



# Isolated Link Coupler

## Cat. No. 1791-AIC

### Installation Data

#### To the Installer

This document provides information on:

- description of the isolated link coupler
- important pre-installation considerations
- power requirements
- description
- installation
- wiring connections
- status indicator

#### Description

The isolated link coupler provides a means of connecting programming or monitoring devices to be remotely linked to the programmable controller or SLC controller. It provides connection to both DH+ and DH-485 networks. The unit provides both a mini-DIN port and an RJ-11 port connection.

#### Pre-installation Considerations

The isolated link coupler can be mounted at the bottom of a 1791 large block I/O module (e.g. 64-point or 128-point) or remotely up to 10,000 cable-feet from the programmable controller, or up to 4,000 cable-feet from the SLC<sup>®</sup> scanner module. When mounted under a large block module, make sure that you allow sufficient space beneath the isolated link coupler to sustain the required spacing between units for cooling.

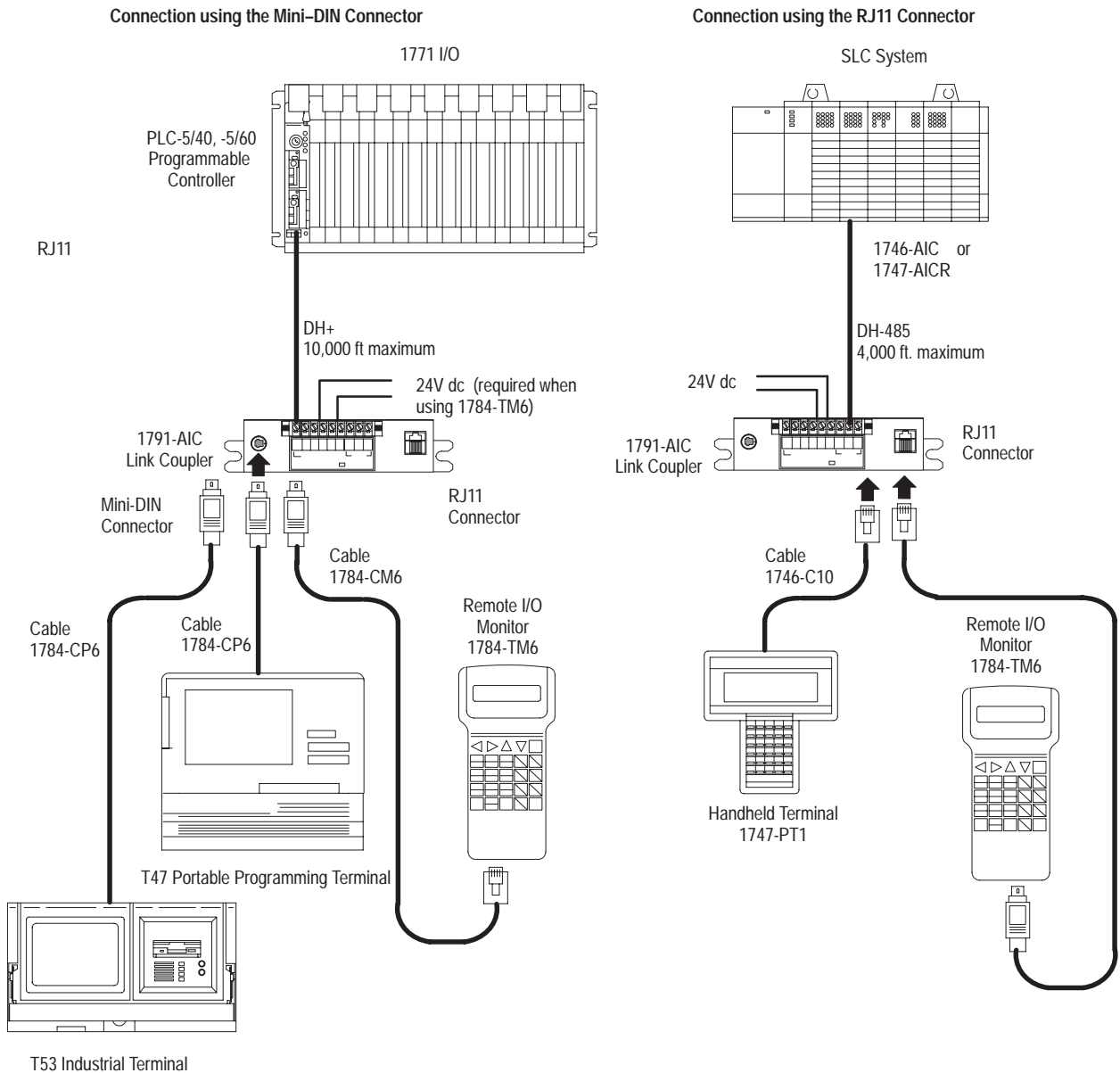
#### Power Requirements

The isolated link coupler requires a power supply with a rating of 24V dc (+10%, -15%) when used with a 1784-TM6 I/O monitor or when used with the SLC system. The supply must be capable of supplying a minimum current of 70mA (280mA when using the 1771-TM6 I/O monitor).

