



# **DC (12–24V) Input Module**

## **Cat. No. 1771-IB**

### **Installation Data**

#### **To The Installer**

This document provides information on:

- important pre-installation considerations
- power supply requirements
- initial handling procedures
- installing the module
- using the indicators for troubleshooting
- module specifications

#### **Pre-installation Considerations**

The 1771-IB module is compatible with the following 2 and 3-wire devices:

- DC proximity switches
- photoelectric sensors
- pushbuttons
- limit switches
- float switches
- selector switches

The off-state leakage current of your 3-wire devices should not exceed 3mA.

This module contains input filtering to limit the effect of voltage transients caused by contact bounce and/or radiated electrical noise. The delay due to input filtering is nominally  $12 \pm 7$ ms for turning inputs on, and  $20 \pm 7$ ms for turning inputs off.

#### **Power Requirements**

Your module receives its power through the 1771 I/O chassis backplane from the chassis power supply. The module requires 74mA from the output of this supply. Add this to the requirements of all other modules in the I/O chassis to prevent overloading the chassis backplane and/or backplane power supply.

**Installation Data**  
**DC (12–24V) Input Module**  
**Cat. No. 1771-IB**

**Specifications**

Inputs per Module	8
Module Location	1771 I/O chassis
Input Voltage Range	10 to 27V dc
Nominal Input Current	8mA at 12V dc 24mA at 24V dc
Maximum Off-state Current	3.0mA
Maximum Off-state Voltage	7.0V dc
Minimum On-state Voltage	10V dc
Input Impedance	1 to 2K ohms maximum (on-state) 2 to 3K ohms maximum (off-state)
Input Signal Delay	Low to high propagation delay 12ms $\pm$ 7ms High to low propagation delay 20ms $\pm$ 7ms
Power Dissipation	5.7 Watts (max.), 0.4 Watts (min.)
Thermal Dissipation	19.3 BTU/hr (max.), 1.4 BTU/hr (min.)
Backplane Current	74mA @ 5V dc $\pm$ 5%
Opto-electrical Isolation	1500V ac rms
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)
Conductors	Wire Size
	Category
	14 gage stranded maximum 3/64 inch insulation maximum 2 <sup>1</sup>
Keying	Between 4 and 6 Between 14 and 16
Field Wiring Arm	Catalog Number 1771-WA

<sup>1</sup> Refer to publication 1770-4.1, Programmable Controller Wiring and Grounding Guidelines.



As a subsidiary of Rockwell International, one of the world's largest technology companies — Allen-Bradley meets today's challenges of industrial automation with over 85 years of practical plant-floor experience. More than 11,000 employees throughout the world design, manufacture and apply a wide range of control and automation products and supporting services to help our customers continuously improve quality, productivity and time to market. These products and services not only control individual machines but integrate the manufacturing process, while providing access to vital plant floor data that can be used to support decision-making throughout the enterprise.

**With offices in major cities worldwide**

**WORLD HEADQUARTERS**  
**Allen-Bradley**  
**1201 South Second Street**  
**Milwaukee, WI 53204 USA**  
**Tel: (1) 414 382-2000**  
**Telex: 43 11 016**  
**FAX: (1) 414 382-4444**

**EUROPE/MIDDLE EAST/AFRICA HEADQUARTERS**  
**Allen-Bradley Europe B.V.**  
**Amsterdamseweg 15**  
**1422 AC Uithoorn**  
**The Netherlands**  
**Tel: (31) 2975/43500**  
**Telex: (844) 18042**  
**FAX: (31) 2975/60222**

**ASIA/PACIFIC HEADQUARTERS**  
**Allen-Bradley (Hong Kong) Limited**  
**Room 1006, Block B, Sea View Estate**  
**28 Watson Road**  
**Hong Kong**  
**Tel: (852) 887-4788**  
**Telex: (780) 64347**  
**FAX: (852) 510-9436**

**CANADA HEADQUARTERS**  
**Allen-Bradley Canada Limited**  
**135 Dundas Street**  
**Cambridge, Ontario N1R 5X1**  
**Canada**  
**Tel: (1) 519 623-1810**  
**FAX: (1) 519 623-8930**

**LATIN AMERICA HEADQUARTERS**  
**Allen-Bradley**  
**1201 South Second Street**  
**Milwaukee, WI 53204 USA**  
**Tel: (1) 414 382-2000**  
**Telex: 43 11 016**  
**FAX: (1) 414 382-2400**