Panel Interface Connectors

Overview

What is a Panel Interface Connector?

A panel interface connector (PIC) is a pass-through unit that mounts to the outside of a control panel containing a PLC or other programmable device. Using the pass-through connections, the operator is able to interface with the PLC or other units within the control box without opening the enclosure door. PICs usually contain a power outlet and various connectors necessary for the PLC or other programmable units in the control box. ZipPort PICs are available with single, duplex or GFCI power outlets, as well as a no-power option. Connectors available include D-Sub, RJ45, RJ12, USB, Ethernet, and Data Highway; units are available in various combinations needed for the typical control panel.

Why should I use a Panel Interface Connector?

Installing a PIC on an enclosure allows the operator to access the components inside the enclosure without opening the door. This is an important safety feature which removes many of the risks of working with an open electrical panel. Using a PIC may also eliminate the need for operators to wear fire-resistant suits, hoods and gloves, and use non-conductive tools, prior to accessing electrical enclosures capable of producing Arc Flash*, per NFPA 70E requirements.

*Note: An Arc Flash is a voltage breakdown of resistance of air, resulting in an arc which can occur where there is sufficient voltage in an electrical system and a path to ground or lower voltage.

Features

- Aluminum housing with gasket
- All connections are normally straight through, pin 1 to pin 1, etc.
- All D-Sub connectors are FEMALE EXTERIOR and MALE INTERIOR referenced to the cabinet.
- The 9-pin D-Sub pin configuration is available as a break out configuration in some units. These connectors allow for the D-Sub to be separated into individual lines. This allows the user to connect to the D-Sub using screw terminal connections.
- Some units are configured for Allen Bradley's®* Data Highway system. In this case, the 9-pin D-Sub and/or 8-pin "mini-DIN" are connected to a 3-pin pluggable terminal block commonly used with "BLUE HOSE" applications.
- The internal power connection for frame sizes 32 and 48 is made via a covered terminal block with spring-type connections.
- The internal power connection for frame sizes 16 and 24 is made via female push-on terminals for Line-in and Neutral, plus a ring terminal for ground.
- The standard reset is a 3 Amp circuit breaker to limit the power output of the unit.
- *Registered trademark of Allen Bradley Company, LLC

