

Data Sheet

SIMATIC® 505

Isolated Discrete Input Module (PPX:505–2580)

Description

The PPX:505–2580 16-point Discrete Input Module accepts sixteen discrete isolated inputs to the Series 505™ I/O base.

- Series 505 I/O base format
- 1500 V channel-to-channel
- 1500 V channel-to-PLC backplane isolation
- Sourcing and sinking applications
- Field-side LEDs

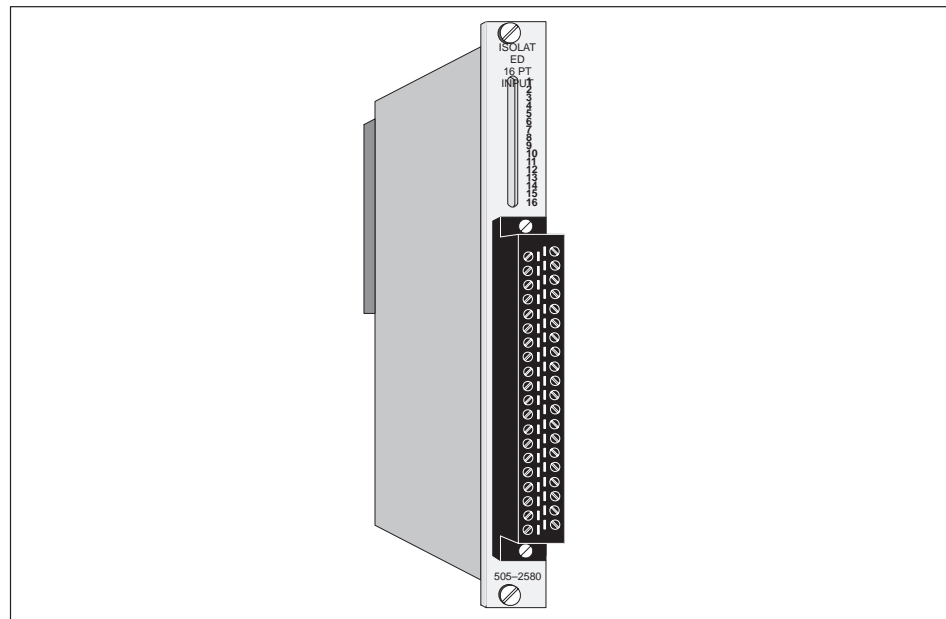


Figure 1 PPX:505–2580 Input Module

2806132–0001

publication date: 03/96

Applications

The PPX:505–2580 input module is designed for applications where isolation is required between all inputs. Applications such as motor control centers and utilities control utilizing 125 VAC are targeted for use with this input module.

Table 1 General Specifications

Inputs per module	16
Isolation	1500 VDC channel-to-channel 1500 VDC channel-to-backplane
Input voltage	95 – 132 VAC
Input Current	7 mA nominal per circuit
Turn On Time	1.7 mSec nominal
Turn Off Time	7.2 mSec nominal
Operating Characteristic for Typical Input	Turn ON 85 VAC 2.85 mA Turn OFF 80 VAC 2.65 mA Nominal 120 VAC 4.00 mA
Connector	Removable
Wire Gauge	14 to 22 AWG
Backplane Power	1 Watt (maximum)
Module Size	Single wide
Agency Approvals	UL, UL for Canada FM (Class I, Div 2)
Shipping Weight	1.5 lb (0.68 Kg)

Table 2 Environmental Specifications

Operating Temperature	0° to 60° C (32° to 140° F)
Storage Temperature	-40° to 85° C (-40° to 185° F)
Humidity (relative)	5% to 95% (non-condensing)

