

SIRIUS Circuit Breakers up to 100 A

Feeder system

Overview

The infeed system is a convenient means of power supply and distribution for a group of several circuit-breakers or complete load feeders.

These devices are available in the SIRIUS modular system up to 5.5 kW at AC 400 V. For higher power ratings, circuit-breakers of size S0 with screw connection (up to 11 kW at AC 400 V) can be integrated into the system.

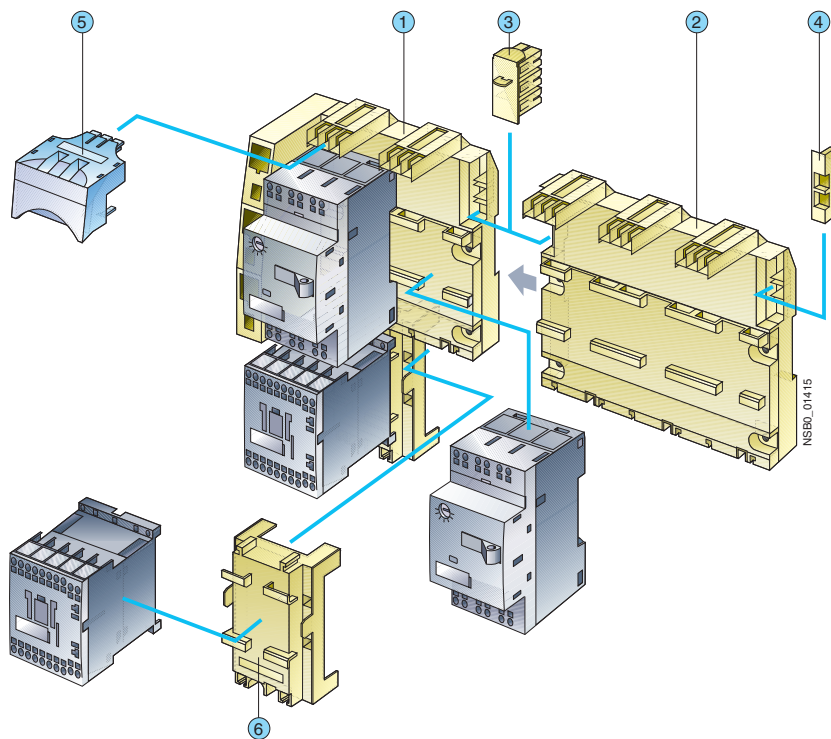
Design

The system is based on a basic module complete with a lateral incoming unit (3-phase busbar with infeed). This incoming unit with Cage Clamp terminals is mounted on the right or left depending on the design and can be supplied with a maximum conductor cross-section of 25 mm² (with end sleeve). A basic module has two sockets onto each of which a circuit-breaker can

be snapped. Expansion modules are available for extending the system (3-phase busbars for system expansion). The individual modules are connected through an expansion plug.

Electrical connection between the 3-phase busbars and the circuit-breakers is implemented through plug-in connectors. The complete system can be mounted on a 35 mm standard rail to EN 50022 and can be expanded as required up to a maximum current carrying capacity of 63 A.

The system is mounted extremely quickly and easily thanks to the simple plug-in technique. Thanks to the lateral infeed, the system also saves space in the control cabinet. The additional overall height required for the infeed unit is only 30 mm. The alternative infeed possibilities on each side offer a high degree of flexibility for configuring the control cabinet: infeed on left-hand or right-hand side, ring infeed or infeed on one side and loop-through from the other side to supply further loads are all possible.



- ① 3-phase busbar with infeed
- ② 3-phase busbar for system extension
- ③ Extension connector
- ④ End cover
- ⑤ Cable connector
- ⑥ Contactor base




① 3-phase busbars with infeed


A 3-phase busbar with infeed unit is required for connecting the incoming supply. This module comprises one infeed module and 2 sockets which each accept one circuit-breaker. A choice of two designs with infeed on the left or right is available. The incoming supply is connected via Cage Clamp terminals. The Cage Clamp springs permit conductor cross-sections of up to 25 mm² with end sleeves. An end cover is supplied with each module.

② 3-phase busbars for system expansion

The 3-phase busbars for system expansion support expansion of the system. There is a choice of modules with 2 or 3 sockets. The system can be expanded as required up to a maximum current carrying capacity of 63 A. An expansion plug is supplied with each module.

