on top of shoe)	108 mm	270 mm	FBCB	FBS250108	282.00
		108 mm	270 mm	FBCB	FBS250108M	282.00
	Without wire: For mechanical mounting only Contactor Support	45 mm	182mm	3RV101	FBS0045	40.00
		55 mm	185 mm	3RV102	FBS0055	42.00
		55 mm	242 mm	3RV103	FBS0055L	56.00
	Support Bracket for 3RT104 Contactor For use with FBS10070	70 mm	—	3RT104	FBS0070B	23.00
	Side module for Adaptor Shoe expansion	10 mm	182 mm	—	8US1998-2BM00	12.00
	Feeder Breaker Mounting Plate For mounting 3-pole E-frame Siemens circuit breakers through 80 amps. Mounts to FBS8072 Adaptor Shoe.	72 mm	160 mm	FBCB15-80	FBP80	49.00
 8US1998-2BM00	Fast Clips For fastening 2 or more shoes together. 2 required per pair of shoes. .	—	—	—	FBC20	9.00 Pack of 20
		Spacer For supporting a 3RT101 or 3RT102 contactor to a Fastbus shoe when used with a 3RV MSP. 1 required per contactor.	—	—	—	8US1998-1BA00
 FBC20						
 8US1998-1BA00						

Cross Reference

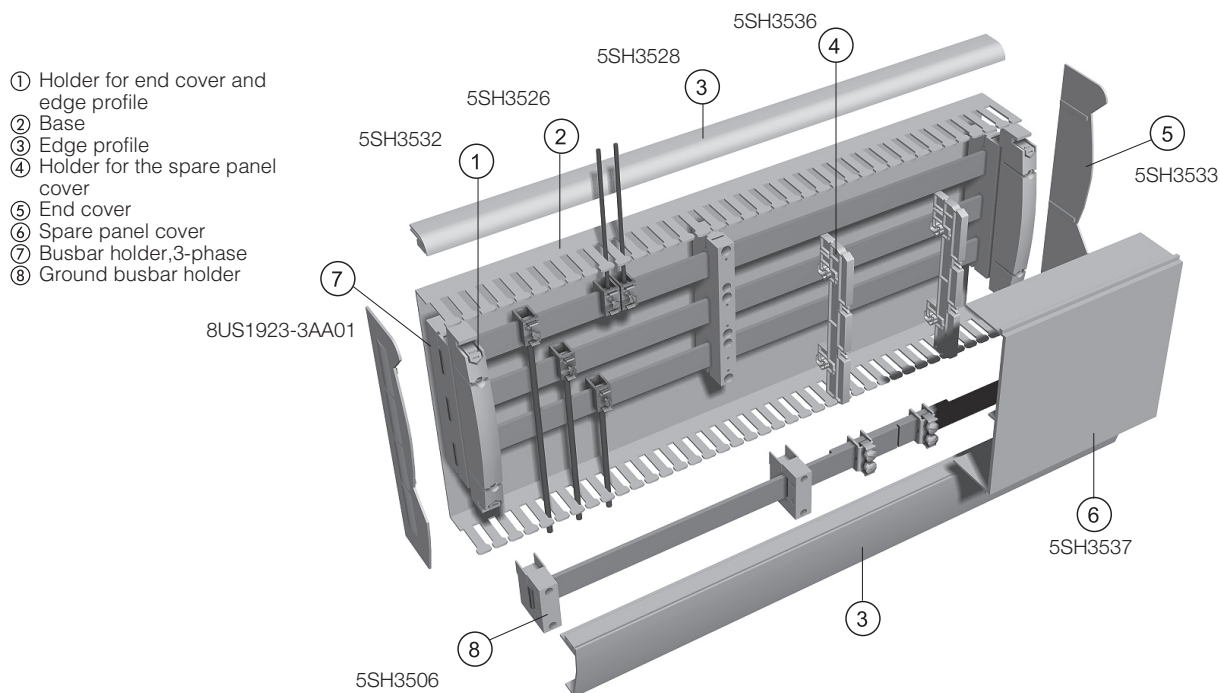
Function	MLFB	MLFB
Adapter shoe w/wire for SIRIUS S00 and S0	FBS2545	8US1251-5DM07
Adapter shoe w/wire for SIRIUS S2	FBS5055	8US1261-5FM08
Adapter shoe w/wire for SIRIUS S2 combos	FBS5055L	8US1261-5FP08
Adapter shoe for SIRIUS S3	FBS10070	8US1111-4SM00
Adapter shoe w/o wire for SIRIUS S00 and S0	FBS0045	8US1250-5AM00
Adapter shoe w/o wire for SIRIUS S2	FBS0055	8US1260-5AM00
Adapter shoe w/o wire for SIRIUS S2 combos	FBS0055L	8US1250-5AP00

Fast Bus 8US and Fast Bus Busbar Adapter System

60 mm system

Selection and ordering data

for sharp-edged copper busbars to DIN 46 433, width 12 mm to 30 mm, thickness 5 mm and 10 mm



Description	Order No.	List Price \$	Pack Units
Busbar holders ⑦			
with outside fixing (3-pole)	L1-L3 ¹⁾	8US19 23-2AA01	46.00
with inside fixing (3-pole)	L1-L3	8US19 23-3AA01	41.00
with inside fixing (4-pole)	L1-L3 + PE/N	8US19 23-4AA00	59.00
Endcover for 3-pole busbar holders and 4-pole busbar holders ⑤			
3 pole endcover for use with 5SH3532	229 mm high	5SH3533	12.80
4 pole endcover for use with 5SH3532	289 mm high	5SH3534	30.50
Partition profile			
slotted	2 000 mm long ¹⁾	8US19 22-1EA00	236.00
closed	2 000 mm long	8US19 22-1FA00	139.00
Base ②			
3-pole system	1 100 mm long	230 mm in width	5SH3 526
4-pole system	1 100 mm long	290 mm in width	5SH3 527
(or 3-pole system with wiring duct)			155.00
			163.00
Holder for edge profile and partion profile ①			
for 5SH3 528 and 5SH3 530		5SH3 532	23.00
Edge profile ③			
not slotted	1 100 mm long	17 mm x 36 mm	5SH3 528
	1 100 mm long	77 mm x 36 mm	5SH3 530
slotted	1 100 mm long		5SH3 531
			68.00
			136.00
			119.00
Spare panel cover holder (for spare panel cover) ④			
	32 mm deep	1 000 mm long	5SH3 536
			25.00
Spare panel cover ⑥			
Mounting on spare panel holder 5SH3 523	1 000 mm long	202 mm in width	5SH3 537
			130.00
Ground busbar holder ⑧			
			5SH3506
			18.00





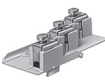

1) Discount Code: Fast Bus

Fast Bus

8US and Fast Bus Busbar Adapter System

Accessories for 60 mm system

Selection and ordering data

	Description	Order No.	List Price \$	Standard pkg qty
 8US19 23--AA00  5SH3506	Busbar holders 60 mm system End and intermediate holders for flat copper profiles 12 mm x 5 mm to 30 mm x 10 mm with outside fixing (3-pole) L1-L3 with inside fixing (3-pole) L1-L3 with inside fixing (4-pole) L1-L3 + PE/N	8US19 23-2AA01 8US19 23-3AA01 8US19 23-4AA00	46.00 41.00 59.00	
	Ground busbar holder for flat copper profiles 12 mm x 5 mm to 20 mm x 10 mm, also 25 mm x 5 mm and 30 mm x 5 mm Attachment to 8US19 23-2AA01 or independent installation	① 5SH3 506	18.00	
	End covers for 60-mm busbar system (see p. 5/9) 1) for covering unterminated busbar ends for 8US19 23-2AA00 (3-pole) L1-L3 for 8US19 23-3AA00 (3-pole) L1-L3 for 8US19 23-4AA00 (4-pole) L1-L3 + PE/N (1 unit = 2 pieces)	8US19 22-1AC00 8US19 22-1AC00 8US19 22-1AB00	14.10 ea. 14.10 ea. 32.00	10 10
	Busbar copper (flat copper, approx. 2 m long, bare, to EN 12 167) 6 mm x 6 mm 12 mm x 5 mm, common size for 40mm system 20 mm x 5 mm, common size for 60mm system 30 mm x 5 mm 20 mm x 10 mm 30 mm x 10 mm	8WC5 020 8WC5 023 8WC5 026 8WC5 033 8WC5 028 8WC5 034	33.00 104.00 118.00 220.00 226.00 256.00	
 8GS40200  8US19 22-2A	Cover profiles for busbars 12 mm x 5 mm, 12 mm x 10 mm 210 mm long 20 mm x 5 mm 1 000 mm long 25 mm x 5 mm 1 000 mm long 30 mm x 5 mm 1 000 mm long 20 mm x 10 mm 1 000 mm long 30 mm x 10 mm 1 000 mm long 20 - 30 mm x 5 mm 1 meter long	8GS4 0200 8US19 22-2AA00 8US19 22-2AA00 8US19 22-2AA00 8US19 22-2BA00 8US19 22-2BA00 FBC72	16.00 ea. 35.50 35.50 35.50 38.00 38.00 35.50 ea.	5 3
	Incoming supply terminals for 60 mm busbar system Terminal plate with cover (35 mm ² to 120 mm ² , 3-pole) 200 mm long 84 mm wide Connection module for 4-pole (PE/N) up to 16 mm must be attached to an adapter/switching device holder 242 mm long 18 mm wide	8US19 21-1AA00 8US12 00-0AA00	98.00 60.00	
 8US19 21-1AA00	Three Pole Lug Plate assembly with cover Wire Size 2-250 MCM 3/0-350 MCM 300-600 MCM Amp Rating 440 amps 460 amps 560 amps	FBT250 FBT350 FBT600	98.00 193.00 205.00	
 FBT250				

1) For masking unterminated busbar ends up to 5 mm busbar thickness (ground clearance at 10 mm busbar thickness: 17 mm).

