

## Technical Specifications

**Table 5: Electrical Specifications**

Supply Voltage	208 Vac +10%/-15%; 230 Vac +10%/-15%; 460 Vac +10%/-15%; 575 Vac +10%/-15%
Control Voltage	115 Vac +10%/-15% (control power transformer included)
Frequency	50/60 Hz +/- 5%
Rated Current	Full load current (FLA) per NFPA 70 / NEC Table 430-250
Motor Power	Type 1 and Type 12/12K: 3–150 hp @ 208 V 5–200 hp @ 230 V 10–400 hp @ 460 V 15–500 hp @ 575 V
	Type 3R or 50 °C (122 °F) Rated: 3–125 hp @ 208 V 5–150 hp @ 230 V 10–350 hp @ 460 V 15–400 hp @ 575 V
Motor Voltage	208, 230, 460, 575 V
Starting Duty (Standard Duty)	S1: Starting at 350% of In <sup>1</sup> for 40 s from a cold state
	S3: Starting at 300% of In <sup>1</sup> for 20 s, or 200% of In for 40 s, with a load factor of 95% and 3 starts per hour, or an equivalent thermal cycling

<sup>1</sup> In is the controller full load current listed on the nameplate.

**Table 6: Environmental Specifications**

Storage Temperature	-13 to +158 °F (-25 to +70 °C)
Operating Temperature	UL Type 1 and Type 12/12K: +14 to 104 °F (-10 to 40 °C)
	UL Type 3R and Mod X10: +14 to 122 °F (-10 to 50 °C)
Humidity	95% with no condensation or dripping water, conforming to IEC 60068-2-3
Altitude	1000 m (3280 ft.), derated by 2.2% for each additional 100 m (328 ft.) up to 2000 m (6560 ft.) maximum
Enclosure	UL Type 1: General Purpose
	UL Type 12/12K: Industrial Use, dust-tight/drip-tight
	UL Type 3R: Outdoor Use
Pollution Degree	Pollution degree 2 (UL Type 1 and Type 3R) and pollution degree 3 (UL Type 12/12K) per NEMA ICS-1 and IEC 60664-1
Resistance to Vibration (Soft Starter Only)	According to IEC 60068-2-6: 1.5 mm peak to peak from 3 to 13 Hz 1 gn from 13 to 150 Hz
Resistance to Shocks	According to IEC 60068-2
Codes and Standards	UL Listed per UL 508 under category NKJH Conforms to applicable NEMA ICS, NFPA, and IEC standards Manufactured under ISO 9001 standards Factory modification E10 provides Canadian cUL certification per C22.2 No.14. Seismic Certification: • 2003 IBC, NFPA 5000, and ASCE7 • ICC ES AC 156 <sup>1</sup>

<sup>1</sup> Acceptance criteria test protocol with an importance factor of 1.5.

**Table 7: Operation**

Methods of Starting:	
Torque Ramp	Adjustable from 1 to 60 s by keypad
Current Limitation	Adjustable from 150% to 350% of controller rated current (In) as indicated on nameplate
Booster Start-up Pulse	Pulse start at 80% of full voltage for 0.1 to 1 s ( <b>bSt</b> ) for breaking free high-friction loads or starting 2-pole motors
Methods of Stopping:	
Freewheel	Coast to stop on stop command
Torque Deceleration Ramp	Adjustable from 1 to 60 s by keypad
Status and Diagnostics:	Digital display of motor and controller status, including: Ready/Run Motor Current

**Table 8: Protection**

Motor:	
Thermal Overload	Solid-state thermal overload relay, integral to the ATS22 soft starter. Overload class is selectable as 10, 20, or 30 by keypad. Range is 40% to 100% of ATS22 soft starter rated current. <sup>1</sup>
Shunt-Trip Disconnect	Removes all power from the controller cabinet when the ATS22 soft starter detects a fault condition.
Controller:	
Short-Circuit Current Ratings	<ul style="list-style-type: none"> <li>PowerPact H, J, D, L, or P Circuit Breaker: 100 kA @ 480 V and 50 kA @ 600 V<sup>2</sup></li> <li>PowerPact M Circuit Breaker: 65 kA @ 480 V and 25 kA @ 600 V</li> <li>Fusible Disconnect: 100 kA @ 600 V (requires UL Class J time-delay fuses, not included).</li> </ul>
Overcurrent Protection	An overcurrent protection device (OCPD) provides Type 1 coordination to the short-circuit current ratings.
Overtemperature Protection	Protection if heatsink temperature exceeds 85 °C (185 °F)
Shorting Contactor	A shorting contactor is integral to the ATS22 soft starter and reduces temperature rise in the enclosure by eliminating the watts loss of the SCRs.
Unbalanced Threshold Current	Programmable, 10% to 100% of soft starter rated current (In)
Ground Fault	Programmable, 10% to 100% of soft starter rated current (In)
Undervoltage/Overvoltage	Programmable, undervoltage trip at 50% to 90% of line voltage ( <b>ULn</b> ), and overvoltage trip at 110% to 125% of line voltage

<sup>1</sup> Refer to the *ATS22 User Manual*, BBV51330, for ATS22 soft starter maximum rated current. It may differ from the ratings of the Enclosed ATS22 controller.

<sup>2</sup> Short-circuit rating for power circuits N05, R05, and Y05 with an IEC contactor is 35,000 A @ 600 V for the following horsepower ratings:  
350 hp: Type 1 and 12  
300 hp: Type 3R or Mod X10