Selection and ordering data

Type	Version	For circuit-breakers Size	Order No.	Price £ 1 unit	Price Group	Weight approx. kg	
3-phase busbars with infeed							
 3RV19 17-1A	3-phase busbars with infeed incl. end cover 3RV19 17-6A	For 2 circuit-breakers with infeed from the left	S0 (screw), S00 (Cage Clamp)	3RV19 17-1A	9.76	101	0.380
		For 2 circuit-breakers with infeed from the right	S0 (screw), S00 (Cage Clamp)	3RV19 17-1E	9.76	101	0.380
3-phase busbars for system expansion							
 3RV19 17-4B	3-phase busbars for system expansion incl. 3RV19 17-5BA00 expansion connector	For 2 circuit-breakers	S0 (screw), S00 (Cage Clamp)	3RV19 17-4A	5.89	101	0.200
		For 3 circuit-breakers	S0 (screw), S00 (Cage Clamp)	3RV19 17-4B	7.79	101	0.300
Plug-in connector							
 3RV19 27-5AA00	Plug-in connector to make contact with the circuit-breakers	Single unit packaging	S0 (screw)	3RV19 27-5AA00	1.52	101	0.041
			S00 (Cage Clamp)	3RV19 17-5AA00	1.52	101	0.028

Type	Version	For contactor Size	Order No.	Price £ 1 unit	Price Group	Weight approx. kg	
Contactor base							
 3RV19 17-7AA00	Contactor base for mounting direct-on-line or reversing starters Not required for screw type feeders.	Single unit packaging	S00 (Cage Clamp)	3RV19 17-7AA00	0.95	101	0.031
Single phase module							
	Single phase module			3RV19 17-5D	6.97	101	0.050
Standard mounting rail							
	Standard mounting rail			3RV19 17-7B	0.82	101	on req.

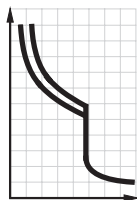
SIRIUS Circuit Breakers up to 100 A

for motor protection

Selection and ordering data

CLASS 10, with screw connection or Cage Clamp connection, without auxiliary switch

Auxiliary switches on page 7.