Cross Reference

Function

Incoming power terminal

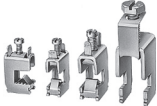


MLFB	MLFB
FBT250	8US1921-1AA00

① Discount Code: Siemens AG

Fast Bus 8US and Fast Bus Busbar Adapter System

Accessories for 60 mm system

Selection and ordering data

Description	Conductor cross-section	Order No.	List Price \$	Pack Units
Terminals for round conductors (See below for cross reference information)				
8US19 21-2A.00 8US19 21-2B.00 	5 mm busbar thickness from 12 mm x 5 mm up to 30 mm x 5 mm	1.5 – 16 mm ² 4 – 35 mm ² 16 – 120 mm ²	8US19 21-2AA00 4.00 ea. 8US19 21-2AB00 5.10 ea. 8US19 21-2AC00 20.00 ea.	100 50 50
	from 20 mm x 5 mm up to 30 mm x 5 mm	95 – 185 mm ² 150 – 300 mm ²	8US19 41-2AA01 35.00 ea. 8US19 41-2AA02 45.00 ea.	6 3
8US19 41-2AA0. 	10 mm busbar thickness from 12 mm x 10 mm up to 30 mm x 10 mm	1.5 – 16 mm ² 16 – 70 mm ² 16 – 120 mm ²	8US19 21-2BA00 6.50 ea. 8US19 21-2BD00 15.00 ea. 8US19 21-2BC00 20.00 ea.	100 50 50
	from 20 mm x 10 mm up to 30 mm x 10 mm	95 – 185 mm ² 150 – 300 mm ²	8US19 41-2AA01 35.00 ea. 8US19 41-2AA02 45.00 ea.	6 3
Terminals for Single Busbars (See below for cross reference information)				
AWG 16 – 6 12 – 2 6 – 2/0 6 – 250 MCM	Amp Rating 180 amps 270 amps 400 amps 440 amps	FBT166-1 FBT122-1 FBT620-1 FBT6250-1	4.34 ea. 5.34 ea. 15.34 ea. 21.34 ea.	3 3 3 3
Terminals for Double Stack Busbars				
AWG 16 – 6 12 – 2 6 – 2/0 6 – 250 MCM	Amp Rating 180 amps 270 amps 400 amps 440 amps	FBT166-2 FBT122-2 FBT620-2 FBT6250-2	6.67 ea. 7.67 ea. 15.34 ea. 21.34 ea.	3 3 3 3
Terminals for Single or Double Stack Busbars (See below for cross reference information)				
AWG 3/0 – 350 MCM 300 – 600 MCM	Amp Rating 460 amps 560 amps	FBT30350 FBT300600	35.00 ea. 45.00 ea.	3 3
Covering cap for supply terminals for round conductors (attachment to busbar)				
8US19 22-1GA00 	60 mm system for terminals up to 120 mm ² for terminals up to 300 mm ²	200 mm long 200 mm long	84 mm wide 270 mm wide	8US19 22-1GA00 40.00 8US19 22-1GA02 85.00
	Terminal Covers (mount to busbars) for terminals up to 250 MCM for terminals up to 600 MCM			FBC84 40.00 FBC135 85.00
Supply terminals for cable lugs, copper bars or laminated copper bands				
10 mm busbar thickness for cable lugs up to 240 mm ² for 20 mm x 5 mm up to 30 mm x 10 mm	(bolts threaded M 10)		8US19 41-2AC00 21.00 8US19 41-2BB00 20.00	
Terminals to fit wire gauge size #16-2 3 lugs per set with cover			FBT162 58.00	
Ground Terminals for Ground Busbar	Connection for: 12 AWG 4 AWG 2 AWG	8WA2860 ¹⁾ 8WA2868 ¹⁾ 8WA2870 ¹⁾	0.40 1.25 1.50	
Cross Reference Numbers				
FBT166-1 FBT122-1 FBT6250-1 FBT620-1 FBT30350 FBT300600 FBC84 FBC135	16-6 AWG 12-2 AWG 6-250 MCM 6-2/0 AWG 3/0-350 MCM 300-600 MCM Cover 84 mm wide Cover 135 mm wide Cover 270 mm wide	180 A = 270 A = 440 A = 400 A = 460 A = 560 A = =	8US19 21-2AA00 8US19 21-2AB00 8US19 21-2AC00 8US19 21-2AD00 8US19 41-2AA01 8US19 41-2AA02 8US19 22-1GA00 8US19 22-1GA02	1.5 – 16 mm ² 4.0 – 35 mm ² 16.0 – 120 mm ² 16.0 – 70 mm ² 95.0 – 185 mm ² 150.0 – 300 mm ²


1) Discount Code: Terminal Blocks

Fast Bus

8US and Fast Bus Busbar Adapter System

Accessories for 60 mm system

Selection and ordering data

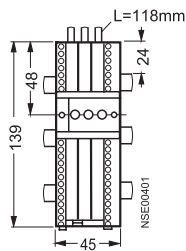
Description	Conductor cross-section	Order No.	List Price \$	Pack Units	
Extension and connection terminals					
for 2 abutting busbars ¹⁾	12 mm × 5 mm (1 set = 2 units)	① 8JK3 201	16.00 ea.	Std. Pkg Qty=10	
Accessories for busbar adapters and switching device holders					
8US19 98-4AA00 	Mounting rail (35 mm) – plastic complete with fixing screws	45 mm wide	8US19 98-7CA15	4.00 ea. Std. Pkg Qty=10	
		55 mm wide	8US19 98-7CA16	5.00 ea. Std. Pkg Qty=10	
		70 mm wide	8US19 98-4AA00	6.20 ea. Std. Pkg Qty=10	
		110 mm wide	8US19 98-7CA10	10.00 ea. Std. Pkg Qty=10	
8US19 98-3AA00 	Connection holder (for vertical busbar assembly) fixes the circuit-breaker to the mounting rail ²⁾ (for SIRIUS size S00/S0)		8US19 98-1DA00	2.45 ea. Std. Pkg Qty=20	
	Screw holder for supplementary screw fixing of the feeder (for SIRIUS size S00/S0)		8US19 98-1CA00	5.50 ea. Std. Pkg Qty=20	
	Spacer fixes the feeder to the busbar adapter (for SIRIUS size S00/S0)		8US19 98-1BA00	0.78 ea. Std. Pkg Qty=20	
	Connection keys for mechanical linking of adapters and switching device holders (2 units per combination)		8US19 98-1AA00	1.05 ea. Std. Pkg Qty=100	
Outgoing terminal rail for busbar adapter					
8US19 98-8AA10 	Plug-type terminal (complete with supporting element for attachment to busbar adapter and switching device holder) 3 × 2.5 mm ² (400 V) and 4 × 1.5 mm ² (250 V)	91 mm long	45 mm wide	8US19 98-8AM07	35.00 ea.
		91 mm long	54 mm wide	8US19 98-8AA10	98.00 ea.

- 1) Terminal bar must be made up in-house.
- 2) For 45 mm and 55 mm mounting rail.

