



Program Storage Device

Catalog Number 1747-PSD, Series D

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Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at <http://literature.rockwellautomation.com>) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.





In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

<p>WARNING</p> 	<p>Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.</p>
<p>IMPORTANT</p>	<p>Identifies information that is critical for successful application and understanding of the product.</p>
<p>ATTENTION</p> 	<p>Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you to identify a hazard, avoid a hazard, and recognize the consequences.</p>
<p>SHOCK HAZARD</p> 	<p>Labels may be located on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.</p>
<p>BURN HAZARD</p> 	<p>Labels may be located on or inside the equipment, for example, a drive or motor, to alert people that surfaces may be at dangerous temperatures.</p>

Safety Considerations

This equipment is suitable for use in Class I, Division 2, Groups A, B, C, and D, or non-hazardous locations only. The following attention statement applies to use in hazardous locations.

WARNING

EXPLOSION HAZARD



- Substitution of components may impair suitability for Class I, Division 2.
- Do not replace components or disconnect equipment unless power has been switched off and the area is known to be non-hazardous.
- Do not connect or disconnect connectors or operate switches while circuit is live unless the area is known to be non-hazardous.
- All wiring must comply with N.E.C. article 501-4(b).

Environnements dangereux

Cet équipement est conçu pour être utilisé dans des environnements de Classe 1, Division 2, Groupes A, B, C, D, ou non dangereux. La mise en garde suivante s'applique à une utilisation dans des environnements dangereux.

MISE EN GARDE

DANGER D'EXPLOSION



- La substitution de composants peut rendre cet équipement impropre à une utilisation en environnement de Classe 1, Division 2.
- Couper le courant ou s'assurer que l'emplacement est désigné non dangereux avant de remplacer les composants.
- Couper l'alimentation ou s'assurer que l'environnement est classé non dangereux avant de brancher ou débrancher des connecteurs ou de faire fonctionner des commutateurs.

Overview

The 1747-PSD Program Storage Device (PSD) is a hand-held program-transfer device. The PSD provides one-program storage and retrieval for SLC 5/03, 5/04, and 5/05 and MicroLogix 1000, 1100, 1200, and 1500 controllers.⁽¹⁾ The PSD connects to the RS-232 serial port running DF1 full-duplex communications protocol.

⁽¹⁾ The names SLC, PLC, and controller are used interchangeably to describe a programmable controller. Industrial programming station is an industrial-hardened PC-based programming station located in the factory production area.

4 Program Storage Device

The program storage device supports DF1 full-duplex with CRC or BCC error detection, 8 data bits, 1 stop bit, and no parity at communication rates 1200 bps, 2400 bps, 4800 bps, 9600 bps, 19200 bps, and 38400 bps. During operation, the program storage device matches the DF1 communication rate of the SLC or MicroLogix controller. The program storage device will not communicate with a controller if the channel is configured for DH485, DF1 half-duplex or ASCII protocol. Embedded responses and simultaneous communications are not supported.

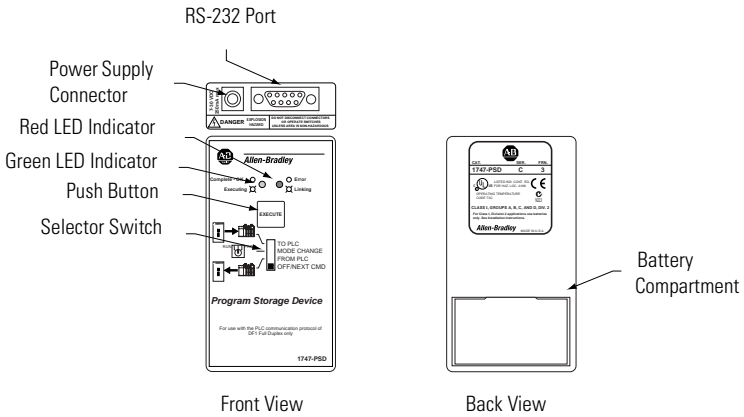
The program storage device checks for 19200 bps communication rate first. Use 19200 bps for fastest recognition.