**Description**

The isolated link coupler module (cat. no. 1791-AIC) provides an interface to Data Highway Plus® (DH+) and DH-485 communication links. The DH+ connection lets you remotely connect a programming terminal such as an Allen-Bradley T47. The DH-485 connection lets you connect a handheld terminal and the SLC processor. Both DH+ and DH-485 terminations on the 1791-AIC can be used at the same time.

**Figure 1**  
**Link Coupler Sample Connection Diagram using a T47 Terminal or Handheld Terminal**



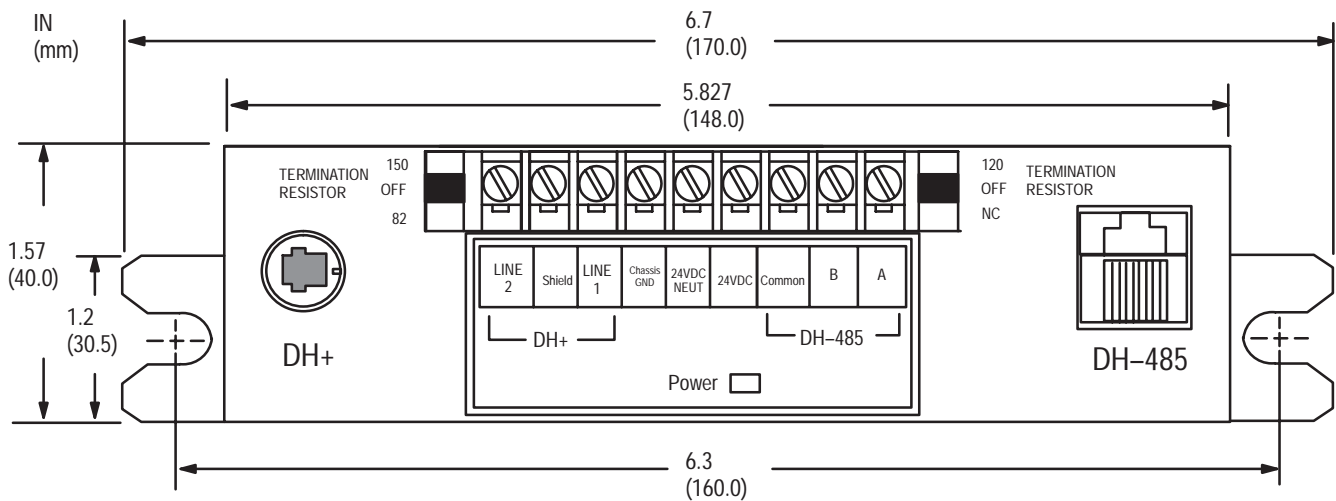
## Installing the Isolated Link Coupler

To install the 1791-AIC module, proceed as follows:

### Mounting Separate from a Block I/O Module

1. Select a position for mounting. The AIC module can be mounted either horizontally or vertically. Mounting dimensions are shown in Figure 2.