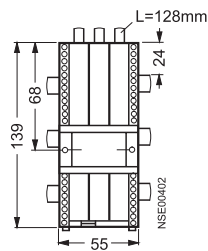
① Discount Code: Siemens AG

Dimension drawings

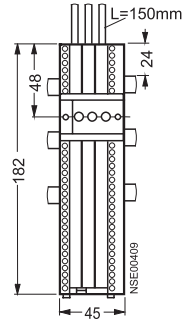
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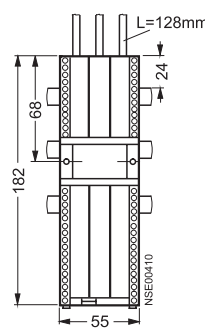
8US10 61-5FK08



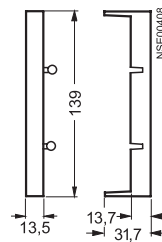
8US10 51-5DM07



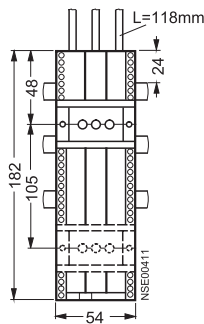
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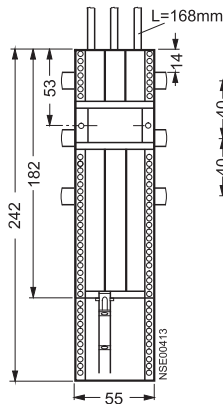
8US19 98-2BK00



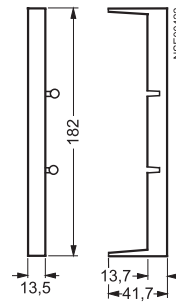
8US10 61-5NA00,
8US10 61-6NA00



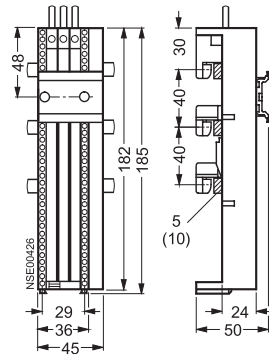
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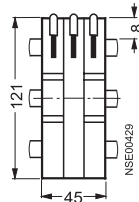
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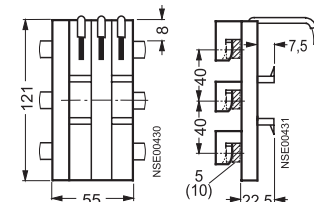
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8US10 51-5DJ07



8US10 61-5DJ07



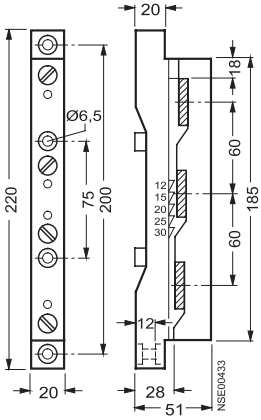
Fast Bus

8US and Fast Bus Busbar Adapter System

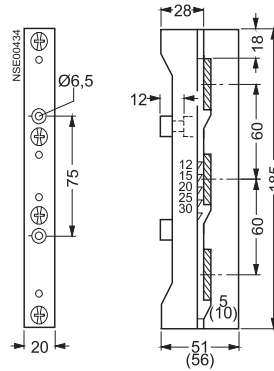
60 mm system

Dimension drawings

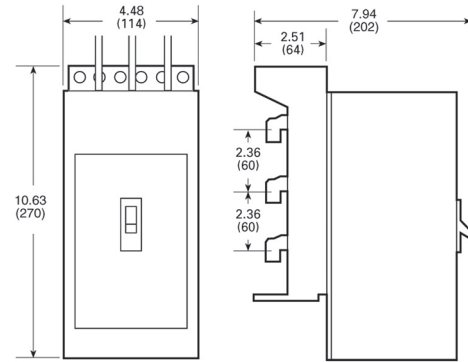
8US19 23-2AA00



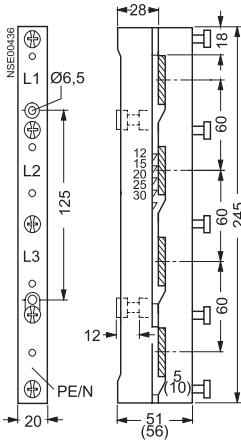
8US19 23-3AA00



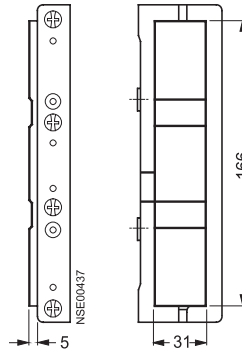
FBCB150, FBCB200, FBCB225, FBCB250



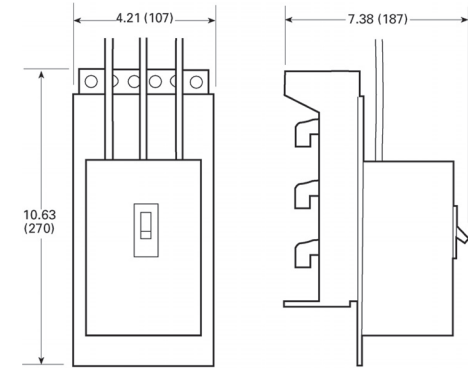
8US19 23-4AA00



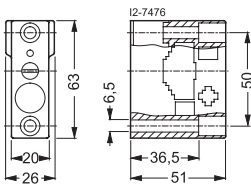
8US19 22-1AC00
with 8US19 23-3AA00



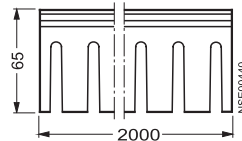
FBCB100, FBCB125



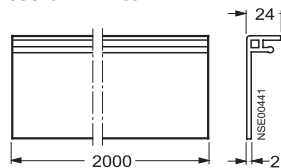
5SH3 506



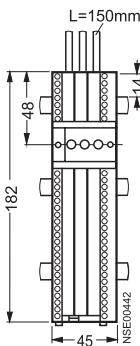
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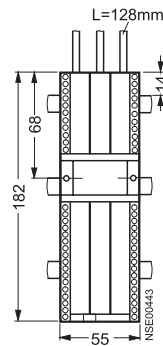
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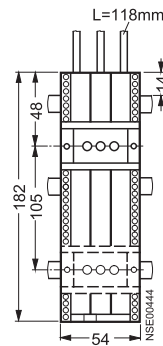
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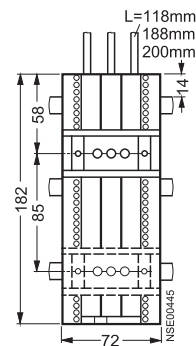
8US12 61-5FM08



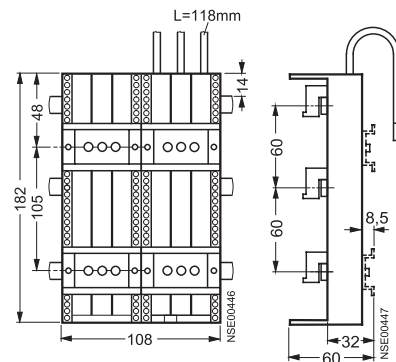
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8US12 61-6NA00



8US12 11-5NE00
8US12 71-2NA20
8US12 71-6MA20

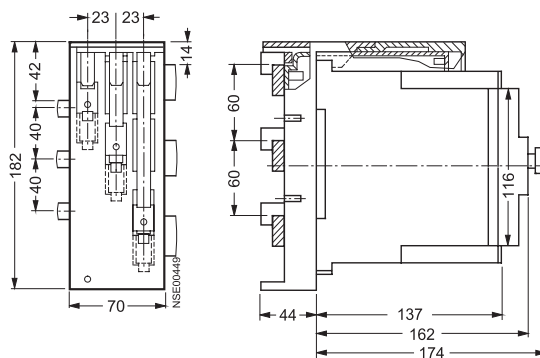


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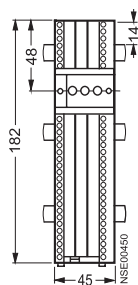


Dimension drawings

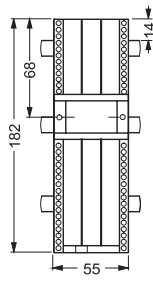
8US11 11-4SM00



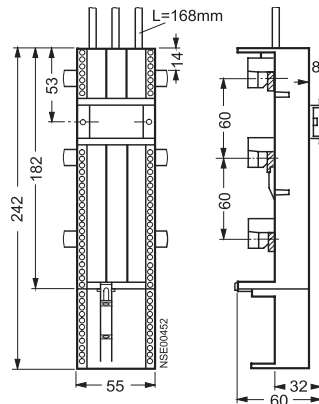
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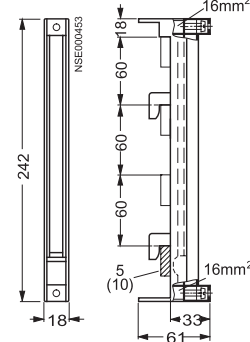
8US12 60-5AM00



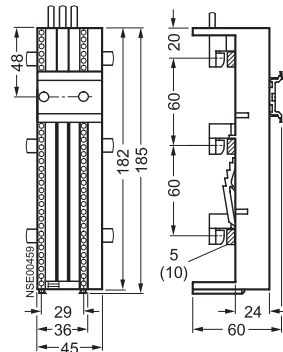
8US12 60-5AP00
8US12 61-5FP08



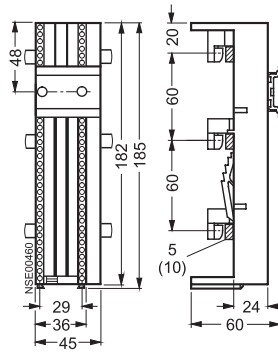
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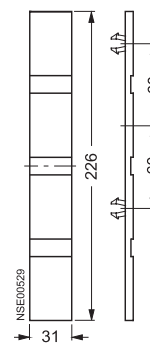
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1)
8US12 50-5RM07



