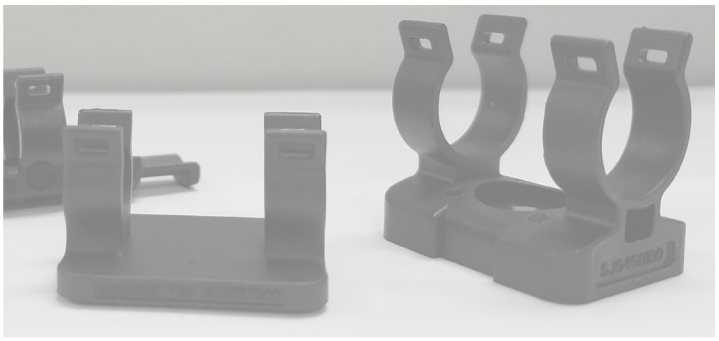
Amphenol Pcd

LUMINUS
GUIDE 2018



LUMINUS

Description:

Luminus are lightweight, cost-effective connectors that are highly reliable and simple to use. With multiple configurations and arrangements available, a solution can be tailored to suit your application's exact requirements. Proven solutions can be found in single engine general aviation, multiple-engine business and passenger jets, and high performance rotary aircraft. Ideal where space is limited, these innovative, "scoop-proof" connectors feature a locking mechanism that ensures stability, are suitable for blind-mating, and are RoHS compliant.

Features and Benefits:

1/4 turn bayonet style connection; push and snap connection - Makes wire installation and maintenance easy and efficient; positive "click" when locked

Interfacial and Triple-Barrier Seal - Enables environmental sealing (IP 67 rating)

Multiple Keying Positions - Ensures proper connectivity

Multiple Configurations and Accessories - Tailored solutions to meet application needs

Contacts - AS39029 MIL Spec contacts for broad application compatibility. Stamped & Formed available as lower cost option

Visual markings - Visual aid for easy assembly

Rugged Polyamide Housings; 500 mating cycles - Durability

Blind-Mate Connection - Enables simple, blind mating; easy assembly

D160, M81714, FAR25 Compliance-Meets demanding military-aerospace environmental conditions

Typical Applications:

- Aerospace Lighting
- Power & Signal Distribution
- Cabin Service Systems
- Actuation & Sensors

LUMINUS

Shell Size

05 (max dia: 0.318)

2, size 22, Twist & Lock

3, size 22, Twist & Lock

06 (max dia: 0.390)

1, size 16 & 20, Push & Pull

07 (max dia: 0.448

6, size 22, Twist & Lock

8, size 22, Twist & Lock

1, size 12, Push & Pull

08 (max dia: 0.528)

4, size 16 , Twist & Lock

5, size 22, Twist & Lock

9: 1, size 16; 8 size 22 Twist & Lock

9, size 22Twist & Lock

3, size 16 Twist & Lock

3, size 20 Push & Pull

10 (max dia: 0.630)

9: 4, size 16; 5 size 22Twist & Lock

10: 4, size 16; 6 size 22 Twist & Lock

11 (max dia: 0.700)

3, size 12, Twist & Lock

3, size 16, Push & Pull

14 (max dia: 0.875)

