# Profibus Slave

### T1H-PBC



If you are using a Profibus controller network, the Terminator I/O sub-system will help further reduce the cost of your overall application. The T1H-PBC module allows the micro-modular Terminator I/O sub-system to be linked with a Profibus master controller. Profibus is a control bus that provides a common method to connect automation - equipment with devices on a single network. This standard communications media is referred to as Profibus and significantly reduces hardwiring costs. Profibus provides specifications for information exchanged between nodes, such as controller data associated with lowlevel device and configuration parameters individually related to system operations.

Profibus allows 32 stations per segment. Segments vary in length depending on the desired transmission speed. The maximum speed is achieved on a segment 100 meters (327 feet) in length. Our Profibus DP Slave represents a single station. Repeaters also count as stations and are used to extend the network to greater distances. Our Profibus module supports baud rates of 9.6Kbaud to 12Mbaud depending on the network length.

### Here's how it works:

The T1H-PBC module is a Profibus slave, which can be plugged into the network interface position of the Terminator I/O micro-modular family of I/O bases. This module reports all the identification data, diagnostic information, and parameters that control the module operation. The T1H-PBC module scans and reports all discrete and analog I/O data to a Profibus master. The externally-powered AC Terminator I/O base units contain a 24 VDC power supply for simple wiring of sensors and actuators into the Terminator I/O modules, and for controlling them with a Profibus master. Using our Profibus I/O sub-system will increase installation flexibility as well as save on wiring costs. The T1H-PBC module supports Terminator discrete and analog I/O modules.

The T1H-PBC also offers the following features:

- Cost-effective: With a single network for devices, hardwiring costs are reduced.
- Easy connectivity: Low-cost installation is easy to implement and maintain.
- Diagnostics: The Profibus slave offers advanced error diagnostics commonly available in traditional systems.
- High baud rates: Response time is 10ms per device
- LED Indicators: These provide quick indication of Terminator power and operating mode.

### Note:

For use with Think & Do Software, we recommend the SST Profibus PCI Master Card, part number 5136-PFB-PCI. (AutomationDirect does not this provide interface). See www.mysst.com for more information.

#### **Specifications** Module Type

Max. Expansion

Max. I/O Points per Controller

**Communications** 

**Module Connectors** 

Internal Power Consumption

Operating Environment

Manufacturer

Profibus Network Interface Module

126 stations, 32 stations per segment, 9 repeaters in a row

244 Input Bytes (analog or discrete) 244 Output Bytes (analog or discrete) as specified by the Profibus DP Specification

RS-485 Profibus, Profibus-DP. Baud rate selectable from 9.6Kbaud to 12M baud.

Profibus 9-pin D-shell, RJ-12 serial (for firmware update only)

530mA maximum at 5VDC (supplied by base power supply)

 $0^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  (32°F to 140°F), 5% to 95% humidity (non-condensing)

Host Automation Products

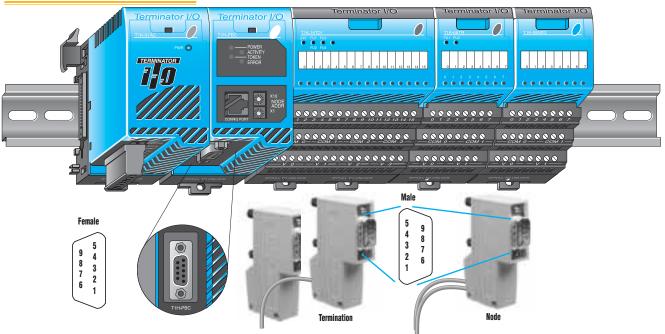


**T1H-CTRIO** 

#### The

T1H-PBC supports the new T1H-CTRIO High-speed Counter I/O Module. See the DL205 H2-CTRIO module section in this desk reference for information on the CTRIO modules. Also check our web site for the latest information on the CTRIO modules.

