

Dynamic Braking Components For The Micro Series Drives Micro Series Drives can be modified to include dynamic braking. The modifications involve replacing board(s) inside of the drive as well as adding a Dynamic Braking Resistor in a separate enclosure. Larger drives require a combination of Dynamic Braking Board and an additional Form C Relay Board. Instructions are included with the boards. Also available as a modification, see Mod Squad section, see page 378.

Dynamic Braking Boards*

Drive HP	Drive Voltage Rating	Catalog Number	List Price	App. Wgt. (lbs)
1/2-3	All	174184.00	429	2
5	200-230V	174185.00	467	2
5	460-480V	174185.00	467	2
5	550-575V	174184.00	429	2

* β Dynamic braking resistors are required with the dynamic braking boards.

Specifications are subject to change without notice

Dynamic Braking Resistors**

Drive HP	Drive Voltage Rating	Catalog Number	List Price	App. Wgt. (lbs)	
1/2	200-230V	174178.00	189	1	
1	200-230V	174179.00	189	1	
	460-480V	174179.00	189	1	
	550-575V	174178.00	189	1	
1 1/2	200-230V	174179.00	189	1	
	2	200-230V	174180.00	189	1
		460-480V	174180.00	189	1
3	550-575V	174179.00	189	1	
	200-230V	174182.00	267	1	
		460-480V	174182.00	267	1
5	550-575V	174181.00	267	1	
	200-230V	174183.00	267	1	
		460-480V	174183.00	267	1
7 1/2	550-575V	174182.00	267	1	
	200-230V	174143.00	310	1	
		460-480V	174143.00	310	1
10	550-575V	174148.00	310	1	
	200-230V	174143.00	310	1	
		460-480V	174143.00	310	1
15-20	550-575V	174148.00	310	1	
	200-230V	174144.00	471	1	
		460-480V	174144.00	471	1
25-30	550-575V	174149.00	483	1	
	200-230V	174145.00	795	1	
		460-480V	174145.00	795	1
40	550-575V	174140.00	815	1	
	460-480V	174146.00	1037	1	
		550-575V	174141.00	1037	1
50-60	460-480V	174147.00	1199	1	
	550-575V	174142.00	1199	1	

** Dynamic braking Resistors are provided with mounting brackets.

Specifications are subject to change without notice

Dynamic Braking Boards With Form C Relay Board*

Drive HP	Drive Voltage Rating	Catalog Number	List Price	App. Wgt. (lbs)
7 1/2	200-230V	174192.00	413	2
7 1/2	460-480V	174193.00	413	2
7 1/2	550-575V	174193.00	413	2
10-60	All	174192.00	413	2

* Dynamic braking resistors are required with the dynamic braking boards.

Specifications are subject to change without notice

AC Control Kits



Cable and Keypad are purchased separately. Installing the remote keypad and cable involves partially dis-assembling the drive. Instructions are included with the keypad. Also available as a modification, see Mod Squad section.

Remote Keypads & Cables (For Micro Series, NEMA 1, Drives*)

Item	Catalog Number	List Price	App. Wgt. (lbs)
Keypad	174177.00	248	2
2.5 ft. Cable	174174.00	73	2
5 ft. Cable	174175.00	105	2
10 ft. Cable	174176.00	170	2

* Compatible with any Micro Series, NEMA 1, drive.

NOTE: Using the remote keypad on a WASHGUARD Duty Inverter is not recommended, for the control will no longer meet NEMA 4/12 sealing requirements.

Specifications are subject to change without notice

AC / DC Controls

Micro Series Dimension Information

Techlink Programming and Monitoring Software

TechLink Software is a powerful Drive Configuration tool that works in a Microsoft Windows environment. TechLink supports the following drives sold by LEESON: Micro Series, SM Plus Series and SM Vector Series.

TechLink allows a drive program to be created off line and to access the drive directly while connected over RS232 or RS485 (depending on the drive). RS485 supports several drives on one drive network but will require an RS232 to RS485 converter for most personal computers.

First time users visit LEESON's website, under "Links and Downloads" to download TechLink Software.

