# SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A

**General data** 

## Overview

The following illustrations show our 3RV1 motor starter protectors/circuit breakers with the accessories which can be mounted for the various sizes, see also "Introduction" --> "Overview".

Motor starter protectors/circuit breakers, size S00, with mountable accessories



Motor starter protectors/circuit breakers, sizes S0, S2 or S3, with mountable accessories



Mountable accessories for all sizes S00 ... S3

- 1 Transverse auxiliary switch (can not be used with 3RV17 and 3RV18 circuit breakers)
- 2 Lateral auxiliary switch with 2 contacts
- 3 Lateral auxiliary switch with 4 contacts
- 4 Shunt release
- 5 Undervoltage release

For accessories see page 5/17 onwards.

Mountable accessories

61 Undervoltage release with leading auxiliary contacts	S00
62 Undervoltage release with leading auxiliary contacts	S0 S3
7 Alarm switch	S0 S3
8 Isolator module	S0 and S2

## © Siemens AG 2010 SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A

#### General data



Size S0 motor starter protector

3RV1 motor starter protectors are compact, current limiting motor starter protectors which are optimized for load feeders. The motor starter protectors are used for switching and protecting induction motors of up to 45 kW at 400 V AC and for other loads with rated currents of up to 100 A.

## Type of construction

The motor starter protectors are available in four sizes:

- Size S00 width 45 mm. max. rated current 12 A, at 400 V AC suitable for induction motors up to 5.5 kW.
- Size S0 width 45 mm, max. rated current 25 A, at 400 V AC suitable for induction motors up to 11 kW.
- Size S2 width 55 mm, max. rated current 50 Å, at 400 V AC suitable for induction motors up to 22 kW.
- Size S3 width 70 mm. max. rated current 100 A, at 400 V AC suitable for induction motors up to 45 kW.

#### Note

LC

Ð	Screw terminals
	Cage Clamp terminals
	The terminals are indicated in the selection and

dering data by orange backgrounds.

#### "Increased safety" type of protection EEx e according to ATEX directive 94/9/EC

The 3RV10 motor starter protectors are suitable for the overload protection of explosion-proof motors with "increased safety" type of protection EEx e; see Chapter 20 "Appendix" --> "Standards and approvals" --> "Type overview of approved devices for explosion-protected areas (ATEX Explosion Protection)".

## Application

#### **Operating conditions**

3RV1 motor starter protectors are suitable for use in any climate. They are intended for use in enclosed rooms in which no severe operating conditions (such as dust, caustic vapors, hazardous gases) prevail. When installed in dusty and damp areas, suitable enclosures must be provided.

3RV1 motor starter protectors can optionally be fed from the top or from below.

The permissible ambient temperatures, the maximum switching capacities, the tripping currents and other boundary conditions can be found in the technical specifications and tripping characteristics, see note on Technical Information on page 5/1.

3RV1 motor starter protectors are suitable for operation in IT systems (IT networks). In this case, the different short-circuit breaking capacity in the IT system must be taken into account.

Since operational currents, starting currents and current peaks are different even for motors with identical power ratings due to the inrush current, the motor ratings in the selection tables are only guide values. The specific rated and start-up data of the motor to be protected is always paramount to the choice of the most suitable motor starter protector. This also applies to motor starter protectors for transformer protection.

#### Possible uses

The 3RV1 motor starter protectors can be used:

- · For short-circuit protection
- For motor protection (also with overload relay function)
- For system protection
- · For short-circuit protection for starter combinations
- For transformer protection
- As main control and EMERGENCY-STOP switches
- For fuse monitoring

or-

- For use in IT systems (IT networks)
- For switching of DC currents
- · As voltage transformer circuit breakers
- In areas subject to explosion hazard (ATEX)

More information can be found in "Configuration", see note on Technical Information on page 5/1.

SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A Motor Starter Protectors

For motor protection

## Selection and ordering data

CLASS 10, without auxiliary switches

PU (UNIT, SET, M)=1 PS\* PG =1 unit =101

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		3RV10 1	1-0JA10	3RV	10 21	-0JA10	3RV10 11-1E	A20				
Rated current	Suitable for induc- tion motors <sup>1)</sup> with <i>P</i>	Setting range for thermal overload releases	Instanta- neous over- current releases	Short-circuit breaking capacity at 400 V AC	DT	Screw terminals	Ð	Weight per PU approx.	DT	Cage Clamp terminals		Weight per PU approx.
In		L C	1 >	I <sub>cu</sub>		Order No.	Price per PU			Order No.	Price per PU	
A	kW	А	А	kA				kg				kg
Size S	00											
0.16 0.2 0.25	0.04 0.06 0.06	0.11 0.16 0.14 0.2 0.18 0.25	2.1 2.6 3.3	100 100 100		3RV10 11-0AA10 3RV10 11-0BA10 3RV10 11-0CA10		0.230 0.231 0.233		3RV10 11-0AA20 3RV10 11-0BA20 3RV10 11-0CA20		0.233 0.234 0.234
0.32	0.09	0.22 0.32	4.2	100		3RV10 11-0DA10				3RV10 11-0DA20		0.234
0.4 0.5 0.63 0.8	0.09 0.12 0.18 0.18	0.28 0.4 0.35 0.5 0.45 0.63 0.55 0.8	5.2 6.5 8.2 10	100 100 100 100		3RV10 11-0EA10 3RV10 11-0FA10 3RV10 11-0GA10 3RV10 11-0HA10		0.235 0.232 0.233 0.235		3RV10 11-0EA20 3RV10 11-0FA20 3RV10 11-0GA20 3RV10 11-0GA20 3RV10 11-0HA20		0.236 0.232 0.234 0.237
1 1.25 1.6 2	0.25 0.37 0.55 0.75	0.7 1 0.9 1.25 1.1 1.6 1.4 2	13 16 21 26	100 100 100 100	* * * *	3RV10 11-0JA10 3RV10 11-0KA10 3RV10 11-1AA10 3RV10 11-1BA10		0.281		3RV10 11-0JA20 3RV10 11-0KA20 3RV10 11-1AA20 3RV10 11-1BA20		0.235 0.281 0.283 0.282
2.5 3.2 4 5	0.75 1.1 1.5 1.5	1.8 2.5 2.2 3.2 2.8 4 3.5 5	33 42 52 65	100 100 100 100	• • • •	3RV10 11-1CA10 3RV10 11-1DA10 3RV10 11-1EA10 3RV10 11-1EA10 3RV10 11-1FA10		0.281 0.283 0.281 0.285		3RV10 11-1CA20 3RV10 11-1DA20 3RV10 11-1EA20 3RV10 11-1EA20 3RV10 11-1FA20		0.284 0.285 0.284 0.286
6.3 8 10 12	2.2 3 4 5.5	4.5 6.3 5.5 8 7 10 9 12	82 104 130 156	100 50 50 50		3RV10 11-1GA10 3RV10 11-1HA10 3RV10 11-1JA10 3RV10 11-1JA10 3RV10 11-1KA10		0.288 0.289 0.284		3RV10 11-1GA20 3RV10 11-1HA20 3RV10 11-1HA20 3RV10 11-1JA20 3RV10 11-1KA20		0.288 0.290 0.286 0.282
Size S	D											
0.16 0.2 0.25 0.32	0.04 0.06 0.06 0.09	0.11 0.16 0.14 0.2 0.18 0.25 0.22 0.32	2.1 2.6 3.3 4.2	100 100 100 100		3RV10 21-0AA10 3RV10 21-0BA10 3RV10 21-0CA10 3RV10 21-0CA10		0.286 0.288 0.287 0.286				
0.4 0.5 0.63 0.8	0.09 0.12 0.18 0.18	0.28 0.4 0.35 0.5 0.45 0.63 0.55 0.8	5.2 6.5 8.2 10	100 100 100 100		3RV10 21-0EA10 3RV10 21-0FA10 3RV10 21-0GA10 3RV10 21-0HA10		0.288 0.287 0.289 0.287		  		
1 1.25 1.6 2	0.25 0.37 0.55 0.75	0.7 1 0.9 1.25 1.1 1.6 1.4 2	13 16 21 26	100 100 100 100		3RV10 21-0JA10 3RV10 21-0KA10 3RV10 21-1AA10 3RV10 21-1BA10		0.350 0.353 0.357 0.356		  		
2.5 3.2 4 5	0.75 1.1 1.5 1.5	1.8 2.5 2.2 3.2 2.8 4 3.5 5	33 42 52 65	100 100 100 100		3RV10 21-1CA10 3RV10 21-1DA10 3RV10 21-1EA10 3RV10 21-1EA10 3RV10 21-1FA10		0.357 0.356 0.354 0.358		  		
6.3 8 10 12.5	2.2 3 4 5.5	4.5 6.3 5.5 8 7 10 9 12.5	82 104 130 163	100 100 100 100		3RV10 21-1GA10 3RV10 21-1HA10 3RV10 21-1JA10 3RV10 21-1KA10		0.357 0.356 0.361 0.358		  		
16 20 22 25	7.5 7.5 11 11	11 16 14 20 17 22 20 25	208 260 286 325	50 50 50 50		3RV10 21-4AA10 3RV10 21-4BA10 3RV10 21-4CA10 3RV10 21-4CA10 3RV10 21-4DA10		0.366 0.363 0.361 0.364		  		

 $^{1)}$  Guide value for 4-pole standard motors at AC 50 Hz 400 V. The actual starting and rated data of the motor to be protected must be considered when selecting the units.

Auxiliary switches can be ordered separately (see "Mountable accessories").

For multi-unit packing and reusable packaging, see Chapter 20 "Appendix" --> "Ordering notes".

# SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A Motor Starter Protectors

For motor protection

CLASS 10, with transverse auxiliary switch (1 NO + 1 NC)

PU (UNIT, SET, M)=1 PS\* =1 unit PG =101





3RV10 11-0KA15 with integrated transverse auxiliary switch



3RV10 21-1GA15 with integrated transverse auxiliary switch



3RV10 11-0GA25 with integrated transverse auxiliary switch

		VEISE duxi	ary switch	VEISE	5 auxii	ary switch	verse auxilia	ary Switch				
Rated current	Suitable for induc- tion motors <sup>1)</sup> with <i>P</i>	Setting range for thermal overload releases	Instanta- neous over- current releases	Short-circuit breaking capacity at 400 V AC	DT	Screw terminals	Ð	Weight per PU approx.	DT	Cage Clamp terminals		Weight per PU approx.
In		CC	>	I <sub>cu</sub>		Order No.	Price per PU			Order No.	Price per PU	
А	kW	А	А	kA				kg				kg
Size S	00											
0.16	0.04	0.11 0.16	2.1	100		3RV10 11-0AA15		0.245		3RV10 11-0AA25		0.245
0.2 0.25	0.06 0.06	0.14 0.2 0.18 0.25	2.6 3.3	100 100		3RV10 11-0BA15 3RV10 11-0CA15		0.246 0.246		3RV10 11-0BA25 3RV10 11-0CA25		0.245 0.246
0.32	0.09	0.22 0.32	4.2	100		3RV10 11-0DA15		0.247	В	3RV10 11-0DA25		0.246
0.4	0.09	0.28 0.4	5.2	100 100		3RV10 11-0EA15		0.250		3RV10 11-0EA25		0.250
0.5 0.63	0.12 0.18	0.35 0.5 0.45 0.63	6.5 8.2	100		3RV10 11-0FA15 3RV10 11-0GA15		0.247 0.249		3RV10 11-0FA25 3RV10 11-0GA25		0.247 0.252
0.8	0.18	0.55 0.8	10	100		3RV10 11-0HA15		0.250	В	3RV10 11-0HA25		0.250
1	0.25 0.37	0.7 1 0.9 1.25	13 16	100 100		3RV10 11-0JA15 3RV10 11-0KA15		0.249 0.297		3RV10 11-0JA25 3RV10 11-0KA25		0.249
1.25 1.6	0.55	1.1 1.6	21	100		3RV10 11-0KA15		0.297		3RV10 11-1AA25		0.297 0.298
2	0.75	1.4 2	26	100		3RV10 11-1BA15		0.297		3RV10 11-1BA25		0.297
2.5	0.75	1.8 2.5	33	100		3RV10 11-1CA15		0.298		3RV10 11-1CA25		0.298
3.2 4	1.1 1.5	2.2 3.2 2.8 4	42 52	100 100		3RV10 11-1DA15 3RV10 11-1EA15		0.299 0.296		3RV10 11-1DA25 3RV10 11-1EA25		0.300 0.298
5	1.5	3.5 5	65	100		3RV10 11-1FA15		0.301		3RV10 11-1FA25		0.303
6.3	2.2	4.5 6.3	82	100		3RV10 11-1GA15		0.303		3RV10 11-1GA25		0.303
8 10	3 4	5.5 8 7 10	104 130	50 50		3RV10 11-1HA15 3RV10 11-1JA15		0.304 0.300		3RV10 11-1HA25 3RV10 11-1JA25		0.304 0.300
12	5.5	9 12	156	50		3RV10 11-1KA15		0.297		3RV10 11-1KA25		0.298
Size S	0											
0.16	0.04 0.06	0.11 0.16	2.1	100		3RV10 21-0AA15		0.300 0.304				
0.2 0.25	0.06	0.14 0.2 0.18 0.25	2.6 3.3	100 100		3RV10 21-0BA15 3RV10 21-0CA15		0.304				
0.32	0.09	0.22 0.32	4.2	100		3RV10 21-0DA15		0.303				
0.4 0.5	0.09 0.12	0.28 0.4	5.2	100 100		3RV10 21-0EA15 3RV10 21-0FA15		0.303 0.304				
0.63	0.12	0.35 0.5 0.45 0.63	6.5 8.2	100		3RV10 21-0FA15		0.304				
0.8	0.18	0.55 0.8	10	100		3RV10 21-0HA15		0.370				
1 1.25	0.25 0.37	0.7 1 0.9 1.25	13 16	100 100		3RV10 21-0JA15 3RV10 21-0KA15		0.368 0.369				
1.25	0.55	1.1 1.6	21	100		3RV10 21-0KA15		0.309				
2	0.75	1.4 2	26	100		3RV10 21-1BA15		0.371				
2.5	0.75	1.8 2.5	33	100		3RV10 21-1CA15		0.372				
3.2 4	1.1 1.5	2.2 3.2 2.8 4	42 52	100 100		3RV10 21-1DA15 3RV10 21-1EA15		0.375 0.370				
5	1.5	3.5 5	65	100		3RV10 21-1FA15		0.376				
6.3	2.2	4.5 6.3	82	100		3RV10 21-1GA15		0.374				
8 10	3 4	5.5 8 7 10	104 130	100 100		3RV10 21-1HA15 3RV10 21-1JA15		0.374 0.375				
12.5	5.5	9 12.5	163	100		3RV10 21-1KA15		0.374				
16	7.5	11 16	208	50 50		3RV10 21-4AA15		0.382				
20 22	7.5 11	14 20 17 22	260 286	50 50		3RV10 21-4BA15 3RV10 21-4CA15		0.376 0.378				
25	11	20 25	325	50		3RV10 21-4DA15		0.382				
- C - C - C - C - C - C - C - C - C - C												

<sup>1)</sup> Guide value for 4-pole standard motors at AC 50 Hz 400 V. The actual starting and rated data of the motor to be protected must be considered when selecting the units. Auxiliary switches can be ordered separately (see "Mountable accessories").

