SUB-MICRO SERIES DYNAMIC BRAKING OPTION (FOR USE WITH EXTERNAL RESISTORS)

INSTALLATION AND OPERATION INSTRUCTIONS

Manual Number: SDBN06C

(These instructions apply to Dynamic Braking modules 174417, 174418, and 174419 ONLY)

The Sub-Micro Series Dynamic Braking option can be used with all SM, SM-Plus, and SM-Basic models.

⚠WARNING!

Remove power from the drive and wait three minutes before wiring the DB module. Incorrect wiring of the B+ and B- terminals **will result in equipment damage!** The B+ terminal on the DB module must be connected to the B+ terminal on the Sub-Micro drive, and the B- terminal on the DB module must be connected to the B- terminal on the Sub-Micro drive.

SM-PLUS SERIES DRIVES

PROGRAMMING

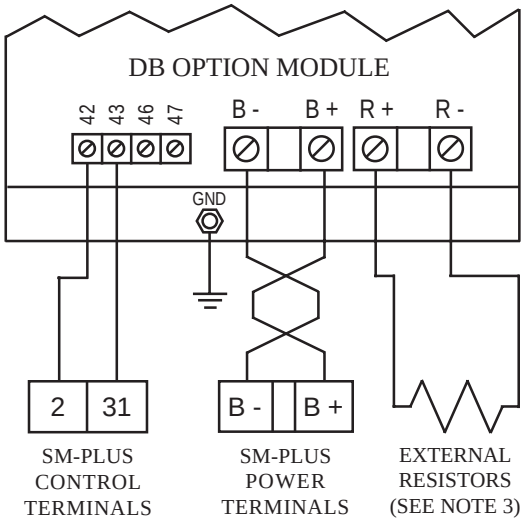
1. Set Parameter 09 (TB-31 OUTPUT) to DYNAMIC BRAKING (04).

WIRING

The diagram to the right illustrates how the DB module is wired to the SM-Plus Series drive.

NOTE 1: Use 18 AWG wire for control connections.
NOTE 2: Use minimum 14 AWG wire for connections to B+, B-, R+, and R-. The B+ and B- wires MUST be twisted together and must be less than 12 inches long. Twisting the R+ and R- wires is also recommended.
NOTE 3: External resistors are required when using Dynamic Braking modules 174417, 174418, and 174419. External resistor assemblies are available from LEESON (refer to the resistor selection chart on the next page).

SM-PLUS DIAGRAM



SM SERIES DRIVES

PROGRAMMING

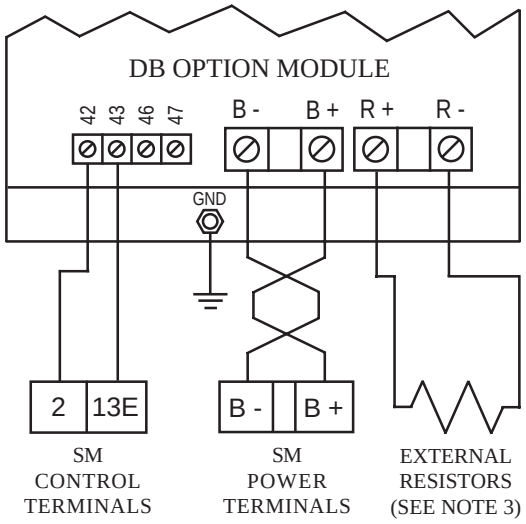
1. Set Parameter 12 (TB-13E FUNCTION) to DYNAMIC BRAKING (20).

WIRING

The diagram to the right illustrates how the DB module is wired to the SM Series drive.

NOTE 1: Use 18 AWG wire for control connections.
NOTE 2: Use minimum 14 AWG wire for connections to B+, B-, R+, and R-. The B+ and B- wires MUST be twisted together and must be less than 12 inches long. Twisting the R+ and R- wires is also recommended.
NOTE 3: External resistors are required when using Dynamic Braking modules 174417, 174418, and 174419. External resistor assemblies are available from LEESON (refer to the resistor selection chart on the next page).

SM DIAGRAM



SM-BASIC DRIVES

PROGRAMMING

1. Set Parameter 06 (TB-14 OUTPUT) to DB BRAKE (11).

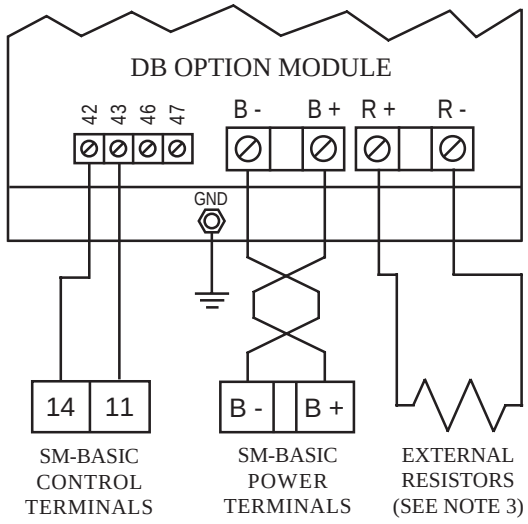
WIRING

The diagram to the right illustrates how the DB module is wired to the SM-Basic drive.

