



# ULH, ULV

## DYNAMIC BRAKING 60 W TO 500 W (UL® RECOGNIZED)

The ULV (V=vertical) & ULH (H=horizontal) models are UL® recognized metal-clad, high power resistors designed for industrial drives and other applications. The rugged extruded aluminum housing provides electrical isolation and simple two-screw mounting. These models are available with flying leads or tab terminals and can be ordered with inductive or non-inductive windings. Packages 200W and larger are also available with internally mounted, UL listed, thermal protection circuits.

### GENERAL SPECIFICATIONS

Model	Power Rating on Heat Sink	Resistance Range (ohms)				Resistance Tolerance
		Inductive		Non-Inductive		
		Tab Terminals	Flying Leads	Tab Terminals	Flying Leads	
ULH/ULV60	60	0.1-375	0.1-400	0.1-180	0.1-180	±2.0 (G) ±5.0 (J) ±10 (K)
ULH/ULV80	80	0.1-281	0.1-910	0.1-110	0.1-110	
ULH/ULV100	100	0.1-225	0.1-1.1K	0.1-225	0.1-240	
ULH/ULV120	120	0.1-187	0.1-1.3K	0.1-187	0.1-300	
ULH/ULV150	150	0.1-150	0.1-1.6K	0.1-150	0.1-390	
*ULH/ULV200	200	0.1-450	0.1-2.2K	0.1-450	0.1-1K	
*ULH/ULV300	300	0.1-300	0.1-2.7K	0.1-300	0.1-1.5K	
*ULH/ULV400	400	0.1-225	0.1-4.3K	0.1-225	0.1-2.2K	
*ULH/ULV500	500	0.1-180	0.1-6.8K	0.1-180	0.1-3K	

\* Available with thermostat circuit. Consult Isotek Technical Support for calibration temperatures.



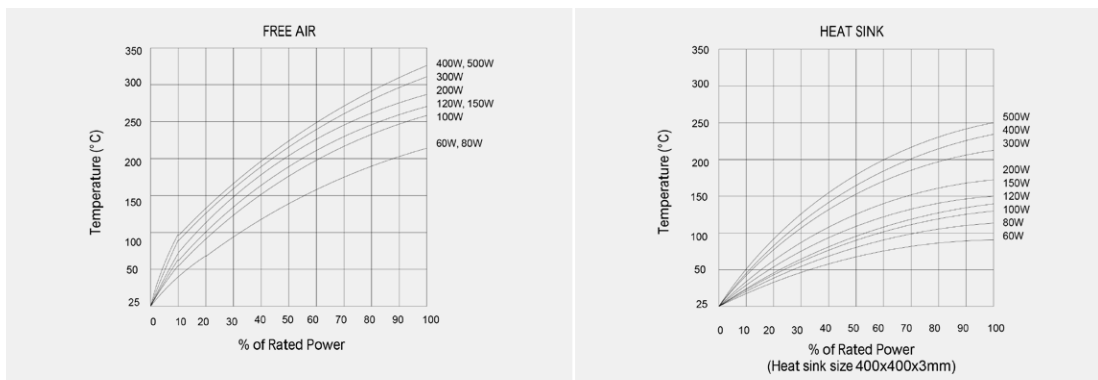
### CHARACTERISTICS

Values in [ ] indicate change in Ω after test

Temperature Range	-55°C to 200°C
Insulation Resistance	20MΩ minimum
Dielectric Strength	[1000V + (rated voltage x 2)] minimum
Temperature Coefficient	±260 ppm/°C maximum
Short Time Overload	± [2% + 0.05 Ω] 60W:5x power rating (5 sec.); 80 to 500W:10x power rating (5 sec.)
Moisture Resistance	[3% + 0.05 Ω] 40°C, 95% RH, DC100V case to terminal (500 hours)
Thermal Shock	± [2% + 0.05 Ω] power rating 30 minutes, -25°C, 15 minutes
Vibration	± [1% + 0.05 Ω] 10Hz-55Hz-10Hz (1 minute) 2 hours each direction
Moisture Load Life	± [3% + 0.05 Ω] 40°C, 95% Rh, 0.1x power rating, 1.5 hours on, 30 minutes off, 500 hours
Load Life	± [5% + 0.05 Ω] power rating, 1.5 hours on, 30 minutes off, 500 hours

Applied voltage: AC RMS

### SURFACE TEMPERATURE INCREASE VERSUS POWER LOAD



A mid-point bracket is required for 150, 300-500W models to ensure sufficient contact with the heat sink.