Agency Approvals

- NEMA / UL Type 12, 4, & 4x
- IP65
- UL file number E495019
- CE

Panel Interface Connectors Specifications

Part Number	Price	Housing Size	Outside Connections (excluding power outlet)	Outside Cable(s)† (Table 1)	Inside Connections (excluding power outlet)	Inside Cable(s)† (Table 1)
ZIPport Panel Interface Connectors Specifications						
The port sequence is exactly the same for outside connections and inside connections.						
No power						
ZP-PNA-06-100		6	Female DB9	1, 3	Male DB9	1, 2, 4, 5, 7
ZP-PNA-06-101		6	RJ45 jack		RJ45 jack	8
ZP-PNA-10-200		10	2 - Female DB9	1, 3	2 - Male DB9	1, 2, 4, 5, 7
115VAC Simplex outlet (single)						
ZP-PSA-16-100		16	Female DB9	1, 3	Male DB9	1, 2, 4, 5, 7
ZP-PSA-16-101		16	RJ45 jack		RJ45 jack	8
ZP-PSA-16-102		16	RJ12 jack	4, 5, 12	RJ12 jack	4, 5, 7
ZP-PSA-16-103		16	Female HD15		Male HD15	
ZP-PSA-16-104		16	Female DB15	9	Male DB15	9
ZP-PSA-16-200*		16	Female DB9	1, 3	Male DB9	1, 2, 4, 5, 7
ZP-PSA-24-100*		24	Female DB25		Male DB25	10
ZP-PSA-32-300*		32	Female DB9, Female USB Form B	1, 3, 6	Male DB9, Female USB form A	1, 2, 3, 4, 5, 6, 7
ZP-PSA-32-400*		32	2 - Female DB9, RJ45 jack	1, 3	2 - Male DB9, RJ45 jack	1, 2, 4, 5, 7,8
115VAC Duplex outlet						
ZP-PDA-32-200*		32	Female DB9	1, 3	Male DB9	1, 2, 4, 5, 7
ZP-PDA-32-201*		32	RJ45 jack		RJ45 jack	8
ZP-PDA-32-202*		32	Female USB form A	3	Female USB form A	3, 6
ZP-PDA-32-300*		32	Female DB9, RJ45 jack	1, 3	Male DB9, RJ45 jack	1, 2, 4, 5, 7, 8
ZP-PDA-32-301*		32	Female DB9, RJ45 jack	1, 3	9-Pin terminal block, RJ45 jack	8
ZP-PDA-32-302*		32	Female DB9, Female USB Form B	1, 3, 6	Male DB9, Female USB Form A	1, 2, 3, 4, 5, 6, 7
ZP-PDA-32-303*		32	Female DB9, Female 8-Pin Mini-Din	1, 3	3-pin terminal block, (Data Highway)	
ZP-PDA-32-304*		32	Female DB9, RJ45 jack	1, 3	3-pin terminal block, (Data Highway), RJ45 jack	8
ZP-PDA-32-305*		32	Female DB9, Female USB form A	1, 3, 6	Male DB9, Female USB form A	1, 2, 3, 4, 5, 6, 7
ZP-PDA-32-400*		32	2 - Female DB9, Female USB form B	1, 3, 6	2 - Male DB9, Female USB form A	1, 2, 3, 4, 5, 6, 7
ZP-PDA-32-401*		32	Female DB9, Female USB form B, Female USB form A	1, 3, 6	Male DB9, Female USB form A, Female USB form B	1, 2, 3, 4, 5, 6, 7
ZP-PDA-32-402*		32	RJ45 jack, Female USB form B, Female USB form A	3, 6	RJ45 jack, Female USB form A, Female USB form B	3 ,6, 8
ZP-PDA-32-403*		32	Female DB9, RJ12 jack, Female USB form A	1, 3, 4, 5	Male DB9, RJ12 jack, Female USB form A	1, 2, 3, 4, 5, 6, 7
115VAC GFCI outlet						
ZP-PGA-32-200*		32	Female DB9	1, 3	Male DB9	1, 2, 4, 5, 7
ZP-PGA-32-201*		32	RJ45 jack		RJ45 jack	8
ZP-PGA-32-300*		32	Female DB9, RJ45 jack	1, 3	Male DB9, RJ45 jack	1, 2, 4, 5, 7, 8
ZP-PGA-32-301*		32	Female DB9, Female USB form B	1, 3, 6	Male DB9, Female USB form A	1, 2, 3, 4, 5, 6, 7
ZP-PGA-48-400*		48	Female DB9, Female USB form B, Female USB form A	1, 3, 6	Male DB9, Female USB form A, Female USB form B	1, 2, 3, 4, 5, 6, 7
ZP-PGA-48-500*		48	2 - Female DB9, Female USB form B, Female USB form A	1, 3, 6	2 - Male DB9, Female USB form A, Female USB form B	1, 2, 3, 4, 5, 6, 7

†Note: Based on application. *Note: 3 Amp resettable circuit breaker. Note: Port sequence for inside connections mirrors port sequence for outside connections

Panel Interface Connectors Specifications

ZIPport Panel Interface Connectors General Specifications

Electrical Specifications for PICs with Power Outlet(s)

Voltage Rating	115VAC
Current Rating	3A with resettable circuit breaker, 15A without resettable circuit breaker
SCCR	10kA 0.2 kA (for units with 3A resettable Circuit Breaker)

Technical Specs

Agency Approvals	UL Recognized, CE
Degree of Protection	IP65, NEMA/UL 4, 4x,12 (when mounted with supplied gasket)
Suggested Mounting Screw	#8 -32 x 3/4" for housing sizes 6 through 32. #10 - 32 x 3/4" for size 48 Mounting screws not included with product.
Suggested Screw Torque	10.62 lb/in for housing sizes 6 through 32. 17.7 lb/in for housing size 48

Material Specifications

Body	Epoxy-coated Die-cast Aluminum
Gasket	Thermo-plastic (TPE)
Handle	Polyamide
Levers	Stainless Steel

Accessories

**One gasket supplied and required during mounting to meet Degree of Protection standards.
Insert with Panel Cutout dimensions for mounting**

