

TOSHIBA

TOSHIBA INTERNATIONAL CORPORATION

SOLID STATE STARTERS

TE2 Series



**LOW
VOLTAGE**

INNOVATED DESIGN SAVES SPACE, TIME, & MONEY

Toshiba's TE2 low voltage motor starter series is a high-end, digitally programmable, reduced voltage solid state starter. This heavy-duty starter provides stepless soft starting of three-phase AC induction motors, which protects mechanical components from excessive torque stress as well as electrical systems from the effects of high motor inrush currents.

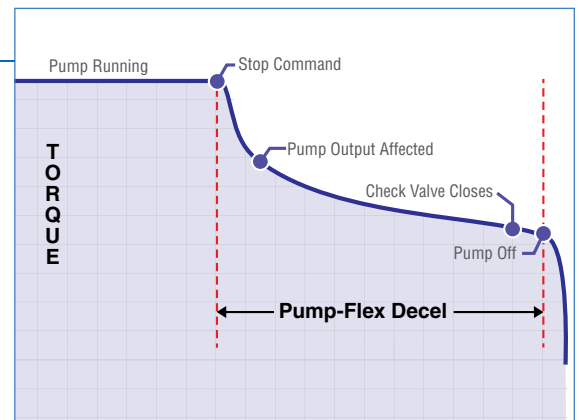
- 3 Phase Voltage and Current Metering
- Power Factor Indications and Protections
- 4 - 20 mA Analog Output with 12 Programmable Functions
- Integrated Bypass Contactor
- 120 V Control (240 V Option)
- Pull-Apart Control Terminals
- Narrow Width for MCC Mounting
- Four Digit LED Display
- Tsmart 7" Full Color Touchscreen Keypad Option
- RS485 MODBUS RTU
- Multiple Ramp Types to Start Any Load
- Flexibility of Two-Wire or Three-Wire Controls
- Equipment Ground Fault
- Retentive Thermal Memory
- Convenience of Real-Time Thermal Modeling



PUMP-FLEX™ APPLICATION FEATURES

The Pump-Flex Deceleration Control helps protect equipment used in applications, such as centrifugal pumps, conveyors, and material handlers, from damages caused by abrupt stopping conditions. When a stop command is given, the deceleration feature gradually extends the stopping time by decreasing the voltage applied to the motor. The check valve then safely and gently closes and the Pump-Flex circuit automatically turns off. Additional features include:

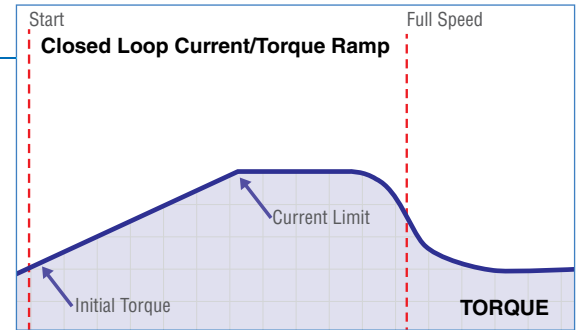
- Pump-Flex Deceleration Control Eliminates Damaging Effects of "Water Hammer"
- Ideal for Irrigation Pumps when Specific Amount of Water Needs to be Pumped if Power Failure or Fault Trip Occurs During Operation
- Elapsed Time Meter, Run-Cycle Counter, Remaining Lock Out Time, & Fault History for Maximum Monitoring & Control of Pumps or Processes



Pump-Flex Decel Feature

PUMPS, FANS, BLOWERS, & CONVEYORS

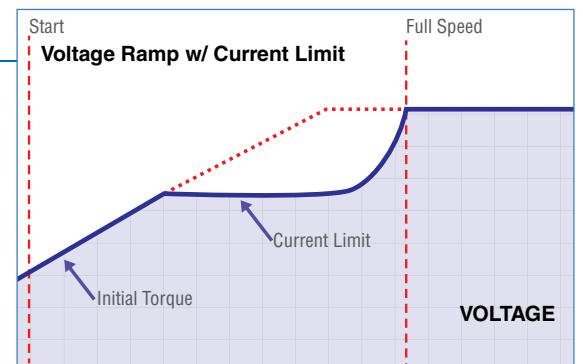
Closed loop torque/current ramping provides a linear increase in output torque during acceleration. It maximizes the available torque using an internal PID feedback loop, ensuring a smooth and linear ramp-up to full speed. It is ideal for low pressure pumps where slight surges at the end of the ramp may pose mechanical problems or on fans and mixers where blade warping can be an issue.



Closed Loop Current/Torque Ramp

COMPRESSORS & CHILLERS

The TE2 offers voltage ramping with current limiting for applications that need the smoothness of voltage ramping while maintaining the ability to start in limited power environments. For maximum motor power where the available power supply is severely limited, a current limit/current step start can be used.