8US19 22-1AB00



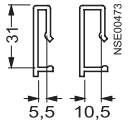
Fast Bus

8US and Fast Bus Busbar Adapter System

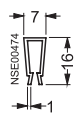
Accessories for 40 mm and 60 mm system

Dimension drawings

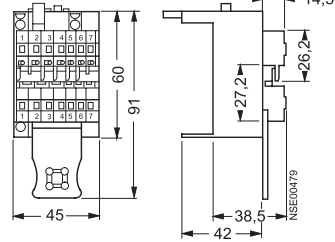
8US19 22-2AA00
8US19 22-2BA00



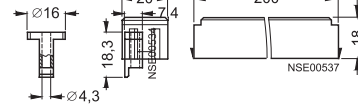
8GR5 010



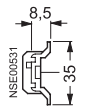
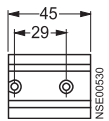
8US19 98-8AM07



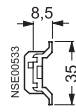
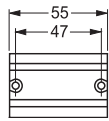
8US19 22-1CA00



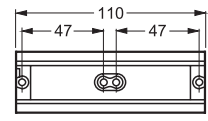
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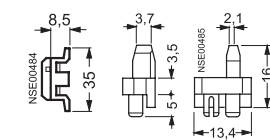
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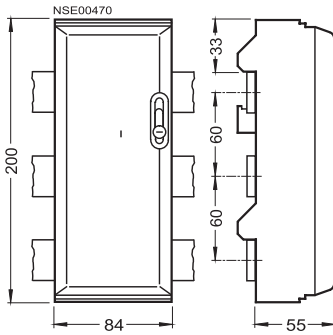
8US19 98-7CA10



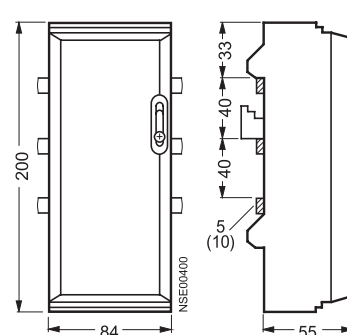
8US19 98-1BA00



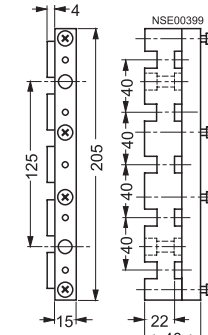
8US19 22-1GA00



8US19 22-1GA00

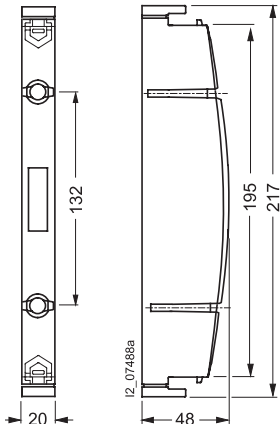


8US19 03-5AA00



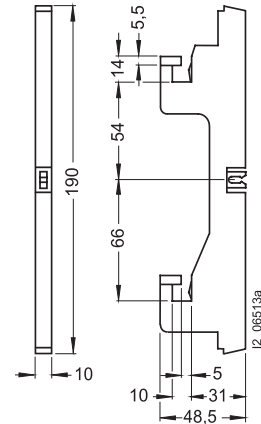
Holder for edge profile

5SH3 532



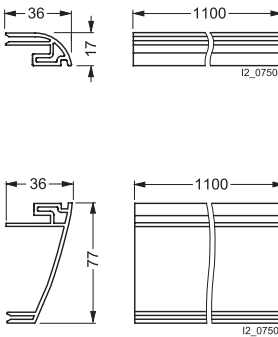
Spare panel holder

5SH3 523



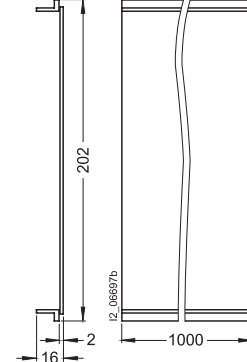
Edge profile

5SH3 528, 5SH3 530



Spare panel cover

5SH3 525



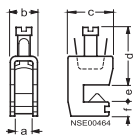
Fast Bus 8US and Fast Bus Busbar Adapter System

Accessories for 40 mm and 60 mm system

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4
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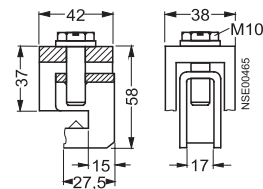
Dimension drawings

8US19 21-2..00

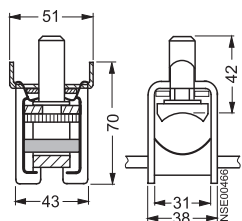


Type	a	b	c	d	e	f
8US19 21-2AA00	7,5	11,5	22,5	25	5	10
-2AB00	10,5	15,5	29	35	5	10
-2AC00	17	23,5	36	55	5	12
-2AD00	14,5	20,5	32	42	5	12
8US19 21-2BA00	7,5	11,5	22,5	25	10	10
-2BB00	10,5	15,5	29	35	10	10
-2BC00	17	23,5	36	55	10	12
-2BD00	14,5	20,5	32	42	10	12

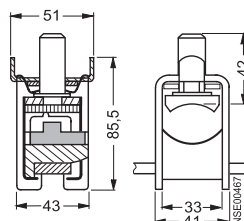
8US19 41-2AC00



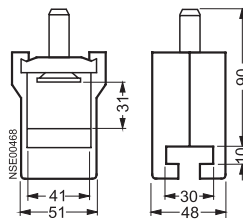
8US19 41-2AA01
8US19 41-2BB00



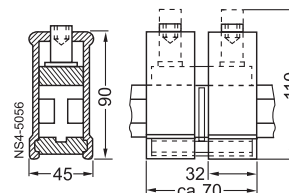
8US19 41-2AA02



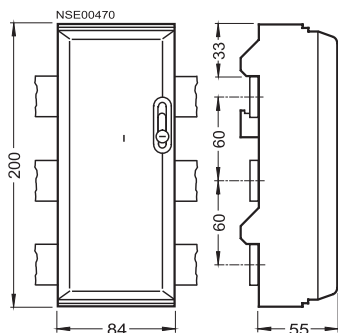
8US19 41-2BA00



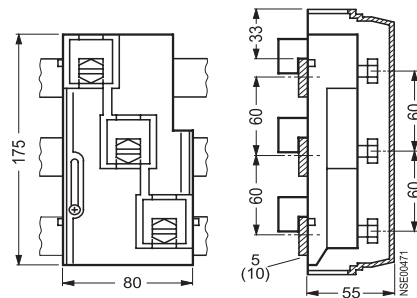
8US19 41-2BF00



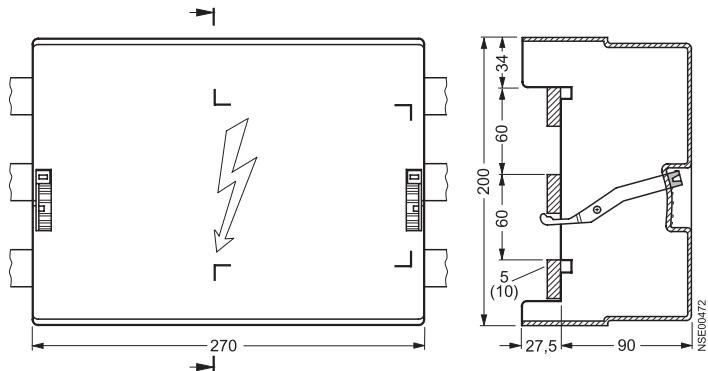
8US19 22-1GA00



8US19 21-1AA00



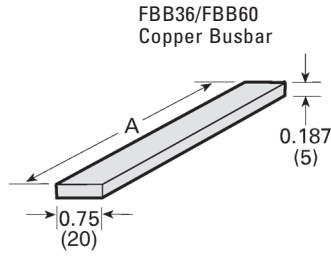
8US19 22-1GA02



Fast Bus

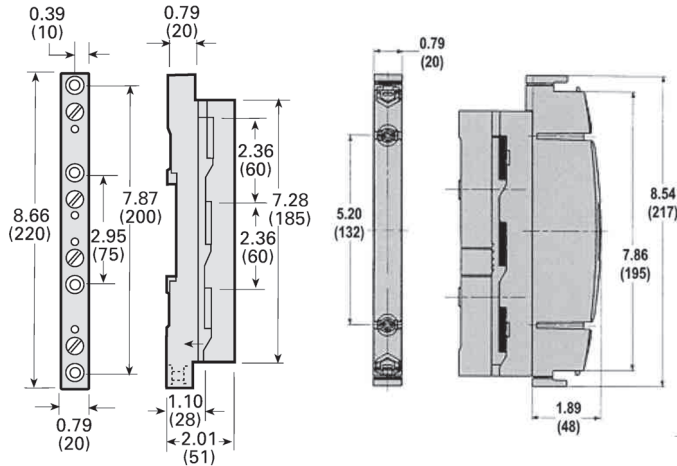
8US and Fast Bus Busbar Adapter System

Dimensions

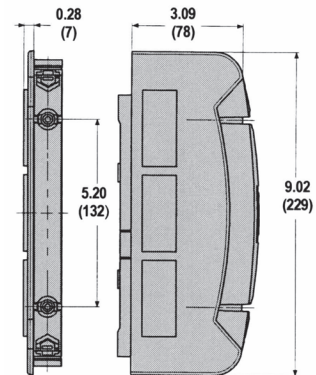


Dimension	A
FBB36	36 (914)
FBB60	60 (1524)