For multi-unit packing and reusable packaging, see Chapter 20 "Appendix" --> "Ordering notes".

# SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A Motor Starter Protectors

For motor protection

CLASS 10, wit	thout au	ıxiliary sı	witches									
	Rated current	Suitable for induc- tion motors <sup>1)</sup> with <i>P</i>	Setting range for thermal overload releases	Instanta- neous over- current releases	Short-circuit breaking capacity at 400 V AC	DT	Screw terminals	Ð	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	In		G	>	I <sub>cu</sub>		Order No.	Price per PU				
	А	kW	А	А	kA							kg
Size S2	16 20 25 32 40	7.5 7.5 11 15 18.5	11 16 14 20 18 25 22 32 28 40	208 260 325 416 520	50 50 50 50 50	* * * *	3RV10 31-4AA10 3RV10 31-4BA10 3RV10 31-4DA10 3RV10 31-4DA10 3RV10 31-4EA10 3RV10 31-4FA10		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101	1.046 1.043 1.031 1.028 1.047
3RV10 31-4HA10	45 50	16.5 22 22	36 40 40 50	585 650	50 50 50		3RV10 31-4FA10 3RV10 31-4GA10 3RV10 31-4HA10		1 1 1	1 unit 1 unit 1 unit	101 101 101	1.047 1.039 1.027
Size S3												
17/-	40 50 63	18.5 22 30	28 40 36 50 45 63	520 650 819	50 50 50		3RV10 41-4FA10 3RV10 41-4HA10 3RV10 41-4JA10		1 1 1	1 unit 1 unit 1 unit	101 101 101	2.219 2.240 2.247
9	75 90 100	37 45 45	57 75 70 90 80 100	975 1170 1235	50 50 50		3RV10 41-4KA10 3RV10 41-4LA10 3RV10 41-4MA10		1 1 1	1 unit 1 unit 1 unit	101 101 101	2.253 2.280 2.295
3RV10 41-4LA10 Size S3, with i	noroaco	d owitchi	a capacity									
	16 20 25 32 40 50 63	7.5 7.5 11 15 18.5 22 30	11 16 14 20 18 25 22 32 28 40 36 50 45 63	208 260 325 416 520 650 819	100 100 100 100 100 100 100	* * * * *	3RV10 42-4AA10 3RV10 42-4BA10 3RV10 42-4DA10 3RV10 42-4DA10 3RV10 42-4EA10 3RV10 42-4FA10 3RV10 42-4HA10 3RV10 42-4JA10		1 1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101 101 101	2.174 2.185 2.211 2.222 2.203 2.230 2.255
3RV10 42-4JA10	75 90 100	37 45 45	57 75 70 90 80 100	975 1170 1235	100 100 100 100		3RV10 42-4KA10 3RV10 42-4LA10 3RV10 42-4LA10 3RV10 42-4MA10		1 1 1	1 unit 1 unit 1 unit	101 101 101	2.266 2.268 2.275

## CLASS 20, without auxiliary switches

Size S2											
212	16	7.5	11 16	208	50	А	3RV10 31-4AB10	1	1 unit	101	1.067
12775	20	7.5	14 20	260	50	А	3RV10 31-4BB10	1	1 unit	101	1.071
THE OWNER WATER	25	11	18 25	325	50	A	3RV10 31-4DB10	1	1 unit	101	1.054
000	32	15	22 32	416	50	А	3RV10 31-4EB10	1	1 unit	101	1.067
and the set	40	18.5	28 40	520	50	А	3RV10 31-4FB10	1	1 unit	101	1.076
	45	22	36 45	585	50	A	3RV10 31-4GB10	1	1 unit	101	1.073
	50	22	40 50	650	50	А	3RV10 31-4HB10	1	1 unit	101	1.071
000											

#### 3RV10 31-4AB10 Size S3, with increased switching capacity 40 18.5 28 ... 40 520 100 3RV10 42-4FB10 1 unit 101 2.222 А 1 3RV10 42-4HB10 3RV10 42-4JB10 2.265 2.278 50 22 36 ... 50 650 100 А 1 unit 101 1 63 30 45 ... 63 819 100 А 1 unit 101 1 57 ... 75 70 ... 90 75 3RV10 42-4KB10 3RV10 42-4LB10 100 37 975 А 1 1 unit 101 2.268 90 45 1170 100 А 2.313 1 1 unit 101 80 ... 100 100 A 3RV10 42-4MB10 45 1235 100 1 unit 101 2.322 1

3RV10 42-4KB10

<sup>1)</sup> Guide value for 4-pole standard motors at AC 50 Hz 400 V. The actual starting and rated data of the motor to be protected must be considered when selecting the units. Auxiliary switches can be ordered separately (see "Mountable accessories").

For multi-unit packing and reusable packaging, see Chapter 20 "Appendix" --> "Ordering notes".

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# SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A Motor Starter Protectors

For motor protection with overload relay function

## Selection and ordering data

CLASS 10, with overload relay function (automatic RESET), without auxiliary switches

	Rated current	Suitable for induc- tion motors <sup>1)</sup> with <i>P</i>	Setting range for thermal overload releases	neous over- current releases	Short-circuit breaking capacity at 400 V AC	DT	Screw terminals	Price	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	'n		CC	>	I <sub>cu</sub>		order No.	per PU				
	А	kW	A	А	kA							kg
Size S0 <sup>2)</sup>	0.16	0.04	0.11 0.16	2.1	100	A	3RV11 21-0AA10		1	1 unit	101	0.354
	0.2	0.06	0.14 0.2	2.6	100	А	3RV11 21-0BA10		1	1 unit	101	0.358
	0.25 0.32	0.06 0.09	0.18 0.25 0.22 0.32	3.3 4.2	100 100	A A	3RV11 21-0CA10 3RV11 21-0DA10		1 1	1 unit 1 unit	101 101	0.352 0.352
	0.4 0.5	0.09 0.12	0.28 0.4 0.35 0.5	5.2 6.5	100 100	A A	3RV11 21-0EA10 3RV11 21-0FA10		1 1	1 unit 1 unit	101 101	0.355 0.356
3RV11 21-0KA10	0.63 0.8	0.18	0.45 0.63	8.2	100 100 100	А	3RV11 21-0GA10		1	1 unit	101	0.358
0111121010110	1	0.18	0.55 0.8	10 13	100	A	3RV11 21-0HA10 3RV11 21-0JA10		1	1 unit 1 unit	101	0.421
	1.25 1.6	0.37 0.55	0.9 1.25 1.1 1.6	16 21	100 100	A A	3RV11 21-0KA10 3RV11 21-1AA10		1	1 unit 1 unit	101 101	0.426 0.422
	2	0.75	1.4 2	26	100	А	3RV11 21-1BA10		1	1 unit	101	0.427
	2.5 3.2	0.75 1.1	1.8 2.5 2.2 3.2	33 42	100 100	A A	3RV11 21-1CA10 3RV11 21-1DA10		1	1 unit 1 unit	101 101	0.422 0.428
	4 5	1.5 1.5	2.8 4 3.5 5	52 65	100 100	A A	3RV11 21-1EA10 3RV11 21-1FA10		1	1 unit 1 unit	101 101	0.420 0.429
	6.3	2.2	4.5 6.3	82	100	А	3RV11 21-1GA10		1	1 unit	101	0.426
	8 10	3 4	5.5 8 7 10	104 130	100 100	A A	3RV11 21-1HA10 3RV11 21-1JA10		1 1	1 unit 1 unit	101 101	0.425 0.428
	12.5	5.5 7.5	9 12.5	163	100 50	A	3RV11 21-1KA10		1	1 unit	101	0.426
	16 20	7.5	11 16 14 20	208 260	50	A A	3RV11 21-4AA10 3RV11 21-4BA10		1	1 unit 1 unit	101 101	0.436 0.430
	22 25	11 11	17 22 20 25	286 325	50 50	A A	3RV11 21-4CA10 3RV11 21-4DA10		1 1	1 unit 1 unit	101 101	0.427 0.432
Size S2 <sup>2)</sup>												
1000	16 20	7.5 7.5	11 16 14 20	208 260	50 50	A A	3RV11 31-4AA10 3RV11 31-4BA10		1	1 unit 1 unit	101 101	1.123 1.109
000	25 32	11 15	18 25 22 32	325 416	50 50	A A	3RV11 31-4DA10 3RV11 31-4EA10		1	1 unit 1 unit	101 101	1.114 1.111
	40	18.5	28 40	520	50	А	3RV11 31-4FA10		1	1 unit	101	1.123
	45 50	22 22	36 45 40 50	585 650	50 50	A A	3RV11 31-4GA10 3RV11 31-4HA10		1	1 unit 1 unit	101 101	1.101 1.106
3 9 8												
3RV11 31-4EA10 Size S3, with in		d owitchir	a = a = a = a = a = a = a = a = a = a =									
512e 55, with h	16	7.5	11 16	208	100	А	3RV11 42-4AA10		1	1 unit	101	2.247
000	20 25	7.5 11	14 20 18 25	260 325	100 100	A A	3RV11 42-4BA10 3RV11 42-4DA10		1	1 unit 1 unit	101 101	2.255 2.284
	32	15	22 32	416	100	А	3RV11 42-4EA10		1	1 unit	101	2.295
	40 50	18.5 22	28 40 36 50	520 650	100 100	A A	3RV11 42-4FA10 3RV11 42-4HA10		1 1	1 unit 1 unit	101 101	2.288 2.320
	63	30	45 63	819	100	А	3RV11 42-4JA10		1	1 unit	101	2.333
3RV11 42-4AA10	75 90 100	37 45 45	57 75 70 90 80 100	975 1170 1235	100 100 100	A A A	3RV11 42-4KA10 3RV11 42-4LA10 3RV11 42-4MA10		1 1	1 unit 1 unit 1 unit	101 101 101	2.368 2.353 2.346

<sup>1)</sup> Guide value for 4-pole standard motors at AC 50 Hz 400 V. The actual starting and rated data of the motor to be protected must be considered when selecting the units.

<sup>2)</sup> Accessories for mounting on the right (for sizes S0 to S3) and 3RV19 15 three-phase busbars (for size S0) cannot be used.

Auxiliary switches can be ordered separately (see "Mountable accessories").

For starter combinations

## Selection and ordering data

Without auxiliary switches

Without auxilia	ary swit	ches										
	Rated current	Suitable for induc- tion motors <sup>1)</sup> with <i>P</i>	Thermal overload releases <sup>2)</sup>	Instanta- neous over- current releases	Short-circuit breaking capacity at 400 V AC	DT	Screw terminals	Ð	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	I <sub>n</sub>		L C	>	I <sub>CU</sub>		Order No.	Price per PU				
	А	kW	А	А	kA							kg
Size S0	0.16 0.2 0.25 0.32	0.04 0.06 0.06 0.09	Without Without Without Without	2.1 2.6 3.3 4.2	100 100 100 100	A A A A	3RV13 21-0AC10 3RV13 21-0BC10 3RV13 21-0CC10 3RV13 21-0CC10 3RV13 21-0DC10		1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.282 0.284 0.285 0.282
3RV13 21-0AC10	0.32 0.4 0.5 0.63 0.8	0.09 0.12 0.18 0.18	Without Without Without Without	5.2 6.5 8.2 10	100 100 100 100 100	A A A A	3RV13 21-0EC10 3RV13 21-0EC10 3RV13 21-0FC10 3RV13 21-0GC10 3RV13 21-0HC10		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101	0.282 0.283 0.348 0.283
3HV 13 21-UAC 10	1 1.25 1.6 2	0.18 0.25 0.37 0.55 0.75	Without Without Without Without	13 16 21 26	100 100 100 100 100	A A A A	3RV13 21-04C10 3RV13 21-0JC10 3RV13 21-0KC10 3RV13 21-1AC10 3RV13 21-1BC10		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101	0.345 0.351 0.352 0.352
	2.5 3.2 4 5	0.75 1.1 1.5 1.5	Without Without Without Without	33 42 52 65	100 100 100 100 100	A A A A	3RV13 21-16C10 3RV13 21-1CC10 3RV13 21-10C10 3RV13 21-1EC10 3RV13 21-1FC10		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101	0.352 0.353 0.349 0.354
	6.3 8 10 12.5	2.2 3 4 5.5	Without Without Without Without	82 104 130 163	100 100 100 100 100	A A A A	3RV13 21-1GC10 3RV13 21-1GC10 3RV13 21-1HC10 3RV13 21-1JC10 3RV13 21-1KC10		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101	0.355 0.354 0.357 0.354
	16 20 22 25	7.5 7.5 11 11	Without Without Without Without	208 260 286 325	50 50 50 50 50	A A A A	3RV13 21-4AC10 3RV13 21-4BC10 3RV13 21-4BC10 3RV13 21-4CC10 3RV13 21-4DC10		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101	0.362 0.357 0.358 0.359
Size S2	16	7.5	Without	208	50	A	3RV13 31-4AC10		1	1 unit	101	1.038
	20 25 32	7.5 11 15	Without Without Without	260 325 416	50 50 50	A A A	3RV13 31-4BC10 3RV13 31-4DC10 3RV13 31-4EC10		1 1 1	1 unit 1 unit 1 unit	101 101 101	1.037 1.014 1.018
3RV13 31-4AC10	40 45 50	18.5 22 22	Without Without Without	520 585 650	50 50 50	A A A	3RV13 31-4FC10 3RV13 31-4GC10 3RV13 31-4HC10		1 1 1	1 unit 1 unit 1 unit	101 101 101	1.033 1.040 1.019
Size S3	40	18.5	Without	520	50	A	3RV13 41-4FC10		1	1 unit	101	2.197
777	50 63	22 30	Without Without	650 819	50 50	A A	3RV13 41-4HC10 3RV13 41-4JC10		1 1	1 unit 1 unit	101 101	2.227 2.244
•	75 90 100	37 45 45	Without Without Without	975 1170 1235	50 50 50	A A A	3RV13 41-4KC10 3RV13 41-4LC10 3RV13 41-4MC10		1 1 1	1 unit 1 unit 1 unit	101 101 101	2.247 2.269 2.292
3RV13 41-4JC10 Size S3, with in	ocrease	d switchi	ng capacity									
	16 20 25 32	7.5 7.5 11 15	Without Without Without Without Without	208 260 325 416	100 100 100 100	A A A A	3RV13 42-4AC10 3RV13 42-4BC10 3RV13 42-4DC10 3RV13 42-4DC10 3RV13 42-4EC10		1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	2.175 2.188 2.219 2.208
-	40 50 63	18.5 22 30	Without Without Without	520 650 819	100 100 100	A A A	3RV13 42-4FC10 3RV13 42-4HC10 3RV13 42-4JC10		1 1 1	1 unit 1 unit 1 unit	101 101 101	2.218 2.218 2.248
3RV13 42-4JC10	75 90 100	37 45 45	Without Without Without	975 1170 1235	100 100 100	A A A	3RV13 42-4KC10 3RV13 42-4LC10 3RV13 42-4MC10		1 1 1	1 unit 1 unit 1 unit	101 101 101	2.278 2.266 2.293

