

# PL-700SM-B Series

**Metal Shell** Auto-Coupling Connectors  
**27 pole** capacity circular shell connectors



## Features

The **Pulse-Lok® 700SM-B Series** connector is Amphenol Alden's most robust offering in a sub .700" diameter package. The metal housings are perfect for protecting against harsh and EMI/RFI environments.

### Overview (intuitive, compact, configurable)

- Pulse-Lok® auto-latch / mating confirmation
- Miniature .700" diameter circular shell
- Up to 27 contact positions
- 3 various pad print color options
- Multiple standard and proprietary keying options

### Order as a full cable assembly (Consult Factory)

- Single or double ended
- Customize your cable bundle
- Overmolded strain relief
- Add components to fulfill requirements

## Specifications (for reference only)

### Material

- Connector Housing:  
Nickel Plated Brass
- Molded Core Insulator:
  - Polyamide 12 (LV3H) (1P-7P)
  - LCP (10P-27P)
  - Contacts: Brass/Phosphor Bronze
  - 30µ" Gold over 50µ" Nickel
- Flammability Rating
  - Molded Contact Insulator (core):  
UL94 V-0

### Mechanical

- Mating Cycles: 5,000  
*(minimal plating wear may be visible)*
- Mating Force:
  - Mate: 17.5 lbs. Max
  - Un-mate: 3 lbs. Max
  - Unintended Extraction:  
30 lbs. Min.
  - Backshell Withdrawal: 5 lbs. Min.\*\*\*

### Environmental

- Operating Temp: -20°C to +125°C
- Moisture Resistance: to IP-67  
(mated)
- Sterilizable: EtO, Autoclave,  
STERRAD® - Consult factory
- Chemical Resistance: Common  
operating room cleaning solvents

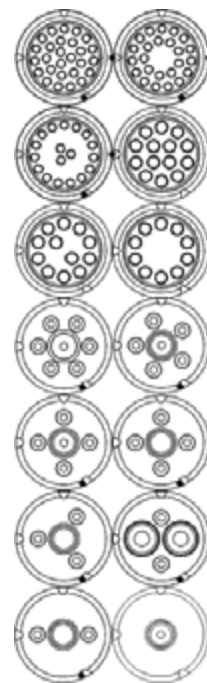
\*\*\*Backshell sold separately

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

**Table A: Standard Contact Configurations & Specifications**

Number of Poles	Contact Size (Pin Diameter - mm)	Max Wire Gauge	Operating Voltage Max (V RMS)	Operating Current Max (A)*	Mated Contact Resistance (mΩ)
27	0.5	26	300	2.0	<50
24	0.5	26	300	2.0	<50
18	0.5	26	300	2.0	<50
14	0.7	22	300	3.0	<50
12	0.7	22	300	3.0	<50
10	0.7	22	300	3.0	<50
7	0.7	22	300	3.0	<50
6	0.7	22	300	3.0	<50
5	0.7	22	300	3.0	<50
4	0.7	22	300	3.0	<50
2+2	2(1.5)-2(0.7)	2(16)-2(22)	300	5.0/3.0	<50
3	0.7	22	300	3.0	<50
2	0.7	22	300	3.0	<50
2	1.5	16	300	5.0	<50
1	0.7	22	300	3.0	<50
1	2.3	12	300	16.0	<50

**Up to 27 Contact Positions**

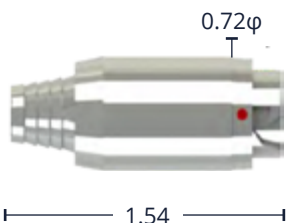


\*30°C Heat Rise Limit | Custom contact inserts are available. Consult factory.

**Standard Housing Options - dimensions in inches**

**Cable Mount Receptacles**

**Cable Mount Receptacle Kit**



Select this component from Table B

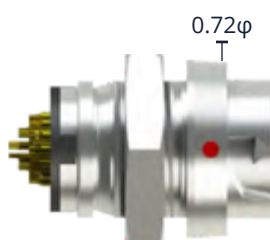
**Cable Mount Receptacle Assembly (w/ optional Press & Seal™ Backshell)**



Select Press & Seal™ Backshell from Table C

**Panel-Mount Receptacles**

**Front Panel-Mount Receptacle Assembly**



Mounted Height =0.32

Panel thickness range to 0.187  
Select this component from Table B

**Cable Mount Plugs**

**Cable Mount Plug Kit**



Select this component from Table B

**Cable Mount Plug Assembly (w/ optional Press & Seal™ Backshell)**



Select Press & Seal™ Backshell from Table C

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**Table B: Standard Part Numbers**

Number of Poles	Cable Mount Receptacle	Front Panel - Mount Receptacle		Cable Mount Plug
	Solder Cup	Solder Cup	PCB	Solder Cup
27	357062	356062	356149	355062
24	357131	356131	356209	355131
18	357125	356125	356203	355125
14	357048	356048	356143	355048
12	357119	356119	356197	355119
10	357113	356113	356191	355113
7	357034*	356028*	356137*	355028*
6	357107*	356107*	356185*	355072*
5	357101*	356071*	356179*	355071*
4	357095*	356095*	356173*	355095*
2(16)+2(22)	357020*	356020*		355020*
3	357089*	356089*	356167*	355089*
2 (22)	357080*	356080*	356161*	355080*
2 (16)	357077*	356077*		355077*
1 (22)	357071*	356101*	356155*	355101*
1 (12)	357006*	356006*		355006*

