

Transformers

TM Series Transformer Modules

Provides AC or DC bus supply voltages for up to four Aerotech controllers

300 watts max power output (TM3); 500 watts max power output (TM5)

Auxiliary supply outputs for powering up to four additional products



TM3 (left) and TM5 transformer modules.

TM3 Transformer Module

The TM3 transformer module provides and distributes isolated AC and/or DC bus supply voltages for up to four Aerotech controllers. It is configured at the factory to provide 28 VAC, 56 VAC, 115 VAC, 40 VDC, 80 VDC, or 160 VDC with a maximum transformer output power capability of 300 watts.

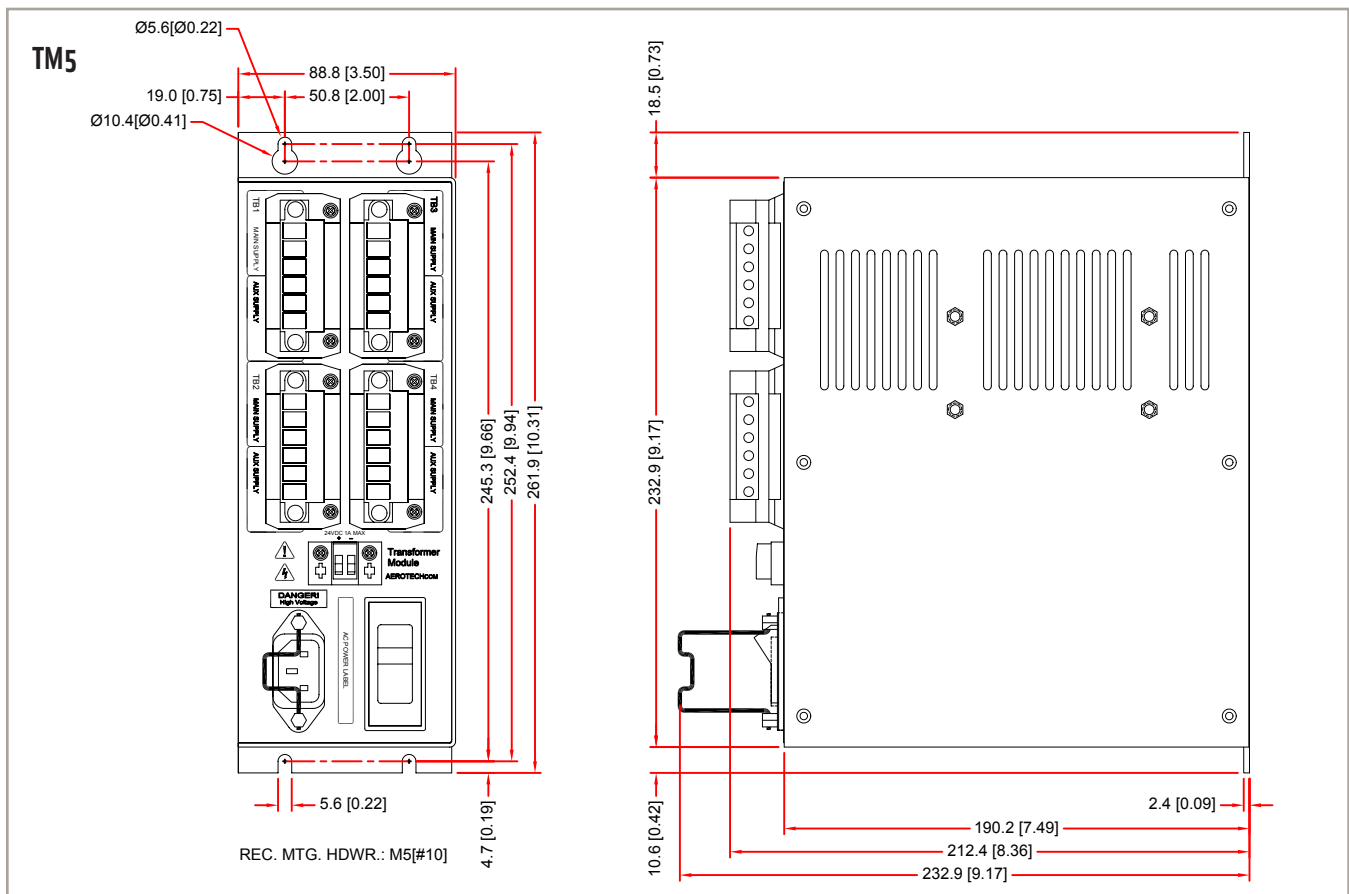
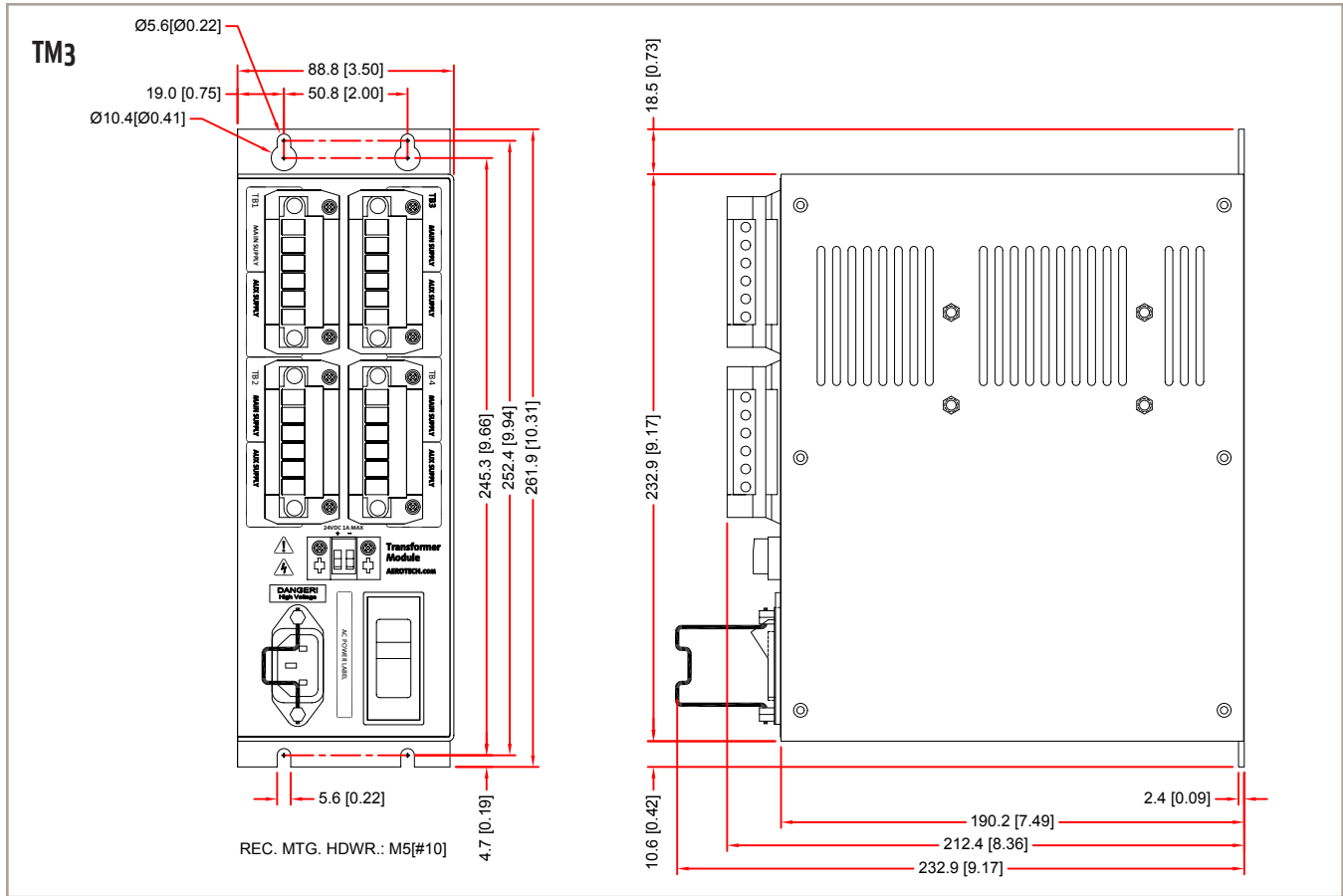
Additionally, the TM3 provides auxiliary supply outputs for powering the auxiliary power inputs of up to four Aerotech products. The TM3 also includes a 24 VDC power supply that provides the user with 24 VDC output. Other features of the TM3 include a soft-start circuit to limit inrush current and a voltage selector that can be configured for AC input voltages of 100 VAC, 115 VAC, 200 VAC, or 230 VAC.