<sup>1)</sup> Guide value for 4-pole standard motors at 50 Hz 400 V AC. The actual starting and rated data of the motor to be protected must be considered when selecting the units.

<sup>2)</sup> For overload protection of the motors, appropriate overload relays must be used. Auxiliary switches can be ordered separately (see "Mountable accessories").

For multi-unit packing and reusable packaging, see Chapter 20 "Appendix" --> "Ordering notes".

# SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A Motor Starter Protectors

## For transformer protection

## Selection and ordering data

## CLASS 10, without auxiliary switches

Motor starter protectors for the protection of transformers with high inrush current

	Rated current	Setting range for thermal overload releases	Instanta- neous over- current releases	Short-circuit breaking capacity at 400 V AC	DT	Screw terminals	÷	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	<i>I</i> n	CC	>	I <sub>CU</sub>		Order No.	Price per PU				
	А	А	А	kA							kg
Size S0											
	0.16 0.2 0.25 0.32	0.11 0.16 0.14 0.2 0.18 0.25 0.22 0.32	3.3 4.2 5.2 6.5	100 100 100 100		3RV14 21-0AA10 3RV14 21-0BA10 3RV14 21-0CA10 3RV14 21-0DA10		1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.286 0.287 0.286 0.288
3RV14 21-0KA10	0.4 0.5 0.63 0.8	0.28 0.4 0.35 0.5 0.45 0.63 0.55 0.8	8.2 10 13 16	100 100 100 100		3RV14 21-0EA10 3RV14 21-0FA10 3RV14 21-0GA10 3RV14 21-0HA10		1 1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.287 0.286 0.290 0.290
	1 1.25 1.6 2	0.7 1 0.9 1.25 1.1 1.6 1.4 2	21 26 33 42	100 100 100 100		3RV14 21-0JA10 3RV14 21-0KA10 3RV14 21-1AA10 3RV14 21-1BA10		1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.353 0.354 0.353 0.358
	2.5 3.2 4 5	1.8 2.5 2.2 3.2 2.8 4 3.5 5	52 65 82 104	100 100 100 100		3RV14 21-1CA10 3RV14 21-1DA10 3RV14 21-1EA10 3RV14 21-1FA10		1 1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.354 0.358 0.354 0.357
	6.3 8 10 12.5	4.5 6.3 5.5 8 7 10 9 12.5	130 163 208 260	100 100 100 100		3RV14 21-1GA10 3RV14 21-1HA10 3RV14 21-1JA10 3RV14 21-1JA10 3RV14 21-1KA10		1 1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.356 0.358 0.362 0.360
	16 20	11 16	286 325	50 50		3RV14 21-4AA10		1	1 unit	101	0.365
Size S2	20	14 20	323	50	•	3RV14 21-4BA10		I	1 unit	101	0.365
	16 20 25 32 40	11 16 14 20 18 25 22 32 28 40	325 416 520 660 836	50 50 50 50 50		3RV14 31-4AA10 3RV14 31-4BA10 3RV14 31-4DA10 3RV14 31-4EA10 3RV14 31-4FA10		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101	1.029 1.034 1.038 1.029 1.039

3RV14 31-4DA10

000

Auxiliary switches can be ordered separately (see "Mountable accessories").

For multi-unit packing and reusable packaging, see Chapter 20 "Appendix" --> "Ordering notes".

For fuse monitoring

## Selection and ordering data

Without auxiliary switches



#### Note:

The auxiliary switch required for signaling must be ordered separately. For multi-unit packing and reusable packaging, see Chapter 20 "Appendix" --> "Ordering notes".

## Accessories

	Version	Contacts	DT	Screw terminals	Ð	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
				Order No.	Price per PU				kg
Mountable a	uxiliary switches (essential acces	ssories)							
3RV19 01-1E	<b>Transverse auxiliary switches</b> With screw terminals, mountable on front	1 NO + 1 NC	•	3RV19 01-1E		1	1 unit	101	0.018
3RV19 01-1A	Lateral auxiliary switches With screw terminals, mountable on the left	1 NO + 1 NC	•	3RV19 01-1A		1	1 unit	101	0.045

Additional auxiliary switches and other accessories see "Mountable accessories".

# SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A Circuit Breakers

For system protection according to UL 489/CSA C22.2 No. 5-02

### Selection and ordering data

## Without auxiliary switches

Circuit breakers for system protection and non-motor loads according to UL/CSA

	Rated current	Thermal overload releases (non- adjustable)	Instanta- neous over- current releases	Short-circuit breaking capacity at AC 480 Y/277 V <sup>2)</sup>	480 V AC	DT	Screw terminals	Price	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	<i>I</i> n <sup>1)</sup>	G	>	Ibc	I <sub>bc</sub>		Order No.	per PU				
	А	А	А	kA	kA							kg
Size S0												
	0.16 0.2 0.25 0.32	0.16 0.2 0.25	2.1 2.6 3.3	50 50 50		C C C C C	3RV17 21-0AD10 3RV17 21-0BD10 3RV17 21-0CD10		1 1 1	1 unit 1 unit 1 unit	101 101 101	0.460 0.460 0.460
	0.32	0.32	4.2 5.2	50 50		C	3RV17 21-0DD10 3RV17 21-0ED10		1	1 unit 1 unit	101	0.460
	0.5 0.63 0.8	0.5 0.63 0.8	6.5 8.2 10	50 50 50		C C C	3RV17 21-0FD10 3RV17 21-0GD10 3RV17 21-0HD10		1 1 1	1 unit 1 unit 1 unit	101 101 101	0.460 0.460 0.530
3RV17 21-0AD10	1 1.25 1.6 2	1 1.25 1.6 2	13 16 21 26	50 50 50 50		C C C C C	3RV17 21-0JD10 3RV17 21-0KD10 3RV17 21-1AD10 3RV17 21-1BD10		1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.530 0.530 0.530 0.530
	2.5 3.2 4	2.5 3.2 4	33 42 52	50 50 50 50		C C C C	3RV17 21-1CD10 3RV17 21-1DD10 3RV17 21-1DD10 3RV17 21-1ED10		1 1 1	1 unit 1 unit 1 unit	101 101 101	0.530 0.530 0.530 0.530
	5	5	65	50		С	3RV17 21-1FD10		1	1 unit	101	0.530
	6.3 8 10 12.5	6.3 8 10 12.5	82 104 130 163	50 50 50 50		C C C C C C	3RV17 21-1GD10 3RV17 21-1HD10 3RV17 21-1JD10 3RV17 21-1KD10		1 1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.530 0.530 0.530 0.530
	15 20 22	15 20 22	208 260 286	50 50 50		C C C C	3RV17 21-4AD10 3RV17 21-4BD10 3RV17 21-4CD10		1 1 1	1 unit 1 unit 1 unit	101 101 101	0.530 0.530 0.530
Size S3												
1011X	10 15	10 15	150 225	65 65	65 65	B B	3RV17 42-5AD10 3RV17 42-5BD10		1 1	1 unit 1 unit	101 101	0.460 0.460
	20 25 30 35	20 25 30 35	260 325 390 455	65 65 65 65	65 65 65 	B B B B	3RV17 42-5CD10 3RV17 42-5DD10 3RV17 42-5ED10 3RV17 42-5ED10 3RV17 42-5FD10		1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.460 0.460 0.460 0.460
	40 45 50	40 45 50	520 585 650	65 65 65		B B B	3RV17 42-5GD10 3RV17 42-5HD10 3RV17 42-5JD10		1 1 1	1 unit 1 unit 1 unit	101 101 101	0.460 0.460 0.460
3RV17 42-5FD10	60 70	60 70	780 910	65 65		B B	3RV17 42-5LD10 3RV17 42-5QD10		1 1	1 unit 1 unit	101 101	0.460 0.460

 Rated value 100 % according to UL 489 and IEC 60947-2 ("100 % rated breaker").

Por values for AC 600 Y/347 V "Technical specifications" --> "Permissible rated data of devices approved for North America (UL/CSA)"
 --> "3RV17 and 3RV18 motor starter protectors as circuit breakers" see note on Technical Information on page 5/1.

Transverse auxiliary switches must not be mounted, lateral auxiliary switches can be ordered separately (see "Mountable accessories").

# SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A Circuit Breakers

For transformer protection according to UL 489/CSA C22.2 No. 5-02

## Selection and ordering data

## Without auxiliary switches

Circuit breakers for system and transformer protection according to UL/CSA, specially designed for transformers with high inrush current

			-							
	Rated current <sup>1)</sup>	Thermal overload releases (non-adjust- able)	Instanta- neous overcurrent releases	Short-circuit breaking capac- ity at AC 480 Y/277 V <sup>2)</sup>	DT	Screw terminals	UNIT SET, M	,	PG	Weight per PU approx.
	<i>I</i> <sup>1)</sup>	G	>	Ibc		Order No. Pri per F				
<b></b>	A	A	A	kA						kg
Size S0										
	0.16 0.2 0.25 0.32	0.16 0.2 0.25 0.32	3.3 4.2 5.2 6.5	50 50 50 50	С С С С С С	3RV18 21-0AD10 3RV18 21-0BD10 3RV18 21-0CD10 3RV18 21-0CD10 3RV18 21-0DD10		1 1 unit 1 1 unit 1 1 unit 1 1 unit	101 101 101 101	0.450 0.450 0.450 0.450
	0.4 0.5 0.63 0.8	0.4 0.5 0.63 0.8	8.2 10 13 16	50 50 50 50	С С С С С	3RV18 21-0ED10 3RV18 21-0FD10 3RV18 21-0GD10 3RV18 21-0GD10 3RV18 21-0HD10		1 1 unit 1 1 unit 1 1 unit 1 1 unit 1 1 unit	101 101 101 101	0.450 0.450 0.450 0.450
3RV18 21-0AD10	1 1.25 1.6 2	1 1.25 1.6 2	21 26 33 42	50 50 50 50	0000	3RV18 21-0JD10 3RV18 21-0KD10 3RV18 21-1AD10 3RV18 21-1BD10		1 1 unit 1 1 unit 1 1 unit 1 1 unit 1 1 unit	101 101 101 101	0.520 0.520 0.520 0.520
	2.5 3.2 4 5	2.5 3.2 4 5	52 65 82 104	50 50 50 50	C C C C C	3RV18 21-1CD10 3RV18 21-1DD10 3RV18 21-1ED10 3RV18 21-1ED10 3RV18 21-1FD10		1 1 unit 1 1 unit 1 1 unit 1 1 unit 1 1 unit	101 101 101 101	0.520 0.520 0.520 0.520
	6.3 8 10 12.5	6.3 8 10 12.5	130 163 208 260	50 50 50 50	C C C C C C	3RV18 21-1GD10 3RV18 21-1HD10 3RV18 21-1JD10 3RV18 21-1KD10		1 1 unit 1 1 unit 1 1 unit 1 1 unit 1 1 unit	101 101 101 101	0.520 0.520 0.520 0.520
	15 20	15 20	286 325	50 50	C C	3RV18 21-4AD10 3RV18 21-4BD10		1 1 unit 1 1 unit	101 101	0.520 0.520

 Rated value 100 % according to UL 489 and IEC 60947-2 ("100 % rated breaker").

2) For values for AC 600 Y/347 V "Technical specifications" --> "Permissible rated data of devices approved for North America (UL/CSA)"
 --> "3RV17 and 3RV18 motor starter protectors as circuit breakers" see note on Technical Information on page 5/1.

Transverse auxiliary switches must not be mounted, lateral auxiliary switches can be ordered separately (see "Mountable accessories").

# SIRIUS 3RV Motor Starter Protectors/Circuit Breakers up to 100 A Motor Starter Protectors

## For distance protection

### Selection and ordering data

## Voltage transformer circuit breakers with auxiliary switches (1 CO)



Accessories

ccessones									
	Version	Contacts	DT	Screw terminals	Ð	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
				Order No.	Price per PU				
									kg
intable aux	kiliary switches for other signalir	ng purposes							
	Lateral auxiliary switches With screw terminals, mountable on the left	1 NO + 1 NC		3RV19 01-1A		1	1 unit	101	0.045
01-1A									
	liary switches and other accesso e accessories".	ories							

## More information

### Conversion of 3VU13 to 3RV1 voltage transformer circuit breakers

The 3VU13 voltage transformer circuit breakers previously available have been discontinued. The 3RV1 voltage transformer circuit breakers are offered as replacement types.

