



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.

1756-TIME GPS Rollover Event Awareness

Reference: 2019-05-001

Date: May 2019

This Product Notice provides awareness of Global Positioning System (GPS) events that may affect time keeping capabilities of the 1756HP-TIME and 1756-TIME ControlLogix® GPS Time Synchronization modules. The GPS uses fixed size counters to manage various aspects of time keeping. When a counter rolls over (maximum value to zero) time keeping devices dependent on that counter may need to be updated to compensate.



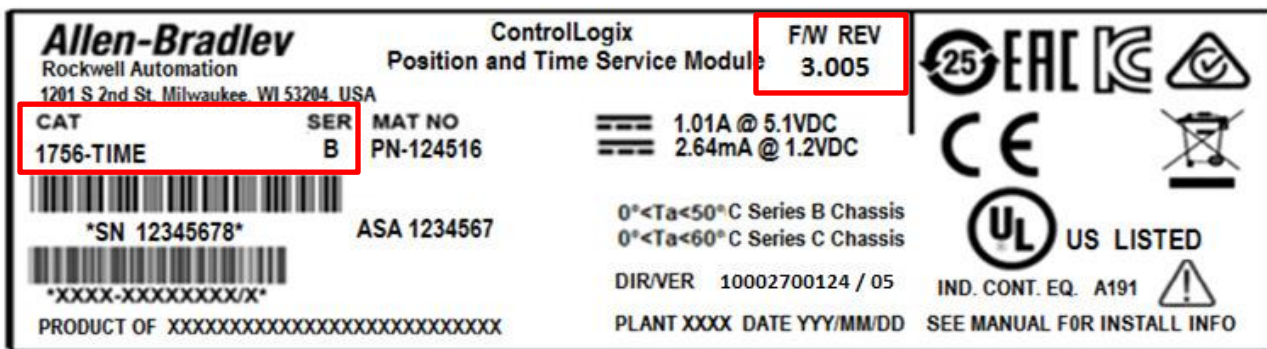
– Product Identification –

The potentially affected products are 1756-TIME and 1756HP-TIME GPS Time Synchronization Modules.

- 1756HP-TIME
- 1756-TIME Series A
- 1756-TIME Series B

On installed product, the product identification information may be found on the product nameplate, located on the side of the product module. The catalog number will be on the left side in the CAT field and the as shipped version information in the F/W REV field. Since the firmware version may have been updated in the field after receipt, you should verify the firmware revision using online tools such as Studio 5000 Logix Designer® or FactoryTalk® Network Manager.

In the example shown below, the catalog number is 1756-TIME Series B and the firmware revision is 3.005. Firmware version 3.005 contains the correction for the week counter rollover event and is the correct version as of the release of this notification.



On product still within its shipping carton, the product identification information may be found on the carton label. The catalog number will be on the left side in the CAT field and the as shipped version information in the FW field.

In the example shown to the right, the catalog number is 1756-TIME Series B and the firmware revision is 3.005. Firmware version 3.005 contains the correction for the week counter rollover event and is the correct version as of the release of this notification.



– Description –

Future Global Positioning System (GPS) events may affect the time keeping capabilities of the 1756HP-TIME and 1756-TIME ControlLogix® GPS Time Synchronization modules. The GPS uses fixed size counters to manage various aspects of time keeping. When a counter rolls over (maximum value to zero) time keeping devices dependent on that counter may need to be updated to compensate.

A recent rollover event occurred on April 6, 2019. The GPS time standard rolled over the week counter to zero. In the GPS, weeks are calculated using a 10-bit counter, giving a maximum of 1024 weeks prior to rolling over to week 0. This correlates to approximately 19.7 years. When the rollover occurred, GPS devices that used this information to calculate time erroneously calculated the week as 0, or 19.7 years in the past. The next week rollover event for devices using this 10-bit counter is expected to occur on September 27, 2036.

As reported by the US Naval Observatory (USNO), “there is an ongoing multi-billion-dollar program of upgrades to improve the overall performance of the Global Position System. Included within this program is a move towards a 13-bit date field to represent the week number. Thirteen binary bits represents around 157 years per epoch. Newer GPS receivers will not be affected by the current end-of-epoch situation”.

Additional information concerning the recent 10-bit week counter rollover event may be found at the [Department of Homeland Security](#) and the [US Naval Observatory](#).

Additional future events may have a similar effect on the 1756-TIME module. Rockwell Automation has created Knowledgebase Article ID [1082057](#) to address this and future events that may affect the 1756-TIME module.

– Temporary Workarounds –

No workaround has been identified for older 1756HP-TIME and 1756-TIME Series A modules. Rockwell Automation encourages customers with older modules to migrate to the current 1756-TIME Series B modules.

– Correction –

Rockwell Automation will update Knowledgebase Article ID [1082057](#) when upcoming rollover events result in firmware revisions. Customers are encouraged to subscribe to updates to this article to receive advance notification.

Users of prior 1756HP-TIME and 1756-TIME Series A modules must migrate to the current 1756-TIME Series B module prior to 2021. Migration of older product is at the discretion and cost of the customer.

Users of current 1756-TIME Series B modules should upgrade their module to firmware version 3.005 or later. Updated firmware can be field installed and is available on the Rockwell Automation Product Compatibility and Download Center (PCDC). Access the PCDC at <https://compatibility.rockwellautomation.com/Pages/home.aspx>. Click the “Find Downloads” link and enter 1756-TIME. Make sure to select the latest firmware release for the Series B module. Follow the instructions to complete the firmware download.

– 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.
- Follow the steps in the Correction section of this document to make sure you have the latest firmware revision for your 1756-TIME Series B module.
- Prior to installation of new product, verify the firmware level to make sure you have the latest firmware revision.
- If you need additional assistance, please contact Rockwell Automation Technical Support. See Appendix A for local telephone numbers. Customers without TechConnectSM 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 [1087251](#). 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 TechConnectSM 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