Preface

This manual provides the information needed to install, wire, and configure the SIMATIC® TI505™ Input/Output modules listed below.

- Discrete Input Modules (AC Input):
  PPX:505–4008 PPX:505–4016 PPX:505–4032
  PPX:505–4008–A PPX:505–4016–A PPX:505–4032–A
  PPX:505–4208 PPX:505–4216 PPX:505–4232
  PPX:505–4208–A PPX:505–4216–A PPX:505–4232–A
  PPX:505–4408 PPX:505–4416 PPX:505–4432*
  PPX:505–4408–A PPX:505–4416–A PPX:505–4432–A*

- Discrete Input Modules (DC Input):
  PPX:505–4108 PPX:505–4116 PPX:505–4132
  PPX:505–4308 PPX:505–4316 PPX:505–4332
  PPX:505–4316–A

- Discrete Output Modules (DC Sinking):
  PPX:505–3508 PPX:505–3516 PPX:505–3532
  PPX:505–3708* PPX:505–3716* PPX:505–3732*

- Discrete Output Modules (DC Sourcing):
  PPX:505–4508 PPX:505–4516 PPX:505–4532
  PPX:505–4708* PPX:505–4716* PPX:505–4732*

- Discrete Output Modules (AC Output):
  PPX:505–4608 PPX:505–4616 PPX:505–4632
  PPX:505–4808* PPX:505–4816* PPX:505–4832*

- Relay Output Modules:
  PPX:505–4908 PPX:505–4916 PPX:505–4932*
  PPX:505–5417
  PPX:505–5518

- Word Input Module:
  PPX:505–6308*

- Word Output Module:
  PPX:505–6408*

- Input Simulator:
  PPX:505–6010

- Output Simulator
  PPX:505–6011

* double-wide

1.4 Fuses

Discrete Output Modules

Fuses on the Discrete AC and DC Output modules are located on the Printed Circuit Board (PCB). (Figure 1-1 shows these boards.) There are four fuses on the module, one for each common. To gain access to the fuses, remove the module from the base.

⚠WARNING

Disable all power to the module and base before attempting to replace a fuse. Failure to do so may result in injury to personnel or damage to equipment.

⚠CAUTION

The fuse protects the PCB and minimizes the risk of fire in case of an overload. The fuse does not always protect the output circuit.

The red indicator located at the bottom of the LED array on each Discrete Output DC module indicates a blown fuse in an output circuit. The AC modules do not have blown fuse indicators. Note that the modules are supplied from the factory with UL/CSA approved fuses. Table 1-2 lists the fuses, their ratings, and spare part numbers.

Table 1-2 Agency-Approved Fuses for Discrete Output Modules

Module	Description	UL/CSA	IEC
PPX:505–3508 PPX:505–3516 PPX:505–3532 PPX:505–4508 PPX:505–4516 PPX:505–4532	1/2 A DC Output 1/2 A DC Output 1/2 A DC Output 1/2 A DC Output 1/2 A DC Output 1/2 A DC Output	3.0 A 125 V Normal Blow 5 x 20 mm San-O-Ind. Corp. TSC or equivalent (2587679–8012)	2.5 A 250 V Normal Blow 5 x 20 mm San-O–Ind.corp. EQ or equivalent
PPX:505–4608 PPX:505–4616 PPX:505–4632 PPX:505–3708 PPX:505–3716 PPX:505–3732 PPX:505–4708 PPX:505–4716 PPX:505–4732	24–110 VAC Output 24–110 VAC Output 24–110 VAC Output 2 A DC Output 2 A DC Output 2 A DC Output 2 A DC Output 2 A DC Output 2 A DC Output	3.15 A 125 V Normal Blow 5 x 20 mm San-O-Ind. Corp. TSC or equivalent (2587679–8014)	2.5 A 250 V Normal Blow 5 x 20 mm San-O–Ind.corp. EQ or equivalent
PPX:505–4808 PPX:505–4816 PPX:505–4832	110–220 VAC Output 110–220 VAC Output 110–220 VAC Output	5 A 250 V Normal Blow .25” x 1.25” San-O-Ind. Corp. SS2–5 A or equivalent (2587679–8013)	No IEC equivalent

Table 3-8 Terminal Block Pin-out: 32-Point Discrete DC Output Modules (PPX:505–3532, PPX:505–3732, PPX:505–4532, and PPX:505–4732)