Controllers used with 1747-PSD Program Storage Device

Controller	Series	Operating System
SLC 5/03	Not applicable	OS300
		OS301
		OS302
SLC 5/04		OS400
		OS401
SLC 5/05		OS500
	OS501	
MicroLogix 1000 Analog	A	Not applicable
MicroLogix 1000 Discrete	A, B, C, D, E, and F	
MicroLogix 1100 ⁽¹⁾	A	
MicroLogix 1200	A, B, and C	
MicroLogix 1500, 1764-LSP	A, B, and C	
MicroLogix 1500, 1764-LRP ⁽¹⁾	B and C	
PC-based industrial programming station	Not applicable	

⁽¹⁾ Recipe data and/or Data Logs stored in Data Log Memory cannot be uploaded or downloaded by the 1747-PSD programming device.

1747-PSD Features



Selector Switch and Pushbutton

The four-position selector switch selects the type of operation performed by the program storage device. Program Transfer mode functions are labeled on the program storage device.

The pushbutton executes the selected function. Memory Module mode, Clear Memory mode, Program Transfer mode, and Secondary Industrial Programming Station functions are available using the pushbutton in conjunction with the switch.

Battery Compartment

The battery compartment in the back of the program storage device holds two AAA, 1.5V dc standard or alkaline batteries. Batteries are not included with the program storage device.

The program storage device is Class I, Division 2, Groups A, B, C, and D certified only when used with batteries.

LED Indicators

The program storage device has a red and a green LED indicator.

User-supplied Power Connection

The program storage device accepts 7...30V dc user-supplied power from a Class 2 power supply adapter.

A 9V dc, Class 2 power supply adapter (120V ac), catalog number 1787-USADPTR, is available for use with the program storage device.

The adapter plugs into the power supply connection at the top of the module.

For permanent installations, use a power supply adapter.

Connect the Program Storage Device

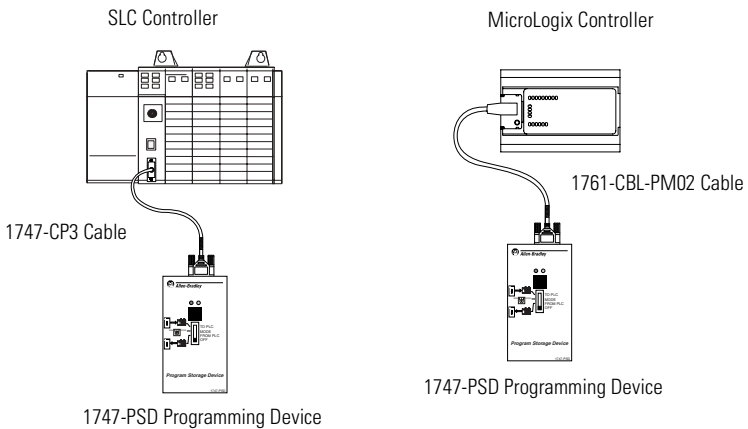
Connect the program storage device to the controllers with the appropriate cable.

1747-PSD Cable Connection

Controller	Serial Port	With Cable ⁽¹⁾
SLC 5/03, SLC 5/04, and SLC 5/05	Channel 0 RS-232	1747-CP3
MicroLogix 1000, 1100, 1200, and 1500		1761-CBL-PM02
MicroLogix 1500	Channel 1 RS-232	1747-CP3
MicroLogix 1200	PROG/HMI RS-232	1761-CBL-PM02
Industrial Programming Station	COM1 or COM2	1747-CP3

⁽¹⁾ The cables are not supplied with the program storage device.

Program Storage Device Connected to Controllers



Apply Power to the Program Storage Device

To apply power, move the selector switch from the OFF/NEXT CMD position to any desired function selection.

LED Indicators when Applying Power

Red LED Indicator	Green LED Indicator	Indicates
On	Off	an error at power-up.
Flashing	Off	the program storage device is trying to communicate.
Off	On	the program storage device is able to communicate.
Off	Off	the program storage device is in Sleep mode.