TM5 Transformer Module

The TM5 transformer module is used to provide and distribute isolated AC bus supply voltages for up to four Aerotech controllers. It is configured at the factory to provide 28 VAC, 56 VAC, 115 VAC, or a combination of these voltages with a total output power capability of 500 watts. Additionally, the TM5 distributes the applied AC line voltage to each of the auxiliary supply outputs for powering the auxiliary power inputs of other Aerotech products. The TM5 may also be purchased with the 24 VDC power supply option that provides the user with 24 VDC output.

Model	TM3	TM5
Type	Isolation	
AC Input Configurations	100 VAC, 115 VAC, 200 VAC, 230 VAC	
Peak AC Input Inrush Current	32 A _{pk}	200 A _{pk}
Operating Frequency	50/60 Hz	
Maximum Continuous Transformer Output Power	300 watts max @ 20°C	500 watts max @ 20°C
Peak Transformer Output Power	400 watts max @ 20°C	800 watts max @ 20°C
Short Circuit/Over Current Protection	AC input 10 A breaker/switch (supplementary protection only); 100 VAC/115 VAC configurations contain 4 A slow-blow fuse connected to transformer primary winding; 200 VAC/230 VAC configurations contain 3 A slow-blow fuse connected to transformer primary winding	AC input 10 A breaker/switch (supplementary protection only); 100 VAC/115 VAC configurations contain 8 A slow-blow fuse connected to transformer primary winding; 200 VAC/230 VAC configurations contain 4 A slow-blow fuse connected to transformer primary winding
Thermal Protection	Integral transformer thermal switch is normally closed. Thermal switch opens when internal temperature of transformer reaches 110°C	Integral transformer thermal switch is normally closed. Thermal switch opens when internal temperature of transformer reaches 110°C.
Secondary Winding Configuration	28 VAC (40 VDC bus); 56 VAC (80 VDC bus) ±10 VDC, ±20 VDC, ±30 VDC, ±40 VDC	28 VAC (40 VDC bus); 56 VAC (80 VDC bus); 112 VAC (160 VDC bus)
+24 VDC Output	4 A max	4 A max

TM3/5 Series DIMENSIONS



TM3/5 Series ORDERING INFORMATION

Ordering Example

TM3	-A	-80VDC	-80VDC	-NO SPLIT	-PS24-1
Base	Line Voltage	Bus Voltage 1	Bus Voltage 2	Axis Split	Power Supply
TM3	-A -B -C -D	-80 VDC -56 VAC -40 VDC -28 VAC -40B AUX AC	-80 VDC -56 VAC -40 VDC -28 VAC -40B AUX AC	-2-2 -NO SPLIT	-PS24-1
TM5	-A -B -C -D	-115 VAC -56 VAC -28 VAC -56 VAC CT	-115 VAC -56 VAC -28 VAC -56 VAC CT	-1-3 -2-2 -3-1	-PS24-1

TM3/TM5 Transformers

TM5	0.5 kVA isolation transformer in enclosure with power switch, 4 AC voltage motor power outputs and aux power connections
TM3	0.3 kVA isolation transformer in enclosure with power switch, 4 AC or DC voltage motor power outputs and aux power connections

Line Voltage

-A	115 VAC
-B	230 VAC
-C	100 VAC
-D	200/208 VAC

Bus Voltage (Vbus1)

-115VAC	115 VAC (for 160 VDC bus); TM5 only
-56VAC	56 VAC (for 80 VDC bus)
-28VAC	28 VAC (for 40 VDC bus)
-56VAC CT	56 VAC center tap for Ensemble CL drives (for 40 VDC bus)
-80VDC	80 VDC (for input to MP drives); TM3 only
-40VDC	40 VDC (for input to MP drives); TM3 only
-40B AUX AC	±40 VDC bus with AUX AC output. AUX AC voltage will be the same as the TM3 line voltage; TM3 only

Bus Voltage (Vbus2)

-115VAC	115 VAC (for 160 VDC bus)
-56VAC	56 VAC (for 80 VDC bus)
-28VAC	28 VAC (for 40 VDC bus)
-56VAC CT	56 VAC center tap for Ensemble CL drives (for 40 VDC bus)
-80VDC	80 VDC (for input to MP drives); TM3 only
-40VDC	40 VDC (for input to MP drives); TM3 only
-40B AUX AC	±40 VDC bus with AUX AC output. AUX AC voltage will be the same as the TM3 line voltage; TM3 only

Axis Split (Vbus1 - Vbus2)

-1-3	Axis 1 Vbus 1; Axis 2,3,4 Vbus 2
-2-2	Axis 1,2 Vbus 1; Axis 3,4 Vbus 2
-3-1	Axis 1,2,3 Vbus 1; Axis 4 Vbus 2
-NO SPLIT	Vbus 1 and Vbus 2 ties together and wired to all axes

Power Supply

-PS24-1	24 VDC utility supply
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Note: The power supply is optional with the TM5 transformer.

TM3/5 Series ORDERING INFORMATION

Optional Brake Cable (Only selected when /PS24-1 is selected)

-C24-06	6DM (2 ft) 2 conductor brake cable with flying leads
-C24-09	9DM (3 ft) 2 conductor brake cable with flying leads
-C24-12	12DM (4 ft) 2 conductor brake cable with flying leads
-C24-15	15DM (5 ft) 2 conductor brake cable with flying leads
-C24-18	18DM (6 ft) 2 conductor brake cable with flying leads

/CABLE1/CABLE2/CABLE3/CABLE4

-C1	Cable AXIS 1
-C2	Cable AXIS 2
-C3	Cable AXIS 3
-C4	Cable AXIS 4

Cable Type

-AB	Bus and Aux Power
-AL	Bus and Aux Power for CLS
-B	Bus Only

Standard Cable Lengths

-06	6DM (2 ft)
-09	9DM (3 ft)
-12	12DM (4 ft)
-15	15DM (5 ft)
-18	18DM (6 ft)

LINECORD

-ENGLAND	U.K. compatible line cord
-GERMANY	German compatible line cord
-ISRAEL	Israel compatible line cord
-INDIA	India compatible line cord
-AUSTRALIA	Australia compatible line cord
-US-115VAC	U.S. 115 VAC line cord
-US-230VAC	US 230 VAC line cord
-NO-LINECORD	No line cord