

# 3RV Motor Starter Protectors up to 100 A

## General data

### Overview



S0 motor starter protectors

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 three-phase 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 – overall width 45 mm, max. rated current 12 A, at 400 V AC suitable for 3-phase induction motors up to 5.5 kW.
- Size S0 – overall width 45 mm, max. rated current 25 A, at 400 V AC suitable for 3-phase induction motors up to 11 kW.
- Size S2 – overall width 55 mm, max. rated current 50 A, at 400 V AC suitable for 3-phase induction motors up to 22 kW.
- Size S3 – overall width 70 mm, max. rated current 100 A, at 400 V AC suitable for 3-phase induction motors up to 45 kW.

### 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 conditions (such as dust, caustic vapors, hazardous gases) prevail. When installed in dusty and damp areas, suitable enclosures must be provided.

3RV 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.

3RV1 motor starter protectors are suitable for use 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

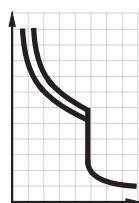
The 3RV1 motor starter protectors can be used:

- For short-circuit protection
- For motor protection (also with overload relay function)
- For plant protection
- For short-circuit protection for starter combinations
- For transformer protection
- As main control and EMERGENCY-STOP switches
- For fuse monitoring
- For use in IT systems (IT networks)
- For switching of DC currents
- As voltage transformer circuit-breakers

More information is available under "Configuration".

### Selection and ordering data

#### Class 10, without/with auxiliary switches



Rated current	Suitable for three-phase induction motors <sup>1)</sup> with P	Setting range for thermal overload release	Instantaneous overcurrent release	Short-circuit breaking capacity at 400 V AC	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. <sup>2)</sup>
$I_n$				$I_{cu}$		Order No.	Price per PU			kg
A	kW	A	A	kA						

#### Size S00



0.16	0.04	0.11 ... 0.16	2.1	100	3RV10 11-0AA1 □	1	1 unit	101	0.245
0.2	0.06	0.14 ... 0.2	2.6	100	3RV10 11-0BA1 □	1	1 unit	101	0.246
0.25	0.06	0.18 ... 0.25	3.3	100	3RV10 11-0CA1 □	1	1 unit	101	0.246
0.32	0.09	0.22 ... 0.32	4.2	100	3RV10 11-0DA1 □	1	1 unit	101	0.247
0.4	0.09	0.28 ... 0.4	5.2	100	3RV10 11-0EA1 □	1	1 unit	101	0.250
0.5	0.12	0.35 ... 0.5	6.5	100	3RV10 11-0FA1 □	1	1 unit	101	0.247
0.63	0.18	0.45 ... 0.63	8.2	100	3RV10 11-0GA1 □	1	1 unit	101	0.249
0.8	0.18	0.55 ... 0.8	10	100	3RV10 11-0HA1 □	1	1 unit	101	0.250
1	0.25	0.7 ... 1	13	100	3RV10 11-0JA1 □	1	1 unit	101	0.249
1.25	0.37	0.9 ... 1.25	16	100	3RV10 11-0KA1 □	1	1 unit	101	0.297
1.6	0.55	1.1 ... 1.6	21	100	3RV10 11-1AA1 □	1	1 unit	101	0.298
2	0.75	1.4 ... 2	26	100	3RV10 11-1BA1 □	1	1 unit	101	0.297
2.5	0.75	1.8 ... 2.5	33	100	3RV10 11-1CA1 □	1	1 unit	101	0.298
3.2	1.1	2.2 ... 3.2	42	100	3RV10 11-1DA1 □	1	1 unit	101	0.299
4	1.5	2.8 ... 4	52	100	3RV10 11-1EA1 □	1	1 unit	101	0.296
5	1.5	3.5 ... 5	65	100	3RV10 11-1FA1 □	1	1 unit	101	0.301
6.3	2.2	4.5 ... 6.3	82	100	3RV10 11-1GA1 □	1	1 unit	101	0.303
8	3	5.5 ... 8	104	50	3RV10 11-1HA1 □	1	1 unit	101	0.304
10	4	7 ... 10	130	50	3RV10 11-1JA1 □	1	1 unit	101	0.300
12	5.5	9 ... 12	156	50	3RV10 11-1KA1 □	1	1 unit	101	0.297

#### Size S0



0.16	0.04	0.11 ... 0.16	2.1	100	3RV10 21-0AA1 □	1	1 unit	101	0.300
0.2	0.06	0.14 ... 0.2	2.6	100	3RV10 21-0BA1 □	1	1 unit	101	0.304
0.25	0.06	0.18 ... 0.25	3.3	100	3RV10 21-0CA1 □	1	1 unit	101	0.302
0.32	0.09	0.22 ... 0.32	4.2	100	3RV10 21-0DA1 □	1	1 unit	101	0.303
0.4	0.09	0.28 ... 0.4	5.2	100	3RV10 21-0EA1 □	1	1 unit	101	0.303
0.5	0.12	0.35 ... 0.5	6.5	100	3RV10 21-0FA1 □	1	1 unit	101	0.304
0.63	0.18	0.45 ... 0.63	8.2	100	3RV10 21-0GA1 □	1	1 unit	101	0.305
0.8	0.18	0.55 ... 0.8	10	100	3RV10 21-0HA1 □	1	1 unit	101	0.370
1	0.25	0.7 ... 1	13	100	3RV10 21-0JA1 □	1	1 unit	101	0.368
1.25	0.37	0.9 ... 1.25	16	100	3RV10 21-0KA1 □	1	1 unit	101	0.369
1.6	0.55	1.1 ... 1.6	21	100	3RV10 21-1AA1 □	1	1 unit	101	0.371
2	0.75	1.4 ... 2	26	100	3RV10 21-1BA1 □	1	1 unit	101	0.371
2.5	0.75	1.8 ... 2.5	33	100	3RV10 21-1CA1 □	1	1 unit	101	0.372
3.2	1.1	2.2 ... 3.2	42	100	3RV10 21-1DA1 □	1	1 unit	101	0.375
4	1.5	2.8 ... 4	52	100	3RV10 21-1EA1 □	1	1 unit	101	0.370
5	1.5	3.5 ... 5	65	100	3RV10 21-1FA1 □	1	1 unit	101	0.376
6.3	2.2	4.5 ... 6.3	82	100	3RV10 21-1GA1 □	1	1 unit	101	0.374
8	3	5.5 ... 8	104	100	3RV10 21-1HA1 □	1	1 unit	101	0.374
10	4	7 ... 10	130	100	3RV10 21-1JA1 □	1	1 unit	101	0.375
12.5	5.5	9 ... 12.5	163	100	3RV10 21-1KA1 □	1	1 unit	101	0.374
16	7.5	11 ... 16	208	50	3RV10 21-4AA1 □	1	1 unit	101	0.382
20	7.5	14 ... 20	260	50	3RV10 21-4BA1 □	1	1 unit	101	0.376
22	11	17 ... 22	286	50	3RV10 21-4CA1 □	1	1 unit	101	0.378
25	11	20 ... 25	325	50	3RV10 21-4DA1 □	1	1 unit	101	0.382

Order No. supplement for transverse auxiliary switches

None  
1 NO + 1 NC

Additional price<sup>3)</sup>

0 None  
5 X

1) Standard 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.

2) Weights are specified for variants with auxiliary switch.

3) Totals are rounded up and down. This may lead to slight differences in the overall price.

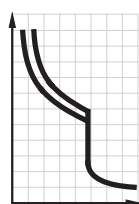
Auxiliary switches can also be ordered separately (see "Mountable Accessories").

Multi-unit/reusable packaging, see "Appendix" --> "Ordering Notes".

# 3RV Motor Starter Protectors up to 100 A

## For motor protection

### Class 10, without/with auxiliary switches



Rated current	Suitable for three-phase induction motors <sup>1)</sup> with P	Setting range for thermal overload release	Instantaneous overcurrent release	Short-circuit breaking capacity at 400 V AC	DT	Cage Clamp connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. <sup>2)</sup>
$I_n$				$I_{cu}$		Order No.	Price per PU			
A	kW	A	A	kA						kg

#### Size S00



0.16	0.04	0.11 ... 0.16	2.1	100	3RV10 11-0AA2 □	1	1 unit	101	0.245
0.2	0.06	0.14 ... 0.2	2.6	100	3RV10 11-0BA2 □	1	1 unit	101	0.245
0.25	0.06	0.18 ... 0.25	3.3	100	3RV10 11-0CA2 □	1	1 unit	101	0.246
0.32	0.09	0.22 ... 0.32	4.2	100	3RV10 11-0DA2 □	1	1 unit	101	0.246
0.4	0.09	0.28 ... 0.4	5.2	100	3RV10 11-0EA2 □	1	1 unit	101	0.250
0.5	0.12	0.35 ... 0.5	6.5	100	3RV10 11-0FA2 □	1	1 unit	101	0.247
0.63	0.18	0.45 ... 0.63	8.2	100	3RV10 11-0GA2 □	1	1 unit	101	0.252
0.8	0.18	0.55 ... 0.8	10	100	3RV10 11-0HA2 □	1	1 unit	101	0.250
1	0.25	0.7 ... 1	13	100	3RV10 11-0JA2 □	1	1 unit	101	0.249
1.25	0.37	0.9 ... 1.25	16	100	3RV10 11-0KA2 □	1	1 unit	101	0.297
1.6	0.55	1.1 ... 1.6	21	100	3RV10 11-1AA2 □	1	1 unit	101	0.298
2	0.75	1.4 ... 2	26	100	3RV10 11-1BA2 □	1	1 unit	101	0.297
2.5	0.75	1.8 ... 2.5	33	100	3RV10 11-1CA2 □	1	1 unit	101	0.298
3.2	1.1	2.2 ... 3.2	42	100	3RV10 11-1DA2 □	1	1 unit	101	0.300
4	1.5	2.8 ... 4	52	100	3RV10 11-1EA2 □	1	1 unit	101	0.298
5	1.5	3.5 ... 5	65	100	3RV10 11-1FA2 □	1	1 unit	101	0.303
6.3	2.2	4.5 ... 6.3	82	100	3RV10 11-1GA2 □	1	1 unit	101	0.303
8	3	5.5 ... 8	104	50	3RV10 11-1HA2 □	1	1 unit	101	0.304
10	4	7 ... 10	130	50	3RV10 11-1JA2 □	1	1 unit	101	0.300
12	5.5	9 ... 12	156	50	3RV10 11-1KA2 □	1	1 unit	101	0.298

#### Order No. supplement for transverse auxiliary switches

None  
1 NO + 1 NC

▶  
B

Additional price<sup>3)</sup>

0 None  
5 X

- 1) Standard 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.
- 2) Weights are specified for variants with auxiliary switch.
- 3) Totals are rounded up and down. This may lead to slight differences in the overall price.

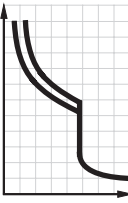


Auxiliary switches can also be ordered separately (see "Mountable Accessories").

Multi-unit/reusable packaging, see "Appendix" --> "Ordering Notes".

