

# **TEAMMaster™**



## **Low Voltage Solid State Starters**

30 - 800 hp • 230 - 575 VAC

## Features and Benefits

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AC induction motors have become increasingly dominant in industrial facilities worldwide. Manufacturers faced with increasing pressure to control costs have recognized that motor efficiency and energy consumption are key factors to production costs.

Starting motors across-the-line (full voltage start) has been identified as a less than optimal design practice. During each start, motors experience high (600-800% of full load amps) inrush currents. This can subject motor windings to excess stress, ultimately reducing the motor service life and efficiency. In addition, the resulting torque at in-rush conditions can produce mechanical shock, which in turn puts undue stress on gears, couplings, and belts (which can also slip).

Solid State Starters are ideal in overcoming these conditions. They operate by ramping the voltage to the motor (reduced voltage start), thus reducing stress. While undergoing this operation, they will also monitor the motor and protect it from excess current draw.

Recognizing that not all loads are started up in the same manner, the TEAMMaster™ Low Voltage Solid State Starter can operate in a variety of modes, thus controlling your process equipment optimally.

## Control Features

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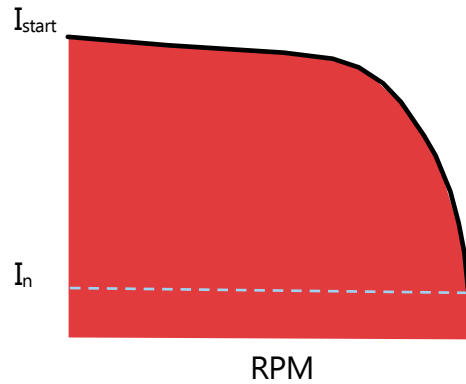
- **Current Ramping:** rapidly accelerates loads while regulating and limiting allowable current, offering ideal protection to motor windings. This is a widely employed starting mode for many applications.
- **Tru Torque® Control:** accelerate to speed via a torque ramp method. This mode is effective for pumping applications where water surge, or “water hammer,” is intolerable. It is also ideal on conveyor applications where minimal slip is required.
- **Power Control:** this ramping mode limits the power (kW) draw on start up. This works well when a generator or other unusually soft power supply is employed.
- **Dual Current Ramps:** similar to current ramping, but user can select either of two ramp profiles. This allows flexibility for applications like mixers or conveyors where they may be started up empty or at full load.
- **Voltage Ramp:** this “classic” method of ramping uses no feedback of current or torque. It can be used as a “back-up mode” when process difficulties prevent using other ramp modes.
- **Kick Start:** introduces an elevated voltage for a brief time at the start of acceleration. Useful for starting motor rotation for high inertia or high friction loads. This can be applied in conjunction with all other control modes
- **Soft Deceleration:** achievable via Voltage or Tru Torque® mode.

# Performance

Soft start control reduces start-up current demand as illustrated below.

## ACROSS THE LINE (ATL)

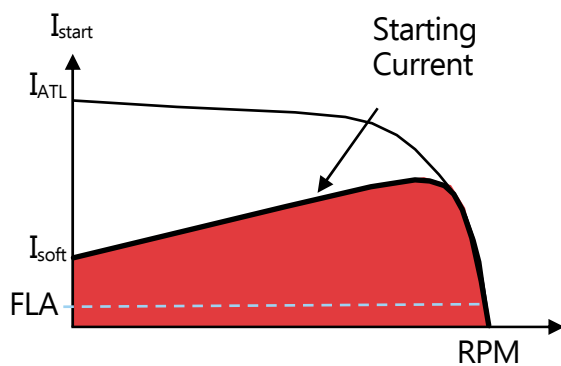
Motor Inrush Current ( $I_{start}$ ) Typically 500-800%  
Motor Full Load ( $I_n$ ) Current



