Enclosed 48 Soft Starts

Advanced performance in a packaged starter

a brand of Schneider Electric

SQUARE D

Flexible Control

Enclosed 48 Soft Starters provide industry-leading performance in a packaged soft starter solution. Available as a pre-engineered and "build-to-order" product, Enclosed 48 Soft Starters can be configured based upon exact specifications to optimize the unit for specific application requirements up to 600 HP.

The Enclosed 48 packages the advanced functionality of the Altistart® 48 Soft Starter in a Type 1, Type 12 or Type 3R enclosure. Combination devices are available with either a circuit breaker or fusible disconnect, the Enclosed 48 Soft Starter features coordinated short circuit current ratings up to 100kA (fused) and 30kA (circuit breaker) and the choice of power circuit configurations – with isolation contactor (non-reversing and reversing) and shunt trip options. In addition, the Enclosed 48 Soft Starter is rated as seismic qualified (floor mount configurations) to the International Code Counsel Evaluation Service (ICC ES) Acceptance Criteria for Seismic Qualification Testing of Nonstructural Components (AC156) and is EGSA Class 3 Generator compliant for use on emergency/ standby generators.

As the most fully integrated enclosed soft start on the market, the Enclosed 48 Soft Starter features genuine Schneider Electric components, including circuit breakers, operating mechanisms, control relays, contactors, and terminal blocks, to ensure easy device configuration and reliable soft start operation no matter your application.

for your Most Demanding Applications

Simplified Selection and Installation

Available in a wide range of fully functional models, the Enclosed 48 Soft Starter features a complete low voltage offering of horsepower ratings up to 600 HP@ 575V with the ability to select a variety of factory modifications for customized performance.

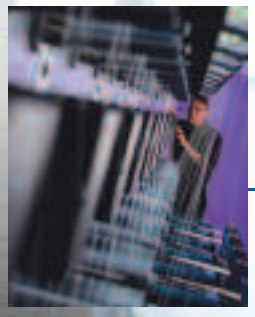
In addition to the Altistart 48 Soft Start, Enclosed 48 units are supplied ready-fitted with overcurrent protection device, shorting (bypass), and isolation means, so no additional components are required. Installation becomes quick and easy as all that is required for operation is unit mounting and connection to the control, supply and motor. All enclosures have either pre-punched conduit knockouts or top and bottom removable conduit entry plates to save time during installation – unit mounting and connection to the control, supply and motor is all that is required for operation.

Advanced Protection

The Enclosed 48 Soft Starter protects both the motor and machine for your applications. For the motor, the Enclosed 48 Soft Starter delivers thermal protection by I^2t calculation, with phase loss detection and protection from excessive starts. For the machine, the soft start provides both overload and underload protection and guards against stalled impellers, rotation direction and excessive acceleration time. Additionally, the Altistart 48 Soft Starter provides active thermal overload protection when in shorting (bypass) mode.

High Performance Machine Control

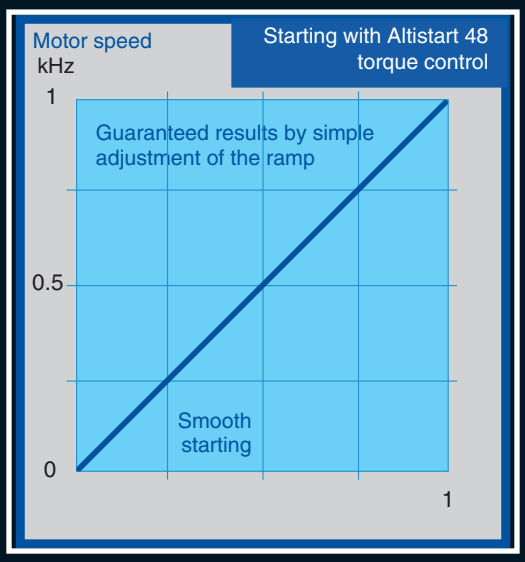
Featuring the unique Torque Control System (TCS), the Altistart 48 Soft Starter uniquely provides linear control during starting and stopping conditions. Developing only the torque needed to accelerate the load, Enclosed 48 Soft Starter provides a constant acceleration rate that is independent of the motor load and controls machine torque during both acceleration and deceleration. With voltage or current limiting systems used in traditional soft starts, the motor torque changes according to the speed and all torque, including acceleration torque, is machine controlled. The constant linear speed ramp creates smooth acceleration and deceleration that generates less mechanical stress on the motor and machine, even for the most demanding applications.