3RV10 11



3RV10 21



3RV10 31








3RV10 41

Rated current I_n	Suitable for 3-phase induction motors ¹⁾ P_n	Current setting range		Short-circuit breaking capacity at AC 400 V I_{cu}	Screw connection			Weight approx. kg	Cage Clamp connection			Weight approx. kg
		Thermal overload release	Instantaneous short-circuit release		Order No.	Price £	Price Group		Order No.	Price £	Price Group	
A	kW	A	A	kA	1 unit			kg	1 unit			kg
Size S00												
0.16	0.04	0.11 ... 0.16	2.1	100	3RV10 11-0AA10	25.41	101	0.245	3RV10 11-0AA20	25.98	101	0.253
0.2	0.06	0.14 ... 0.2	2.6	100	3RV10 11-0BA10	25.41	101	0.246	3RV10 11-0BA20	25.98	101	0.254
0.25	0.06	0.18 ... 0.25	3.3	100	3RV10 11-0CA10	25.41	101	0.246	3RV10 11-0CA20	25.98	101	0.254
0.32	0.09	0.22 ... 0.32	4.2	100	3RV10 11-0DA10	25.66	101	0.247	3RV10 11-0DA20	26.23	101	0.254
0.4	0.09	0.28 ... 0.4	5.2	100	3RV10 11-0EA10	25.66	101	0.250	3RV10 11-0EA20	26.23	101	0.256
0.5	0.12	0.35 ... 0.5	6.5	100	3RV10 11-0FA10	25.66	101	0.247	3RV10 11-0FA20	26.23	101	0.252
0.63	0.18	0.45 ... 0.63	8.2	100	3RV10 11-0GA10	25.91	101	0.249	3RV10 11-0GA20	26.36	101	0.254
0.8	0.18	0.55 ... 0.8	10	100	3RV10 11-0HA10	27.62	101	0.250	3RV10 11-0HA20	28.19	101	0.257
1	0.25	0.7 ... 1	13	100	3RV10 11-0JA10	27.62	101	0.249	3RV10 11-0JA20	27.62	101	0.255
1.25	0.37	0.9 ... 1.25	16	100	3RV10 11-0KA10	29.27	101	0.297	3RV10 11-0KA20	29.84	101	0.301
1.6	0.55	1.1 ... 1.6	21	100	3RV10 11-1AA10	29.27	101	0.298	3RV10 11-1AA20	29.84	101	0.303
2	0.75	1.4 ... 2	26	100	3RV10 11-1BA10	30.73	101	0.297	3RV10 11-1BA20	31.30	101	0.302
2.5	0.75	1.8 ... 2.5	33	100	3RV10 11-1CA10	30.73	101	0.298	3RV10 11-1CA20	31.30	101	0.304
3.2	1.1	2.2 ... 3.2	42	100	3RV10 11-1DA10	30.73	101	0.299	3RV10 11-1DA20	31.30	101	0.305
4	1.5	2.8 ... 4	52	100	3RV10 11-1EA10	30.73	101	0.296	3RV10 11-1EA20	31.30	101	0.304
5	1.5	3.5 ... 5	65	100	3RV10 11-1FA10	30.73	101	0.301	3RV10 11-1FA20	31.30	101	0.306
6.3	2.2	4.5 ... 6.3	82	100	3RV10 11-1GA10	30.73	101	0.303	3RV10 11-1GA20	31.30	101	0.308
8	3	5.5 ... 8	104	50	3RV10 11-1HA10	30.73	101	0.304	3RV10 11-1HA20	31.30	101	0.310
10	4	7 ... 10	130	50	3RV10 11-1JA10	34.28	101	0.300	3RV10 11-1JA20	35.04	101	0.306
12	5.5	9 ... 12	156	50	3RV10 11-1KA10	34.28	101	0.297	3RV10 11-1KA20	35.04	101	0.302
Size S0												
2.5	0.75	1.8 ... 2.5	30	100	3RV10 21-1CA10	33.45	101	0.372	–	–	–	–
3.2	1.1	2.2 ... 3.2	38	100	3RV10 21-1DA10	33.45	101	0.375	–	–	–	–
4	1.5	2.8 ... 4	48	100	3RV10 21-1EA10	33.45	101	0.370	–	–	–	–
5	1.5	3.5 ... 5	60	100	3RV10 21-1FA10	33.45	101	0.376	–	–	–	–
6.3	2.2	4.5 ... 6.3	76	100	3RV10 21-1GA10	33.45	101	0.374	–	–	–	–
8	3	5.5 ... 8	96	100	3RV10 21-1HA10	33.45	101	0.374	–	–	–	–
10	4	7 ... 10	120	100	3RV10 21-1JA10	37.25	101	0.375	–	–	–	–
12.5	5.5	9 ... 12.5	150	100	3RV10 21-1KA10	37.25	101	0.375	–	–	–	–
16	7.5	11 ... 16	192	50	3RV10 21-4AA10	37.25	101	0.382	–	–	–	–
20	7.5	14 ... 20	240	50	3RV10 21-4BA10	38.77	101	0.376	–	–	–	–
22	11	17 ... 22	264	50	3RV10 21-4CA10	41.31	101	0.378	–	–	–	–
25	11	20 ... 25	300	50	3RV10 21-4DA10	47.33	101	0.382	–	–	–	–
Size S2												
16	7.5	11 ... 16	192	50	3RV10 31-4AA10	65.89	101	1.040	–	–	–	–
20	7.5	14 ... 20	240	50	3RV10 31-4BA10	65.89	101	1.040	–	–	–	–
25	11	18 ... 25	300	50	3RV10 31-4DA10	74.76	101	1.030	–	–	–	–
32	15	22 ... 32	384	50	3RV10 31-4EA10	81.10	101	1.020	–	–	–	–
40	18.5	28 ... 40	480	50	3RV10 31-4FA10	93.77	101	1.040	–	–	–	–
45	22	36 ... 45	540	50	3RV10 31-4GA10	103.27	101	1.030	–	–	–	–
50	22	40 ... 50	600	50	3RV10 31-4HA10	105.81	101	1.020	–	–	–	–
Size S3												
63	30	45 ... 63	819	50	3RV10 41-4JA10	112.78	101	2.240	–	–	–	–
75	37	57 ... 75	975	50	3RV10 41-4KA10	124.18	101	2.250	–	–	–	–
90	45	70 ... 90	1170	50	3RV10 41-4LA10	133.05	101	2.280	–	–	–	–
100	45	80 ... 100	1235	50	3RV10 41-4MA10	146.99	101	2.290	–	–	–	–

1) Recommended values for standard 4-pole motors at AC 50 Hz 400 V. Please check the actual start-up data and ratings for the motor to be protected.