Use the Program Storage Device

The program storage device has five modes.

- Program Transfer mode - between program storage device and controller
- Program Transfer mode - between program storage device and industrial programming station
- Memory Module mode
- Clear Memory mode
- Off/Next Command mode
- Sleep mode

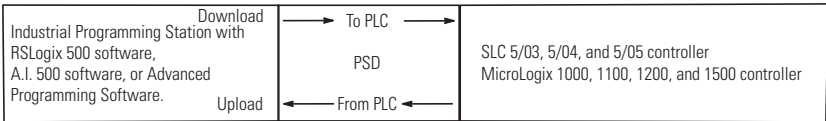
IMPORTANT

When an error occurs during operation, the red LED indicator illuminates steadily for 30 seconds before the module enters the Sleep mode.

Program Transfer Mode between the Program Storage Device and Controller

Program Transfer mode allows a program to be transferred between the program storage device and controller.

Program Transfer between the Program Storage Device and Controller



Program Transfer between the Program Storage Device and Controller

Switch Position	Function
To PLC	Transfers a new program from the program storage device to the controller. The controller must be in Remote Program mode or an error will occur.
Mode Change	Toggles the controller mode between Remote Program and Remote Run. When the program storage device switches the controller to Remote Program, the error bits are cleared.
From PLC	Transfers a program from the controller to the program storage device. The program storage device can receive a program regardless of the controller's operating mode.

If you want to transfer a program to the controller and the controller is not in Remote Program mode, follow the steps using the mode change command.

1. Without pressing the pushbutton, slide the selector switch from the OFF/NEXT CMD position to the desired command.
2. Wait until the green LED indicator illuminates steadily.
3. Within 10 seconds after the green LED indicator illuminates steadily, press the pushbutton.
4. Release the pushbutton within 10 seconds.

While the command is executing, the green LED indicator flashes.

If the green LED indicator and red LED indicator flash simultaneously, refer to the Incompatibilities section.

When execution is complete, either the green or the red LED indicator illuminates steadily for 30 seconds. Green indicates a successful transfer and red indicates a failed transfer.

After 30 seconds, the illuminated LED indicator turns off, and the program storage device enters the Sleep mode.

- To maximize battery life, slide the selector switch to the OFF/NEXT CMD position.

To return the controller to the Remote Run mode following a program transfer, repeat these steps using the mode change command.

Incompatibilities

When a download from the program storage device is commenced, and the target controller is of an earlier firmware version (Series or OS) than the stored program, the green and red LED indicators flash simultaneously. This indicates a possible program incompatibility. Pressing and releasing the EXECUTE pushbutton within 10 seconds after the LED indicators begin flashing allows the possible incompatibility to be accepted, and the program download operation commences.

If a downloaded program contains	Then the program storage device indicates	Use the tables in this section to determine
file types that are not supported by the controller	that the download has failed and after the controller Edit Resource/Owner Timeout expires (60 seconds by default), the controller Fault LED indicator will flash and the out-of-box default program will be loaded into controller memory. (Until the Edit Resource/Owner Timeout expires, the controller remains in download mode and the Fault LED indicator is off.)	if new file types in the series of controller file to be downloaded by the program storage device causes the download to an earlier series target controller to fail. If security, multi-point and F8 floating point files are present, they can't be deleted. Programmable Limit Switch and String files are optional, so if they don't exist in the user program, they won't cause the download to fail.
instructions that are not supported by the target controller	that the download has completed, but the controller faults when attempting to go to Run mode.	if new instruction types in the series of controller file to be downloaded by the program storage device causes an earlier series target controller to fault when attempting to go to Run mode.
a communication driver that is not supported by the target controller	that the download has completed, and the controller goes into Run mode, but that communication channel configuration remains unchanged. Message instructions targeting this communication channel may fail.	if the communication driver in the series of controller file to be downloaded by the program storage device is supported by the earlier series target controller.