Patented Torque Control System (TCS)

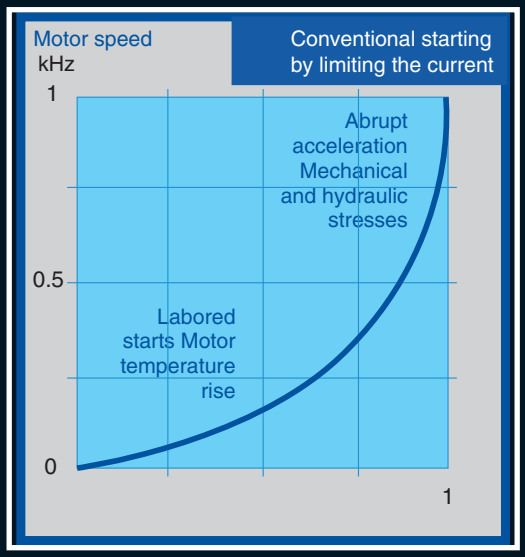
TCS delivers motor torque control for the entire acceleration and deceleration period:

- Gradual acceleration up to nominal speed, even with high starting torque.
- Additionally controls deceleration. Can prevent check valve slamming and associated maintenance problems in water systems.
- Improves reliability and life of belts and machinery.



Conventional voltage ramp starting by limiting the current can cause:

- Excessive motor heating from difficult start loads.
- Mechanical stress from abrupt end of acceleration ramp.
- No benefit from ramp adjustments.



Typical Applications

- Centrifugal pumps
- Piston pumps
- Fans
- Refrigeration compressors
- Screw compressors
- Piston compressors
- Conveyors, transporters
- Lifting screws
- Drag lifts
- Lifts
- Circular saws, band saws
- Pulpers
- Agitators
- Mixers
- Grinders
- Crushers
- Refiners
- Presses

Key Benefits

Reduced torque during start, which:

- Prevents damage to material in process.
- Can increase the life of machines and reduce down time.

Reduced current peaks on the supply during starting, which:

- Reduces plant capacity requirements.
- Reduces voltage sag on installations with limited capacity.
- Eliminates detrimental effects on other equipment driven from a weak supply.

Smooth acceleration and deceleration independent of fluctuations in motor load

- Ideally suited for most fans, centrifugal pumps or other variable torque loads.
- Can eliminate water hammer and check valve slamming even on difficult pumping applications.

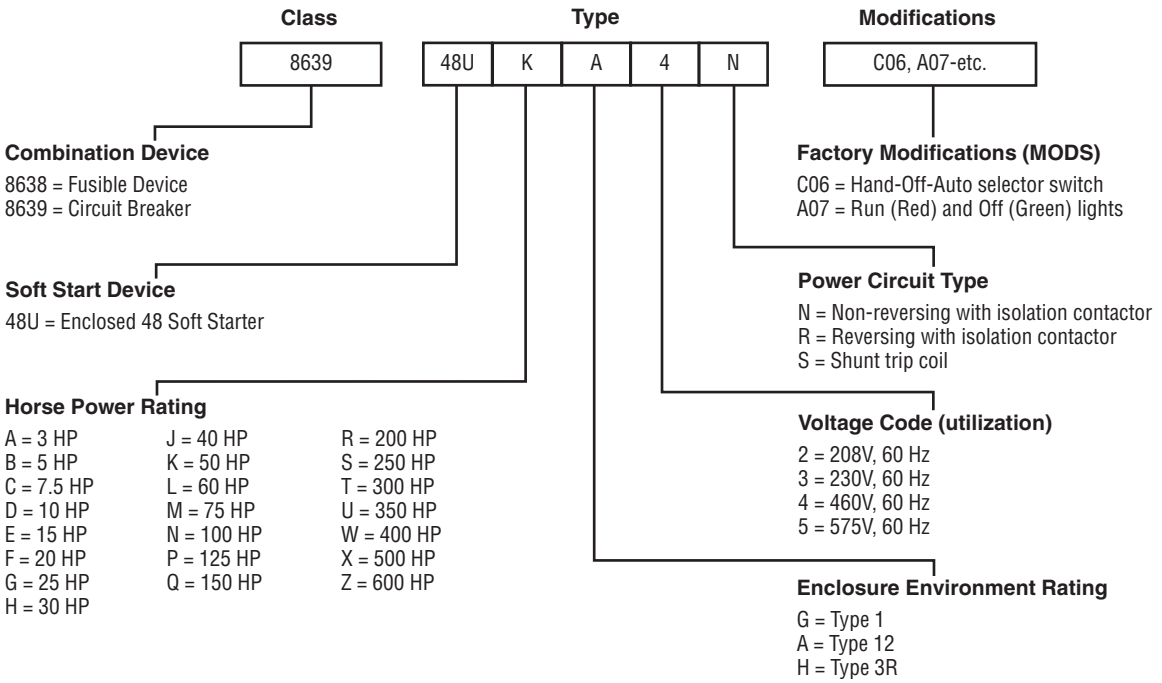
Advanced protection for the motor and the installation, including:

