

SED2-BT300-F-7 Migration Kit

Product Description

This kit contains the parts needed to reconfigure an existing SED2 Drive (with Bypass option) with a BT300 HVAC Drive.

Contents

- Cover, FS7 to FSF
- Conduit Adapter Plate
- Conduit and Fittings
- Terminal Block Assembly - Not Shown
- Hardware Kit - Not Shown
- BT300 Mounting Template - Not Shown

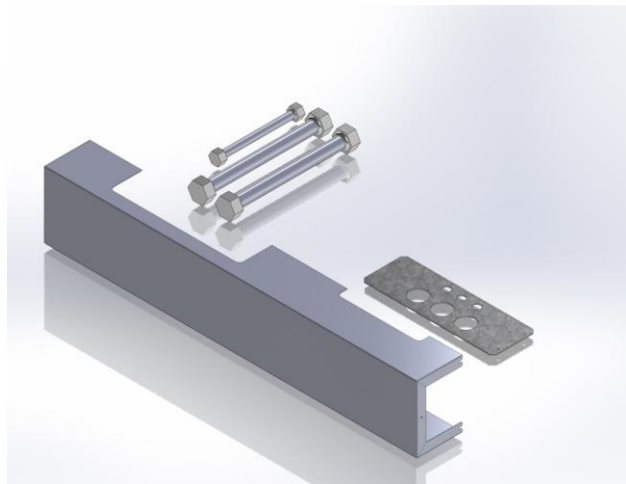


Figure 1. SED2-BT300-F-7 Contents.

Product Number

SED2-BT300-F-7
Migration Kit, SED2 FSF to BT300 FS7

- 480 Vac: 75 hp

Warning/Caution Notations

WARNING:		Personal injury or loss of life may occur if you do not follow the procedures as specified.
CAUTION:		Equipment damage or loss of data may occur if you do not follow the procedures as specified.

Required Tools

- Small, flat-blade screwdriver
- Small and large Phillips screwdriver
- Wire stripper
- T20 Torx
- 13 mm socket
- 13 mm open end wrench
- 7/16" socket
- 7/16" open end wrench

Expected Installation Time

90 minutes

Prerequisites



WARNING:

Disconnect and lock-out all power, and wait at least five minutes before beginning installation.

- Read these Installation Instructions in their entirety prior to beginning installation.
- Read the *SED2 to BT300 Migration Guide* (125-1005) prior to beginning installation.
- All wiring must conform to national and local codes and regulations (NEC, CE, and so on).

Installation

Remove the Existing SED2 Drive

1. Disconnect power.



WARNING:

Always wait five minutes after disconnecting the SED2 from the power source before performing any work.

2. Remove right side and lower covers from existing SED2 Drive to expose power and control wiring.

3. Disconnect existing power and control wiring from the SED2 Drive.
4. Remove and retain two screws from both ends of existing 994-944-01 Cover.
5. Remove and discard the 994-944-01 Cover from the 994-943 Stand.
6. Pull existing power and control wiring from the existing SED2 Drive into the 994-943 Stand cavity.
7. Remove four nuts and washers from the SED2 Drive mounting studs.
8. Remove the 994-001 Dust Cover and SED2 Drive from the bypass.



Figure 2. Remove Existing SED2 Drive.

Install the BT300 VFD and Terminal Blocks

1. Install the Control/Input Terminal Block assembly in approximate location shown using two No. 10-32 \times 1/2" screws.
2. Install the Output Terminal Block assembly in approximate location shown using two No. 10-32 \times 1/2" screws.
3. Locate the new BT300 VFD (using template provided) a minimum of 13" above the top of the 994-943 Stand.
If necessary, cut off existing mounting studs to prevent interference with the BT300 mounting position.

- NOTE:** Loosely assemble 1-1/2" conduit runs and test fit prior to mounting the VFD, and adjust the VFD's height as necessary.
4. Drill and tap for four 5/16-18 \times 3/4" mounting bolts, and mount the new BT300 VFD.
 5. Terminate existing control wiring on control terminal blocks (see Table 1), and trim as necessary.
 6. Terminate existing input power wiring (L1, L2, L3) at input terminal blocks, and trim as necessary.
 7. Terminate existing output power wiring (U1, V1, W1) at output terminal blocks, and trim as necessary.
 8. Remove cover from the BT300 VFD.

