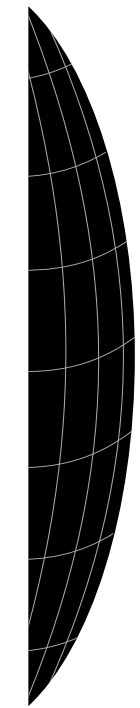




1900SIM CONNECTORS

The best of
EN3545 and EN4165 connectors

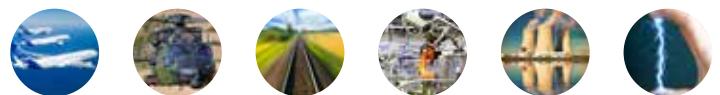


Commercial Aerospace
Defence



BROCHURE 03/15 - V3.0

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Amphenol Air LB
Your Satisfaction. Everyday. Everywhere.

PRESENTATION

1900SIM is a new rectangular, modular and sealed connector, in lightweight composite, Metallized or not.

WEIGHT SAVING

Derived from the legacy EN3545 connector shells, the 1900SIM series can be fitted with the whole EN4165 modules range.

1900SIM series consists of a Plug, a Receptacle (with or without flange) and Rear clip-in accessories, available with or without Plating : Bright Nickel, Olive Drab Cadmium and Black Zinc Nickel (RoHS).



3 Locking / Polarizing systems are available : Standard (by screw), Quick Lock and Quarter Turn ensuring 36 keying positions.

TIME SAVING

APPLICATIONS IN HARSH ENVIRONMENT

Commercial Aerospace - Defence - Rail & Mass Transit

REACH ET RoHS

All connector shells and modules are conformed to the REACH spec.
All modules are conformed to the RoHS spec.
All connector shells are conformed to the RoHS spec., except for Olive Drab Cadmium versions

MODULES

Power
Signal
Quadrx, Triax, Twinax, Coax
Fiber Optic Termini
RJ45 Ethernet (cat. 6)

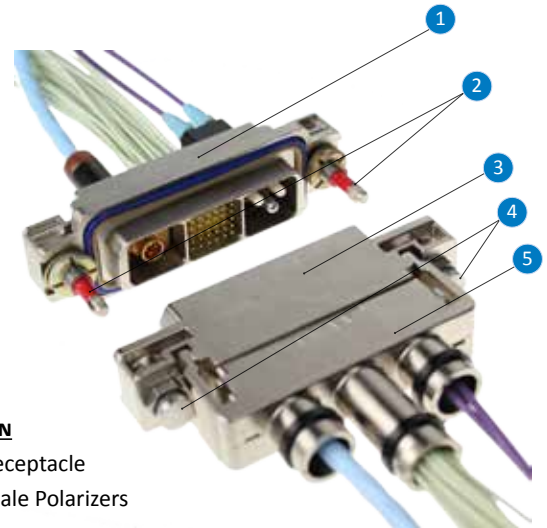
CONTACTS

Copper Alloy : Crimp or PCB contacts (straight or angled)
Size 22 to 8 : as per SAE-AS39029 standard
as per EN3155 standard

Size 23 : as per BACC47 standard
EN3155 standard pending

CAPTION

- 1 - Receptacle
- 2 - Male Polarizers
- 3 - Plug
- 4 - Female Polarizers
- 5 - Backshell



MAIN TECHNICAL FEATURES

MATERIAL

Shells : Thermoplastic
Plating : Nickel, Cadmium, Zinc Nickel alloy, or without plating
Modules : Thermoplastic and Silicone elastomer
Contacts : Copper alloy, Gold on Nickel plating

ENVIRONMENTAL

Operating temperature : -55° to +175° continuously
Salt Spray withstanding (BS) :

Plating (Plug + Receptacle mated)			
Without plating	Nickel	Cadmium	Zinc Nickel
/	500h	500h	500h

ELECTRICAL

Insulation resistance : \geq to 5000 M Ω

	Contact size						
	23	22	20	16	12	8	8
Withstanding voltage	1500 V RMS			1800 V RMS			
Max. current rating (A)	5	7,5	13	23	46	80	

MODULE RETENTION IN SHELL

25,4 daN

MECHANICAL

Shocks : 100g during 6 ms
Vibrations : 1g² / Hz up to 2000 Hz, 4 H per axis
Endurance : 500 full mating and unmating cycles
(100 cycles with the Quick Lock Polarizer)

SEALING

Intercavity : according to EN2591 test 324 pressure \leq 147 hPa
Crossing : a leak \leq 4 cm³/h under differential pressure of 1 bar
Interfacial : according to EN2591 test 314 pressure \leq 147 hPa

