

L510

Advanced Micro Drive



1/4-1 hp (115V) • 1/4-3 hp (230V) • 1-3 hp (460V)

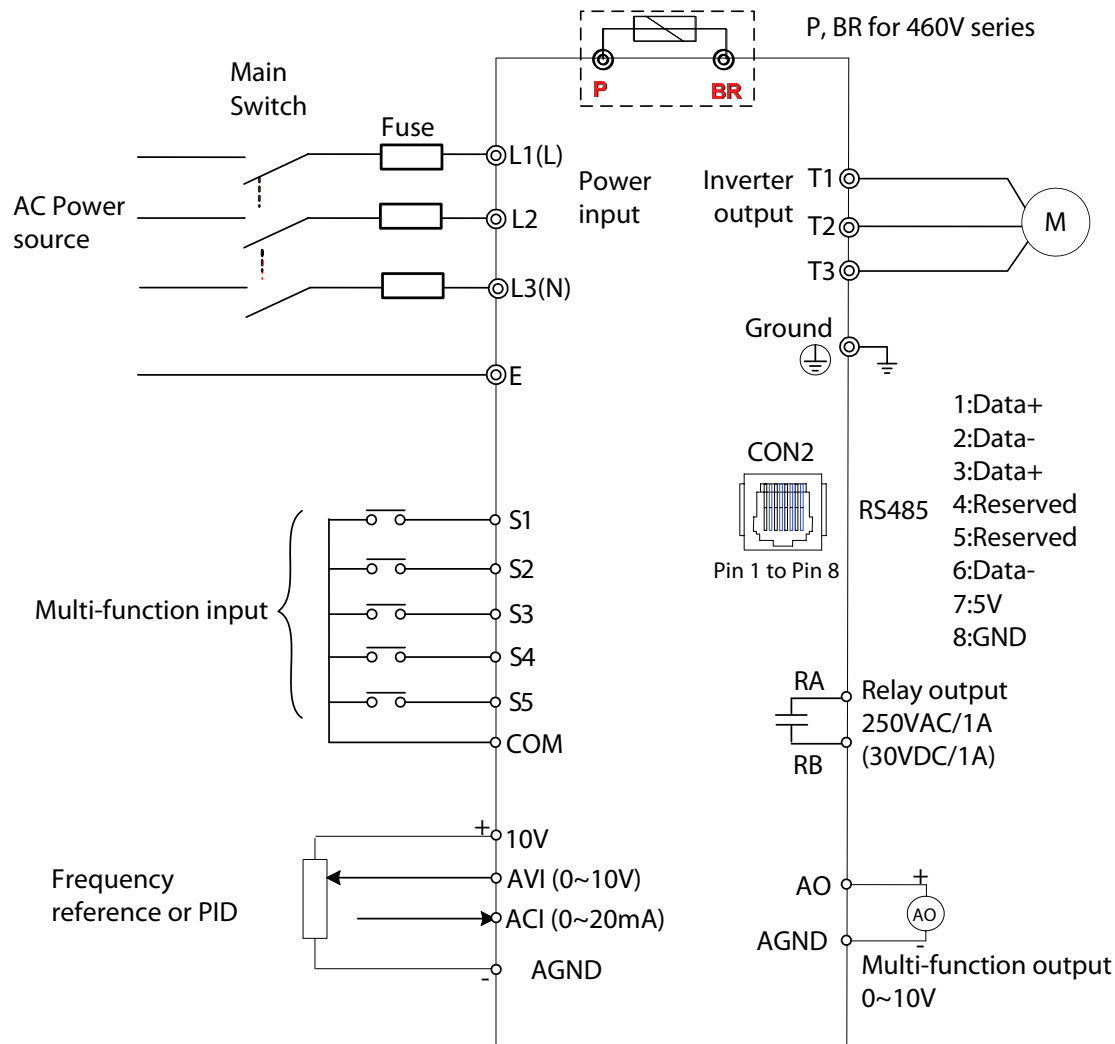
Features & Highlights

- Compact Design: the L510 has a small footprint and accomodates DIN rail mounting as an option
- Simple to program with parameters grouped by function type and purpose
- 150% overload
- 0-650 Hz
- Speed pot standard for all ratings
- High speed response utilizing a 32-bit CPU design
- V/F control, auto-torque boost or sensorless vector
- Leakage current prevention via capacitor switch
- Digital Operator: 5 digit bright LED readout
- Diagnostics and parameter configurations
- Power loss ride-through
- TECO-Link configuration software for on-line monitoring, programming, and operation via built-in RS485
- UL, cUL Listed, CE Marked

Machine & Industry Applications

- Conveyors
- Pumps
- Exhaust Fans
- Mixers
- Treadmills
- Packaging
- HVAC
- Food and Beverage
- Machining/ Tooling
- Converting fixed speed motors to variable speed

