Product Safety Group
1201 South Second Street
Milwaukee, WI USA 53204
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PRODUCT NOTICE

Notice of Potential Product Concern

Rockwell Automation issues a Product Notice when it identifies a product(s) anomaly that may cause commercial or customer satisfaction concerns.

Allen-Bradley 1715-AENTR and AADvance T9110 and T9120 May Not Detect Loss of Power Supply

Reference: 2019-07-002

Date: July 2019

This Product Notice informs you of a potential anomaly that exists with the Allen-Bradley® 1715-AENTR Ethernet/IP Adaptor Module, the AADvance® T9110 Processor Module, and the AADvance T9120 Processor Eurocard. When used with redundant power supplies, the affected module may not detect and report the loss of a single supply. If the redundant supply is subsequently lost, the system will lose all power and shut down without system notification.

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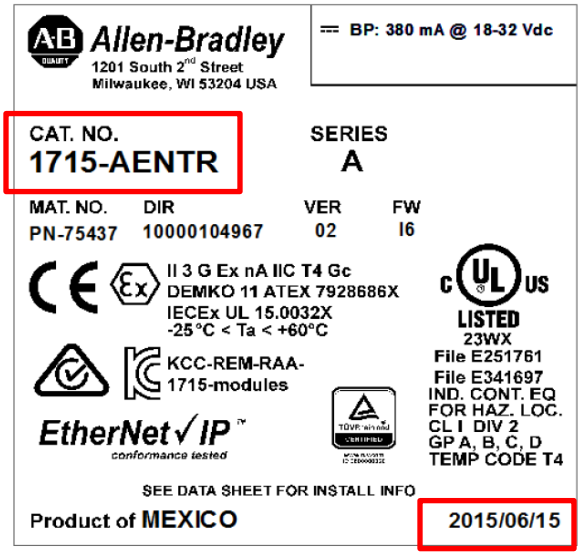
– Product Identification –

The potentially affected products are the Allen-Bradley 1715-AENTR Ethernet/IP Adapter, the AADvance T9110 Processor Module, and the AADvance T9120 Eurocard Processor.

- Allen-Bradley 1715-AENTR Ethernet/IP Adapter manufactured through March 2019.
- AADvance T9110 Processor Module manufactured through March 2019.
- AADvance T9120 Processor Eurocard manufactured through April 2019.

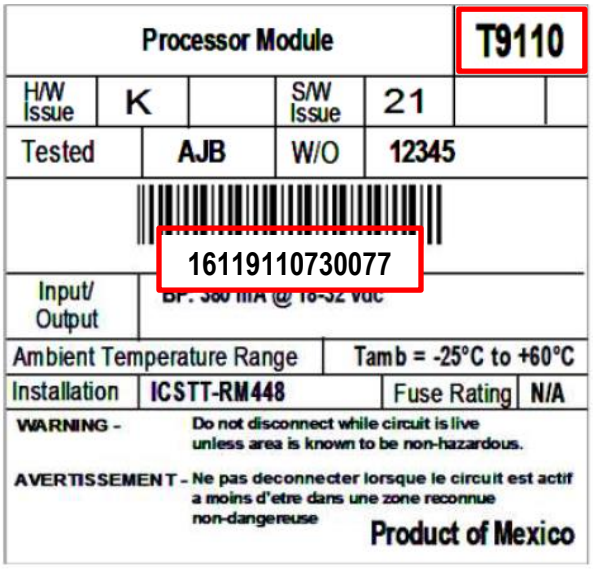


For installed 1715-AENTR product, the product identification information may be found on the product nameplate located on the right side of the module. The catalog number will be in the CAT. NO. field and the date of manufacture will be in the lower right corner in the format of YYYY/MM/DD, where YYYY is the year, MM is the month code, and DD is the day of the month.

In the example shown at the left, the catalog number is 1715-AENTR and the date of manufacture is 2015/06/15, or June 15, 2015. This module would be subject to this notification.

For new 1715-AENTR product still within its carton, the product identification information may be found on the carton label. The catalog number will be in the CAT field and the date of manufacture will be on the right side in the format of YYYY/MM/DD, where YYYY is the year, MM is the month code, and DD is the day of the month.

In the example shown at the left, the catalog number is 1715-AENTR and the date of manufacture is 2015/08/10, or August 10, 2015. This module would be subject to this notification.

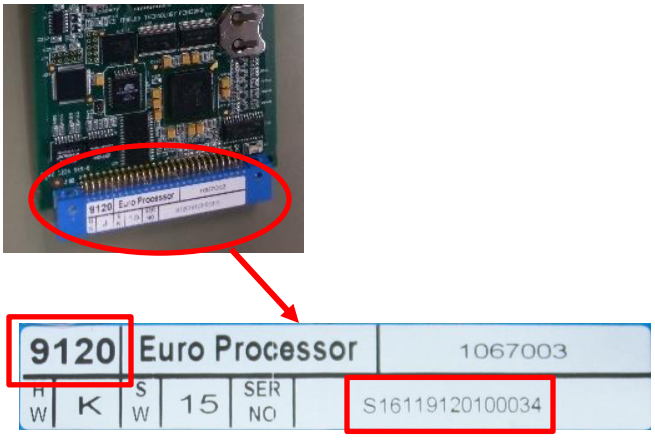


For installed T9110 product, the product identification information may be found on the product nameplate, located on the right side of the product. The catalog number will be in the upper right corner and the date of manufacture will be the first four numeric digits in the serial number, located under the serial number bar code and will be of the format YYMM where YY is the year code and MM is the month code.