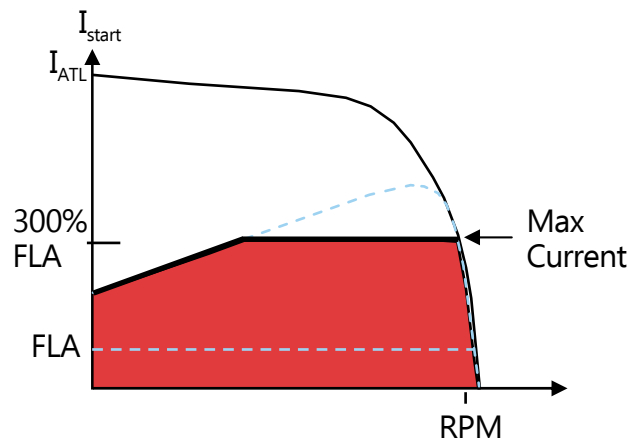
## Soft Start Motor Current Ramp

Lower peak currents and absence of spikes reduces energy costs and produces less motor/ process equipment wear and tear.

### TYPICAL CLOSED LOOP CURRENT RAMP PROFILE



### CURRENT RAMP WITH MAX CURRENT SETTING



# TEAMMaster™ Hardware and Software Advantages

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The TEAMMaster™ motor starter is a microprocessor-controlled starter for single or three-phase motors. The starter can be custom designed for specific applications. A few of the features are:

- Solid state design
- Reduced voltage starting and soft stopping
- Closed-loop motor current control, power (kW) control, torque control
- Programmable motor protection
- Programmable operating parameters
- Programmable metering

Each starter can operate within applied line voltage and frequency values of 100VAC to 600VAC and 23 to 72Hz.

The starter can be programmed for any motor FLA and all of the common motor service factors. It enables operators to control both motor acceleration and deceleration. The TEAMMaster™ can also protect the motor and its load from damage that could be caused by incorrect phase order wiring.

The starter continually monitors the amount of current being delivered to the motor. This protects the motor from overheating or drawing excess current.

All units are shipped with proven MX<sup>2</sup> technology.

The enhanced engineering features of the MX<sup>2</sup> starter include:

- Universal voltage operation
- Universal frequency operation
- Programmable motor overload multiplier
- Controlled acceleration and deceleration
- Multiple frame sizes
- Phase rotation protection
- Regulated current control
- Electronic motor thermal overload protection
- Electronic over/under current protection
- Single phase protection
- Line-to-line current imbalance protection
- Stalled motor protection
- Programmable metering
- Programmable Relays
- Analog input and output with digital offset and span adjustment
- Voltage and current accuracy of 3%
- Slow speed (Cyclo Conversion) 7.1% & 14.3% forward and reverse
- Motor winding (Anti-Condensation)
- Anti-windmilling brake
- DC Injection Braking
- Passcode protected

# Crusher Duty Rated Solid State Starters

- Provides solid state starting and full voltage emergency backup starting
- Complete electronic motor protection including full voltage start overload capability
- Designed for severe applications; capable of 500% full load amps for up to 30 seconds and 125% continuous duty
- Transfer to bypass mode when motor is at full speed (bypass is A-T-L rated)
- Circuit breaker with flange-mounted disconnect operator
- Metering, diagnostics, and door-mounted LCD operator standard
- Service entrance rated
- Door-mounted start and stop pushbuttons and run indication light
- Door-mounted overload reset and run indicating light
- Terminal strip in enclosure for remote start/stop connection
- Auxiliary relay with qty 2 form-C run contacts
- Analog I/O