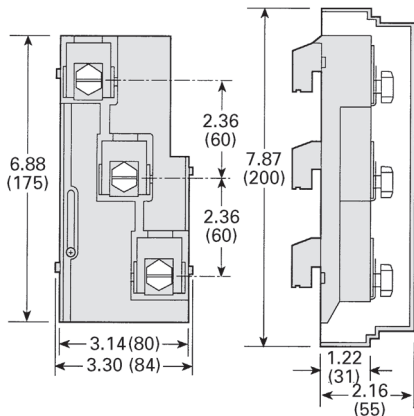
FBS400 or FBSXP
Busbar Support Kit



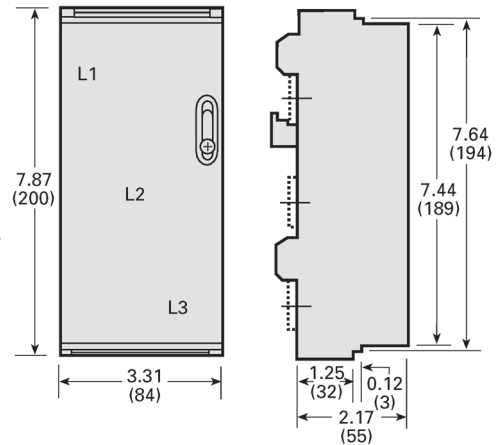
FBIC



FBT250
Three-Pole Lug Plate
(uses same cover as 8US1922-1GA00)



FBT162/FBC84
Terminals and Cover



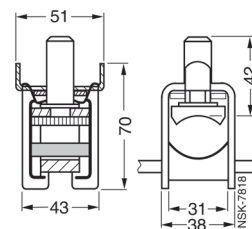
All dimensions shown in inches (millimeters). For reference purposes only. Not to be used for design or construction purposes.

Fast Bus 8US and Fast Bus Busbar Adapter System

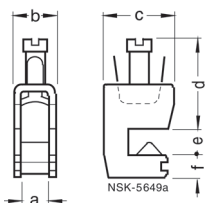
Dimensions

Type	a	b	c	d	e	f
FBT166-1	7.5	11.5	22.5	25	5	10
FBT122-1	10.5	15.5	29	35	5	10
FBT6250-1	17	23.5	36	55	5	12
FBT620-1	14.5	20.5	32	42	5	12
FBT166-2	7.5	11.5	22.5	25	10	10
FBT122-2	10.5	15.5	29	35	10	10
FBT6250-2	17	23.5	36	55	10	12
FBT620-2	14.5	20.5	32	42	10	12

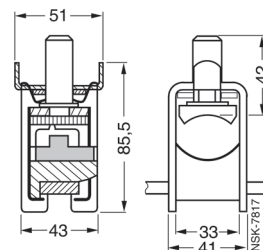
FBT30350



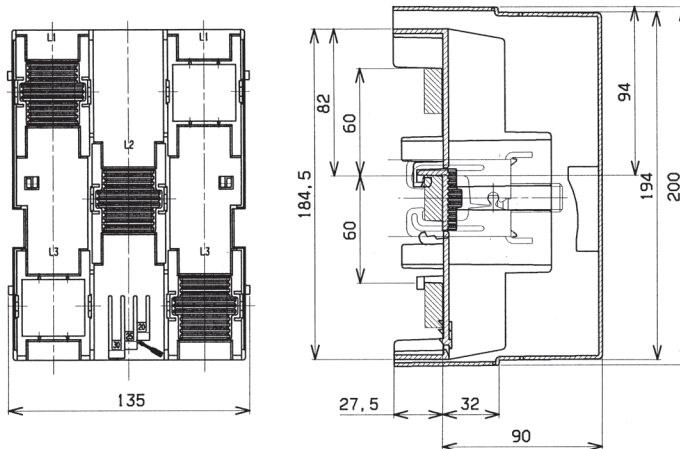
FBT



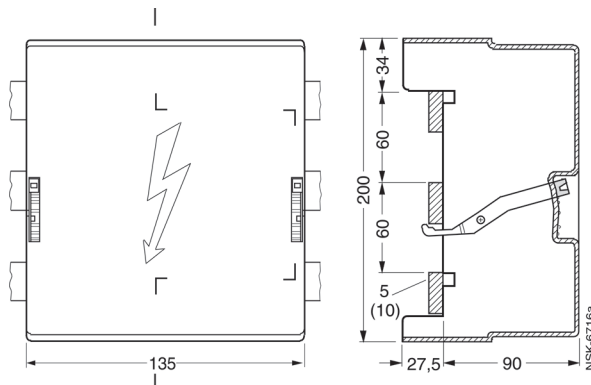
FBT300600



FBT350/FBT600
(Uses same cover as FBC135)



FBC135



All dimensions shown in millimeters. For reference purposes only. Not to be used for design or construction purposes.