In the example shown to the left, the catalog number is T9110 and the serial number is **1611**911073007, where the date code 1611, or November 2016. This product would be subject to this notification.

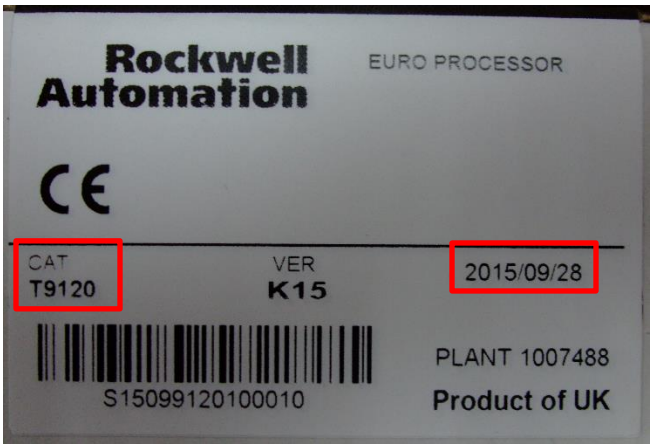
For new T9110 product still within its carton, the product identification information may be found on the carton label. The catalog number will be in the CAT field and the date of manufacture will be on the right side in the format of YYYY/MM/DD, where YYYY is the year, MM is the month code and DD is the day of the month.

In the example shown to the left, the catalog number is T9110 and the manufacturing date is 2015/03/11, or March 11, 2015. This module would be subject to this notification.



For installed T9120 Eurocard product, the product identification information may be found on the product nameplate, located on the Eurocard connector. The catalog number will be in the top left corner and the date of manufacture will be the first four numeric digits of the serial number, located in the bottom right corner and of the format YYMM, where YY is the year code and MM is the month code.

In the example shown to the left, the catalog number is 9120, or T9210, and the serial number is S**1611**912010034, where the date code is 1611, or November, 2016. This product would be subject to this notification.



For unopened T9120 product, the product identification information may be found on the carton label. The catalog number will be in the CAT field and the date of manufacture will be on the right side in the format of YYYY/MM/DD, where YYYY is the year, MM is the month code and MM is the day of the month.

In the example shown to the left, the catalog number is T9120 and the date of manufacture is 2015/09/28, or September 28, 2015. This product would be subject to this notification.

The catalog number and manufacturing date of these modules may also be obtained electronically using the Rockwell Automation AADvance and 1715 Diagnostic Collection Tool. Use of the tool is described in Rockwell Automation Knowledgebase Article ID 68174. The electronic date code will be shown in the serial number string and is of the format is YYMM, where YY is the year code and MM is the month code.

	A	B	C	D	E	F	G	H	I	J	
L	Bus	Slot	Channel	Module	Serial No	OFA	IOFB	PSUP	MP Build	FPGA	LSP
2		A		9110	84-1407-9110-5-00091				162	325	
3		B		9110	84-1407-9110-5-00074				162	325	
4		2	0	1715-IB16	84-1308-9402-5-00687						

In the example collection tool data file output shown above, the serial number of AADvance T9110 module in the A slot is 84-**1407**-9110-5-00091. The date code for this module is 1407, or July 2014. This module would be subject to this notification.

– Description –

A potential anomaly exists with the Allen-Bradley® 1715-AENTR Ethernet/IP Adaptor Module, the AADvance® T9110 Processor Module, and the AADvance T9120 Processor Eurocard. When used with redundant power supplies, the affected module may not detect and report the loss of a single supply. If the redundant supply is subsequently lost, the control system will lose all power and shut down without system notification.

Internal to the potentially affected modules are blocking diodes that prevent power from one power supply affecting the detection circuitry for the other power supply. When a single supply becomes non-operational, the detection circuitry signals the system of the loss resulting in an LED indication on the module's faceplate and the generation of a fault alarm. The system will continue to operate on the remaining supply.

On a small percentage of modules, the blocking diodes may allow power from the remaining operational power supply to affect the detection circuitry for the non-operational power supply. This will prevent detection circuitry for the non-operational supply from signaling a loss supply condition to the system.

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– Temporary Workarounds –

No temporary workaround has been identified. Customers are advised to check for this condition and, if determined the module or card is affected, take appropriate corrective actions as described in the Correction section of this document.

– Correction –

ATTENTION: Only persons skilled in the maintenance of industrial control and electrical equipment should attempt to perform the following test and remediation actions. Failure to follow industry standard safety procedures, including Lock-Out / Tag-Out (LOTO) and use of appropriate levels of personal protective equipment (PPE), may result in harm to personnel or loss of equipment. Make sure you read and understand all warnings as provided in the product installation and service documentation.

Important - Prior to requesting module repair or replacement, customers must perform a power loss test to determine if the module or card is affected by this anomaly. Test procedures specific to module type are included in Appendix B of this notification. If testing determines your module is not affected, no action is required.