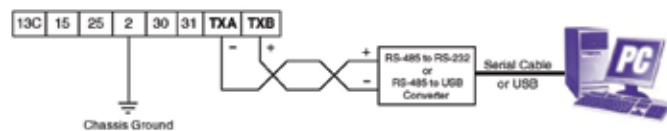
LEESON frequently updates Techlink software and the Models files to keep current with our expanding product offering and upgrades to our existing lines. If you have Techlink software installed on your computer and would like to check to see if you have the most current version of the TechLink program or the Models data, check the versions on the opening TechLink screen to the versions below. You will only need to download the program that has been updated. Each program below is a self extracting zip file; after expanding, run setup.exe to install.

The diagrams below illustrate how to connect the LEESON Micro Series, SM Plus and SM Vector Series drives to a computer in order to use the TechLink software.

Note 1: When using serial communications, terminal 2 on the drive MUST be connected to chassis ground.

SM Plus & SM Vector Series

The SM Plus and SM Vector Series drives are RS-485, so a RS-232 to RS-485 or USB to RS-485 converter is required. The converter connects to the computer using a standard serial connection. A twisted pair connects the converter to the drive.

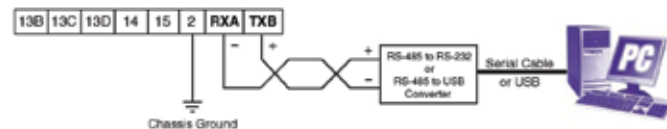


SM Plus & SM Vector Series Control Strip

Note 2: Refer to the converter manufacturer's instructions for proper converter configuration. The converter is not supplied by LEESON.

Micro Series

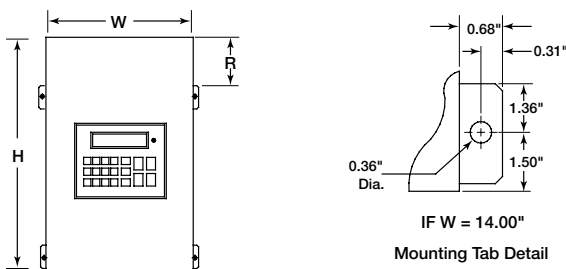
The Micro Series is RS-485, so a RS-232 to RS-485 or USB to RS-485 converter is required. The converter connects to the computer using a standard serial or USB connection. A twisted pair connects the converter to the drive.



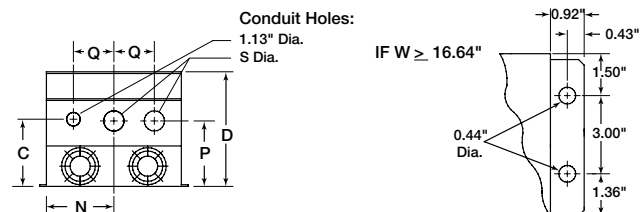
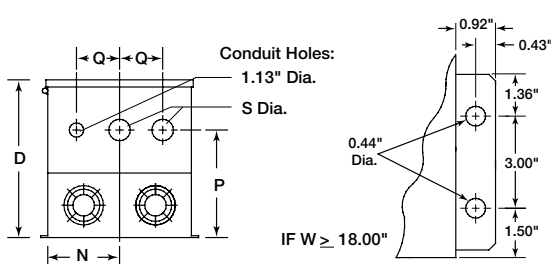
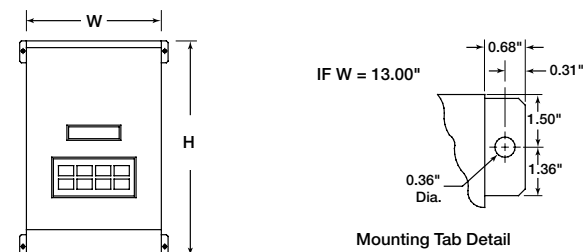
Micro Series Control Strip

Note: 3 Refer to the converter manufacturer's instructions for proper converter configuration. The converter is not supplied by LEESON.

