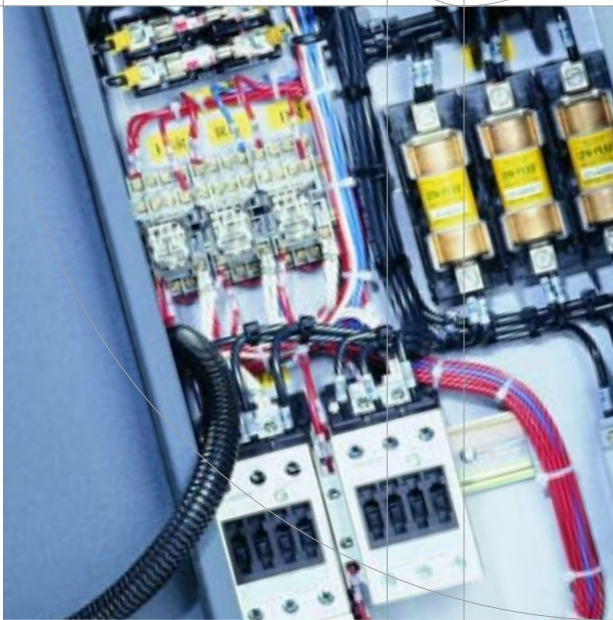




# SIEMENS

HVAC Products

## Bypass Packages for SED2 HVAC Drives



# Bypass Packages for SED2 Variable Frequency Drives

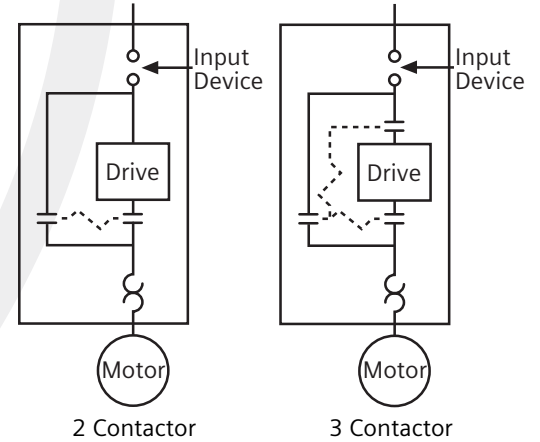
## Bypass Power Features

### By-pass

- 2 Contactor – Output & Bypass
  - Overload protection in bypass mode
  - Step down transformer with fused primary and secondary
  - Contactors electrically and mechanically interlocked
- 3 Contactor (optional)– Input, Output & Bypass
  - provides drive test
  - provides complete electrical isolation of drive

### Input Device

- Disconnect
- Fused Disconnect (optional)
- Circuit Breaker (optional)
- All doors are interlocked and padlockable



### Reactor Options

- 3% Line mounted in bypass enclosure
- 3% Line (in NEMA 1 enclosure) supplied separately
- Load reactor mounted in bypass enclosure
- Load reactor (in NEMA 1 enclosure) supplied separately

## Standard Bypass Control Features

Our new Bypass package is designed as a companion to our new SED2 family of HVAC variable frequency drives

### Auto Bypass

- Relay logic allows the user to send the motor to bypass mode based on the drive's programmable relay.
- The drive's programmable relay is typically set to fault. Can be set-up for applications that run full speed for an extended period of time.

### Enable Input

- Generally used for safety tie-ins. The drive or bypass will not operate the motor when open.

### Common Remote Start/Stop

- Common remote start/stop can be used in both drive and bypass mode.