Customers requesting repair should submit a request for a Return Material Authorization (RMA) by sending an email to returns@ra.rockwell.com with subject line "PN 2019-07-002 RMA Request". An RMA will be returned by email with processing instructions.

Customers requesting replacement or exchange product should contact their Rockwell Automation System Integrator, Distributor, or Sales Office, or other place of purchase. Make sure to reference this Product Notice PN 2019-07-002 when requesting replacement product.

Important – Customers may expect extended delivery times for repairs, exchange, or replacement product while inventory levels are replenished.

Rockwell Automation will accept requests for repair (where applicable) or replacement product for a period of 18 months from the initial publication of this Product Notice.

– Requested Customer Action –

Rockwell Automation requests you take the following actions:

- Check if you have a product affected by this Product Notice. Refer to the Product Identification and Description sections of this document for product identification assistance.
- If applicable, contact your local Rockwell Automation Distributor or Sales Office for replacement. Make sure to reference this Product Notice when requesting replacement product.
- All returns should be over packed to prevent shipping damage during transit.
- Continue to check incoming shipments for potentially affected product. Product in transit or in non-Rockwell Automation inventory may continue to contain potentially affected product for a period of time after the publication of this document.

- If you need additional assistance, please contact Rockwell Automation Technical Support. See Appendix A for local telephone numbers. Customers without TechConnect℠ support contracts should reference this Product Notice when calling.
- Customers with TechConnect support contracts may be able to chat online with support representatives. Reference this Product Notice when connected to a support engineer.

The most current version of this Product Notice is posted on the Rockwell Automation Support Center, http://www.rockwellautomation.com/knowledgebase, as ID number 1087883. Additional languages may also be available at the end of this article attached as downloadable PDF documents.

If this Product Notice does not affect you because you do not have the products any longer, or if you are a Distributor, Rockwell Automation asks that you forward a copy of this notice, with any identifying documentation, immediately to the person or company that now has the product. We also ask that you contact Rockwell Automation Technical Support and provide the location of the affected units.

We appreciate your immediate cooperation. If you have any questions, please contact us.

Sincerely,

ROCKWELL AUTOMATION

You can register for Automatic Product Safety Advisories and Product Notices from Rockwell Automation by email. Go to the Support web page at http://www.rockwellautomation.com/support and click the *Search Knowledgebase – Get Answers* link. Sign in with your TechConnect Account or free Rockwell Automation Member Account and you can subscribe to important product updates, including Product Safety Advisories and Product Notices.

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Appendix A
Regional Technical Support Information

The following list can help you to contact the correct technical support center for your location. If your country is not listed, you can find a customer support number for your location by going to the Rockwell Automation Knowledgebase as https://rockwellautomation.custhelp.com. Mouse over *Support* and select *Find Local Support*, then enter your location information. If you have a TechConnect℠ support contract, please use the telephone number supplied to you with the contract.

Region / Country	Phone Number ( ) International Code
Asia/Pacific	
Australia	1 800 762 593
China	400 620 6620
Hong Kong	+852 2887 4666
India	1 800 2000 121
Japan	03 3206 2785
Korea	(82) 2 2188 4400
Malaysia	1 800 80 4851
New Zealand	0800 27 27 25
Taiwan	080 902 0908
Thailand	(66) 2936 1500
Caribbean	
All Countries (English)	(1) 440 646 3223
All Countries (Español)	(1) 440 646 3650
Central America	
Argentina	800.666.0320
Belize	(1) 440 646 3650
Bolivia	(54) 800 10 0632
Brazil	(55) 11 5189 9500
Chile	800.53.0012
Colombia	01.800.700.2107
Costa Rica	0800.013.1215
Ecuador	58.212.949.0611
El Salvador	(52) 55 5246 2010
Guatemala	1.800.288.0108
Honduras	(52) 55 5246 2010
Mexico	001.888.365.8677
Nicaragua	(52) 55 5246 2010
Panama	001.800.203.3475
Paraguay	(54) 11 5554 4000
Peru	0800.535.36
Suriname	(1) 440 646 3650
Uruguay	(54) 11 5554 4000
Venezuela	800.1.00.3062

Region / Country	Phone Number ( ) International Code
Europe	
Austria	(49) 211 41553 664
Belgium	(32) 2 716 8411
Czech Republic	(420) 28401 5911
Denmark	(45) 43 466 006
Finland	(358) 958 447 419
France	(33) 825303132
Germany	(49) 211 41553 664
Hungary	(420) 28401 5911
Ireland	(44) 01908 635245
Italy (Brescia, Milano e Padova)	(39) 199 11 99 00
Italy (Bologna,Firenze,Napoli, Roma e Torino)	(39) 199 11 99 22
Morocco	(33) 825303132
Netherlands	(31) 10 266 55 80
Poland	(48) 22 32 60 707
Portugal	(1) 440 646 3223
Slovakia	(420) 284015911
Spain	(34) 902 30 93 30
Sweden	(46) 46 19 93 91
Switzerland (German)	(41) 0844 84 84 11
Switzerland (French)	(41) 0844 84 84 12
Switzerland (Italian)	(41) 0844 84 84 13
United Kingdom	(44) 01908 635245
North America	
Canada	(1) 440-646-3223
United States	(1) 440-646-3223

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Appendix B
Power Loss Detection Test Procedure

Prior to requesting repair or replacement material, product identified as included in Product Notice 2019-07-002 must be tested to verify anomalous operation. The procedures on the following pages are specific to module type.