Type 12 Dimensions for models rated above 30HP at 240/200 VAC and 60 HP at 400/480 VAC



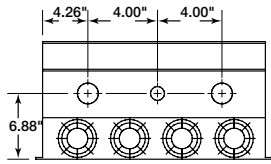
Type 1 Dimensions for models rated above 30HP at 240/200 VAC and 60 HP at 590/480/400 VAC



- DC Motors
- Gearmotors
- AC / DC Controls
- Accessories / Kits
- Mods / Factory Options
- X-Ref / Index
- Tech. Information
- Terms / Warnings
- Other Products

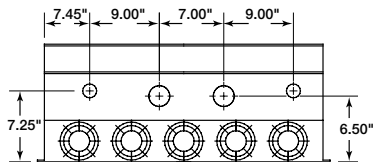
Dimension Information for Micro Series Drives

CONDUIT HOLES FOR 174578.00



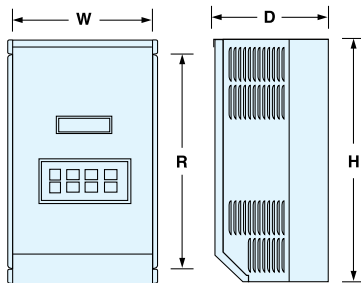
Conduit Holes: Large holes = 1.75"
Small hole = 1.13"

CONDUIT HOLES FOR 174586.00

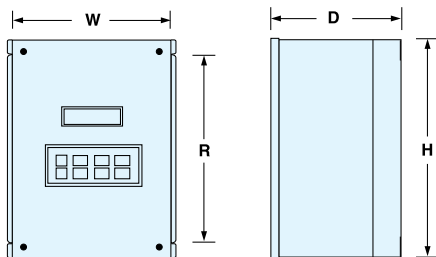


Conduit Holes: Large holes = 3.00"
Small holes = 1.13"