RSLogix 500 software may be used to determine the source of the incompatibility. In Offline mode, set the controller series/revision to that of the target controller and observe the errors indicated by the program verification routine.

Refer to Additional Resources for a listing of where you can go to find more information regarding file types, instructions, and controllers.

Incompatible Controllers

Controller	Controller OS/Series	File Types Supported	Instructions Supported	Comms Supported
SLC 5/03	OS302, Series C, FRN 10 and later	Security ⁽¹⁾	CEM, DEM, RPC	—
	OS302, Series C, FRN 3...8	—	BTR, BTW, RHC, TDF, ENC, RMP, FBC, DDT	DF1 Radio Modem (FRN 6+)
	OS302, Series B	—	—	—
	OS302, Series A	Multi-point ⁽¹⁾	SIN, COS, TAN, ASN, ACS, ATN, LN, LOG, ABS, DEG, RAD, XPY, CPT, SWP, SCP	DF1 Half-duplex Master
	OS301, Series A	Float ⁽²⁾ , String	ABL, ACB, ACI, ACL, ACN, AEX, AHL, AIC, ARD, ARL, ASC, ASR, AWA, AWT	—
	OS300, Series A	—	—	—
SLC 5/04	OS401, Series C, FRN 10 and later	Security ⁽¹⁾	CEM, DEM, RPC	—
	OS401, Series C, FRN 3...8	—	BTR, BTW, RHC, TDF, ENC, RMP, FBC, DDT	DF1 Radio Modem (FRN 6+)
	OS401, Series B	—	—	—
	OS401, Series A	Multi-point ⁽¹⁾	SIN, COS, TAN, ASN, ACS, ATN, LN, LOG, ABS, DEG, RAD, XPY, CPT, SWP, SCP	DF1 Half-duplex Master
	OS400, Series A	—	—	—

Incompatible Controllers

Controller	Controller OS/Series	File Types Supported	Instructions Supported	Comms Supported
SLC 5/05	OS501, Series C, FRN 10 and later	Security ⁽¹⁾	CEM, DEM, RPC, EEM	—
	OS501, Series C, FRN 3...8	—	BTR, BTW, RHC, TDF, ENC, RMP, FBC, DDT	DF1 Radio Modem (FRN 6+)
	OS501, Series B	—	—	—
	OS500, Series A	—	—	—
MicroLogix 1000 Discrete	Series F	—	—	—
	Series E	—	—	—
	Series D	—	—	DF1 Half-duplex Slave
	Series C	—	MSG	DH-485
	Series B	—	—	—
	Series A	—	—	—
MicroLogix 1000 Analog	Series A	—	—	—
MicroLogix 1100	Series A	—	—	—
MicroLogix 1200	Series C, FRN 4+	Pis, Float ⁽²⁾	CPW, RTA, GCD, ABS, SCP with FP (FRN 6+)	<ul style="list-style-type: none"> • DF1 Half-duplex Master (FRN 7+) • DF1 Radio Modem (FRN 7+) • Modbus RTU Master (FRN 8+)
	Series B, FRN 3	—	ABL, ACB, ACI, ACN, AEX, AHL, ARD, ARL, ASC, ASR, SWP	—
	Series A, FRN 1...2	—	—	—

Incompatible Controllers

Controller	Controller OS/Series	File Types Supported	Instructions Supported	Comms Supported
MicroLogix 1500 LSP	Series C, FRN 6+	Pls, Float ⁽²⁾	CPW, RTA, GCD, ABS, RCP, SCP with FP (FRN 7+)	<ul style="list-style-type: none"> • DF1 Half-duplex Master (FRN 8+) • DF1 Radio Modem (FRN 8+) • Modbus RTU Master (FRN 9+)
	Series B, FRN 4...5	String	—	Modbus RTU Slave
	Series A, FRN 1...3	—	—	—
MicroLogix 1500 LRP	Series C, FRN 6+	Pls, Float ⁽²⁾	CPW, RTA, GCD, ABS, RCP, SCP with FP (FRN 7+)	<ul style="list-style-type: none"> • DF1 Half-duplex Master (FRN 8+) • DF1 Radio Modem (FRN 8+) • Modbus RTU Master (FRN 9+)
	Series B, FRN 4...5	—	—	—