ATTENTION: Only persons skilled in the maintenance of industrial control and electrical equipment should attempt to perform the following test and remediation actions. Failure to follow industry standard safety procedures, including Lock-Out / Tag-Out (LOTO) and use of appropriate levels of personal protective equipment (PPE), may result in harm to personnel or loss of equipment. Make sure you read and understand all warnings as provided in the product installation and service documentation.

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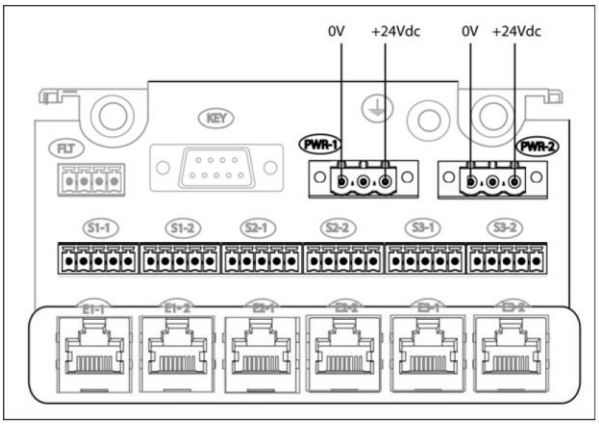
AADVANCE T9110 PROCESSOR MODULE TEST PROCEDURE



Equipment required:

- Terminal screwdriver
- Digital Voltmeter (DVM)
- Online access (read only) to view diagnostic status, using the AADvance Workbench

Check Procedure:

1. Verify that the system is healthy (see healthy power supply indication).
2. Verify that all power supply units/sources are healthy and all circuit breakers/fuses are healthy (application dependent).
3. Turn off power feed 1 (by removing the PWR-1 connector)
4. Verify that the System Healthy LED turns Red and that the 'Processor Module X 24v1 Power Feed Healthy' status = FALSE (See Power Feed 1 UnHealthy indication).
5. Verify that the voltage between the 0v and +24Vdc pins on the T9100 Processor Base (not the connector itself) is <2Vdc.
6. Replace the PWR-1 connector and press the 'Fault Reset' button on any of the installed Processor Modules.
7. Verify that the system is healthy (see healthy power supply indication).
8. Turn off power feed 2 (by removing the PWR-2 connector)
9. Verify that the System Healthy LED turns Red and that the 'Processor Module X 24v2 Power Feed Healthy' status = FALSE (See Power Feed 2 UnHealthy indication).
10. Verify that the voltage between the 0v and +24Vdc pins on the T9100 Processor Base (not the connector itself) is <2Vdc.
11. Replace the PWR-2 connector and press the 'Fault Reset' button on any of the installed Processor Modules.
12. Verify that the system is healthy (see healthy power supply indication).
13. Refer to results table to determine what action is required.

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Results Table

Test Step	PWR-1 Removed			PWR-2 Removed		
Module	A	B	C	A	B	C
Processor Module X 24vN Power Feed Healthy' status = FALSE AND Connector voltage on T9100 Base <2Vdc	No Action Required Processor Healthy	No Action Required Processor Healthy	No Action Required Processor Healthy	No Action Required Processor Healthy	No Action Required Processor Healthy	No Action Required Processor Healthy
Processor Module X 24vN Power Feed Healthy' status = TRUE	RMA Required	RMA Required	RMA Required	RMA Required	RMA Required	RMA Required
Connector voltage on T9100 Base >2Vdc	RMA Required	RMA Required	RMA Required	RMA Required	RMA Required	RMA Required