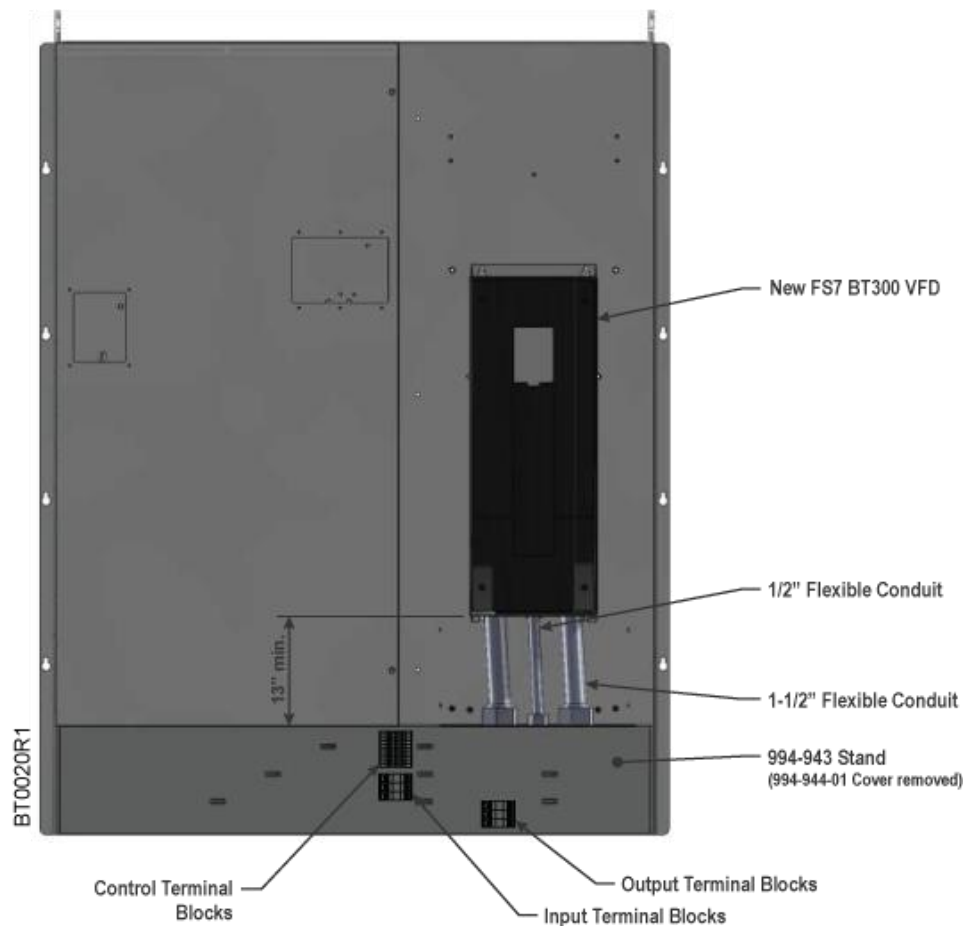


Figure 3. Install BT300 VFD and Terminal Blocks.

Final Assembly

1. Install the BT300-900 Cover onto the 994-943 Stand using screws retained at the beginning of this installation.
2. Remove the Conduit Adapter Plate and install two 1-1/2" and one 1/2" flexible conduit fittings (provided).
3. Install the remaining fittings at the BT300 VFD.
4. Temporarily re-install the Conduit Adapter Plate, and cut the flexible conduit to length.
5. Assemble fittings onto conduit.
6. Remove the Adapter Plate and pull control and power wires from terminals through the respective conduits.
7. Re-install the Conduit Adapter Plate onto the BT300-900 Cover.
8. Pull the control and power wires through the conduit openings in the VFD, and complete fitting assembly at the BT300.
9. Terminate control wiring at the BT300 (see Table 1), and trim wires as necessary.
10. Terminate the input (L1, L2, L3) and output (U, V, W) power wires at the BT300, and trim wires as necessary.
11. Re-install the BT300 cover.
12. Reconnect the power and program the BT300. See *Bypass Parameter Setting*.

