



*The field-proven, digital soft start solution*

# The XLD Series Specifications

by  **MOTORTRONICS**

## Acceleration Adjustments

Ramp types	Voltage ramp or current ramp
Starting torque	0 - 100% of line voltage or 0 - 600% of FLA
Ramp time	1 to 120 seconds
Current limit	200 - 600%

## Dual Ramp Settings\*

Four (4) programmable ramp options

## Deceleration Adjustments

Begin decel level	0 - 100% of line voltage
Stop level	0 to 1% less than begin decel
Decel time	0 - 60 seconds
Operation during overload	Ramp down or coast-to-stop

## Jog Settings\*

Jog at set current	100 - 500% of FLA
Jog at set voltage	0 - 100% of line voltage
Voltage jog max time	0 - 20 seconds

## Kick Start Settings

Kick start	0 - 100% of line voltage
Kick start time	0.1 - 2 seconds

## Programmable Output Relays

Three (3) relays can be individually programmed for change of state indication for any one of 18 conditions.

Type / Rating	FORM C (SPDT), rated 5 amps, 240VAC max (1200VA)
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## Protection

### Start & Run Protection

Two programmable overload trip curves allow for the thermal capacity required to start the load while providing motor overload protection needed during the run time.

Start:	Programmable for Class 5 - 30
Run:	Programmable for Class 5 - 30, enabled when starter detects motor is "At-Speed"
Reset:	Manual or automatic, selectable via programming

The **XLD Series** recognizes motor cool-down rates are a function of the run time and that sometimes a motor will cool faster if allowed to run.

**Real-Time Thermal Modeling** Continuously calculates motor operating temperature even when your motor isn't running. Knows when your motor is cool enough for a successful restart.

**Retentive Thermal Memory** Remembers the thermal condition of the motor even in the event of a power brown-out or black-out. Extrapolates motor temperature using a real-time clock.

**Dynamic Reset Capacity** Overload will not reset until thermal capacity in the motor is sufficient for a successful restart. Starter learns and retains this information from previous starts.

**Phase Current Imbalance/Loss Protection**

Imbalance trip level	5 - 30% current between any two phases
Imbalance trip delay	0 - 20 seconds
Phase loss	Trips on any phase current loss

**Electronic Shear Pin Protection**

Shear pin trip level	50 - 300% of motor FLA
Shear pin trip delay	0 - 20 seconds

**Load Loss Trip Protection**

Under current trip level	10 - 90% of motor FLA
Under current trip delay	0 - 20 seconds

**Coast Down (Back Spin) Lockout Timer**

Coast down time	0 - 60 minutes
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**Starts-per-Hour Lockout Timer**

Starts-per-hour	1 - 10 successful starts per hour
Time between starts	0 - 60 min. between start attempts

**Phase Rotation** Phase sequence insensitive

**Shorted Load** During start, injects voltage for ¼ second and will trip if it sees a 9x unit current surge

**Short Circuit** Trips in 12.5 ms at 10x unit current rating during run

**Shorted SCR** Trips on a voltage drop of less than 1½ V across any SCR pair

**Shunt Trip** Separate relay trips on current flow while in the OFF mode (multiple shorted SCRs)

**Over Temperature** Thermal sensors on heat sinks trip when temperature exceeds 185° F