Table 1

Cable Code	Cable Part Number	Cable Description
1	ZL-DB9-CBL-2	Male DB9 to Female DB9 adapter cable
2	SVC-PCCFG-CBL	Female DB9 to Female Firewire Servo adapter cable
3	USB-RS232	Male USB form A to Male DB9 adapter cable
4	D2-DSCBL or GS-EDRV-CBL-2	Programming cable for DL05/06, DL105, DL205, DL350, D4-450, Click
5	GS-232CBL	RJ12 to Female DB9 for GS2 DRIVES ONLY
6	USB-CBL-AB_	USB form A to USB form B cable series
7	FA-ISOCON	RS232 - RS422/485 converter
8	OP-MCBL-1	Optimate cable for Modbus PLCs
9	ZL-DB15-CBL-2	Male DB15 to Female DB15 adapter cable
10	ZL-DB25-CBL-2	Male DB25 to Female DB25 adapter cable

No Power
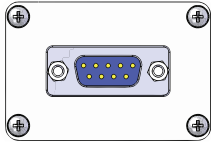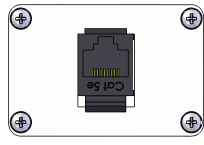
ZP-PNA-06-100

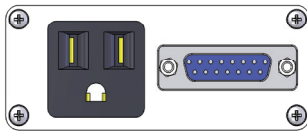**ZP-PNA-06-101**
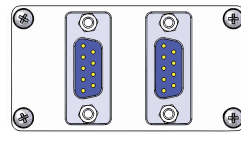
ZP-PNA-10-200

Simplex Outlet, 115V AC
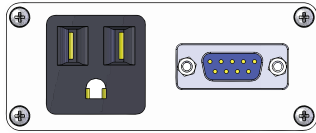
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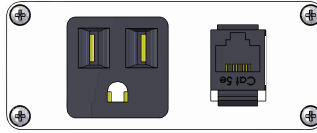
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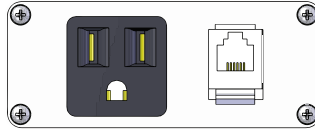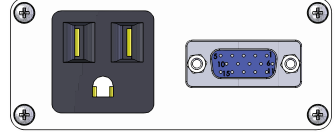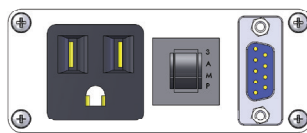
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ZP-PSA-16-103
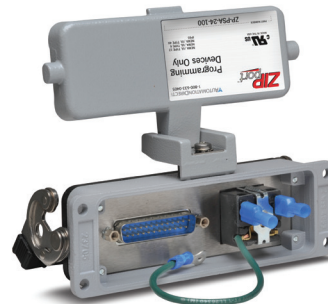
ZP-PSA-16-104

ZP-PSA-16-200
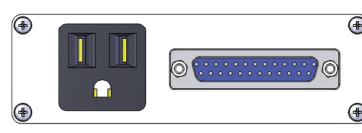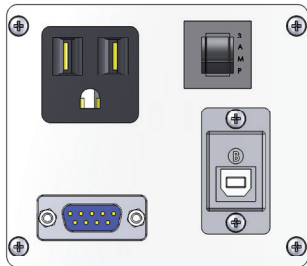
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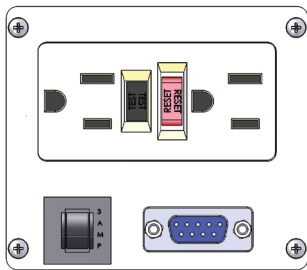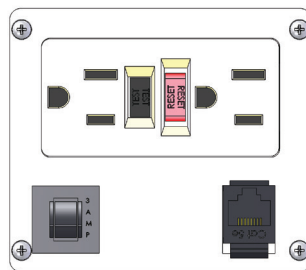
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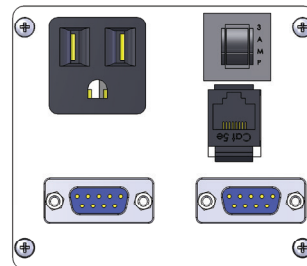
ZP-PSA-32-400

Back view of ZP-PSA-24-100
Crimp terminals are supplied for hot and neutral connection for housing sizes 6 through 24. Ground wire supplied with an M3 ring terminal (recommended screw size #6).
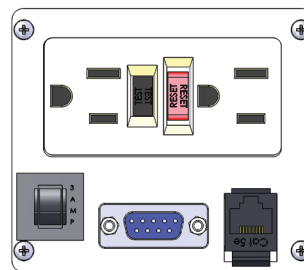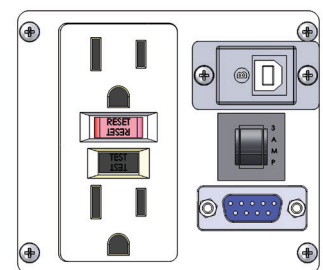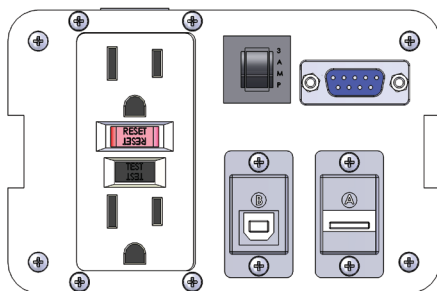
GFCI Outlet, 115V AC