NOTE 1: Use 18 AWG wire for control connections.
NOTE 2: Use minimum 14 AWG wire for connections to B+, B-, R+, and R-. The B+ and B- wires MUST be twisted together and must be less than 12 inches long. Twisting the R+ and R- wires is also recommended.
NOTE 3: External resistors are required when using Dynamic Braking modules 174417, 174418, and 174419. External resistor assemblies are available from LEESON (refer to the resistor selection chart below).

⚠ **WARNING!** SM-Basic control terminals are hot to ground! Do not touch!

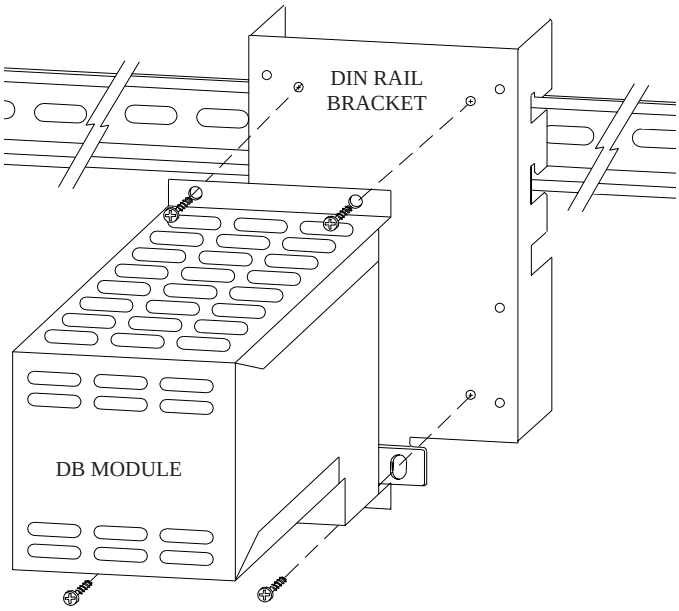
SM-BASIC DIAGRAM



MOUNTING THE DYNAMIC BRAKING MODULE

The diagram to the right illustrates how to mount the DB Module. The DB Module is compatible with the DIN Rail Mounting Kit option, or can simply be mounted to a flat surface such as an electrical panel.

NOTE: DO NOT mount the resistors below the Sub-Micro Series drive! The resistors generate heat, and must be mounted above or to the side of the drive.

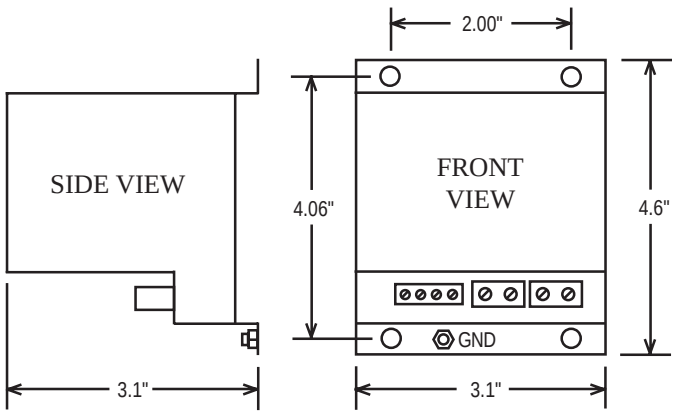


SELECTING EXTERNAL RESISTORS

Use the chart below to select the proper external resistor assembly:

EXTERNAL RESISTOR ASSEMBLIES			
HP	**240 / 200 Vac**	**480 / 400 Vac**	**590 / 480 Vac**
0.25 - 0.5	174178	174179	N / A
1 - 1.5	174179	174179	174178
2	174180	174180	174179
3	174182	174182	174181
5	174183	174183	174182
7.5 - 10	174143	174143	174148
15 - 20	174144	174144	174149
25	N / A	174145	174140

NOTE: These resistor assemblies are the same as those used with the Micro Series drives. The DB Module does not include short-circuit protection for the external resistors. If short-circuit protection is desired, fusing must be supplied by the customer. Consult Leeson.



⚠ **WARNING!**
Hazard of electric shock! External resistors are connected to the drive's DC bus, which can reach 950 VDC. Connections to external resistors must be electrically insulated and mechanically shielded for safety. High Voltage warning signs are also recommended.