## Crusher Duty Units 460V

Max HP	AMP Rating	NEMA 12		NEMA 3R		NEMA 12/ NEMA 3R Weight (lbs)
		Model	Dimensions	Model	Dimensions	
50	65	TRX2E-050-480-12KP	26H X 24W X 13D	TRX2E-050-480-3RKP	48H X 24W X 12D	215
75	96	TRX2E-075-480-12KP	26H X 24W X 13D	TRX2E-075-480-3RKP	48H X 24W X 12D	220
100	124	TRX2E-100-480-12KP	48H X 24W X 12D	TRX2E-100-480-3RKP	48H X 24W X 12D	230
125	156	TRX2E-125-480-12KP	48H X 36W X 12D	TRX2E-125-480-3RKP	48H X 36W X 12D	320
150	180	TRX2E-150-480-12KP	48H X 36W X 12D	TRX2E-150-480-3RKP	48H X 36W X 12D	325
200	240	TRX2E-200-480-12KP	48H X 36W X 16D	TRX2E-200-480-3RKP	48H X 36W X 12D	335
250	302	TRX2E-250-480-12KP	70H X 30W X 18D	TRX2E-250-480-3RKP	70H X 30W X 18D	510
300	361	TRX2E-300-480-12KP	70H X 30W X 18D	TRX2E-300-480-3RKP	70H X 30W X 18D	512
400	477	TRX2E-400-480-12KP	87H X 37W X 20D	TRX2E-400-480-3RKP	87H X 37W X 20D	765
500	590	TRX2E-500-480-12KP	87H X 37W X 20D	TRX2E-500-480-3RKP	87H X 37W X 20D	790
600	720	TRX2E-600-480-12KP	87H X 37W X 20D	TRX2E-600-480-3RKP	87H X 37W X 20D	815
>600	Consult Factory					

## Crusher Duty Units 230V

Max HP	AMP Rating	NEMA 12		NEMA 3R		NEMA 12/ NEMA 3R Weight (lbs)
		Model	Dimensions	Model	Dimensions	
25	65	TRX2E-025-230-12KP	26H X 24W X 13D	TRX2E-025-230-3RKP	26H X 24W X 13D	215
30	96	TRX2E-030-230-12KP	26H X 24W X 13D	TRX2E-030-230-3RKP	26H X 24W X 13D	220
50	124	TRX2E-050-230-12KP	48H X 24W X 12D	TRX2E-050-230-3RKP	48H X 24W X 12D	230
60	156	TRX2E-060-230-12KP	48H X 24W X 12D	TRX2E-050-230-3RKP	48H X 24W X 12D	320
75	180	TRX2E-075-230-12KP	48H X 24W X 12D	TRX2E-075-230-3RKP	48H X 24W X 12D	325
100	240	TRX2E-100-230-12KP	48H X 36W X 16D	TRX2E-100-230-3RKP	48H X 36W X 16D	335
125	302	TRX2E-125-230-12KP	70H X 30W X 18D	TRX2E-125-230-3RKP	70H X 30W X 18D	510
150	361	TRX2E-150-230-12KP	70H X 30W X 18D	TRX2E-150-230-3RKP	70H X 30W X 18D	515
200	477	TRX2E-200-230-12KP	87H X 37W X 20D	TRX2E-200-230-3RKP	87H X 37W X 20D	765
250	590	TRX2E-250-230-12KP	87H X 37W X 20D	TRX2E-250-230-3RKP	87H X 37W X 20D	790
300	720	TRX2E-300-230-12KP	87H X 37W X 20D	TRX2E-300-230-3RKP	87H X 37W X 20D	815
>250	Consult factory					