ZP-PGA-32-200

ZP-PGA-32-201

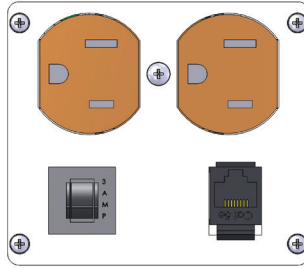**ZP-PGA-32-300**

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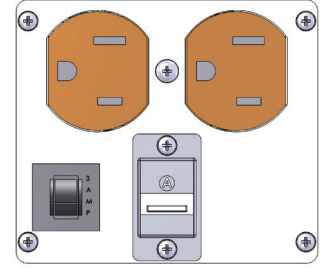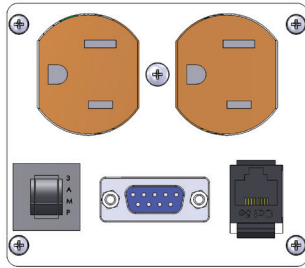
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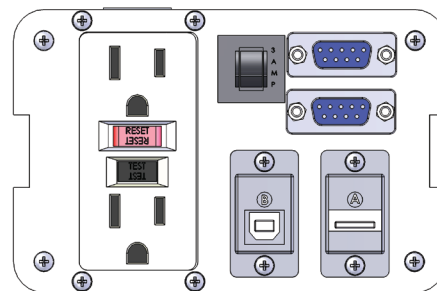
ZP-PGA-48-500

Duplex Outlet, 115V AC
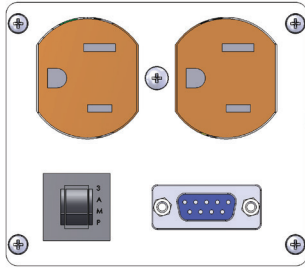
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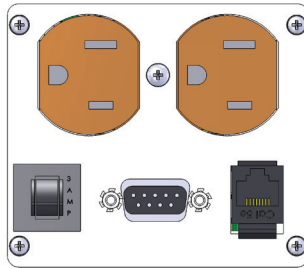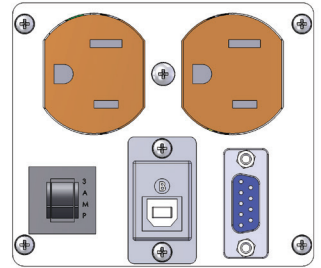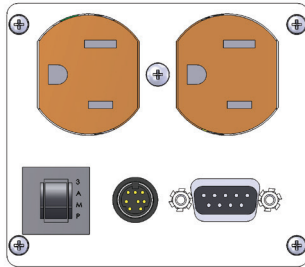

ZP-PDA-32-201

ZP-PDA-32-202

ZP-PDA-32-300
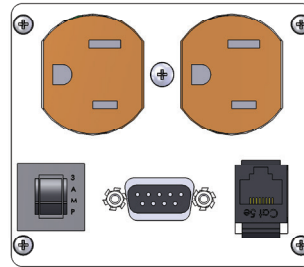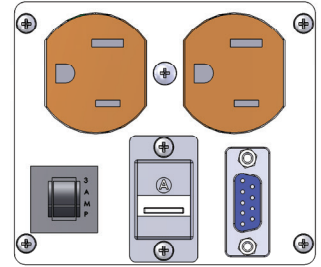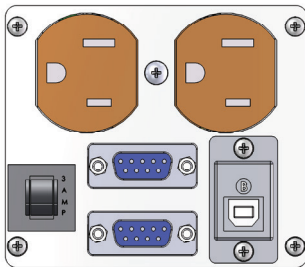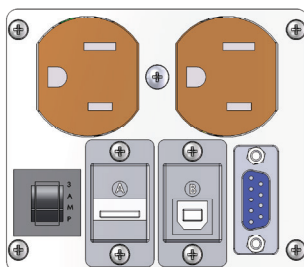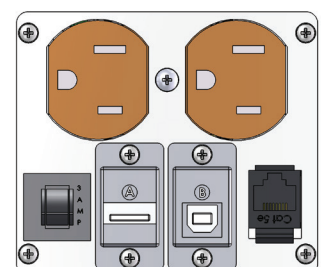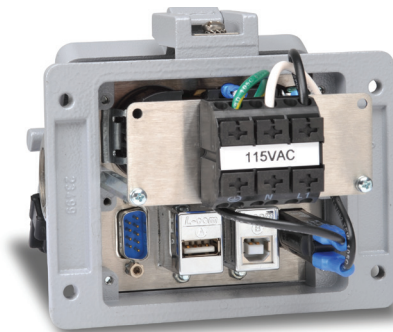

