

PL-500SM-N SERIES

Plastic Shell Auto-Coupling Connectors
14 pole capacity miniature circular connector
for overmolding

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

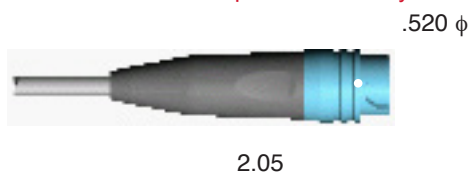
TABLE A: STANDARD CONTACT CONFIGURATIONS & SPECIFICATIONS

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

Custom contact inserts are available. Consult factory.

STANDARD HOUSING OPTIONS

In-Line Receptacle Assembly



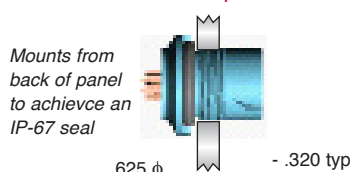
Shown with overmolded strain relief
(Refer to PL Series Overmolding Guide)

In-Line Receptacle Kit (for overmolding)



Select this component from Table B

Panel-Mount Receptacle Assembly



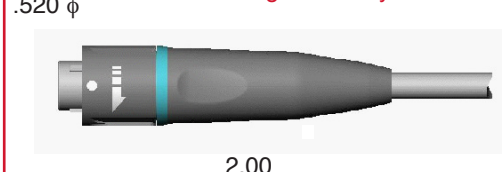
Panel thickness range = .063 to .125

Panel-Mount Receptacle



Select this component from Table B

In-Line Plug Assembly



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

In-Line Plug Kit (for overmolding)



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
Fax: 508-583-0164
www.amphenolalden.com

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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	PCB	
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

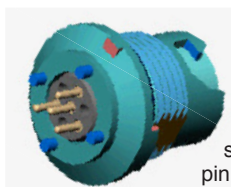
2 Standard Keys, Proprietary Keys Available

Up to .125 Standard

CONTACT TERMINATION OPTIONS

Termination Options Receptacles & In-Line Plug

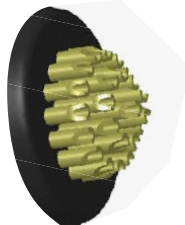
PCB (Panel-Mount Receptacle only)



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

Available at:

AI-PL500-01 Receptacle

AI-PL500-02 Plug

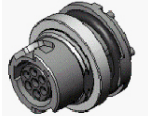
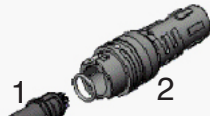
www.aldenproducts.com

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
1	109099-77
2	390052
3	390253
4	390032-77

Description

Solder Nest
Insertion Tool
Insertion Tool
Spanner Wrench

Application

Receptacle Core
Receptacle Core 224 IGA
Receptacle Core 224 IGA
Receptacle Mounting Ring

In-Line Plug

Item	Alden P/N
1	108077-77

Description

Solder Nest/Assembly
Base

Application

Plug Core

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

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