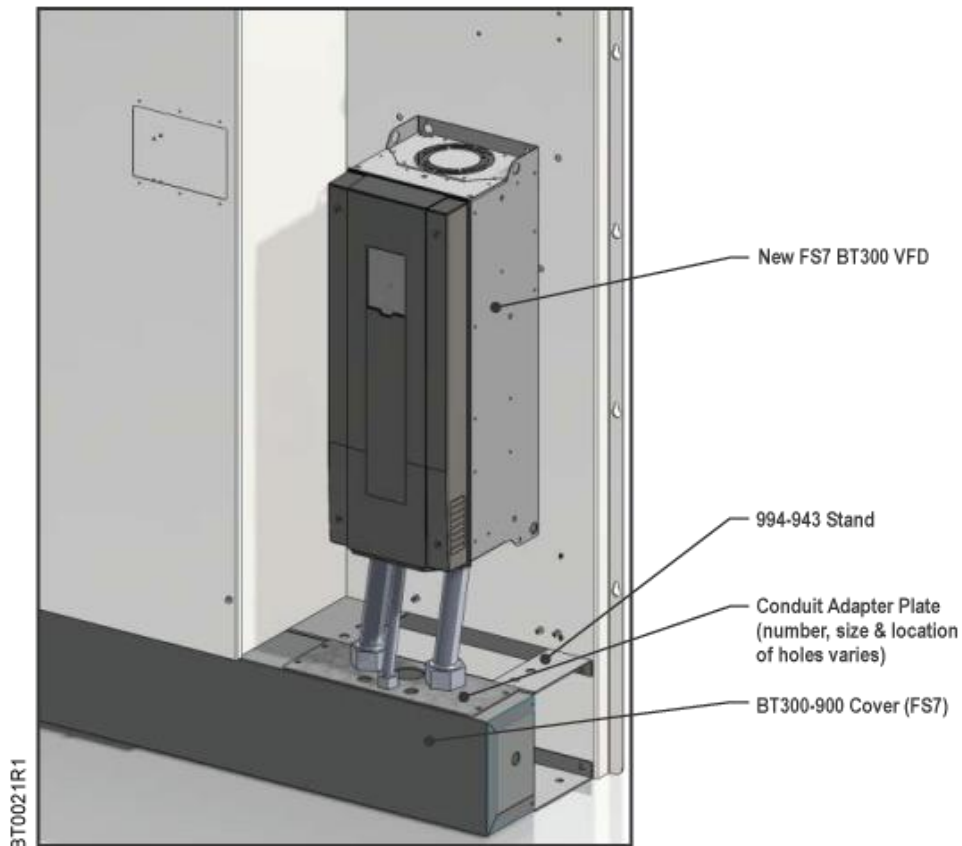


Figure 4. Final Assembly.

Table 1. Wiring Designations.

Conventional (A)					
SED2 Terminal No.	Description	Bypass Wire Color (Number)	BT300 Terminal No.	Description	Function
8	Digital Input 4	108	9	Digital Input 2	Run Interlock 2 (M2 Status Coast to Stop)
5	Digital Input 1	105	8	Digital Input 1	Start Stop
9	24 Vdc +	109	6	24 Vdc +	Power 24 Vdc
22	RO1 NO	7	24	RO2 NC	Fault Status
21	RO1 Common	5	25	RO2 Common	Fault Status

Electronic (E)					
SED2 Terminal No.	Description	Bypass Wire Color (Number)	BT300 Terminal No.	Description	Function
8	Digital Input 4	Purple	14	Digital Input 4	Run Interlock 1
6	Digital Input 2	Yellow	9	Digital Input 2	Run Interlock 2 (M2 Status Coast to Stop)
5	Digital Input 1	Brown	8	Digital Input 1	Start Stop
28	24 Vdc -	Blue	7	Ground	Power 24 Vdc
25	RO 2 NO	Red	23	RO1 NO	Run Status
24	RO 2 Common	Red	22	RO1 Common	Run Status
22	RO1 NO	Orange	24	RO2 NO	Fault Status
21	RO1 Common	Orange	25	RO2 Common	Fault Status

Bypass Parameter Setting

1. Change **Ctrl Signal 2 A** (3.5.1.2) to a value of **DigIN Slot0.1** (virtual off). This removes the reverse command from DI2.
2. Change **Run Interlock 2** (3.5.1.13) to a value of **DigIN SlotA.2** (use Digital Input 2). This is used to monitor the M2 Contactor.
3. Change **RO2 Function** (3.5.3.2.4) to a value of **FaultInvert**. This is for fail-safe operation of fault relay (wired to normally closed contact). If the inverter loses power but the bypass does not, then the contact closes to indicate to the bypass that there is a problem.

For SED2 Electronic Bypass only when the interlock feature is enabled, continue to Steps 4 and 5.

4. Change **Preset Freq Sel0** (3.5.1.15) to a value of **DigIN Slot0.1** (virtual off) to remove DI4 from that definition.
5. Change **Run Interlock 1** (3.5.1.12) to a value of **DigIN SlotA.4** (use Digital Input 4). This is used to monitor the terminals 7 and 8 of the SED2 E-Bypass Board.

The installation is now complete. See the *SED2 to BT300 Migration Guide* (125-1005) for further information.

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