Previous type	Replacement type
3VU13 11-6HR00	3RV16 11-1CG14
3VU13 21-6HR00	3RV16 11-1CG14 + 3RV19 01-1A
3VU13 11-6JR00	3RV16 11-1DG14

## Overview

#### Mounting location and function

The 3RV1 motor starter protectors/circuit breakers have three main contact elements. In order to achieve maximum flexibility, auxiliary switches, signaling switches, auxiliary releases and isolator modules can be supplied separately.

These components can be fitted as required on the motor starter protectors without using tools.

For overview graphic see "General Data" --> "Overview".

Front side Transverse auxiliary switches An auxiliary switch block can be inserted transversely on the front. The overall width of the motor starter protectors remains unchanged. Notes: 1 NO + 1 NC • A maximum of 4 auxiliary contacts with aux-2 NO iliary switches can be attached to each moor tor starter protector. 1 CO contact • Transverse auxiliary switches must not be used for the 3RV17 and 3RV18 circuit breakers Left-hand side Lateral auxiliary switches One of the three auxiliary switches can be mounted laterally at the left side for each motor starter protector. The contacts of the auxiliary switch close (2 contacts) Notes: and open together with the main contacts of the motor starter protector. 1 NO + 1 NC · A maximum of 4 auxiliary contacts with aux-The overall width of the lateral auxiliary switch with 2 contacts is 9 mm. iliary switches can be attached to each mo-2 NO tor starter protector/circuit breaker. • Auxiliary switches (2 contacts) and signal 2 NC switches can be mounted separately or toaether. Lateral auxiliary switches One auxiliary switch with 4 contacts can be mounted at left side laterally for each motor starter protector/circuit breaker. The contacts of the auxiliary (4 contacts) • The signaling switch cannot be used for the switch close and open together with the main contacts of the motor starter 3RV17 and 3RV18 circuit breakers. 2 NO + 2 NC protector/circuit breaker. The overall width of the lateral auxiliary switch with 4 contacts is 18 mm. Signaling switches for sizes S0, S2 and S3 One signaling switch can be mounted at the left side of each motor starter protector/circuit breaker with a rotary operating mechanism. Tripping 1 NO + 1 NC The signaling switch has two contact systems Short-circuit 1 NO + 1 NC One contact system always signals tripping irrespective of whether this was caused by a short-circuit, an overload or an auxiliary release. The other contact system only switches in the event of a short-circuit. There is no signaling as a result of switching off with the handle. In order to be able to switch on the motor starter protector again after a short-circuit, the signaling switch must be reset manually after the error cause has been eliminated. The overall width of the signaling switch is 18 mm. **Right-hand side** Auxiliary releases Notes. Shunt releases For remote-controlled tripping of the motor starter protector/circuit breaker. The release coil should only be energized for short periods (see schemat-• One auxiliary release can be mounted per motor starter protector/circuit breaker ics) Accessories cannot be mounted at the or right-hand side of the 3RV11 motor starter Undervoltage releases Trips the motor starter protector/circuit breaker when the voltage is interprotectors for motor protection with overrupted and prevents the motor from being restarted accidentally when the load relay function. voltage is restored. Used for remote-controlled tripping of the motor starter protector Particularly suitable for EMERGENCY-STOP disconnection by way of the corresponding EMERGENCY-STOP pushbutton according to EN 60204-1 (VDE 0113). or Undervoltage releases with Function and use as for the undervoltage release without leading auxiliary contacts, but with the following additional function: the auxiliary contacts will leading auxiliary contacts open in switch position OFF to deenergize the coil of the undervoltage (2 NO) release, thus interrupting energy consumption. In the "tripped" position, these auxiliary contacts are not guaranteed to open. The leading contacts permit the motor starter protector to reclose. The overall width of the auxiliary release is 18 mm. Тор Isolator modules for Isolator modules can be mounted to the upper terminal end of motor starter sizes S0 and S2 protectors of sizes S0 and S2 Notes: The supply cable is connected to the motor starter protector through the iso-• The isolator module cannot be used for the lator module. 3RV17 and 3RV18 circuit breakers. The plug can only be unplugged when the motor starter protector/circuit • The isolator module covers the terminal breaker is open and isolates all 3 poles of the motor starter protector from the network. The shock-protected isolation point is clearly visible and screws of the transverse auxiliary switch. If the isolator module is used, we therefore recommend that either the lateral auxiliary secured with a padlock to prevent reinsertion of the plug switches be fitted or that the isolator module not be mounted until the auxiliary switch has been wired. For a complete overview of which accessories can be used

for the various motor starter protectors see "Introduction" --> "Overview" --> "Motor starter protectors".

# **SIRIUS 3RV Motor Starter Protectors up to 100 A Accessories**

## Mountable accessories

#### Selection and ordering data Weight per PU Version Contacts For motor DT Screw terminals PS\* PG ΡU starter (UNIT, protectors/ SÈT, M) approx. circuit breakers Size Order No. Price per PU kg Auxiliary switches<sup>1)</sup> 3RV19 01-1D 3RV19 01-1E 0.015 Transverse auxiliary S00, S0, S2, S3 1 CO 1 unit 101 b 1 .... 1 NO + 1 NC switches 1 unit 101 0.018 With screw terminals, 2 NO 3RV19 01-1F 1 unit 101 0.018 ► 1 3RV19 01-1E mountable on front Solid-state compatible 1 CO S00, S0, S2, S3 A 3RV19 01-1G 1 unit 101 0.016 1 and your a transverse auxiliary 0 0 0 switches With screw terminals. 3RV19 01-1G front mountable, for operation in dusty atmosphere and in solid-state circuits with low operating currents Covers for transverse S00, S0, S2, S3 > 3RV19 01-0H 1 10 units 0.006 101 auxiliary switches 3RV19 01-0H 1 NO + 1 NC S00, S0, S2, S3 🕨 0.045 Lateral auxiliary switches 3RV19 01-1A 101 1 1 unit 0.045 2 NO 3RV19 01-1B With screw terminals. 1 1 unit 101 mountable on the left 2 NC 3RV19 01-1C 0.045 101 1 unit . 1 2 NO + 2 NC 0.083 А 3RV19 01-1J 101 1 unit 1 3RV19 01-1A 0.0 00 . 3RV19 01-1J

 $^{1)}$  Each motor starter protector can be fitted with one transverse and one lateral auxiliary switch. The lateral auxiliary switch with 2 NO + 2 NC is used without a transverse auxiliary switch. Transverse auxiliary switches must not be used for the 3RV17 and 3RV18 circuit breakers.

	Version	Contacts	For motor starter protectors/ circuit breakers Size	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
					Order No.	Price € per PU				kg
Auxiliary swi	tches <sup>1)</sup>									
3RV19 01-2E	Transverse auxiliary switches With Cage Clamp terminals, mountable on front	1 NO + 1 NC 2 NO	S00, S0, S2, S3	• •	3RV19 01-2E 3RV19 01-2F		1 1	1 unit 1 unit	101 101	0.017 0.018
The second s	Lateral auxiliary switches With Cage Clamp terminals, mountable on left	1 NO + 1 NC 2 NO 2 NC	S00, S0, S2, S3	A A A	3RV19 01-2A 3RV19 01-2B 3RV19 01-2C		1 1 1	1 unit 1 unit 1 unit	101 101 101	0.040 0.040 0.040

3RV19 01-2A

1) Each motor starter protector can be fitted with one transverse and one lateral auxiliary switch. Transverse auxiliary switches must not be used for the 3RV17 and 3RV18 circuit breakers.

S

							Mou	ntable	acces	sories
	Version		For motor starter protectors/ circuit breakers Size	DT	Screw terminals	<b>(</b>	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
					Order No.	Price per PU				ka
Signaling swi	tches <sup>1)</sup>									kg
3RV19 21-1M	Signaling switches One signaling switch can be mounted on the left per motor starter protector.	Separate tripped and short-circuit alarms, 1 NO + 1 NC each	S0, S2, S3	•	3RV19 21-1M		1	1 unit	101	0.094
Isolator modu	lles <sup>1)</sup>									
SRV19 38-1A with padlock	Isolator modules	Visible isolating distance for isolating individual motor starter protectors from the network, lock- able in disconnected position.	S0 S2	A A	3RV19 28-1A 3RV19 38-1A		1	1 unit 1 unit	101 101	0.157

<sup>1)</sup> This accessory cannot be used for the 3RV17 and 3RV18 circuit breakers.

## Mountable accessories

	Rated	d contr	ol supply volt	age U <sub>s</sub>		For motor starter	DT	Screw terminals	Ð	PU	PS*	PG	Weight
	AC 50 Hz	AC 60 Hz	AC 50/60 Hz 100 % ON period <sup>1)</sup>	AC/DC 50/60 Hz, DC 5 s ON period <sup>2)</sup>	DC	protectors/ circuit breakers Size			Ð	(UNIT, SET, M)			per PU approx.
			ponoa	ponod				Order No.	Price per PU				
	V	V	V	V	V								kg
Auxiliary relea	ases <sup>3</sup>	)											
-			ge releases										
3RV19 02-1DP0	 24 110  230 400 415 500	 120 208 240 440 480 600	        <b>-</b> <b>-</b> <b>-</b> <b>-</b>	       vith leading	24      	S00, S0, S2, S3 S00, S0, S2, S3	A A A A A A	3RV19 02-1AB4 3RV19 02-1AB0 3RV19 02-1AF0 3RV19 02-1AM1 3RV19 02-1AV0 3RV19 02-1AV0 3RV19 02-1AV1 3RV19 02-1AS0		1 1 1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101 101 101 101	0.138 0.134 0.134 0.128 0.131 0.127 0.129 0.127
3RV19 12-1CP0	2 NO 230 400 415 230 400 415	240 440 480 240 440 480	    	   	   	S00 S00 S00 S0, S2, S3 S0, S2, S3 S0, S2, S3	A A A A A	3RV19 12-1CP0 3RV19 12-1CV0 3RV19 12-1CV1 3RV19 22-1CV1 3RV19 22-1CV0 3RV19 22-1CV1		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101 101	0.140 0.137 0.139 0.139 0.136 0.138
		480 t relea				50, 52, 53	A	3RV 19 22-10 VI		I	i unit	101	0.138
	    	    	20 24 90 110 210 240 350 415 500	20 70 70 190 190 330 330 500 500	  	S00, S0, S2, S3 S00, S0, S2, S3	A ► A	3RV19 02-1DB0 3RV19 02-1DF0 3RV19 02-1DF0 3RV19 02-1DP0 3RV19 02-1DV0 3RV19 02-1DS0		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	101 101 101 101 101	0.133 0.135 0.130 0.129 0.126

<sup>1)</sup> The voltage range is valid for 100 % (infinite) ON period. The response voltage lies at 0.9 of the lower limit of the voltage range.

<sup>2)</sup> The voltage range is valid for 5 s ON period at AC 50 Hz/60 Hz and DC. The response voltage lies at 0.85 of the lower limit of the voltage range.

<sup>3)</sup> One auxiliary release can be mounted on the right per motor starter protector (does not apply to 3RV11 motor starter protectors with overload relay function).

### Overview

#### Insulated three-phase busbar systems

Three-phase busbar systems provide an easy, time-saving and clearly arranged means of feeding 3RV1 motor starter protectors with screw terminals. Different versions are available for sizes S00, S0 and S2 and can be used for the various different types of motor starter protectors. The 3RV19 15 three-phase busbar systems are not suitable for 3RV11 motor starter protectors with overload relay function. The three-phase busbars must not be used for 3RV17 and 3RV18 circuit breakers.

The busbars are suitable for between 2 and 5 circuit breakers/motor starter protectors. However, any kind of extension is possible by clamping the tags of an additional busbar (rotated by 180°) underneath the terminals of the respective last motor starter protector.

A combination of motor starter protectors of different sizes is possible only with sizes S00 and S0. Connecting pieces are available for this purpose. The motor starter protectors are supplied by appropriate feeder terminals.



Three-phase busbar system, size S00



Three-phase busbar system, size S2



Three-phase busbar system, with example for combining sizes S00 and S0  $\,$ 

The three-phase busbar systems are finger-safe. They are designed for any short-circuit stress which can occur at the output side of connected motor starter protectors.

The three-phase busbar systems can also be used to construct "Type E Starters" of size S0 or S2 according to UL/CSA. Special feeder terminals must be used for this purpose, however (see "Selection and ordering data").

#### Busbar adapters for 40 mm and 60 mm systems

The motor starter protectors are mounted directly with the aid of busbar adapters on busbar systems with 40 mm and 60 mm center-to-center clearance in order to save space and to reduce infeed times and costs. Busbar adapters for busbar systems with 40 mm center-to-center clearance are suitable for copper busbars with a width of 12 mm to 15 mm, while those with 60 mm center-to-center clearance are suitable for copper busbars with a width of 12 mm to 30 mm. The busbars can be 4 mm to 5 mm or 10 mm thick.

The motor starter protectors are snapped onto the adapter and connected on the line side. This prepared unit is then plugged directly onto the busbar system, and is thus connected both mechanically and electrically at the same time.

Further busbar adapters for snap-mounting direct-on-line starters and reversing starters as well as additional accessories such as line terminals and outgoing terminals, flat copper profile, etc., can be found in Chapter 17 "SENTRON Switching and Protection Devices, Switch Disconnectors, 8US Busbar Systems" --> "SENTRON 8US Busbar Systems".



