

## Power Requirement for MT-700 series

Transformer: 24 Vac

		5V / 15V outputs load (sensor power supplies)	
961-	Description	No load	Fully loaded
722A/F	Main controller	<b>7.0 VA</b> (0.29 A rms)	<b>10.6 VA</b> (0.44 A rms)
716U	16UI	<b>2.8 VA</b> (0.12 A rms)	<b>8.9 VA</b> (0.37 A rms)
784A	8UI / 4RO	<b>4.7 VA</b> (0.19 A rms)	<b>9.3 VA</b> (0.39 A rms)
766A	6UI / 2AO / 4RO	<b>5.6 VA</b> (0.23 A rms)	<b>10.3 VA</b> (0.43 A rms)
742V	4UI / 2MVC	<b>2.4 VA</b> (0.10 A rms) ...with all MVC outputs actives: Sporlan valves: <b>17.3 VA</b> (0.72 A rms)* Maximum load: <b>31.7 VA</b> (1.32 A rms)*	<b>5.0 VA</b> (0.21 A rms) ...with all MVC outputs actives: Sporlan valves: <b>19.9 VA</b> (0.83 A rms)* Maximum load: <b>34.5 VA</b> (1.44 A rms)*
708V	8MVC	<b>1.9 VA</b> (0.08 A rms) ...with all MVC outputs actives: Sporlan valves: <b>12.0 VA</b> (0.50 A rms)* Maximum load: <b>31.2 VA</b> (1.30 A rms)*	-
708R	8RO	<b>4.7 VA</b> (0.19 A rms)	-
710P	Power backup	<b>3.3 VA</b> (0.14 A rms) ...charging capacitor bank: <b>16.8 VA</b> (0.70 A rms)*	-

\* Intermittent load: Little contribution to transformer heating, but can cause excessive secondary voltage drop. Sporlan valve consumption numbers are for the GC/FGB family (most powerful).

### To determine transformer size:

Add the "VA" numbers from the table for all modules in the cluster (ignoring intermittent loads).  
 Oversize the transformer if necessary to limit the voltage drop to less than 3 Vac for intermittent loads.

Note 1: The maximum current consumption for any module cluster is 4.8 A rms (115 VA).

Note 2: To estimate consumption with partially loaded 5V / 15V outputs, use the numbers in the "No load" column and adjust according to the following table ...

	Consumption (AC input)
5V output	add 0.015 VA for every 1 mA of load
15V output	add 0.030 VA for every 1 mA of load

## Power Requirements for classic Micro Thermo Boards

950- or 961- or 962-	Board name	Nominal Power Requirements	Current per phase at 24.5Vac	VA at 24.5Vac	Current per phase at 34.6Vac	VA 34.6Vac	Conditions
3208	MT3208	18Vac-41Vac					Make sure U14 has a HVN suffixes
500Q	MT500r3	24Vac-32Vac Centre-Tap	90mA	2.2	85mA	2.9	Program running
504P	MT504r3	24Vac-32Vac Centre-Tap	295mA	7.2	270mA	9.3	4 relays on, 4 AO at 20mA
508P	MT508r3	24Vac-32Vac Centre-Tap	375mA	9.2	340mA	11.8	8 relays on, 4 AO at 20mA, 4 DIN on
512P	MT512r3	24Vac-32Vac Centre-Tap	440mA	10.8	420mA	14.5	12 relays on, 4 AO at 20mA, 8 DIN on
634B	MT-CKT	24Vac-32Vac Centre-Tap	135mA	3.3	115mA	4	5 relays on
634B	MT-CKT	24Vac-32Vac Centre-Tap	212mA	5.2	176mA	6.1	10 relays on
632F	MT-CMP	24Vac-32Vac Centre-Tap	72mA	1.8	56mA	1.9	2 relays on

950- or 961- or 962-	Board name	Nominal Power Requirements	Current at 17.3Vac	VA at 17.3Vac	Current at 24.5Vac	VA 24.5Vac	Conditions
331X	Neuron Board	16Vac-24Vac	120mA	2.0	120mA	2.9	Normal use. Tx and Rx leds on
336A	MT-ALARM	16Vac-24Vac	330mA	5.7	245mA	6.0	No RTC or Schedulers, all relays on
336A	MT-ALARM	16Vac-24Vac	340mA	5.9	255mA	6.3	1 RTC or Schedulers, all relays on
336A	MT-ALARM	16Vac-24Vac	350mA	6.0	265mA	6.5	2 RTC or Schedulers, all relays on
336A	MT-ALARM	16Vac-24Vac	365mA	6.3	275mA	6.8	3 RTC or Schedulers, all relays on
374B	ANTI-SWEAT	16Vac-24Vac	260mA	4.5	230mA	5.6	With user interface (364B Display)
462C	MT-DISPLAY	16Vac-24Vac		2		2	All segments on
3810	MT-REPEATER	16Vac-24Vac	25mA	0.43	23mA	0.56	Normal use. Tx and Rx leds on
636A	MT-EEPR Obsolete	16Vac-24Vac	580mA	10.0	460mA	11.27	Board Revision 2. All valves installed. 2 CDS valves moving
636A	MT-EEPR Obsolete	16Vac-24Vac	460mA	7.96	360mA	8.82	Board Revision 2. All valves installed. 1 CDS valves moving
636C	DT-EEPR	16V-24Vac split bobbin	2.1A	30@ <b>16V</b>	2.1A	50@ <b>24V</b>	When 6 valves Sporlan are connected
636C	DT-EEPR	16V-24Vac split bobbin	3.4A	55@ <b>16V</b>	3.4A	82@ <b>24V</b>	When 6 valves Alco are connected

See more notes on following page

\* When sensors are powered from the 5V or 15V of the Sensor Power, add sensor VA requirements to the board's VA requirements

- The current shown for centre-tap transformers is per phase. Each phase will require a fuse.
- Note that **no** safety margin has been added to these values. Once the total amperage has been found, choose a transformer and fuses that will allow for a safety margin. Most MT boards have an earth ground connector. This connection is not mandatory, but is highly recommended.

**Recommended wire Type for power:**

- When a center-tap transformer is required, use a cable with 3 conductors. Do not use the shield as the third conductor. Use at least 18 AWG conductors.

**WARNING!**

