

PL-700SM-N FEATURES



Compact and configurable, the **Pulse-Lok®** 700SM-N Series connectors are Amphenol Alden's most versatile offering in a package diameter less than three quarters of an inch. From our highest density 27 pole, to our popular power and signal 2+2 option, the **Pulse-Lok®** 700SM-N series can support your diverse interconnect requirements.

Overview (intuitive, compact, configurable)

- **Pulse-Lok®** auto-latch / mating confirmation
- Miniature 0.700" diameter circular shell
- Up to 27 contact positions
- 6 color options in a variety of combinations
- 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 design requirements

SPECIFICATIONS

Material

Connector Housing: Polyamide 12 (LV3H)
Molded Contact Insulator (core):
Polyamide 12 (LV3H) (1P-7P)
LCP(10P-27P)
Contacts: Brass / Phosphor Bronze
• 30µ" Gold over 50µ" Nickel
Flammability Rating
• Housing & Coupler: 94HB
• Molded Contact Insulator (core): UL94 V-0

Mechanical

Mating Cycles: 5,000
Mating Force:
• Mate: 13.5 lbs. Max
• Un-mate: 3.0 lbs. Max
• Unintended extraction: 30 lbs. Min.
• Backshell Withdrawal: 5.0lbs. Min.***

Environmental

- Operating Temp: -20C to +105C**
- Moisture Resistance: to IP-67 (mated)
- Sterilizable: gamma & EtO**
- Chem. Resistance: common OR cleaning solvents

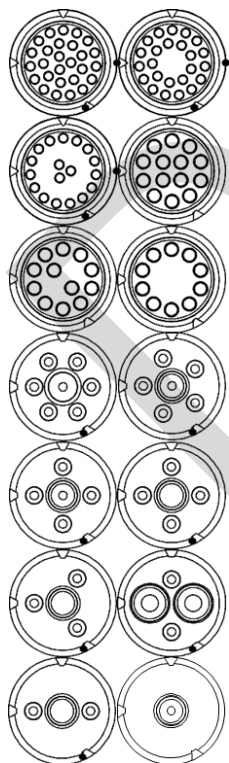
**Dependent on overmold material

***Backshell sold separately

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)*	Mated Contact Resistance (m Ω)
27	0.5	26	300 V RMS	2.0	<50
24	0.5	26	300 V RMS	2.0	<50
18	0.5	26	300 V RMS	2.0	<50
14	0.7	22	300 V RMS	3.0	<50
12	0.7	22	300 V RMS	3.0	<50
10	0.7	22	300 V RMS	3.0	<50
7	0.7	22	300 V RMS	3.0	<50
6	0.7	22	300 V RMS	3.0	<50
5	0.7	22	300 V RMS	3.0	<50
4	0.7	22	300 V RMS	3.0	<50
2+2	2(1.5)-2(0.7)	2(16)-2(22)	300 V RMS	8.0/3.0	<50
3	0.7	22	300 V RMS	3.0	<50
2	0.7	22	300 V RMS	3.0	<50
2	1.5	16	300 V RMS	8.0	<50
1	0.7	22	300 V RMS	3.0	<50
1	2.3	12	300 V RMS	16.0	<50

*30C Heat Rise Limit

Custom contact inserts are available. Consult factory.

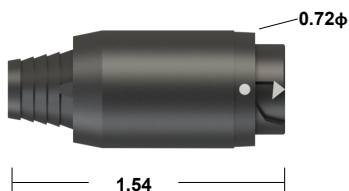
PL-700SM-N SERIES

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

STANDARD HOUSING OPTIONS

Cable Mount Receptacles

Cable Mount Receptacle Kit



Select this component from Table B

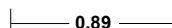
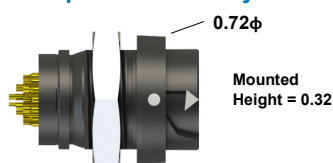
Cable Mount Receptacle Assembly (w/ optional Press & Seal™ Backshell)



Select Press & Seal™ Backshell from Table C

Panel-Mount Receptacles

Front Panel-Mount Receptacle Assembly



Panel thickness range to 0.187
Select this component from Table B

Rear Panel-Mount Receptacle



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 this component from Table B

Note: Standard color configuration is black on black.
See our online configurator for more color options at:
www.amphenolalden.com/configurator

Note: Dimensions are stated in inches unless noted otherwise.