ZP-PDA-32-301

ZP-PDA-32-302
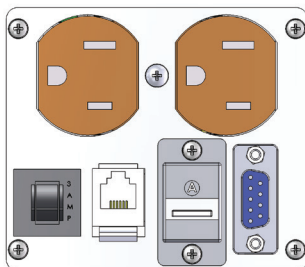

ZP-PDA-32-303

ZP-PDA-32-304
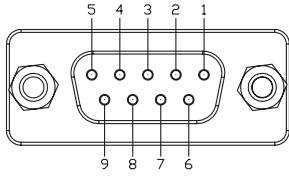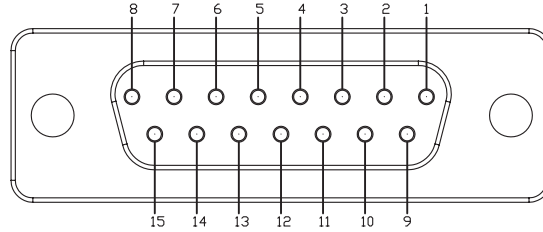

ZP-PDA-32-305

ZP-PDA-32-400

ZP-PDA-32-401

ZP-PDA-32-402

DB9 Pin Configuration
View looking into Female connector

5 4 3 2 1

9 8 7 6

DB15 Pin Configuration
View looking into Female connector

8 7 6 5 4 3 2 1

15 14 13 12 11 10 9

HD15 Pin Configuration
View looking into Female connector

5 1

10 6

15 11

DB25 Pin Configuration
View looking into Female connector

13 12 11 10 9 8 7 6 5 4 3 2 1

25 24 23 22 21 20 19 18 17 16 15 14

DB9 Data Highway Plus Pin Configuration
View looking into Female connector

5 4 3 2 1

9 8 7 6
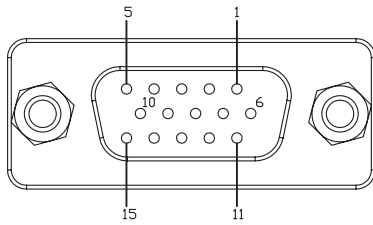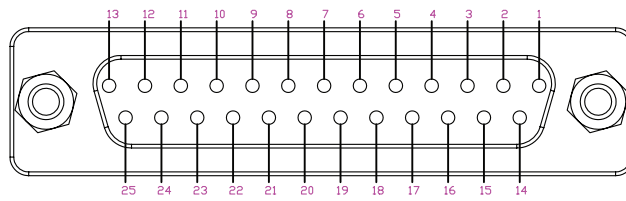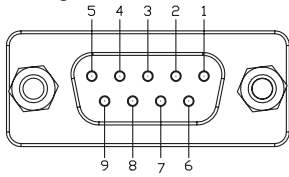
DB9 to Phoenix 3-Pin connector
DB9	Phoenix 3-Pin connector
1	Clear
5	Blue
7	Shield

DB9 + 8-Pin Mini-Din Data Highway Plus Pin Configuration
View looking into Female connector

8   7   6
5   4   3
2   1

5 4 3 2 1

9 8 7 6
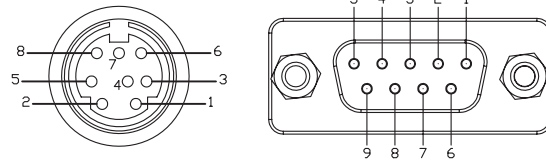
DB9 to Phoenix 3-Pin connector
DB9	Phoenix 3-Pin connector
1	Clear
5	Blue
7	Shield

8-Pin Mini to Phoenix 3-Pin connector
8-Pin Mini	Phoenix 3-Pin connector
1	Blue
3	Shield
6	Clear

