

5 POLE MINI PL SPEC Pak®

Sealed Power For Environmental Connections

Marine | Wind Power | Lighting | Transportation | Pumps | Ground Support
Machine Tool | Industrial Automation | Motor | Solar Power | Harsh Environments

5 Position Mini PL SPEC Pak® is a rugged and environmentally sealed (IP68) connector with a secure manual release latch. This compact connector leverages the proven PowerMod® pin and socket contact technology, delivering capabilities up to 23 amps at 600 volts while handling wires from 24 to 12 AWG (0.5 to 2.5 mm²). The 30µ gold plated pins are available in 3 lengths, enabling sequenced contact mating options. These contacts sit inside UV and flame resistant shells that are touch safe on both sides.

Features

Manual Release Latch

- Prevents accidental un-mating

Pin & Socket Contacts

- Gold plated for greater connectivity

3 Pin Lengths Available

- Offers sequencing capabilities

Touch Safe per UL 1977 Sec. 10.2

- Touch safe on both pin & socket sides

Rugged & Environmentally Sealed Shells

- F1 weatherability rating per UL 746C
- V0 flammability rating per UL 94
- IP68, exceeds industry standards



Mechanical

Environmental Seal

IEC	IP 68
UL	50E

Wire

Size	24 to 12 AWG 0.5 to 2.5 mm²
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Sealing Options

Sealing Gland

Operating Temperature

-20 to 105°C
-4 to 221°F

Mating Cycles (no load)

500

Contact Retention Force

10 lbf
44 N

Mating Force (nominal)

3.5 lb
16 N

Touch Safe (UL 1977 Sec 10.2)

Pass

Latch Strength (nominal)

34 lb
155 N

Materials

Shell	PC
Latch	PC
Flammability	UL 94 V-0
Weatherability	UL 764C / 12mm F1
Sockets	
Socket Body	Copper Alloy, 200 µ inch Sn over Ni
Socket Contact	Copper Alloy, 30 µ inch Au over Ni
Pin	
	Copper Alloy, 30 µ inch Au over Ni

NOTE: Sn = tin Ni = nickel Au = Gold

Electrical

Current Rating (Amperes)

UL 1977	23
CSA (30°C Rise)	16

Voltage Rating

UL 1977 (AC/DC)	600
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Dielectric Withstanding (AC)

2200

Contact Resistance (average)

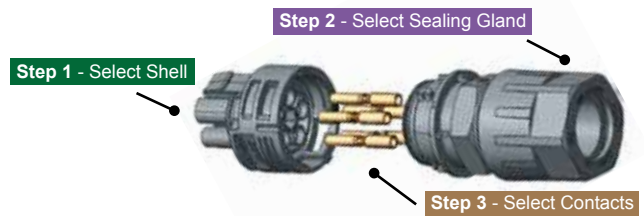
3 Milliohms

UL US File No. E26226

SP © CSA Certified
File No. LR25154

| ORDERING INFORMATION |

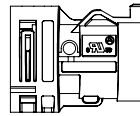
SPEC Pak® Mini PL Series is a highly configurable environmentally sealed connector that can be purchased as components in bulk for volume production, or pre-packaged as a kit. Configuring a connector is an easy three step process.



Step 1: Select Shell

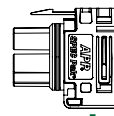
SPEC Pak® Shell Kits (sealing glands & contacts sold separately)

Description	- Part Numbers -
Minimum Quantity	25
Male, Receptacle Shell	SK1-021M05
Female, Plug	SK6-021M05
Female, Jam Nut	SK7-021M05
Female, Cover	SK9F-021
Male, Cover	SK9M-021



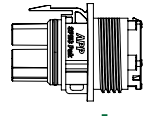
SK1-021M05
Male Receptacle

Mates With:



SK6-021M05
Female Plug

OR



SK7-021M05
Female Panel, Jam Nut

Step 2: Select Sealing Gland

FAQ

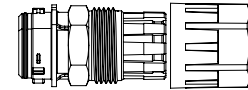
Q: Do I need a sealing gland?