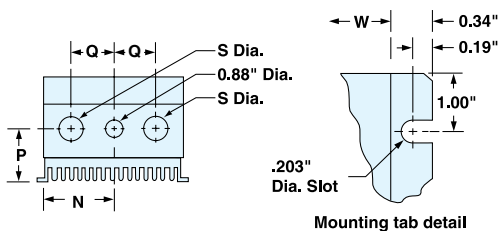
NEMA 1 ONLY



NEMA 4/12
WASHGUARD ONLY



NEMA 1 & NEMA 4/12



Mounting tab detail

Micro Series Inverter - Dims. (Inches) -
NEMA 1, NEMA 4/12 & NEMA 4X

Dimension Key	H	W	D	N	P	Q	R	S
A	7.5	4.7	3.33	2.35	1.6	1.37	5.5	0.88
B	7.5	4.7	3.63	2.35	1.9	1.37	5.5	0.88
C	7.5	4.7	4.33	2.35	2.6	1.37	5.5	0.88
D	7.5	6.12	4.22	3.77	2.4	1.37	5.5	0.88
E	7.5	6.12	5.12	3.77	3.3	1.37	5.5	0.88
F	7.88	7.86	5.94	5.13	3.95	1.5	5.88	1.13
G	7.88	6.12	4.35	3.06	2.7	1.37	5.88	0.88
H	7.88	7.86	4.9	4.8	3.25	1.37	5.88	0.88
I	9.38	7.86	6.25	5.13	3.95	1.5	7.38	1.13
J	7.88	7.86	5.9	4.8	4.25	1.37	5.88	0.88
K	9.75	10.26	7.2	5.13	5.25	2	7.75	1.13
L	11.25	7.86	6.84	3.93	4.19	2	7.75	1.38
M	9.38	7.86	6.84	3.93	4.19	2	5.88	1.13
N	12.75	7.86	6.84	3.93	4.19	2	9.25	1.38
O	12.75	7.86	7.4	3.93	4.19	2	9.25	1.38
P	12.75	10.26	7.74	5.13	5	2.5	9.25	1.38
Q	11.75	10.26	8.35	5.13	5.75	2	9.75	1.13
R	9.38	7.86	7.4	3.93	4.19	2	5.88	1.13
S	12.75	10.26	8.25	5.13	5	2.5	9.25	1.38
T	15.75	10.26	8.35	5.13	5.75	2.5	12.25	1.38
U	13.75	10.26	8.35	5.13	5.75	2	11.75	1.38
V	15.75	10.26	8.35	5.13	5.75	2	13.75	1.38
W	19.75	10.26	8.55	5.13	5.75	2.5	16.25	1.75
X	7.88	7.86	3.75	4.8	2.1	1.37	5.88	0.88
Y	7.88	6.12	5.25	3.06	3.6	1.37	5.88	0.88
Z	20.25	10.26	8.35	5.13	5.75	2	16.25	1.38
AA	15.75	10.26	8.35	5.13	5.75	2	11.75	1.38
AB	21	13.72	8.35	5.13	6.1	2	16.25	1.38
AC	7.5	6.12	3.63	3.77	1.8	1.37	5.5	0.88
AD	7.88	6.12	3.63	3.06	2	1.37	5.88	0.88
AE	25	13	10.5	5.56	6.5	2.62	-	1.38
AF	47	16.64	11.85					SEE CHART
AG	29	16.64	11.85	7.14	6.88	3.12	-	1.75
AH	29	24.42	11.85	11.12	6.5	4.5	-	2.5
AI	29	36.66	11.85	11.5	9	4.5	-	2.5
AJ	37	18	13.3	7.5	8	3.13	7.14	1.75
AK	39	26	13.3	11.5	9	4.5	9.14	2.5
AL	29	36.66	11.85					SEE CHART
AM	31	14	11.86	6	7.5	2.62	5.64	1.38
AN	49	18	13.3	7.5	8	3.13	7.14	1.75
AO	39	26	13.3	11.5	9	4.5	9.14	2.5

AC / DC Controls

AC Control Kits

Accessories For The SM, SM-Plus & SM Vector Series Drives



Dynamic Braking Modules With Built-in Dynamic Braking Resistors[⊠]

Dynamic Braking Components for the SM, SM-Plus & SM Vector Series Drives Dynamic braking is available for the SM, SM-Plus and SM Vector series drives as a separate Dynamic Braking Module. Lower HP modules have the control electronics and the dynamic braking resistor in one convenient package. Larger units require a separate resistor. The modules can be panel or DIN rail mounted.

Drive HP	Motor Voltage Rating	Catalog Number	List Price	App. Wgt. (lbs)
1/4-1/2	208-230V	174400.00	319	2
	400-480V	174406.00	319	2
1 - 1 1/2	208-230V	174401.00	371	3
	400-480V	174407.00	371	3
1 - 1 1/2	480-590V	174412.00	371	3
2 - 3	208-230V	174402.00	503	4
	400-480V	174408.00	503	4
	480-590V	174413.00	503	4
5	208-230V	174403.00	657	5
	400-480V	174409.00	657	5
	480-590V	174414.00	657	5
7 1/2	208-230V	174404.00	831	6
	400-480V	174410.00	831	6
	480-590V	174415.00	831	6
10	208-230V	174405.00	1003	8
	400-480V	174411.00	1003	8
	480-590V	174416.00	1003	8

[⊠] Braking Resistors are included with the module and not purchased separately.

Specifications are subject to change without notice

Electronic Programing Unit

Electronic Programming Unit allows off-line set-up and replication of the drive's plug-in electronic programming module (shown at right). Excellent for multi-drive applications. Keypad input and alphanumeric display simplify programming. RS-232 serial port allows downloading of configuration files from personal computer.



Catalog Number	List Price	App. Wgt. (lbs)
174189.00	883	2

DIN Rail - Mounting Kits

Steel plates and fasteners for mounting drives on standard 35mm DIN rails for panel building. Set of six.
174186 for "A" chassis drives.
174187 for "B" chassis drives.
174188 for "C" chassis drives.

