

TOSHIBA

MEDIUM VOLTAGE DRIVES



MTX

NEMA 3R MV

- NEMA 3R / UL Rain Tight Enclosure Ratings
- 4160 V at 500, 1000, and 1500 HP
- 50°C Ambient Rating
- IEEE-519 Compliant / 36 Pulse Harmonic Cancellation
- Additive PWM Output Allows Use with Standard / Existing Motors
- Neutral Point Clamp Eliminates Common Mode Voltage
- Innovative Design for Use in the Desert, Jungle, or Anywhere in Between

Reliability in motion[®]

MTX NEMA 3R MV

MTX Standard Specifications			
Volts	Amps	HP	Model Number
4160	62	500	MTXA44050S
	124	1000	MTXA44100S
	186	1500	MTXA44150S
Dimensions and Weight			
Horsepower	H x W x D (in)		Weight (lb)
500 HP	107 x 168 x 63		15000
1000 HP			
1500 HP			
Power Requirements			
Output Frequency (Hz)	0 to 120 Hz		
Main Circuit	Three phase 4160 V Input Isolation Transformer. 36 Pulse Design with Input Fused Disconnect and Vacuum Contactor. IGBT Output		
Control Circuit	Internally Supplied 120 V and 230 V		
Tolerance	Voltage: ± 10%, Frequency ± 5%		
Control Specifications Input			
Control Method	Multi-level Pulse Width Modulated (PWM) Output Control		
Frequency Precision	± 0.5% of Maximum Output Frequency: Analog Input, 0.01% Digital Input		
V/F Control	V/Hz, Sensorless Vector Control, Variable Torque, Closed Loop Vector Control, Constant Torque (Option)		
Acceleration/Deceleration	0.1 to 6000 sec		
Main Control Functions	Soft Stall (Automatic Load Reduction Control During Overload) Restart into a rotating motor.		
Main Protective Functions	Current Limit, Overcurrent, Overcharge, Overload, Undervoltage, Overvoltage, Ground Fault, CPU Error, Cooling Fan Abnormal		
Data Transmission	Ethernet; Optional Profibus, Modbus RTU, Modbus, TCP/IP, TOSLINE-S20, and DeviceNet Available		
Overload Ratio	115% FLA for 60 sec		
Interface			
Liquid Crystal Display/ Electronic Operator Interface (LCD EOI)	4 x 20 Graphical Backlit LCD Display. Ability to Display Multiple Parameters on one Screen. Flash Upgradeable Software. Includes Multi-Function Rotary Encoder and Ethernet PC Interface		
LED Indications	Run (Red) / Stop (Green), Remote / Local, Indication of Inverter Status		
Keys	Local / Remote, Monitor/Program, Run, Enter, ESC, Stop / Reset, Up, Down		
Push Button	Illuminated Interlock and Fault Reset Push Buttons		
Analog Outputs	Eight Selectable Voltage or Current Output Signals with Programmable Functions		
Analog Inputs	Two Selectable Voltage or Current Input Signals		
Digital Inputs	Eight Digital Inputs with Programmable Functions		
Digital Outputs	Six Available Digital Outputs with Programmable Functions (One used internal to drive.)		
Construction			
Enclosure	Type 3R		
Panel Construction	Free Standing, Front-Maintenance Type, Top or Bottom Access for Motor and Power Cables		
Color	Bright White		
Ambient Conditions			
Ambient Temperature	0 to 50 °C		
Humidity	Maximum 95% (No Condensation)		
Altitude	1000 m Above Sea Level or Less		
Installation	Outdoor		
Typical Applications	Fan, Blower, Pump, Compressor, Extruder, Options for Submersible Pumping Applications		
Standards	Electrical Performance: NEC, ANSI		
Components and Others	NEC, NEMA, UL, CUL		

**Typical HP rating of a 4 pole motor. Contact factory for applications on constant torque loads.



MTX - a New Benchmark in Deliverable Medium Voltage Technology

Toshiba proudly introduces the MTX N3R Outdoor Medium Voltage ASD. The MTX is the world's first ASD specifically designed for outdoor mounting in remote applications or applications where a building does not exist. It features an innovative enclosure design and power section topology that is unprecedented in the medium voltage ASD arena.

The MTX is two enclosure types married together. The transformer section is convection cooled. There are no moving parts, and heat is eliminated through passive vents at the top of the drive. The inverter section is forced cooled. Power modules are designed with the heat sinks out-the-back to send waste heat to the atmosphere. The interior of the inverter section is cooled using plate-type heat exchanger(s) so it remains cool and clean without introducing outside air.

The new topology is a logical progression of the proven T300MVi design in a UL rain tight enclosure. Additionally, you will achieve a lower cost of ownership with the MTX because heat removal from a building-based drive is eliminated.

ADJUSTABLE SPEED DRIVES MOTORS CONTROLS UPS INSTRUMENTATION PLC

TOSHIBA

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