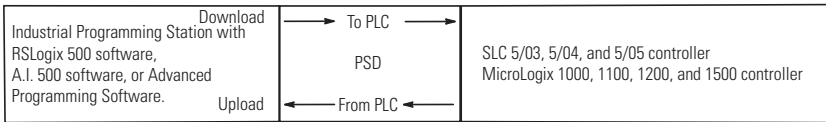
⁽¹⁾ File cannot be deleted.

⁽²⁾ F8 file cannot be deleted by RSLogix 500 software.

Program Transfer Mode between the Program Storage Device and Industrial Programming Station

Program Transfer mode allows a program to be transferred between the program storage device and the industrial programming station.

Program Transfer between the Program Storage Device and Industrial Programming Station



Program Transfer between the Program Storage Device and Industrial Programming Station

Switch Position	Function
To PLC	Transfers a program from the industrial programming station to the program storage device (DOWNLOAD).
From PLC	Transfers a program from the program storage device to the industrial programming station (UPLOAD).

IMPORTANT

There are two unique operating sequences defined for program upload/download between the industrial programming station and the program storage device. The primary operational sequence used with RSLogix software, V5.20 or later varies slightly from the secondary procedure (typically) used with earlier RSLogix software versions, and with other programming software packages.

The primary sequence allows for convenient, unconditional transfer of the program, but does not guarantee OS revision control upon transfer to the target controller. Transfer of an incompatible program to the controller will result in loss of the resident user program, and may result in a failed download or a controller fault when the controller is placed in Run mode.

The secondary sequence, designed for use with earlier programming packages (also functional with RSLogix software, V5.20 or later), uses a stored controller identity to guarantee OS revision control and will disallow program transfer operations that could result in improper controller operation (due to unsupported functions included in the user program).

New program storage device units are loaded with the 5/04 controller identity as default. If the program storage device is to be used with a different controller and the secondary procedure will be used, the desired controller identity must be transferred to the program storage device (using the Program Transfer Mode - Controller From PLC command) from the desired controller type (5/03 controller, for example). The program storage device maintains the stored controller identity even when the program storage device is cleared. The only way to change the program storage device identity is to execute a program transfer operation from the desired controller (Program Transfer Mode - Controller From PLC command).

To transfer a program to the industrial programming station:

1. Start the applicable programming software on the Industrial Programming Station. Configure for RS-232, DF1 full-duplex communications. Select 19200 baud and CRC error checking. If applicable, disable autobrowsing (RSWho).
2. Primary - for RSLogix software, V5.20 or later: Without pressing the pushbutton, slide the selector switch from the OFF/NEXT CMD position to the desired command.

The red LED indicator may blink while the program storage device attempts to connect. When the program storage device detects RSLinx software as the connected device, the green LED indicator will illuminate steadily.

Secondary - for RSLogix software, A.I. 500 software or Advanced Programming software.

- a. With the pushbutton depressed, slide the selector switch from the OFF/NEXT CMD position to the desired command.

Continue holding down the pushbutton while the program storage device attempts to establish communications (the red LED indicator may blink during this process).

- b. When the green LED indicator illuminates steadily, release the pushbutton (within 10 seconds).
3. Within 10 seconds after the green LED indicator illuminates steadily, depress the pushbutton.
4. Release the pushbutton within 10 seconds. Wait for the green LED indicator to illuminate steadily.
5. Within 30 seconds, the upload or download transfer must begin. Issue the upload or download command from the industrial programming station.

WARNING

In all cases, executing a download command will clear the program currently stored in the program storage device.

While the command is executing, the green LED indicator flashes.

Completion of the transfer is indicated by the programming software package, or by a steadily illuminated LED indicator on the program storage device. Green indicates a successful transfer and red indicates a failed transfer.