# 3RV Motor Starter Protectors up to 100 A

For motor protection

## Class 10, without auxiliary switches

	Rated current	Suitable for three-phase induction motors <sup>1)</sup> with P	Setting range for thermal overload release	Instantaneous overcurrent release	Short-circuit breaking capacity at 400 V AC	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	$I_n$				$I_{cu}$		Order No.	Price per PU			kg
	A	kW	A	A	kA						

### Size S2



16	7.5	11 ... 16	208	50	▶	3RV10 31-4AA10	1	1 unit	101	1.046
20	7.5	14 ... 20	260	50	▶	3RV10 31-4BA10	1	1 unit	101	1.043
25	11	18 ... 25	325	50	▶	3RV10 31-4DA10	1	1 unit	101	1.031
32	15	22 ... 32	416	50	▶	3RV10 31-4EA10	1	1 unit	101	1.028
40	18.5	28 ... 40	520	50	▶	3RV10 31-4FA10	1	1 unit	101	1.047
45	22	36 ... 45	585	50	▶	3RV10 31-4GA10	1	1 unit	101	1.039
50	22	40 ... 50	650	50	▶	3RV10 31-4HA10	1	1 unit	101	1.027

### Size S3



40	18.5	28 ... 40	520	50	▶	3RV10 41-4FA10	1	1 unit	101	2.219
50	22	36 ... 50	650	50	▶	3RV10 41-4HA10	1	1 unit	101	2.240
63	30	45 ... 63	819	50	▶	3RV10 41-4JA10	1	1 unit	101	2.247
75	37	57 ... 75	975	50	▶	3RV10 41-4KA10	1	1 unit	101	2.253
90	45	70 ... 90	1170	50	▶	3RV10 41-4LA10	1	1 unit	101	2.280
100	45	80 ... 100	1235	50	▶	3RV10 41-4MA10	1	1 unit	101	2.295

### Size S3, with increased switching capacity



16	7.5	11 ... 16	208	100	▶	3RV10 42-4AA10	1	1 unit	101	2.174
20	7.5	14 ... 20	260	100	▶	3RV10 42-4BA10	1	1 unit	101	2.185
25	11	18 ... 25	325	100	▶	3RV10 42-4DA10	1	1 unit	101	2.211
32	15	22 ... 32	416	100	▶	3RV10 42-4EA10	1	1 unit	101	2.222
40	18.5	28 ... 40	520	100	▶	3RV10 42-4FA10	1	1 unit	101	2.203
50	22	36 ... 50	650	100	▶	3RV10 42-4HA10	1	1 unit	101	2.230
63	30	45 ... 63	819	100	▶	3RV10 42-4JA10	1	1 unit	101	2.255
75	37	57 ... 75	975	100	▶	3RV10 42-4KA10	1	1 unit	101	2.266
90	45	70 ... 90	1170	100	▶	3RV10 42-4LA10	1	1 unit	101	2.268
100	45	80 ... 100	1235	100	▶	3RV10 42-4MA10	1	1 unit	101	2.275

## Class 20, without auxiliary switches

### Size S2



16	7.5	11 ... 16	208	50	A	3RV10 31-4AB10	1	1 unit	101	1.067
20	7.5	14 ... 20	260	50	A	3RV10 31-4BB10	1	1 unit	101	1.071
25	11	18 ... 25	325	50	A	3RV10 31-4DB10	1	1 unit	101	1.054
32	15	22 ... 32	416	50	A	3RV10 31-4EB10	1	1 unit	101	1.067
40	18.5	28 ... 40	520	50	A	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	A	3RV10 31-4HB10	1	1 unit	101	1.071

### Size S3, with increased switching capacity



40	18.5	28 ... 40	520	100	A	3RV10 42-4FB10	1	1 unit	101	2.222
50	22	36 ... 50	650	100	A	3RV10 42-4HB10	1	1 unit	101	2.265
63	30	45 ... 63	819	100	A	3RV10 42-4JB10	1	1 unit	101	2.278
75	37	57 ... 75	975	100	A	3RV10 42-4KB10	1	1 unit	101	2.268
90	45	70 ... 90	1.170	100	A	3RV10 42-4LB10	1	1 unit	101	2.313
100	45	80 ... 100	1.235	100	A	3RV10 42-4MB10	1	1 unit	101	2.322

1) Standard 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.

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

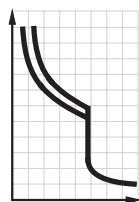
Multi-unit/reusable packaging, see "Appendix" --> "Ordering Notes".

# 3RV Motor Starter Protectors up to 100 A

For motor protection with overload relay function

## Selection and ordering data

**CLASS 10, with overload relay functions (automatic reset), without auxiliary switches**



Rated current $I_n$	Suitable for three-phase induction motors <sup>1)</sup> with P	Setting range for thermal overload release	Instantaneous over-current release	Short-circuit breaking capacity at 400 V AC	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
A	kW	A	A	kA		Order No. Price per PU				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	A	3RV11 21-0BA10	1	1 unit	101	0.358
0.25	0.06	0.18 ... 0.25	3.3	100	A	3RV11 21-0CA10	1	1 unit	101	0.352
0.32	0.09	0.22 ... 0.32	4.2	100	A	3RV11 21-0DA10	1	1 unit	101	0.352
0.4	0.09	0.28 ... 0.4	5.2	100	A	3RV11 21-0EA10	1	1 unit	101	0.355
0.5	0.12	0.35 ... 0.5	6.5	100	A	3RV11 21-0FA10	1	1 unit	101	0.356
0.63	0.18	0.45 ... 0.63	8.2	100	A	3RV11 21-0GA10	1	1 unit	101	0.358
0.8	0.18	0.55 ... 0.8	10	100	A	3RV11 21-0HA10	1	1 unit	101	0.421
1	0.25	0.7 ... 1	13	100	A	3RV11 21-0JA10	1	1 unit	101	0.416
1.25	0.37	0.9 ... 1.25	16	100	A	3RV11 21-0KA10	1	1 unit	101	0.426
1.6	0.55	1.1 ... 1.6	21	100	A	3RV11 21-1AA10	1	1 unit	101	0.422
2	0.75	1.4 ... 2	26	100	A	3RV11 21-1BA10	1	1 unit	101	0.427
2.5	0.75	1.8 ... 2.5	33	100	A	3RV11 21-1CA10	1	1 unit	101	0.422
3.2	1.1	2.2 ... 3.2	42	100	A	3RV11 21-1DA10	1	1 unit	101	0.428
4	1.5	2.8 ... 4	52	100	A	3RV11 21-1EA10	1	1 unit	101	0.420
5	1.5	3.5 ... 5	65	100	A	3RV11 21-1FA10	1	1 unit	101	0.429
6.3	2.2	4.5 ... 6.3	82	100	A	3RV11 21-1GA10	1	1 unit	101	0.426
8	3	5.5 ... 8	104	100	A	3RV11 21-1HA10	1	1 unit	101	0.425
10	4	7 ... 10	130	100	A	3RV11 21-1JA10	1	1 unit	101	0.428
12.5	5.5	9 ... 12.5	163	100	A	3RV11 21-1KA10	1	1 unit	101	0.426
16	7.5	11 ... 16	208	50	A	3RV11 21-4AA10	1	1 unit	101	0.436
20	7.5	14 ... 20	260	50	A	3RV11 21-4BA10	1	1 unit	101	0.430
22	11	17 ... 22	286	50	A	3RV11 21-4CA10	1	1 unit	101	0.427
25	11	20 ... 25	325	50	A	3RV11 21-4DA10	1	1 unit	101	0.432

### Size S2<sup>2)</sup>



16	7.5	11 ... 16	208	50	A	3RV11 31-4AA10	1	1 unit	101	1.123
20	7.5	14 ... 20	260	50	A	3RV11 31-4BA10	1	1 unit	101	1.109
25	11	18 ... 25	325	50	A	3RV11 31-4DA10	1	1 unit	101	1.114
32	15	22 ... 32	416	50	A	3RV11 31-4EA10	1	1 unit	101	1.111
40	18.5	28 ... 40	520	50	A	3RV11 31-4FA10	1	1 unit	101	1.123
45	22	36 ... 45	585	50	A	3RV11 31-4GA10	1	1 unit	101	1.101
50	22	40 ... 50	650	50	A	3RV11 31-4HA10	1	1 unit	101	1.106

### Size S3, with increased switching capacity<sup>2)</sup>



16	7.5	11 ... 16	208	100	A	3RV11 42-4AA10	1	1 unit	101	2.247
20	7.5	14 ... 20	260	100	A	3RV11 42-4BA10	1	1 unit	101	2.255
25	11	18 ... 25	325	100	A	3RV11 42-4DA10	1	1 unit	101	2.284
32	15	22 ... 32	416	100	A	3RV11 42-4EA10	1	1 unit	101	2.295
40	18.5	28 ... 40	520	100	A	3RV11 42-4FA10	1	1 unit	101	2.288
50	22	36 ... 50	650	100	A	3RV11 42-4HA10	1	1 unit	101	2.320
63	30	45 ... 63	819	100	A	3RV11 42-4JA10	1	1 unit	101	2.333
75	37	57 ... 75	975	100	A	3RV11 42-4KA10	1	1 unit	101	2.368
90	45	70 ... 90	1170	100	A	3RV11 42-4LA10	1	1 unit	101	2.353
100	45	80 ... 100	1235	100	A	3RV11 42-4MA10	1	1 unit	101	2.346

1) Standard 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.

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

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

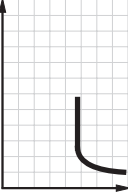




Multi-unit/reusable packaging, see "Appendix" --> "Ordering Notes".

