

S15 Application Note 1.3.1

Basic Preset Speed Control

How to control the S15 with preset speeds via discrete inputs.

Estimated Time: 10 Minutes

Level: 1

Prerequisite:

- S15 Application Note 1.1.1
Navigating Menus & Parameters

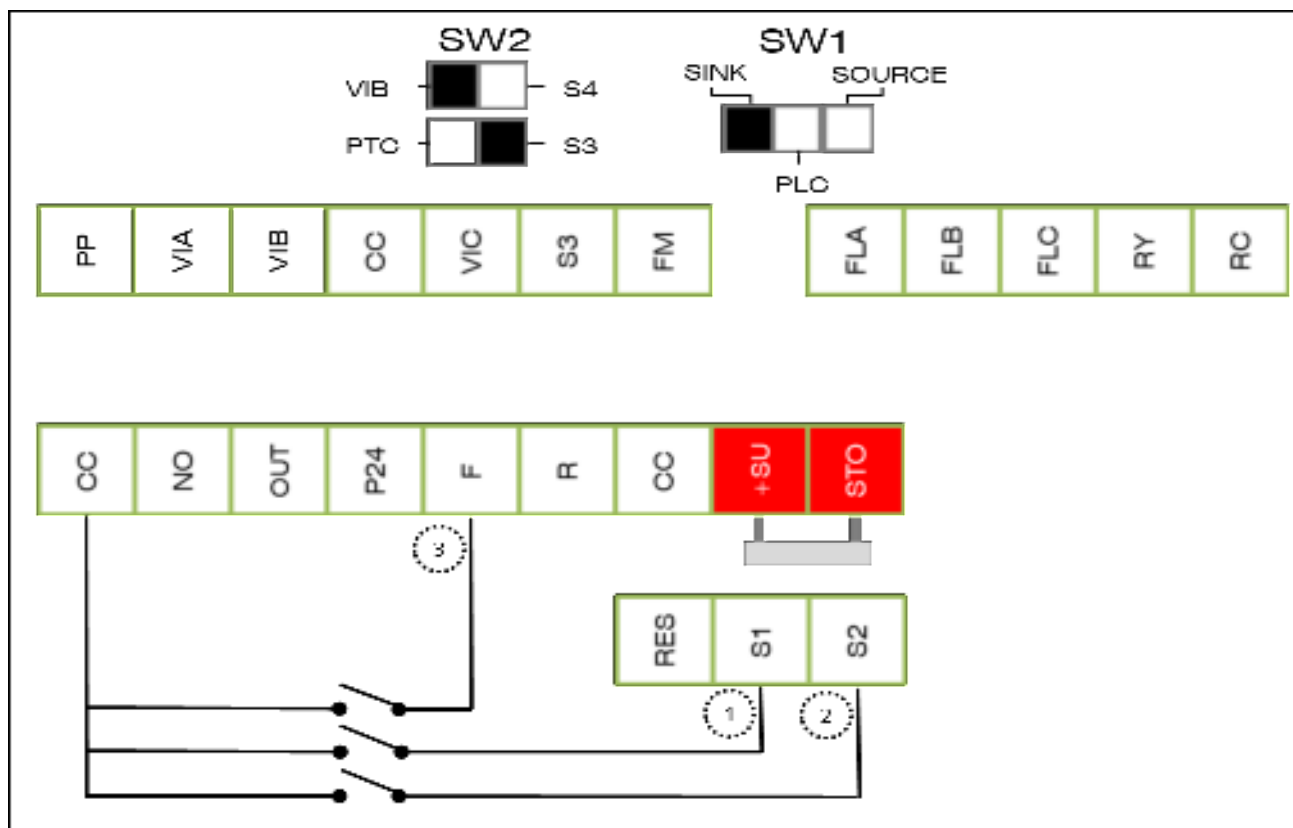
STEP A

Connections

The S15 can be controlled via a preset speed command wired to a discrete input. To illustrate the binary nature of these inputs, only one switch is closed at a time in this example.

Connections for basic preset speed control are shown below.

- Normally open switch that will be used to invoke Preset Speed #1.
- Normally open switch that will be used to invoke Preset Speed #2.
- Normally open switch that will be used for a Forward Run signal.



Check Your Work

- ✓ Use monitor mode to verify the input terminals are activated when the switches are closed.
- ✓ Confirm the wiring matches the diagram above.

STEP B Programming

In this example, program Preset Speed #1 to be 30 Hz and Preset Speed #2 to be 60 Hz.

1. Program Preset Speed #1 for 30 Hz.

Parameter	Description	Default Value	New Value
Sr1	Preset Speed #1	0Hz	30Hz

2. Program Preset Speed #2 for 60 Hz.

Parameter	Description	Default Value	New Value
Sr2	Preset Speed #2	0Hz	60Hz

Note: Preset speed inputs are binary, and follow the sequence of the table below.

Preset-speed logic input signal example: Slide switch SW1 = SINK side
O: ON - OFF (Speed commands other than preset-speed commands are valid when all are OFF)

Terminal	Preset-speed														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
S1-CC	O	-	O	-	O	-	O	-	O	-	O	-	O	-	O
S2-CC	-	O	O	-	-	O	O	-	-	O	O	-	-	O	O
S3-CC	-	-	-	O	O	O	O	-	-	-	-	O	O	O	O
RES-CC	-	-	-	-	-	-	-	O	O	O	O	O	O	O	O

Note: Refer to Section 5.7 in the S15 Instruction Manual (E6582175) for additional information.

Check Your Work

✓ Confirm Preset Speed is programmed to the correct frequency. By default, all Preset Speeds are 0 Hz.

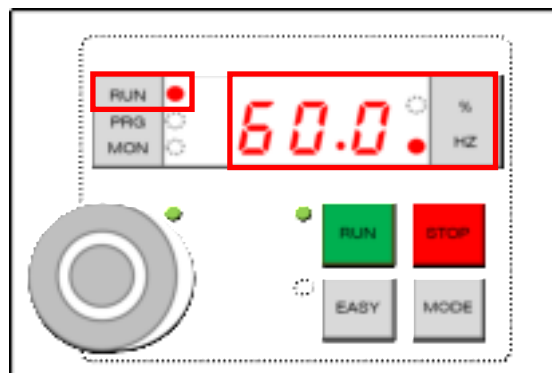
STEP C

Verification

Follow these steps to verify operation of preset speed commands.

1. Close switch 3 to give the drive a forward run signal.
2. Close switch 1 or 2. (Only one of these two switches should be closed at any time.)
3. The drive should run to the corresponding speed shown in the table below.

Switch	Function	Display
3	Fwd Run	F highlights in top right corner.
1	Preset Speed #1	Output frequency is 10.0 Hz.
2	Preset Speed #2	Output frequency is 30.0 Hz.



Check Your Work

- ✓ Confirm the drive runs when switch 3 and switch 1 or 2 are closed.
- ✓ Verify the output frequency.
- ✓ Confirm the drive decelerates to a stop when switch 3 is open.