After 30 seconds, the illuminated LED indicator turns off and the program storage device enters the Sleep mode.

- To maximize battery life, slide the selector switch to the OFF/NEXT CMD position.

Memory Module Mode

Memory Module mode allows a program to be transferred between the memory module and controller. The Memory Module mode cannot be used with the MicroLogix 1000 controller because the controller does not have a memory module feature.

Memory Module Mode

Switch Position	Function
To PLC	Transfers a program from the memory module to the controller. ⁽¹⁾ The controller must be in Remote Program mode or an error will occur.
Mode Change	Reserved for Clear Memory mode indication.
From PLC	Transfers a program from the controller to the memory module.

⁽¹⁾ Write-only protection is not supported. The memory module can be reprogrammed with another update.

If you want to transfer a program to the controller and the controller is not in Remote Program mode, first follow the Program Transfer Mode - Controller procedure using the mode change command.

- Hold the pushbutton down and move the selector switch from the OFF/NEXT CMD position to the desired command, either to PLC or from PLC.

Continue holding the pushbutton until the green LED indicator turns on.

2. Within 10 seconds after the green LED indicator illuminates steadily, release the pushbutton.

The green LED indicator turns off.

3. Within 10 seconds, press the pushbutton again.
4. Release the pushbutton within 10 seconds.

While the command is executing, the green LED indicator flashes.

When execution is complete, either the green or the red LED indicator illuminates steadily for 30 seconds. Green indicates a successful transfer and red indicates a failed transfer.

After 30 seconds, the illuminated LED indicator turns off and the program storage device enters the Sleep mode.

5. To maximize battery life, slide the selector switch to the OFF/NEXT CMD position.

To return the controller to the Remote Run mode following a memory module transfer, follow the Program Transfer Mode - Controller procedure using the Mode Change command.

Clear Memory Mode

Clear Memory mode allows a program to be cleared in the controller or program storage device.

Clear Memory Mode

Switch Position	Function
To PLC	Clears the program from the controller's memory. The controller must be in Remote Program mode or an error will occur.
Mode Change	Reserved for Clear Memory mode indication.
From PLC	Clears the program from the program storage device's memory. Maintains stored controller identity.

If you want to clear the controller's memory and the controller is not in Remote Program mode, first follow the Program Transfer Mode - Controller procedure using the mode change command.

1. Hold the pushbutton down and slide the selector switch from OFF/NEXT CMD to mode change to select Clear Memory mode.

Continue holding down the pushbutton until the green LED indicator illuminates steadily to indicate program storage device readiness.

2. Release the pushbutton within 10 seconds.
3. Wait for the green LED indicator to turn off.
4. Within 10 seconds, press the pushbutton.
5. Release the pushbutton within 10 seconds.
6. Slide the selector switch to the desired command, either To PLC or From PLC.
7. Within 10 seconds, press the pushbutton.
8. Release the pushbutton within 10 seconds.

The green LED indicator flashes while the command is executing.

When execution is complete, either the green or the red LED indicator illuminates steadily for 30 seconds. Green indicates a successful transfer and red indicates a failed transfer.

After 30 seconds, the LED indicator will turn off, and the program storage device enters the Sleep mode.

9. To maximize battery life, slide the selector switch to the OFF/NEXT CMD position.

To return the controller to the Remote Run mode following a clear memory function, follow the Program Transfer Mode - Controller procedure using the mode change command.

Off/Next Command - All Modes

Off/Next Command turns off the program storage device or readies it for the next command.

Sleep Mode

Sleep mode lets the program storage device conserve battery power by shutting itself off.

Following an operation, either the green or the red LED indicator illuminates steadily for 30 seconds before the program storage device enters the Sleep mode. To exit Sleep mode:

1. Turn the switch to OFF/NEXT CMD position.
2. Follow procedure for next command.

Interpret the LED Indicators

The program storage device has a red and a green LED indicator.