METALLIZATION RESISTANCE

Metallization continuity by conductive plating and grounding fingers
Nickel plating : $<$ 3 m Ω under 1 Amp per connection
Cadmium plating : $<$ 3 m Ω under 1 Amp per connection
Zinc Nickel plating : $<$ 3 m Ω under 1 Amp per connection

WEIGHT

Products		Without plating	With plating
Plug	/	10,20 g	13,70 g
Receptacle	Standard	9,90 g	11,75 g
	With flange	11,60 g	14,06 g
Accessories	Backshell (with integrated chimneys)	/	13,67 g
	Standard cable clamp	4,73 g	/
Locking / Polarization system (couple)	Standard (by screw)	7,31 g	
	1/4 turn	7,68 g	
	Quick Lock	9,38 g	

PART NUMBERING SYSTEM

CONNECTORS

Material :
Standard composite (without plating)
Shielded composite (with plating)

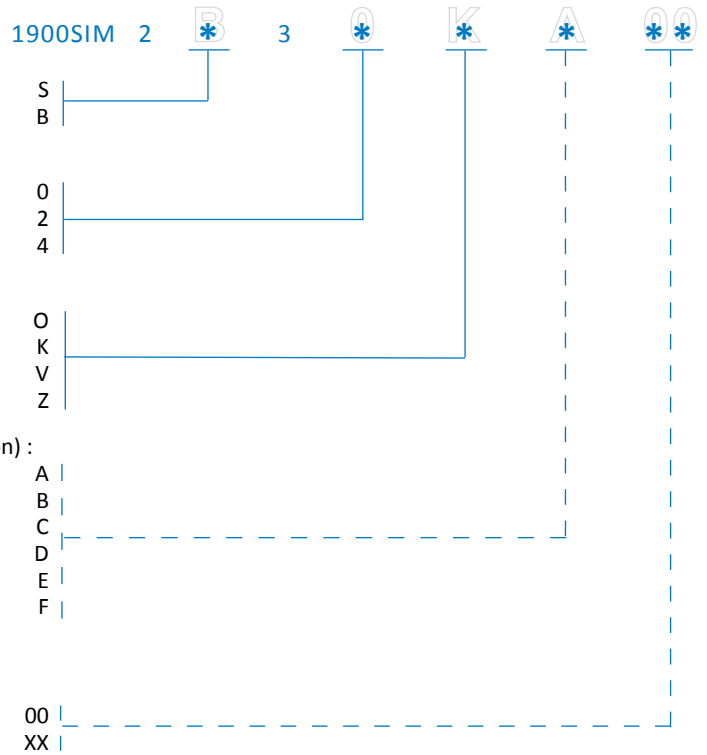
Shell Type :
Plug
Standard Receptacle
Flanged Receptacle

Plating / Shell metallization :
Without (S material only)
Bright Nickel (B material only)
Olive Drab Cadmium (B material only)
Black Zinc Nickel (B material only)

Equipment Code (Polarizer material according to shell metallization) :
O Shell delivered with its Female standard polarizers (by screw) ⁽¹⁾
P Shell delivered with its Male standard polarizers (by screw)
T Shell delivered with its Female 1/4 turn polarizers ⁽¹⁾
I Shell delivered with its Male 1/4 turn polarizers
O Shell delivered with its Female Quick Lock polarizers ⁽¹⁾
N Shell delivered with its Male Quick Lock polarizers
S Polarizing Code :
 Polarizers not mounted on shells
 Polarizers mounted and polarized on shells ⁽²⁾

⁽¹⁾ only for Plug and Standard Receptacle

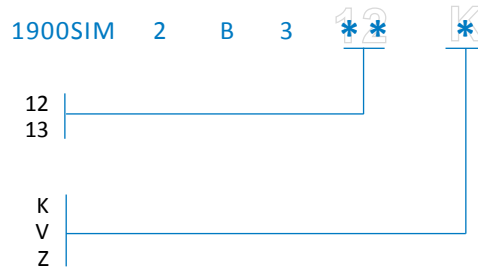
⁽²⁾ Ex : XX = 16 mean Polarizer 1 in position 1 / Polarizer 2 in position 6



METALLIZED ACCESSORIES

Rear Accessories :
Backshell with integrated chimneys
Backshell with removable chimneys (pending)

Plating / Accessories Metallization :
Bright Nickel
Olive Drab Cadmium
Black Zinc Nickel