Healthy Power Supply indication – Dual Processor Configuration

Module LED Indication

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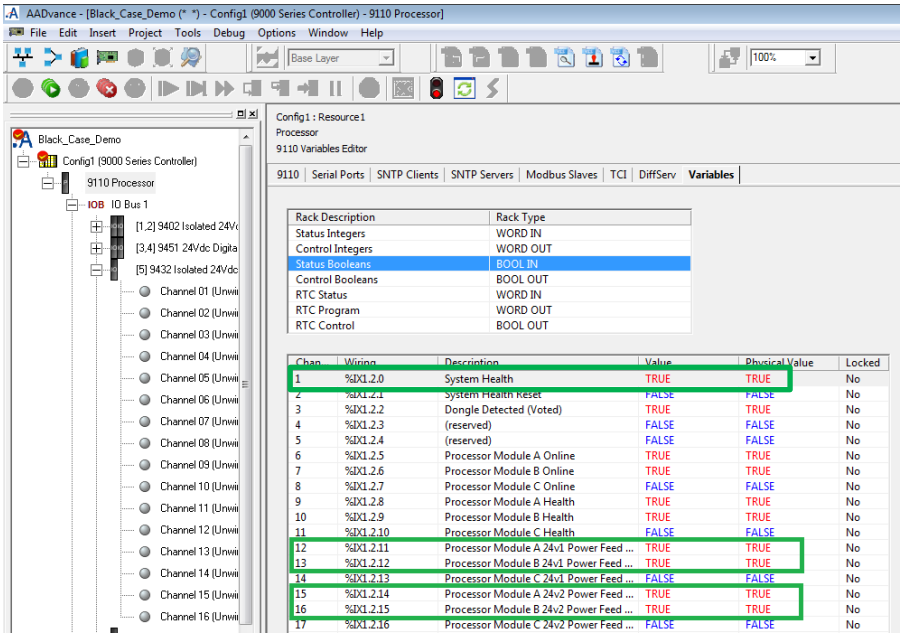
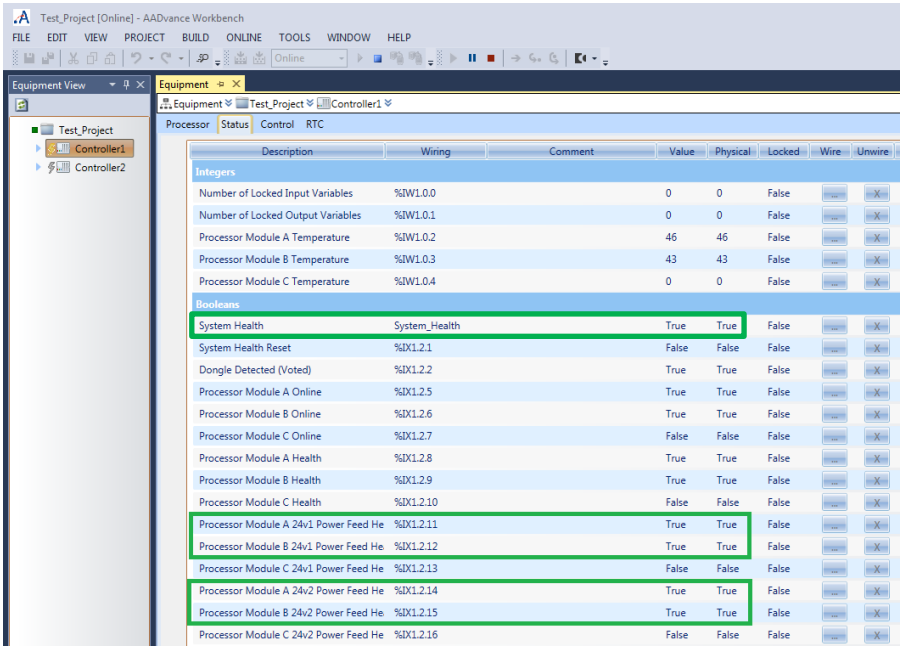
Online status when using AADvance Workbench 1.x



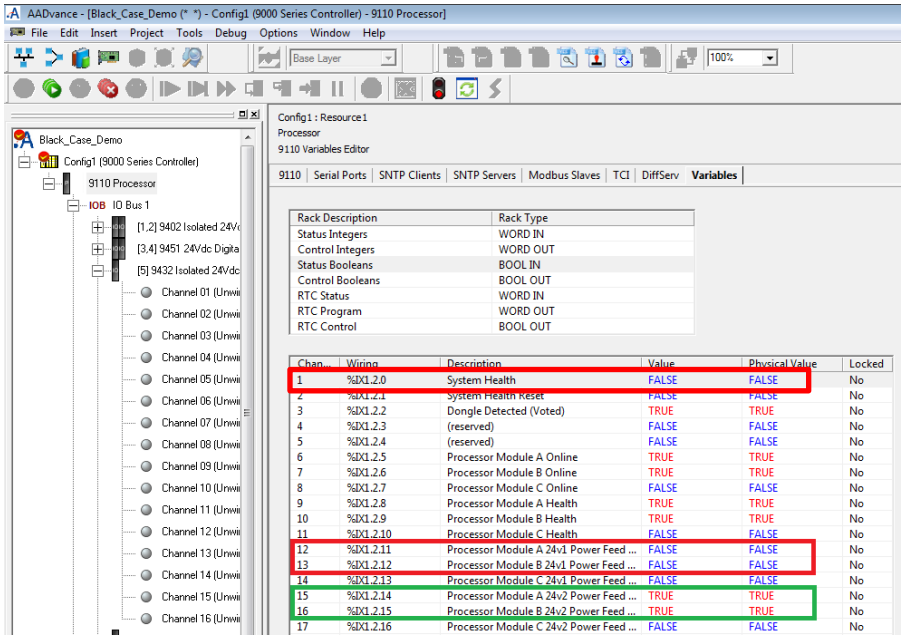
Online status when using AADvance Workbench 2.x