# 3RV Motor Starter Protectors up to 100 A

For starter combinations

## Selection and ordering data

### Without auxiliary switches

	Rated current	Suitable for three-phase induction motors <sup>1)</sup> with P	Setting range for thermal overload release <sup>2)</sup>	Instantaneous over-current release	Short-circuit breaking capacity at 400 V AC	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	A	kW	A	A	kA		Order No.	Price per PU			kg
<b>Size S0</b>											
	0.16	0.04	None	2.1	100	A	3RV13 21-0AC10	1	1 unit	101	0.282
	0.2	0.06	None	2.6	100	A	3RV13 21-0BC10	1	1 unit	101	0.284
	0.25	0.06	None	3.3	100	A	3RV13 21-0CC10	1	1 unit	101	0.285
	0.32	0.09	None	4.2	100	A	3RV13 21-0DC10	1	1 unit	101	0.282
	0.4	0.09	None	5.2	100	A	3RV13 21-0EC10	1	1 unit	101	0.286
	0.5	0.12	None	6.5	100	A	3RV13 21-0FC10	1	1 unit	101	0.283
	0.63	0.18	None	8.2	100	A	3RV13 21-0GC10	1	1 unit	101	0.348
	0.8	0.18	None	10	100	A	3RV13 21-0HC10	1	1 unit	101	0.283
	1	0.25	None	13	100	A	3RV13 21-0JC10	1	1 unit	101	0.345
	1.25	0.37	None	16	100	A	3RV13 21-0KC10	1	1 unit	101	0.351
	1.6	0.55	None	21	100	A	3RV13 21-1AC10	1	1 unit	101	0.352
	2	0.75	None	26	100	A	3RV13 21-1BC10	1	1 unit	101	0.352
	2.5	0.75	None	33	100	A	3RV13 21-1CC10	1	1 unit	101	0.352
	3.2	1.1	None	42	100	A	3RV13 21-1DC10	1	1 unit	101	0.353
	4	1.5	None	52	100	A	3RV13 21-1EC10	1	1 unit	101	0.349
	5	1.5	None	65	100	A	3RV13 21-1FC10	1	1 unit	101	0.354
	6.3	2.2	None	82	100	A	3RV13 21-1GC10	1	1 unit	101	0.355
	8	3	None	104	100	A	3RV13 21-1HC10	1	1 unit	101	0.354
	10	4	None	130	100	A	3RV13 21-1JC10	1	1 unit	101	0.357
	12.5	5.5	None	163	100	A	3RV13 21-1KC10	1	1 unit	101	0.354
	16	7.5	None	208	50	A	3RV13 21-4AC10	1	1 unit	101	0.362
	20	7.5	None	260	50	A	3RV13 21-4BC10	1	1 unit	101	0.357
	22	11	None	286	50	A	3RV13 21-4CC10	1	1 unit	101	0.358
	25	11	None	325	50	A	3RV13 21-4DC10	1	1 unit	101	0.359
	16	7.5	None	208	50	A	3RV13 31-4AC10	1	1 unit	101	1.038
	20	7.5	None	260	50	A	3RV13 31-4BC10	1	1 unit	101	1.037
	25	11	None	325	50	A	3RV13 31-4DC10	1	1 unit	101	1.014
	32	15	None	416	50	A	3RV13 31-4EC10	1	1 unit	101	1.018
	40	18.5	None	520	50	A	3RV13 31-4FC10	1	1 unit	101	1.033
	45	22	None	585	50	A	3RV13 31-4GC10	1	1 unit	101	1.040
	50	22	None	650	50	A	3RV13 31-4HC10	1	1 unit	101	1.019
	40	18.5	None	520	50	A	3RV13 41-4FC10	1	1 unit	101	2.197
	50	22	None	650	50	A	3RV13 41-4HC10	1	1 unit	101	2.227
	63	30	None	819	50	A	3RV13 41-4JC10	1	1 unit	101	2.244
	75	37	None	975	50	A	3RV13 41-4KC10	1	1 unit	101	2.247
	90	45	None	1170	50	A	3RV13 41-4LC10	1	1 unit	101	2.269
	100	45	None	1235	50	A	3RV13 41-4MC10	1	1 unit	101	2.292
	16	7.5	None	208	100	A	3RV13 42-4AC10	1	1 unit	101	2.175
	20	7.5	None	260	100	A	3RV13 42-4BC10	1	1 unit	101	2.188
	25	11	None	325	100	A	3RV13 42-4DC10	1	1 unit	101	2.219
	32	15	None	416	100	A	3RV13 42-4EC10	1	1 unit	101	2.208
	40	18.5	None	520	100	A	3RV13 42-4FC10	1	1 unit	101	2.218
	50	22	None	650	100	A	3RV13 42-4HC10	1	1 unit	101	2.218
	63	30	None	819	100	A	3RV13 42-4JC10	1	1 unit	101	2.248
	75	37	None	975	100	A	3RV13 42-4KC10	1	1 unit	101	2.278
	90	45	None	1170	100	A	3RV13 42-4LC10	1	1 unit	101	2.266
	100	45	None	1235	100	A	3RV13 42-4MC10	1	1 unit	101	2.293

- 1) Standard 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.
- 2) For overload protection of the motors, appropriate overload relays must be used.

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

Multi-unit/reusable packaging, see "Appendix" --> "Ordering Notes".

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

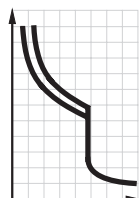
# 3RV Motor Starter Protectors up to 100 A

## 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 release	Instantaneous overcurrent release	Short-circuit breaking capacity at 400 V AC	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
$I_n$			$I_{cu}$		Order No.	Price per PU			
A	A	A	kA						kg

#### Size S0



0.16	0.11 ... 0.16	3.3	100	▶	3RV14 21-0AA10	1	1 unit	101	0.286
0.2	0.14 ... 0.2	4.2	100	▶	3RV14 21-0BA10	1	1 unit	101	0.287
0.25	0.18 ... 0.25	5.2	100	▶	3RV14 21-0CA10	1	1 unit	101	0.286
0.32	0.22 ... 0.32	6.5	100	▶	3RV14 21-0DA10	1	1 unit	101	0.288
0.4	0.28 ... 0.4	8.2	100	▶	3RV14 21-0EA10	1	1 unit	101	0.287
0.5	0.35 ... 0.5	10	100	▶	3RV14 21-0FA10	1	1 unit	101	0.286
0.63	0.45 ... 0.63	13	100	▶	3RV14 21-0GA10	1	1 unit	101	0.290
0.8	0.55 ... 0.8	16	100	▶	3RV14 21-0HA10	1	1 unit	101	0.290
1	0.7 ... 1	21	100	▶	3RV14 21-0JA10	1	1 unit	101	0.353
1.25	0.9 ... 1.25	26	100	▶	3RV14 21-0KA10	1	1 unit	101	0.354
1.6	1.1 ... 1.6	33	100	▶	3RV14 21-1AA10	1	1 unit	101	0.353
2	1.4 ... 2	42	100	▶	3RV14 21-1BA10	1	1 unit	101	0.358
2.5	1.8 ... 2.5	52	100	▶	3RV14 21-1CA10	1	1 unit	101	0.354
3.2	2.2 ... 3.2	65	100	▶	3RV14 21-1DA10	1	1 unit	101	0.358
4	2.8 ... 4	82	100	▶	3RV14 21-1EA10	1	1 unit	101	0.354
5	3.5 ... 5	104	100	▶	3RV14 21-1FA10	1	1 unit	101	0.357
6.3	4.5 ... 6.3	130	100	▶	3RV14 21-1GA10	1	1 unit	101	0.356
8	5.5 ... 8	163	100	▶	3RV14 21-1HA10	1	1 unit	101	0.358
10	7 ... 10	208	100	▶	3RV14 21-1JA10	1	1 unit	101	0.362
12.5	9 ... 12.5	260	100	▶	3RV14 21-1KA10	1	1 unit	101	0.360
16	11 ... 16	286	50	▶	3RV14 21-4AA10	1	1 unit	101	0.365
20	14 ... 20	325	50	▶	3RV14 21-4BA10	1	1 unit	101	0.365

#### Size S2



16	11 ... 16	325	50	▶	3RV14 31-4AA10	1	1 unit	101	1.029
20	14 ... 20	416	50	▶	3RV14 31-4BA10	1	1 unit	101	1.034
25	18 ... 25	520	50	▶	3RV14 31-4DA10	1	1 unit	101	1.038
32	22 ... 32	660	50	▶	3RV14 31-4EA10	1	1 unit	101	1.029
40	28 ... 40	836	50	▶	3RV14 31-4FA10	1	1 unit	101	1.039

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

Multi-unit/reusable packaging, see "Appendix" --> "Ordering Notes".

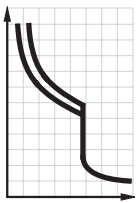


\* You can order this quantity or a multiple thereof.

# 3RV Motor Starter Protectors up to 100 A

For fuse monitoring

## Selection and ordering data

### Without auxiliary switches

	Rated current	Thermal overload release	Instantaneous overcurrent release	Short-circuit breaking capacity at 400 V AC	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	$I_n$			$I_{cu}$		Order No.	Price per PU			
	A	A	A	kA						kg

#### Size S00



0.2	0.2	1.2	100	▶	<b>3RV16 11-0BD10</b>	1	1 unit	101	0.289
-----	-----	-----	-----	---	-----------------------	---	--------	-----	-------

Multi-unit/reusable packaging, see "Appendix" --> "Ordering Notes".

The auxiliary switch required for signaling can be ordered separately.

Type	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
------	---------	----	-----------	--------------	-------------------	-----	----	--------------------------

### Mountable auxiliary switches



3RV19 01-1E

**Transverse auxiliary switches**  
with screw connection

1 NO + 1 NC



**3RV19 01-1E**

1

1 unit

101

0.018



3RV19 01-1A

**Lateral auxiliary switches**  
with screw connection

1 NO + 1 NC



**3RV19 01-1A**

1

1 unit

101

0.045

For further auxiliary switches, see "Mountable accessories".



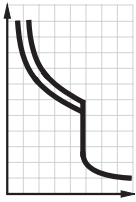



# 3RV Motor Starter Protectors up to 100 A

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

## Selection and ordering data

### Class 10, without auxiliary switches

Motor starter protectors for plant protection according to UL/CSA.



	Rated current	Setting range for thermal overload release (non-adjustable)	Instantaneous overcurrent release	Short-circuit breaking capacity at 400 V AC	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	$I_n$ A	 A	 A	$I_{cu}$ kA		Order No.	Price per PU			kg
<b>Size S3</b>										
	10	10	150	100	B	3RV17 42-5AD10	1	1 unit	101	2.200
	15	15	225	100	B	3RV17 42-5BD10	1	1 unit	101	2.200
	20	20	260	100	B	3RV17 42-5CD10	1	1 unit	101	2.200
	25	25	325	100	B	3RV17 42-5DD10	1	1 unit	101	2.200
	30	30	390	100	B	3RV17 42-5ED10	1	1 unit	101	2.200
	35	35	455	100	B	3RV17 42-5FD10	1	1 unit	101	2.200
	40	40	520	100	B	3RV17 42-5GD10	1	1 unit	101	2.200
	45	45	585	100	B	3RV17 42-5HD10	1	1 unit	101	2.200
	50	50	650	100	B	3RV17 42-5JD10	1	1 unit	101	2.200
	60	60	780	100	B	3RV17 42-5LD10	1	1 unit	101	2.200
	70	70	910	100	B	3RV17 42-5PD10	1	1 unit	101	2.200

# 3RV Motor Starter Protectors up to 100 A

For distance protection

## Selection and ordering data

### Voltage transformer circuit-breakers with auxiliary switches

Rated current	Thermal overload release	Instantaneous overcurrent release	Auxiliary switch integrated in the circuit-breaker, transverse	Short-circuit breaking capacity at 400 V AC	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
$I_n$				$I_{cu}$		Order No.	Price per PU			kg
A	A	A		kA						

#### Size S00



1.4	1.4	6	1 CO	50	B	<b>3RV16 11-1AG14</b>	1	1 unit	101	0.314
2.5	2.5	10.5	1 CO	50	▶	<b>3RV16 11-1CG14</b>	1	1 unit	101	0.318
3	3	20	1 CO	50	▶	<b>3RV16 11-1DG14</b>	1	1 unit	101	0.315

Type	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
								kg

### Laterally mountable auxiliary switches for other signaling purposes



Lateral auxiliary switches	1 NO + 1 NC	▶	<b>3RV19 01-1A</b>	1	1 unit	101	0.045
----------------------------	-------------	---	--------------------	---	--------	-----	-------

3RV19 01-1A

For further auxiliary switches, see "Mountable Accessories".

