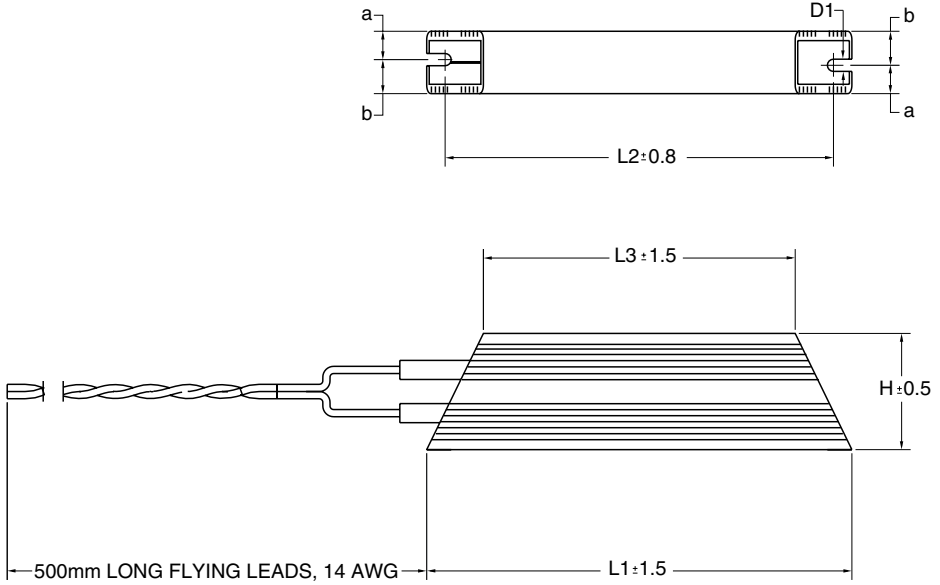


Manual for Dynamic Braking Resistors E94ZB for use with Servo Models 94/940/941



Silicon rubber insulated wires with rated temp of 200°C

S800

Dynamic Brake Resistor Dimensions:

Model Number	Dimensions (mm)						W = a + b		Weight (kg)	Marking on the Resistor
	L1	L2	L3	H	D1±0.3	a	b			
E94ZB15A300A	215	196	175	60	5.3	13	17	0.60	ULV300 15Ω	
E94ZB20A150A	210	197	170	41	4.3	10	12	0.29	ULV150 20Ω	
E94ZB30A150A	210	197	170	41	4.3	10	12	0.29	ULV150 30Ω	
E94ZB40A080A	150	137	110	41	4.3	10	12	0.19	ULV80 40Ω	
E94ZB45A300A	215	196	175	60	5.3	13	17	0.60	ULV300 45Ω	
E94ZB75A150A	210	197	170	41	4.3	10	12	0.29	UL150 75Ω	
E94ZBF0A080A	150	137	110	41	4.3	10	12	0.19	ULV80 150Ω	

Wiring

The brake resistors are wired into connector P6 (a 5-pin quick-connect terminal block) on the SimpleServo 94 drive or PositionServo 940/941 drive (the drive has regen circuitry built-in). The brake resistor connects between the Positive DC Bus (either P6.1 or 2) and P6.3.

P6 TERMINAL ASSIGNMENTS (BRAKE RESISTOR AND DC BUS)

Pin	Terminal	Function
1	B+	Positive DC Bus / Brake Resistor
2	B+	
3	BR	Brake Resistor
4	B-	Negative DC Bus
5	B-	

Specifications

Resistor Model	Resistance, Ohm	Rated Continuous Power on Heat Sink, Watts
E94ZB15A300A	15	300
E94ZB20A150A	20	150
E94ZB30A150A	30	150
E94ZB40A080A	40	80
E94ZB45A300A	45	300
E94ZB75A150A	75	150
E94ZBF0A080A	150	80

Notes:

- 1) The rated continuous power on heat sink is measured when the resistor is mounted vertically on a heat sink (200x200x3mm) at the room temperature 25°C. Derate the continuous power for the following conditions:

Ambient Temperature	Derate the Rated Power	
	With Heat Sink (200X200X3mm)	Without Heat Sink (i.e., Free Air)
25 °C	No derating	Derate by 20%
40 °C	Derate by 5%	Derate by 25%

- 2) The continuous power supplied to the resistor shall not exceed the rated continuous power.
- 3) The surface temperature can reach up to 200 °C.
- 4) **⚠ WARNING!** Do not put any flammable material close to the resistor.
- 4) Resistors must be vertically mounted on heat sink or metal plate for adequate cooling and safe operation.

Drive Compatibility

The following table shows the compatibility with the individual brake resistors and drives. The blanks in the model numbers apply to the 940 ("_" = P; "~" = "EX" or "ES") and the 941 ("_" = R; "~" = "RX" or "RS") Drives.

Resistor Model	Compatible 94 Drive Models	Compatible 940/941 Drive Models
E94ZB15A300A	N/A	E94_180T2N~~
E94ZB20A150A	E94S080S2F, E94S100S2F E94S080Y2N, E94S100Y2N	E94_080S2F~~, E94_080Y2N~~, E94_100S2F~~, E94_100Y2N~~
E94ZB30A150A	N/A	E94_120Y2N
E94ZB40A080A	E94S020S1N, E94S040S1N E94S020S2F, E94S040S2F E94S020Y2N, E94S040Y4N	E94_020S1N~~, E94_020S2F~~, E94_020Y2N~~, E94_040S1N~~, E94_040S2F~~, E94_040Y4N~~
E94ZB45A300A	N/A	E94_090T4N~~
E94ZB75A150A	E94S040T4N, E94S050T4N	E94_040T4N~~, E94_050T4N~~, E94_060T4N~~
E94ZBF0A080A	E94S020T4N	E94_020T4N~~



WARNING!

To avoid damage to the drive, do not use a custom dynamic braking resistor smaller than the above recommended resistance.