

TECHNICAL HINTS



NOTE: SR44 soft starters have been discontinued. Please consider SR55 soft starters as a replacements.

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Technical Hints

Category: General

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| No: 1 | Subject: Motor Configuration |
| If the motor starts OK but stalls as soon as a load is applied, then check the configuration of the motor, i.e., it may be that the motor is meant to be connected in delta but is actually connected in star (wye). | |
| No: 2 | Subject: Kick Start |
| Kick start is not always suitable for use with rolling starts or very light loads. | |
| No: 3 | Subject: Slip-Ring Motors 1 |
| When sizing a single stage of resistors for use with a Soft-Starter, care must be taken to balance the standstill torque requirements against large slips at full voltage. | |
| No: 4 | Subject: Slip-Ring Motors 2 |
| Slip rings may be shorted at partial voltage by forcing a user current limit at start, and then using the current limit timeout flag to control K2 and hence the shorting contactor. | |
| No: 5 | Subject: Commissioning 1 |
| It is a good idea to start by using one of the standard applications. (Refer to 'Applications' Menu Settings in Ch.5) | |
| No: 6 | Subject: Sizing Starters |
| Starters may need to be de-rated for high start frequency, current, ambient temperature, altitude, or long starts. | |
| No: 7 | Subject: Contactors |
| Contactors marked (for example K1) on wiring diagrams are not included within the Soft Starters. | |
| No: 8 | Subject: Soft-Starts |
| Soft-Starters reduce motor starting current at the expense of reducing starting torque and increasing start time. | |
| No: 9 | Subject: Start Time with "Auto Ramp" |
| When "Auto Ramp" is selected, the ramp time is an arbitrary number, with "1" being fastest up to "255" the slowest. The unit will be accelerated to full speed by the microprocessor with a varying ramp profile while trying to keep the start current to a minimum. | |

Technical Hints (continued)

Category: Troubleshooting

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| No: 1 | Subject: Reset Trip |
| Trips can be reset by pressing the '#' key on the keypad, or by changing the Start/Stop l/p to 'Start' if control is set to remote. | |
| No: 2 | Subject: Load (1) |
| The Soft-Starter will trip (8) if a start is attempted with no motor connected on the output. | |
| No: 3 | Subject: Intermittent "7 Sensing Signal" Trip |
| Normally caused by a noisy site. First try increasing the optimize rate; secondly increase trip sensitivity. | |
| No: 4 | Subject: Stopped Cooling |
| This message is displayed during the cooling time (pnu116), and is the period allowed for the unit to cool before a restart. | |
| No: 5 | Subject: Keypad Displays "2 Comms Failure" |
| Check that the unit has its original front cover and keypad. | |
| No: 6 | Subject: No Current Display |
| If the motor current drops below 12.5% I_L while running in "Phase Loss only" or "Start & Bypass", then no value is displayed. | |
| No: 7 | Subject: Cancelled 1 |
| If trying to change from Keypad to Remote Starting with a start signal present, the display flashes "cancelled". | |
| No: 8 | Subject: Commissioning 2 |
| If the Soft-Start trips on overload during the start, check that the starter is large enough for the load. | |
| No: 9 | Subject: "Too Hot" |
| Check ventilation into the cabinet. If the unit has worked for a long time, check fans and airflow through unit. | |

Category: Wiring

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| No: 1 | Subject: When Replacing Star-Delta (Wye-Delta) Starters |
| If you are planning to re-use the existing overload and contactor, ensure that they are sized for the full motor line current; not just for delta-phase current. | |
| No: 2 | Subject: Running Inside the Delta 1 |
| The unit must be set to Firing Mode 1. The current displayed is now the phase current (58% of the line current). | |
| No: 3 | Subject: Running Inside the Delta 2 |
| When running with Firing Mode 1, the maximum cable length between starter and motor is reduced to 50M. | |
| No: 4 | Subject: Running Inside the Delta 3 |
| An in-line contactor must be used when running in the Delta. | |

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