## More information

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

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

# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Mountable accessories

#### Overview

##### Mounting location and function

The 3RV1 motor starter protectors have three main contact elements. In order to achieve maximum flexibility, auxiliary switches, alarm 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.

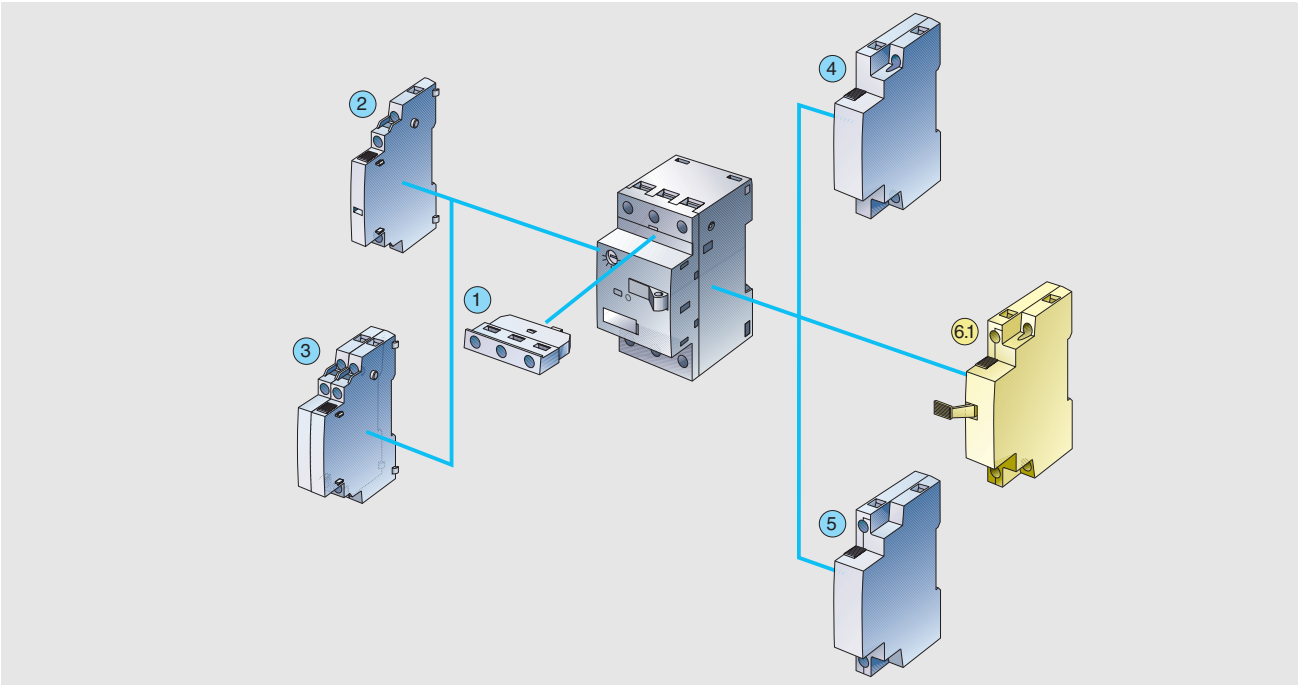
<b>Front</b> <i>Notes:</i> <ul style="list-style-type: none"> <li>A maximum of 4 auxiliary contacts with auxiliary switches can be attached to each motor starter protector.</li> <li>Transverse auxiliary switches must not be used for the 3RV17 motor starter protectors.</li> </ul>	<b>Transverse auxiliary switches</b> 1 NO + 1 NC or 2 NO or 1 changeover contact	<b>An auxiliary contact block can be inserted transversely on the front.</b> <b>The overall width of the motor starter protectors remains unchanged.</b>
<b>Left-hand side</b>	<b>Lateral auxiliary switches (2 contacts)</b> 1 NO + 1 NC or 2 NO or 2 NC  <b>Lateral auxiliary switches (4 contacts)</b> 2 NO + 2 NC	One of the three auxiliary switches can be mounted laterally for each motor starter protector. The contacts of the auxiliary switch close and open together with the main contacts of the motor starter protector. The overall width of the lateral auxiliary switch with 2 contacts is 9 mm.  One auxiliary switch can be mounted laterally for each motor starter protector. The contacts of the auxiliary switch close and open together with the main contacts of the motor starter protector. The overall width of the lateral auxiliary switch with 4 contacts is 18 mm.
<i>Notes:</i> <ul style="list-style-type: none"> <li>Auxiliary switches (2 contacts) and alarm switches can be mounted separately or together.</li> <li>A maximum of 4 auxiliary contacts with auxiliary switches can be attached to each motor starter protector.</li> </ul>	<b>Alarm switches for sizes S0, S2, and S3</b> Trip 1 NO + 1 NC Short-circuit 1 NO + 1 NC	One alarm switch can be mounted at the side of each motor starter protector with a rotary operating mechanism. The alarm switch has two contact systems. 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 <u>switching off</u> with the handle. In order to be able to switch on the motor starter protector again after a short-circuit, the alarm switch must be reset manually after the error cause has been eliminated. The overall width of the alarm switch is 18 mm.
<b>Right-hand side</b>	<b>Shunt release</b>  or  <b>Undervoltage release</b>  or  <b>Undervoltage release with leading auxiliary contacts</b> (2 NO)	For remote-controlled tripping of the motor starter protector. The release coil should only be energized for short periods (see schematics).  Trips the motor starter protector when the voltage is interrupted and prevents the motor from being restarted accidentally when the 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 button according to DIN VDE 0113.  Function and use as for the undervoltage release without leading auxiliary contacts, but with the following additional function: the auxiliary contacts will open in switch position OFF to deenergize the coil of the undervoltage release, thus interrupting power 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.
<b>Top</b> <i>Note:</i> The isolator module covers the terminal screws of the transverse auxiliary switch. If the isolator module is used, we therefore recommend that either the lateral auxiliary switches be fitted or that the isolator module not be mounted until the auxiliary switch has been wired.	<b>Isolator modules for motor starter protectors</b> Size S0 and S2	Isolator modules can be mounted to the upper terminal end of motor starter protectors of sizes S0 and S2. The supply cable is connected to the motor starter protector through the isolator module. The plug can only be unplugged when the motor starter protector is open and isolates all 3 poles of the motor starter protector from the network. The shock-protected isolation point is clearly visible and secured with a padlock to prevent reinsertion of the plug.

# 3RV Motor Starter Protectors up to 100 A

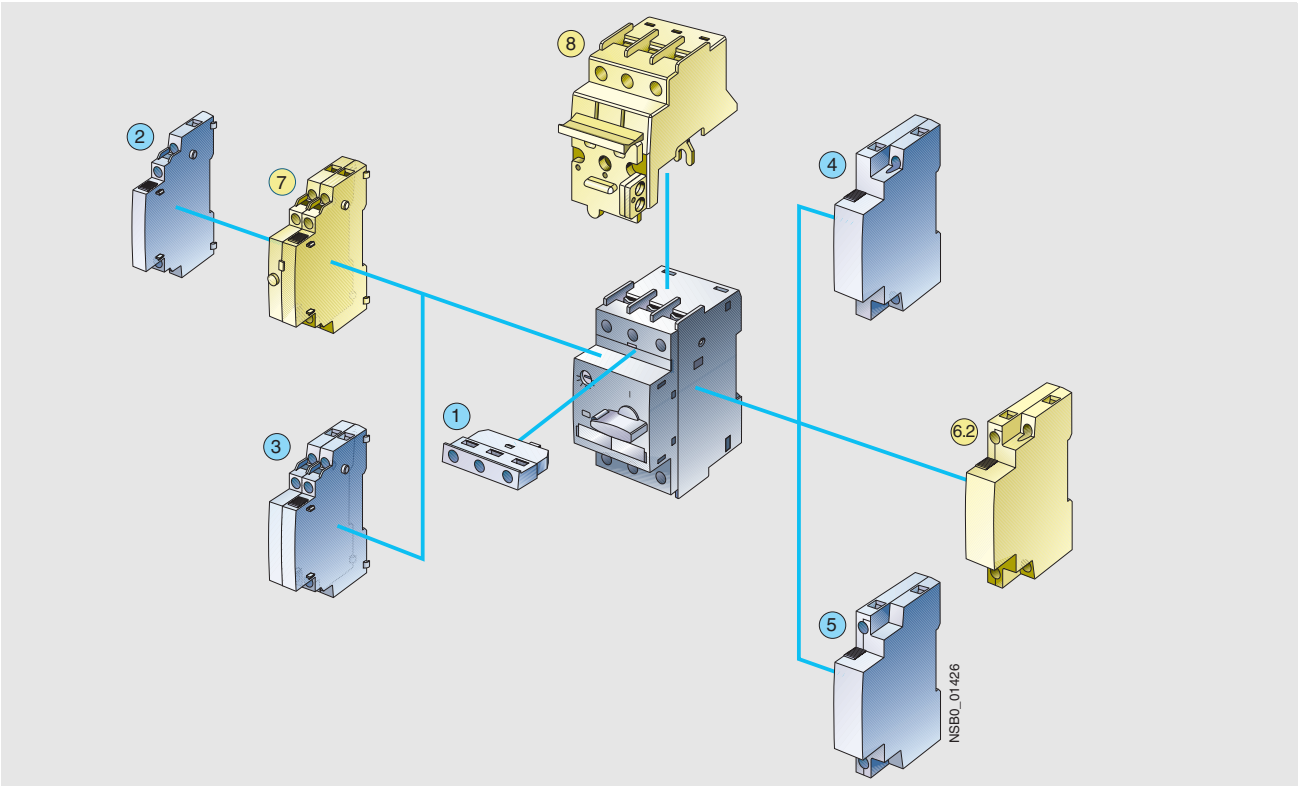
## Accessories

### Mountable accessories

S00 circuit-breakers with mountable accessories



Circuit-breakers, sizes S0, S2 or S3, with mountable accessories



Mountable accessories for all sizes S00 ... S3

- ① Transverse auxiliary switch
- ② Lateral auxiliary switch with 2 contacts
- ③ Lateral auxiliary switch with 4 contacts
- ④ Shunt release
- ⑤ Undervoltage release

Mountable accessories

- ⑥.1 Undervoltage release with leading auxiliary contacts
- ⑥.2 Undervoltage release with leading auxiliary contacts

for sizes

- S00
- S0 ... S3

Mountable accessories

- ⑦ Signalling switch
- ⑧ Isolator module

for sizes






- S0 ... S3
- S0 and S2

# 3RV Motor Starter Protectors up to 100 A

## Accessories



### Mountable accessories

#### Selection and ordering data

Type	Version	For motor starter protectors Size	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
				Order No.	Price per PU			
<b>Auxiliary switches<sup>1)</sup></b>								
 3RV19 01-1E	<b>Transverse auxiliary switches</b> with screw connection	1 CO 1 NO + 1 NC 2 NO <sup>2)</sup>	S00, S0, S2, S3	▶ <b>3RV19 01-1D</b> ▶ <b>3RV19 01-1E</b> ▶ <b>3RV19 01-1F</b>		1 1 1	1 unit 1 unit 1 unit	101 101 101 0.015 0.018 0.018
 3RV19 01-1G	<b>Solid-state compatible transverse auxiliary switches</b> with screw connection for use in dusty atmosphere and in solid-state circuits with low operating currents	1 CO	S00, S0, S2, S3	<b>3RV19 01-1G</b>		1	1 unit	101 0.016
 3RV19 01-0H	<b>Covering caps for transverse auxiliary switches</b>		S00, S0, S2, S3	<b>3RV19 01-0H</b>		1	10 units	101 0.006
 3RV19 01-1A	<b>Lateral auxiliary switches</b> with screw connection	1 NO + 1 NC 2 NO 2 NC 2 NO + 2 NC	S00, S0, S2, S3	▶ <b>3RV19 01-1A</b> ▶ <b>3RV19 01-1B</b> ▶ <b>3RV19 01-1C</b> ▶ <b>3RV19 01-1J</b>		1 1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101 0.045 0.045 0.045 0.083
 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.