TABLE B:

STANDARD PART NUMBERS

Number of Poles	Cable Mount Receptacle	Front Panel-Mount Receptacle		FPM Receptacle (w/ Dust Cap)	Rear Panel-Mount Receptacle		Cable Mount Plug	Cable Mount Plug (Breakaway)
	Solder Cup	Solder Cup	PCB	Solder Cup	Solder Cup	PCB	Solder Cup	Solder Cup
27	300322	300196	330196	301589	301365	331196	300112	301784
24	301270	301004	330336	301575	301351	331336	300850	301778
18	301242	300990	330322	301561	301337	331322	300822	301772
14	300294	300182	330182	301547	301323	331182	300084	301766
12	301214	300976	330308	301533	301309	331308	300794	301760
10	301186	300962	330294	301519	300697	331294	300766	301754
7	300266*	300168*	330168*	301505*	300683*	331168*	300056*	301748*
6	301158*	300948*	330280*	301471*	300669*	331280*	300738*	301742*
5	301130*	300934*	330266*	301477*	300655*	331266*	300710*	301736*
4	301102*	300920*	330252*	301449*	300627*	331252*	300482*	301730*
2(16)+2(22)	300238*	300154*		301463*	300641*		300028*	301724*
3	300543*	300529*	330238*	301603*	301379*	331238*	300501*	301718*
2 (22)	301046*	300892*	330224*	301421*	300599*	331224*	300428*	301712*
2 (16)	301074*	300906*		301435*	300613*		300500*	301706*
1 (22)	301018*	300878*	330210*	301497*	300585*	331210*	300400*	301700*
1 (12)	300210*	300140*		301393*	300571*		300000*	301790*

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:

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

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

Phone: 1(508) 427-7000
E-mail: Info@AmphenolAlden.com
www.AmphenolAlden.com

PL-700SM-N SERIES

Plastic Shell Auto-Coupling Connectors 27 pole capacity circular shell connectors

CONNECTOR TERMINATION OPTIONS

Contact Termination

Press & Seal™ Features & Benefits

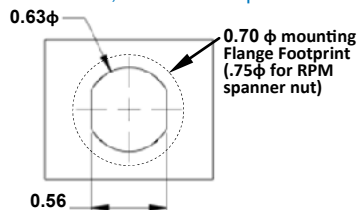
- Contacts provide IP-67 watertight seal when inserted into insulator
- Easy crimp & poke installation
- Excellent contact retention
- Contacts may be crimped or soldered

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

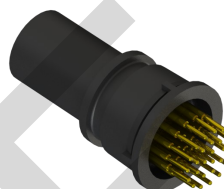
Solder Cup (Available for All)



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

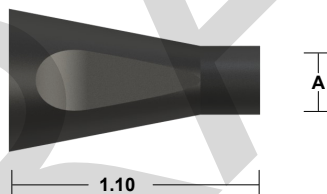
ACCESSORIES

Front Panel-Mount Receptacle Dust Cover



P/N 300390

Backshell



Plug Soaking Cap



P/N 300391

The PL-700 plug housing is designed to accept Amphenol Alden's one piece, 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 from the table to the right.

Dimension A	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: Black (std.) Gray (optional) & accessories sold separately

Cable Mount Receptacle Instructions:

- AI-PL700SMN-IR01 (1Pole, 12AWG)
- AI-PL700SMN-IR02 (2+2Pole, 16/22AWG)
- AI-PL700SMN-IR03 (1-7Pole, 22AWG)
- AI-PL700SMN-IR04 (10-14Pole, 22AWG)
- AI-PL700SMN-IR05 (18-27Pole, 26AWG)

Panel-Mount Receptacle Instructions:

- AI-PL700SMN-PMR01 (1Pole, 12AWG)
- AI-PL700SMN-PMR02 (2+2Pole, 16/22AWG)
- AI-PL700SMN-PMR03 (1-7Pole, 22AWG)
- AI-PL700SMN-PMR04 (10-14Pole, 22AWG)
- AI-PL700SMN-PMR05 (18-27Pole, 26AWG)

Cable Mount Plug Instructions

- AI-PL700SMN-P01 (1Pole, 12AWG)
- AI-PL700SMN-P02 (2+2Pole, 16/22AWG)
- AI-PL700SMN-P03 (1-7Pole, 22AWG)
- AI-PL700SMN-P04 (10-14Pole, 22AWG)
- AI-PL700SMN-P05 (18-27Pole, 26AWG)

ASSEMBLY INSTRUCTIONS

Note: recommended tooling included in assembly instructions

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

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