**Note:** Part numbers cover black housings in Key 1 configuration. For other color and housing options utilize the Amphenol Alden connector configurator located at [www.amphenolalden.com/configurator](http://www.amphenolalden.com/configurator)

**Options Include:**

- Housing Color Options: Black (std.), Gray, White, Blue, Red, Green, Yellow
- Mating Key Options: 2 Standard Keys, Proprietary Keys Available
- Panel-Mount Thickness Options: Up to .125 Standard
- \*Press & Seal™ contacts, crimp or solder termination

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## Contact Termination Options

### Press & Seal™ Features & Benefits

- Contacts provide IP-67 water tight seal when inserted into insulator
- Easy crimp & poke installation
- Excellent contact retention
- Contacts may be crimped or soldered

#### Press & Seal™ Contact System



- Available on 1 to 7-Pole Configurations
- Accepts multiple wire gauges 12, 16, 22AWG

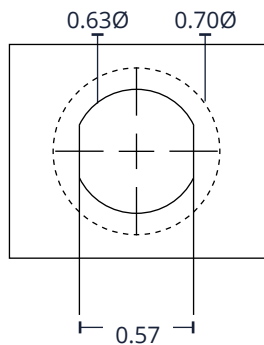
### Solder Cup (Available for All)



#### Features & Benefits

Tiered solder cups provide easy access to center positions. Canted cups facilitate quick and easy wire positioning. Standard on 10-27 pole configurations.

### Panel-Mount, Cut-Out Template



0.70Ø mounting Flange  
Footprint (.75Ø for  
RPM spanner nut)

Applies to Disposable Receptacle

### PCB Contact (Available for All)



Request Sales  
Drawing for PCB  
mounting template

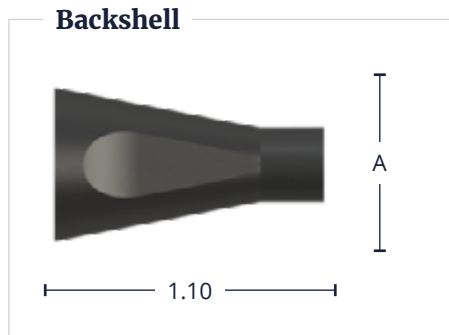
#### Features & Benefits

- Available in most pole counts from 1 to 27 Poles
- PCB stand-offs ensure proper positioning
- Convenient packaging high temperature connect cures may be soldered to PCB and snapped into panel-mounted receptacle housing later

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**Table C: Accessories** - dimensions in inches

**Note:** Black (std.) Gray (optional) & accessories sold separately



The **PL-700 plug housing** is designed to accept Amphenol Alden’s one piece, Press & Seal PVC Backshell. This unique backshell simply snaps into place providing an IP-67 rated seal to the plug housing and cable exit without hardware resulting in a clean overmolded look. For optimum sealing we suggest selecting a wire exit i.d. that is at least .005” smaller than your nominal cable diameter.

Dimension A	Part #	
	Black	Gray
0.053	300350	300351
0.064	300352	300353
0.075	300354	300355
0.086	300356	300357
0.096	300358	300359
0.104	300360	300361
0.120	300362	300363
0.129	300364	300365
0.142	300366	300367
0.153	300368	300369
0.162	300370	300371
0.170	300372	300373
0.186	300374	300375
0.204	300376	300377
0.215	300378	300379
0.225	300380	300381
0.235	300382	300383
0.249	300384	300385
0.264	300386	300387
0.300	300388	300389

**Assembly Instructions**

**Cable Mount Receptacle Instructions:**

- AI-PL700SMB-IR01(1Pole,12AWG)
- AI-PL700SMB-IR02(2+2Pole,16/22AWG)
- AI-PL700SMB-IR03(1-7Pole,22AWG)
- AI-PL700SMB-IR04(10-14Pole,22AWG)
- AI-PL700SMB-IR05(18-27Pole,26AWG)
- AI-PL700SMB-PMR01(1Pole,12AWG)

**Panel-Mount Receptacle Instructions:**

- AI-PL700SMB-PMR02(2+2Pole,16/22AWG)
- AI-PL700SMB-PMR03(1-7Pole,22AWG)
- AI-PL700SMB-PMR04(10-14Pole,22AWG)
- AI-PL700SMB-PMR05(18-27Pole,26AWG)

**Cable Mount Plug Instructions:**

- AI-PL700SMB-P01 (1Pole, 12AWG)
- AI-PL700SMB-P02 (2+2Pole, 16/22AWG)
- AI-PL700SMB-P03 (1-7Pole, 22AWG)
- AI-PL700SMB-P04 (10-14Pole, 22AWG)
- AI-PL700SMB-P05 (18-27Pole,26AWG)

**Note:** recommended tooling included in assembly instructions

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