### Essential Services Mode (Smoke Purge)

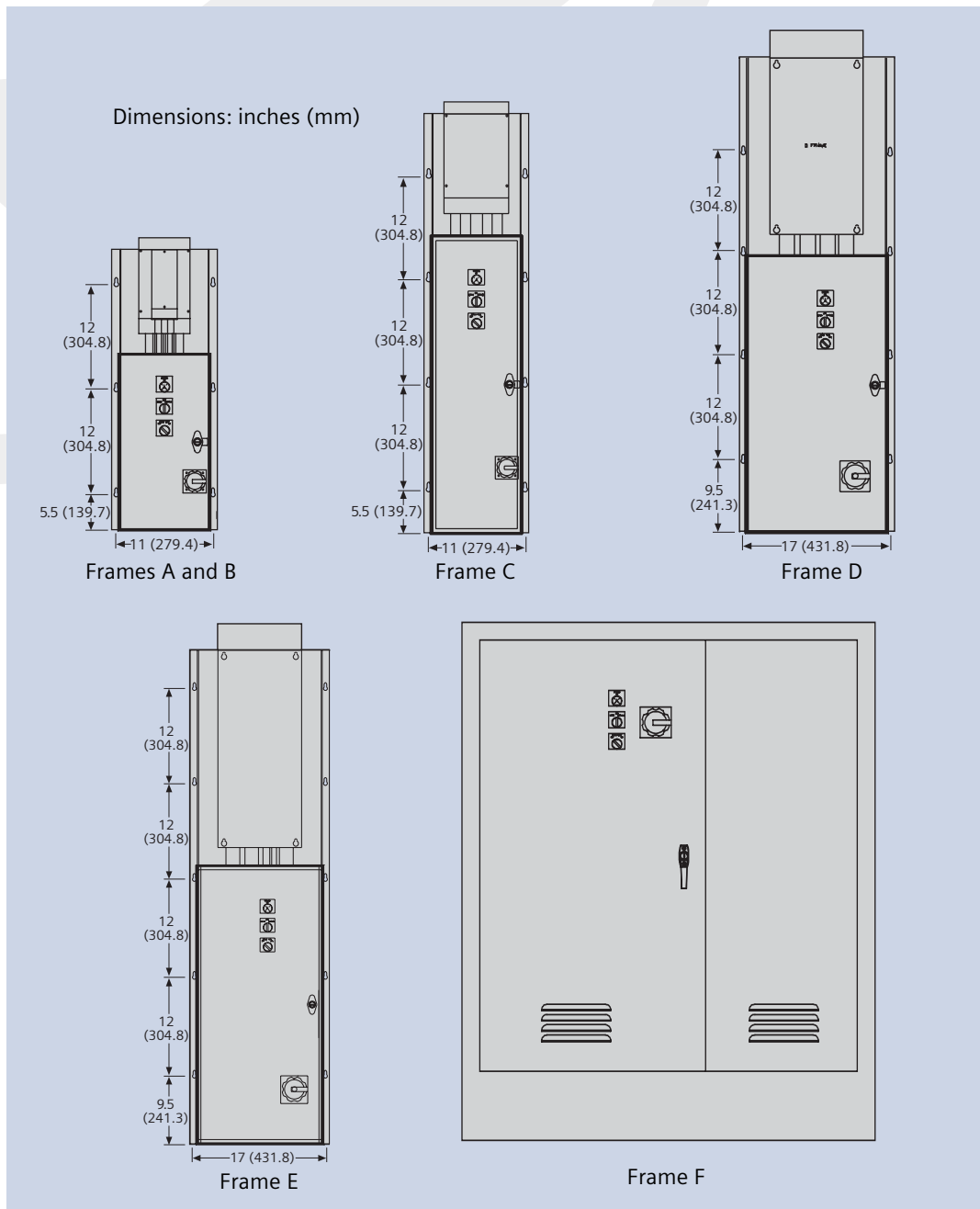
- Typically used for smoke purge. The motor goes to bypass regardless of selected mode.
- No call to stop will have an effect including open safety or stop command.
- Only turning the power off or opening this contact will stop the motor.



