Appendix B Accessories

B.1 All Brake Resistors & Brake Units Used in AC Motor Drives

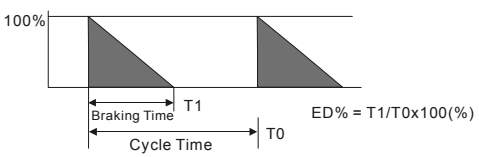
Note: Please only use DELTA resistors and recommended values. Other resistors and values will void Delta's warranty. Please contact your nearest Delta representative for use of special resistors. The brake unit should be at least 10 cm away from AC motor drive to avoid possible interference.

Voltage	Applicable Motor		Full Load Torque kgf-m	Specification Resistors	Brake Resistors Model No of Units Used		Brake Torque 10%ED%	Minimum Resistance Rates
	HP	kW						
115V Series	1/4	0.2	0.110	80W 200Ω	BR080W200	1	400	80Ω
	1/2	0.4	0.216	80W 200Ω	BR080W200	1	220	80Ω
	1	0.75	0.427	80W 200Ω	BR080W200	1	125	80Ω
230V Series	1/2	0.4	0.216	80W 200Ω	BR080W200	1	220	200Ω
	1	0.75	0.427	80W 200Ω	BR080W200	1	125	80Ω
	2	1.5	0.849	300W 100Ω	BR300W100	1	125	55Ω
	3	2.2	1.262	300W 70Ω	BR300W070	1	125	35Ω
	5	3.7	2.080	400W 40Ω	BR400W040	1	125	25Ω
	7.5	5.5	3.111	500W 30Ω	BR500W030	1	125	16Ω
460V Series	1	0.75	0.427	80W 750Ω	BR080W750	1	125	260Ω
	2	1.5	0.849	300W 400Ω	BR300W400	1	125	190Ω
	3	2.2	1.262	300W 250Ω	BR300W250	1	125	145Ω
	5	3.7	2.080	400W 150Ω	BR400W150	1	125	95Ω
	7.5	5.5	3.111	500W 100Ω	BR500W100	1	125	60Ω
	10	7.5	4.148	1000W 75Ω	BR1K0W075	1	125	45Ω
575V Series	1	0.75	0.427	300W 400Ω	BR300W400	1	125	200Ω
	2	1.5	0.849	300W 400Ω	BR300W400	1	125	200Ω
	3	2.2	1.262	600W 200Ω	BR300W400	2	125	150Ω
	5	3.7	2.080	600W 200Ω	BR300W400	2	125	150Ω
	7.5	5.5	3.111	600W 200Ω	BR300W400	2	125	150Ω
	10	7.5	4.148	2000W 100Ω	BR1000W50	2	125	82Ω

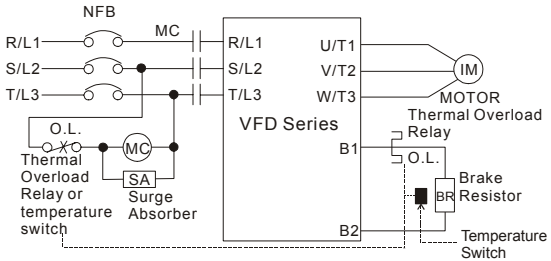
Note: Brake Torque 10%ED% : brake torque at 10% duty cycle in (%).

NOTE

1. Please select the brake unit and/or brake resistor according to the table. "-" means no Delta product. Please use the brake unit according to the Equivalent Resistor Value.
2. If damage to the drive or other equipment is due to the fact that the brake resistors and the brake modules in use are not provided by Delta, the warranty will be void.
3. Take into consideration the safety of the environment when installing the brake resistors.
4. If the minimum resistance value is to be utilized, consult local dealers for the calculation of the power in Watt.
5. Please select thermal relay trip contact to prevent resistor over load. Use the contact to switch power off to the AC motor drive!
6. When using more than 2 brake units, equivalent resistor value of parallel brake unit can't be less than the value in the column "Minimum Equivalent Resistor Value for Each AC Drive" (the right-most column in the table).
7. Please read the wiring information in the user manual of the brake unit thoroughly prior to installation and operation.
8. In applications with brake resistor or brake unit, Pr.25 (Over-voltage stall prevention) must be disabled. And Pr.102 (AVR function) shall not be used.
9. Definition for Braking Usage ED%
   Explanation: The definition of the barking usage ED(%) is for assurance of enough time for the brake unit and brake resistor to dissipate away heat generated by braking. When the brake resistor heats up, the resistance would increase with temperature, and braking torque would decrease accordingly. Suggest cycle time is one minute

