



Data Sheet



MOVIDRIVE® system/technology
Information Regarding UL



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1 Information regarding UL

INFORMATION



- Use only tested units with a limited output voltage ($V_{\max} = \text{DC } 30 \text{ V}$) and limited output current ($I_{\max} = 8 \text{ A}$) as an external DC 24 V voltage source.
- UL certification does not apply to operation in voltage supply systems with a non-grounded star point (IT systems).

1.1 Field wiring power terminals

- Use 60/75 °C copper wire only.
- Tighten terminals to in-lbs (Nm) as follows:

Tightening torque in-lbs (Nm)				
MDX9_A-...-5_3-..	Line connection		Motor and braking resistor terminals	
0020 - 0160	X1	4.43 – 7.08 (0.5 – 0.8) Wire sizes 14 – 12 AWG	X2	4.43 – 7.08 (0.5 – 0.8) Wire sizes 14 – 12 AWG
0240 - 0320	X1	15.05 – 15.93 (1.7 – 1.8)	X2	15.05 – 15.93 (1.7 – 1.8)
0460 - 0750	X1	75.2 – 84.1 (8.5 – 9.5)	X2	75.2 – 84.1 (8.5 – 9.5)
0910 - 1490	X1	159.3 – 194.7 (18 – 22)	X2	159.3 – 194.7 (18 – 22)
MDX9_A-...-2_3-..	Line connection		Motor and braking resistor terminals	
0070 - 0140	X1	4.43 – 7.08 (0.5 – 0.8) Wire sizes 14 – 12 AWG	X2	4.43 – 7.08 (0.5 – 0.8) Wire sizes 14 – 12 AWG
0213 - 0290	X1	15.05 – 15.93 (1.7 – 1.8)	X2	15.05 – 15.93 (1.7 – 1.8)
0420 - 0570	X1	75.2 – 84.1 (8.5 – 9.5)	X2	75.2 – 84.1 (8.5 – 9.5)
0840 - 1080	X1	159.3 – 194.7 (18 – 22)	X2	159.3 – 194.7 (18 – 22)
All modules	PE connection			
		M4: 8.85 – 10.62 (1.0 – 1.2) M6: 26.55 – 35.4 (3.0 – 4.0)		

1.2 Short circuit current rating

Suitable for use on a circuit capable of delivering not more than

- 5,000/10,000 rms symmetrical amperes when protected by circuit breakers and Type E combination motor controllers as described in the tables below.
- 65,000 rms symmetrical amperes when protected by fuses, circuit breakers and Type E combination motor controllers as described in the tables below.

Max. voltage is limited to 240 V (230 V units only) or 500 V (400 V units only).

1.3 Branch circuit protection

Integral solid state short circuit protection does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes.

- If you use cable cross sections that are dimensioned for a smaller current than the rated current of the unit, make sure that the fuse is dimensioned for the used cable cross section.
- For information on selecting cable cross sections, refer to the project planning manual.
- Comply with the country-specific installation regulations in addition to the above notes.

1.3.1 AC 380 – 500 V devices

MDX9_A-..	SCCR: 5 kA/ 500 V		
	Non semiconductor fuses (currents are maximum values)	Inverse-time circuit breaker (currents are maximum values)	Type E Combination Motor Controller
0020-5x3-4-y (size 1)	-	50 A/500 V min.	Siemens Sirius 3RV2011-1CA10 1.8 – 2.5 A, 480 V
0025-5x3-4-y (size 1)	-	50 A/500 V min.	Siemens Sirius 3RV2011-1CA10 1.8 – 2.5 A, 480 V
0032-5x3-4-y (size 1)	-	50 A/500 V min.	Siemens Sirius 3RV2011-1EA10 2.8 – 4 A, 480 V
0040-5x3-4-y (size 1)	-	50 A/500 V min.	Siemens Sirius 3RV2011-1EA10 2.8 – 4 A, 480 V
0055-5x3-4-y (size 2)	-	50 A/500 V min.	Siemens Sirius 3RV2011-1GA10 4.5 – 6.3 A, 480 V
0070-5x3-4-y (size 2)	-	50 A/500 V min.	Siemens Sirius 3RV2011-1HA10 5.5 – 8 A, 480 V
0095-5x3-4-y (size 2)	-	50 A/500 V min.	Siemens Sirius 3RV2011-1JA10 7 – 10 A, 480 V
0125-5x3-4-y (size 3)	-	50 A/500 V min.	Siemens Sirius 3RV2011-4AA10 10 – 16 A, 480 V
0160-5x3-4-y (size 3)	-	50 A/500 V min.	Siemens Sirius 3RV2011-4AA10 10 – 16 A, 480 V
0240-5x3-4-y (size 4)	-	60 A/500 V min.	Siemens Sirius 3RV2021-4DA10 18 – 25 A, 480 V
0320-5x3-4-y (size 4)	-	60 A/500 V min.	Siemens Sirius 3RV2031-4EA10 22 – 32 A, 480 V
0460-5x3-4-y (size 5)	-	125 A/500 V min.	Siemens Sirius 3RV2031-4VA10 35 – 45 A, 480 V
0620-5x3-4-y (size 5)	-	125 A/500 V min.	Siemens Sirius 3RV2041-4JA10 45 – 63 A, 480 V
0750-5x3-4-y (size 5)	-	125 A/500 V min.	Siemens Sirius 3RV2041-4KA10 57 – 75 A, 480 V

