North American Electric

Siemens 3RW30-40 Series Reduced Voltage Soft Starter

Visit naemotors.com for download links to this and all other customer manuals and documents

1.0 Common Faults

Most commonly, a fault presented by the 3RW series soft start can be remedied by making adjustments to the parameterization potentiometers on the front of the device. The function of these potentiometers is defined below.

U - Starting Voltage

Ie – Rated Current

t – Ramp Down Time

t – Ramp Up Time

xIe – Starting Current

Starting **CLASS**

U - Sets percentage of full voltage used to start.
Increasing this parameter will increase starting torque but will also increase the heat load to the motor during start up.

t - Sets ramp up time
Increasing this value will extend the time taken for motor to reach full line voltage. If set too long, RVSS will fault to protect motor and SCRs.

t - Sets ramp down time
Increasing this value will extend the time taken for RVSS to reduce the voltage on soft stop.

Ie - Selects rated full load current of Motor

xIe - Max Starting Current
Sets the max allowable current at start.
(i.e. A setting of “5” would allow 5 times the value set with “Ie” above)

CLASS - Selects start class for application
Classes are defined by IEC 947-4-1 per the below table.

Tripping Class	10A	10	20	30
Max. tripping time at 1.5 x setting current (s) (warm state)	120	240	480	720
Tripping time at 7.2 x setting current (s) (cold state)	2 - 10	4 - 10	6 - 20	9 - 30
At 1.05 x setting current	no tripping			

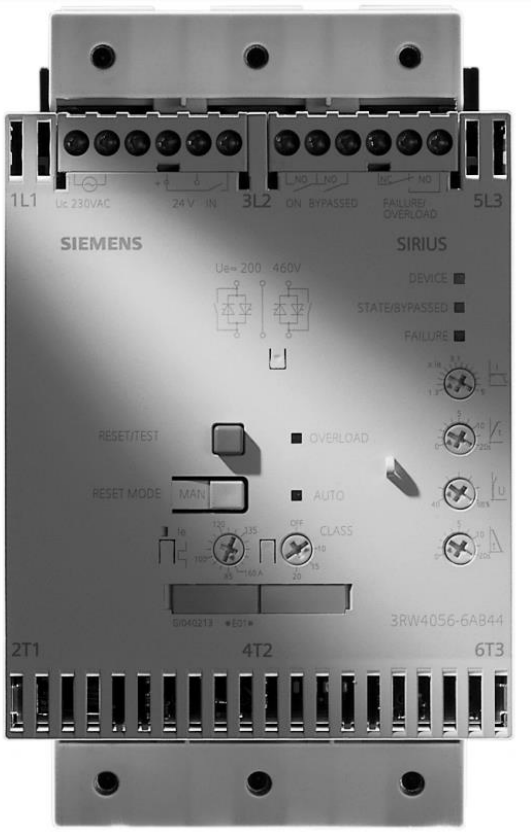
2.0 Frames

The 3RW series of RVSS has several frames available depending on the power required for your system. The ranges of frames are pictured below. You will notice there are two frames available for the 3RW40, however the commissioning process will be the same.

Once you have identified the series of your soft start, proceed to Pg.3 and follow the steps pertaining to your series to commission the soft start.