2) Compatible with the following motor starter protectors:  
 3RV1. 1 (size S00) as of version E01  
 3RV1. 2 (size S0) as of version E04  
 3RV1. 3 (size S2) as of version E04  
 3RV1. 4 (size S3) as of version E04.

Type	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
<b>Transverse auxiliary switches with Cage Clamp connection</b>								
 3RV19 01-2E	1 transverse auxiliary switch can be mounted on each motor starter protector	1 NO + 1 NC 2 NO	▶ <b>3RV19 01-2E</b> ▶ <b>3RV19 01-2F</b>			1 1	1 unit 1 unit	101 101 0.017 0.018
<b>Laterally mountable auxiliary switches with Cage Clamp connection</b>								
 3RV19 01-2A	1 lateral auxiliary switch can be mounted on the left for each motor starter protector	1 NO + 1 NC 2 NO 2 NC	▶ <b>3RV19 01-2A</b> ▶ <b>3RV19 01-2B</b> ▶ <b>3RV19 01-2C</b>			1 1 1	1 unit 1 unit 1 unit	101 101 101 0.040 0.040 0.040

# 3RV Motor Starter Protectors up to 100 A

## Accessories



### Mountable accessories

Type	Version	For motor starter protectors Size	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
				Order No.	Price per PU			
Alarm switches <sup>1)</sup>								
	Alarm switches	Separate tripped and short-circuit alarms, each 1 NO + 1 NC.	S0, S2, S3	▶	3RV19 21-1M	1	1 unit	101 0.094
3RV19 21-1M								
Isolator modules								
	Isolator modules	Visible isolating distance for isolating individual motor starter protectors from the network, lockable in isolating position.	S0 S2	▶ A	3RV19 28-1A 3RV19 38-1A	1 1	1 unit 1 unit	101 0.157 101 0.324
3RV19 38-1A with padlock								

# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Mountable accessories

Rated control supply voltage $U_s$					For motor starter protectors Size	DT	Screw connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.	
AC 50 Hz	AC 60 Hz	AC 50/60 Hz 100% ON-time <sup>1)</sup>	AC/DC 50/60 Hz, DC 5 s ON-time <sup>2)</sup>	DC								
V	V	V	V	V			Order No.	Price per PU			kg	
Auxiliary releases <sup>3)</sup>												
	Undervoltage release											
	-	-	-	-	24	S00, S0, S2, S3	A	3RV19 02-1AB4	1	1 unit	101	0.138
	24	-	-	-	-		A	3RV19 02-1AB0	1	1 unit	101	0.134
	110	120	-	-	-		A	3RV19 02-1AF0	1	1 unit	101	0.134
	-	208	-	-	-		A	3RV19 02-1AM1	1	1 unit	101	0.128
	230	240	-	-	-		▶ A	3RV19 02-1AP0	1	1 unit	101	0.131
	400	440	-	-	-		▶ A	3RV19 02-1AV0	1	1 unit	101	0.127
	415	480	-	-	-		A	3RV19 02-1AV1	1	1 unit	101	0.129
500	575	-	-	-		A	3RV19 02-1AS0	1	1 unit	101	0.127	
3RV19 02-1DP0												
	Undervoltage release with leading auxiliary contacts 2 NO											
	230	240	-	-	-	S00	A	3RV19 12-1CP0	1	1 unit	101	0.140
	400	-	-	-	-		A	3RV19 12-1CV0	1	1 unit	101	0.137
	415	480	-	-	-		A	3RV19 12-1CV1	1	1 unit	101	0.139
	230	240	-	-	-	S0, S2, S3	A	3RV19 22-1CP0	1	1 unit	101	0.139
	400	-	-	-	-		A	3RV19 22-1CV0	1	1 unit	101	0.136
415	480	-	-	-		A	3RV19 22-1CV1	1	1 unit	101	0.138	
3RV19 12-1CP0												
Shunt releases												
-	-	20 ... 24	20 ... 70	-	S00, S0, S2, S3	▶ A	3RV19 02-1DB0	1	1 unit	101	0.133	
-	-	90 ... 110	70 ... 190	-		A	3RV19 02-1DF0	1	1 unit	101	0.135	
-	-	210 ... 240	190 ... 330	-		▶ A	3RV19 02-1DP0	1	1 unit	101	0.130	
-	-	350 ... 415	330 ... 500	-		A	3RV19 02-1DV0	1	1 unit	101	0.129	
-	-	500	500	-		A	3RV19 02-1DS0	1	1 unit	101	0.126	

- 1) The voltage range is valid for 100 % (infinite) ON-time. The response voltage is at 0.9 the lower limit of the voltage range.
- 2) The voltage range is valid for 5 s ON-time at AC 50 Hz/60 Hz and DC. The response voltage is at 0.85 the lower limit of the voltage range.
- 3) One auxiliary release can be mounted to the right of each motor starter protector.

#### 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-type terminals. Different designs are available for sizes S00, S0 and S2 and can be used for the various different types of motor starter protectors. The only exceptions are the 3RV19 15 three-phase busbar systems, which are not suitable for the 3RV11 motor starter protectors with overload relay function.

The busbars are suitable for between 2 and 5 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.

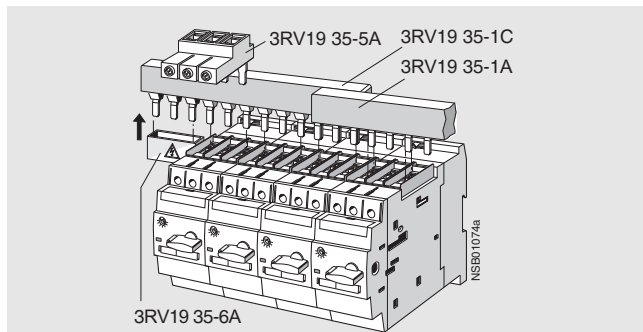
Different sized motor starter protectors cannot be clamped together due to the different dimensions. Special connectors are available for connecting three-phase busbars for S0 motor starter protectors to busbars for S00 motor starter protectors.

Busbars with larger modular spacing can be used for motor starter protectors with laterally mounted accessories.

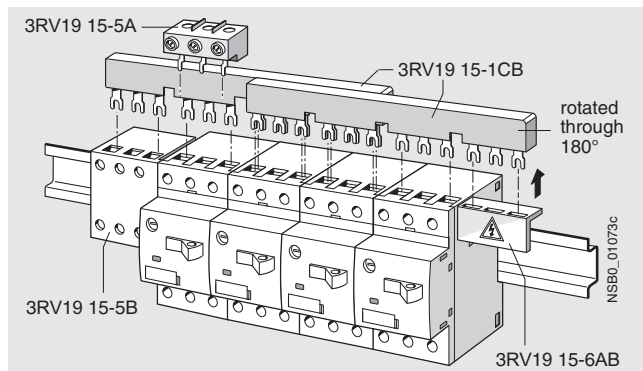
The motor starter protectors are supplied by appropriate line-side terminals.

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

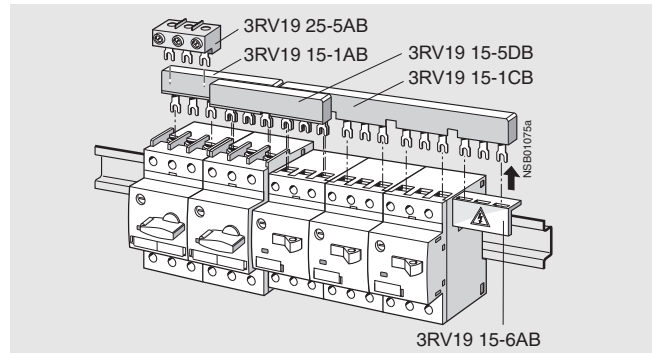
The three-phase busbar systems can also be used to construct "Type E Starters" of size S0 or S2 according to UL/CSA. Special feeder terminals must be used for this purpose, however (see Selection and Ordering Data).



3-phase busbar system, size S2



3-phase busbar system, size S00



3-phase busbar system, with example for combining sizes S00 and S0

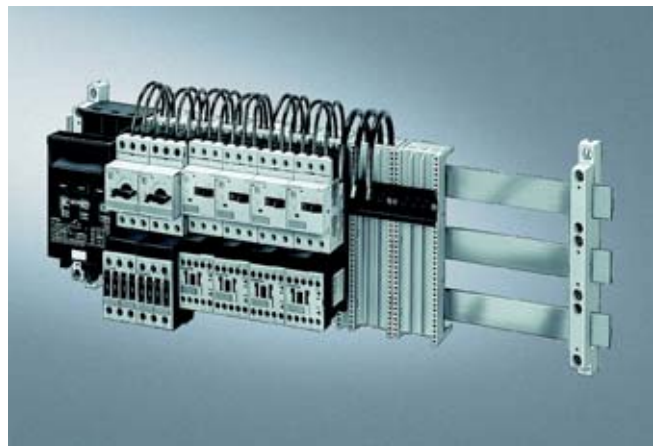
##### Busbar adapters

The motor starter protectors are mounted directly with the aid of busbar adapters on busbar systems with 40 mm and 60 mm center-line spacing in order to save space and to reduce infeed times and costs.

Busbar adapters for busbar systems with 40 mm center-line spacing are suitable for copper busbars with a width of 12 mm to 15 mm, while those with 60 mm center-line spacing are suitable for copper busbars with a width of 12 mm to 30 mm. The busbars can be 4 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, busbar copper, etc., can be found under "Distribution/Busbar Systems and Controlgear".



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

The 3RV19 infeed system can be found under "Load Feeders, Motor Starters and Soft Starters", "3RA Fuseless Load Feeders".







# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Busbar accessories

#### Selection and ordering data


Modular spacing	Number of motor starter protectors that can be connected			Rated current $I_n$ at 690 V	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	without lateral accessories	with lateral auxiliary switch	with auxiliary release									
mm				A								kg
<b>3-phase busbar systems</b>												
For feeding several motor starter protectors with screw-type connection, mounted side-by-side on standard mounting rails, insulated, with touch protection.												
 3RV19 15-1AB	45	-	-	63	S00, S0 <sup>1)</sup>	▶	<b>3RV19 15-1AB</b>		1	1 unit	101	0.044
	3					▶	<b>3RV19 15-1BB</b>		1	1 unit	101	0.071
	4					▶	<b>3RV19 15-1CB</b>		1	1 unit	101	0.099
	5					▶	<b>3RV19 15-1DB</b>		1	1 unit	101	0.124
 3RV19 15-1BB	55	-	2	63	S00, S0 <sup>1)</sup>	▶	<b>3RV19 15-2AB</b>		1	1 unit	101	0.048
	3					▶	<b>3RV19 15-2BB</b>		1	1 unit	101	0.079
	4					▶	<b>3RV19 15-2CB</b>		1	1 unit	101	0.111
	5					▶	<b>3RV19 15-2DB</b>		1	1 unit	101	0.140
 3RV19 15-1CB	63	-	-	2	S00, S0 <sup>1)</sup>	▶	<b>3RV19 15-3AB</b>		1	1 unit	101	0.052
	4					▶	<b>3RV19 15-3CB</b>		1	1 unit	101	0.120
	55	2	-	108	S2	▶	<b>3RV19 35-1A</b>		1	1 unit	101	0.140
	3					▶	<b>3RV19 35-1B</b>		1	1 unit	101	0.214
 3RV19 15-1DB	4					▶	<b>3RV19 35-1C</b>		1	1 unit	101	0.295
	75	-	2	108	S2 <sup>2)</sup>	A	<b>3RV19 35-3A</b>		1	1 unit	101	0.161
	3		3			A	<b>3RV19 35-3B</b>		1	1 unit	101	0.262
	4		4			A	<b>3RV19 35-3C</b>		1	1 unit	101	0.369

1) Not suitable for 3RV11 motor starter protectors with overload relay function. Common clamping of S00 and S0 motor starter protectors is not possible, due to the different modular spacings and terminal heights. The 3RV19 15-DB connector is available for connecting busbars from size S0 to size S00.

2) Auxiliary releases and lateral auxiliary switches cannot be used in combination.




Version	Modular spacing	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	mm								kg

#### Connectors for 3-phase busbars

 3RV19 15-5DB	For connecting three-phase busbars for motor starter protectors of size S0 (left) to size S00 (right)		45	S00, S0	▶	<b>3RV19 15-5DB</b>	1	1 unit	101	0.042

Conductor cross-section			For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Solid or stranded	Finely stranded with end sleeve	AWG conductors, solid or stranded								
mm <sup>2</sup>	mm <sup>2</sup>	AWG								kg

#### 3-phase line-side terminals

<b>Connection from top</b>										
 3RV19 25-5AB	2.5 ... 25	4 ... 16	12-4	S00	▶	<b>3RV19 15-5A</b>	1	1 unit	101	0.043
				S0	▶	<b>3RV19 25-5AB</b>	1	1 unit	101	0.041
<b>Connection from below<sup>1)</sup></b>										
 3RV19 15-5B	2.5 ... 25	4 ... 16	12-4	S00, S0	▶	<b>3RV19 15-5B</b>	1	1 unit	101	0.110
<b>Connection from top</b>										
 3RV19 15-5B	2.5 ... 50	1.5 ... 35	14-0	S2	▶	<b>3RV19 35-5A</b>	1	1 unit	101	0.115

#### 3-phase line-side terminals for constructing "Type E Starters"


<b>Connection from top</b>										
 3RV19 25-5EB	2.5 ... 25	4 ... 16	10-4	S0	C	<b>3RV19 25-5EB</b>	1	1 unit	101	0.055
	10 ... 50	-	8-0	S2	▶	<b>3RV19 35-5E</b>	1	1 unit	101	0.100

1) This terminal is connected in place of a switch, please take the spacing into account.

# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Busbar accessories

Version	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
<b>Covers for connection tags</b>								
	Touch protection for empty positions	S00, S0	▶ <b>3RV19 15-6AB</b>		1	10 units	101	0.003
		S2	▶ <b>3RV19 35-6A</b>		1	5 units	101	0.006

### Busbar adapters



8US10 61-5DJ07



8US12 51-5MD07

For motor starter protectors Size	Rated current A	Connection cable AWG	Adapter length mm	Adapter width mm	Rated voltage V	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
<b>Busbar adapters for 40 mm systems</b>												
For copper busbars according to DIN 46433 Width: 12 mm and 15 mm Thickness: 5 mm and 10 mm												
S00, S0	25	12	121	45	690	▶	<b>8US10 51-5DJ07</b>		1	1 unit	103	0.106
S00, S0 + lateral auxiliary switch	25	12	121	55	690	▶	<b>8US10 61-5DJ07</b>		1	1 unit	103	0.119
S2	56	8	139	55	690	▶	<b>8US10 61-5FK08</b>		1	1 unit	103	0.231
S3	100	4	182	70	400 <sup>1)</sup>	▶	<b>8US11 11-4SM00</b>		1	1 unit	103	0.541
S3	100	4	182	72	480 ... 690 <sup>2)</sup>	▶	<b>8US10 11-4TM00</b>		1	1 unit	103	0.478
<b>Busbar adapters for 60 mm systems</b>												
For copper busbars according to DIN 46433 Width: 12 mm and 30 mm Thickness: 5 mm and 10 mm also for T and double-T special profiles												
S00, S0	25	12	182	45	690	▶	<b>8US12 51-5DM07</b>		1	1 unit	103	0.183
S2	56	8		55	690	▶	<b>8US12 61-5FM08</b>		1	6 units	103	0.263
S3	100	4		70	400 <sup>1)</sup>	▶	<b>8US11 11-4SM00</b>		1	1 unit	103	0.541
S3	100	4		72	480 ... 690 <sup>2)</sup>	▶ A	<b>8US12 11-4TM00</b>		1	1 unit	103	0.498

1) Up to 460 V AC with max. short-circuit breaking capacity 25 kA.

2) Cannot be used for voltages < 480 V AC  
Short-circuit breaking capacity 480 V/ 500 V/ 525 V AC:  
- up to  $I_n = 25$  A: max. 30 kA  
- up to  $I_n = 90$  A: max. 16 kA  
- up to  $I_n = 100$  A: max. 6 kA  
Short-circuit breaking capacity 690 V AC:  
- max. 12 kA.

For more busbar adapters, see "SIVACON Switchgear, Distribution Systems and Cabinets " -->  
"Components for Distribution Systems 8US, 8UC, 4NC"

# 3RV Motor Starter Protectors up to 100 A

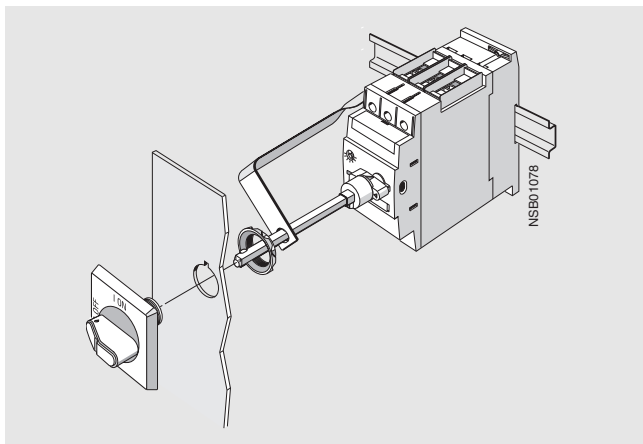
## Accessories

### Rotary operating mechanisms

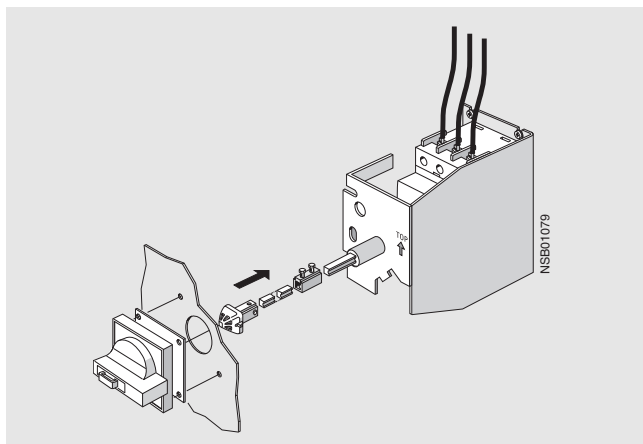
#### Overview

##### 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 lock 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



3RV19 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 power system or reconnected to it from an operator panel.

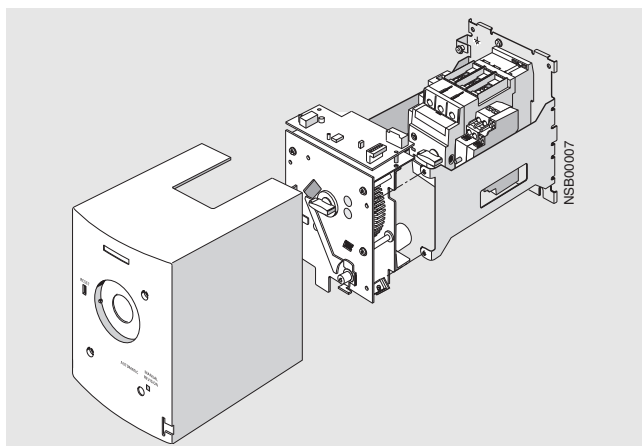
If the motor starter protector is tripped as a result of overload or short-circuit, it will be in tripped position. For reclosing, the remote motorized operating mechanism must first be set manually or electrically to the 0 position (electrically by means of the Open command). Then it can be reclosed.

The remote motorized operating mechanism is available for motor starter protectors of size S2 ( $I_{nmax} = 50$  A) and S3 ( $I_{nmax} = 100$  A) that are designed for control voltages of 230 V AC 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.

##### Reset function

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



# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Rotary operating mechanisms

#### Selection and ordering data

Type	Color of knob	Version Extension shaft mm	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
------	---------------	----------------------------------	--------------------------------------	----	-----------	--------------	-------------------	-----	----	-----------------------------

#### Door-coupling rotary operating mechanisms



3RV19 26-0B

The door-coupling rotary operating mechanisms consist of a knob, a coupling driver and an extension shaft of 130/330 mm in length (5 x 5 mm). The door-coupling rotary operating mechanisms are designed to the 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.