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MDX9_A-..	SCCR: 10 kA/ 500 V		
	Non semiconductor fuses (currents are maximum values)	Inverse-time circuit breaker (currents are maximum values)	Type E Combination Motor Controller
0910-5x3-4-y (size 6)	-	225 A/500 V min.	Siemens Sirius 3RV2041-4YA10 75 – 93 A, 480 V
1130-5x3-4-y (size 6)	-	225 A/500 V min.	-
1490-5x3-4-y (size 6)	-	225 A/500 V min.	-

MDX9_A-..	SCCR: 65 kA/ 500 V		
	Non semiconductor fuses (currents are maximum values)	Inverse-time circuit breaker (currents are maximum values)	Type E Combination Motor Controller
0020-5x3-4-y (size 1)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-1CA10 1.8 – 2.5 A, 480 V
0025-5x3-4-y (size 1)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-1CA10 1.8 – 2.5 A, 480 V
0032-5x3-4-y (size 1)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-1EA10 2.8 – 4 A, 480 V
0040-5x3-4-y (size 1)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-1EA10 2.8 – 4 A, 480 V
0055-5x3-4-y (size 2)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-1GA10 4.5 – 6.3 A, 480 V
0070-5x3-4-y (size 2)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-1HA10 5.5 – 8 A, 480 V
0095-5x3-4-y (size 2)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-1JA10 7 – 10 A, 480 V
0125-5x3-4-y (size 3)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-4AA10 10 – 16 A, 480 V
0160-5x3-4-y (size 3)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-4AA10 10 – 16 A, 480 V
0240-5x3-4-y (size 4)	60 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	60 A/500 V min.	Siemens Sirius 3RV2021-4DA10 18 – 25 A, 480 V
0320-5x3-4-y (size 4)	60 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	60 A/500 V min.	Siemens Sirius 3RV2031-4EA10 22 – 32 A, 480 V
0460-5x3-4-y (size 5)	125 A/600 V Class: J, K-1, RK1, T	125 A/500 V min.	Siemens Sirius 3RV2031-4VA10 35 – 45 A, 480 V
0620-5x3-4-y (size 5)	125 A/600 V Class: J, K-1, RK1, T	125 A/500 V min.	Siemens Sirius 3RV2041-4JA10 45 – 63 A, 480 V
0750-5x3-4-y (size 5)	125 A/600 V Class: J, K-1, RK1, T	125 A/500 V min.	Siemens Sirius 3RV2041-4KA10 57 – 75 A, 480 V
0910-5x3-4-y (size 6)	225 A/600 V Class: J, T	225 A/500 V min.	Siemens Sirius 3RV2041-4YA10 75 – 93 A, 480 V
1130-5x3-4-y (size 6)	225 A/600 V Class: J, T	225 A/500 V min.	-

MDX9_A-..	SCCR: 65 kA/ 500 V		
1490-5x3-4-y (size 6)	225 A/600 V Class: J, T	225 A/500 V min.	-