Fast Bus

8US and Fast Bus Busbar Adapter System

Selection

Required Components for Fast Bus Mounting

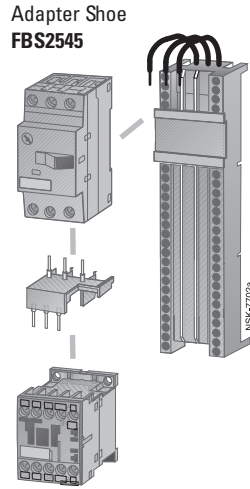
3RV101 with 3RT101

MSP
3RV101

Link Module
3RA1911-1A

Contactor
3RT101

Spacer for Contactor
8US1998-1BA00



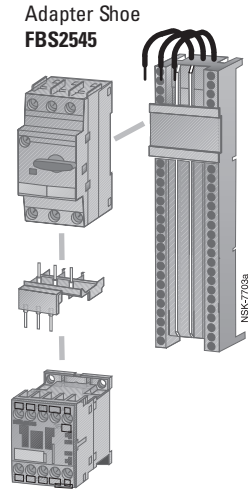
3RV102 with 3RT101

MSP
3RV102

Link Module
3RA1921-1D

Contactor
3RT101

Spacer for Contactor
8US1998-1BA00



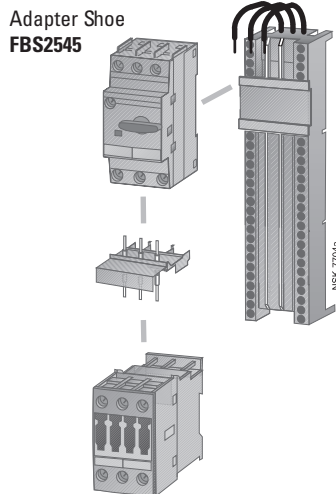
3RV102 with 3RT102

MSP
3RV102

Link Module
for AC: **3RA1921-1A**
for DC: **3RA1921-1B**

Contactor
3RT102

Spacer for Contactor
8US1998-1BA00

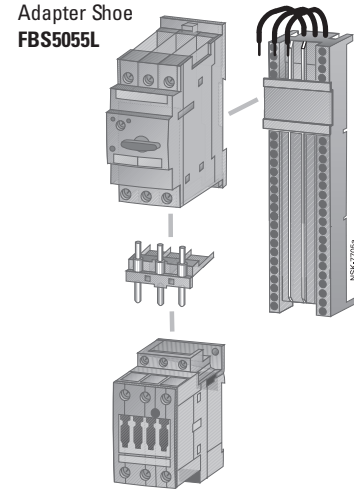


3RV103 with 3RT103

MSP
3RV103

Link Module
for AC: **3RA1931-1A**
for DC: **3RA1931-1B**

Contactor
3RT103



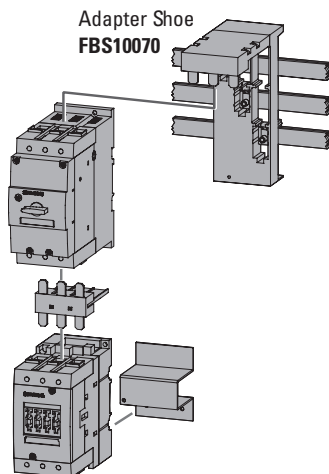
3RV104 with 3RT104

MSP
3RV104

Link Module
for AC: **3RA1941-1A**
for DC: **3RA1941-1B**

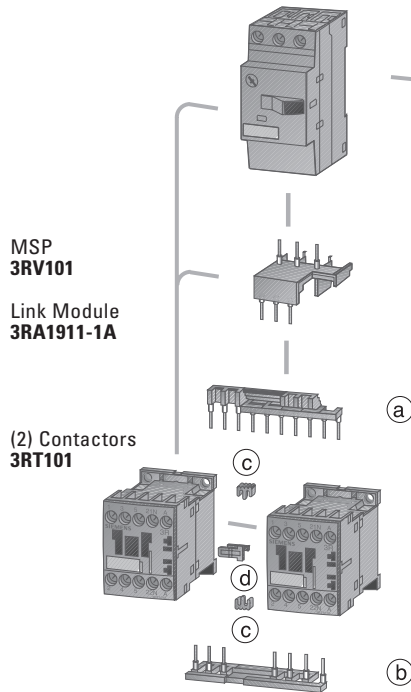
Contactor
3RT104

Bracket
FBS0070B



Required Components for Fast Bus Mounting

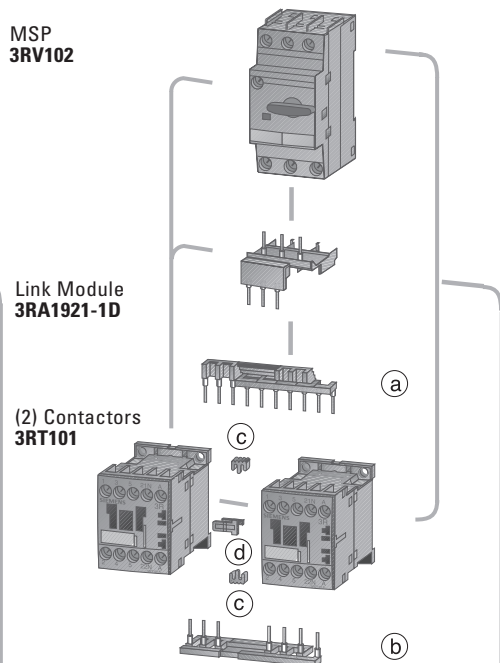
3RV101 with Reversing 3RT101



3RA1913-2A Wiring Kit

- (a) Upper Wiring Module
- (b) Lower Wiring Module
- (c) 2 Connecting Clips
- (d) Mechanical Interlock

3RV102 with Reversing 3RT101

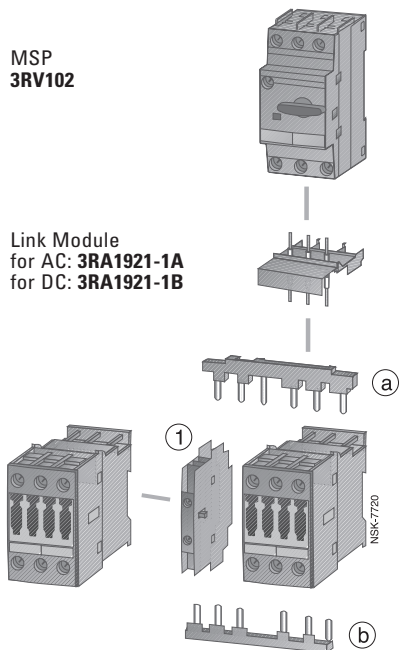


MSP 3RV102

Link Module 3RA1921-1D

(2) Contactors 3RT101

3RV102 with Reversing 3RT102



MSP 3RV102

Link Module for AC: 3RA1921-1A for DC: 3RA1921-1B

(2) Contactors 3RT102

3RA1923-2A Wiring Kit

- (a) Upper Wiring Module
- (b) Lower Wiring Module

Contactor Support for 3RT101: FBS0045 Contactor Support for 3RT102: FBS0055

Adapter Shoe FBS2545

- ① 3RA1924-2B
Mechanical Interlock
- ② FBC20
Fast Clips
- ③ 8US1998 - 1BA00
Spacers for Contactors
1 Required per Contactor

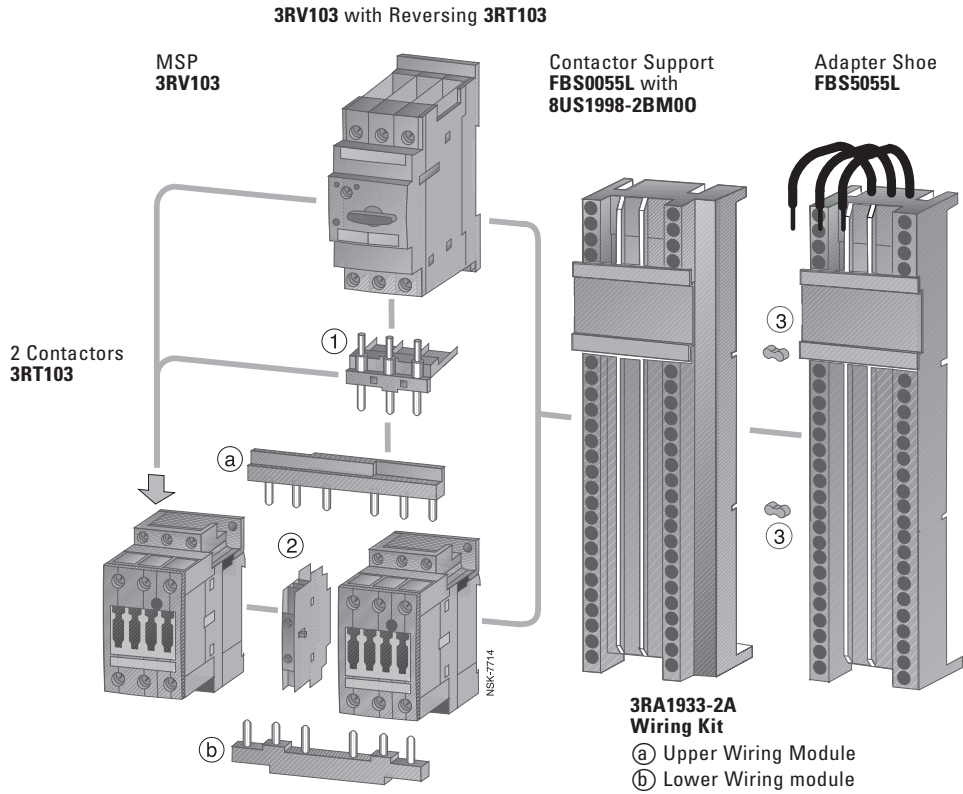
Fast Bus

8US and Fast Bus Busbar Adapter System

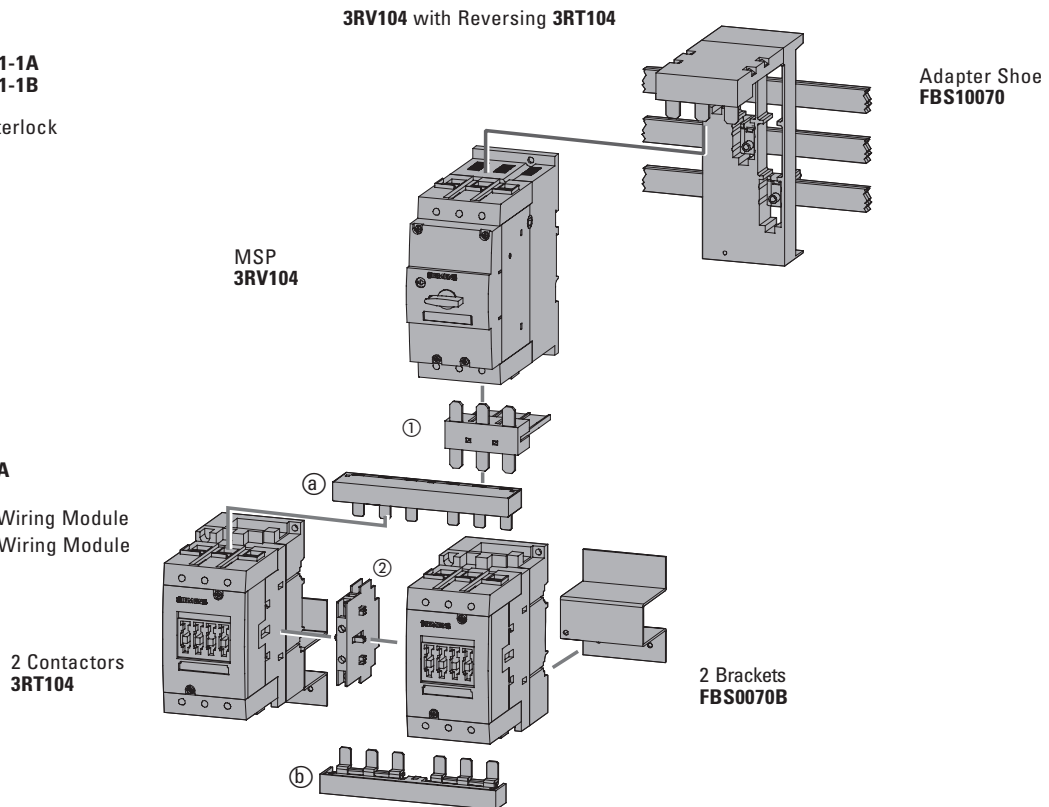
Selection

Required Components for Fast Bus Mounting

- ① Link Module for AC: **3RA1931-1A**
for DC: **3RA1931-1B**
- ② Mechanical Interlock **3RA1924-2B**
- ③ Fast Clips **FBC20**