## Frame Sizes Dimensions: inches (mm)

Frame Size	Height	Width	Depth
A and B	36.0 (914)	12.0 (305)	8.3 (211)
C	49.0 (1245)	12.0 (305)	9.7 (244)
D	57.5 (1461)	18.0 (457)	11.3 (287)
E	66.5 (1689)	18.0 (457)	11.3 (287)
F	60.0 (1524)	48.0 (1219)	17.0 (432)

## Mounting Hole Dimensions



## Bypass – Door Mounted Control Devices

### 2 Contactor Units

- “Drive-Off-Bypass” selector
- “Bypass” pilot light

### 3 Contactor Units

- “Drive-Off-Bypass” selector
- “Bypass” pilot light
- “Drive Test on/off” selector

## VFD and Bypass Part Number Configuration Guide

	V	B	A	3	4	0	.	F	1	2	0	X
<b>Model(s)</b>	VB A 3 4 0 . F 1 2 0 X											
<b>VB</b>	VFD with bypass											
<b>Series</b>	A Conventional Control											
<b>Voltage</b>	1 208 V 2 230 to 240 V 3 380 to 480 V 4 500 to 600 V											
<b>HP rating</b>	0.5, 0.7, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 7.5, 10., 15., 20., 25., 30., 40., 50., 60., 75., 100, 125											
<b>Disconnect</b>	D Disconnect F Fused Disconnect B Circuit Breaker (Available soon)											
<b>NEMA rating</b>	1 NEMA Type 1 5 NEMA Type 12 (Available soon)											
<b>Contactors</b>	2 2 Contactors 3 3 Contactors											
<b>Reactor</b>	0 None 3 3% Line Reactor (mounted/wired internally)* L Load Reactor (mounted/wired internally)*											
<b>Other</b>	X											

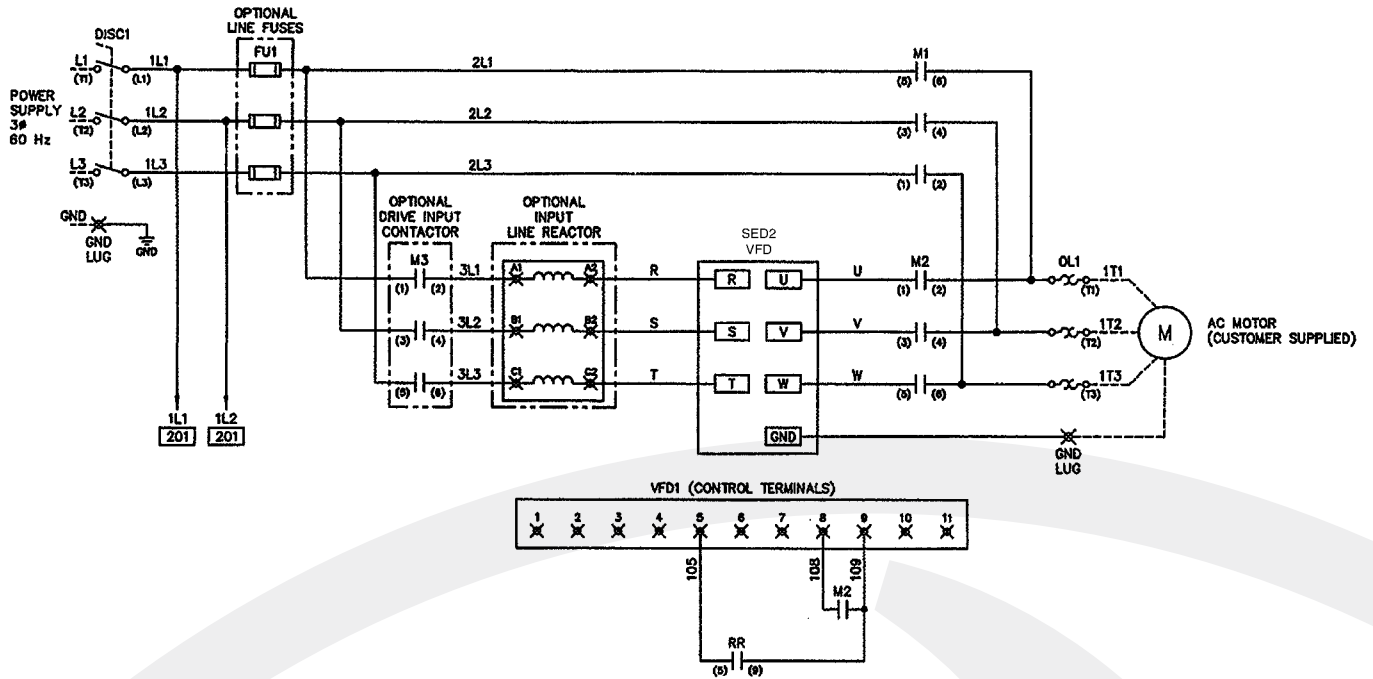
Example shown above:  
VBA340.F120 = VFD with bypass, 480V, 40Hp, fused disconnect, NEMA 1, 2 contactors

