

PL-700SM-B SERIES

Metal Shell Auto-Coupling Connectors

27 pole capacity circular shell connectors

PL-700SM-B FEATURES

Compact and configurable, the PL-700SM-B Series connector is Amphenol Alden's most versatile offering in a sub .700" diameter package. PL-700SM-B Series connectors attach to a cable with a Press & Seal™ backshell that provides the refined look and performance of an overmolded product.

Packaging (intuitive, compact, configurable)

- Pulse-Lok® auto-latch / mating confirmation
- Miniature .700" diameter circular shell
- Up to 27 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)
- Sterilizable
- Chemical resistant housing
- Up to 5,000 mating cycles (with std. Contacts)
- Rugged Metal Shell

SPECIFICATIONS

Electrical (see below)

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

Material

Connector Housing: Nickel Plated Brass
Flex Reliefs: Thermoplastic Rubber
Contacts: Brass / BeCu,
Gold Plate per MIL-G-45204
Reusable Socket = 30-45μ" Gold over 50-200μ" Nickel strike
Disposable Pin = 10-30μ" Gold over 50-200μ" Nickel strike

Mechanical

Mating Cycles: 5K cycles max
Retention Force:
• Mated Connectors: 25 lbs. Minimum
• Cable to Connector: 35 lbs. Typical
• Backshell to Connector: 45 lbs. Minimum

Housing Styles (Page 2)

- Plug: In-Line
- Receptacles: Front & Rear Panel-Mount
- Receptacles: In-Line

Environmental

- Operating Temp: -20C to +125C**
- Moisture Resistance: to IP-67 (encapsulated)
- Sterilizable: gamma, EtO & Autoclave
- Chem. Resistance: common OR cleaning solvents

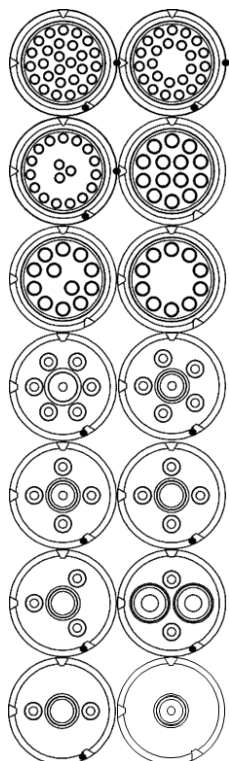
* post conditioning

**Dependent on overmold material

TABLE A:

STANDARD CONTACT CONFIGURATIONS & SPECIFICATIONS

Up to 27 Contact Positions



Number of Poles	Contact Size Pin ϕ (mm)	Max Wire Gauge	Operating Voltage Max	Operating Current Max (A)	Contact Resistance (ohms)
27	0.5	26	300 V RMS	0.5	<14m
24	0.5	26	300 V RMS	0.5	<14m
18	0.5	26	300 V RMS	0.9	<14m
14	0.7	22	300 V RMS	0.9	<6m
12	0.7	22	300 V RMS	1.2	<6m
10	0.7	22	300 V RMS	2.0	<6m
7	0.7	22	300 V RMS	2.1	<6m
6	0.7	22	300 V RMS	2.1	<6m
5	0.7	22	300 V RMS	2.4	<6m
4	0.7	22	300 V RMS	2.4	<6m
2+2	2(1.5)-2(0.7)	2(16)-2(22)	300 V RMS	7.0/3.0	<6m
3	0.7	22	300 V RMS	3.0	<6m
2	0.7	22	300 V RMS	3.0	<6m
2	1.5	16	300 V RMS	13.0	<2m
1	0.7	22	300 V RMS	3.0	<6m
1	2.3	12	300 V RMS	15.0	<2m

Custom contact inserts are available. Consult factory.

Standard Hybrid Circuit Arrangements
Coaxial & Custom Circuits Available

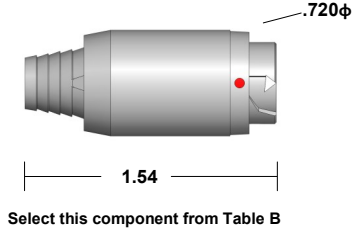
PL-700SM-B SERIES

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

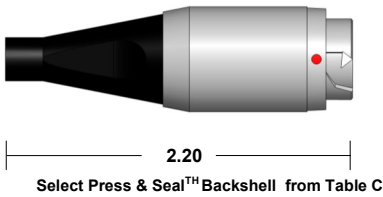
STANDARD HOUSING OPTIONS

In-Line Receptacles

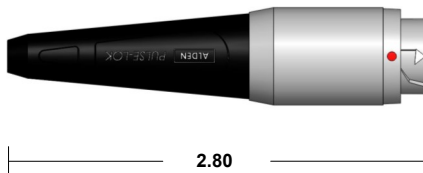
In-Line Receptacle Kit



In-Line Receptacle Kit (w/ optional Press & Seal™ Backshell)