Wiring Diagram



Terminal Symbols	TM1 Function Description
L1(L)	Main power input, L1(L)/L2/L3(N)
L2	
L3(N)	
P*	Externally connected braking resistor
BR*	
T1	Inverter output, connect to U, V, W terminals of motor
T2	
T3	
⊕	Ground Terminal
RA	Relay output terminal, Specification: 250VAC/1A(30VDC/1A)
RB	
COM	S1-S5 (COMMON)
S1	Multi-function input terminals
S2	
S3	
S4	
S5	
10V	Built-in power for external speed potentiometer
AVI	Analog voltage input, Specification: 0-10VDC/ 2-10V
ACI	Analog current input, Specification: 0/4-20mA
AO	Multi-function analog output terminal. Maximum output 10VDC/1mA
AGND	Analog ground terminal

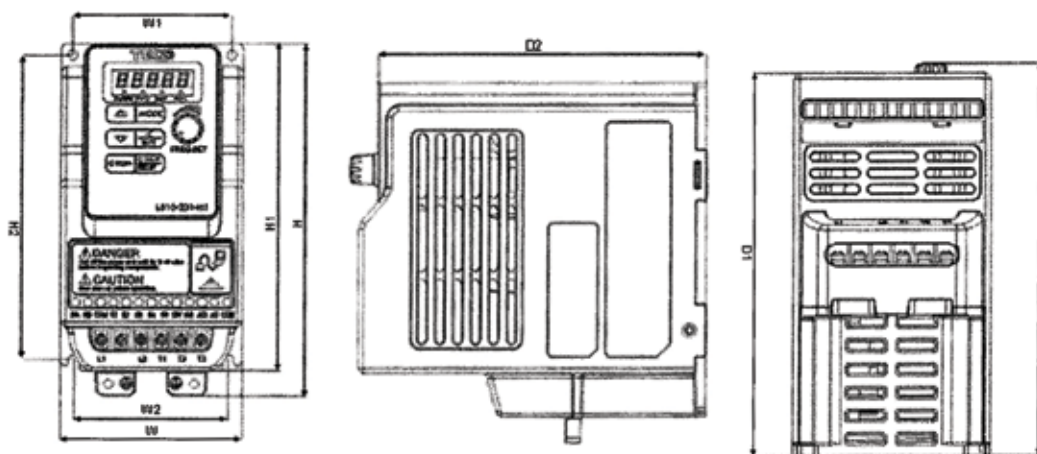
*P, BR for 460V series

Operating Features and Characteristics

Control Mode		V/F control + auto-torque compensation function, sensorless vector
Frequency	Range	0.01 - 650.00 Hz
	Setting resolution	Digital input: 0.01 Hz
		Analog input: 0.06 Hz/ 60 Hz
	Setting	Keypad: Set directly with ▲▼ keys or the VR (Potentiometer) on the keypad
		External input terminals: AVI (0/2-10V), ACI (0/4-20mA) input Multi-function input up/ down function parameter (Group 3)
		Setting frequency by communication method
	Frequency limit	Lower and upper frequency limits; 3-skip frequency settings
Run	Operation set	Keypad run, stop button; External terminals; Multi-operation mode: 2/3 wire selection; Jog operation
		Run signal by communication method
Common Control	V/ F curve setting	6 fixed curve and one customized curve
	Carrier frequency	1-16 KHz (default 5 KHz)
	Acceleration & deceleration control	2 sets of Acc/ Dec time parameters; 4 sets of S curve parameters
	Multi-function input	19 functions
	Multi-function output	14 functions
	Multi-function analog output	5 functions
	Main features	Overload detection, 8 preset speeds, Auto-run, Acc/ Dec Switch, Main/ Alt Run Command Select, Main/ Alt Frequency Command Select, PID Control, Torque Boost, V/F Start Frequency, Fault Reset

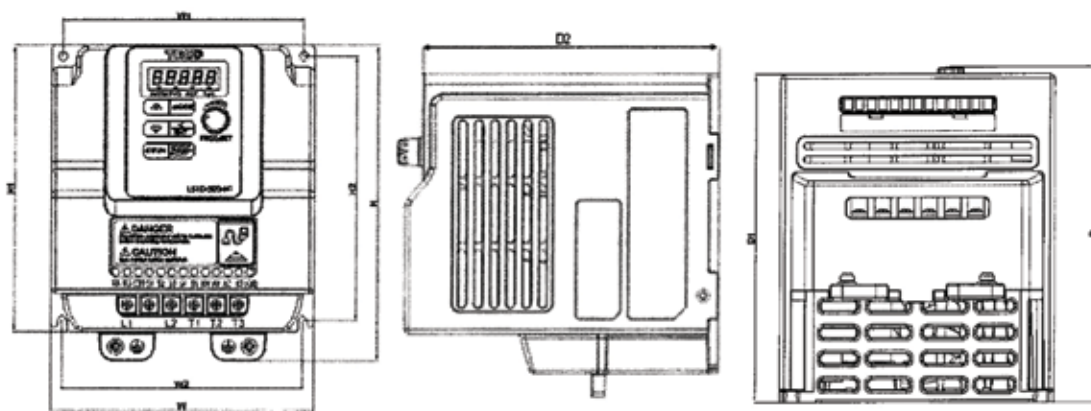
Protection	
Protection Class	IP20
Suitable environment	
Operating Temperature	-10–40°C (-10–50°C with fan) If several inverters are installed in the same control panel, ensure adequate spacing and provide the necessary cooling and ventilation for successful operation
Storage Temperature	-20–60°C
Relative Humidity	Max 95°C (without condensation)
Shock	1G (9.8m/s ²) for <20 Hz. 0.6G (5.88m/s ²) 20 Hz–50 tHz

