



ALLEN-BRADLEY

PLC-3/10 I/O Scanner Module

(Cat. No. 1775-SR)

Product Data



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PLC-3/10 I/O Scanner Module

Using the 1775-SR Scanner

The 1775-SR scanner is a required module for the PLC-3/10 programmable controller. When you are setting up your PLC-3/10 system, you must insert a 1775-SR scanner into the PLC-3/10 Processor Chassis (Cat. No. 1775-A3) and set its thumbwheel switch to one. This number one 1775-SR scanner communicates between the PLC-3/10 programmable controller and:

- the industrial terminal for programming interface
- 1771 I/O chassis for I/O scanning interface
- a backup PLC-3/10 processor that takes control over the outputs if the primary PLC-3/10 processor faults
- up to six PLC-3 or PLC-3/10 processors for peer-to-peer communication



WARNING: Remove system power before removing or inserting the 1775-SR scanner in the PLC-3/10 chassis. Failure to observe this warning could result in damage to PLC-3/10 components and/or undesired operation with injury to personnel.

Important: Do not insert the 1775-SR scanner into the PLC-3 Main Processor Chassis (Cat. No. 1775-A1, -A2). The 1775-SR scanner is not compatible with the PLC-3 programmable controller.

Programming Interface

The 1775-SR scanner provides an RS-232-C compatible channel (channel 5) that can communicate with the industrial terminal. You can use the industrial terminal to:

- enter and monitor ladder diagram program instructions
- enter and monitor data table values
- operate the PLC-3/10 LIST function
- load and record ladder diagram programs with a Data Cartridge Recorder (Cat. No. 1770-SB) or Data Cassette Recorder (Cat. No. 1770-SA)
- print out ladder diagram program through channel C interface to a compatible printer

The number one 1775-SR scanner supports operation of channel 0 on the PLC-3/10 front panel. If you are using channel 5 on the number one 1775-SR scanner, you must make I/O channel 4 inactive through the PLC-3/10 LIST function.

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If the LED is:	Then
On	The channel is functioning properly.
Flashing	The input file that receives the data from the backup PLC-3/10 processor is too small.
Off	The channel has not received data during the last 200 ms or the channel is inactive.

If you are using the channel for peer-to-peer communication:

If the LED is:	Then
On	The channel is functioning properly.
Flashing	The input file that receives the data from a slave PLC-3 or PLC-3/10 processor is too small.
Off	There is a communication problem along the channel or the channel is inactive.

Backup Connector

Below the I/O channel status indicators is a backup connector. You can use this connector to set up the backup system capability for switching control over the outputs. This connector is only used for 1775-SR scanner number one.

Channel 5 Connector

Below the backup connector is a 25-pin D-shell connector labeled CH5. This connector provides communication with an industrial terminal for ladder diagram programming and configuring the PLC-3/10 system.

To use channel 5 on 1775-SR scanner number one, you must make I/O channel 4 inactive through the PLC-3/10 LIST function.

Terminal Swing Arm

Near the bottom of the scanner is a Terminal Swing Arm (Cat. No. 1775-WA). This swing arm contains the connector for I/O communication channels 1 to 4. Functions of these channels include:

- scanning I/O
- backup communication
- peer-to-peer communication

Make connection for these channels with 1770-CD cable.

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Related Publications

For detailed information on using the 1775-SR scanner for I/O scanning or backup communication, refer to the:

- PLC-3 I/O Scanner-Interface Module User's Manual (publication 1775-6.5.2).
- PLC-3 Backup Concepts Manual (publication 1775-6.3.1)

Specifications

Location

- Single slot in a PLC-3/10 processor chassis

Functions

- I/O interface
- RS-232-C interface for ladder diagram programming

I/O Capacity

- 2,048 inputs and 2,048 outputs

Channels per Scanner

- 4 I/O communication or
- 1 RS-232-C communication and 3 I/O communication

Communication Rate

- 57.6 or 115.2 kbaud (I/O channel)
- 110 baud to 19.2 kbaud (RS-232-C channel)

I/O Channel Cable Lengths for Communication Rates

- up to 5,000 cable feed for 115.2 kbaud
- up to 10,000 cable feet for 57.6 kbaud

Nominal I/O Scan Times per I/O Adapter

- 5.5 to 6.5 ms for 1 channel
- 6 ms for 2 channels
- 6 ms for 3 channels
- 6.0 to 6.5 ms for 4 channels

Environmental Conditions

- Operational Temperature: 0 to 60°C (32 to 140°F)
- Storage Temperature: -40 to 85°C (-40 to 185°F)
- Relative Humidity: 5 to 95% (without condensation)