\*Only one can be installed inside bypass enclosure. If both are required, a separate enclosed reactor is required.

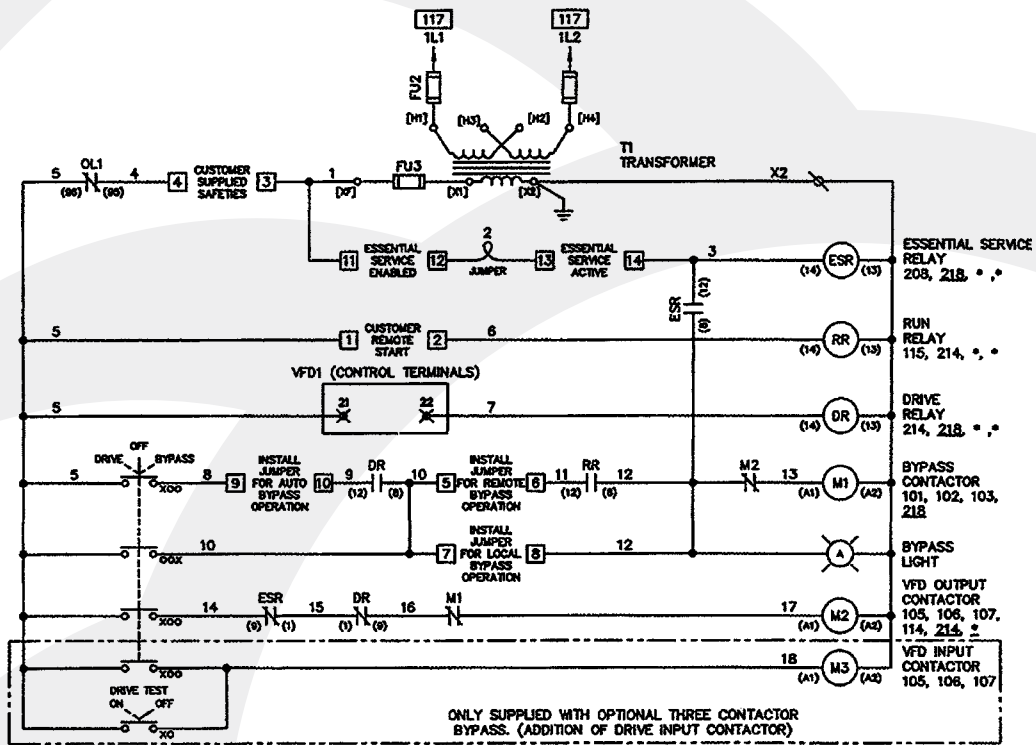
## VFD with Bypass Ratings Tables (Maximum Full Load Amps)

HP →	.5	.75	1	1.5	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125
208V	2.2	3.1	4.0	5.7	7.5	10.6	16.7	24.2	30.8	48.2	59.4	74.8	88	114	143	169	211	273	343
230V	2	2.8	3.6	5.2	6.8	9.6	15.2	22	28	42	54	68	80	104	130	154	192	248	312
460V	1	1.4	1.8	2.6	3.4	4.8	7.6	11	14	21	27	34	40	52	65	77	96	124	156
575V	.8	1.1	1.4	2.1	2.7	3.9	6.1	9	11	17	22	27	32	41	52	62	77	99	125

# Power Connection Diagram



# Control Logic Diagram (Typical 120V circuit)



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