



CUSTOM SOFTWARE DESCRIPTION

RUN INHIBIT

Software Number: VSP018221		Base Version: VSP010025	
Product: V7 Low HP		Part Number: CIMR-V7AMXXXX-041	
Release Date: See Rev. History	Author: Ty Phillips	<input type="checkbox"/> Beta Version	
Overview: Forward and Reverse Run Inhibit multi-function inputs are added.			

Revision History:				
	VSP018220	First version	5/2/02	S. Sokuza
<1>	VSP018221	Added contact type selection parameter	5/7/02	Ty Phillips

Background:

Forward and Reverse Inhibit multi-function inputs are specifically designed for drives used in simple linear motion applications. By connecting the limit switches at opposite ends of the linear slide, operation in the forward or reverse direction can be inhibited. This prevents damage to machinery while still allowing motion on the opposite direction to come “off” the limit switch.

Additional Parameters:

No.	Parameter Description	Unit	Setting Range	Default	Access Level
n045	Fwd/Rev Inhibit Mode 0: Run Command Cycle Not Required 1: Run Command Cycle Required	-	0 ~ 1	1	1st function
<1> n046	Fwd/Rev Inhibit Contact Type 0: N.O. 1: N.C.	-	0 ~ 1	1	1st function

Additional Multi-function Input Settings:

These selections apply to parameters n050 ~ n056 (Terminals S1 ~ S7).

Setting	Description
28	Forward Run Inhibit
29	Reverse Run Inhibit

Additional Alarms:

Display	Description
FL	Forward Limit (Forward Run Inhibit Input Closed)
RL	Reverse Limit (Reverse Run Inhibit Input Closed)

Description of Functionality:

When the Forward Run Inhibit multi-function input is open^{<1>} and the inverter is running in the forward direction, it will stop by the method selected in n005. The inverter can only be run in the reverse direction while the Forward Run Inhibit input is open^{<1>}. If the forward run command is still in place when the Forward Run Inhibit input closes^{<1>}, and n045 = 0, the inverter will restart. If n045 = 1, the run command must be cycled.

When the Reverse Run Inhibit multi-function input is open^{<1>} and the inverter is running in the reverse direction, it will stop by the method selected in n005. The inverter can only be run in the forward direction while the Reverse Run Inhibit input is open^{<1>}. If the reverse run command is still in place when the Reverse Run Inhibit input closes^{<1>}, and n045 = 0, the inverter will restart. If n045 = 1, the run command must be cycled.

The digital operator will flash “FL” when the Forward Run Inhibit multi-function input is closed. It will flash “RL” when the Reverse Run Inhibit input is closed.

The above functionality is valid when n046 = 1 (N.C. contact type selected). When n046 = 0 (N.O. type contact selected), operation is identical except the Forward and Reverse Run Inhibit commands become active when the corresponding multi-function input is closed.^{<1>}

Timing Charts:

Fig. 1 – Terminal control (2-wire) with n045 = 0

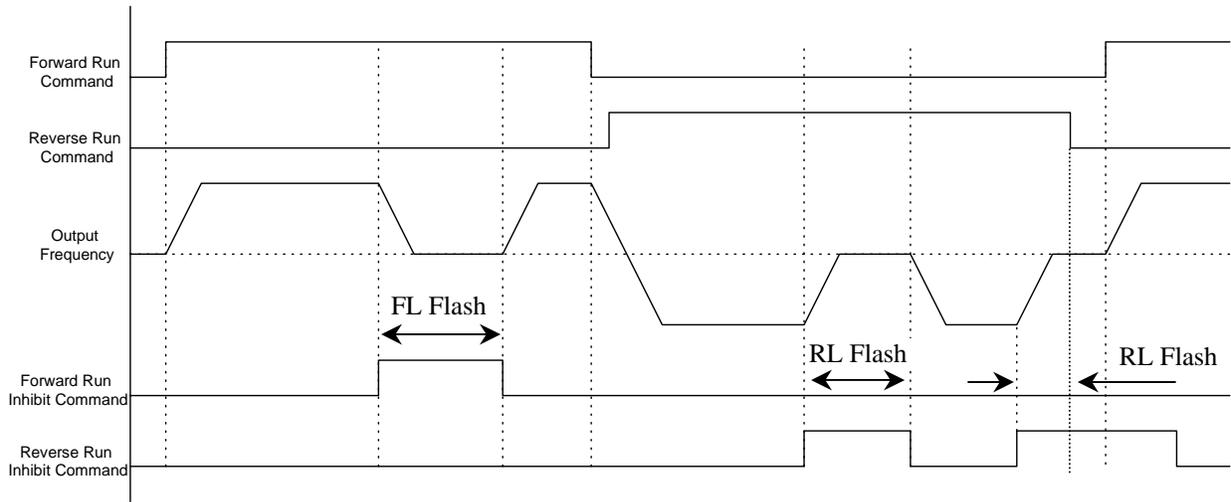


Fig. 2 – Terminal control (2-wire) with n045 = 1

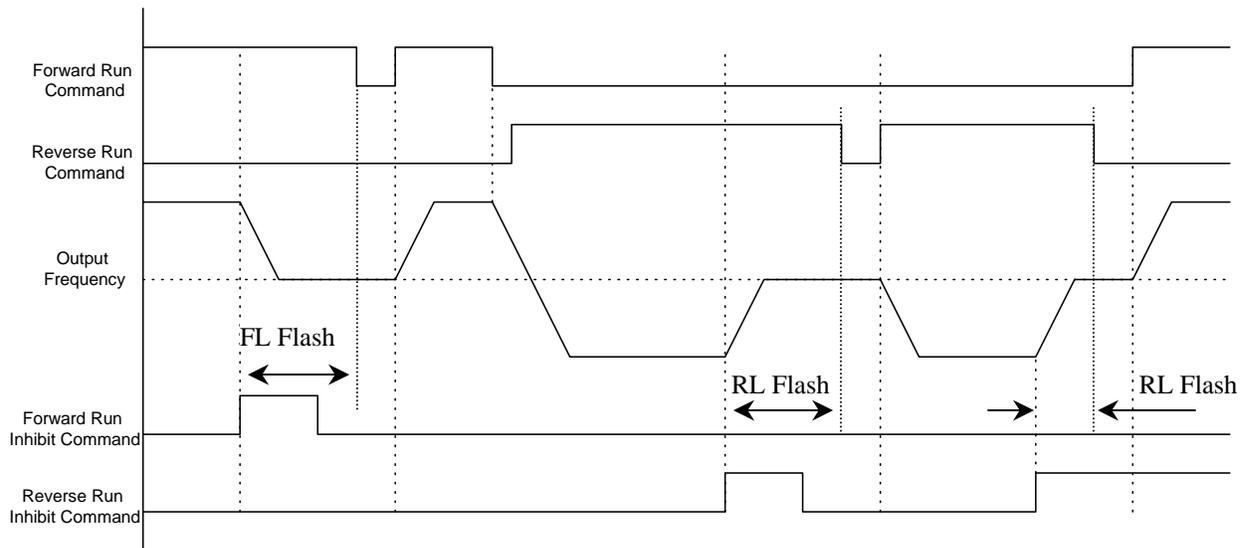


Fig. 3 – Terminal control (3-wire) or local control (n045 setting irrelevant)