- ① Link Module for AC: **3RA1941-1A**
for DC: **3RA1941-1B**
- ② Mechanical Interlock **3RA1924-2B**



Fast Bus 8US and Fast Bus Busbar Adapter System

Dimensions

1

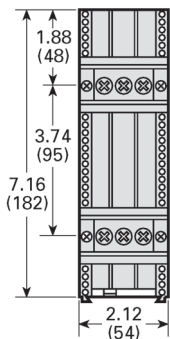
2

3

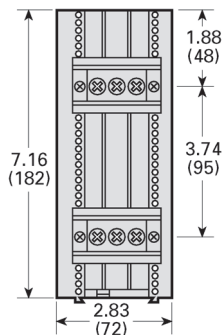
4

5

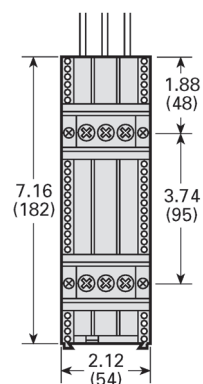
FBS0054
Adapter Shoe



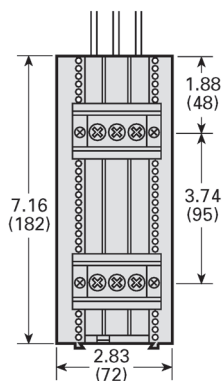
FBS0072
Adapter Shoe



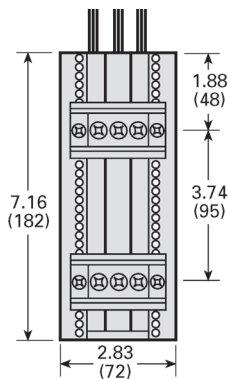
FBS3254
Adapter Shoe



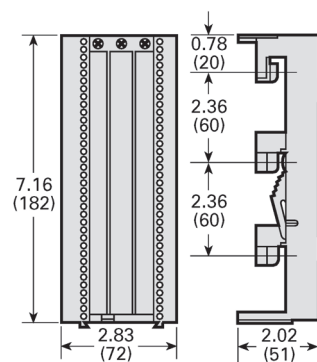
FBS3272
Adapter Shoe



FBS6572
Adapter Shoe



FBS8072[Ⓢ]
Adapter Shoe



All dimensions shown in inches (millimeters). For reference purposes only. Not to be used for design or construction purposes.

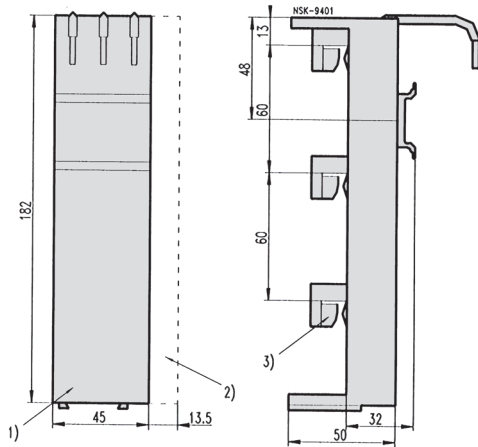
ⓈSide profile dimension is generic for all FBS type shoes.

Fast Bus

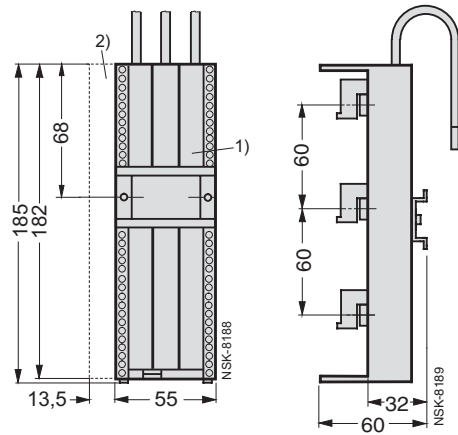
8US and Fast Bus Busbar Adapter System

Dimensions

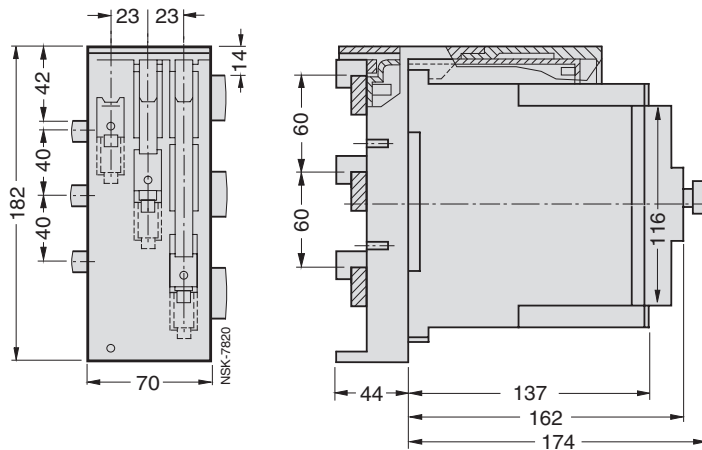
- 1) FBS2545
Adapter Shoe
- 2) 8US1998-2BM00
Side Module
- 3) for busbar
width: 12 to 30 mm
thickness: 5 and 10 mm