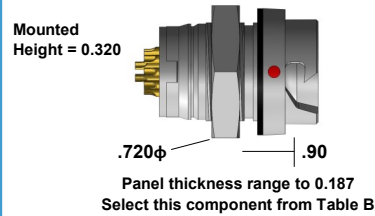


In-Line Receptacle Kit (w/ overmolded strain relief)



Panel-Mount Receptacles

Front Panel-Mount Receptacle Assembly

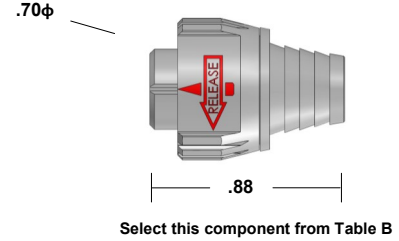


Front Panel-Mount Receptacle Dust Cover

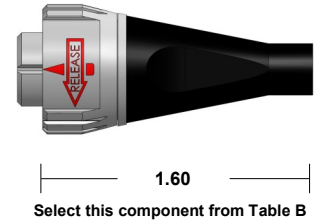


In-Line Plugs

In-Line Plug Assembly



In-Line Plug Kit (for overmolding)



In-Line Plug Assembly (w/ overmolded strain relief)



TABLE B:

STANDARD PART NUMBERS

Number of Poles	In-Line Receptacle	Front Panel-Mount Receptacle		In-Line Plug	In-Line Plug (Release Tabs)
	Solder Cup	Solder Cup	PCB	Solder Cup	Solder Cup
27	357062	356062	356149	355062	353062
24	357131	356131	356209	355131	353131
18	357125	356125	356203	355125	353125
14	357048	356048	356143	355048	353048
12	357119	356119	356197	355119	353119
10	357113	356113	356191	355113	353113
7	357104*	356028*	356137*	355028*	353028*
6	357107*	356107*	356185*	355072*	353072*
5	357101*	356071*	356179*	355071*	353071*
4	357095*	356095*	356173*	355095*	353095*
2(16)+2(22)	357020*	356020*	-	355020*	353020*
3	357059*	356089*	356167*	355089*	353089*
2 (22)	357080*	356080*	356161*	355080*	353080*
2 (16)	357083*	356077*	-	355077*	353077*
1 (22)	357071*	356101*	356155*	355101*	353101*
1 (12)	357006*	356006*	-	355006*	353006*

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

Options Include:

Indicator Color Options Red (Std.), White, Black
Mating Key Options 2 Standard Keys, Proprietary Keys Available
Panel-Mount Thickness Options Up to .125 Standard

*Press & Seal™ contacts, crimp or solder termination

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

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www.amphenolalden.com

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CONNECTOR TERMINATION OPTIONS

Contact Termination

Press & Seal™ Features & Benefits

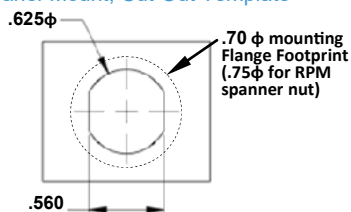
- Contacts provide IP-67 watertight seal when inserted into insulator
- Easy crimp & poke installation
- Excellent contact retention
- Contacts may be crimped or soldered

Press & Seal™ Contact System



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

Panel-Mount, Cut-Out Template



Applies to both Front & Rear Panel-Mount Receptacles

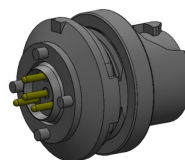
Solder Cup (Available for All)



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

PCB (Panel-Mount Receptacles only)



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 contact cures may be soldered to PCB and snapped into panel-mounted receptacle housing later

Front Panel-Mount Receptacle



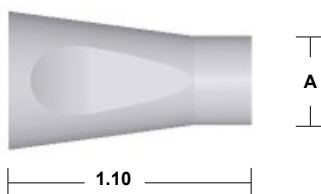
P/N 300390

Plug Soaking Cap



P/N 300391

Plug Backshell



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.

ACCESSORIES

Dimension A	Part #	Part #
(Inches)	(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

Note: accessories sold separately

Receptacles:

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)
 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)

Plugs:

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)

ASSEMBLY INSTRUCTIONS

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

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