

<b>APPLICATION NOTE</b>	<b>FECA-AN-143</b>
<b>HAND – OFF – AUTO Switch Wiring Setup and Parameters</b>	

<b>Inverter type</b>	FRENIC-Eco series
<b>Software version</b>	All versions
<b>Required options</b>	None
<b>Related documentation</b>	-
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### Introduction:

This application note will address the wiring and parameter settings for using a HAND – OFF - AUTO (HOA) switch to control a **FRENIC-Eco** drive.

### Terminology

HAND – Frequency controlled locally either from keypad or by hand from panel, Run command controlled by hand from panel

OFF – Drive is stopped, still has power

AUTO – Frequency and Run commands controlled remotely

### Common Examples

Typical uses of this application include operating under following conditions:

HAND – Drive is controlled either from keypad or panel.

OFF – Drive stops.

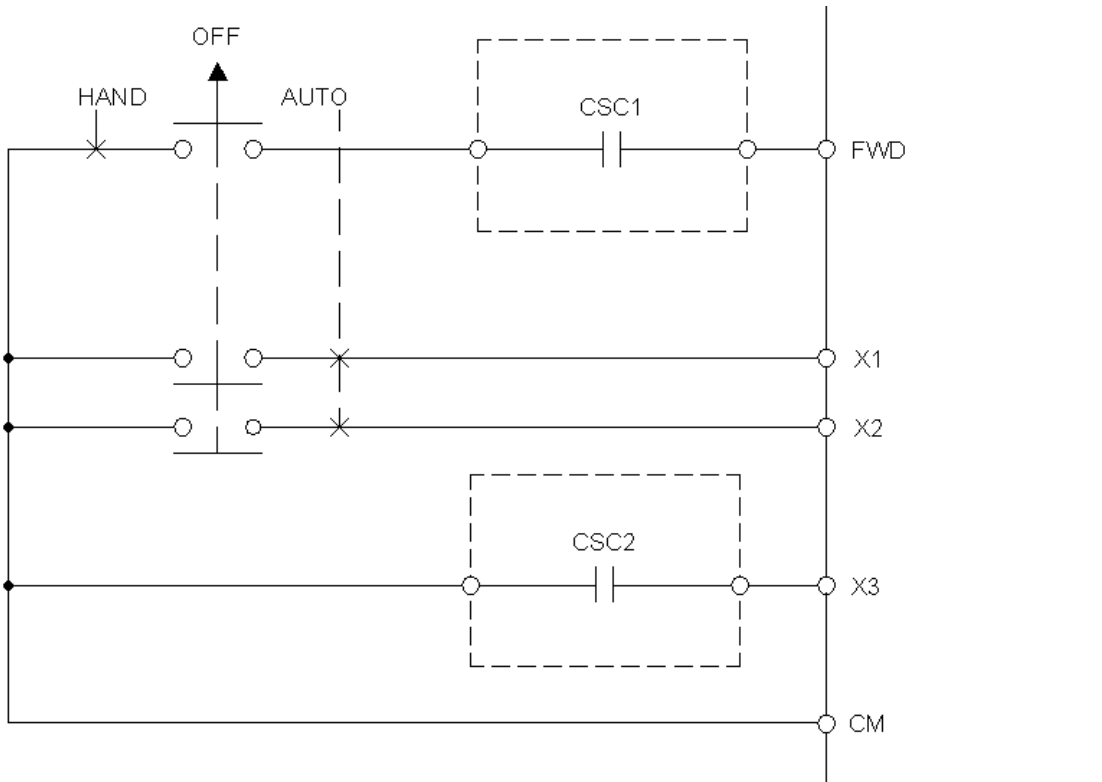
AUTO – Drive controlled by PLC. Forward Run command given by dry contact closure (wired in series with AUTO dry contact) creating an electrical short between the drive's **FWD** and **CM** terminals. The speed controlled by 0-10VDC signal from PLC going to drive terminals **11** and **12**, **11** and **V2**, or 4-20mA signal to terminals **11** and **C1**.

### Parameters:

Code	Setting	Name
F01	0 (Keypad) [default] 1 (0-10VDC to terminal <b>12</b> ) 2 (4-20mA to terminal <b>C1</b> ) 3 (Sum of V and mA to <b>12</b> and <b>C1</b> ) 5 (0-10VDC to terminal <b>V2</b> ) 7 (Enable terminal UP/DOWN control)	Frequency Command 1 (HAND)
F02	1 (Terminal FWD/REV)	Run Command (HAND)
E01	11 (Switch frequency command)	X1 Terminal Function (AUTO)
C30	0 (Keypad) 1 (0-10VDC to terminal <b>12</b> ) 2 (4-20mA to terminal <b>C1</b> ) [default] 3 (Sum of V and mA to <b>12</b> and <b>C1</b> ) 5 (0-10VDC to terminal <b>V2</b> ) 7 (Enable terminal UP/DOWN control)	Frequency Command 2 (AUTO)
E02	87 (Switch Run command)	X2 Terminal Function (AUTO)
E03	88 (FWD 2)	X3 Terminal Function (AUTO)

### Switch Wiring

- When in HAND position, HAND contact is closed. Forward run command given by closing customer supplied contact 1 (CSC1) wired in series with HAND contact. Frequency is controlled by F01 setting.
- When in OFF position, all HAND and AUTO contacts opened.
- When in AUTO position, all AUTO contacts closed. Forward run command is given by closing customer supplied contact 2 (CSC2). Frequency is controlled by C30 setting.



Note: For more information refer to **FRENIC-Eco Instruction Manual (INR-SI47-1225-E)**.