3RW30

3RW40



3.0 Quick Commissioning

3.1 Quick commissioning of the 3RW30 and optimization of the parameter

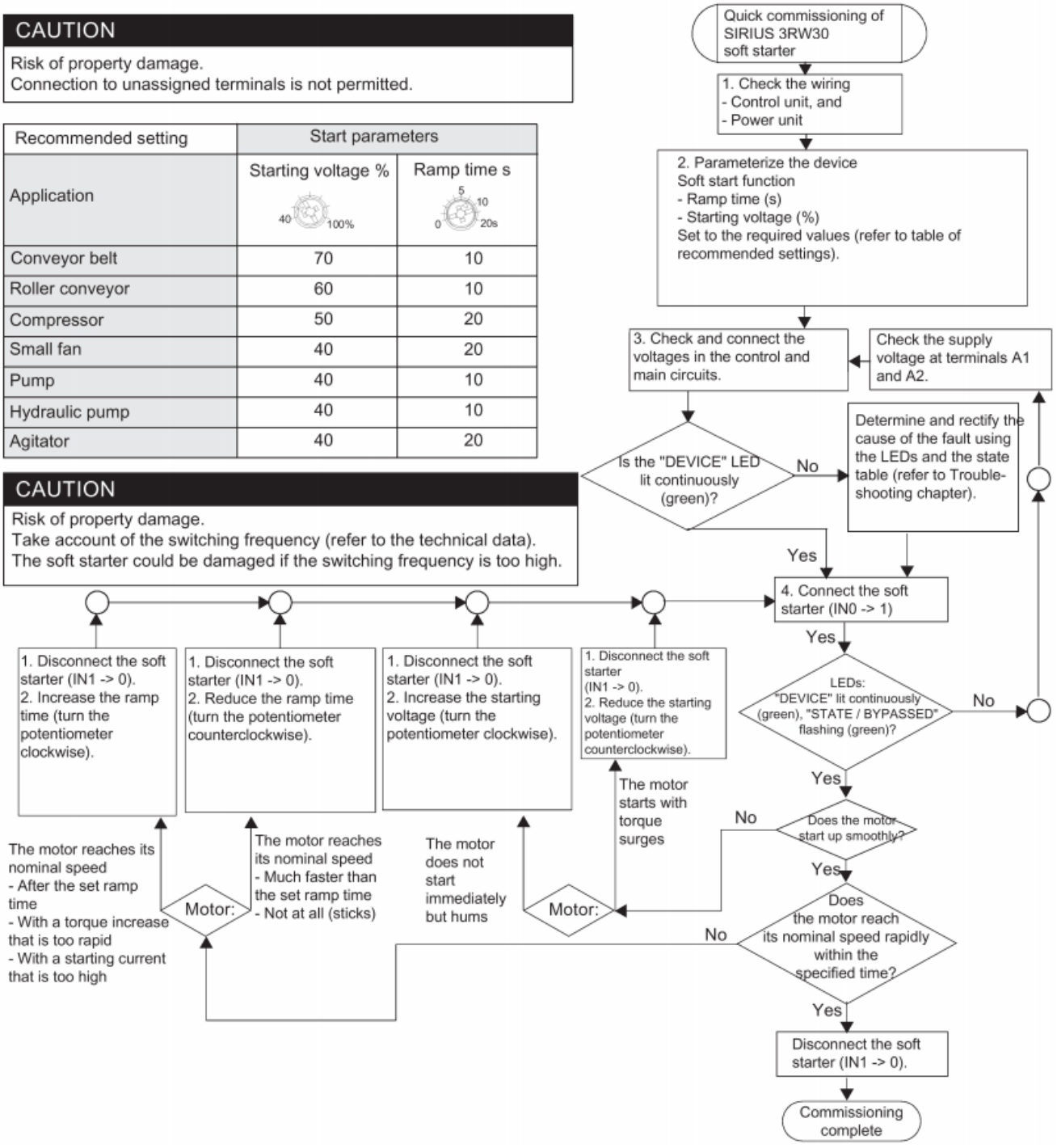
CAUTION

Risk of property damage.
Connection to unassigned terminals is not permitted.

Recommended setting	Start parameters	
Application	Starting voltage % (40 … 100%)	Ramp time s (0 … 5 … 10 … 20s)
Conveyor belt	70	10
Roller conveyor	60	10
Compressor	50	20
Small fan	40	20
Pump	40	10
Hydraulic pump	40	10
Agitator	40	20

