

## PL-900SM-N SERIES

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



### PL-900SM-N FEATURES

The compact PL-900 is available in several power circuit configurations for industrial and medical electronic applications. This connector series is ideal for applications where safety, ease of use, and exposure to hostile environments are of primary consideration.

#### Packaging (intuitive, compact, configurable)

- Pulse-Lok auto-latch/quick-release mechanism confirms continuity
- Concealed Contacts meet IEC and UL safety specifications
- Press & Seal contact system

- Available as a rugged overmolded cable assembly
- Polarized Housing eliminates missmating
- Up to 14 standard color combinations for coding

#### Performance (for harsh environments)

- Water Proof, seals to cable
- Impact Resistant plastic housing
- Chemical Resistant
- Shock Proof housing design
- High Performance flex relief extends cable life and strain relief

### SPECIFICATIONS

#### Electrical (see below)

Mating Life: 5,000 cycles min.  
High Current Ratings per UL/ANSI/EIA  
Dielectric Withstand Voltage: 2200V RMS  
(Contact to Contact, Contact to Outer Housing)  
Insulation Resistance: Per ANSI/EIA-364-14

#### Material

Connector Housing: PL 900SM-N = Nylon

Flex Reliefs: TPR

Contacts: Pins = Brass, Sockets = Bronze Alloy  
Contact Plating: Gold per MIL-G-45204C

#### Mechanical

- Mating Cycles: 20K cycles max  
Retention Force:
- Mated Connectors: 50 lbs. Minimum
  - Cable to Connector: to 50 lbs. typical
  - Contact Barrel Wire Size: #12 to #22
  - Contact Isolation: Probe @ 7lb. Per IEC 60601-1

#### Environmental

- Operating Temp: -20C to +105C
- Moisture Resistance: IP-67 (IEC)
- Flammability Rating: UL94 V-0 (PL-900SM-V only-see Table B)
- Chemical Resistance: Common industrial solvents (consult factory)

**TABLE A: STANDARD CONTACT CONFIGURATIONS & SPECIFICATIONS**

Up to 14  
contact positions



Number of Poles	Contact Size Pin $\phi$ (mm)	Max Wire Gauge	Rated Current	Rated Voltage	Contact Resistance
14	0.7	22	5	600V AC/DC	< 10m ohms
12	0.7	22	5	600V AC/DC	< 10m ohms
10	0.7	22	5	600V AC/DC	< 10m ohms
7	1.5	16	15	600V AC/DC	< 10m ohms
3	2.4	12	30	600V AC/DC	< 10m ohms

#### In-Line Receptacle Assembly



Shown with overmold flex relief  
(Refer to PLSeries Overmolding Guide)

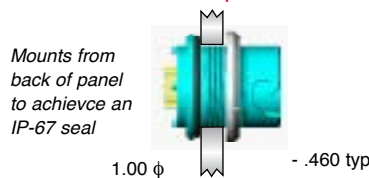
#### In-Line Receptacle (for overmolding)



2.31

Select this component from Table B

#### Panel-Mount Receptacle Assembly



Mounts from  
back of panel  
to achieve an  
IP-67 seal

Panel thickness range = .063 to .250

#### Panel-Mount Receptacle

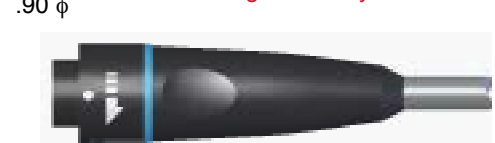


1.00 typ.

Select this component from Table B

### STANDARD HOUSING OPTIONS

#### In-Line Plug Assembly



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

#### In-Line Plug (for overmolding)



2.0 typ.

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](http://www.aldenproducts.com/configurator)

All dimensions shown in inches.