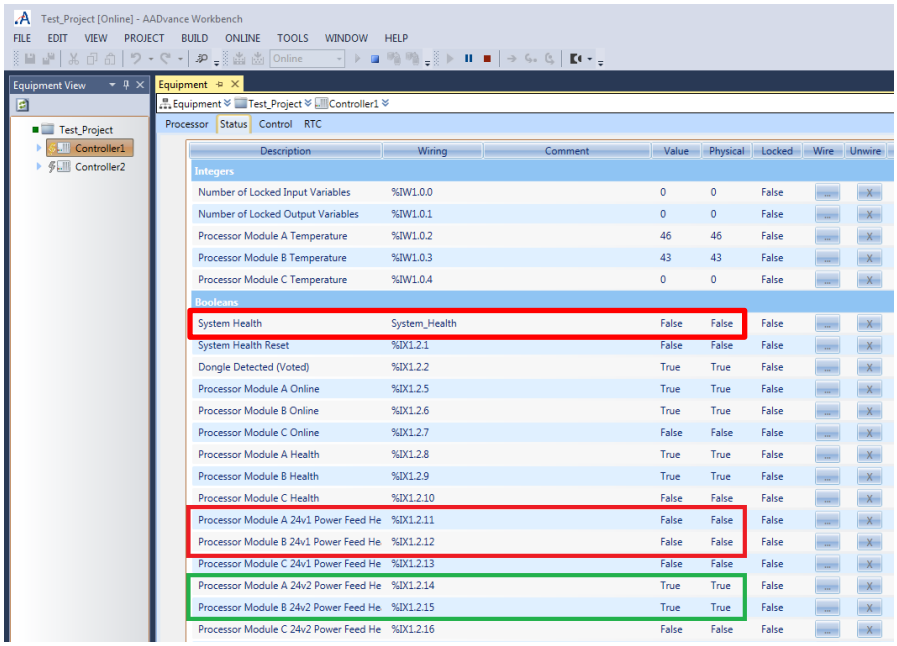
Power Feed 1 UnHealthy indication – Dual Processor Configuration

Module LED Indication

Online status when using AADvance Workbench 1.x



Online status when using AADvance Workbench 2.x



Power Feed 2 UnHealthy indication – Dual Processor Configuration

Module LED Indication

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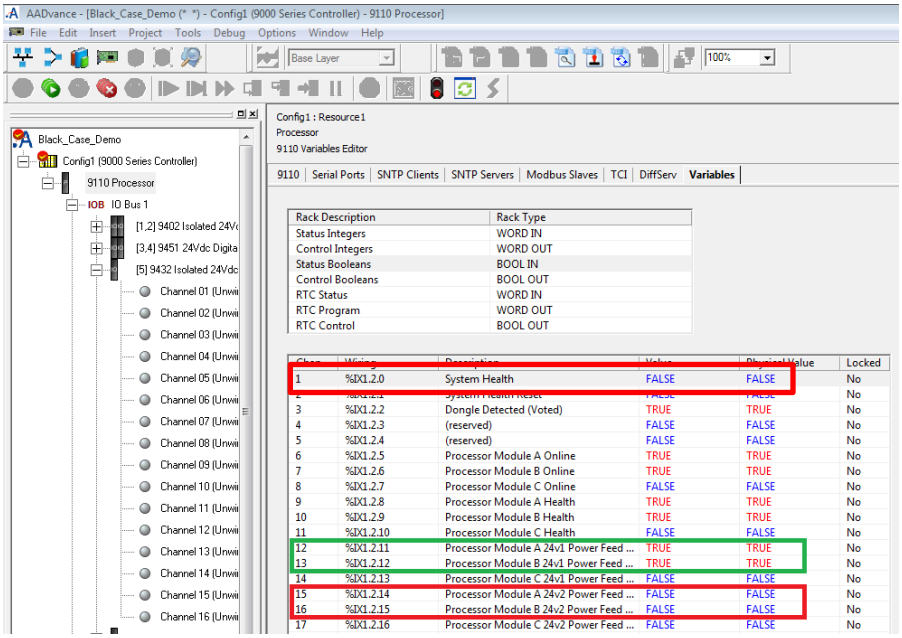
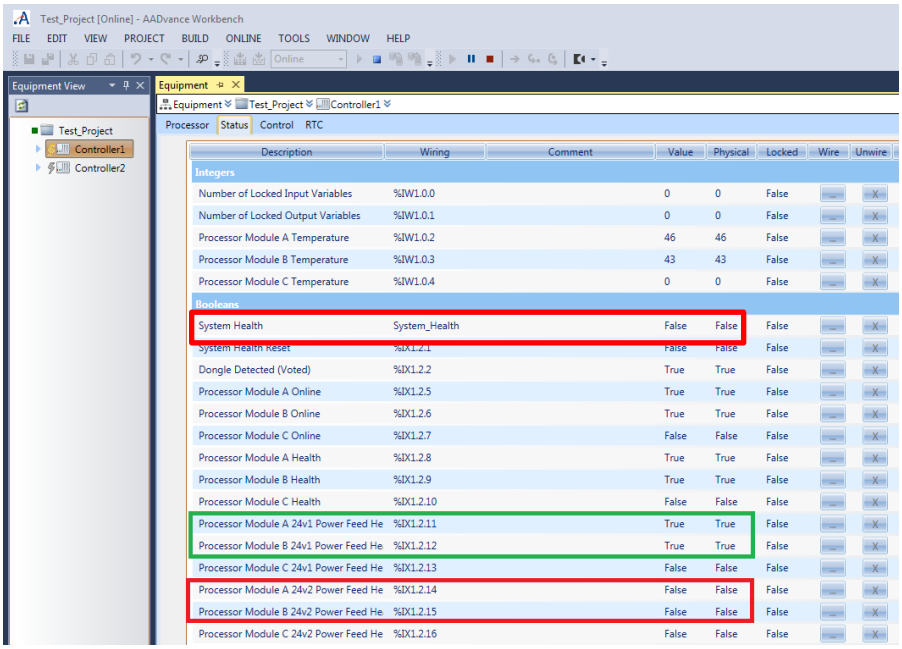
Online status when using AADvance Workbench 1.x



