



### PL-700SM-N FEATURES

Compact and configurable, the PL-700SM-N Series connector is Amphenol Alden's most versatile offering in a sub .700" diameter package. PL-700SM-N 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
- 16 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: Thermoplastic  
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 +105C\*\*
- Moisture Resistance: to IP-67 (encapsulated)
- Sterilizable: gamma, EtO & Autoclave
- Chem. Resistance: common OR cleaning solvents

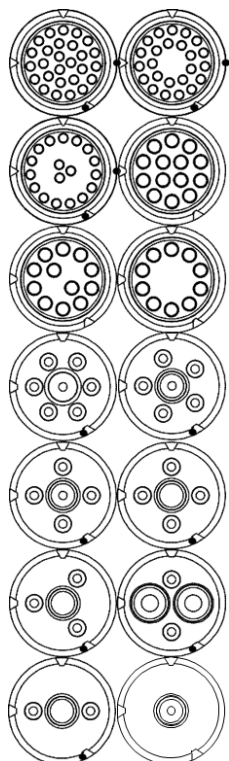
\* post conditioning

\*\*Dependent on overmold material

TABLE A:

STANDARD CONTACT CONFIGURATIONS & SPECIFICATIONS

#### Up to 27 Contact Positions



| Number of Poles | Contact Size Pin $\phi$ (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

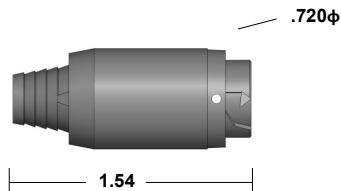
# PL-700SM-N SERIES

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

## STANDARD HOUSING OPTIONS

### In-Line Receptacles

#### In-Line Receptacle Kit



Select this component from Table B

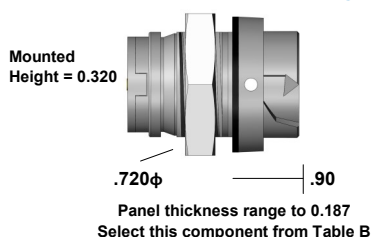
#### In-Line Receptacle Kit (w/ optional Press & Seal™ Backshell)



Select Press & Seal™ Backshell from Table C

### Panel-Mount Receptacles

#### Front Panel-Mount Receptacle Assembly



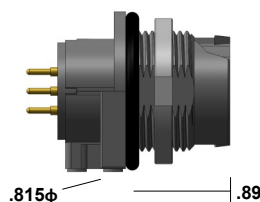
Select this component from Table B

#### Front Panel-Mount Receptacle (w/ Dust Cover)



Select this component from Table B

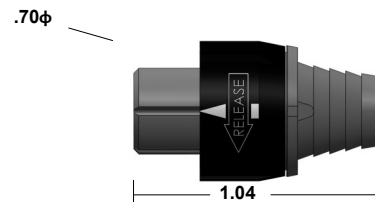
#### Rear Panel-Mount Receptacle



Select this component from Table B

### In-Line Plugs

#### In-Line Plug Assembly



Select this component from Table B

#### In-Line Plug Kit (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](http://www.amphenolalden.com/configurator)

TABLE B:

STANDARD PART NUMBERS

| Number of Poles | In-Line Receptacle | Front Panel-Mount Receptacle |         | FPM Receptacle (w/ Dust Cap) | Rear Panel-Mount Receptacle |         | In-Line Plug | In-Line 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* | 301477*                      | 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](http://www.amphenolalden.com/configurator)

#### Options Include:

Housing Color Options Black & Gray  
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.

Phone: 508-427-7000  
Fax: 508-583-0164  
[www.amphenolalden.com](http://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

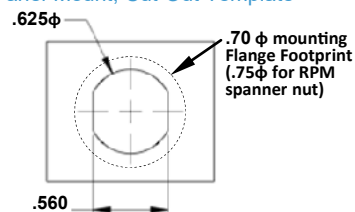
- Contacts provide IP-67 watertight seal when inserted into insulator
- Easy crimp & poke installation
- Excellent contact retention
- Contacts may be crimped or soldered

#### 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

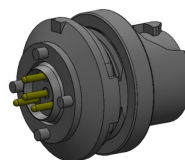
#### Solder Cup (Available for All)



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

#### Front Panel-Mount Receptacle Dust Cover

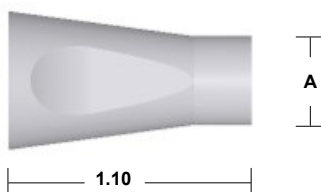


P/N **300390**  
Black (std.), Gray (opt.)  
Plug Soaking Cap



P/N **300391**  
Black (std.), Gray (opt.)

#### 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-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)  
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)

### Plugs:

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

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

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