CAUTION

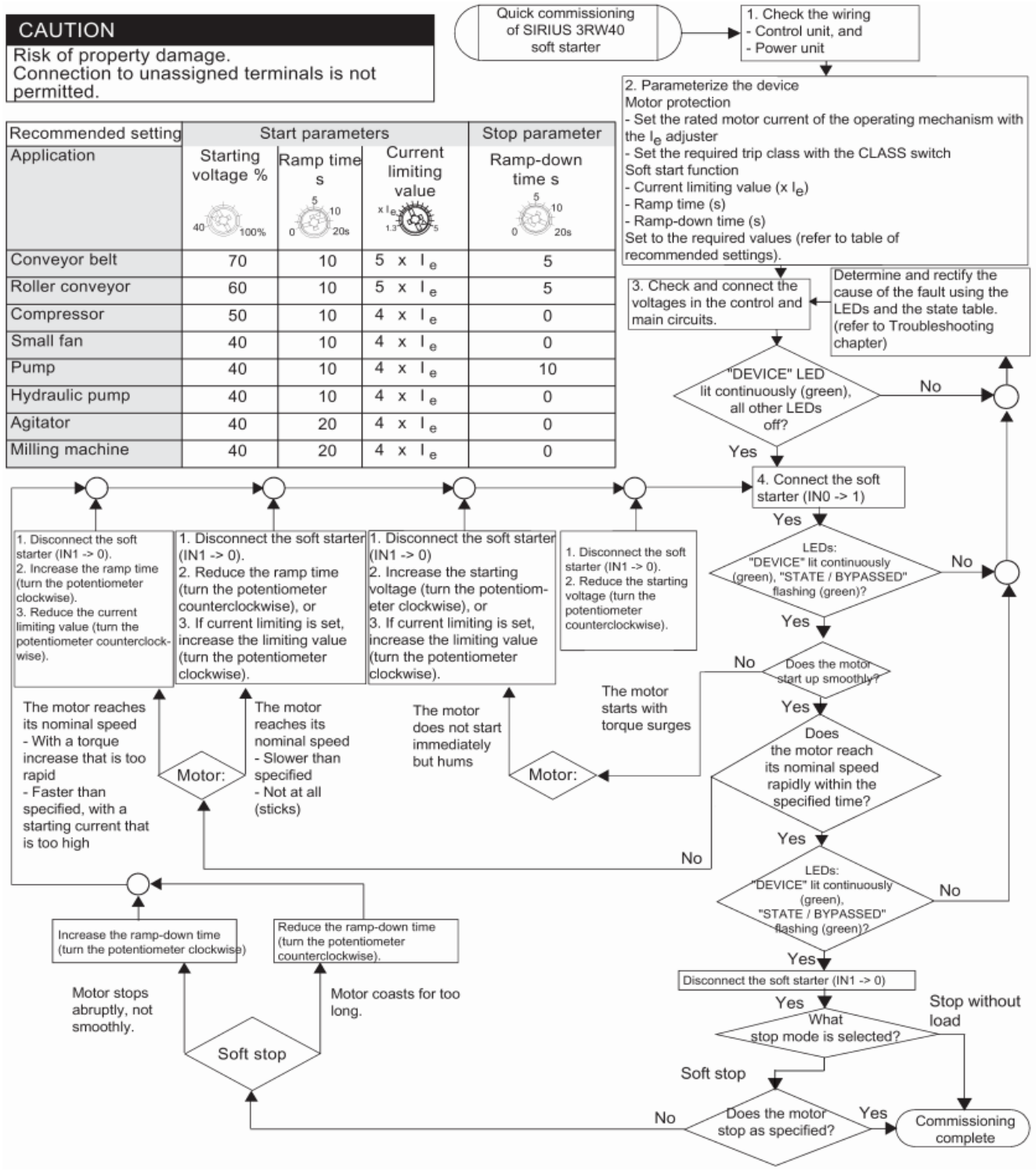
Risk of property damage.
Take account of the switching frequency (refer to the technical data).
The soft starter could be damaged if the switching frequency is too high.



3.2 Quick commissioning of the 3RW40 and optimization of the parameters

CAUTION
Risk of property damage.
Connection to unassigned terminals is not permitted.

Recommended setting	Start parameters			Stop parameter
Application	Starting voltage %	Ramp time s	Current limiting value	Ramp-down time s
Conveyor belt	70	10	5 x I_e	5
Roller conveyor	60	10	5 x I_e	5
Compressor	50	10	4 x I_e	0
Small fan	40	10	4 x I_e	0
Pump	40	10	4 x I_e	10
Hydraulic pump	40	10	4 x I_e	0
Agitator	40	20	4 x I_e	0
Milling machine	40	20	4 x I_e	0



CONTACT INFORMATION:

North American Electric, Inc.

Phone: 662-429-8049 Toll Free (800) 884-0404 Fax: (662) 429-8546
350 Vaiden Dr., Hernando, MS 38632 www.naemotors.com

UL 508A

Motor Controls