25, size 22, Twist & Lock

LUMINUS

Materials and Specifications

	Push & Pull	Twist & Lock	
Materials	Insulator Body: Polyamide 6/6 (Nylon)	Insulator Body: Polyamide 6/6 (Nylon)	
	Grommet: Silicone Rubber	Grommet & Face Seal: Silicone Rubber	
	Contact Retainer: Stainless Steel	Contact Retainer: Stainless Steel	
	Contacts: Copper Alloy Gold Plated		
Temperature Range	-65˚C to 125˚C	-65˚C to 125˚C	
Temperature Life	150 hours @ 95˚C	500 hours @ 85˚C	
Insulation Resistance	1500VAC, 60hz @ Sea Level	5000 MΩ Min. @ 500 VDC	
Dielectric Withstanding	1500 VAC, 60 Hz @ Sea Level, 1ma	1500 VAC, 60 Hz @ Sea Level, 1ma	
	300 VAC, 60 Hz @ 70,000 ft, 2ma	300 VAC, 60 Hz @ 70,000 ft, 2ma	
Durability	50 mating cycles	500 mating cycles	
Altitude Immersion	5% salt solution, 55k ft, DWV 1500VA	5% salt solution, 75k feet	
		5000Mohms @ 1500 VAC, sea level	
		5000Mohms @ 300 VAC, 70k ft	
		5000Mohms @ 300 VAC, 100k ft	
Temperature Cycling	5(1) Hour Cycles: 0 C to 95 C	5(1) Hour Cycles: -65˚C to 125˚C	
Thermal Shock	5(1) Hour Cycles: 0 C to 95 C	-65˚C to 200˚C	
Vibration	Contact Factory	30G Sinusoidal; 43.96G Random	
Shock		300G, 3msec, Half-Sine	
Salt Spray		5% Salt Spray @ 95˚C for 48 Hours	
Humidity	10 Days @ 25˚C to 65˚C, 90% - 95% RH	10 Days @ 25˚C to 65˚C, 90% - 95% RH	
Fluid Immersion		Lubricating Oil per Mil-Prf-7808	
		Cleaning Compound per Mil-Prf-87937, Alkaline Base	
		Isopropyl Alcohol & Mineral Spirit Solution	
	Skydrol Hydraulic Fluid	Skydrol Hydraulic Fluid	
	Hydraulic Fluids per MIL-PRF-83282 MIL-PRF-87257	Hydraulic Fluids per MIL-PRF-83282 MIL-PRF-87257	
	Ethylene Glycol	Ethylene Glycol	
	Propylene Glycol	Propylene Glycol	
	Aviation Jet A	Aviation Jet A	
Seal Rating	IP67	IP67	
Flammability	UL94, V0.	UL94, V0.	
		DOTG section 26.6.2 & 26.6.3	
		FAR Part 25 App F Part I	
RoHS & REACH Compliance	Yes	Yes	
Contact Insertion & Removal Force (not to exceed)	-	size 22	10 lbs
		size 20	10 lbs
		size 16	13 lbs
		size 12	15 lbs
Contact Retention (minimum)	-	size 22	10 lbs
		size 20	15 lbs
		size 16	25 lbs
		size 12	30 lbs

LUMINUS

Part Numbering (Twist & Lock)