A: For IP68 rating, sealing glands are required with SK1-021M05 & SK6-021M05.

A: For splash resistance in the unmated condition, use optional wire sealing grommets with SK7-021M05. (See accessories on page 4).

Q: How do I select the appropriate sealing gland?

A: Identify the number of wires that will be used. Number of wires: _____
Identify the outer diameter (OD) of those wire(s). OD of the wires: _____



Material

Shell	PC
Sealing Grommet	EPDM
Flammability	UL94 V0
Color	Black

Torque Requirements

Hand tighten until snug, using a wrench tighten an additional 1/4 to 1/2 turn.

Wrench Size 24

Mechanical

Operating Temperature

-20° to 105°C
-4° to 221°F

Bundled Cable

Number of Wires	Cable Range Wire Outer Diameter (OD) mm (in)	Part - Numbers -	Connector Kit Designation
Minimum Quantity	25		
1	14.0 to 15.5 (0.55-0.61)	PS1T24-15X	PS 01
1	11.0 to 14.0 (0.43-0.55)	PS1T24-14X	PS 02
1	6.5 to 11.0 (0.26-0.43)	PS1T24-11X	PS 03
1	4.0 to 6.5 (0.16-0.26)	PS1T24-7X	PS 04
1	3.0 to 4.1 (0.12-0.16)	PS1T24-4X	PS 05
1	2.0 to 3.1 (0.08-0.12)	PS1T24-3X	PS 06
1	1.0 to 2.0 (0.04-0.08)	PS1T24-2X	PS 07

Discrete Wires

Number of Wires	Cable Range Wire Outer Diameter (OD) mm (in)	Part - Numbers -	Connector Kit Designation
Minimum Quantity	25		
3	3.5 to 4.5 (0.14-0.18)	PS3T24-5X	PM 31
3	2.6 to 3.6 (0.10-0.14)	PS3T24-4X	PM 32
3	2.0 to 2.8 (0.08-0.11)	PS3T24-3X	PM 33
3	1.0 to 2.0 (0.04-0.08)	PS3T24-2X	PM 34
4	3.5 to 4.5 (0.14-0.18)	PS4T24-5X	PM 41
4	2.6 to 3.6 (0.10-0.14)	PS4T24-4X	PM 42
4	2.0 to 2.8 (0.08-0.11)	PS4T24-3X	PM 43
4	1.0 to 2.0 (0.04-0.08)	PS4T24-2X	PM 44
5	3.5 to 4.5 (0.14-0.18)	PS5T24-5X	PM 51
5	2.6 to 3.6 (0.10-0.14)	PS5T24-4X	PM 52
5	2.0 to 2.8 (0.08-0.11)	PS5T24-3X	PM 53
5	1.0 to 2.0 (0.04-0.08)	PS5T24-2X	PM 54

Step 3: Select Contacts

FAQ

Q: What should I consider when selecting the contacts?

A: Determine the number of amps (continuous and peak). See temperature charts.

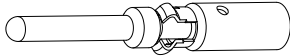
Amps (continuous) _____ at _____ volts & Peak Amps _____ for _____ seconds

Q: Which contacts are used in each shell?

A: Pins are used in SK1-021M05 (male receptacle).

Sockets are used in SK6-021M05 (female plug) & SK7-021M05 (female panel mount, jam nut)

Pin Contacts (PowerMod® Series) - (For pre-mate and post-mate contacts for sequencing, contact the factory)



Type	AWG	mm ²	----- Part Numbers -----		Connector Kit Designation
Minimum Quantity			500	50	
Standard Length 7.7					
Pin	24 to 20	0.25 to 0.50	PM16P2024S30	PM16P2024S30-50	P56
Pin	20 to 16	0.50 to 1.30	PM16P1620S30	PM16P1620S30-50	P55
Pin	16 to 14	1.30 to 2.10	PM16P1416S30	PM16P1416S30-50	P54
Pin	12	2.5	PM16P12S30	PM16P12S30-50	P57