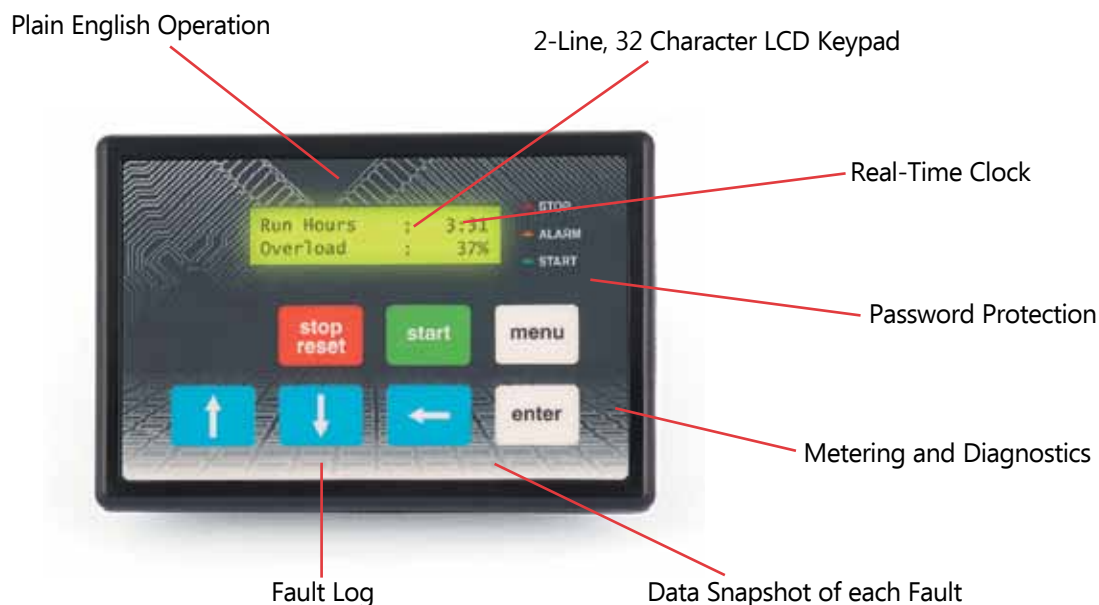
**NEMA 3R ratings at 460VAC are in stock. All other units are built to order.**

**(Allow 1-2 weeks for delivery)**

**For 575/600VAC units, please consult factory**

**For NEMA 4 ratings, please consult factory**

# LCD Operators Keypad



Crusher Duty panels come standard with a door-mounted user interface

- Configuration for all starting modes
- Operating data display:
  - +/- 2% accuracy
  - Average Current
  - L1 current
  - L2 current
  - L3 current
  - Current imbalance %
  - Ground fault amps/residual
  - Average volts
  - L1 - L2 voltage
  - L2 - L3 voltage
  - L3 - L1 voltage
  - Overload %
  - Power factor
  - Watts
  - VA
  - VARS
  - Phase order
  - Line frequency
  - Analog input
  - Analog output
  - Run time – days
  - Run time – hours
  - Number of starts
  - Tru Torque® %
  - Power %
  - Peak starting current
  - Last starting duration
- kW hours and MW hours
- Display up to 9 most recent faults

# Combination Panels

- Circuit breaker with Rotary disconnect operator
- Complete electronic motor protection
- Up-to-speed bypass transfer
- Heavy Duty: capable of 500% full load amps for up to 30 seconds and 125% continuous duty
- Standard Duty: capable of 350% full load amps for up to 30 seconds and 115% continuous duty
- Standard 120V control power transformer
- Terminal strip in enclosure for remote start/stop connection
- Auxiliary relay with qty 2 form C run contacts
- Analog I/O

## 230VAC

Max HP by Duty		AMP Rating	NEMA 4/12		NEMA 3R		NEMA 4/12 NEMA 3R Weight (lbs)
Std.	Heavy		Model No.	Dimensions	Model No.	Dimensions	
20/25	20	52	TMX2PB-20-2-4-CB-ST	36H x 16W x 15D	TMX2PB-20-2-3-CB-ST	36H x 16W x 15D	175
30/40	30/40	77	TMX2PB-30-2-4-CB-ST	42H x 20W x 15D	TMX2PB-30-2-3-CB-ST	42H x 20W x 15D	200
50	50	124	TMX2PB-50-2-4-CB-ST	48H x 24W x 15D	TMX2PB-50-2-3-CB-ST	48H x 24W x 15D	220
60/75	60/75	180	TMX2PB-75-2-4-CB-ST	48H x 24W x 15D	TMX2PB-75-2-3-CB-ST	48H x 24W x 15D	220
100	---	240	TMX2PB-100-2-4-CB-ST	48H x 24W x 15D	TMX2PB-100-2-3-CB-ST	48H x 24W x 15D	220
150	100	361	TMX2PB-75-2-4-CB-ST	48H x 24W x 15D	TMX2PB-150-2-3-CB-ST	48H x 24W x 15D	220
200	150	477	TMX2PB-100-2-4-CB-ST	78H x 30W x 24D	TMX2PB-200-2-3-CB-ST	78H x 30W x 24D	400
>200	>150	Consult Factory					