# of Positions	Contact Size	Shell Size	Key	Color	Plug P/N	Inline Receptacle P/N	Circular Receptacle P/N	Square Receptacle PN	Jamnut PCB Mount	Oval Receptacle PN	Jam Nut Rear Mount Receptacle PN
1	Quadrax	8	-	-	SJS801110	SJS801120	-	SJS801130*	SJS801160*	SJS801170*	SJS801190*
2	22D	5	-	black	SJS830250	SJS830270	-	-	-	SJS502170	SJS502190
3	12	11	-	black	SJS103110*	SJS103120*	-	-	-	-	-
3	22D	5	-	black	SJS830210	SJS830230	-	-	-	SJS503170	SJ503190
3	20	7	-	white	SJS862300	SJS862400	-	SJS862450	-	-	-
3	16	8	A	white	SJS840310	SJS840300	SJS840320	SJS803730	-	-	-
3	16	8	B	black	SJS840340	SJS840350	SJS840330	SJS803130	-	-	-
3	12	10	-	-	SJS003110	SJS003120	-	-	-	-	-
3	12	11	-	black	SJS103110	SJS103120	-	-	-	-	-
4	16	8	A	white	SJS840410	SJS840400	SJS840420	SJS804730	SJS840760	-	SJS840790
4	16	8	B	white	SJS840440	SJS840450	SJS840430	-	-	-	-
4	20	7	-	black	SJS704110	SJS704120	-	-	-	-	-
5	22D	8	-	white	SJS860510	SJS860500	SJS860520	SJS805730	-	-	-
5	22D	8	-	white	SJS870510	-	SJS870520	-	-	-	-
6	22D	7	-	black	SJS861700	SJS861800	-	-	SJS706160	-	-
8	22D	7	A	black	SJS830100	SJS830200	-	SJS830220	SJS708160	SJS708170	SJS708190
8	22D	7	B	green	SJS830101	SJS830201	-	SJS830221	-	-	-
8	22D	7	C	yellow	SJS830102	SJS830202	-	SJS830222	-	-	-
9	22D	8	-	black	SJS862100	SJS862200	-	SJS809130	-	-	-
12	22D	8	-	white	SJS861300	SJS861400	-	SJS812730	SJS812760*	-	-
12	22D	11	A	black	SJS112110	SJS112120	-	-	SJS112160	-	-
12	22D	11	B	-	SJS112210	SJS112220	-	-	SJS112260	-	-
12	22D	11	C	-	SJS112310	SJS112320	-	-	SJS112360	-	-
12	22D	11	D	-	SJS112410	SJS112420	-	-	SJS112460	-	-
25	22D	14	A	black	SJS425110	SJS425120	-	-	SJS425160	-	-
25	22D	14	B	-	SJS425210	SJS425220	-	-	SJS425260	-	-
25	22D	14	C	-	SJS425310	SJS425320	-	-	SJS425360	-	-
25	22D	14	D	-	SJS425410	SJS425420	-	-	SJS425460	-	-
12	20	14	-	-	SJS412110	SJS412120	-	-	-	-	-
5	12 (3)	11	-	black	SJS1AE110*	SJ1AE120*	-	-	-	-	-
	22 (2)						-	-	-	-	-
9	16	8	-	white	SJS860100	SJS860200	-	-	-	-	-
	22D							-	-	-	-
9	16	10	-	white	SJS860910	SJS860900	-	SJS0AA730	-	-	-
	22D							-	-	-	-
10	16	10	-	white	SJS861100	SJS861200	-	SJS0A8730*	SJS0BB770*	-	-
	22D							SJS0AB730	SJS0AB770	-	-

Note: Above part numbers come without contacts; inquire within for "with contacts" part numbers
* SJS870510 uses pin contacts; SJS870520 uses socket contacts

*Available at extended lead timed.

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Part Numbering (Push & Pull)

Contact Size	Contact Qty	Shell Size	Key	Color	Plug P/N	Receptacle
12	1	7	n/a	blue	SJS512100	SJS512200
12	1	7	n/a	red	SJS512110	SJS512210
16	1	6	n/a	blue	SJS716100	SJS716200
16	1	6	n/a	red	SJS716110	SJS716210
20	1	6	n/a	green	SJS720100	SJS720200
20	1	6	n/a	yellow	SJS720110	SJS720210
16	3	11	A	red	SJS816100	SJS816200
16	3	11	B	white	SJS816110	SJS816210
16	3	11	C	blue	SJS816120	SJS816220
20	3	8	A	red	SJS820100	SJS820200
20	3	8	B	white	SJS820110	SJS820210
20	3	8	C	blue	SJS820120	SJS820220

Part Numbering (Accessories)

Shell Size	Strain Relief Single	Strain Relief Single 90°	Strain Relief Single 45°	Double Strain Relief	Double Side Tape Mount Cradle	Screw Mount Cradle	Tube Mount Cradle	Single Side Tape Tube Mount Cradle	Double Side Tape Tube Mount Cradle	Dummy Flanges	Hard Protective Caps
5	SJSA55000	SJSAA5100	SJSAA5200	SJSA56000	SJS257000	SJS257100	SJSA5V000	SJS5AV010	SJS5AV020	-	SJSA5B000
7	SJS450350	SJSA75100	SJSA75200	SJSA76000	SJS883000	SJS450250	SJSA7V000	SJSA7V010	SJSA7V020	SJS830220D	SJSA7B000
8	SJSA85000	SJSA85100	SJSA85200	SJSA86000	SJS445000	SJS450100	SJSA8V000	SJSA8V010	SJSA8V020	-	SJSA8B000
10	SJSA05000	SJSA05100	SJSA05200	SJSA06000	SJS991000	-	SJSA0V000	SJSA0V010	SJSA0V020	SJS0AA730D	SJSA0B000