- 1) FBS5055
Adapter Shoe
- 2) 8US1998-2BM00
Side Module

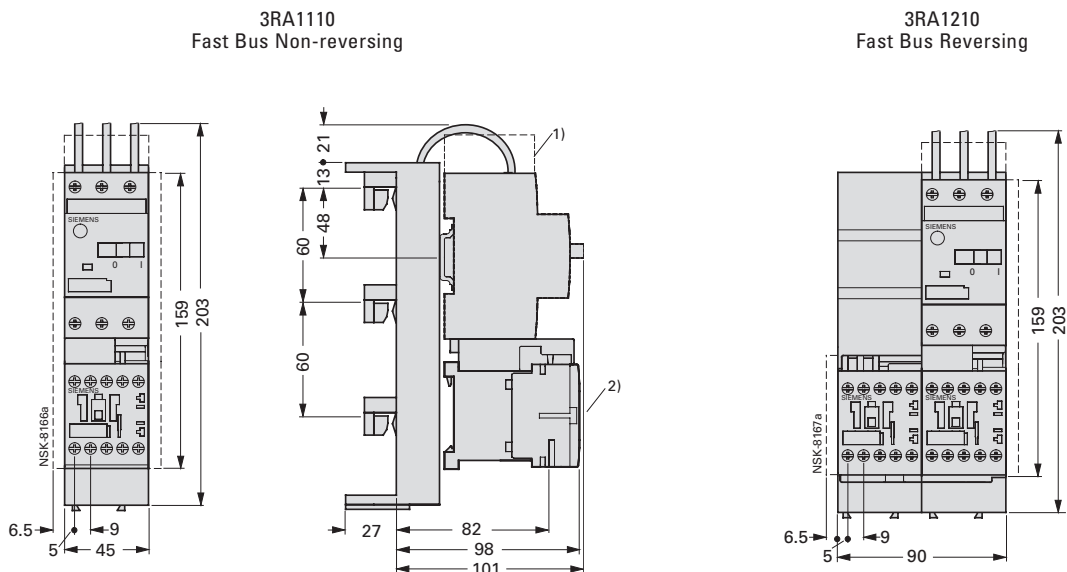


FBS10070
Adapter Shoe
with 3RV104 mounted



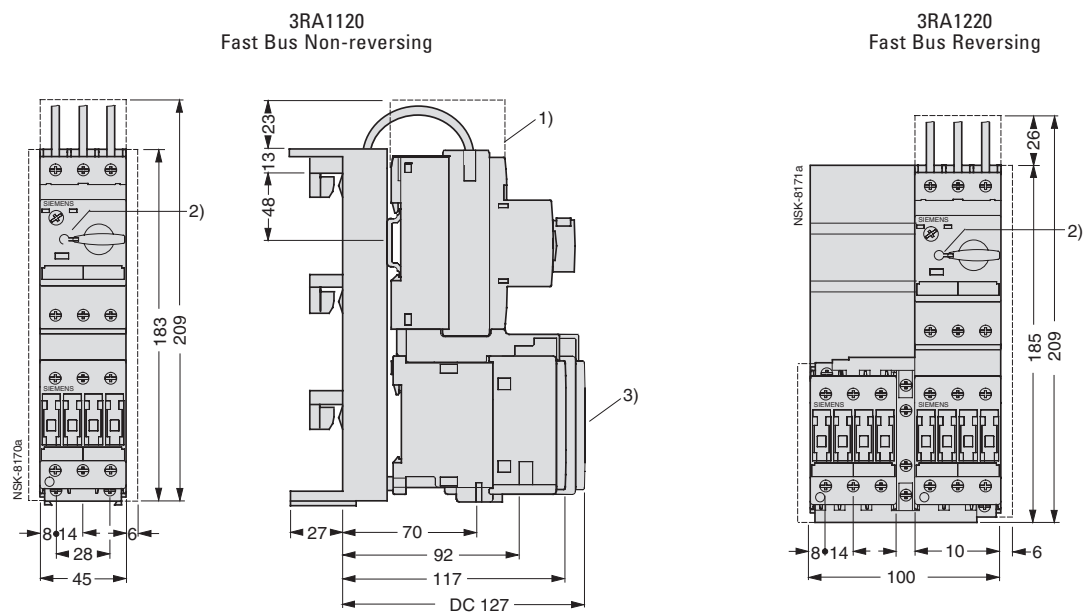
All dimensions shown in millimeters. For reference purposes only. Not to be used for design or construction purposes.

Dimensions, 3RV101 with 3RT101



- 1) Arcing space
- 2) When a front auxiliary is installed on the contactor, add 39 mm to the depth of the contactor.

Dimensions, 3RV102 with 3RT101



- 1) Arcing space
- 2) Lockable in OFF position. Padlock diameter 5 mm.
- 3) When a front mount auxiliary is installed on the contactor, add 49 mm to the depth of the contactor.

All dimensions shown in millimeters. For reference purposes only. Not to be used for design or construction purposes.

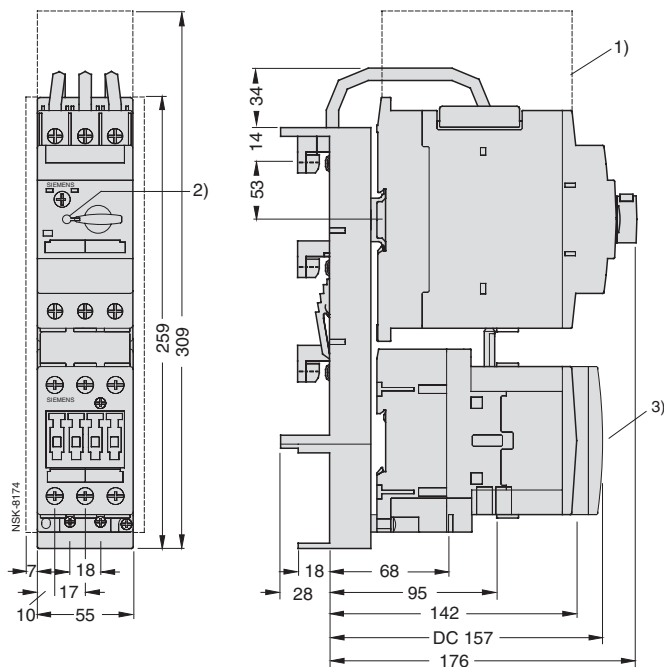
Fast Bus

8US and Fast Bus Busbar Adapter System

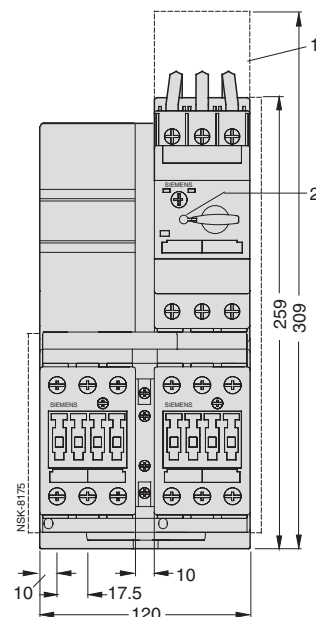
Dimensions

3RV103 with 3RT103

3RA1130
Fast Bus Non-reversing



3RA1230
Fast Bus Reversing

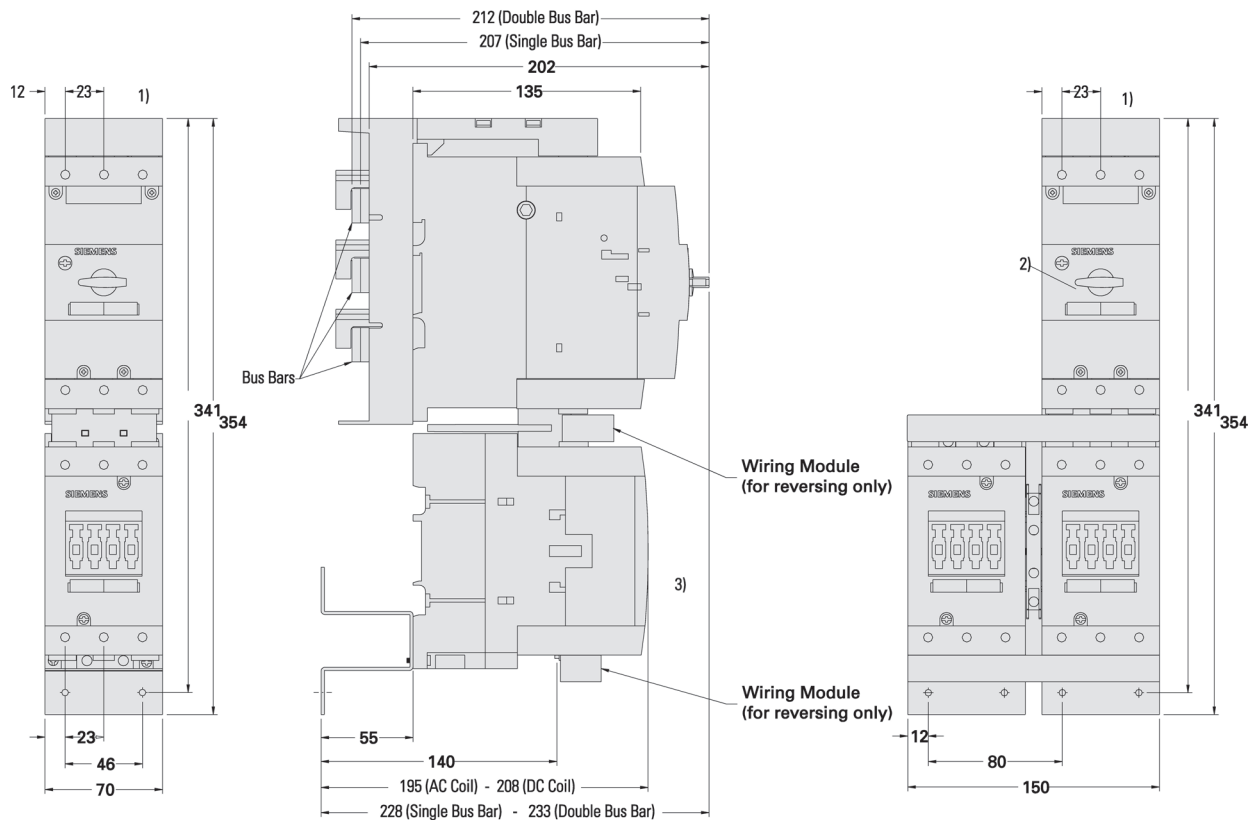


Lateral clearance to grounded components minimum 6 mm.

- 1) Arcing space
- 2) Lockable in OFF position with padlock diameter 5 mm.
- 3) When a front mount auxiliary is installed on the contactor, add 49 mm to the depth of the contactor.

All dimensions shown in millimeters. For reference purposes only. Not to be used for design or construction purposes.

3RV104 with 3RT104



Lateral clearance to grounded components minimum 6 mm.

- 1) Arcing space
- 2) Lockable in OFF position with padlock diameter 5 mm.
- 3) When a front mount auxiliary is installed on the contactor, add 49 mm to the depth of the contactor.

All dimensions shown in millimeters. For reference purposes only. Not to be used for design or construction purposes.

Fast Bus

Notes