## 460VAC

Max HP by Duty		AMP Rating	NEMA 4/12		NEMA 3R		NEMA 4/12 NEMA 3R Weight (lbs)
Std.	Heavy		Model No.	Dimensions	Model No.	Dimensions	
50	40	65	TMX2PB-50-4-4-CB-ST	36H X 16W X 15D	TMX2PB-50-4-3-CB-ST	36H X 16W X 15D	175
75	75	96	TMX2PB-75-4-4-CB-ST	42H X 20W X 15D	TMX2PB-75-4-3-CB-ST	42H X 20W X 15D	200
100	---	125	TMX2PB-100-4-4-CB-ST	48H X 24W X 15D	TMX2PB-100-4-3-CB-ST	48H X 24W X 15D	220
150	150	180	TMX2PB-150-4-4-CB-ST	48H X 30W X 15D	TMX2PB-150-4-3-CB-ST	48H X 30W X 15D	220
200	---	240	TMX2PB-200-4-4-CB-ST	48H X 30W X 15D	TMX2PB-200-4-3-CB-ST	48H X 30W X 15D	220
300	200	361	TMX2PB-300-4-4-CB-ST	48H X 30W X 15D	TMX2PB-300-4-3-CB-ST	48H X 30W X 15D	220
400	300	477	TMX2PB-400-4-4-CB-ST	78H X 30W X 24D	TMX2PB-400-4-3-CB-ST	78H X 30W X 24D	400
>400	>300	Consult Factory					

## 575VAC

Max HP by Duty		AMP Rating	NEMA 4/12		NEMA 3R		NEMA 4/12 NEMA 3R Weight (lbs)
Std.	Heavy		Model No.	Dimensions	Model No.	Dimensions	
40	40	40	TMX2PB-30-5-4-CB-ST	24H X 16W X 15D	TMX2PB-30-5-3-CB-ST	24H X 16W X 15D	175
50	50	52	TMX2PB-40-5-4-CB-ST	24H X 16W X 15D	TMX2PB-40-5-3-CB-ST	24H X 16W X 15D	175
60	50	65	TMX2PB-50-5-4-CB-ST	24H X 16W X 15D	TMX2PB-50-5-3-CB-ST	24H X 16W X 15D	175
100	100	96	TMX2PB-75-5-4-CB-ST	36H X 16W X 15D	TMX2PB-75-5-3-CB-ST	36H X 16W X 15D	200
125	125	125	TMX2PB-100-5-4-CB-ST	36H X 20W X 15D	TMX2PB-100-5-3-CB-ST	36H X 20W X 15D	220
200	200	180	TMX2PB-150-5-4-CB-ST	48H X 20W X 15D	TMX2PB-150-5-3-CB-ST	48H X 20W X 15D	220
250	200	240	TMX2PB-200-5-4-CB-ST	48H X 20W X 15D	TMX2PB-200-5-3-CB-ST	48H X 20W X 15D	220
350	250	361	TMX2PB-300-5-4-CB-ST	48H X 20W X 15D	TMX2PB-300-5-3-CB-ST	48H X 20W X 15D	220
500	400	477	TMX2PB-400-5-4-CB-ST	78H X 30W X 20D	TMX2PB-400-5-3-CB-ST	78H X 30W X 20D	400
>500	>400	Consult Factory					

For options, substitute the -ST in the model with -OP and choose from the options on page\_\_