**Figure 2**  
**Mounting Dimensions for the Isolated Link Coupler (cat. no. 1791-AIC)**

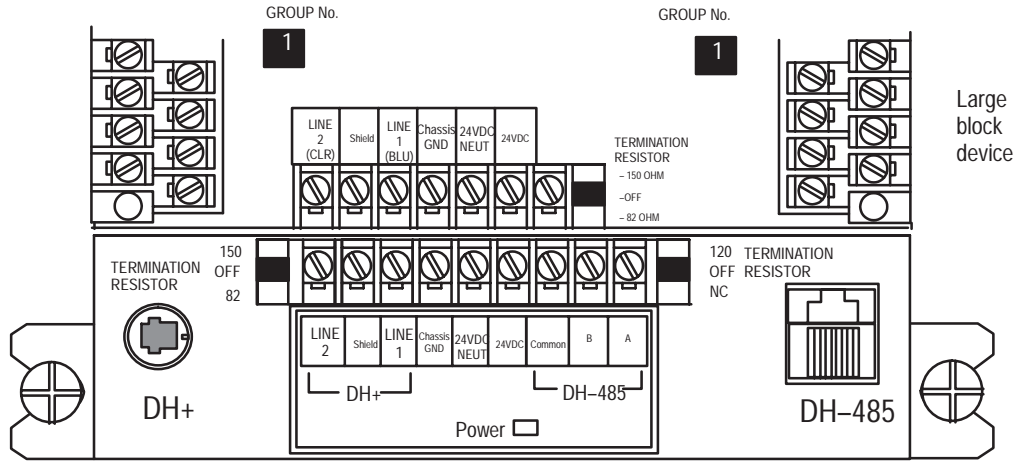


2. Secure the AIC module with two 1/4-inch mounting screws or bolts.
3. Make wiring connections to the terminal block on the AIC module as described in Connecting Wiring.
4. Use a flat-bladed screwdriver to position the termination resistor switch for your application.

### Mounting Under a Block I/O Module

1. Refer to Figure 3. Position the AIC module against the bottom of the large block I/O module. The indented area at the top of the AIC module fits over the mounting screws securing the large block I/O module.
2. Secure the AIC module with two 1/4-inch screws or bolts.
3. Make wiring connections to the terminal block on the AIC module as described in Connecting Wiring.