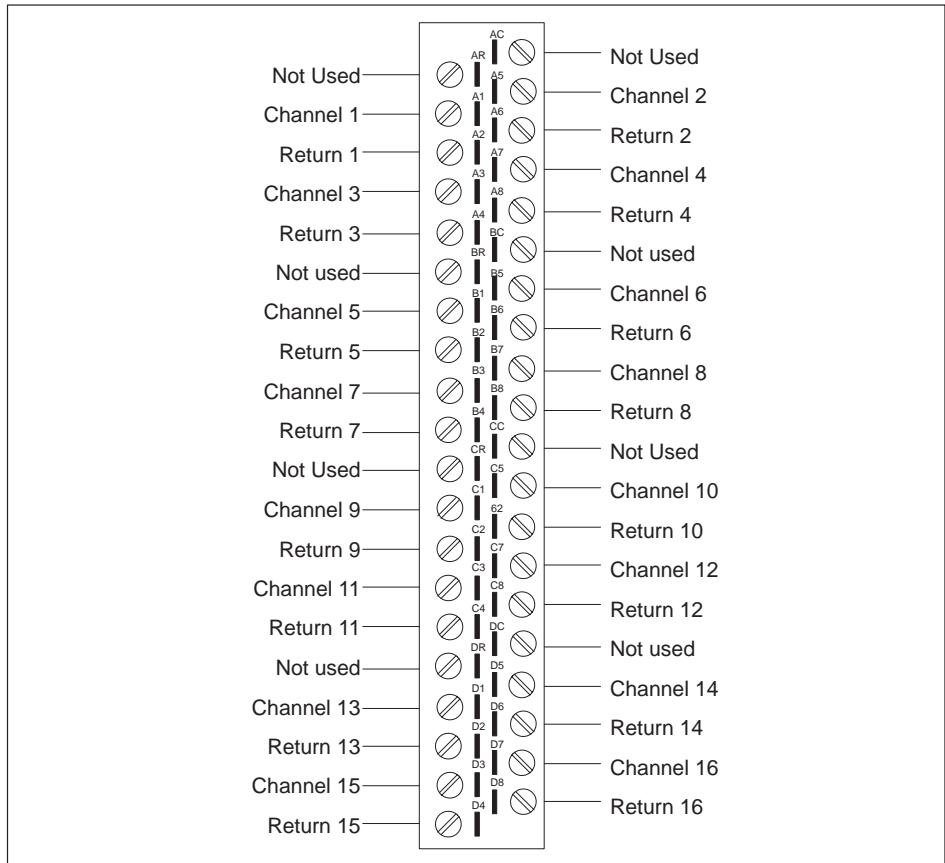


Figure 2 PPX:505-2580 Input Connector

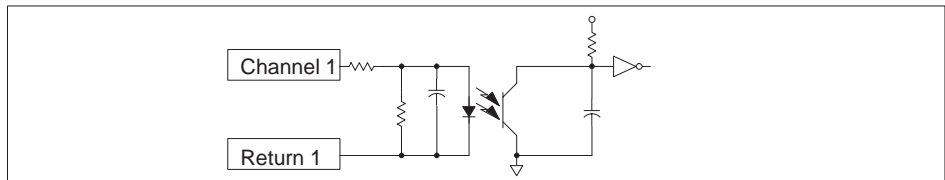


Figure 3 Typical Internal Circuit

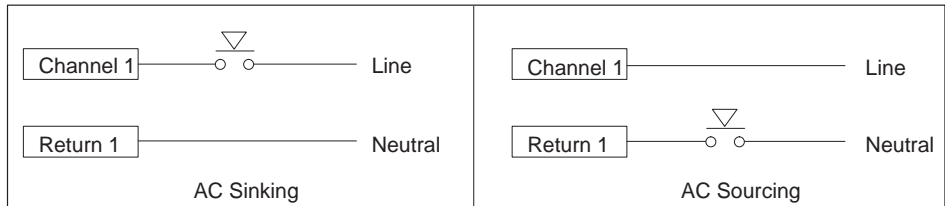


Figure 4 Typical External Wiring Application for the PPX:505-2580

Checking Module Operation

You must check to see that the module is configured in the memory of the controller. This is important because the module will appear to be functioning regardless of whether it is communicating with the controller. To view the controller I/O configuration chart listing all slots on the base and the inputs or outputs associated with each slot, refer to your *SIMATIC TISOFT Programming Manual*. An example chart is shown in Figure 5.

I/O Module Definition for Channel 1 Base 00						
Slot	I/O Address	Number of bit and word I/O				Special Function
		X	Y	WWX	WY	
01	0001	16	00	00	00	NO
02	0000	00	00	00	00	NO
15	0000	00	00	00	00	NO
16	0000	00	00	00	00	NO

Figure 5 Sample I/O Configuration Chart

In this example, the PPX:505–2580 module is inserted in slot 1 in I/O base 0. Data appears as 16 “X” locations starting at “X1”. For your particular module, look at the chart for the number corresponding to the slot occupied by the module. If bit locations appear on this line, then the module is registered in the controller memory and the module is ready for operation.

If the line is blank or erroneous, re-check the module to ensure that it is firmly seated in the slots. Generate the controller I/O configuration chart again. If the line is still incorrect, contact the Technical Services Group at 423–461–2501 for further assistance.

Table 3 Operating Characteristics for Typical Circuit

Turn ON	Turn OFF	Nominal
85 VAC, 2.85 mA	80 VAC, 2.65 mA	120 VAC, 4.00 mA

⚠	WARNING
<p>Do not install or remove I/O modules while they are energized.</p> <p>Accessing energized parts could cause death or serious injury to personnel, and/or damage to equipment.</p> <p>Disconnect all power to the base before installing or removing I/O modules.</p>	

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