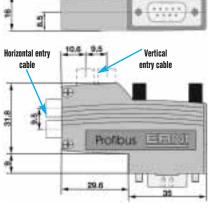
# Profibus Slave



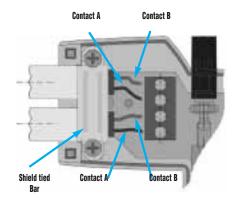
Baud	Max. Segment Length		Max. Expansion	
	Feet	Meters	Feet	Meters
9.6Kbps	3278ft.	1000m	32786ft.	10000m
19.2Kbps	3278ft.	1000m	32786ft.	10000m
93.75Kbps	3278ft.	1000m	32786ft.	10000m
187.5Kbps	3278ft.	1000m	32786ft.	10000m
500Kbps	1311ft.	400m	13114ft.	4000m
1.5Mbps	655ft.	200m	6557ft.	2000m
3Mbps	327ft.	100m	3270ft.	1000m
6Mbps	327ft.	100m	3270ft.	1000m
12Mbps	327ft.	100m	3270ft.	1000m

Terminator I/O Modules Supported				
Discrete Types	Analog Types			
8-point DC Input	8-channel Current Input			
8-point AC Input	8-channel Voltage Input			
16-point DC Input	8-channel Current Output			
16-point AC Input	8-channel Voltage Output			
8-point DC Output	16-channel Current Input			
8-point AC Output	16-channel Voltage Input			
16-point DC Output	16-channel Current Output			
16-point AC Output	16-channel Voltage Output			
8-point Relay Output				
16-point Relay Output				

Recommended Cables		
Siemens	6XV1 830 0AH10	
Belden	3079A	



#### all dimensions in mm



# ERNI ERbic connectors for Profibus networks

Connectors are available for the Profibus Base Controller. They

are available in standard node and standard termination styles with vertical cable entry for Terminator I/O.

ERNI ER <i>bic</i> Connectors				
Part No.	Description	Device		
103658	Profibus certified stan- dard node vertical con- nector. 9-pin male D-sub	Terminator I/O T1H-PBC or any Profibus ISA/ PCI Personal Computer Master/Slave Card		
103659	Profibus certified stan- dard termination vertical connector .9-pin male D-sub	Terminator I/O T1H-PBC or any Profibus ISA/ PCI Personal Computer Master/Slave Card		

**DIMENSIONS AND INSTALLATION** 

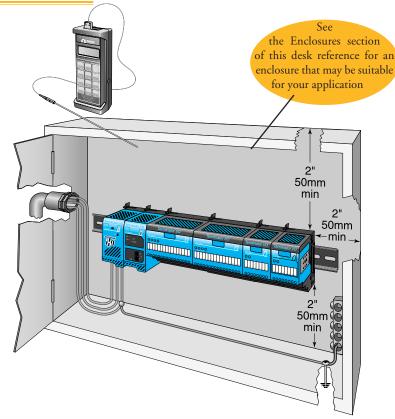
It is important to understand the installation requirements for your Terminator I/O system. This will help ensure that the Terminator I/O products work within their environmental and electrical limits.

## **Plan for safety**

This catalog should never be used as a replacement for the technical data sheet that comes with the products or the T1K-INST-M Installation and I/O Manual (It is also available online at www.automation-direct.com.) The technical data sheet contains information that must be followed. The system installation should comply with all appropriate electrical codes and standards.

# Unit dimensions and mounting orientation

Use the following diagrams to make sure the Terminator I/O system can be installed in your application. Terminator I/O units can be mounted horizontally or vertically. However, to insure proper airflow for cooling purposes, units should not be mounted upside-down. It is important to check the Terminator I/O dimensions against the conditions required for your application. For example, it is recommended to leave 2" depth for ease of access and cable clearance. However, your distance may be greater or less. Also, check the installation guidelines for the recommended cabinet clearances.



Terminator I/O Environmental Specifications		
Ambient Operating Temperature	32°F to 131°F (0°C to 55°C)	
Storage Temperature	-4°F to 158°F (-20°C to 70°C)	
Ambient Humidity	5% to 95% (Non-condensing)	
Atmosphere	No corrosive gases. The level of environmental pollution = 2 (UL 840)	
Vibration Resistance	MIL STD 810C, Method 514.2	
Shock Resistance	MIL STD 810C, Method 516.2	
Voltage Withstand (Dielectric)	1500VAC, 1 minute	
Insulation Resistance	500VDC, 10M ohm	
Noise Immunity	NEMA ICS3-304 Impulse noise 1us, 1000V FCC class A RFI (144MHz, 430MHz 10W, 10cm)	
Agency Approvals	UL, CE, FCC class A, NEC Class 1 Division 2	

