

PL-500SM-N FEATURES

Ideal for front-panel instrumentation and hand-held equipment, the compact and cost effective PL-500 Series is designed to meet the efficient packaging demands of portable electronic devices

Packaging (intuitive, compact, configurable)

- Pulse-Lok® auto-latch / mating confirmation
- Miniature .520" diameter circular shell
- Up to 14 contact positions
- 14 standard color combinations
- Multiple and proprietary keying options
- Available as an overmolded cable assembly
- Custom configurations available

Performance (for harsh environments)

- Water proof (IP-67 rated)
- Steam, EtO, & Gamma sterilizable
- Chemical resistant housing
- Up to 5,000 mating cycles (with std. Contacts)
- Factory terminated, overmolded cable assemblies for enhanced flex and strain relief

SPECIFICATIONS

Electrical (see below)

Mating Life: 5,000 cycles min.
Contact Resistance: < 10 milliohms*

Material

Connector Housing: Nylon 12
Flex Reliefs: Thermoplastic Rubber
Contacts: Brass / BeCu,
Gold Plate per MIL-G-45204

Mechanical

Mating Cycles: 20K cycles max
Retention Force:
• Mated Connectors: 25 lbs. Minimum
• Cable to Connector: to 30 lbs. typical
• Backshell to Connector: 50 lbs. Minimum

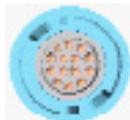
Environmental

- Operating Temp: -20C to +85C
- Moisture Resistance: to IP-67 (encapsulated)
- Sterilizable: gamma, EtO & Autoclave
- Chem. Resistance: common OR cleaning solvents
* post conditioning

TABLE A: STANDARD CONTACT CONFIGURATIONS & SPECIFICATIONS

| Number of Poles | Contact Size Pin ϕ (mm) | Max Wire Gauge | Operating Voltage max | Operating Current Max | Contact Resistance |
|-----------------|---------------------------------|----------------|--------------------------|--------------------------|-----------------------|
| 14 | 0.5 | 28 | 300 V RMS | .9 A | < 14m ohms |
| 10 | 0.5 | 28 | 300 V RMS | 1.2 A | < 14m ohms |
| 8 | 0.7 | 22 | 300 V RMS | 1.8 A | < 6m ohms |
| 7 | 0.7 | 22 | 300 V RMS | 2.1 A | < 6m ohms |
| 6 | 0.7 | 22 | 300 V RMS | 2.1 A | < 6m ohms |
| 5 | 0.7 | 22 | 300 V RMS | 2.4 A | < 6m ohms |
| 4 | 0.7 | 22 | 300 V RMS | 2.4 A | < 6m ohms |
| 3 | 0.7 | 22 | 300 V RMS | 3.0 A | < 6m ohms |
| 2 | 0.7 | 22 | 300 V RMS | 3.0 A | < 6m ohms |
| 1 | 0.7 | 22 | 300 V RMS | 3.0 A | < 6m ohms |
| 1 | 1.5 | 16 | 300 V RMS | 7.0 A | < 2m ohms |

**Up to 14
contact positions**



Custom contact inserts are available. Consult factory.

STANDARD HOUSING OPTIONS

In-Line Receptacle Assembly



2.05

Shown with overmolded strain relief
(Refer to PL Series Overmolding Guide)

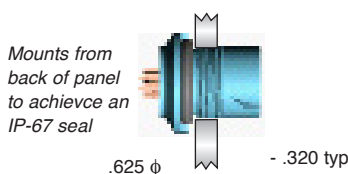
In-Line Receptacle Kit (for overmolding)



1.43

Select this component from Table B

Panel-Mount Receptacle Assembly



Panel thickness range = .063 to .125

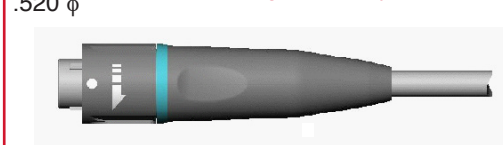
Panel-Mount Receptacle



1.02

Select this component from Table B

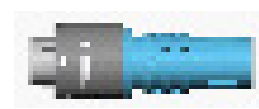
In-Line Plug Assembly



2.00

Shown with Overmolded Strain Relief
(Refer to PL Series Overmolding Guide)

In-Line Plug Kit (for overmolding)



1.35

Select this component from Table B

Connector housings are illustrated in blue with gray couplers and backshells. Standard color is black on black. See our online configurator for color options at: www.aldenproducts.com/configurator

* All dimensions shown in inches except where indicated

For additional information about this, or any other Alden product, please contact an Amphenol Alden specialist today.