Catalog Number	List Price	App. Wgt. (lbs)
174186.00	181	3
174187.00	203	3
174188.00	242	3



Accessories For The SM2 Flux Vector Series Drives Dynamic Braking Components for the SM2 Vector Series Drives



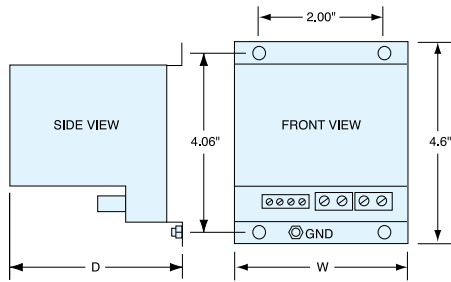
Dynamic Braking Modules With Built-in Dynamic Braking Resistors[⊠]

Dynamic Braking Components for the SM2 Vector Series Drives Dynamic braking is available for the SM2 Vector Series drives as a separate Dynamic Braking Module. 10 HP and lower modules have control electronics and the dynamic braking resistor in one convenient package. Larger units require a separate resistor. The modules can be panel or DIN rail mounted.

Drive HP	Motor Voltage Rating	Catalog Number	List Price	App. Wgt. (lbs)
1/3-1/2	208 - 230V	174157.00	311	2
	400 - 480V	174158.00	311	2
1 - 1 1/2	208 - 230V	174151.00	363	3
	400 - 480V	174152.00	363	3
	480 - 590V	174153.00	363	3
2 - 3	208 - 230V	174154.00	495	4
	400 - 480V	174155.00	495	4
	480 - 590V	174156.00	495	4
5	208 - 230v	174159.00	645	5
	400 - 480V	174160.00	645	5
	480 - 590V	174161.00	645	5
7 1/2	208 - 230V	174162.00	814	6
	400 - 480V	174163.00	814	6
	480 - 590V	174164.00	814	6
10	208 - 230V	174165.00	983	8
	400 - 480V	174166.00	983	8
	480 - 590V	174167.00	983	8

[⊠] Braking Resistors are included with the module and not purchased separately.

Specifications are subject to change without notice



Dynamic Braking Modules Without Resistors*

Drive HP	Motor Voltage Rating	Catalog Number	List Price	App. Wgt. (lbs)
15-20	208-230V	174417.00	429	10
15-30	400-480V	174418.00	429	10
15-25	480-590V	174419.00	429	10

* Dynamic Braking Resistors are purchased and mounted separately. Specifications are subject to change without notice

Dynamic Braking Resistors**

Drive HP	Motor Voltage Rating	Catalog Number	List Price	App. Wgt. (lbs)
15-20	208-230V	174144.00	471	1
15-20	400-480V	174144.00	471	1
15-20	480-590V	174149.00	483	1
15-30	400-480V	174145.00	795	1
25	480-590V	174140.00	815	1

** Dynamic Braking Resistors are provided with mounting brackets. Specifications are subject to change without notice

SM4 Remote Keypad

Potentiometer Kit takes the place of the up/down buttons on the drive's keypad gives operators hands-on speed control over the Inverter's speed range

Use with Width (W) dim. of:	Catalog Number	List Price	App. Wgt. (lbs)
6.28 or 7.12	174693.00	152	2
8.04 or 8.96	174697.00	157	2

Specifications are subject to change without notice



EPM Bulk Pack

Plug-in electronic programming modules (EPM). Allow off-line set-up and replication of program using Electronic Programming Unit. Set of 10.

Catalog Number	List Price	App. Wgt. (lbs)
174190.00	195	1

Specifications are subject to change without notice



Remote Keypad

Remote keypad kit for includes eight-foot connecting cable and gasket. Mounted in proper enclosure, the keypad kit will provide up to NEMA 4 protection. These keypads can only be used with Sub-Micro drives manufactured May, 1999 or later (date code of 9922 or higher).

Drive Type	Catalog Number	List Price	App. Wgt. (lbs)
SM Plus	174191.00	255	2
SM Series	174194.00	207	2
SM Vector	174306.00	255	2
SM2 Vector	174150.00	250	2

Specifications are subject to change without notice



Inverter Accessory Parts

Discriptor	Catalog Number	List Price
Micro Series Keypad	006707.01	59
Speed Pot (10k/5w pot, washers & nut)	006708.01	62

Specifications are subject to change without notice