Hand Tool	Pneumatic Tool			Insertion Tool	Extraction Tool
	Tool	Die	Locator		
PM1000G1	TM0001	N/A	TL0001	PM1002G1	PM1003G1

Socket Contacts (PowerMod® Series)

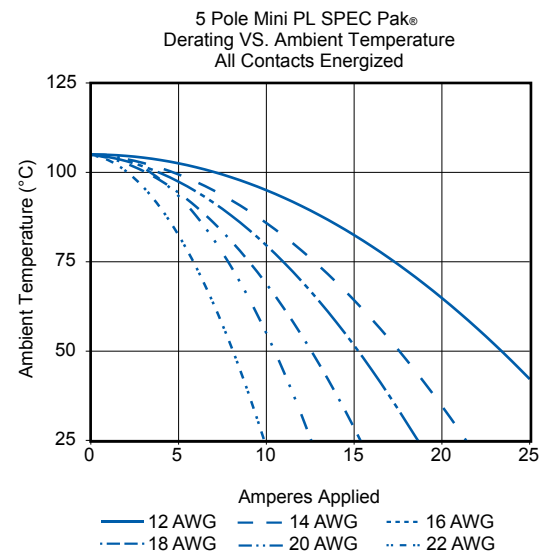
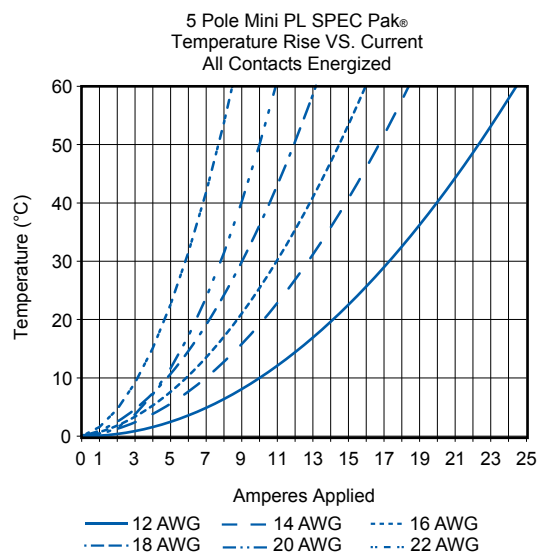


Type	AWG	mm ²	----- Part Numbers -----		Connector Kit Designation
Minimum Quantity			500	50	
Socket	24 to 20	0.25 to 0.50	PM16S2024S32	PM16S2024S32-50	S56
Socket	20 to 16	0.50 to 1.30	PM16S1620S32	PM16S1620S32-50	S55
Socket	16 to 14	1.30 to 2.10	PM16S1416S32	PM16S1416S32-50	S54
Socket	12	2.5	PM16S12S32	PM16S12S32-50	S57

Hand Tool	Pneumatic Tool			Insertion Tool	Extraction Tool
	Tool	Die	Locator		
PM1000G1	TM0001	N/A	TL0002	PM1002G1	PM1003G1

NOTE: APP tooling is required for UL & CSA compliance. Use of unapproved tools will void the connectors warranty.

| TEMPERATURE CHARTS |



| CONNECTOR KIT - PART NUMBER CONFIGURATOR |

Step 1 Select Shell				Step 2 Select Sealing Gland		Step 3 Select contact	
Series	Color	Shell Style ¹	Shell Size	Insert Arrangement	Wire Protection ¹	Housing & Contacts Arrangement ²	
S	K	1	- 021	M05	PS	01	- P56
1 = Male, Receptacle (Pins) 6 = Female Plug (Sockets) 7 = Female Panel Mount Jam Nut (Sockets)						P56 = 20 - 24 AWG Pin P55 = 16 - 20 AWG Pin P54 = 14 -16 AWG Pin P57 = 12 AWG Pin	
021							
M05							
00 = No Wire Protection						S56 = 20 - 24 AWG Socket	
PS = Plastic Single Hole						S55 = 16 - 20 AWG Socket	
PM = Plastic Multi-Hole						S54 = 14 - 16 AWG Socket	
00 = No Wire Protection						S57 = 12 AWG Socket	
01 thru 99 = See page 3 for selection							