<b>Door-coupling rotary operating mechanisms</b>	Black	130 330	S0, S2, S3	▶ ▶	<b>3RV19 26-0B</b> <b>3RV19 26-0K</b>		1 1	1 unit 1 unit	101 101	0.111 0.324
<b>EMERGENCY-STOP door-coupling rotary operating mechanisms</b>	Red/ Yellow	130 330	S0, S2, S3	▶ ▶	<b>3RV19 26-0C</b> <b>3RV19 26-0L</b>		1 1	1 unit 1 unit	101 101	0.110 0.316

#### Door-coupling rotary operating mechanisms, for arduous conditions



3RV19 26-2C

The door-coupling rotary operating mechanisms consist of a knob, a coupling driver, an extension shaft of 300 mm in length (8 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 locking device reliably prevents opening of the control cabinet door in the ON position of the circuit-breaker. 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 mechanism thus meets the requirements for isolating functions to IEC 60947-2.

<b>Door-coupling rotary mechanisms</b>	Gray	300	S0 S2 S3	▶ ▶ ▶	<b>3RV19 26-2B</b> <b>3RV19 36-2B</b> <b>3RV19 46-2B</b>		1 1 1	1 unit 1 unit 1 unit	101 101 101	1.180 1.570 1.722
<b>EMERGENCY-STOP door-coupling rotary operating mechanisms</b>	Red/ Yellow	300	S0 S2 S3	▶ ▶ ▶	<b>3RV19 26-2C</b> <b>3RV19 36-2C</b> <b>3RV19 46-2C</b>		1 1 1	1 unit 1 unit 1 unit	101 101 101	1.188 1.486 1.732

Type	Rated control supply voltage $U_s$	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
------	------------------------------------	--------------------------------------	----	-----------	--------------	-------------------	-----	----	-----------------------------

#### Remote motorized operating mechanisms



<b>Remote motorized operating mechanisms</b>	50/60 Hz, 230 V AC 24 V DC	S2 S2	B B	<b>3RV19 36-3AP0</b> <b>3RV19 36-3AB4</b>		1 1	1 unit 1 unit	101 101	3.520 3.420
	50/60 Hz, 230 V AC 24 V DC	S3 S3	B B	<b>3RV19 46-3AP0</b> <b>3RV19 46-3AB4</b>		1 1	1 unit 1 unit	101 101	3.441 3.357

# 3RV Motor Starter Protectors up to 100 A

## Accessories

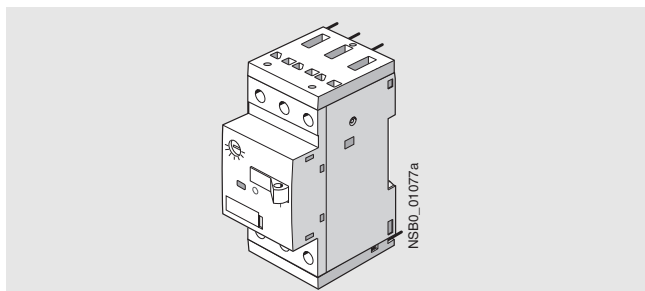
### Mounting accessories

#### Overview

##### Soldering terminal

Soldering terminals 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.

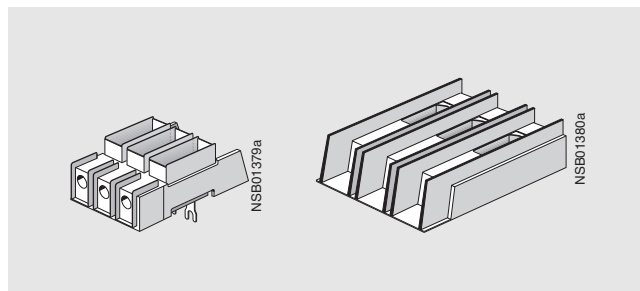


3RV19 18-5A

The 3RV19 28-1H terminal block must be used here for size S0; it is simply screwed onto the basic unit.

Basic units of size S2 are already compliant with the new clearance and creepage distance requirements.

The 3RT19 46-4GA07 terminal block must be used for size S3. The standard box terminal is to be replaced by this terminal block.



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

##### Terminals for "Self-Protected Combination Motor Controller (Type E)" according to UL508

The 3RV10 motor starter protectors are approved according to UL508 as a "Self-Protected Combination Motor Controllers (Type E)".

As of 16 July 2001, for this application, UL 508 demands increased clearance and creepage distances (1 inch and 2 inches respectively) at the line side of the device.

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

Three-phase line-side 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
<b>Covers</b>								
	<b>Terminal covers for box terminals</b>	S2	▶ <b>3RT19 36-4EA2</b>		1	1 unit	101	0.016
	Additional touch protection for fitting to box terminals (2 units can be mounted per motor starter protector)	S3	▶ <b>3RT19 46-4EA2</b>		1	1 unit	101	0.023
	<b>Terminal covers</b>	S3	▶ <b>3RT19 46-4EA1</b>		1	1 unit	101	0.037
	For cable lug and bar 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)							
	<b>Scale covers</b>	S0, S0, S2, S3	▶ <b>3RV19 08-0P</b>		100	10 units	101	0.100
	Sealable, for covering the set current scale.							

# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Mounting accessories

Type	Version	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
------	---------	-----------------------------------	----	-----------	--------------	-------------------	-----	----	-----------------------------

#### Fixing accessories



3RB19 00-0B

<b>Push-in lugs</b>	For screwing the motor starter protector onto mounting plates. For each motor starter protector, 2 units are required.	S00, S0	▶	<b>3RB19 00-0B</b>		100	10 units	101	0.100
---------------------	---	---------	---	--------------------	--	-----	----------	-----	-------

#### Soldering terminals



3RV19 18-5A with motor starter protector

<b>For main contacts</b>	For soldering the main conductor cross-sections of a motor starter protector to a printed circuit board (1 set = 2 parts for 1 motor starter protector)	S00	B	<b>3RV19 18-5A</b>		1	4 sets	101	0.030
<b>For main and auxiliary contacts</b>	For soldering the main conductor connections and the auxiliary conductor connections of the transverse auxiliary switch 1NO + 1NC of a motor starter protector to a printed circuit board (1 set = 3 parts for 1 motor starter protector)	S00	B	<b>3RV19 18-5B</b>		1	4 sets	101	0.044

Type	Version	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
------	---------	-----------------------------------	----	-----------	--------------	-------------------	-----	----	-----------------------------

#### Terminals for "Self-Protected Combination Motor Controller (Type E)" according to UL508



3RV19 28-1H



3RT19 46-4GA07

Note: As of 16 July 2001, UL508 demands for "Combination Motor Controller Type E" 1-inch clearance and 2-inch creepage distance at line side. The following terminal blocks must be used in 3RV10 motor starter protectors of sizes S0 and S3. The 3RV10 motor starter protector in size S2 conforms with the required clearance and creepage distances without a terminal block. Terminal blocks are not required for use according to CSA. With size S0, these terminal blocks cannot be used in combination with 3RV19.5 three-phase busbars and with size S3, they cannot be used with a transverse auxiliary switch. For construction with 3-phase busbars, see "Busbar Accessories".

<b>Terminal blocks Type E</b>	For extended clearance and creepage distances (1-inch and 2-inch respectively)	S0 S3	▶ A	<b>3RV19 28-1H</b> <b>3RT19 46-4GA07</b>		1 1	1 unit 1 unit	101 101	0.083 0.155
-------------------------------	--	----------	--------	---	--	--------	------------------	------------	----------------

Type	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
------	-----------------------------------	----	-----------	--------------	-------------------	-----	----	-----------------------------

#### Auxiliary terminals, 3-pole







3RT19 46-4F

	For connection of auxiliary and control cables to the main conductor connections (for one side)	S3	B	<b>3RT19 46-4F</b>		1	1 unit	101	0.033
--	---	----	---	--------------------	--	---	--------	-----	-------

# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Mounting accessories



Version	Method of operation	Size	Contactors	Motor starter protector	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
Link modules, single unit packaging											
 3RA19 11-1AA00	For mechanical and electrical connection between contactor and motor starter protector with screw connection	AC/DC	S00	S00	▶	3RA19 11-1AA00		1	1 unit	101	0.027
			S00	S0	▶	3RA19 21-1DA00		1	1 unit	101	0.028
		AC	S0	S0	▶	3RA19 21-1AA00		1	1 unit	101	0.037
			S2	S2	▶	3RA19 31-1AA00		1	1 unit	101	0.042
			S3	S3	▶	3RA19 41-1AA00		1	1 unit	101	0.090
		DC	S0	S0	▶	3RA19 21-1BA00		1	1 unit	101	0.039
			S2	S2	▶	3RA19 31-1BA00		1	1 unit	101	0.043
			S3	S3	▶	3RA19 41-1BA00		1	1 unit	101	0.089
Link modules, multi-unit packaging											
 3RA19 31-1A	For mechanical and electrical connection between contactor and motor starter protector with screw connection	AC/DC	S00	S00	▶	3RA19 11-1A		1	10 units	101	0.019
			S00	S0	▶	3RA19 21-1D		1	10 units	101	0.021
		AC	S0	S0	▶	3RA19 21-1A		1	10 units	101	0.028
			S2	S2	▶	3RA19 31-1A		1	5 units	101	0.033
			S3	S3	▶	3RA19 41-1A		1	5 units	101	0.072
		DC	S0	S0	▶	3RA19 21-1B		1	10 units	101	0.030
			S2	S2	▶	3RA19 31-1B		1	5 units	101	0.034
			S3	S3	▶	3RA19 41-1B		1	5 units	101	0.073
Hybrid link modules, single-unit packaging											
 3RA19 11-2FA00	Electrical and mechanical connection between motor starter protector with screw terminals and contactor with Cage Clamp terminals	AC/DC	S00	S00	▶	3RA19 11-2FA00		1	1 unit	101	0.038
			S00	S0	▶	3RA19 21-2FA00		1	1 unit	101	0.028
Hybrid link modules, multi-unit packaging											
 3RA19 11-2F	Electrical and mechanical connection between motor starter protector with screw terminals and contactor with Cage Clamp terminals	AC/DC	S00	S00	▶	3RA19 11-2F		1	10 units	101	0.031
			S00	S0	▶	3RA19 21-2F		1	10 units	101	0.030


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

# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Mounting accessories

Type	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
<b>Adapters and link modules for Cage Clamp connections</b>								
	<b>Link modules, Cage Clamp</b> Electrical connection between motor starter protector and contactor (busbar adapter not included in scope of supply)	Size S00	▶ <b>3RA19 11-2A</b>		1	10 units	101	0.016
	<b>Link modules, Cage Clamp with mechanical connections</b> Mechanical and electrical connection between motor starter protector and contactor	Size S00	▶ <b>3RA19 11-2E</b>		1	10 units	101	0.028
	<b>Adapters for rail mounting</b> With 2 mounting rails 45 mm wide, one adjustable	Size S00	▶ <b>3RA19 22-1L</b>		1	5 units	101	0.413
	<b>Busbar adapters</b> 45 mm wide, 182 mm long, adapted for Cage Clamp motor starter protectors. An additional mounting rail must be mounted for an additional contactor.	40 mm busbar system	▶ <b>8US10 51-5CM47</b>		1	1 unit	103	0.193
		60 mm busbar system	▶ <b>8US12 51-5CM47</b>		1	1 unit	103	0.190
	<b>35 mm standard mounting rails</b> Plastic, including fixing screws	A	<b>8US19 98-7CA15</b>		1	10 units	103	0.009