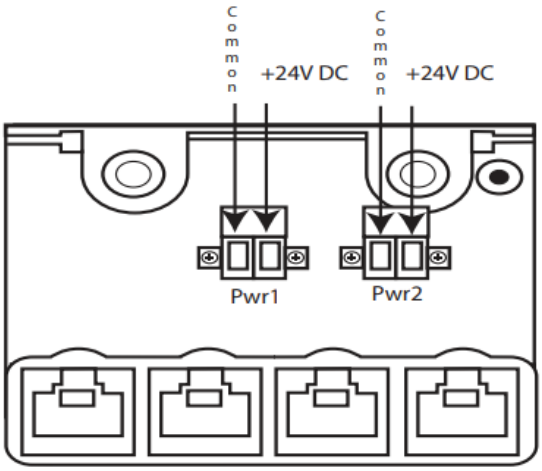
Online status when using AADvance Workbench 2.x



ALLEN-BRADLEY 1715-AENTR MODULE TEST PROCEDURE

Equipment required:

1) Terminal screwdriver
2) Digital Voltmeter (DVM)
3) Access to 1715-AENTR adapter tag information (Logix Designer, FactoryTalk Live Data Test Client, etc.)



Check Procedure:

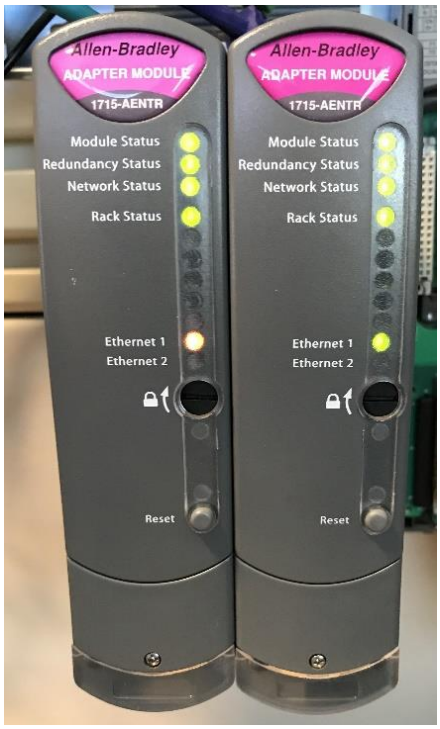
1) Verify that the system is healthy (Module Status and Rack Status solid green).
2) Verify that all power supply units/sources are healthy and all circuit breakers/fuses are healthy (application dependent).
3) Remove the PWR-1 connector (removes power from PWR-1).
4) Verify that the Rack Status LED turns red and that the tag <Adapter Name>:S.Power1Fault = 1.
5) Verify that the voltage between the common and +24V DC pins on the 1715-A2A Base (not the connector itself) is less than 2V DC.
6) Replace the PWR-1 connector and press the Reset button on either of the installed 1715-AENTR modules.
7) Verify that the system is healthy (Module Status and Rack Status solid green).
8) Remove the PWR-2 connector (removes power from PWR-2).
9) Verify that the Rack Status LED turns Red and that the tag <Adapter Name>:S.Power2Fault = 1.
10) Verify that the voltage between the common and +24V DC pins on the 1715-A2A Base (not the connector itself) is less than 2V DC.
11) Replace the PWR-2 connector and press the Reset button on either of the installed 1715-AENTR modules.
12) Verify that the system is healthy (see healthy power supply indication).
13) Refer to results table to determine what action is required.