User Connection	User Connection
AR = User-Power (–)	AC = User-Power (+)
A1 = Output 1	A5 = Output 5
A2 = Output 2	A6 = Output 6
A3 = Output 3	A7 = Output 7
A4 = Output 4	A8 = Output 8
BR = User-Power (–)	BC = User-Power (+)
B1 = Output 9	B5 = Output 13
B2 = Output 10	B6 = Output 14
B3 = Output 11	B7 = Output 15
B4 = Output 12	B8 = Output 16
CR = User-Power (–)	CC = User-Power (+)
C1 = Output 17	C5 = Output 21
C2 = Output 18	C6 = Output 22
C3 = Output 19	C7 = Output 23
C4 = Output 20	C8 = Output 24
DR = User-Power (–)	DC = User-Power (+)
D1 = Output 25	D5 = Output 29
D2 = Output 26	D6 = Output 30
D3 = Output 27	D7 = Output 31
D4 = Output 28	D8 = Output 32

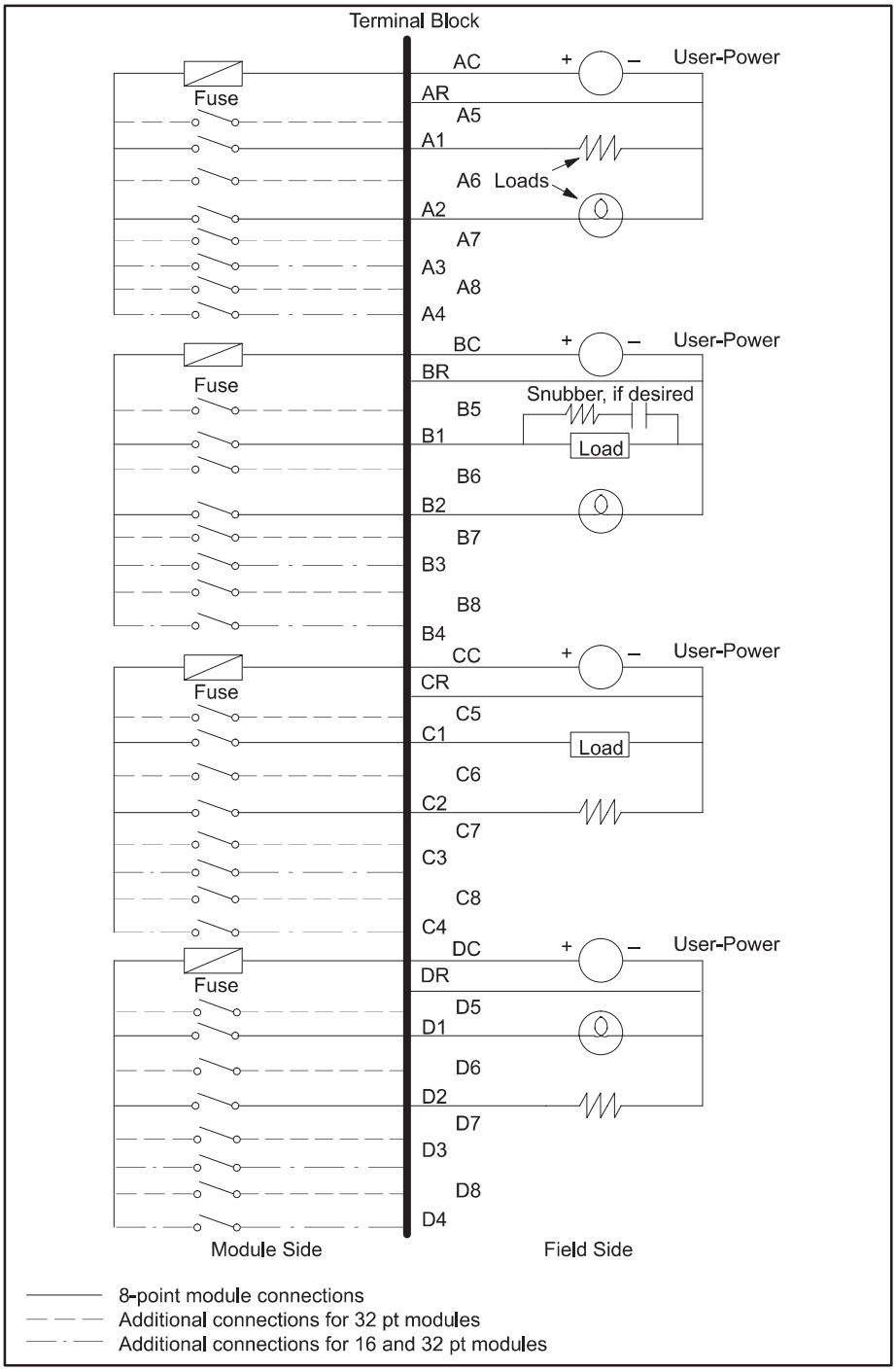

Figure 3-10 Typical Connection for Discrete Sourcing Output Modules (PPX:505–4508, PPX:505–4708, PPX:505–4516, PPX:505–4716, PPX:505–4532, and PPX:505–4732)

