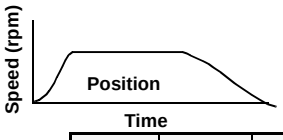
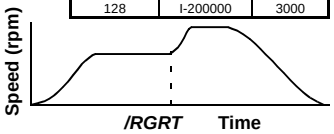
Sigma II Indexer Functional Features and Capabilities

Preset Index Moves: Program Steps (PGMSTEP)



PGMSTEP	POS	SPD
0	I+200000	3000
1	I-100000	2500
2	A+200000	1500
n	—	1500
128	I-200000	3000



PGMSTEP	POS	SPD	RDST	RSPD
0	I+200000	1500	20000	2000
1	I-100000	3000	60000	1000
2	A+200000	1500	15000	1000
n	—	1500	—	1000
128	I-200000	3000	—	1000

One hundred twenty eight directly addressable PGMSTEPS

- PGMSTEPS are stored in non-volatile memory
- Specify either: I = incremental or A = absolute moves:
  Positioning range: ±99,999,999 reference units
  Absolute: Reference units from the home position
- Compatible with absolute encoders
- Separately settable acceleration and deceleration

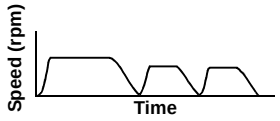
Index moves with Registration

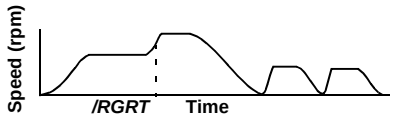
- Supported with high speed input (/RGRT)
- Distance (RDST)
- Speed (RSPD)

Choice of Three Styles of Homing Routines

Optional: Up to 16 Preset Bi-Directional Speed Settings

Looping and Linking





LOOP command

Up to 99,999 times (to facilitate selectable batch counting)

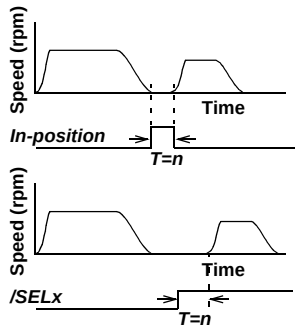
PGMSTEP	POS	SPD	LOOP
0	I+200000	3000	1
1	I+100000	2500	2
2	A+200000	1500	1
n	—	—	—
128	I-200000	3000	1

Linking program steps

NEXT = Go to and start PGMSTEP

PGMSTEP	POS	SPD	RDST	RSPD	LOOP	NEXT
0	I+200000	3000	20000	4000	1	1
1	I+200000	2500	60000	1000	2	End
2	A+200000	1500	15000	1000	1	3
n	—	—	—	—	—	—
128	I-200000	3000	—	1000	1	5

Linking Index Moves with a Combination of Events



In-Position + Time Delay

Time Delay Range: n = 0 to 99,999ms

Input /SELX + Time Delay

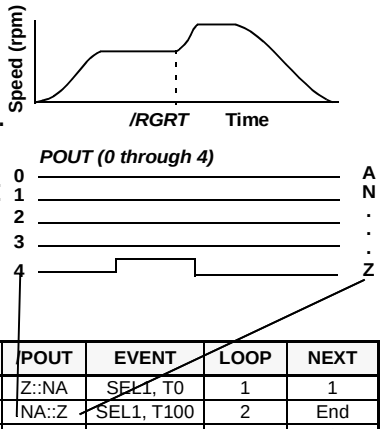
/SELX = choice of seven selectable hardware inputs (/SEL0, /SEL1, etc.)

PGMSTEP	POS	SPD	RDST	RSPD	EVENT	LOOP	NEXT
0	I+200000	1500	20000	1000	SEL1T0	1	1
1	I+200000	3000	60000	1000	SEL3T100	1	End
2	A+200000	1500	15000	1000	IT0	1	3
n	—	—	—	—	—	—	—
128	I-200000	3000	—	1000	NT0	1	5

Setting Outputs

Two ways to set five adjustable outputs

- Set conditions of outputs at the **start** of a PGMSTEP action.
- Set conditions of outputs at the **end** of a PGMSTEP action.
  Example: reserve the next PGMSTEP for P OUT only. *See*: PGMSTEP Number 127 in the table).



Setting Terminology	
Setting	Description
A	Active
N	Non-Active
:	No change from previous state
Z	Zone (PLS-style function)

PGMSTEP	POS	SPD	RDST	RDSP	/POUT	EVENT	LOOP	NEXT
0	I+200000	1500	200000	2000	Z::NA	SEL1, T0	1	1
1	I-200000	3000	60000	1000	NA::Z	SEL1, T100	2	End
2	A+200000	1500	15000	1000	::NZZ	—	1	3
n	—	—	—	—	—	—	—	—
127	—	1000	—	1000	NZZZZ	IT0	1	End
128	I-200000	3000	—	1000	ZZZZZ	DT1000	1	5

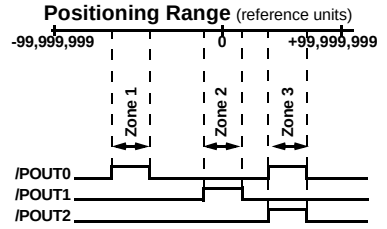
Output Zones

Zone Signal Outputs up to 32 definable zones

Zone Table Example

- IF there is a PGMSTEP that:
  —Indexes in Zone 2 (defined in the table as -10,000,000 to +10,000,000)
- AND
  —Defines /POUT number 1 as Z-output type
- THEN
- —/POUT1 is active within the range
  -10,000,000 to +10,000,000 (as specified in the table)

Zone 2 = 00010_2 (binary) defining active outputs /POUT0 - /POUT4



Zones Defined by Position Limits Zone N and Zone P

Zone Number	Zone N	Zone P	/POUT				
			4	3	2	1	0
0	0	0	—	—	—	—	—
1	-50000000	-30000000	—	—	—	—	X
2	-10000000	+10000000	—	—	—	X	—
3	+20000000	+40000000	—	—	—	X	X
4	0	0	—	—	X	—	—
n	—	—	—	—	—	—	—
31	0	0	X	X	X	X	X

Built-in Routines for Single-Axis Applications

Definable software limits

Hardware limit switch stopping routines

- Coasting
- Decelerating
- Applying dynamic brake

Power loss or alarm stopping routines

- Coasting
- Dynamic braking

Adjustable Holding Brake actuation for vertical loads