Voltage Ramp with Current Limit



Remote-Mounted Keypad Option



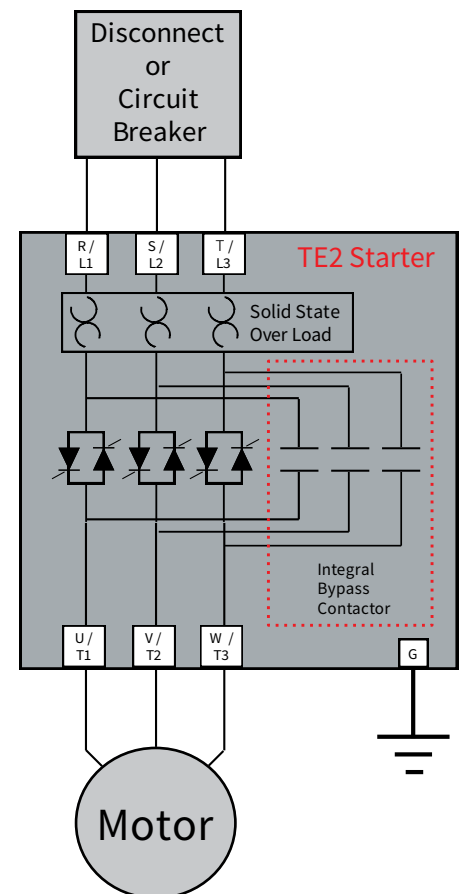
Tsmart 7" Touchscreen Option

INDUSTRIES SERVED

- Oil & Gas
- Mining & Minerals
- Chemical
- Water & Wastewater

APPLICATIONS

- Blowers
- Chillers
- Compressors
- Conveyors
- Fans
- Mixers
- Process Machinery
- Pumps



DIMENSIONS

Model No.	H (in.)	W (in.)	D (in.)
TE2-18-BP through TE2-48-BP	8.75	8.00	6.65
TE2-62-BP through TE2-112-BP	14.00	8.00	6.65
TE2-150-BP through TE2-160-BP	19.21	8.00	6.65
TE2-210-BP through TE2-275-BP	29.00	12.50	9.10
TE2-361-BP through TE2-450-BP	29.75	12.50	9.10
TE2-550-BP through TE2-600-BP	32.03	12.50	9.87
TE2-862-BP through TE2-900-BP	44.13	25.50	11.86
TE2-1006-BP through TE2-1250-BP	46.56	28.20	13.00

Dimensions are for reference only and are subject to change without notice.
Consult factory for exact dimensions.



TE2 SERIES SOFT STARTER WITH INTEGRAL BYPASS CONTACTOR

- Data Based on NEC Table 430-150, Full-Load Current Three-Phase Motors
- Size of Soft Starter Based on Actual Motor Nameplate FLA
- Heavy Duty Rating
 - Overload Capacity: 500% for 60 Seconds
 - 1.15 SF

RATINGS

Model Number	Max. Amps	Nominal Motor Rating (50/60 Hz)							
		208 V/HP		230 V/HP		460 V/HP		575 V/HP	
		Shunt Bypass	Start Bypass	Shunt Bypass	Start Bypass	Shunt Bypass	Start Bypass	Shunt Bypass	Start Bypass
TE2-18-BP	18	5	3	5	5	10	10	15	10
TE2-28-BP	28	7.5	7.5	7.5	7.5	20	15	25	20
TE2-39-BP	39	10	10	10	10	25	25	30	30
TE2-48-BP	48	15	10	15	15	30	30	40	30
TE2-62-BP	62	20	15	20	20	40	40	60	50
TE2-78-BP	78	25	20	25	25	60	50	75	60
TE2-92-BP	92	30	25	30	30	60	60	75	75
TE2-112-BP	112	30	30	40	30	75	75	100	75
TE2-150-BP	150	40	40	50	50	100	100	125	—
TE2-160-BP	160	50	40	60	50	125	100	150	—
TE2-210-BP	210	60	60	75	60	150	150	200	150
TE2-275-BP	275	75	60	100	75	200	150	200	150
TE2-361-BP	361	125	75	125	125	300	250	350	300
TE2-450-BP	450	150	125	150	150	350	300	450	300
TE2-550-BP	550	150	150	200	200	450	400	500	500
TE2-600-BP	600	200	200	200	200	500	500	600	600
TE2-862-BP	862	250	250	300	300	600	500	700	600
TE2-900-BP	900	300	250	350	300	700	600	900	600
TE2-1006-BP	1006	350	300	400	400	800	800	1000	900
TE2-1250-BP	1250	450	350	500	450	1000	900	1200	1000

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