

S11 APPLICATION GUIDELINE 10.1

Multi-Motor Connection

Introduction

A Toshiba ASD can be used to run more than multiple motor motors at the same time. However, some special considerations need to be addressed. This app note will cover considerations for the selection of the drive and connection of the motors to be operated

Selection of the VFD

When Selecting the VFD to operate multiple motors, follow these guidelines:

- 1) Use the same motor's HP rating and voltage.
- 2) Use a separate overload relay for each motor according NEC guidelines.
- 3) The auxiliary contacts on the overload relays should be connected in series and connected to an Emergency Stop input (S3) on the S11 so that if one overload opens, the drive shuts down.
- 4) Make sure the sum of the motors amperage + 10% (do not include service factor) is less than the ASD's full load amps(FLA)

$$1.1 \times n \times FLA_{motor} \leq FLA_{ASD}$$

Where *n* is the number of motors to be connected.

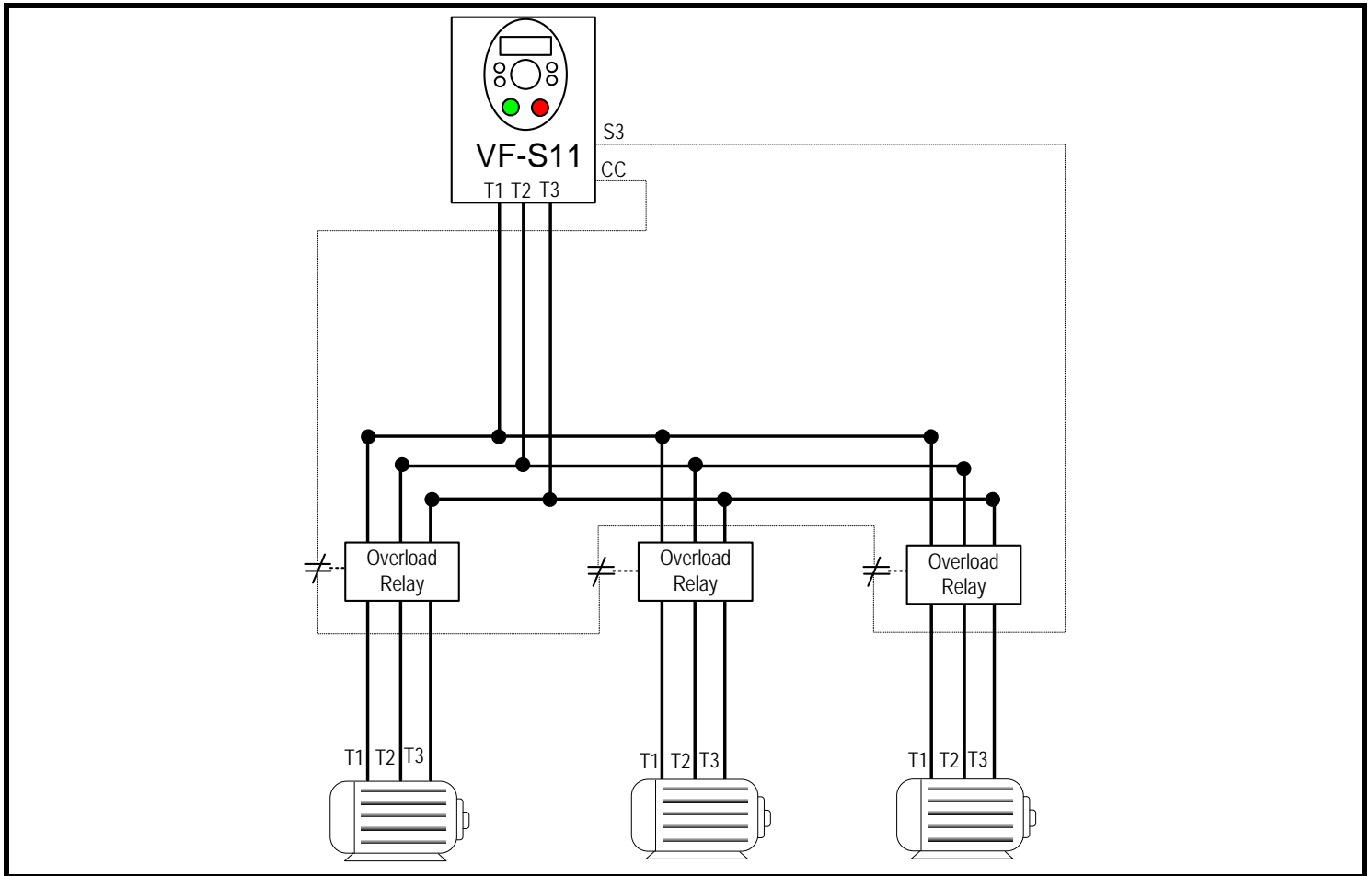
- 5) Make sure the total motor lead length is lesser than 600ft (The sum of all motor lead length's).
- 6) Use V/f constant Volts/Hz pattern .

Programming

Parameter	Description	Default Value	New Value
ϵHr^*	Motor Electronic Protection	100%	100%
F116	Input Terminal Selection 6 (S3)	8 (SS3)	45 (EXTN)

*Note: Do not change the drives motor electronic thermal protection level from 100%

Connections



Revision History

Rev.	Date	Written/Revised By	Approved By	Description
10.2	6/23/2011	Joshua Austin	Eric Houg	Modified parameter table, and simple rewording. Revised to incorporate document control requirements.

For additional assistance, please contact Toshiba Adjustable Speed Drive Marketing Dept. at (800) 231-1412 ext. 2092