Selection and ordering data

Type	Version	Order No.	Price £	Price Group	Weight approx. kg	
1 unit						
Mountable auxiliary switches¹⁾						
 3RV19 01-1E  3RV19 01-1A	Transverse auxiliary switch with screw connection	1 CO	3RV19 01-1D	3.99	101	0.020
	with Cage Clamp connection	1 NO + 1 NC	3RV19 01-1E	4.88	101	0.018
		1 NO + 1 NC	3RV19 01-2E	4.94	101	0.017
	Lateral auxiliary switch with screw connection	1 NO + 1 NC	3RV19 01-1A	4.88	101	0.030
	with Cage Clamp connection	1 NO + 1 NC	3RV19 01-2A	4.94	101	0.040


Type	Control supply voltage of contactor	For contactor Size	For circuit-breaker Size	Order No.	Price £	Price Group	Weight approx. kg	
1 unit								
Link modules								
 3RA19 11-1AA00  3RA19 31-1AA00  3RA19 41-1AA00	Link module for mechanical fixing and electrical contacting between contactor and circuit-breaker	AC/DC	S00 S00	S00 S0	3RA19 11-1AA00 3RA19 21-1DA00	2.28 2.98	101 101	0.027 0.028
		AC	S0 S2 S3	S0 S2 S3	3RA19 21-1AA00 3RA19 31-1AA00 3RA19 41-1AA00	3.29 6.72 7.60	101 101 101	0.037 0.042 0.090
		DC	S0 S2 S3	S0 S2 S3	3RA19 21-1BA00 3RA19 31-1BA00 3RA19 41-1BA00	3.29 7.67 9.38	101 101 101	0.039 0.043 0.089
	Link module, Cage Clamp electrical connection between circuit-breaker and contactor (busbar adapter not included in the scope of supply)	AC/DC	S00	S00	3RA19 11-2A	1.27	101	0.160

Type	Version	For circuit-breaker Size	Order No.	Price £	Price Group	Weight approx. kg
1 unit						


Insulated 3-phase busbar system

For feeding several modular circuit-breakers on standard mounting rails, insulated, shock-protected Load capability: Rated operational voltage 690 V Rated current: Sizes S00 and S0 63 A Size S2 108 A							
 3RV19 15-1AB  3RV19 15-1BB  3RV19 15-1CB  3RV19 15-1DB	3-phase busbars • modular spacing 45 mm	for 2 circuit-breakers for 3 circuit-breakers for 4 circuit-breakers for 5 circuit-breakers	S00, S0 ²⁾ S00, S0 ²⁾ S00, S0 ²⁾ S00, S0 ²⁾	3RV19 15-1AB 3RV19 15-1BB 3RV19 15-1CB 3RV19 15-1DB	4.75 5.83 6.46 7.22	101 101 101 101	0.044 0.071 0.099 0.124
	3-phase busbars • modular spacing 55 mm	for 2 circuit-breakers for 3 circuit-breakers for 4 circuit-breakers	S2 S2 S2	3RV19 35-1A 3RV19 35-1B 3RV19 35-1C	8.49 10.45 12.29	101 101 101	0.137 0.214 0.295

Connector for 3-phase busbars

 3RV19 15-5DB	• modular spacing 45 mm	for connecting 3-phase busbars for circuit-breakers of size S0 (left) to size S00 (right)	S00, S0	3RV19 15-5DB	5.01	101	0.045
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3-phase line-side terminals

 3RV19 25-5AB	• connection from above	Conductor cross-section: solid or stranded 2.5...25 mm ² finely stranded with end sleeve 4...16 mm ²	S00 S0	3RV19 15-5A 3RV19 25-5AB	4.75 5.07	101 101	0.042 0.041
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1) For tripped signalling a minimum of one auxiliary switch is required (more information on request).

2) Clamping together S00 and S0 circuit-breakers is not possible due to the different modular spacings and the different heights of the terminals. A connector is available for connecting busbars from size S00 to size S0. Order No.: 3RV19 15-5DB.