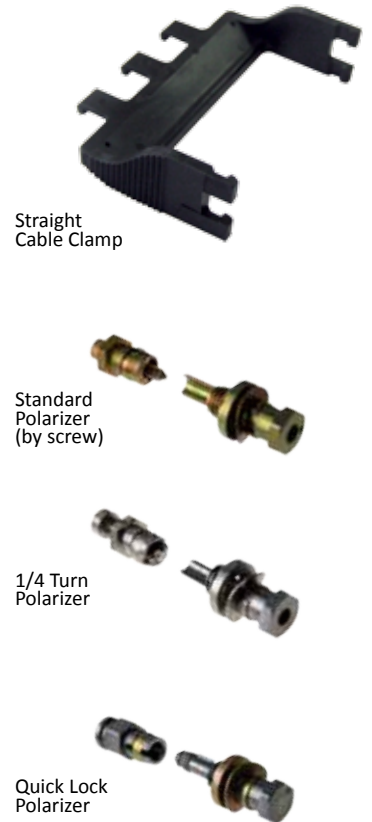


NOT-METALLIZED ACCESSORIES

Designation	Part Number
Standard Straight Cable-Clamp (For Standard Composite connectors)	001901 050 00
Standard Angled (90°) Cable-Clamp (For Standard Composite connectors)	001901 051 00

POLARIZERS AND TOOLS

Designation		Part Number
Standard Polarizers (by screw)	For Standard Composite or Olive Drab Cadmium connectors	Female F 001901 170 00 Male M 001901 160 00
	For Standard Composite or Bright Nickel connectors	Female F 3354 0240 027 CRS Male M 3354 0230 027 CRS
	For Standard Composite or Black Zinc Nickel connectors	Female F 3354 0240 103 CRS Male M 3354 0230 103 CRS
	For Standard Composite or Olive Drab Cadmium connectors	Female F 3354 0210 045 CRS Male M 3354 0200 045 CRS
1/4 Turn Polarizers	For Standard Composite or Bright Nickel connectors	Female F 3354 0210 027 CRS Male M 3354 0200 027 CRS
	For Standard Composite or Black Zinc Nickel connectors	Female F 3354 0210 103 CRS Male M 3354 0200 103 CRS
	For Standard Composite or Olive Drab Cadmium connectors	Female F 3357 0080 045 CRS Male M 3357 0070 045 CRS
Quick Lock Polarizers	For Standard Composite or Bright Nickel connectors	Female F 3357 0080 711 CRS Male M 3357 0070 711 CRS
	For Standard Composite or Black Zinc Nickel connectors	Female F 3357 0080 103 CRS Male M 3357 0070 103 CRS
	For Standard Composite or Olive Drab Cadmium connectors	Female F 3357 0080 045 CRS Male M 3357 0070 045 CRS
Tools	Quick Lock Polarizer mating/unmating tool	3357 1001 000 OUT
	Backshell removing tool	3357 1002 000 OUT



MODULES, CONTACTS AND TOOLS

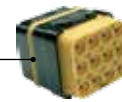
MODULE PROTECTION DURING TRANSPORTATION

Rigid protective Cap to avoid contact damages (pin contacts bended, dust in socket contacts) during transportation of Cable Harnesses
 - for both Pin and Socket modules
 - for modules with or without peripheral sealing



P/N : SIM201

Seal for peripheral sealing

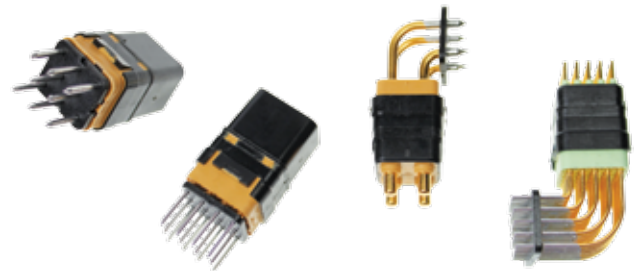


Without peripheral sealing

All Pin Modules [equipped with Pin Contacts] **can be mounted into both** Plugs and Receptacles
 All Socket Modules [equipped with Socket Contacts]