Table A-11 Electrical Specifications for 24 VDC 2 Amp Output Modules (PPX:505–37xx and PPX:505–47xx)

Model Number	No. of Outputs	Module Width
PPX:505–3708	8	Double-wide
PPX:505–3716	16	Double-wide
PPX:505–3732	32	Double-wide
PPX:505–4708	8	Double-wide
PPX:505–4716	16	Double-wide
PPX:505–4732	32	Double-wide

Rated Voltage	6–24 VDC
Operating voltage range	4.5–34 VDC
Min. load per point	5 mA
Temporary overload	5.0 A for 1 ms
Max. on-state voltage drop	2.0 V
Max. off-state leakage current	0.2 mA
Kickback protection	Diode
Max. Delay time through module (with 5 mA min. load)	1 ms on to off 1 ms off to on
User power current with no load	3.0 mA/common
Max. module power from base	5 W
Reverse voltage protection at power terminals	34 VDC
Type of outputs	Non-latching type, unprotected
Output fuse rating	3.15 A, 125 V 5 x 20 mm, normal blow

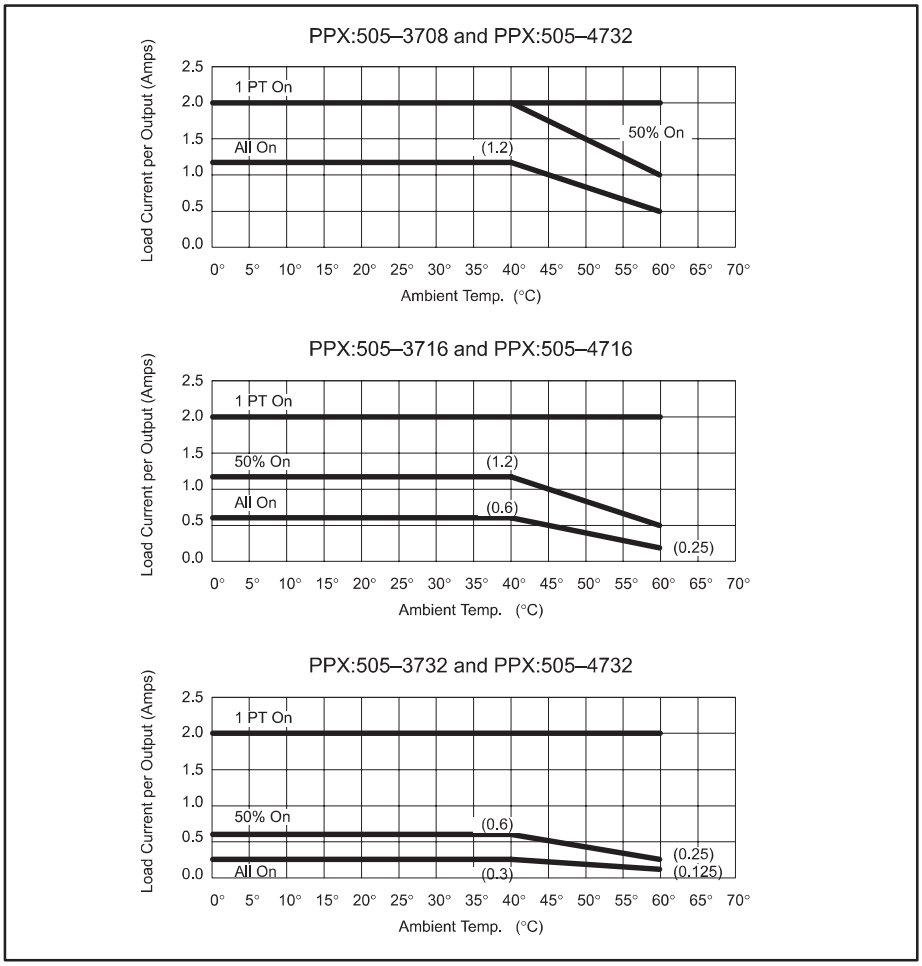

Figure A-9 Derating Curves for PPX:505–37xx and PPX:505–47xx