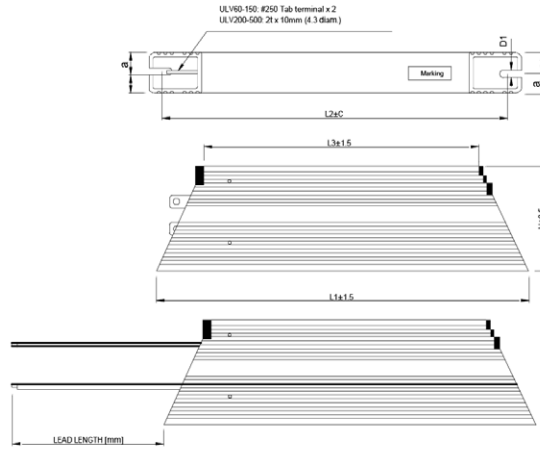
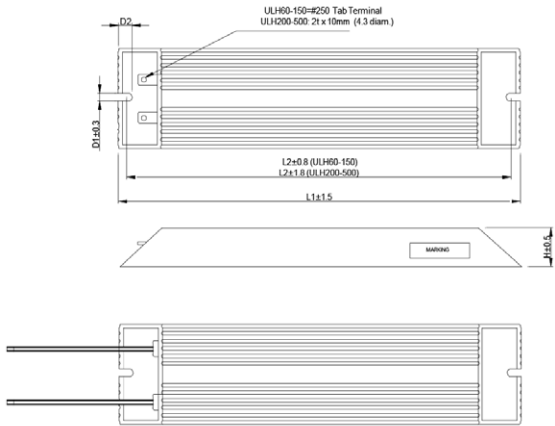


ULH,ULV

DYNAMIC BRAKING 60 W TO 500 W (UL® RECOGNIZED)

TECHNICAL INFORMATION

Model	Dimensions [mm]									Weight [g]		Flying Leads UL E120271 (AWM), No. 3512	
	L1	L2	L3	W	H	D1±0.3	D2±0.3	a	b	ULH	ULV	AWG 10	AWG 14
ULH 60	100	87	60	41	22	4.3	8.65	10	12	110	113	NA	
ULV 60	100	87	60	22	41	4.3	8.65	20	21	110	113	NA	
ULH 80	150	137	110	22	41	4.3	8.65	10	12	195	189	NA	
ULV 80	150	137	110	22	41	4.3	8.65	20	21	195	189	NA	0.10 Ω & up
ULH 100	165	152	125	41	22	4.3	8.65	10	12	216	215	NA	
ULV 100	165	152	125	22	41	4.3	8.65	20	21	216	215	NA	
ULH 120	182	169	142	41	22	4.3	8.65	10	12	245	241	NA	
ULV 120	182	169	142	22	41	4.3	8.65	20	21	245	241	NA	
ULH 150	210	197	170	41	22	4.3	8.65	10	12	283	290	NA	
ULV 150	210	197	170	22	41	4.3	8.65	20	21	283	290	NA	0.11 Ω & up
ULH 200	165	146	125	60	30	5.3	12	13	17	485	447	0.1-0.15 Ω	0.16 Ω & up
ULV 200	165	146	125	30	60	5.3	12	29	31	485	447		
ULH 300	215	196	175	60	30	5.3	12	13	17	600	600	0.1-0.22 Ω	0.23 Ω & up
ULV 300	215	196	175	30	60	5.3	12	29	31	600	600		
ULH 400	265	246	225	60	30	5.3	12	13	17	770	780	0.1-0.30 Ω	0.31 Ω & up
ULV 400	265	246	225	30	60	5.3	12	29	31	770	780		
ULH 500	335	316	295	60	30	5.3	12	13	17	990	980	0.1-0.37 Ω	0.38 Ω & up
ULV 500	335	316	295	30	60	5.3	12	29	31	990	980		



DERATING CURVE AND ORDERING PROCEDURE EXAMPLE