¹ See page 2 for more informaton | ² See page 3 for more information

| ACCESSORIES (optional) |

Wire Seal Accessories for use with SK7-021M05

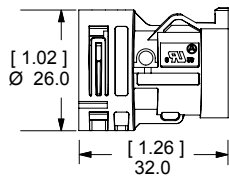
Description	----- Part Numbers -----	
Minimum Quantity	1	50
Wire Seal Retainer	2-8775P1	-
Grommet, wire range 1.2 - 1.9mm (0.047" - 0.075") OD, Orange	114916P1	114916P1-50
Grommet, wire range 1.9 - 2.4mm (0.75" - 0.090") OD, Yellow	114916P2	114916P2-50
Grommet, wire range 2.5 - 3.2mm (0.100" - 0.130") OD, Tan	114916P3	114916P3-50
Sealing Plug, white	114916P1	114916P4-50

Covers

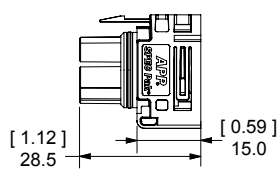
Description	- Part Numbers -
Minimum Quantity	25
Female Cover	SK9F-021
Male Cover	SK9M-021

| DIMENSIONS |

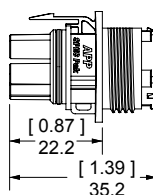
Male Receptacle SK1-021M05



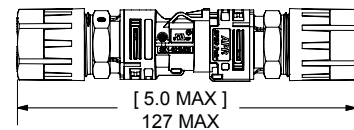
Female Plug SK6-021M05



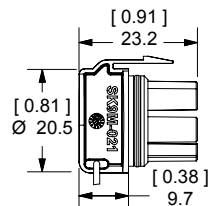
Female Panel Mount SK7-021M05



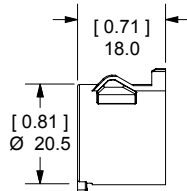
SK1-021M05 & SK6-021M05 (mated)



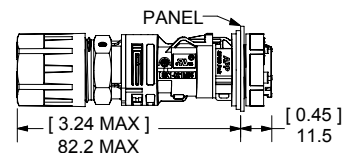
Male Cover SK9M-021



Female Cover SK9F-021



SK1-021M05 & SK7-021M05 (mated)



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HEADQUARTERS: Anderson Power Products®, 13 Pratts Junction Road, Sterling, MA 01564-2305 USA T:978-422-3600 F:978-422-0128

EUROPE: Anderson Power Products® Ltd., Unit 3, Europa Court, Europa Boulevard, Westbrook, Warrington, Cheshire, WA5 7TN United Kingdom T: +44 (0) 1925 428390 F: +44 (0) 1925 520203

ASIA / PACIFIC: IDEAL Anderson Asia Pacific Ltd., Unit 922-928 Topsail Plaza, 11 On Sum Street, Shatin N.T., Hong Kong T: +(852) 2636 0836 F: +(852) 2635 9036

CHINA: IDEAL Anderson Technologies (Shenzhen) Ltd., Block A8 Tantou Western Industrial Park, Songgang Baoan District, Shenzhen, P.R. China 518105 T: +(86) 755 2768 2118 F: +(86) 755 2768 2218

TAIWAN: IDEAL Anderson Asia Pacific Ltd., Taiwan Branch, 4F.-2, No.116, Dadun 20th St., Situn District, Taichung City 407, Taiwan (R.O.C.) T: +(886) 4 2310 6451 F: +(886) 4 2310 6460

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