SIRIUS motor starter protectors and load feeders with busbar adapters snapped onto busbars

# SIRIUS 3RV Motor Starter Protectors up to 100 A Accessories

## **Busbar accessories**

					-	-							
	Modu- lar spac- ing	protecto connect With- out lat- eral acces-	Incl. lat- eral auxil-	an be	Rated current <i>I</i> <sub>n</sub> at 690 V	For motor starter protector Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weig per F appro
Chroo phoop huy	mm				A								
Three-phase bus			oral moto	r startar	protoctor	s with screw							
	terminal	ıls, mount	ted side	oy side	on standa	ard mounting							
RV19 15-1AB	45	sulated, v 2	with touc	1 protec	63	S00, S0 <sup>1)2)</sup>		3RV19 15-1AB		1	1 unit	101	0.0
	-10	3			00	S00, S0 <sup>1)2)</sup>		3RV19 15-1BB		1	1 unit	101	0.0
and the local division of		4 5				S00, S0 <sup>1)2)</sup> S00, S0 <sup>1)2)</sup>		3RV19 15-1CB 3RV19 15-1DB		1	1 unit 1 unit	101 101	0.0 0.1
RV19 15-1BB	55		2		63	S00, S0 <sup>1)2)</sup>	•	3RV19 15-2AB		1	1 unit	101	0.0
			3			S00, S0 <sup>1)2)</sup> S00, S0 <sup>1)2)</sup>		3RV19 15-2BB		1	1 unit	101	0.0
HARD NO.	1		4 5			S00, S0 <sup>1)2)</sup> S00, S0 <sup>1)2)</sup>		3RV19 15-2CB 3RV19 15-2DB		1	1 unit 1 unit	101 101	0.1 0.1
RV19 15-1CB	63			2	63	S00 S0 <sup>1)2)</sup>		3RV19 15-3AB		1	1 unit	101	0.0
1019-100				4		S00, S0 <sup>1)2)</sup>		3RV19 15-3CB		1	1 unit	101	0.
HERE'S	55	2 3			108	S2 S2		3RV19 35-1A 3RV19 35-1B		1 1	1 unit 1 unit	101 101	0.1 0.2
**********	N N	4				S2		3RV19 35-1C		1	1 unit	101	0.2
RV19 15-1DB	75		2 3	2 3	108	S2 <sup>3)</sup> S2 <sup>3)</sup>	A	3RV19 35-3A		1	1 unit	101	0.
			3	3		S2 <sup>3)</sup>	A A	3RV19 35-3B 3RV19 35-3C		1	1 unit 1 unit	101 101	0. 0.
nal heights. The 3f busbars from size	RV19 15-DE	3 connect S00.			lable for c	and termi- connecting For motor	<sup>3)</sup> A n DT	uxiliary releases and ation. Order No.	lateral auxilia Price	ary switche PU	es cannot b PS*	PG	_
nal heights. The 3	RV19 15-DE S0 to size \$	3 connect S00.		e is avai	lable for c	For motor starter protectors	n	ation.					Wei per
nal heights. The 3	RV19 15-DE S0 to size \$	3 connect S00.		e is avai Modu	lable for c	connecting For motor starter	n	ation.	Price	PU (UNIT,			Wei per
nal heights. The 3 busbars from size	RV19 15-DE S0 to size \$ Version	3 connect S00. ee-phase	ting piec	e is avai Modu spaci mm	lable for c	For motor starter protectors Size	DT	ation. Order No.	Price	PU (UNIT, SET, M)	PS*	PG	Wei per appr
Connecting piec	RV19 15-DE S0 to size S Version ce for thre For con phase b starter p	3 connect S00.	e busba hree- for motor s of size	e is avai Modu spaci mm 1rs 45	lable for c	For motor starter protectors	n	ation.	Price	PU (UNIT,			Wei per appr
nal heights. The 3 busbars from size	RV19 15-DE S0 to size \$ Version Ce for thre For con phase b starter p S0 (left)	B connect S00. Be-phase Innecting t Dusbars f protectors	ting piec busba hree- for motor s of size S00 (right	e is avai Modu spaci mm 1rs 45	lable for c	For motor starter protectors Size	DT	ation. Order No.	Price per PU Price	PU (UNIT, SET, M)	PS*	PG	Wei per app
nal heights. The 3 busbars from size	RV19 15-DE S0 to size \$ Version ce for thre For com phase b starter p S0 (left) Conduc Solid or	e-phase solutions anecting to busbars f protectors to size S ctor cross r Finely d stranc	e busba hree- or motor s of size 300 (right s-section / AW ded cab	Modu spaci mm 115 45 ) Gales,	lable for c	For motor starter protectors Size	DT	ation. Order No. <b>3RV19 15-5DB</b>	Price per PU	PU (UNIT, SET, M)	PS*	PG 101	We per app 0.
nal heights. The 3 busbars from size	RV19 15-DE S0 to size \$ Version Se for thre For com phase b starter p S0 (left) Conduc Solid or strande mm <sup>2</sup>	ee-phase soo. ee-phase meeting t ousbars fi protectors to size S ctor cross ctor	e busba hree- or motor s of size 300 (right s-section / AW ded cab	Modu spaci mm irs 45 ) G les, d or nded	lable for c	For motor starter protectors Size S00, S0 - For motor starter protectors	DT	ation. Order No. <b>3RV19 15-5DB</b>	Price per PU Price	PU (UNIT, SET, M) 1	PS*	PG 101	Wei per appr 0.0
nal heights. The 3 busbars from size	RV19 15-DE S0 to size S Version For con phase b starter p S0 (left) Conduc Solid or strande mm <sup>2</sup> cder termin	e-phase solutions anecting to busbars for protectors tor cross for Finely d stranc with e sleeve mm <sup>2</sup> nals	e busba hree- for motor s of size 300 (right s-section AW ded cab end soli e stra AW	Modu spaci mm irs 45 ) G les, d or nded	lable for c lar ng Tighten ing torque	For motor starter protectors Size S00, S0 - For motor starter protectors	DT	ation. Order No. <b>3RV19 15-5DB</b>	Price per PU Price	PU (UNIT, SET, M) 1	PS*	PG 101	Wei per appr 0.0
nal heights. The 3 busbars from size	RV19 15-DE S0 to size \$ Version ce for thre For com phase b starter p S0 (left) Conduc Solid or strande mm <sup>2</sup> cer termin Connec	ee-phase soo. ee-phase necting t busbars fi protectors to size S ctor cross Finely distrance with e sleeve mm <sup>2</sup> nals ction from	e busba hree- for motor sof size soo (right s-section AW ded cabi e stra AW mtop	e is avai Modu spaci mm 1rs 45 ) G les, d or nded G	Tighten ing torque	For motor starter protectors Size S00, S0 - For motor starter protectors Size	DT	ation. Order No. <b>3RV19 15-5DB</b> Order No.	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M)	PS* 1 unit PS*	PG 101 PG	Wei per appr 0.0
hal heights. The 3f busbars from size	RV19 15-DE S0 to size \$ Version ce for thre For com phase b starter p S0 (left) Conduc Solid or strande mm <sup>2</sup> cer termin Connec	e-phase solutions anecting to busbars for protectors tor cross for Finely d stranc with e sleeve mm <sup>2</sup> nals	e busba hree- for motor sof size soo (right s-section AW ded cabi e stra AW mtop	e is avai Modu spaci mm 1rs 45 ) G les, d or nded G	lable for c lar ng Tighten ing torque	For motor starter protectors Size S00, S0 For motor starter protectors Size S00, S0 S00, S0 S00	n DT DT	ation. Order No. <b>3RV19 15-5DB</b> Order No. <b>3RV19 15-5A</b>	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M)	PS* 1 unit PS*	PG 101 PG 101	Wei appr 0.0 Wei appr 0.0
nal heights. The 3f busbars from size	RV19 15-DE SO to size S Version Certor thre For con phase b starter p SO (left) Conduc Solid or strande mm <sup>2</sup> cder termin Connec 2.5 25	ee-phase soo. ee-phase necting t busbars fi protectors to size S ctor cross Finely distrance with e sleeve mm <sup>2</sup> nals ction from	e busba hree- for motor s of size S00 (right s-section ded cab and soli- e stra AW m top 6 10-4	e is avai Modu spaci mm trs 45 ) G les, d or nded G 4	Tighten ing torque	For motor starter protectors Size S00, S0 - For motor starter protectors Size	DT	ation. Order No. <b>3RV19 15-5DB</b> Order No.	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M)	PS* 1 unit PS*	PG 101 PG	Wei appr 0.0 Wei appr 0.0
nal heights. The 3 busbars from size	RV19 15-DE SO to size S Version Certor thre For con phase b starter p SO (left) Conduc Solid or strande mm <sup>2</sup> cor termin Connec 2.5 20	e-phase solution solu	e busba hree- for motor s of size Soo (right s-section a AW ded cab and soli e stra AW m top 6 10-4 m below	e is avai Modu spaci mm 45 ) Ges, d or nded G 4 1)	lable for c lar ng Tighten ing torque Nm 4	For motor starter protectors Size S00, S0 - For motor starter protectors Size S00 S0 S0 S0	n DT DT	ation. Order No. <b>3RV19 15-5DB</b> Order No. <b>3RV19 15-5A</b>	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M)	PS* 1 unit PS*	PG 101 PG 101	Wei per appr 0.0 Wei per appr 0.0 0.0
nal heights. The 3f busbars from size	RV19 15-DE SO to size S Version Certor thre For con phase b starter p SO (left) Conduc Solid or strande mm <sup>2</sup> cor termin Connec 2.5 20	e-phase solutions and the second protectors to size S ctor cross Finely d stranc with e sleeve mm <sup>2</sup> nals ction from 5 4 11	e busba hree- for motor s of size Soo (right s-section a AW ded cab and soli e stra AW m top 6 10-4 m below	e is avai Modu spaci mm 45 ) Ges, d or nded G 4 1)	lable for c lar ng Tighten ing torque Nm 4 Input: 4 Output: 4	For motor starter protectors Size S00, S0 - For motor starter protectors Size S00 S0 S00 S0	n DT DT	ation. Order No. 3RV19 15-5DB Order No. 3RV19 15-5A 3RV19 25-5AB	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M) 1 1	PS* 1 unit PS* 1 unit 1 unit	PG 101 PG 101 101	Wei per appr 0.0 Wei per appr 0.0 0.0
nal heights. The 3f busbars from size	RV19 15-DE SO to size S Version Ce for thre For comphase b starter p SO (left) Conduc Solid or strander connec 2.5 20 Connec 2.5 20	ee-phase solution ee-phase meeting t busbars f protectors to size S ctor cross r Finely d stranc with even mm <sup>2</sup> nals ction from 5 4 11	e busba three- for motor s of size Sood (right s-section ded cab end soli e stra AW m top 6 10-4 m below 6 10-4	e is avai Modu spaci mm 45 ) Ges, d or nded G 4 1)	lable for c lar ng Tighten ing torque Nm 4	For motor starter protectors Size S00, S0 - For motor starter protectors Size S00 S0 S00 S0	n DT DT	ation. Order No. 3RV19 15-5DB Order No. 3RV19 15-5A 3RV19 25-5AB	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M) 1 1	PS* 1 unit PS* 1 unit 1 unit	PG 101 PG 101 101	Wei per appr 0.0 Wei per appr 0.0 0.0
nal heights. The 3f busbars from size	RV19 15-DE SO to size S Version Ce for thre For comphase b starter p SO (left) Conduc Solid or strande mm <sup>2</sup> Connec 2.5 24 Connec	e-phase solutions and the second protectors to size S ctor cross Finely d stranc with e sleeve mm <sup>2</sup> nals ction from 5 4 11	e busba three- for motor s of size Sood (right s-section ded cab e stra AW ded cab solia e stra AW m top 6 10-4 m top	e is avai Modu spaci mm 45 ) Geles, d or nded G 4 1) 4	lable for c lar ng Tighten ing torque Nm 4 Input: 4 Output: 4	For motor starter protectors Size S00, S0 - For motor starter protectors Size S00 S0 S0 S0 S0 S0 S0 S0	n DT DT	ation. Order No. 3RV19 15-5DB Order No. 3RV19 15-5A 3RV19 25-5AB	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M) 1 1	PS* 1 unit PS* 1 unit 1 unit	PG 101 PG 101 101	Wei per appr 0.0 Wei per appr 0.0 0.0
nal heights. The 3d busbars from size	RV19 15-DE SO to size S Version Ce for thre For comphase b starter p SO (left) Conduc Solid or strande mm <sup>2</sup> Connec 2.5 24 Connec	ee-phase solution solution protectors tor cross critical sector mm <sup>2</sup> nals ction from 5 4 11 ction from	e busba three- for motor s of size Sood (right s-section ded cab e stra AW ded cab solia e stra AW m top 6 10-4 m top	e is avai Modu spaci mm 45 ) Geles, d or nded G 4 1) 4	Tighten ing torque Nm 4 Input: 4 Output: 2 2.5	For motor starter protectors Size S00, S0 - For motor starter protectors Size S00 S0 S00 S0	n DT DT	ation. Order No. 3RV19 15-5DB Order No. 3RV19 15-5A 3RV19 25-5AB 3RV19 15-5B	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M) 1 1 1	PS* 1 unit PS* 1 unit 1 unit 1 unit	PG 101 PG 101 101 101	Wei per appr 0.0 Wei per appr 0.0 0.0
nal heights. The 3f busbars from size	RV19 15-DE S0 to size \$ Version Ce for thre For comphase b starter p S0 (left) Conduc Solid or strander connec 2.5 24 Connec 2.5 24 Connec 2.5 56	ee-phase solution solution protectors tor cross cros cro	e busba hree- for motor s of size Soo (right s-section ded cab end solia e stra AW Mentop 6 10-4 m below 6 10-4 m top 35 14-0	e is avai Modu spaci mm 45 ) Gles, d or nded G 4 1) 4	Tighten ing torque Nm 4 Input: 4 Output: 2 2.5	For motor starter protectors Size S00, S0 - For motor starter protectors Size S00 S0 S0 S0 S0 S0 S0 S0 S0 S0 S0 S0	n DT DT	ation. Order No. 3RV19 15-5DB Order No. 3RV19 15-5A 3RV19 25-5AB 3RV19 15-5B	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M) 1 1 1	PS* 1 unit PS* 1 unit 1 unit 1 unit	PG 101 PG 101 101 101	Wei per appr 0.0 Wei per appr 0.0 0.0
nal heights. The 3f busbars from size	RV19 15-DE SO to size S Version For com phase b starter p SO (left) Conduc Solid or strande mm <sup>2</sup> conrec 2.5 24 Connec 2.5 24 Connec 2.5 24 Connec	ee-phase solution solution protectors tor cross cros cro	e busba three- for motor s of size S00 (right 	e is avai Modu spaci mm 45 ) Gles, d or nded G 4 1) 4	Tighten ing torque Nm 4 Input: 4 Output: 2 2.5	For motor starter protectors Size S00, S0 - For motor starter protectors Size S00 S0 S0 S0 S0 S0 S0 S0 S0 S0 S0 S0	n DT DT	ation. Order No. 3RV19 15-5DB Order No. 3RV19 15-5A 3RV19 25-5AB 3RV19 15-5B	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M) 1 1 1	PS* 1 unit PS* 1 unit 1 unit 1 unit	PG 101 PG 101 101 101	n com Weii per appr 0.0 Weii per appr 0.0 0.0 0.1
The eights. The 3d busbars from size	RV19 15-DE SO to size S Version For com phase b starter p SO (left) Conduc Solid or strande mm <sup>2</sup> conrec 2.5 24 Connec 2.5 24 Connec 2.5 24 Connec 2.5 24	ee-phase soo. ee-phase meeting t busbars f protectors to size S ctor cross r Finely d stranc with e sleeve mm <sup>2</sup> rals ction from 5 4 11 ction from 0 1.5 nals for ction from 15 4 11	e busba three- for motor s of size S00 (right 	e is avai Modu spaci mm urs 45 ) Ge les, d or nded Ge 4 1) 4 ucting	Tighten ing torque Nm 4 Input: 4 Output: 2 2.5	For motor starter protectors Size S00, S0 - For motor starter protectors Size S00 S0 S0 S0 S0 S0 S0 S0 S0 S0 S0 S0	n DT DT	ation. Order No. 3RV19 15-5DB Order No. 3RV19 15-5A 3RV19 25-5AB 3RV19 15-5B	Price per PU Price	PU (UNIT, SET, M) 1 PU (UNIT, SET, M) 1 1 1	PS* 1 unit PS* 1 unit 1 unit 1 unit	PG 101 PG 101 101 101	Wei appr 0.0 Wei appr 0.0 0.0 0.0