RJ45 Pin Configuration

8 1

Cat 5e
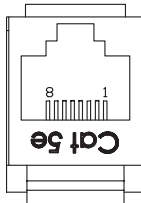
Terminal Block Pin Configuration
for Power

GROUND   NEUTRAL   LINE

GROUND   NEUTRAL   LINE
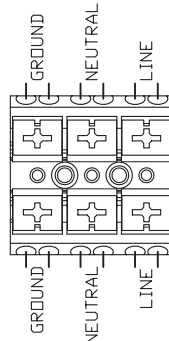
RJ12 Pin Configuration

6 5 4 3 2 1
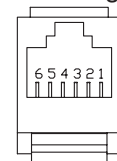
Panel Interface Connectors Quick Reference Chart

Use this checklist to quickly identify the connections in each panel interface connector.

| Part Number	DB9	DB15	HD15	DB25	RJ12	RJ45	USB-AB	USB-BA	USB-AA	8-Pin DIN	Data Hwy Connection	3 Amp Resettable Circuit Breaker
ZIPport Panel Interface Connectors												
No power												
ZP-PNA-06-100	√											
ZP-PNA-06-101						√						
ZP-PNA-10-200	√√											
115VAC Simplex outlet (single)												
ZP-PSA-16-100	√											
ZP-PSA-16-101						√						
ZP-PSA-16-102					√							
ZP-PSA-16-103			√									
ZP-PSA-16-104		√										
ZP-PSA-16-200	√											√
ZP-PSA-24-100				√								
ZP-PSA-32-300	√							√				√
ZP-PSA-32-400	√√					√						√
115VAC Duplex outlet												
ZP-PDA-32-200	√											√
ZP-PDA-32-201						√						√
ZP-PDA-32-202									√			√
ZP-PDA-32-300	√					√						√
ZP-PDA-32-301*	√					√						√
ZP-PDA-32-302	√							√				√
ZP-PDA-32-303	√									√	√	√
ZP-PDA-32-304	√					√					√	√
ZP-PDA-32-305	√								√			√
ZP-PDA-32-400	√√							√				√
ZP-PDA-32-401	√						√	√				√
ZP-PDA-32-402							√	√	√			√
ZP-PDA-32-403	√				√					√		√
115VAC GFCI outlet												
ZP-PGA-32-200	√											√
ZP-PGA-32-201						√						√
ZP-PGA-32-300	√					√						√
ZP-PGA-32-301	√							√				√
ZP-PGA-48-400	√						√	√				√
ZP-PGA-48-500	√√						√	√				√

* Note: This DB9 becomes a 9-pin terminal block in the back.

Panel Cutout Dimensions
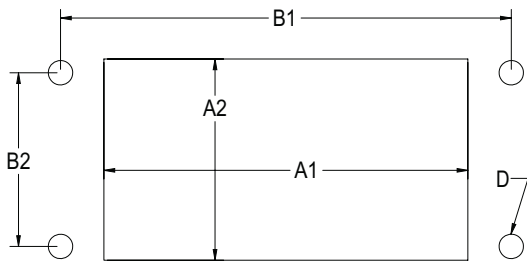
Panel Cutout Dimensions						
Part	**Size**	**A1**	**A2**	**B1**	**B2**	**D**
ZP-PNA-06-xxx	6	2.13 [54.1]	1.46 [37.1]	2.76 [70.10]	1.26 [32.00]	0.177 [4.50]
ZP-PNA-10-xxx	10	2.64 [67.1]	1.46 [37.1]	3.27 [83.1]	1.26 [32.00]	0.177 [4.50]
ZP-PSA-16-xxx	16	3.46 [87.9]	1.46 [37.1]	4.07 [103.4]	1.26 [32.00]	0.177 [4.50]
ZP-PSA-24-xxx	24	4.10 [104.1]	1.46 [37.1]	5.12 [130.0]	1.26 [32.00]	0.177 [4.50]
ZP-PSA-32-xxx ZP-PDA-32-xxx ZP-PGA-32-xxx	32	3.46 [87.9]	2.99 [75.9]	4.33 [110.0]	2.56 [65.0]	0.177 [4.50]
ZP-PGA-48-xxx	48	4.92 [125.0]	3.19 [81.0]	5.83 [148.1]	2.76 [70.10]	0.256 [6.50]

Note: All dimensions in inches [millimeters]

Housing Dimensions