

Siemens SIRIUS 3RV / 3RT Motor Starter

Coordination (IEC 60947-4-1)

Siemens · SIRIUS 3RV2 / 3RT2 · Selection and coordination guide

Motor starter architecture

A SIRIUS starter is 3RV2 MPCB + 3RT2 contactor on a 3RA2 wiring kit. The MPCB provides thermal overload + short-circuit magnetic protection; the contactor makes and breaks the motor current on command; the wiring kit connects them and allows parallel busbar feed.

Decoding the 3RV2 catalog reference

3RV2 + 2-char frame + release + terminal + 2-char current. Frames: 01=S00, 21=S0, 31=S2, 41=S3. Release: 1=motor (13x magnetic), 4=13x soft-starters, 7=short-circuit only. Terminal: A=screw, B=spring, K=ring lug. Example 3RV2011-1AA10 = S00, motor, screw, 0.11 - 0.16 A.

Frame vs. AC-3 rating at 400 V

Frame	3RT2 range	AC-3 400V	Motor kW
S00	3RT2015 - 3RT2018	7 - 12 A	3 - 5.5
S0	3RT2023 - 3RT2028	17 - 38 A	7.5 - 18.5
S2	3RT2035 - 3RT2038	40 - 50 A	18.5 - 22
S3	3RT2045 - 3RT2047	65 - 80 A	30 - 45
S6	3RT1054 - 3RT1056	115 - 185 A	55 - 90
S10	3RT1064 - 3RT1066	225 - 300 A	110 - 160
S12	3RT1075 - 3RT1076	400 - 500 A	200 - 250

DOL pairings (partial)

Motor FLC	MPCB range	Contactor	Frame
2.4 A (0.75 kW)	3RV2011-1CA10 (1.8-2.5 A)	3RT2015-1AB01	S00
4.0 A (1.5 kW)	3RV2011-1EA10 (2.8-4.0 A)	3RT2015-1AB01	S00
7.0 A (3.0 kW)	3RV2011-1HA10 (5.5-8.0 A)	3RT2016-1AB01	S00
12.0 A (5.5 kW)	3RV2011-1KA10 (9.0-12.5 A)	3RT2018-1AB01	S00
18.0 A (7.5 kW)	3RV2021-4CA10 (16-22 A)	3RT2025-1AB00	S0
25.0 A (11 kW)	3RV2021-4EA10 (22-32 A)	3RT2026-1AB00	S0
40.0 A (18.5 kW)	3RV2031-4WA10 (35-45 A)	3RT2035-1AB00	S2

Type-1 vs. type-2 coordination

IEC 60947-4-1 defines two categories post short-circuit. Type-1: no operator danger, starter may not be reusable. Type-2: no danger, no damage other than light tip welding cleanable with a screwdriver. Type-2 is the norm on cargo pumps and thrusters. The pairings above are type-2 up to 50 kA prospective SCC at 400 V per the SIRIUS Innovations manual.

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