place of a switch, please take the space requirement into account.

										Busbar	acces	sories
	Version				motor starter lectors	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
Covers for connect	ction tag	s										
3RV19 15-6AB	Touch pro tions	tection for	empty po:	si- SOC S2	I, SO	A A	3RV19 15-6AB 3RV19 35-6A		1 1	10 units 5 units	101 101	0.003 0.006
Busbar adapters												
8US10 61-5DJ07		8US12 51	-5MD07									
For motor starter protectors Size	Rated current	Connect- ing cable		Adapter width	Rated voltage	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	А	AWG	mm	mm	V							kg
Busbar adapters f For flat copper profiles Width: 12 and 15 mm		-										
Thickness: 5 and 10 n S00, S0	25	12	121	45	690		8US10 51-5DJ07		1	1 unit	143	0.106
S00, S0 + lateral auxiliary switch S2	25 56	12 8	121 139	55 55	690 690		8US10 61-5DJ07 8US10 61-5FK08		1	1 unit 1 unit	143 143	0.119 0.231
S3 S3	100 100	4 4	182 182	70 72	400 <sup>1)</sup> 415 690 <sup>2)</sup>		8US11 11-4SM00 8US10 11-4TM00		1	1 unit 1 unit	143 143	0.541 0.478
Busbar adapters f		n system									-	
For flat copper profiles Width: 12 and 30 mm Thickness: 5 and 10 n also for T and double-	nm T special p	orofiles										
S00, S0 S2 S3 S3 S3 <sup>3)</sup>	25 56 100 100 70 <sup>4)</sup>	12 8 4 4 4	182	45 55 70 72 72	690 690 400 <sup>1)</sup> 415 690 <sup>2)</sup> 600 <sup>4)</sup>	AAA	8US12 51-5DM07 8US12 61-5FM08 8US11 11-4SM00 8US12 11-4TM00 8US12 11-4TR00		1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	143 143 143 143 143	0.183 0.263 0.541 0.498 0.470
<ol> <li>At rated voltage ≤ 400 V: short-circui</li> <li>&gt; 400 to 460 V: short</li> </ol>				A.								
<sup>2)</sup> Short-circuit breakin - up to $I_n = 25$ A: ma - up to $I_n = 90$ A: ma - up to $I_n = 100$ A: m Short-circuit breakin - max. 12 kA.	ng capacity ax. 30 kA ax. 16 kA nax. 6 kA;	/ 415/500/5	525 V AC:									
<ol> <li><sup>3)</sup> This busbar adapter for applications acc</li> </ol>	r is approv ordina to l	ed speciall JL/CSA.	y for 3RV1	17 42 circu	it breakers							
<ul> <li><sup>4)</sup> Values according to - Rated current: 70 , - Short-circuit break 480 V AC: 65 kA, u AC 480 Y/277 V: 61 AC 600 Y/347 V: 20     </li> </ul>	0 UL/CSA: A at 600 V ing capaci up to $I_n = 3$ 5 kA;	AC; tv:										

For additional busbar adapters see Chapter 17 "SENTRON Switching and Protection Devices, Switch Discon-nectors, 8US Busbar Systems" --> "SENTRON 8US Busbar Systems".

# SIRIUS 3RV Motor Starter Protectors up to 100 A Accessories

## 3RV19 infeed system

## Overview

The 3RV19 infeed system is a convenient means of energy supply and distribution for a group of several motor starter protectors or complete load feeders with a screw or spring-type connection up to size S0 (exception: this system cannot be used for the 3RV11, 3RV16 to 3RV18 motor starter protectors/circuit breakers).

The devices with spring-type connections are available in the SIRIUS modular system up to  $5.5 \, kW$  at 400 V AC. The motor starter protectors and load feeders with screw terminals for sizes S00 and S0 can also be integrated in the system at the same time.

The system is based on a basic module complete with a lateral incoming unit (three-phase busbar with infeed). This infeed with spring-type terminals is mounted on the right or left depending on the version and can be supplied with a maximum conductor cross-section of 25 mm<sup>2</sup> (with end sleeve). A basic module has two sockets onto each of which a motor starter protector can be snapped.

Expansion modules are available for extending the system (three-phase busbars for system expansion). The individual modules are connected through an expansion plug. The electrical connection between the three-phase busbars and the motor starter protectors is implemented through plug-in connectors. The complete system can be mounted on a TH 35 standard mounting rail to EN 60715 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 outfeed on the other side to supply further loads are all possible. A terminal block with spring-type connections in combination with a standard mounting rail enables the integration of not only SIRIUS motor starter protectors but also single-phase, two-phase and three-phase components such as 5SY miniature circuit breakers or SIRIUS relay components.



#### 1 Three-phase busbars with infeed

A three-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 motor starter protector. A choice of two versions with infeed on the left or right is available. The infeed is connected using spring-type terminals. The Cage Clamp springs permit conductor cross-sections of up to 25 mm<sup>2</sup> with end sleeves. An end cover is supplied with each module.

#### (2) Three-phase busbars for system expansion

The three-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.

#### (3)a Expansion plug

The expansion plug is used for electrical connection of adjacent three-phase busbars. The current carrying capacity of this plug equals 63 A. One expansion plug is supplied with each threephase busbar for system expansion. Additional expansion plugs are therefore only required as spare parts.

#### (3)b Extra-wide expansion plug

The extra-wide expansion plug makes the electrical connection between two three-phase busbars, thus performing the same function as the 3RV19 17-5BA00 expansion plug; the electrical characteristics (e. g. a current carrying capacity of 63 A) are identical.

The 3RV19 17-5E expansion plug is 10 mm wider than the 3RV19 17-5BA00 expansion plug, hence in the plugged state there is a distance of 10 mm between the connected threephase busbars. This distance can be used to lay the auxiliary current and control current wiring ("wiring duct"). The motor starter protector and contactor can be wired from underneath, which means that the complete cable duct above the system can be omitted.

#### (4) End cover

The end cover is used to cover the three-phase busbar at the open end of the system. This cover is therefore only required once for each system. An end cover is supplied with each threephase busbar system with infeed. Further end covers are therefore only required as spare parts.

#### **(5)** Plug-in connector

The plug-in connector is used for the electrical connection between the three-phase busbar and the motor starter protector. These plug-in connectors are available in versions with screw terminals for sizes S00, S0 or with spring-type terminals for size S00.

# 3RV19 infeed system

## 6 Contactor base

Load feeders can be assembled in the system using the contactor base. The contactor bases are suitable for contactors of size S00 with spring-type terminals and are simply snapped onto the three-phase busbars. Direct-on-line starters and reversing starters are possible. One contactor base is required for direct-on-line starters and two are required for reversing starters. To assemble load feeders for reversing starters, the contactor bases can be arranged either below each other (45 mm overall width) or alongside each other (90 mm overall width). It is important to note that mechanical interlocking of the contactors is only possible when they are arranged vertically.

The infeed system is designed for mounting on a 35 mm standard mounting rail with 7.5 mm overall depth. This standard mounting rail gives the contactor base a stable mounting surface to sit on. If standard mounting rails with a depth of 15 mm are used, the spacer connected to the bottom of the contactor base must be knocked out and plugged into the mating piece that is also on the underside. Then the contactor base also has a stable mounting surface. When standard mounting rails with a depth of 7.5 mm are used, the spacer has no function and can be removed.

As an alternative to using a contactor base, the 3RA19 11-2E electrical link modules can also be used for direct start load feeders of size S00. Motor starter protector and contactor assemblies can then be directly snapped onto the sockets of the three-phase busbars. For feeders of size S00 and S0, the corresponding 3RA19 11-1... or 3RA19 21-1... link modules should generally be used. For size S0, it is only possible integrate direct start load feeders and they must be integrated in the system as complete assemblies.

#### **7** Terminal block

The 3RV19 17-5D terminal block enables the integration of not only SIRIUS motor starter protectors but also single-phase, twophase and three-phase components in addition. Using the terminal block the 3 phases can be fed out of the system; singlephase loads can also be integrated in the system as the result. The terminal block is plugged into the slot of the expansion plug and thus enables outfeeding from the middle or end of the infeed system. The terminal block can be rotated through 180° and be locked to the support modules of the infeed system. The 3RV19 17-7B 45 mm standard mounting rail for screwing onto the support plate is available in addition in order to be able to plug the single-phase, two-phase and three-phase components onto the infeed system.

# SIRIUS 3RV Motor Starter Protectors up to 100 A Accessories

## 3RV19 infeed system

## Selection and ordering data

				_					
	Туре	Version	For motor starter pro- tectors	DT	Order No. Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
			Size						kg
Three-phase busbars									
	Three-phase bus- bars with infeed incl. 3RV19 17-6A end cover	For 2 motor starter protectors with infeed from the left	S00 (Cage Clamp) <sup>1)</sup> , S00, S0 (screw)	A	3RV19 17-1A	1	1 unit	101	0.438
		For 2 motor starter protectors with infeed from the right	S00 (Cage Clamp) <sup>1)</sup> , S00, S0 (screw)	A	3RV19 17-1E	1	1 unit	101	0.438
3RV19 17-1A									
Three-phase busbars									
	<b>bars</b> incl. 3RV19 17- 5BA00 expansion	For 2 motor starter protectors	S00 (Cage Clamp) <sup>1)</sup> , S00, S0 (screw)	A	3RV19 17-4A	1	1 unit	101	0.261
	plug	For 3 motor starter protectors	S00 (Cage Clamp) <sup>1)</sup> , S00, S0 (screw)	A	3RV19 17-4B	1	1 unit	101	0.364
3RV19 17-4B									
Plug-in connectors									
100 10	Plug-in connec- tors	Single-unit packaging	S00 (Cage Clamp) <sup>1)</sup>		3RV19 17-5AA00	1	1 unit	101	0.053
	to make contact with the motor starter protectors	Multi-unit packaging	S00 (Cage Clamp) <sup>1)</sup>	A	3RV19 17-5A	1	10 units	101	0.048
3RV19 17-5AA00									
		Single-unit packaging	S00 (screw)	A	3RV19 17-5CA00	1	1 unit	101	0.040
			S0 (screw)	А	3RV19 27-5AA00	1	1 unit	101	0.040
		Multi-unit packaging	S00 (screw)	A	3RV19 17-5C	1	10 units	101	0.036
			S0 (screw)	A	3RV19 27-5A	1	10 units	101	0.036
3RV19 27-5AA00									

#### 3RV19 27-5AA00

<sup>1)</sup> Compatible with the following motor starter protectors: 3RV10 11-...2. (size S00, Cage Clamp) product version E03 and upwards.

	Туре	Version	For contactors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
Contactor bases										
1.81	Contactor bases for mounting	Single-unit packaging	S00	А	3RV19 17-7AA00		1	1 unit	101	0.042
3RV19 17-7A	direct-on-line or reversing starters	Multi-unit packaging	S00	A	3RV19 17-7A		1	10 units	101	0.048

3RV19 infeed system

						31	RV19 in	reea s	system
	Туре	Version	DT	Order No. F	Price er PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Terminal blocks									kg
C L C C C C C C C C C C C C C C C C C C	Terminal blocks For integration of single-phase, two-phase and three-phase compo- nents	Single-unit packaging	A	3RV19 17-5D		1	1 unit	101	0.050
45 mm standard mou									
• • •	45 mm standard mounting rails for mounting onto three-phase busbar	Single-unit packaging	A	3RV19 17-7B		1	1 unit	101	0.261
3RV19 17-7B Extra-wide expansion	pluge								
JRV19 17-5E	Extra-wide expansion plugs As accessory	Single-unit packaging	A	3RV19 17-5E		1	1 unit	101	0.050
Expansion plug	1)								
	Expansion plugs <sup>1)</sup> as spare part	Single-unit packaging	A	3RV19 17-5BA00		1	1 unit	101	0.035
3RV19 17-5BA00									
End cover	End covers <sup>2)</sup> as spare part	Multi-unit packaging	A	3RV19 17-6A		100	10 units	101	0.500

3RV19 17-6A

<sup>1)</sup> The expansion plug is included in the scope of supply of the 3RV19 17-4 three-phase busbars for system expansion.