Results Table

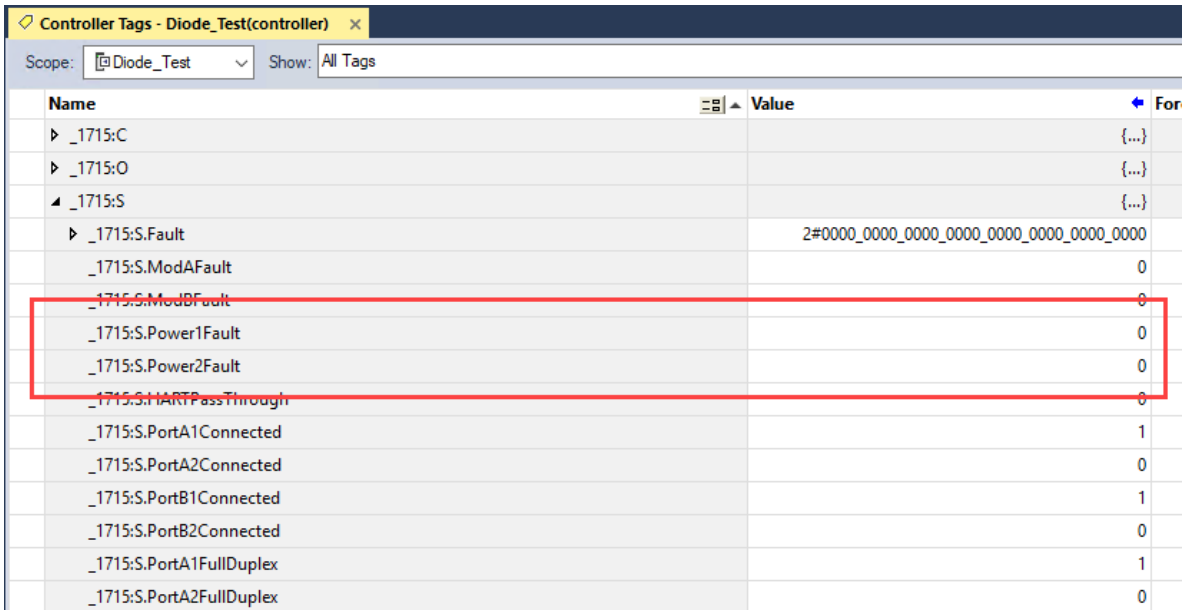
Test Step	PWR-1 Removed	PWR-2 Removed
<Adapter Name>:S.PowerXFault = 1 AND Connector voltage 1715-A2A base less than 2V DC	No Action Required	No Action Required
<Adapter Name>:S.PowerXFault = 0	RMA Required	RMA Required
Connector voltage on 1715-A2A base greater than 2V DC	RMA Required	RMA Required

Healthy Power Supply Indication

Module LED Indication

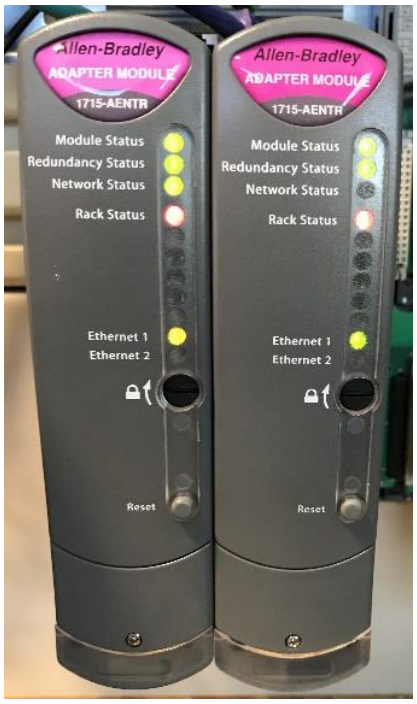


Tag Values Using Logix Designer



PWR-1 UnHealthy Indication

Module LED Indication



Tag Values Using Logix Designer

Controller Tags - Diode_Test(controller)

Scope: Diode_Test Show: All Tags

Name	Value	Fo
_1715:C	{...}	
_1715:O	{...}	
_1715:S	{...}	
_1715:S.Fault	2#0000_0000_0000_0000_0000_0000_0000_0000	
_1715:S.ModAFault	0	
_1715:S.ModBFault	0	
_1715:S.Power1Fault	1	
_1715:S.Power2Fault	0	
_1715:S.HARTPassThrough	0	
_1715:S.PortA1Connected	1	
_1715:S.PortA2Connected	0	
_1715:S.PortB1Connected	1	
_1715:S.PortB2Connected	0	
_1715:S.PortA1FullDuplex	1	
_1715:S.PortA2FullDuplex	0	

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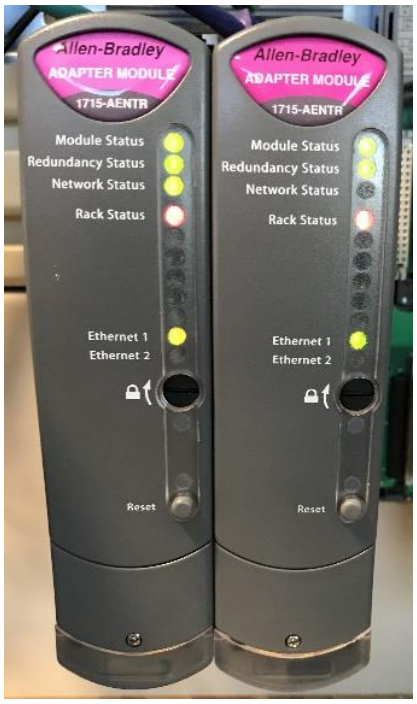
PWR-2 UnHealthy Indication

Module LED Indication



Tag Values Using Logix Designer

Controller Tags - Diode_Test(controller)

Scope: Diode_Test Show: All Tags

Name	Value	Fo
_1715:C	{...}	
_1715:O	{...}	
_1715:S	{...}	
_1715:S.Fault	2#0000_0000_0000_0000_0000_0000_0000_0000	
_1715:S.ModAFault	0	
_1715:S.ModBFault	0	
_1715:S.Power1Fault	0	
_1715:S.Power2Fault	1	
_1715:S.HARTPassThrough	0	
_1715:S.PortA1Connected	1	
_1715:S.PortA2Connected	0	
_1715:S.PortB1Connected	1	
_1715:S.PortB2Connected	0	
_1715:S.PortA1FullDuplex	1	
_1715:S.PortA2FullDuplex	0	