



UDC 2500 Application Note

SP Ramp Set Up Group

Introduction

Set Point Ramp, Set Point Programs and Set Point Rates can be configured in this group.

A single *Setpoint Ramp* [SP RAMP] can be configured to occur between the current local setpoint and a final local setpoint over a time interval of from 1 to 255 minutes.

A *Set Point Rate* [SPRATE] lets you configure a *specific rate of change* for any local setpoint change.

A single *Set Point Program* [SP PROG] with up to 12 segments can be configured.

You can start and stop the ramp/program using the **RUN/HOLD** key.

PV Hot Start is a configurable feature and means that, at initialization, the setpoint is set to the current PV value and the Ramp or Rate or Program then starts from this value.

Function Prompts

Table Error! No text of specified style in document.-1 SPRAMP Group (Numeric Code 200) Function Prompts

Function Prompt Lower Display		Selection or Range of Setting Upper Display		Parameter Definition
English	Numeri c Code	English	Numeri c Code	
SP RAMP <i>SP Program must be disabled for SP Ramp prompts to appear</i>	201	DIS ENAB	0 1	<p>SINGLE SETPOINT RAMP—Make a selection to enable or disable the setpoint ramp function. Make sure you configure a ramp time and a final setpoint value. <i>SP Rate and SP Programming must be disabled.</i></p> <p>DISABLE SETPOINT RAMP—Disables the setpoint ramp option.</p> <p>ENABLE SETPOINT RAMP—Allows the single setpoint ramp prompts to be shown.</p>
TI MIN	202	0 to 255 minutes		<p>SETPOINT RAMP TIME—Enter the number of minutes desired to reach the final setpoint. A ramp time of “0” implies an immediate change of setpoint.</p>
FINLSP	203	Enter a value within the setpoint limits		<p>SETPOINT RAMP FINAL SETPOINT—Enter the value desired for the final setpoint. The controller will operate at the setpoint set here when ramp is ended.</p> <p>ATTENTION If the ramp is on HOLD, the</p>



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English	Numeri c Code	English	Numeri c Code	
				<p>held setpoint can be changed by the ▲ and ▼ keys. However, the ramp time remaining and original ramp rate is not changed. Therefore, when returning to RUN mode, the setpoint will ramp at the same rate as previous to the local setpoint change and will stop if the final setpoint is reached before the time expires. If the time expires before the final setpoint is reached, it will jump to the final setpoint.</p> <p>ATTENTION SP RAMP and SP RATE will cause the SP portion of Accutune to abort. PV Tune will continue to function normally. Ramp is placed into HOLD while tuning (TUNE configuration).</p>
SPRATE	204	DIS ENAB	0 1	<p>SETPOINT RATE—Lets you configure a specific rate of change for any local setpoint change.</p> <p><i>If either SP Ramp or SP Programming is active then SPRATE is disabled.</i></p> <p>DISABLE SETPOINT RATE—Disables the setpoint rate option.</p> <p>ENABLE SETPOINT RATE—Allows the SP rate feature.</p>
EUHRUP	205	0 to 9999 in Engineering units per hour		<p>RATE UP—Rate up value. When making a setpoint change, this is the rate at which the controller will change from the original setpoint up to the new one. The ramping (current) setpoint can be viewed as SPn in the lower display.</p> <p>Entering a 0 will imply an immediate change in Setpoint (i.e., no rate applies).</p>
EUHRDN	206	0 to 9999 in Engineering units per hour		<p>RATE DOWN—Rate down value. When making a setpoint change, this is the rate at which the controller will change from the original setpoint down to the new one. The ramping (current) setpoint can be viewed as SPn in the lower display.</p> <p>Entering a 0 will imply an immediate change in Setpoint (i.e., no rate applies).</p>
SPPROG (optional)	207	DIS ENAB	0 1	<p>SETPOINT RAMP/SOAK PROGRAM— Available only with controllers that contain</p>



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English	Numeri c Code	English	Numeri c Code	
feature) <i>SP Ramp must be disabled for SP Program prompts to appear</i>				this option. <i>SP RAMP and SP RATE must be disabled.</i> DISABLE —Disables setpoint programming. ENABLE —Enables setpoint programming. ATTENTION Detailed information for the prompts for SP Programming may be found in <i>the manual – Setpoint Programming</i> . The listing below is only for reference purposes.
STRSEG	208	1 to 11		Start Segment Number
ENDSEG	209	2 to 12 (always end in a soak segment) SOK 2 SOK 4 SOK 6 SOK 8 SOK 10 SOK 12	2 4 6 8 10 12	End Segment Number
RPUNIT	210	TIME EU-M EU-H	0 1 2	Engineering Units for Ramp Segments TIME in hours:minutes RATE in Engineering units per minute RATE in Engineering units per hour
RECYCL	211	0 to 100 recycles		Number of Program Recycles
SOKDEV	212	0 to 100		Guaranteed Soak Deviation Value
PG END	213	LAST (Hold at last SP) FSAF (Manual mode/failsafe)	0 1	Program Termination State
STATE	214	DIS HOLD	0 1	Program State at Program End
ToBEGN	215	DIS KEY (Keyboard)	0 1	Reset/Rerun SP Program
PVSTRT	216	DIS ENAB	0 1	DISABLE —LSP1 is used as the initial ramp setpoint. ENABLE —Current PV value is used as the initial ramp setpoint.
SG1 RP SG3 RP SG5 RP SG7 RP SG9 RP SG11 RP	217 220 223 226 229 232	0-99hours:0- 59minutes Engineering Units/minute or Engineering Units /hour		Segment #1 Ramp Time or Segment #1 Ramp Rate



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Function Prompt Lower Display		Selection or Range of Setting Upper Display		Parameter Definition
English	Numeri c Code	English	Numeri c Code	
SG2 SP SG4 SP SG6 SP SG8 SP SG10SP SG12SP	218 221 224 227 230 233	Enter a Value within the Setpoint Limits		Soak Segments Setpoint Value
SG2 TI SG4 TI SG6 TI SG8 TI SG10TI SG12TI	219 222 225 228 231 234	0-99 Hours:0-59 Minutes		Soak Segments Duration