# Non-Combination Panels

- Complete electronic motor protection
- Up-to-speed bypass transfer
- Heavy Duty: capable of 500% full load amps for up to 30 seconds and 125% continuous duty
- Standard Duty: capable of 350% full load amps for up to 30 seconds and 115% continuous duty
- Standard 120V control power transformer
- Terminal strip in enclosure for remote start/stop connection
- Auxiliary relay with qty 2 form C run contacts
- Analog I/O

## 230VAC

Max HP by Duty		AMP Rating	NEMA 4/12		NEMA 3R		NEMA 4/12 Weight (lbs)	
Std.	Heavy		Model No.	Dimensions	Model No.	Dimensions		
15	15	40	TMX2PB-15-2-4-NC-ST	24H X 16W X 15D	TMX2PB-15-2-3-NC-ST	24H X 16W X 15D	110	
20/25	20	52	TMX2PB-20-2-4-NC-ST	24H X 16W X 15D	TMX2PB-20-2-3-NC-ST	24H X 16W X 15D	110	
30/40	30/40	77	TMX2PB-30-2-4-NC-ST	36H X 16W X 15D	TMX2PB-30-2-3-NC-ST	36H X 16W X 15D	150	
50	50	124	TMX2PB-50-2-4-NC-ST	36H X 20W X 15D	TMX2PB-50-2-3-NC-ST	36H X 20W X 15D	150	
60/75	60/75	180	TMX2PB-75-2-4-NC-ST	48H X 20W X 15D	TMX2PB-75-2-3-NC-ST	48H X 20W X 15D	180	
100	---	240	TMX2PB-100-2-4-NC-ST	48H X 20W X 15D	TMX2PB-100-2-3-NC-ST	48H X 20W X 15D	180	
150	100	361	TMX2PB-150-2-4-NC-ST	48H X 20W X 15D	TMX2PB-150-2-3-NC-ST	48H X 20W X 15D	180	
200	150	477	TMX2PB-200-2-4-NC-ST	78H X 30W X 20D	TMX2PB-200-2-3-NC-ST	78H X 30W X 20D	350	
>200	>150	Consult Factory						

## 460VAC

Max HP by Duty		AMP Rating	NEMA 4/12		NEMA 3R		NEMA 4/12 NEMA 3R Weight (lbs)	
Std.	Heavy		Model No.	Dimensions	Model No.	Dimensions		
30	30	52	TMX2PB-40-4-4-NC-ST	24H X 16W X 15D	TMX2PB-40-4-3-NC-ST	24H X 16W X 15D	110	
40/50	40	65	TMX2PB-50-4-4-NC-ST	24H X 16W X 15D	TMX2PB-50-4-3-NC-ST	24H X 16W X 15D	110	
60/75	50-75	96	TMX2PB-75-4-4-NC-ST	36H X 16W X 15D	TMX2PB-75-4-3-NC-ST	36H X 16W X 15D	150	
100	---	125	TMX2PB-100-4-4-NC-ST	36H X 20W X 15D	TMX2PB-100-4-3-NC-ST	36H X 20W X 15D	150	
150	150	180	TMX2PB-150-4-4-NC-ST	48H X 20W X 15D	TMX2PB-150-4-3-NC-ST	48H X 20W X 15D	180	
200	---	240	TMX2PB-200-4-4-NC-ST	48H X 20W X 15D	TMX2PB-200-4-3-NC-ST	48H X 20W X 15D	180	
300	200	361	TMX2PB-300-4-4-NC-ST	48H X 20W X 15D	TMX2PB-300-4-3-NC-ST	48H X 20W X 15D	180	
400	300	477	TMX2PB-400-4-4-NC-ST	78H X 30W X 20D	TMX2PB-400-4-3-NC-ST	78H X 30W X 20D	350	
>400	>300	Consult Factory						