Dimensional Diagrams



Units: inches (mm)

Model	W	W1	W2	H	H1	H2	D	D1	Weight
L510-1P2-H1-N	2.83 (72)	2.48 (63)	2.40 (61)	5.55 (141)	5.16 (131)	4.80 (122)	5.48 (139.2)	5.35 (136)	2.0lbs (0.9kg)
L510-1P5-H1-N									
L510-2P2-H1-N									
L510-2P5-H1-N									
L510-201-H1-N									
L510-2P5-H3-N									
L510-201-H3-N									



Units: inches (mm)

Model	W	W1	W2	H	H1	H2	D	D1	Weight
L510-101-H1-N	4.65 (118)	4.25 (108)	4.25 (108)	5.67 (144)	5.16 (131)	4.76 (121)	5.80 (147.3)	5.68 (144.2)	3.52lbs (1.6kg)
L510-202-H1-N									
L510-203-H1-N									
L510-202-H3-N									
L510-203-H3-N									
L510-401-H3-N									
L510-402-H3-N									
L510-403-H3-N									

Keypad



Models & Product Specifications

115V Class; Single-Phase Input

Model L510-XXX-H1-N	1P2	1P5	101
Horsepower (hp)	0.25	0.50	1.00
Motor Capacity (kW)	0.20	0.40	0.75
Rated Output Current (A)	1.80	2.60	4.30
Rated Capacity (KVA)	0.68	1.00	1.65
Input Voltage Range (V)	Single-Phase 100–120V, 50/ 60Hz		
Allowable Voltage Fluctuation	+10%–15%		
Output Voltage Range (V)	Three-Phase 0–240V		
Input Current (A)	9.50	13.00	19.00
Allowable Momentary Power Loss Time (S)	1.00	1.00	1.0
Enclosure	IP20		

Models & Product Specifications - Cont.

230V Class; Single-Phase Input

Model L510-XXX-H1-N	2P2	2P5	201	202	203
Horsepower (hp)	0.25	0.50	1.00	2.00	3.00
Motor Capacity (kW)	0.20	0.40	0.75	1.50	2.20
Rated Output Current (A)	1.80	2.60	4.30	7.50	10.50
Rated Capacity (KVA)	0.68	1.00	1.65	2.90	4.00
Input Voltage Range (V)	Single-Phase 200–240V, 50/ 60Hz				
Allowable Voltage Fluctuation	+10%–15%				
Output Voltage Range (V)	Three-Phase 0–240V				
Input Current (A)	4.90	7.20	11.00	15.50	21.00
Allowable Momentary Power Loss Time (S)	1.00	1.00	1.00	2.00	2.00
Enclosure	IP20				

230V Class; Three-Phase Input

Model L510-XXX-H3-N	2P5	201	202	203
Horsepower (hp)	0.50	1.00	2.00	3.00
Motor Capacity (kW)	0.40	0.75	1.50	2.20
Rated Output Current (A)	2.60	4.30	7.50	10.50
Rated Capacity (KVA)	1.00	1.65	2.90	4.00
Input Voltage Range (V)	Three-Phase 200–240V, 50/ 60Hz			
Allowable Voltage Fluctuation	+10%–15%			
Output Voltage Range (V)	Three-Phase 0–240V			
Input Current (A)	4.00	6.40	9.40	12.20
Allowable Momentary Power Loss Time (S)	1.00	1.00	2.00	2.00
Enclosure	IP20			

460V Class; Three-Phase Input

Model L510-XXX-H3-N	401	402	403
Horsepower (hp)	1.00	2.00	3.00
Motor Capacity (kW)	0.75	1.50	2.20
Rated Output Current (A)	2.30	3.80	5.20
Rated Capacity (KVA)	1.70	2.90	4.00
Input Voltage Range (V)	Three-Phase 380–480V, 50/ 60Hz		
Allowable Voltage Fluctuation	+10%–15%		
Output Voltage Range (V)	Three-Phase 0–480V		
Input Current (A)	4.20	5.60	7.30
Allowable Momentary Power Loss Time (S)	2.00	2.00	2.00
Enclosure	IP20		

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We also offer a wide variety of motors that are matched with the Drives and Soft Starters including Vertical Hollow Shaft, Rolled Steel, and NEMA Premium Efficient motors.

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