LED Indicators

LED Indicator	Status	Indicates
Red	On at power-up	Power-up error.
	Flashing ⁽¹⁾ (green LED indicator off)	Linking. The program storage device is attempting to communicate. ⁽²⁾ Check communication parameters.
	Flashing ⁽¹⁾ (coincident with green LED indicator)	Download of program to earlier Series/OS level controller has been requested. Program storage device is waiting for user acknowledgement.
	On after operation	Unsuccessful operation.
	Off after 30 s	Program storage device is in Sleep mode. To exit Sleep mode, Turn the program storage device off and apply power.
Green	On at power-up	Program storage device is ready.
	Flashing ⁽¹⁾ (red LED indicator off)	Operation is in progress.
	Flashing ⁽¹⁾ (coincident with red LED indicator)	Download of program to earlier Series/OS level controller has been requested. Program storage device is waiting for user acknowledgement.
	On after operation	Successful operation.
	Off after 30 s	Program storage device is in Sleep mode. To exit Sleep mode, turn the program storage device off and apply power.

⁽¹⁾ The on/off flashing rate of the LED indicator could range from approx. 0.1 to 1 second.

⁽²⁾ While applying power, the program storage device attempts to establish communication for approx. 10 seconds, after which the red LED indicator turns solid for approx. 30 seconds and the unit enters the Sleep mode.

Troubleshoot the Program Storage Device

If an error has occurred, try the following items.

- Check the mode of the controller. The controller should be in Remote Program or Remote Run mode. The keyswitch must be in the REM position.
- Check the communication cable.
- Check the communication parameters. Target settings must be DF1 full-duplex with CRC or BCC, at rates from 1200 to 38400 bps, 8 data bits, 1 stop bit, and no parity.
- Move the switch to the OFF/NEXT CMD position and begin the sequence of operation from step 1.

Specifications

Program Storage Device - catalog number 1747-PSD

Attribute	Value
Memory Size, Max	64 K
Supported Communication Rates	38400, 19200, 9600, 4800, 2400, and 1200 bps
Memory Module	EEPROM
Operating Power, Max	7...30V dc, 250 mA, or (2) AAA batteries
Dimensions (HxWxD), Approx.	116 x 66 x 28 mm (4.58 x 2.60 x 1.10 in.)
Weight	0.45 kg (1 lb)

Environmental Specifications

Attribute	Value
Temperature, operating	0...60 °C (32...140 °F)
Temperature, storage	-40...85 °C (-40...185 °F)
Humidity, non-condensing	5 to 95%
Vibration	10 to 57 Hz, 0.3 mm (0.012 in.) peak-to-peak displacement 57 to 500 Hz, 2.0 g
Shock, operating	30.0 g
Shock, non-operating	50.0 g
Free Fall (drop test)	Portable, 2.0 kg (4.4 lb) or less at 1.0 m (39.37 in.) (two drops)
Noise Immunity	NEMA Standard ICS 2-230

Certifications

Certification ⁽¹⁾	Value
Agency Certification (when product or packaging is marked)	<ul style="list-style-type: none">• UL and C-UL Listed• Class I, Division 2, Groups A, B, C, D (with batteries only)• CE/C-Tick compliant for all applicable directives

⁽¹⁾ See the Product Certification link at <http://ab.com> for Declaration of Conformity, certificates, and other certification details.

Additional Resources

Additional resources related to the Program Storage Device are available.

For	Refer to	Publication Number
A reference manual that contains status file data and instruction set information your modular SLC 500 system.	SLC 500 Instruction Set Reference Manual	1747-RM001
A reference manual that contains status file data and instruction set information for your MicroLogix 1000 controller.	MicroLogix 1000 Programmable Controllers User Manual	1761-UM003
A reference manual that contains status file data and instruction set information for your MicroLogix 1100 controller.	MicroLogix 1100 Programmable Controllers Instruction Set Reference Manual	1763-RM001
A reference manual that contains status file data and instruction set information for MicroLogix 1200 and 1500.	MicroLogix 1200 and 1500 Instruction Set Reference Manual	1762-RM001

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