Type	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
<b>Tools for opening Cage Clamp connections</b>								
	For all SIRIUS devices with Cage Clamp connection, up to max. 2.5 mm² conductor cross-section	Length approx. 175 mm	▶ <b>8WA2 880</b>		1	1 unit	041	0.012
		Length; partially insulated approx. 175 mm	▶ <b>8WA2 803</b>		1	1 unit	041	0.024



# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Enclosures and front plates

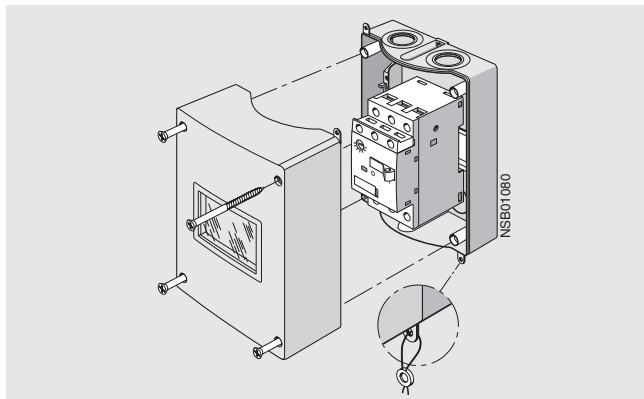
#### Overview

##### Enclosures

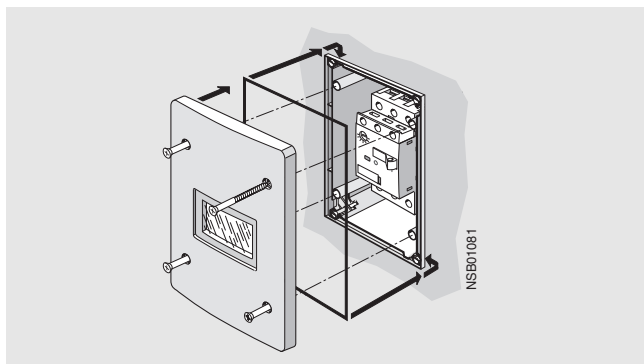
For installing motor starter protectors of sizes S00 ( $I_{nmax} = 12\text{ A}$ ), S0 ( $I_{nmax} = 25\text{ A}$ ) and S2 ( $I_{nmax} = 50\text{ A}$ ) as a single unit, molded-plastic enclosures for surface mounting and molded-plastic enclosures for flush mounting are available in various dimensions.

When installed in a molded-plastic enclosure the motor starter protectors have a rated operational voltage  $U_e$  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).



Enclosure for surface mounting



Enclosure for flush mounting

All enclosures are equipped with N and PE/ground 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 knock-out 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 an alarm 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 S0 and S2 motor starter protectors with rotary operating mechanism are fitted with a rotary operating mechanism as well.

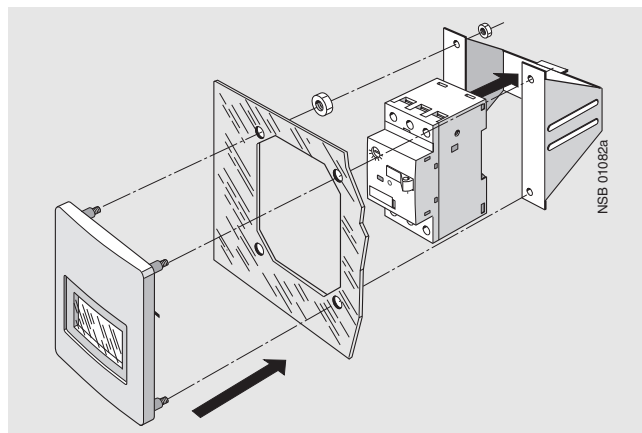
The enclosures can be supplied with a black rotary operating mechanism or with an EMERGENCY-STOP rotary operating mechanism with a red/yellow knob.

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

##### Front plates

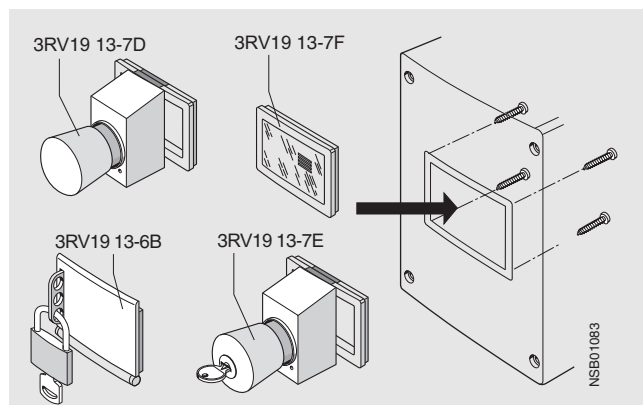
Motor starter protectors are frequently required to be actuated in any enclosure. Front plates equipped with an actuating diaphragm for size S00 motor starter protectors, or rotary operating mechanism for S0 to S3 motor starter protectors are available for this purpose.

The front plates for size S00 have a retaining frame into which the motor starter protectors can be snapped. A retaining frame 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








# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Enclosures and front plates

#### Selection and ordering data



Type	Degree of protection	Integrated terminals	Overall width	For motor starter protectors	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.	
kg												
Molded-plastic enclosures for surface mounting												
	With actuator diaphragm	IP55	N and PE/ground	54 mm (for motor starter protector + lateral auxiliary switch) 72 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S00	▶	3RV19 13-1CA00	1	1 unit	101	0.296	
						▶	3RV19 13-1DA00	1	1 unit	101	0.342	
	With rotary operating mechanism, lockable in 0 position	IP55	N and PE/ground	54 mm (for motor starter protector + lateral auxiliary switch) 72 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S0	▶	3RV19 23-1CA00	1	1 unit	101	0.332	
						▶	3RV19 23-1DA00	1	1 unit	101	0.381	
					82 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S2	A	3RV19 33-1DA00	1	1 unit	101	1.134
	With EMERGENCY-STOP rotary operating mechanism, lockable in 0 position	IP55	N and PE/ground	54 mm (for motor starter protector + lateral auxiliary switch) 72 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S0	▶	3RV19 23-1FA00	1	1 unit	101	0.329	
						▶	3RV19 23-1GA00	1	1 unit	101	0.372	
					82 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S2	A	3RV19 33-1GA00	1	1 unit	101	1.136
Cast aluminum enclosures for surface mounting												
	With rotary operating mechanism, lockable in 0 position	IP65	PE <sup>1)</sup>	72 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S0	▶	3RV19 23-1DA01	1	1 unit	101	1.015	
	With EMERGENCY-STOP rotary operating mechanism, lockable in 0 position	IP65	PE <sup>1)</sup>	72 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S0	A	3RV19 23-1GA01	1	1 unit	101	1.008	
Molded-plastic enclosures for flush mounting												
	With actuator diaphragm	IP55 (front side)	N and PE/ground	72 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S00	A	3RV19 13-2DA00	1	1 unit	101	0.416	
	With rotary operating mechanism, lockable in 0 position	IP55 (front side)	N and PE/ground	72 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S0	A	3RV19 23-2DA00	1	1 unit	101	0.426	
	With EMERGENCY-STOP rotary operating mechanism, lockable in 0 position	IP55 (front side)	N and PE/ground	72 mm (for motor starter protector + lateral auxiliary switch + auxiliary release)	S0	A	3RV19 23-2GA00	1	1 unit	101	0.417	


1) If required, an additional N terminal can be mounted (e.g. 8WA10 11-1BG11).


# 3RV Motor Starter Protectors up to 100 A

## Accessories

### Enclosures and front plates

Type	Degree of protection	Version	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
<b>Front plates</b>										
 3RV19 13-4C	<b>Molded-plastic front plates with actuator diaphragm</b>	IP55 (front side)	For actuating motor starter protectors in any enclosures, includes holder for motor starter protector.	S00	A	<b>3RV19 13-4C</b>	1	1 unit	101	0.216
 3RV19 23-4B + 3RV19 23-4G	<b>Molded-plastic front plates with rotary operating mechanism</b> Lockable in 0 position	IP55 (front side)	For actuating 3RV1 motor starter protectors in any enclosures.	S0, S2, S3	▶	<b>3RV19 23-4B</b>	1	1 unit	101	0.124
	<b>Molded-plastic front plates with EMERGENCY-STOP rotary operating mechanism</b> Red/Yellow, lockable in 0 position	IP55 (front side)	EMERGENCY-STOP actuation of 3RV1 motor starter protectors in any enclosure.	S0, S2, S3	A	<b>3RV19 23-4E</b>	1	1 unit	101	0.124
	<b>Holders for front plate</b> For motor starter protectors size S0	-	Holder is mounted on front plate, motor starter protector with and without accessories is snapped in.	S0	▶	<b>3RV19 23-4G</b>	1	1 unit	101	0.188

<b>Accessories for enclosures</b>										
 Molded-plastic enclosure for surface mounting with 3RV19 13-7D	<b>EMERGENCY-STOP mushroom buttons red/yellow</b> For 3RV19 13-... enclosures and front plates, cannot be used in combination with locking device	IP55	Latching mushroom button, unlatch by turning	S00	▶	<b>3RV19 13-7D</b>	1	1 unit	101	0.108
	<b>EMERGENCY-STOP mushroom buttons red/yellow with safety lock</b> For 3RV19 13-... enclosures and front plates, cannot be used in combination with locking device	IP55	Latching mushroom button, unlatch with key, Ronis safety lock, lock number SB 30, supplied with 2 keys.	S00	A	<b>3RV19 13-7E</b>	1	1 unit	101	0.144
	<b>Locking devices</b> For 3RV19 13-... enclosures and front plates, cannot be used in combination with EMERGENCY-STOP mushroom button	IP55	For 3 padlocks with max. 8 mm shackle diameter.	S00	▶	<b>3RV19 13-6B</b>	1	1 unit	101	0.074
	<b>Spare actuator diaphragms</b>	IP55	Diaphragm, includes holder frame and screws	S00	A	<b>3RV19 13-7F</b>	1	1 unit	101	0.023

Type	Version	Rated control supply voltage $U_s$	For motor starter protectors Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
<b>Indicator Lights</b>										
 3RV19 03-5B	<b>Indicator lights</b> For all enclosures and front plates	With glow lamp and colored lenses red, green, yellow, orange and clear	110 ... 120 220 ... 240 380 ... 415 480 ... 500	S00, S0, S2	C C C C	<b>3RV19 03-5B</b> <b>3RV19 03-5C</b> <b>3RV19 03-5E</b> <b>3RV19 03-5G</b>	1 1 1 1	1 unit 1 unit 1 unit 1 unit	101 101 101 101	0.027 0.026 0.026 0.027