- Selectable overload protection class.
- Overload pre-alarm.
- Phase loss and reversal protection.
- Stall protection during start.
- Protection from material jams while running.
- Underload detection.

Service Entrance Rating

- Provides a factory installed ground neutral assembly with ground wire and label for use as service entrance rated equipment.

Catalog Number Identification



Selection

Enclosed 48 Soft Starts					Power Circuit Type (Type 1 Enclosure)			Power Circuit Type (Type 12 Enclosure)			Power Circuit Type (Type 3R Enclosure)		
	HP Ratings @				Power Circuit N Non-REV with Iso/ Contactor	Power Circuit R REV with Iso/ Contactor	Power Circuit S Shunt Trip Coil w/Molded Case	Power Circuit N Non-REV with Iso/ Contactor	Power Circuit R REV with Iso/ Contactor	Power Circuit S Shunt Trip Coil w/Molded Case	Power Circuit N Non-REV with Iso/ Contactor	Power Circuit R REV with Iso/ Contactor	Power Circuit S Shunt Trip Coil w/Molded Case
Size	208V	230V	460V	575V									
A	3	5	10	15	33.43"H x 24.69"W x 13.083"D – 110 lbs.			33.43"H x 24.69"W x 13.083"D – 110 lbs.			33.43"H x 24.69"W x 13.083"D – 110 lbs.		
A	5	7.5	15	20									
A	7.5	10	20	25									
A	10	–	25	30									
A	–	15	30	40									
B	15	20	40	50	45.81"H x 18.69"W x 13.083"D – 125 lbs.			45.81"H x 18.69"W x 13.083"D – 125 lbs.			45.81"H x 18.69"W x 13.083"D – 125 lbs.		
B	20	25	50	60									
B	25	30	60	75									
B	30	40	75	100									
C	40	50	100	125	62.43"H x 18.69"W x 13.083"D – 200 lbs.			62.43"H x 18.69"W x 13.083"D – 200 lbs.			62.43"H x 18.69"W x 13.083"D – 200 lbs.		
C	50	60	125	150									
D	60	75	150	200	94.6"H x 30"W x 20"D – 500 lbs.	94.6"H x 30"W x 20"D – 500 lbs.	94.6"H x 20"W x 20"D – 400 lbs.	94.6"H x 30"W x 20"D – 500 lbs.	94.6"H x 30"W x 20"D – 500 lbs.	94.6"H x 20"W x 20"D – 400 lbs.	94.8"H x 37.7"W x 32.6"D – 525 lbs.	94.8"H x 37.7"W x 32.6"D – 525 lbs.	94.8"H x 27.7"W x 32.6"D – 425 lbs.
D	75	100	200	250									
D	100	125	250	300									
E	125	150	300	350	94.6"H x 35"W x 20"D – 750 lbs.	94.6"H x 55"W x 20"D – 1000 lbs.	94.6"H x 35"W x 20"D – 750 lbs.	94.6"H x 35"W x 20"D – 750 lbs.	94.6"H x 55"W x 20"D – 1000 lbs.	94.6"H x 35"W x 20"D – 750 lbs.	94.8"H x 42.7"W x 32.6"D – 800 lbs.	94.8"H x 62.7"W x 32.6"D – 1050 lbs.	94.8"H x 42.7"W x 32.6"D – 800 lbs.
E	150	–	350	400									
E	–	200	400	500									
E	200	250	500	600									

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