
SELECTIONIX, INC.
WOODINVILLE, WA

SUPERSTEP SERIES 4000
SEQUENCING STEP
CONTROLLERS

SLC4000 TechNote18

Building Management Interface

Soft Start Enable/Disable Control

Introduction

This technical note describes how to configure the Building Management Interface to provide a soft start using a discrete remote enable/disable signal with firmware version 3.11+. This feature may be applied to either a single or an entire multiple boiler configuration. ***The soft start feature provides for a field programmable time to ramp the heat application, to protect against thermal shock. This soft start feature provides the benefit of a gradual application of heat during a cold startup, while not effecting the operational PID response during normal operation.***

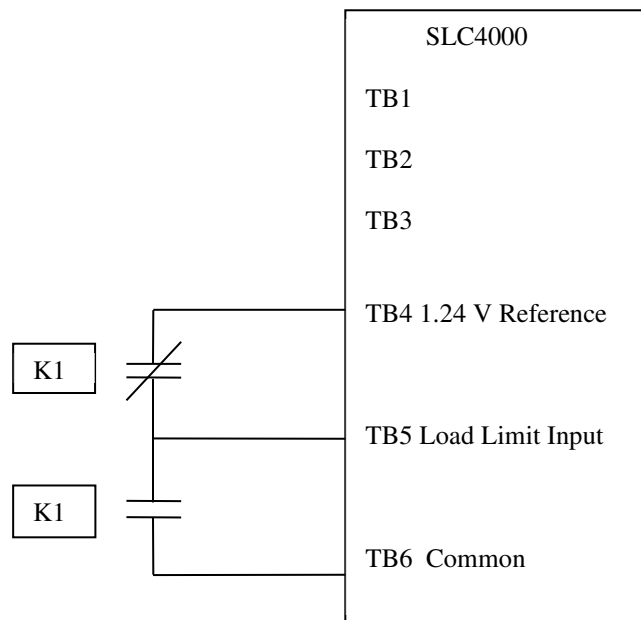
This feature utilizes the hardware load limit control on the master SLC4000. A discrete signal Enables or Disables the boiler(s). For multiple boiler configurations, ALL boilers are sequentially started. The soft start is triggered when the signal transitions from the Disabled state to the Enabled state.

The soft start period is set on the “SLC4000 Information” page of the SLC4075 touchscreen. Enter the period in seconds in the “SS Load Secs” parameter. The DDC load limit control is linearly ramped from 100% to 0%, over this period.

During soft start, the remaining duration is displayed in “SS Ctdn Tmr”.

When the soft start period ends, the Load Limit control is returned to the “S4K Load Limit” hardware interface to resume monitoring of the discrete enable/disable signal.

Soft Start Configuration



Relay or Discrete Switch Closure Wiring Diagram

The above diagram ***Enables the boiler(s) and initiates Soft Start, when the Normally Open contact is closed.***

Reverse the contact set to Disable the boiler(s) when the Normally Open contact is closed.

- Set the Soft Start duration in the SLC4075 SLC4000 Information page “SS Load Secs”
- To disable Soft Start, enter a ‘0’ for the Soft Start duration.

The screenshot shows the 'SLC4000 Information' screen. At the top are three status indicators: a red triangle, a blue line, and a green square. The screen displays various system parameters in a grid. A red box with the text 'No Comm with SLC4000!' is on the left. In the center is a 'AUX DDC' control with a rotary switch. At the bottom are two large blue arrows pointing left and right, and the text 'Page 16'. The 'RED LION' logo is in the bottom right corner. Three callout boxes on the right point to specific values: 'Set Soft Start Duration in seconds' points to 'SS Load Secs: 0', 'Remaining Soft Start seconds' points to 'SS Ctdn Tmr: 0', and 'Soft Start Load Limit' points to 'DDC Ld Lmt %: 0'.

SLC4000 Information					
Qty Sys Rlys:	0	S4K FW Ver:	0.00	Sys Rlys On:	0
Ld Lmt Rlys:	0	SS Load Secs:	0	SS Ctdn Tmr:	0
Aux Cmd %:	0	DDC Step Cmd %:	0	S4K[0] Pct Out	0
S4K Ld Lmt %:	0	DDC Ld Lmt %:	0	S4K[1] Pct Out:	0
S4K On Dly Secs:	0	DDC On Dly Secs:	0	S4K[2] Pct Out	0
S4K Mstr Vnr %:	0	S4K Fault:	0	S4K[3] Pct Out	0

Callouts:

- Set Soft Start Duration in seconds (points to SS Load Secs: 0)
- Remaining Soft Start seconds (points to SS Ctdn Tmr: 0)
- Soft Start Load Limit (points to DDC Ld Lmt %: 0)

Questions?

Contact Selectronix tech support at (425) 788-2979 or techsupport@selectronix.us