1.3.2 AC 200 – 240 V devices

MDX9_A-..	SCCR: 5 kA/ 240 V		
	Non semiconductor fuses (currents are maximum values)	Inverse-time circuit breaker (currents are maximum values)	Type E Combination Motor Controller
0070-2x3-4-y (size 2)	-	50 A/500 V min.	Siemens Sirius 3RV2011-1HA10 5.5 – 8 A, 480 V
0093-2x3-4-y (size 2)	-	50 A/500 V min.	Siemens Sirius 3RV2011-1JA10 7 – 10 A, 480 V
0140-2x3-4-y (size 3)	-	50 A/500 V min.	Siemens Sirius 3RV2011-4AA10 10 – 16 A, 480 V
0213-2x3-4-y (size 4)	-	60 A/500 V min.	Siemens Sirius 3RV2021-4DA10 18 – 25 A, 480 V
0290-2x3-4-y (size 4)	-	60 A/500 V min.	Siemens Sirius 3RV2031-4EA10 22 – 32 A, 480 V
0420-2x3-4-y (size 5)	-	125 A/500 V min.	Siemens Sirius 3RV2031-4VA10 35 – 45 A, 480 V
0570-2x3-4-y (size 5)	-	125 A/500 V min.	Siemens Sirius 3RV2041-4JA10 45 – 63 A, 480 V
0840-2x3-4-y (size 6)	-	225 A/500 V min.	Siemens Sirius 3RV2041-4YA10 75 – 93 A, 480 V
1080-2x3-4-y (size 6)	-	225 A/500 V min.	Siemens Sirius 3RV2041-4YA10 75 – 93 A, 480 V

MDX9_A-..	SCCR: 65 kA/ 240 V		
	Non semiconductor fuses (currents are maximum values)	Inverse-time circuit breaker (currents are maximum values)	Type E Combination Motor Controller
0070-2x3-4-y (size 2)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-1HA10 5.5 – 8 A, 480 V
0093-2x3-4-y (size 2)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-1JA10 7 – 10 A, 480 V
0140-2x3-4-y (size 3)	50 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	50 A/500 V min.	Siemens Sirius 3RV2011-4AA10 10 – 16 A, 480 V
0213-2x3-4-y (size 4)	60 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	60 A/500 V min.	Siemens Sirius 3RV2021-4DA10 18 – 25 A, 480 V
0290-2x3-4-y (size 4)	60 A/600 V Class: CA, CB, CD, CF, G, J, K-1, K-5, RK1, RK5, T	60 A/500 V min.	Siemens Sirius 3RV2031-4EA10 22 – 32 A, 480 V
0420-2x3-4-y (size 5)	125 A/600 V Class: J, K-1, RK1, T	125 A/500 V min.	Siemens Sirius 3RV2031-4VA10 35 – 45 A, 480 V
0570-2x3-4-y (size 5)	125 A/600 V Class: J, K-1, RK1, T	125 A/500 V min.	Siemens Sirius 3RV2041-4JA10 45 – 63 A, 480 V
0840-2x3-4-y (size 6)	225 A/600 V Class: J, T	225 A/500 V min.	Siemens Sirius 3RV2041-4YA10 75 – 93 A, 480 V
1080-2x3-4-y (size 6)	225 A/600 V Class: J, T	225 A/500 V min.	Siemens Sirius 3RV2041-4YA10 75 – 93 A, 480 V

1.4 Motor overload protection

The units are provided with load and speed-sensitive overload protection and thermal memory retention upon shutdown or power loss.

The trip current is adjusted to 150 % of the rated motor current.

1.5 Ambient temperature

The units are suitable for a maximum surrounding air temperature of 40 °C, max. 60 °C with derated output current.