<sup>2)</sup> The end cover is included in the scope of supply of the 3RV19 17-1 threephase busbars with infeed system.

# SIRIUS 3RV Motor Starter Protectors up to 100 A Accessories

## **Rotary operating mechanisms**

## Overview

#### Door-coupling rotary operating mechanisms

Motor starter protectors with a rotary operating mechanism can be mounted in a control cabinet and operated externally by means of a door-coupling rotary operating mechanism. When the cabinet door with motor starter protector is closed, the operating mechanism is coupled. When the motor starter protector closes, the coupling is locked which prevents the door from being opened unintentionally. This interlock can be defeated by the maintenance personnel. In the open position, the rotary operating mechanism can be secured against reclosing with up to 3 padlocks. Inadvertent opening of the door is not possible in this case either.



3RV19 26-0K door-coupling rotary operating mechanism



3RV29 26-2B door-coupling rotary operating mechanism for arduous conditions

#### Remote motorized operating mechanisms

3RV1 motor starter protectors are manually operated controls. They automatically trip in case of an overload or short-circuit. Intentional remote-controlled tripping is possible by means of a shunt release or an undervoltage release. Reclosing is only possible directly at the motor starter protector.

The remote motorized operating mechanism allows the motor starter protectors to be opened and closed by electrical commands. This enables a load or an installation to be isolated from the network or reconnected to it from an operator panel.

If the motor starter protector is tripped as a result of overload or short-circuit, it will be in tripped position. For reclosing, the remote motorized operating mechanism must first be set manually or electrically to the 0 position (electrically by means of the Open command). Then it can be reclosed.

The remote motorized operating mechanism is available for motor starter protectors of size S2 ( $I_{n max} = 50$  A) and S3 ( $I_{n max} = 100$  A) that are designed for control voltages of 230 VAC and 24 V DC. The motor starter protector is fitted into the remote motorized operating mechanism as shown in the drawing.

In the "MANUAL" position, the motor starter protector in the remote motorized operating mechanism can continue to be switched manually on site. In the "AUTOMATIC" position, the motor starter protector is switched by means of electrical commands. The switching command must be applied for a minimum of 100 ms. The remote motorized operating mechanism closes the motor starter protector after a maximum of 1 second. On voltage failure during the switching operation it is ensured that the motor starter protector remains in the OPEN or CLOSED position. In the "MANUAL" and "OFF" position, the remote motorized operating mechanism can be locked with a padlock.

## **RESET** function

The RESET button on the motorized operating mechanism serves to reset any 3RV19 21-1M signaling switch that might be installed.



3RV19 .6-3A.. remote motorized operating mechanism

**Rotary operating mechanisms** 

Selection and ordering data Version Color of Version of For motor DT Order No. Price PS\* Weight PU PG handle extension starter per PU (UNIT, per PU shaft protectors SET, M) approx. Size mm kg Door-coupling rotary operating mechanisms The door-coupling rotary operating mechanisms consist of a knob, a coupling driver and an extension shaft of 130/330 mm in length (6 mm x 6 mm). The door-coupling rotary operating mechanisms are designed to degree of protection IP65. The door locking device prevents accidental opening of the control cabinet door in the ON position of the motor starter protector. The OFF position can be locked with up to 3 padlocks. Door-cou-Black S0, S2, S3 3RV29 26-0B 0.111 130 1 unit 101 pling rotary 330 S0, S2, S3 3RV29 26-0K 0.324 ▶ 1 1 unit 101 3RV29 26-0B operating mechanisms EMER-Red/yel-130 S0, S2, S3 3RV29 26-0C 1 unit 101 0 1 1 0 b 1 GENCYlow 330 S0, S2, S3 ► 3RV29 26-0L 1 1 unit 101 0.316 STOP doorcoupling rotary operating mechanisms Door-coupling rotary operating mechanisms for arduous conditions The door-coupling rotary operating mechanisms consist of a knob, a coupling driver, an extension shaft of 300 mm in length (8 mm x 8 mm), a spacer and two metal brackets, into which the motor starter protector is inserted. The door-coupling rotary operating mechanisms are designed to degree of protection IP65. The door interlocking reliably prevents opening of the control cabinet door in the ON position of the motor starter protector. The OFF position can be locked with up to 3 padlocks Laterally mountable auxiliary releases and two-pole auxiliary switches can be used The door-coupling rotary operating mechanisms thus meet the requirements for isolating functions according to IEC 60947-2. 300 S0 3RV29 26-2B 1 unit 101 1.180 Door-cou-Grav S2 3RV29 36-2B 1.570 pling rotary 1 unit 101 operating S3 ► 3RV29 46-2B 1 unit 101 1.722 1 mechanisms EMER-Red/yel-300 S0 3RV29 26-2C 1 unit 101 1 188 b. 1 3RV29 36-2B GENCY S2 3RV29 36-2C 1 unit 101 1.486 low h STOP door-3RV29 46-2C S3 ► 1 unit 101 1.732 1 coupling rotary operating mechanisms Rated control supply Weight per PU Version For motor DT Order No. Price PU PS\* PG starter per PU (UNIT, voltage U<sub>c</sub> protectors SET, M) approx. Size kg Remote motorized operating mechanisms Remote 50/60 Hz, 230 V AC S2 В 3RV19 36-3AP0 1 unit 101 3.520 motorized 24 V DC S2 В 3RV19 36-3AB4 1 unit 101 3.420 1 operating 50/60 Hz, 230 V AC S3 В 3RV19 46-3AP0 1 1 unit 101 3.441 mechanisms 24 V DC \$3 В 3RV19 46-3AB4 1 1 unit 101 3.357

3RV19 .6-3A..

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# SIRIUS 3RV Motor Starter Protectors up to 100 A Accessories

## **Mounting accessories**

## Overview

#### Solder pin connections

Solder pin connections are available for the main contacts and transverse auxiliary switches of size S00 motor starter protectors.

The prepared terminal parts are clamped to the upper and lower screw terminals of the motor starter protectors which allows them to be soldered into printed circuit boards.



3RV19 18-5A

#### Terminals for "Self-Protected Combination Motor Controllers (Type E)" according to UL 508

The 3RV10 motor starter protectors size S0 and higher are approved according to UL 508 as "Self-Protected Combination Motor Controllers (Type E)".

This requires increased clearance and creepage distances (1 inch and 2 inches respectively) at the input side of the device, which are achieved by mounting terminal blocks.

- Size S0: The 3RV19 28-1H terminal block is simply screwed onto the basic unit.
- Size S2: The basic unit is already compliant with the new clearance and creepage distance requirements.
- Size S3: The standard box terminal must be replaced by the 3RT19 46-4GA07 terminal block.



3RV19 28-1H (left), 3RT19 46-4GA07 (right)

According to CSA, these terminal blocks can be omitted when the device is used as a "Self-Protected Combination Motor Controller" (Type E).

Three-phase feeder terminals are required for constructing "Type E Starters" with an insulated busbar system (see Busbar Accessories).

#### Selection and ordering data

	Version	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
Covers									
	<b>Terminal covers for box terminals</b> Additional touch protection to be fitted at the box terminals (2 units mountable per device)	S2 S3	• •	3RT19 36-4EA2 3RT19 46-4EA2		1 1	1 unit 1 unit	101 101	0.020 0.025
	Terminal covers For cable lug and busbar connection for maintaining the required voltage clearance and as touch protection if box terminal is removed (2 units can be mounted per motor starter protector)	S3	•	3RT19 46-4EA1		1	1 unit	101	0.040
3RV1 (size S3) with 3RT19 46-4EA1 (left) 3RV19 08-0P (right)	Scale covers Sealable, for covering the set current scale	S00, S0, S2, S3	•	3RV19 08-0P		100	10 units	101	0.100

Mounting accessories

				mounting accessories						
	Version	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.	
									kg	
ixing accessori	es									
	Push-in lugs For screwing the motor starter protector onto mounting plates.	S00, S0	A	3RB19 00-0B		100	10 units	101	0.100	
RB19 00-0B	For each motor starter protector, 2 units are required.	1								
older pin conne	ctions									
1000	For main contacts	S00	В	3RV19 18-5A		1	4 units	101	0.030	
	For soldering the main conductor connec- tions of a motor starter protector to a printec circuit board	I								
State of the state	(1 set = 2 units per motor starter protector)									
	For main and auxiliary contacts	S00	В	3RV19 18-5B		1	4 units	101	0.044	
RV19 18-5A with notor starter protec-	For soldering the main conductor connec- tions and the auxiliary conductor connec- tions of the transverse auxiliary switch 1 NC + 1 NC of a motor starter protector to a printed circuit board									
or	(1 set = 3 units per motor starter protector)									
		<b>–</b> .	DT	Order Ne	Price	PU	PS*	PG	Weight	
	Version	For motor	DI	Order No.	THUE	10				
	Version	For motor starter protectors Size	וט	Order No.	per PU	(UNIT, SET, M)			per PU approx.	
		starter protectors Size	וט	Urder No.		(UNIT,				
	elf-Protected Combination Motor Con	starter protectors Size	וט			(UNIT,			approx.	
ferminals for "Se Type E)" accord	elf-Protected Combination Motor Con ing to UL 508 Note: UL 508 demands for "Combination Me Type E" 1-inch clearance and 2-inch creep at line side. The following terminal blocks m	starter protectors Size trollers btor Controller age distance ust be used in		Urder No.		(UNIT,			approx.	
	elf-Protected Combination Motor Con ing to UL 508 Note: UL 508 demands for "Combination Mi Type E" 1-inch clearance and 2-inch creep	starter protectors Size trollers otor Controller age distance ust be used in and S3. 2 conforms distances				(UNIT,			approx.	
Type E)" accord	elf-Protected Combination Motor Con ing to UL 508 Note: UL 508 demands for "Combination Mi Type E" 1-inch clearance and 2-inch creep at line side. The following terminal blocks m 3RV10 motor starter protectors of sizes S0 The 3RV10 motor starter protector in size S with the required clearance and creepage without a terminal block. Terminal blocks ar	starter protectors Size trollers toor Controller age distance ust be used in and S3. 2 conforms distances e not required be used in ubars and with				(UNIT,			approx.	
Type E)" accord	elf-Protected Combination Motor Con ing to UL 508 Note: UL 508 demands for "Combination M Type E" 1-inch clearance and 2-inch creeps at line side. The following terminal blocks m 3RV10 motor starter protectors of sizes S0. The 3RV10 motor starter protector in size S with the required clearance and creepage e without a terminal block. Terminal blocks ar for use according to CSA. With size S0, these terminal blocks cannot combination with 3RV19.5 three-phase bus size S3, they cannot be used with a transve	starter protectors Size trollers botor Controller age distance ust be used in and S3. 2 conforms distances e not required be used in bbars and with rrse auxiliary				(UNIT,			approx.	
Type E)" accord	elf-Protected Combination Motor Con ing to UL 508 Note: UL 508 demands for "Combination Me Type E" 1-inch clearance and 2-inch creep at line side. The following terminal blocks m 3RV10 motor starter protectors of sizes S0 The 3RV10 motor starter protector in size S with the required clearance and creepage e without a terminal block. Terminal blocks ar for use according to CSA. With size S0, these terminal blocks cannot combination with 3RV19 .5 three-phase bus size S3, they cannot be used with a transve switch. For construction with three-phase busbars,	starter protectors Size trollers botor Controller age distance ust be used in and S3. 2 conforms distances e not required be used in bbars and with rrse auxiliary		3RV19 28-1H 3RT19 46-4GA07		(UNIT,	1 unit 1 unit	101 101	approx.	
Type E)" accord	<ul> <li>Eff-Protected Combination Motor Coning to UL 508</li> <li>Note: UL 508 demands for "Combination Multiple E" 1-inch clearance and 2-inch creepart line side. The following terminal blocks m 3RV10 motor starter protectors of sizes S0. The 3RV10 motor starter protector in size S with the required clearance and creepage e without a terminal block. Terminal blocks cannot combination with 3RV19.5 three-phase bus size S3, they cannot be used with a transverse switch.</li> <li>For construction with three-phase busbars, accessories".</li> <li>Terminal blocks type E</li> <li>For extended clearance and creepage distances (1 and 2 inch)</li> </ul>	starter protectors Size trollers botor Controller age distance ust be used in and S3. 2 conforms distances e not required be used in bobars and with borse auxiliary see "Busbar S0 S3	A	3RV19 28-1H 3RT19 46-4GA07	per PU	(UNIT, SET, M) 1 1	1 unit 1 unit	101 101	approx. kg 0.083 0.155	
Type E)" accord	elf-Protected Combination Motor Con ing to UL 508 Note: UL 508 demands for "Combination Me Type E" 1-inch clearance and 2-inch creep at line side. The following terminal blocks m 3RV10 motor starter protectors of sizes S0. The 3RV10 motor starter protector in size S with the required clearance and creepage i without a terminal block. Terminal blocks ar for use according to CSA. With size S0, these terminal blocks cannot combination with 3RV19 .5 three-phase bus size S3, they cannot be used with a transve switch. For construction with three-phase busbars, accessories". Terminal blocks type E For extended clearance and creepage	starter protectors Size trollers botor Controller age distance ust be used in and S3. 2 conforms distances e not required be used in bars and with trse auxiliary see "Busbar S0		3RV19 28-1H		(UNIT, SET, M)	1 unit	101	kg 0.083 0.155 Weight per PU	
Type E)" accord	<ul> <li>Eff-Protected Combination Motor Coning to UL 508</li> <li>Note: UL 508 demands for "Combination Multiple E" 1-inch clearance and 2-inch creepart line side. The following terminal blocks m 3RV10 motor starter protectors of sizes S0. The 3RV10 motor starter protector in size S with the required clearance and creepage e without a terminal block. Terminal blocks cannot combination with 3RV19.5 three-phase bus size S3, they cannot be used with a transverse switch.</li> <li>For construction with three-phase busbars, accessories".</li> <li>Terminal blocks type E</li> <li>For extended clearance and creepage distances (1 and 2 inch)</li> </ul>	starter protectors Size trollers botor Controller age distance ust be used in and S3. 2 conforms distances e not required be used in bars and with bree auxiliary see "Busbar S0 S3 For motor starter protectors	A	3RV19 28-1H 3RT19 46-4GA07	per PU	(UNIT, SET, M) 1 1 1	1 unit 1 unit	101 101	ápprox. kg 0.083	
Type E)" accord	<ul> <li>Eff-Protected Combination Motor Coning to UL 508</li> <li>Note: UL 508 demands for "Combination Multiple E" 1-inch clearance and 2-inch creepart line side. The following terminal blocks m 3RV10 motor starter protectors of sizes S0. The 3RV10 motor starter protector in size S with the required clearance and creepage e without a terminal block. Terminal blocks cannot combination with 3RV19.5 three-phase bus size S3, they cannot be used with a transverse switch.</li> <li>For construction with three-phase busbars, accessories".</li> <li>Terminal blocks type E</li> <li>For extended clearance and creepage distances (1 and 2 inch)</li> </ul>	starter protectors Size trollers botor Controller age distance ust be used in and S3. 2 conforms distances e not required be used in bars and with bree auxiliary see "Busbar S0 S3 For motor starter protectors	A	3RV19 28-1H 3RT19 46-4GA07	per PU	(UNIT, SET, M) 1 1 1	1 unit 1 unit	101 101	approx. kg 0.083 0.155 Weight per PU approx.	