Phone: 508-427-7000
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PL-500SM-N SERIES

Plastic Shell Auto-Coupling Connectors

14 Pole Capacity Miniature Circular Connectors

TABLE B:

STANDARD PART NUMBERS

| Number of Poles | In-Line Receptacle | Panel-Mount Receptacle | | In-Line Plug |
|-----------------|--------------------|------------------------|--------|--------------|
| | Solder Cup | Solder Cup | PCB | Solder Cup |
| 14 | 320679 | 320483 | 320875 | 320182 |
| 10 | 320651 | 320455 | 320847 | 320126 |
| 8 | 320637 | 320441 | 320833 | 320098 |
| 7 | 320630 | 320434 | 320826 | 320084 |
| 6 | 320623 | 320427 | 320819 | 320070 |
| 5 | 320616 | 320420 | 320812 | 320056 |
| 4 | 320609 | 320413 | 320805 | 320042 |
| 3 | 320602 | 320406 | 320798 | 320028 |
| 2 | 320595 | 320399 | 320791 | 320014 |
| 1 (.7mm Pin) | 320588 | 320392 | 320784 | 320000 |
| 1 (1.5mm Pin) | 321022 | 321008 | N/A | 320980 |

Note: Part numbers cover black housings in Key 1 configuration. For other color and housing options utilize the Alden connector configurator located @ www.aldenproducts.com/configurator

Options Include:

Housing Color Options

Mating Key Options

Panel-Mount Thickness Options

Black, Gray, White, Blue, Red, Green, Yellow

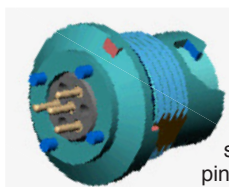
2 Standard Keys, Proprietary Keys Available

Up to .125 Standard

CONTACT TERMINATION OPTIONS

Termination Options Receptacles & In-Line Plug

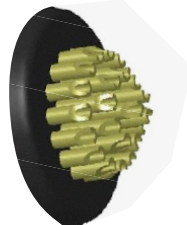
PCB (Panel-Mount Receptacle only)



stand off height.050"
pin length .125"

Request sales drawing SD-106999 for PCB mounting templates

Solder Cup (available on all)



Tiered & Canted for ease of assembly

Panel-Mount, Cut-Out Template



Receptacle Dust Cover



Alden P/N 107976

Assembly Instructions

AI-PL500-01 Receptacle

AI-PL500-02 Plug

Available at:

www.aldenproducts.com

ACCESSORIES

Receptacles

In-Line

Panel-Mount



1 Receptacle Housing
2 Receptacle Core

In-Line Plug



1 Plug Core
2 Plug Housing Assembly

CONNECTOR ASSEMBLY TOOLS

Receptacles

| Item | Alden P/N | Description | Application |
|------|-----------|----------------|--------------------------|
| 1 | 109099-77 | Solder Nest | Receptacle Core |
| 2 | 390052 | Insertion Tool | Receptacle Core 224 IGA |
| 3 | 390253 | Insertion Tool | Receptacle Core 224 IGA |
| 4 | 390032-77 | Spanner Wrench | Receptacle Mounting Ring |

In-Line Plug

| Item | Alden P/N | Description | Application |
|------|-----------|---------------------------|-------------|
| 1 | 108077-77 | Solder Nest/Assembly Base | Plug Core |

For additional information about this, or any other Alden product, please contact an Amphenol Alden specialist today.

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