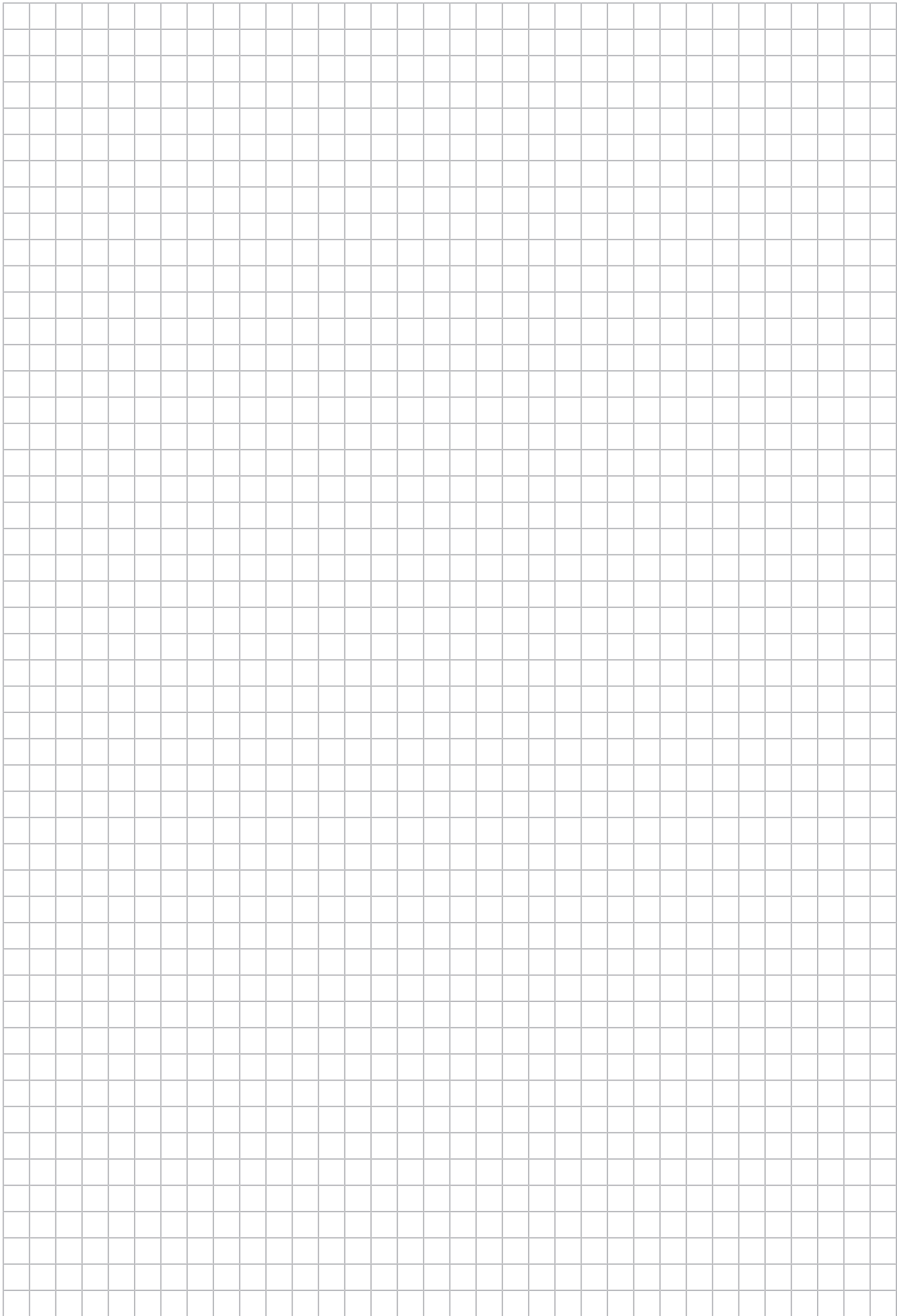
To determine output current rating at higher than 40 °C, the output current should be derated 3.0 % per °C between 40 °C and 60 °C.

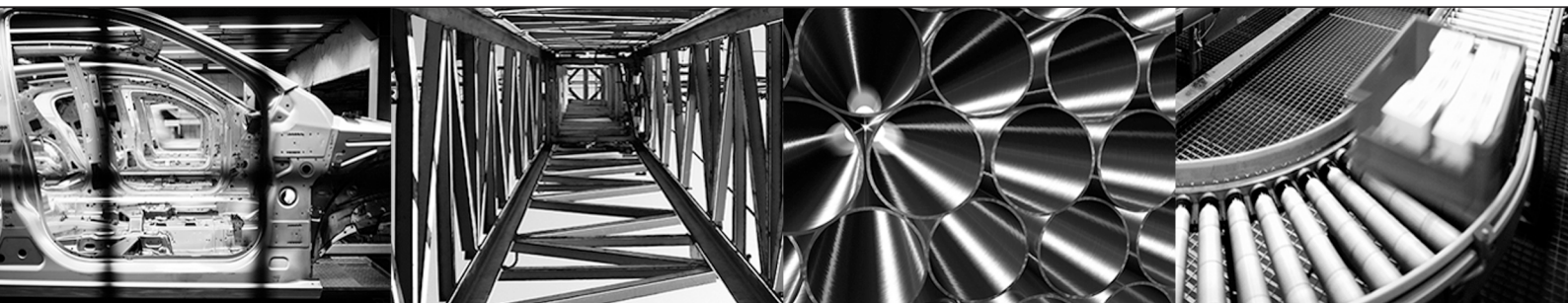
1.6 Environmental conditions

The units are for use in pollution degree 2 environments.

1.7 Wiring Diagrams

For wiring diagrams, refer to chapter "Wiring Diagrams" in Operating Instructions "MOVIDRIVE® system" or "MOVIDRIVE® technology".







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Driving the world

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