System Build Manual

Original Instructions

Allen-Bradley

AADvance Controller

Catalog Numbers T9110 T9300 T9310 T9401/2 T9431/2 T9451 T9481/2

- T9432 Analogue Input Module, 16 Channel
- T9451 Digital Output Module
- T9481 Analog Output Module
- T9482 Analogue Output Module, 8 Channel.

Listed Accessories for use with PLCs:

- T9100 Processor Backplane
- T9300 I/O Backplane
- T9801 Digital Input Termination Assembly, Simplex
- T9802 Digital Input Termination Assembly, Dual
- T9803 Digital Input Termination Assembly, TMR
- T9831 Analogue input Termination Assembly, Simplex
- T9832, Analogue Input Termination Assembly, Dual
- T9833 Analogue Input Termination Assembly, TMR
- T9851 Digital Output Termination Assembly, Simplex and T9852 Digital Output Termination Assembly, Dual
- T9892 Digital Output Termination Assembly, Dual
- T9881 Analogue Output Termination Assembly, Simplex
- T9882 Analogue Output Termination Assembly, Dual.

Non-Hazardous Installation Requirements

Environmental

In a non-hazardous environment a system can be installed in an enclosure or on a support/wall; however, the enclosure or the area where it is installed must not be more than a Pollution Degree 2 or similar environment in accordance with IEC 60664-1:2007.

The surrounding air temperature ratings are:

- For the T9110 Processor module = 60 °C
- For all other I/O modules, base units and termination assemblies = 60 °C

Pollution Degree Definition

For the purpose of evaluating creepage distances and clearances, the following four degrees of pollution in the micro-environment are established:

- Pollution Degree 1: No pollution or only dry pollution occurs. The pollution has no influence.
- Pollution Degree 2: Only non-conductive pollution occurs except that occasionally a temporary conductivity caused by condensation is to be expected.
- Pollution Degree 3: Conductive pollution occurs or dry non-conductive pollution occurs which becomes conductive due to condensation which is to be expected.

Backplane Electrical Ratings

To comply with UL/CSA standards use the following voltage and current ratings for the Processor and I/O Backplanes when designing your power distribution:

IMPORTANT These are the maximum allowed electrical ratings given by UL for the backplane load installed with the relevant TAs and modules. They are not operating values so don't use them to calculate the controller power consumption or heat dissipation values. Refer to the separate topics on estimating Heat Dissipation and Power Consumption.

Table 5 - Maximum Electrical Rating Values

Module	Back-plane Electrical Ratings		Input/Output Electrical Ratings
	Voltage Range (Vdc)	Maximum Current (mA)	
T9100	18-32	10.4A (400 mA per slot)	-
T9300	18-32	9.6A (400 mA per slot)	-
T9110	18-32	380	-
T9401	18-32	260	Input: 18-32 Vdc @ 24 mA
T9402	18-32	260	Input: 0-32 Vdc @ 6.5 mA
T9431	18-32	260	Input: 0-32 Vdc @ 6.5 mA
T9432	18-32	260	Input: 18-32 Vdc @ 24 mA
T9481	18-32	260	Output: 18-32 Vdc/0-20 mA
T9482	18-32	260	Output: 18-32 Vdc/0-20 mA
T9451	18-32	165	Output: 18-32 Vdc @ 0.5 A, Pilot duty 16 VA, 1.5 A Inrush
T9801	18-32	6.5	-
T9802	18-32	6.5	-
T9803	18-32	6.5	-
T9831	18-32	0-24	-
T9832	18-32	0-24	-
T9833	18-32	0-24	-
T9851	18-32	500	-
T9852	18-32	500	-
T9892	18-32	500	-
T9881	18-32	0-24	-
T9882	18-32	0-24	-

Parts List

Base Units

Part No.	Part Description
T9100	Processor base unit
T9300	I/O base unit (3 way)

Modules

Part No.	Part Description
T9110	Processor module
T9401	Digital input module, 24 Vdc, 8 channel, isolated
T9402	Digital input module, 24 Vdc, 16 channel, isolated
T9451	Digital output module, 24 Vdc, 8 channel, isolated, commoned
T9431	Analogue input module, 8 channel, isolated
T9432	Analogue input module, 16 channel, isolated
T9481	Analogue output module, 3 channel, isolated
T9482	Analogue output module, 8 channel, isolated

Special Application Modules

Part No.	Part Description
T9441	Frequency Input Module (Product not yet released. Contact Sales for more information)