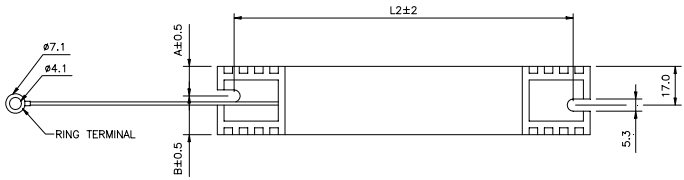


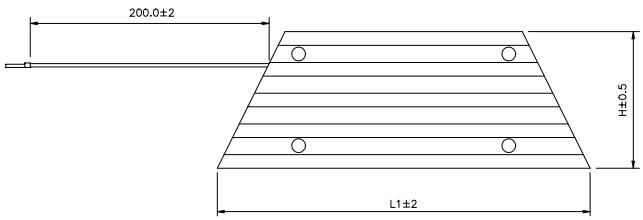
10. For safety reasons, install a thermal overload relay between brake unit and brake resistor. Together with the magnetic contactor (MC) in the mains supply circuit to the drive it offers protection in case of any malfunctioning. The purpose of installing the thermal overload relay is to protect the brake resistor against damage due to frequent braking or in case the brake unit is continuously on due to unusual high input voltage. Under these circumstances the thermal overload relay switches off the power to the drive. Never let the thermal overload relay switch off only the brake resistor as this will cause serious damage to the AC Motor Drive.



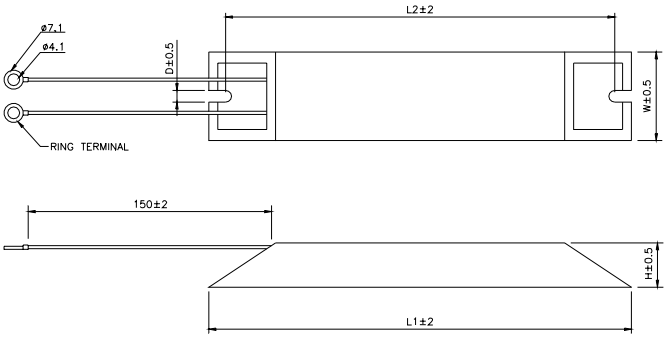
B.1.1 Dimensions and Weights for Brake Resistors& Brake Units

(Dimensions are in millimeter)

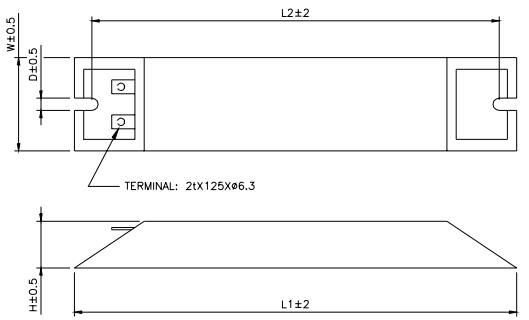




TYPE	L1	L2	H	A	B	MAX. WEIGHT (g)
MVR050W120	165	150	40	8.0	12.0	240
MVR080W120	165	150	40	8.0	12.0	240
MVR200W120	165	150	40	8.0	12.0	240
MVR050W200	165	150	40	15.0	15.0	460
MVR080W200	165	150	40	15.0	15.0	460
MVR200W200	165	150	40	15.0	15.0	460
BR200W040	165	150	40	13.0	17.0	460
BR200W070	165	150	40	13.0	17.0	460
BR200W150	165	150	40	13.0	17.0	460
BR200W250	165	150	40	13.0	17.0	460



TYPE	L1	L2	H	D	W	MAX. WEIGHT (g)
MHR200W120	165	150	20	5.3	40	240
MHR400W120	165	150	20	5.3	40	240
BR080W200	140	125	20	5.3	60	160
BR080W750	140	125	20	5.3	60	160
BR300W070	215	200	30	5.3	60	750
BR300W100	215	200	30	5.3	60	750
BR300W250	215	200	30	5.3	60	750
BR300W400	215	200	30	5.3	60	750
BR400W150	265	250	30	5.3	60	930
BR400W040	265	250	30	5.3	60	930



TYPE	L1	L2	H	D	W	MAX. WEIGHT (g)
MHR025W500	335	320	30	5.3	60	1100
MHR050W500	335	320	30	5.3	60	1100
MHR100W500	335	320	30	5.3	60	1100
BR500W030	335	320	30	5.3	60	1100
BR500W100	335	320	30	5.3	60	1100
BR1K0W020	400	385	50	5.3	100	2800
BR1K0W075	400	385	50	5.3	100	2800