**Figure 3**  
**Mounting the Link Coupler module under a large block I/O module.**

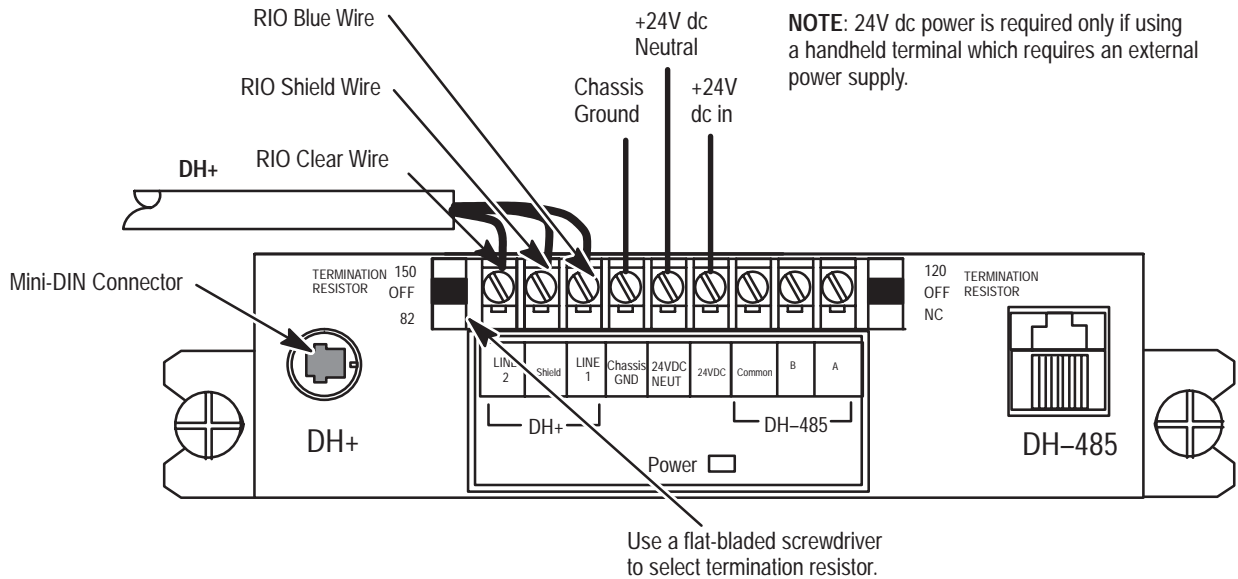


4. Use a flat-bladed screwdriver to position the termination resistor switch for your application.

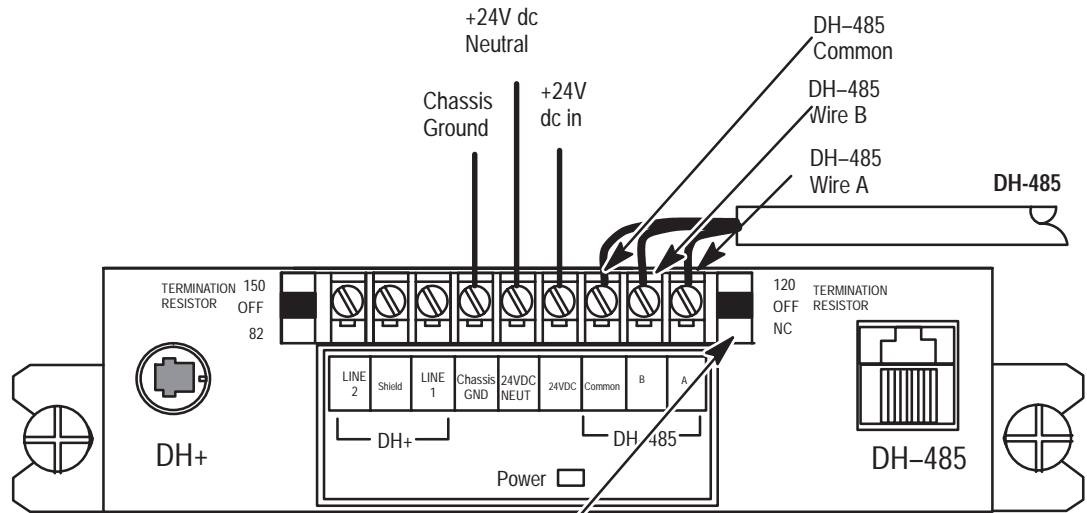
### Connecting Wiring

When using remote I/O, connect wiring as shown in Figure 4. When using DH-485, connect wiring as shown in Figure 5.

**Figure 4**  
**Connecting Wiring for Remote I/O (DH+)**



**Figure 5**  
**Connecting Wiring for DH-485**



**NOTE:** 24V dc power is required with SLC systems.

Use a flat-bladed screwdriver to select termination resistor.

**Table 1**  
**Terminal Strip Terminal Assignments**

Position	Assignment
1	DH+ line 2
2	DH+ shield
3	DH+ line 1
4	Chassis Ground
5	+24V dc Neutral
6	+24V dc
7	DH-485 Common
8	DH-485 Line B
9	DH-485 Line A

**Table 2**  
**Connecting Cable for Peripherals**

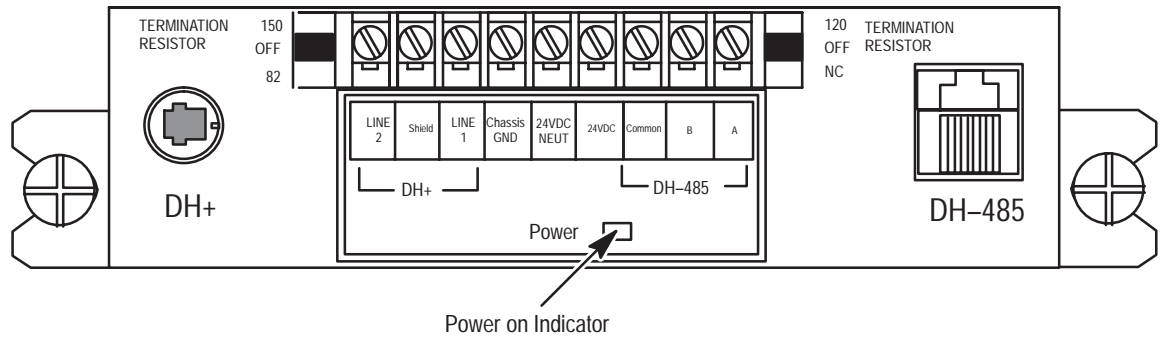
Connect to the Mini-DIN Port	Using Cable	Connect to the DH-485 (RJ-11) Port	Using Cable
T47 Portable Programming Terminal	1784-CP6 or 1784-CP and 1784-CP7	Handheld Terminal 1747-PT1 <sup>1</sup>	1746-C10
T53 Plant Floor Terminal		I/O Monitor 1784-TM6 <sup>1</sup>	1784-CM6
I/O Monitor 1784-TM6 <sup>1</sup>	1784-CM6		

<sup>1</sup> Requires 24V dc power to Isolated Link Coupler

## Status Indicators

The link coupler has only one status indicator. When the indicator (Figure 6) is **on** the link coupler has power.

Figure 6  
Power Indicator



**Installation Data**  
Isolated Link Coupler  
Cat. No. 1791-AIC

## Specifications

Voltage Requirements	24V dc (+10%, -25%)
Maximum Current	70mA 280mA with 1784-TM6 attached
Communication Capability	DH+ – up to 10,000 cable feet DH-485 – up to 4,000 cable feet
Maximum Remote Mounting Distance	programmable controller (DH+) – 10,000 cable feet SLC (DH-485) – 4,000 cable feet
External Connections	One 8 pin DIN connector One 8 pin DH-485 connector
Isolation Voltage	850V dc for 1s 600V ac for 1s
Environmental Conditions	
Operating Temperature	32 to 140°F (0 to 60°C)
Storage Temperature	-40 to 185°F (-40 to 85°C)
Relative Humidity	5 to 95% noncondensing



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