## 575VAC

Max HP by Duty		AMP Rating	NEMA 4/12		NEMA 3R		NEMA 4/12 NEMA 3R Weight (lbs)	
Std.	Heavy		Model No.	Dimensions	Model No.	Dimensions		
40	40	40	TMX2PB-30-5-4-NC-ST	24H X 16W X 15D	TMX2PB-30-5-3-NC-ST	24H X 16W X 15D	110	
50	50	52	TMX2PB-40-5-4-NC-ST	24H X 16W X 15D	TMX2PB-40-5-3-NC-ST	24H X 16W X 15D	110	
60	50	65	TMX2PB-50-5-4-NC-ST	24H X 16W X 15D	TMX2PB-50-5-3-NC-ST	24H X 16W X 15D	110	
100	100	96	TMX2PB-75-5-4-NC-ST	36H X 16W X 15D	TMX2PB-75-5-3-NC-ST	36H X 16W X 15D	150	
125	125	125	TMX2PB-100-5-4-NC-ST	36H X 20W X 15D	TMX2PB-100-5-3-NC-ST	36H X 20W X 15D	150	
200	200	180	TMX2PB-150-5-4-NC-ST	48H X 20W X 15D	TMX2PB-150-5-3-NC-ST	48H X 20W X 15D	180	
250	200	240	TMX2PB-200-5-4-NC-ST	48H X 20W X 15D	TMX2PB-200-5-3-NC-ST	48H X 20W X 15D	180	
350	250	361	TMX2PB-300-5-4-NC-ST	48H X 20W X 15D	TMX2PB-300-5-3-NC-ST	48H X 20W X 15D	180	
500	400	477	TMX2PB-400-5-4-NC-ST	78H X 30W X 20D	TMX2PB-400-5-3-NC-ST	78H X 30W X 22D	350	
>500	>400	Consult Factory						

For options, substitute the -ST in the model with -OP and choose from the options on page\_\_



# Open Chassis Style Starters

- Small and rugged with compact design
- Modular power stack assembly for ease of maintenance and multiple ratings for application flexibility
- Integrated metering system diagnostics
- Integrated motor protection
- Multiple control modes

## Chassis Non-Bypass

HP Ratings				Chassis Only		Weight (lbs)
208VAC	230VAC	460VAC	575VAC	Model/ Amps	Dimensions	
7.5	10	20	25	TRC2-0-S-027A-31C / 27	14H X 9.9W . 7.9D	15
10	15	30	40	TRC2-0-S-040A-31C / 40	14H X 9.9W X 7.9D	15
15	20	40	50	TRC2-0-S-052A-31C / 52	14H X 9.9W X 7.9D	18
20	25	50	60	TRC2-0-S-065A-32C / 65	18H X 10W X 9.6D	18
25	30	60	75	TRC2-0-S-077A-32C / 77	18H X 10W X 9.6D	18
30	---	75	100	TRC2-0-S-096A-33C / 96	27H X 10W X 9.6D	18
40	50	100	125	TRC2-0-S-125A-34C / 125	27H X 10W X 9.6D	19
50	60	125	150	TRC2-0-S-156A-34C / 156	24H X 22W X 10.1D	45
60	75	150	200	TRC2-0-S-180A-34C / 180	24H X 22W X 10.1	45
75	100	200	250	TRC2-0-S-240A-35C / 240	26H X 22W X 10.1D	45
100	125	250	300	TRC2-0-S-302A-35C / 302	26H X 22W X 10.1D	55
125	150	300	400	TRC2-0-S-361A-35C / 361	26H X 22W X 10.1D	60
150	---	350	---	TRC2-0-S-414A-35C / 414	26H X 22W X 10.1D	150
---	200	400	500	TRC2-0-S-477A-35C / 477	26H X 22W X 10.1D	150
200	---	450	---	TRC2-0-S-515A-36C / 515	36.8H X 29W X 10.7D	150
---	250	500	600	TRC2-0-S-590A-36C / 590	36.8H X 29W X 10.7D	160
>200	>350	>500	>600	Consult Factory		