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  
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**TABLE B:**

**STANDARD PART NUMBERS**

Number of Poles	In-Line Receptacle	RPM Receptacle - PCB	RPM Receptacle - SC	In-Line Plug
14	340196	340525	340518	340112
12	340182	340497	340490	340084
10	340168	340469	340462	340056
7	340154	n/a	340448	340028
3	340140	n/a	340434	340000

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](http://www.aldenproducts.com/configurator)

**Options Include:**

Housing Color Options

Mating Key Options

Standard Panel-Mount Thickness

Contact Termination

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

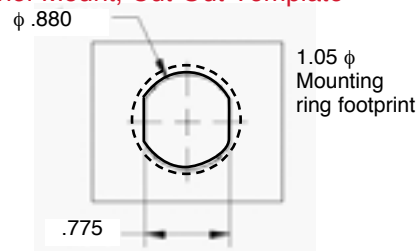
2 Standard Keys, Proprietary Keys Available

.187"

Standard contact is equipped with a MIL crimp barrel suitable for soldering

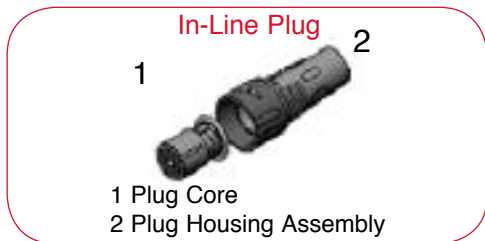
Assembly Instructions AI-PL900-03 In-Line Plug for overmolding  
 AI-PL900-02 Panel-Mount Receptacle  
 Available at: [www.aldenproducts.com](http://www.aldenproducts.com)

**Panel-Mount, Cut-Out Template**



**CONNECTOR ASSEMBLY TOOLS**

**In-Line Plug**



Item	Alden P/N	Description	Application
1	390057	22AWG Insertion Tool	Pin to Plug Core
2	T-831	16AWG Insertion Tool	Pin to Plug Core
3	390020	12AWG Insertion Tool	Pin to Plug Core
4	T-706	Loading Nest	Plug Core Support Base
5	390040	Pneumatic Crimper	Contact Termination Tool
6	390041	Stand for Pneumatic Crimper	Contact Termination Tool
7	390035	Hand Crimper	Contact Termination Tool
8	390032	Size - #12 Crimp Die	Contact Termination Tool
9	390031	Size - #16 Crimp Die	Contact Termination Tool
10	390030	Size - #22 Crimp Die	Contact Termination Tool

**Receptacle**



Item	Alden P/N	Description	Application
1	390056	22AWG Insertion Tool	Socket to Receptacle Core
2	T-831	16AWG Insertion Tool	Socket to Receptacle Core
3	390020	12AWG Insertion Tool	Socket to Receptacle Core
4	T-705	Loading Nest	Receptacle Core Support Base
5	T-701	Insertion Tool	Receptacle Core to Housing
6	390040	Pneumatic Crimper	Contact Termination Tool
7	390041	Stand for Pneumatic Crimper	Contact Termination Tool
8	390035	Hand Crimper	Contact Termination Tool
9	390032	Size - #12 Crimp Die	Contact Termination Tool
10	390031	Size - #16 Crimp Die	Contact Termination Tool
11	390030	Size - #22 Crimp Die	Contact Termination Tool

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# ACCESSORIES

**ACCESSORIES**

## Protective Connective Caps (IP-67 Seal Rating)

Panel 1

**Panel-Mount Receptacle**  
Nylon tether locks into panel washer



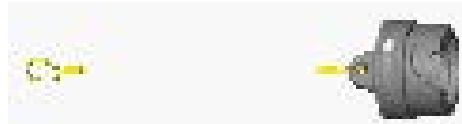
107522-88

**In-Line Receptacle**  
Wire tether with cable loop



107523-88

**In-Line Plug**  
Wire tether with cable loop



107521-88

Part numbers cover black cap moldings - gray optional.

### Panel-Mount Receptacle Dust Cover



Alden P/N 107522-01  
Standard color is black. Gray optional

### Panel-Mount Receptacle Dust Cover -

The PL-900 Series receptacle dust cover protects the receptacles contact system from dust, moisture, and mechanical stress when the connector pair is disengaged. When secured the dust cover will provide an IP-67 environmental seal. The cover is equipped with a tether for security.

### Plug Soaking Cap



Alden P/N 107521-01  
Standard color is black. Gray optional

### Plug Soaking Cap -

The PL-900 Series Plug Soaking Cap is designed to protect the plug's contact system when a cable assembly is being cleaned or not in use. The soaking cap locks onto the plug providing an IP-67 seal that is ideal for soaking in liquid disinfectants. The soaking cap can be permanently attached to a cable assembly by means of a light weight tether.

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