# SIRIUS 3RV Motor Starter Protectors up to 100 A Accessories

## Mounting accessories

	Version	Method of operation	Size Contactor	Circuit breakers	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
						Order No.	Price per PU				
ink modules, si	ngle-unit packaging										kg
	For mechanical and electrical connection	AC/DC	S00 S00	S00 S0	•	3RA19 11-1AA00 3RA19 21-1DA00		1 1	1 unit 1 unit	101 101	0.027 0.028
	between contactor and motor starter pro- tector with screw ter-	AC	S0 S2 S3	S0 S2 S3		3RA19 21-1AA00 3RA19 31-1AA00 3RA19 41-1AA00		1 1 1	1 unit 1 unit 1 unit	101 101 101	0.037 0.042 0.090
RA19 11-1AA00	minals	DC	S0 S2 S3	S0 S2 S3		3RA19 21-1BA00 3RA19 31-1BA00 3RA19 41-1BA00		1 1 1	1 unit 1 unit 1 unit	101 101 101	0.039 0.043 0.089
ink modules, m.	ulti-unit packaging										
	For mechanical and electrical connection	AC/DC	S00 S00	S00 S0		3RA19 11-1A 3RA19 21-1D		1 1	10 units 10 units	101 101	0.019 0.021
T T T	between contactor and motor starter pro- tector with screw ter- minals	AC	S0 S2 S3	S0 S2 S3		3RA19 21-1A 3RA19 31-1A 3RA19 41-1A		1 1 1	10 units 5 units 5 units	101 101 101	0.028 0.033 0.072
3RA19 31-1A	minais	DC	S0 S2 S3	S0 S2 S3	* * *	3RA19 21-1B 3RA19 31-1B 3RA19 41-1B		1 1 1	10 units 5 units 5 units	101 101 101	0.030 0.034 0.073
	Version	Method of operation	Size Contactor	Circuit breakers	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
											kg
Hybrid link modu	ules, single-unit pac		000	000						101	0.000
	Electrical and mechanical connec- tion between motor starter protector with screw terminals and contactor with Cage Clamp terminals	AC/DC	S00 S00	S00 S0	A A	3RA19 11-2FA00 3RA19 21-2FA00		1	1 unit 1 unit	101 101	0.038 0.028
3RA19 11-2FA00		<b>.</b>									
Hybrid link modu	ules, multi-unit pack	AC/DC	S00	S00	•	3RA19 11-2F		1	10 units	101	0.031
	mechanical connec- tion between motor starter protector with screw terminals and contactor with Cage Clamp terminals	AU/DU	S00 S00	S00 S0	A A	3RA19 11-2F 3RA19 21-2F		1	10 units	101	0.031
3RA19 11-2F											

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						Мс	ounting	acces	sories
	Version	Size	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
				Order No.	Price per PU				kg
Adapters and lin	k modules for Cage Clamp term	inals							ng
	Link modules, Cage Clamp Electrical connection between motor starter protector and contac- tor (busbar adapter not included in scope of supply)	S00	•	3RA19 11-2A		1	10 units	101	0.016
ar-	Link modules, Cage Clamp with mechanical connections Mechanical and electrical connec- tion between motor starter protector and contactor	S00	•	3RA19 11-2E		1	10 units	101	0.028
3RA19 11-2A +	<b>Standard mounting rail adapters</b> With 2 standard mounting rails 45 mm wide, one movable	S00		3RA19 22-1L		1	5 units	101	0.413
8US10 51-5CM47	Busbar adapters 45 mm wide, 182 mm long,	40 mm busbar sys- tem		8US10 51-5CM47		1	1 unit	143	0.193
	adapted for Cage Clamp motor starter protectors. An additional standard mounting rail must be mounted for an additional contactor.	60 mm busbar sys- tem		8US12 51-5CM47		1	1 unit	143	0.190
3RA19 11-2E	<b>35 mm standard mounting rails</b> Plastic, including fixing screws	-	A	8US19 98-7CA15		1	10 units	143	0.009
	Version	Size	DT	Cage Clamp	~	PU	PS*	PG	Weight
	VEISION	Size		terminals		(UNIT, SET, M)	13	ru	per PU approx.
				Order No.	Price per PU				
Toolo for onoring									kg
	g Cage Clamp terminals Screwdrivers For all SIRIUS devices with	Green, partially insulated	С	8WA2 880		1	1 unit	041	0.034
8WA2 803	Cage Clamp terminals up to max. 2.5 mm <sup>2</sup> conductor cross-section, length approx. 175 mm	Green	С	8WA2 803		1	1 unit	041	0.024

# SIRIUS 3RV Motor Starter Protectors up to 100 A Accessories

## **Enclosures and front plates**

## Overview

#### Enclosures

For stand-alone installation of motor starter protectors of sizes S00 ( $I_{n max} = 12 \text{ A}$ ), S0 ( $I_{n max} = 25 \text{ A}$ ) and S2 ( $I_{n max} = 50 \text{ A}$ ), molded-plastic and cast-aluminum enclosures for surface mounting and molded-plastic enclosures for flush mounting are available in various dimensions.

When installed in a molded-plastic enclosure the motor starter protectors have a rated operational voltage  $U_{\rm e}$  of 500 V.

The enclosures for surface mounting have the degree of protection IP55; the enclosures for flush mounting also comply with the degree of protection IP55 at the front (the flush-mounted section complies with IP20).



Enclosures for surface mounting



Enclosures for flush mounting

All enclosures are equipped with N and PE terminals. There are two knock-out cable entries for cable glands at the top and two at the bottom; also on the rear corresponding cable entries are scored. There is a knockout on the top of the enclosure for indicator lights that are available as accessories.

The narrow enclosure can accommodate a motor starter protector without accessories, with transverse and lateral auxiliary switch, whereas wide enclosures and enclosures for S2 motor starter protectors also provide space for a laterally mounted auxiliary release. There is no provision for installing a motor starter protector with a signaling switch.

With S00 motor starter protectors, the switch rocker is operated by means of the actuator diaphragm of the enclosure. A locking device, capable of holding up to three padlocks, can be fitted onto the actuator diaphragm to prevent the motor starter protector from closing during maintenance work, for example. A mushroom-shaped EMERGENCY-STOP knob can be fitted in place of the locking device. If it is actuated abruptly, the motor starter protector opens and the mushroom-shaped knob latches. The knob can be unlatched again either by turning it or by using a special key. The motor starter protector can subsequently be switched on again.

The molded-plastic enclosures of the size S0 and S2 motor starter protectors are fitted with a rotary operating mechanism.

The enclosures can be supplied with either a black rotary operating mechanism or with an EMERGENCY-STOP rotary operating mechanism with a red/yellow knob.

All rotary operating mechanisms can be locked in the open position with up to 3 padlocks.

#### Front plates

Motor starter protectors are frequently required to be actuated in any enclosure. Front plates equipped with an actuator diaphragm for size S00 motor starter protectors, or rotary operating mechanism for S0 to S3 motor starter protectors are available for this purpose.

The front plates for size S00 have a holder into which the motor starter protectors can be snapped. A holder for size S0 motor starter protectors is available for front plate sizes S0 to S3.



Front plate for size S00

Accessories for enclosures and front plates



Accessories for size S00

**Enclosures and front plates** 

	Version	Degree of pro- tection	grated	Overall width	For 3RV10 to 3RV16 motor starter protec- tors, size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weigh per PL approx
												kg
Molded-plastic					000						101	0.000
LER.	With actuator diaphragm	IP55	N and PE	54 mm (for switch + lateral auxiliary switch)			3RV19 13-1CA00		1	1 unit	101	0.296
3RV19 13-1DA00				72 mm (for switch + lateral auxiliary switch + auxiliary release)	S00	•	3RV19 13-1DA00		1	1 unit	101	0.342
	With rotary operating mechanism, lockable in 0	IP55	N and PE	54 mm (for switch + lateral auxiliary switch)	SO		3RV19 23-1CA00		1	1 unit	101	0.332
	position			72 mm (for switch + lateral auxiliary switch + auxiliary release)	SO		3RV19 23-1DA00		1	1 unit	101	0.38
				82 mm (for switch + lateral auxiliary switch + auxiliary release)	S2	A	3RV19 33-1DA00		1	1 unit	101	1.134
	With EMER- GENCY- STOP rotary operating	IP55	N and PE	54 mm (for switch + lateral auxiliary switch)	SO		3RV19 23-1FA00		1	1 unit	101	0.32
RV19 23-1FA00	mechanism, lockable in 0 position			72 mm (for switch + lateral auxiliary switch + auxiliary release)	SO		3RV19 23-1GA00		1	1 unit	101	0.37
				82 mm (for switch + lateral auxiliary switch + auxiliary release)	S2	A	3RV19 33-1GA00		1	1 unit	101	1.13
Cast aluminum	enclosures	for surf		unting								
	With rotary operating mechanism, lockable in 0 position	IP65	PE <sup>1)</sup>	72 mm (for switch + lateral auxiliary switch + auxiliary release)	SO		3RV19 23-1DA01		1	1 unit	101	1.01
RV19 23-1DA01	With EMER- GENCY- STOP rotary operating mechanism, lockable in 0 position		PE <sup>1)</sup>	72 mm (for switch + lateral auxiliary switch + auxiliary release)	SO	A	3RV19 23-1GA01		1	1 unit	101	1.00
Molded-plastic				-								
	With actuator diaphragm	IP55 (front side)	N and PE	72 mm (for switch + lateral auxiliary switch + auxiliary release)	S00	A	3RV19 13-2DA00		1	1 unit	101	0.416
BRV19 13-2DA00	With rotary operating mechanism, lockable in 0 position	IP55 (front side)	N and PE	72 mm (for switch + lateral auxiliary switch + auxiliary release)	SO	A	3RV19 23-2DA00		1	1 unit	101	0.426
BRV19 23-2DA00	With EMER- GENCY- STOP rotary operating mechanism, lockable in 0	IP55 (front side)	N and PE	72 mm (for switch + lateral auxiliary switch + auxiliary release)	SO	A	3RV19 23-2GA00		1	1 unit	101	0.41

 If required, an additional N terminal can be mounted (e. g. 8WA1 011-1BG11).

\* You can order this quantity or a multiple thereof.

# SIRIUS 3RV Motor Starter Protectors up to 100 A Accessories

## **Enclosures and front plates**

	Version	Degree of pro- tection	For 3RV10 to 3RV16 motor starter protectors, size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
										kg
Front plates	Molded-plastic front plates with actuator diaphragm For actuating 3RV1 motor starter protectors in any enclosures, includes holder for motor starter	IP55 (front side)	S00	A	3RV19 13-4C		1	1 unit	101	0.216
3RV19 13-4C	protector. Molded-plastic front plates with rotary operating mechanism, lockable in 0 position For actuation of 3RV1 motor start protectors in any enclosure.	(front side)	S0, S2, S3	•	3RV19 23-4B		1	1 unit	101	0.124
	Molded-plastic front plates with EMERGENCY-STOP rotary ope ating mechanism, red/yellow, lockable in 0 position	r- (front side)	S0, S2, S3	A	3RV19 23-4E		1	1 unit	101	0.124
3RV19 23-4B + 3RV19 23-4G	EMERGENCY-STOP actuation of 3RV1 motor starter protectors in any enclosure.									
	Holders for front plates Holder is mounted on front plate motor starter protector with and without accessories is snapped in		SO	•	3RV19 23-4G		1	1 unit	101	0.188
Accessories for e	EMERGENCY-STOP mushroon buttons, red/yellow For 3RV19 13 enclosures and front panels Latching mushroom buttons, unlatch by turning	n IP55	S00	•	3RV19 13-7D		1	1 unit	101	0.108
Molded-plastic enclosure for surface mounting with 3RV19 13-7D	Cannot be used in combination with locking device EMERGENCY-STOP mushroon buttons, red/yellow with lock For 3RV19 13 enclosures and front panels RONIS lock, lock No. SB 30, supplied with 2 keys	n IP55	S00	A	3RV19 13-7E		1	1 unit	101	0.144
	Latching mushroom button, unlatch with key Cannot be used in combination with locking device <b>Locking devices</b> For 3RV19 13 enclosures and front plates	IP55	S00	•	3RV19 13-6B		1	1 unit	101	0.074
	For 3 padlocks with max. 8 mm shackle diameter. Cannot be used in combination with EMERGENCY-STOP mush- room button									
	Spare actuator diaphragms Holders and screws are included scope of supply	IP55 in	S00	A	3RV19 13-7F		1	1 unit	101	0.023
		ed control pply voltage	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Indianter linkte	V									kg
Indicator lights	For all enclosures and front 220 plates 380	) 120 ) 240 ) 415 ) 500	S00, S0, S2	СССС	3RV19 03-5B 3RV19 03-5C 3RV19 03-5E 3RV19 03-5G		1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.027 0.026 0.026 0.027

3RV19 03-5B