Modules					Crimp Contacts					Tools		
Module	Drawing	Layout	Air LB P/N Male Module	Air LB P/N Female Module	Size	Type	EN 3155 standard	Others spec.	Air LB P/N	Crimping tool	Locator	Insertion Extraction
		30 cts size 23	SIM * 3023 P*	SIM * 3023 S*	23	S	Pending	BACC47HB1	001704 001 02	M22520/2-01	K1461 (Daniels)	001112 010 25
						P		BACC47HA1	001714 001 02			
		20 cts size 22	SIM * 2022 P*	SIM * 2022 S*	22	S	003 S 2222	SAE-AS39029/57-354	001704 100 02	M 22520/2-01	M 22520/2-06 M 22520/7-06	M 81969/14-01 001112 100 25
						P	008 P 2222	SAE-AS39029/58-360	001714 100 02	M 22520/7-01	M 22520/2-09 M 22520/7-07	
		12 cts size 20	SIM * 1220 P*	SIM * 1220 S*	20	S	003 S 2020	SAE-AS39029/57-357	001704 203 02	M 22520/1-01 M 22520/2-01	M 22520/1-04 M 22520/2-10	M 81969/14-10 001112 250 25
						P	008 P 2020	SAE-AS39029/58-363	001714 203 02	M 22520/7-01	M 22520/7-08	
		8 cts size 16	SIM * 0816 P*	SIM * 0816 S*	16	S	003 S 1616	SAE-AS39029/57-358	001704 301 02	M 22520/1-01	M 22520/1-04	M 81969/14-03 001112 300 25
						P	008 P 1616	SAE-AS39029/58-364	001714 301 02	M 22520/7-01	M 22520/7-04	
		4 cts size 12	SIM * 0412 P*	SIM * 0412 S*	12	S	003 S 1212	SAE-AS39029/57-359	001704 400 02	M22520/1-01	M22520/1-04	M 81969/14-04 001112 400 25
						P	008 P 1212	SAE-AS39029/58-365	001714 400 02			
		1 ct size 8	SIM * 0108 P*	SIM * 0108 S*	8	S	066 F 0808		001704 700 02	M300 BT	SP593	
						P	065 M 0808		001714 700 02			
		1 ct Quadrax anti rotate on polarizer side	SIM * 0118 P*	SIM * 0118 S*	Q U A D R A X	S	075 F 08	/	001704 705 02	int : M 22520/2-01	int : K709	Extract. only M 81969/14-06 001112 700 25
						P	075 M 08		001714 705 02			
						S	075 F 08		001704 705 02			
		1 ct Quadrax anti rotate on polarizer opposite side	SIM * 0128 P*	SIM * 0128 S*	A R A X	P	075 M 08		001714 705 02	ext : M 22520/5-01	ext : M 22520/5-45	
						S	075 F 08		001704 705 02			
		5 cts size 22 + 6 cts size 16	SIM * 9901 P*	SIM * 9901 S*	22	S	003 S 2222	SAE-AS39029/57-354	001704 100 02	M 22520/2-01	M 22520/2-06 M 22520/7-06	M 81969/14-01 001112 100 25
						P	008 P 2222	SAE-AS39029/58-360	001714 100 02	M 22520/7-01	M 22520/2-09 M 22520/7-07	
						S	003 S 1616	SAE-AS39029/57-358	001704 301 02	M 22520/1-01	M 22520/1-04	M 81969/14-10
						P	008 P 1616	SAE-AS39029/58-364	001714 301 02	M 22520/7-01	M 22520/7-04	001112 250 25

Contacts	Modules with straight PCB cts		Modules with angled PCB cts	
Size	Air LB P/N Male Module	Air LB P/N Female Module	Air LB P/N Male Module	Air LB P/N Female Module
23	SIM * 3023 PNP	SIM * 3023 SNP	335* 7110 501	335* 7120 501
22	SIM * 2022 PNP	SIM * 2022 SNP	335* 7111 501	335* 7121 501
20	SIM * 1220 PNP	SIM * 1220 SNP	335* 7112 501	335* 7122 501
16	SIM * 0816 PNP	SIM * 0816 SNP	335* 7113 501	335* 7123 501
12	SIM * 0412 PNP	SIM * 0412 SNP	335* 7114 501	335* 7124 501
5cts size 22 + 6cts size 16	SIM * 9901 PNP	SIM * 9901 SNP	335* 7115 501	335* 7125 501



Specific Modules						Contacts	Tools
Module	Drawing	Layout	Air LB P/N Male Module	Air LB P/N Female Module	Module standard	Air LB P/N	Insertion Extraction
		6 fiber optic termini EN4639 std (ferrule 1,25 mm)	SIM * O 06LU PN	SIM * O 06LU SN	EN4830	Consult us	001112 300 25
		4 fiber optic termini EN4531 (ferrule 2,5 mm)	SIM * O 04EL PN	SIM * O 04EL SN	EN 4701		006101 009 00
		RJ45 Ethernet Metallized	SIM M D 0145 PN	SIM M D 0145 SN			
		RJ45 Ethernet Not-Metallized	SIM M N 0145 PN	SIM M N 0145 SN			
		Sealing Module	SIM * L0000 PN	/			

MODULES PART NUMBERING SYSTEM

(EXAMPLE) SIM * 0000 P* (EXAMPLE) 335* 7020 501

Peripheral sealing [with] E [without] M

Polarization [N, A, B, C, D]

Peripheral sealing [with] 1 [without] 0

N neutral polarization by default