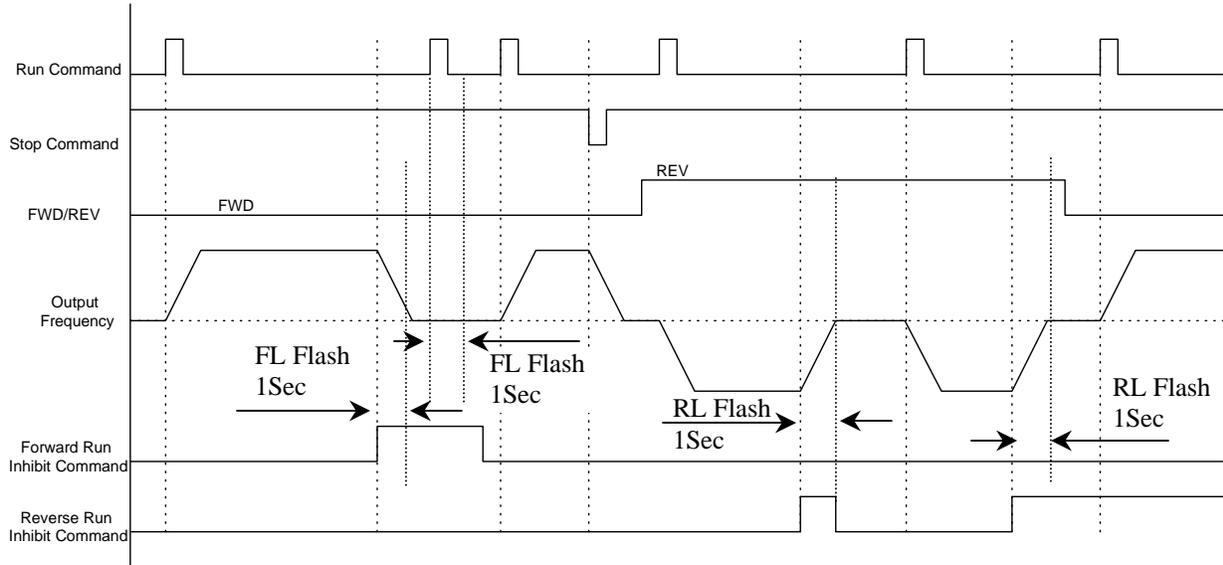


Fig. 4 – Control by serial communication with n045 = 0

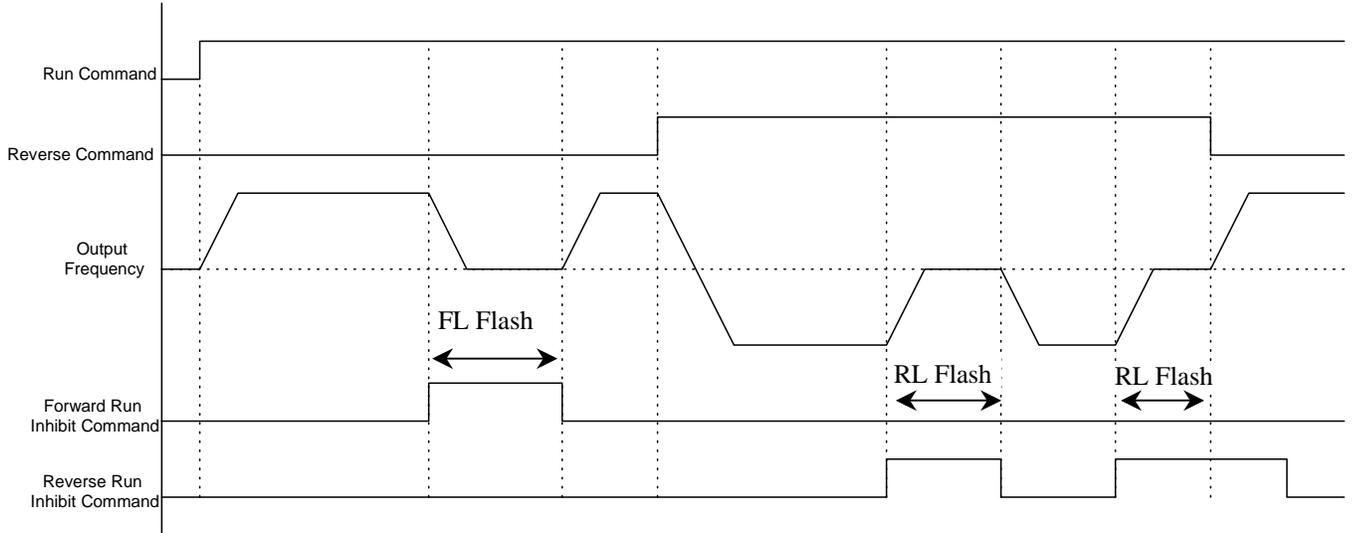
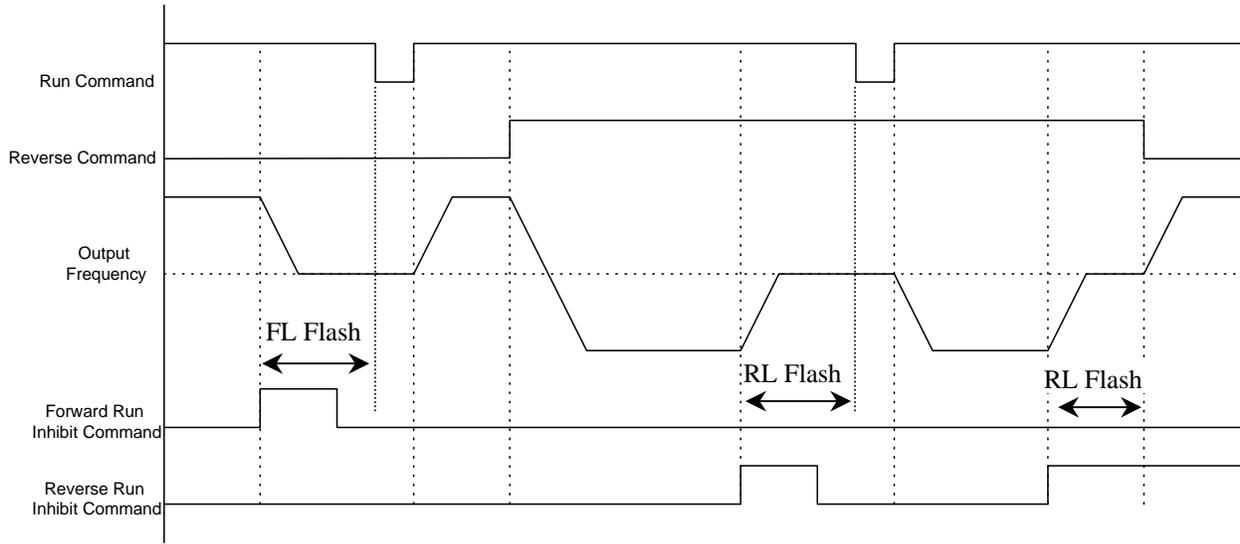


Fig. 5 – Control by serial communication with n045 = 1



Block Diagram.