# Open Chassis Style Starters - Continued

HP RATINGS				Chassis with Bypass	
208VAC	230VAC	460VAC	575VAC	Model/ Amps	Dimensions
7.5	10	20	25	TRB2-1-S-027A-11C / 27	14H X 10W X 6.9D
10	15	30	40	TRB2-1-S-040A-11C / 40	14H X 10W X 6.9D
15	20	40	50	TRB2-1-S-052A-12C / 52	14H X 10W X 6.9D
20	25	50	60	TRB2-1-S-065A-12C / 65	14H X 10W X 6.9D
25	30	60	75	TRB2-1-S-077A-13C / 77	15H X 10W X 7.7D
30	---	75	100	TRB2-1-S-096A-13C / 96	15H X 10W X 7.7D
40	50	100	125	TRB2-1-S-125A-13C / 125	19.5H X 12.3W X 9.6D
50	60	125	150	TRB2-1-S-156A-14C / 156	21.3H X 12.3W X 9.6D
60	75	150	200	TRB2-1-S-180A-14C / 180	21.3H X 12.3W X 9.6D
75	100	200	250	TRB2-1-S-240A-15C / 240	22.8H X 12.5W X 9.6D
100	125	250	300	TRB2-1-S-302A-15C / 302	22.8H X 12.5W X 9.6D
125	150	300	400	TRB2-1-S-361A-16C / 361	24.6H X 13.4W X 9.6D
150	---	350	---	TRB2-1-S-414A-17C / 414	24.6H X 13.4W X 9.6D
---	200	400	500	TRB2-1-S-477A-17C / 477	27.6H X 18.5W X 10.9D
200	---	450	---	TRB2-1-S-515A-17C / 515	27.6H X 18.5W X 10.9D
---	250	500	600	TRB2-1-S-590A-18C / 590	27.6H X 18.5W X 10.9D
250	300/250	600/500	700	TRB2-1-S-720A-19C / 720	27.8H X 26.6W X 12.5D
300	350/---	700/---	800	TRB2-1-S-838A-20C / 838	27.8W X 26.6W X 12.5D
>300	>350	>700	>800	Consult Factory	

## Options and Accessories

Optional features customize packages to better meet application and environment needs.

Mod Code	Option	Description	
A080	Operator Interface Controls - Mounted & Wired 30mm devices	Start-Stop Pushbutton	
A081		Start-Stop Pushbutton and Run Light	
A082		Start-Stop Pushbutton, Run Light, Fault Light, and Reset PB	
A005		Reset Pushbutton	
A085		H-O-A and Start / Stop Pushbuttons	
A086		H-O-A, Start / Stop Pushbuttons, and Run light	
A087		H-O-A, Start / Stop Pushbuttons, Run Light, Fault Light, and Reset Pushbuttons	
A021		'Run' Green indicator light	
A023		'Fault' Amber indicator light	
A083		'Fault' Amber indicator light and reset pushbutton	
A084		'Run', 'Fault' indicator lights and reset pushbutton	
A171		Space Heater Options	Space heater with thermostat
A340A		Door Mounted Display Options	MX2 LCD Display
A254		Fieldbus Communication Modules (installed)	RS232 Connector - Allows user to connect to the starter remotely without opening the enclosure door
A343	Profibus DP		
A345	Ethernet		
A344	DeviceNet		

Packages can be provided on a built-to-order basis. If a special feature not provided in the above options is required, please contact us.

# TECO-Westinghouse

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TECO-Westinghouse Motor Company offers an extensive line of variable speed drives and soft starters for your motor control applications.

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.

From "in stock" controls to engineered systems, we can provide you the right control solution including an extensive line of TECO-Westinghouse AC Motors.



The logo features the word "TECO" in a bold, blue, sans-serif font. To its right is a circular icon containing a stylized "W" with a horizontal line through it. This is followed by the word "Westinghouse" in a blue, serif font. A thin orange horizontal line is positioned below the "TECO" and the circular icon.

**TECO**  **Westinghouse**

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