LUMINUS

Contact Information: Machined and Stamped & Formed

Now with Quadrax & Fiber Optic (M29504) capability

Shipping Format	Loose (Tape & reel not included)
Mating Cycles	500
Materials	Contact Body: Copper Alloy
	Hood Stainless Steel
	Sleeve Stainless Steel

Dimensions	AS39029 Compatible
Plating Options	Machined Gold plate 50 micro-inches min over
	Stamped & Formed Selective gold plate over engagement area 3-5 micro-inches thick over nickel under plate

Contact Matrix

Contact Size	Contact Style	Available		Contact P/N		QPL Part No. (Machined Only)	Contact Retention	Crimp Tensile Strength
		Push-Pull	Twist-Lock	Machined	Stamped & Formed			
12	Pin	Yes	Yes	CNP058365	SCP058365	M39029/58-365	.012" [0,30mm] @ 30lbf [133N]	100lbf [445N]
	Socket	No	Yes	CNS057359	SCS057359	M39029/57-359		
	Socket-L	Yes	No	CNS056353	n/a	M39029/56-353		
16	Pin	Yes	Yes	CNP058364	SCP058364	M39029/58-364	.012" [0,30mm] @ 25lbf [111N]	40lbf [180N]
	Socket	No	Yes	CNS057358	SCS057358	M39029/57-358		
	Socket-L	Yes	No	CNS056352	n/a	M39029/56-352		
20	Pin	Yes	Yes	CNP058363	SCP058363	M39029/58-363	.012" [0,30mm] @ 20lbf [90N]	20lbf [90N]
	Socket	No	Yes	CNS057357	SCS057357	M39029/57-357		
	Socket-L	Yes	No	CNS056351	n/a	M39029/56-351		
22D	Pin	No	Yes	CNP058360	n/a	M39029/58-360	.012" [0,30mm] @ 10lbf [44N]	10 lbf [45N]
	Socket	No	Yes	CNS057354	n/a	M39029/57-354		

Contact Size	Wire Accommodations				Tool Information		
	Size (AWG)	Max Current Rating (A)	ØD Range	Strip Length	Basic Tool	Positioner	Insertion/Removal Tool
12	12	23	.097 - .142" [2,46 - 3,61mm]	.209 - .240" [5,31 - 6,10mm]	M22520/1-01	M22520/1-04 (Yellow)	M81969/14-04
	14	17					
16	16	13	.065 - .109" [1,65 - 2,77mm]	.209 - .240" [5,31 - 6,10mm]	M22520/1-01 M22520/7-01	M22520/1-04 (Blue) M22520/7-04	M81969/14-03
	18	10					
	20	7.5					
20	20	7.5	.040 - .083" [1,02 - 2,11mm]	.209 - .240" [5,31 - 6,10mm]	M22520/1-01 M22520/2-01 M22520/7-01	M22520/1-04 (Red) M22520/2-10 M22520/7-08	M81969/14-11
	22	5					
	24	3					
22D	22	5	.030 - .054" [0,76 - 1,37mm]	.141 - .172" [3,58 - 4,37mm]	M22520/2-01 M22520/7-01	M22520/2-06 M22520/7-06	M81969/14-01
	24	3					
	26	2					
	28	1.5					

AMPHENOL PCD PRODUCTS

BACKSHELLS

CABLE SOLUTIONS

CIRCULAR

GROUND BLOCKS

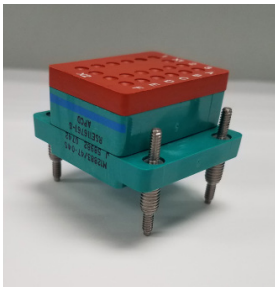
JUNCTION MODULES

LUMINUS

MILITARY AUDIO/POWER

PEGASUS SERIES

RECTANGULAR



RELAY SOCKETS

RUGGED SOLUTIONS

SIM

SOLARIS

SYSTEM ATTACHMENTS

Amphenol Pcd

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