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1900SIM CONNECTORS

Brochure 05/26 - V10.0

2 rue Clément ADER, Zac de Wé - 08110 CARIGNAN - FRANCE
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PRESENTATION

1900SIM is a new rectangular, modular and sealed connector, in lightweight composite, without plating or metallized (different platings are available).

WEIGHT SAVING

Derived from the legacy EN3545 connector shells (same center distance and fixing system), the 1900SIM can be fitted with the whole EN4165 modules range.

It consists of a plug, a receptacle (with or without flange) and rear clip-in accessories.

EASY MOUNTING

2 Locking / Polarizing systems are available (1/4 Turn and Standard by screw) ensuring 36 keying positions.

TIME SAVING

APPLICATIONS IN HARSH ENVIRONMENT

Commercial Aerospace
Urban Air Mobility
Defence

REACH AND RoHS

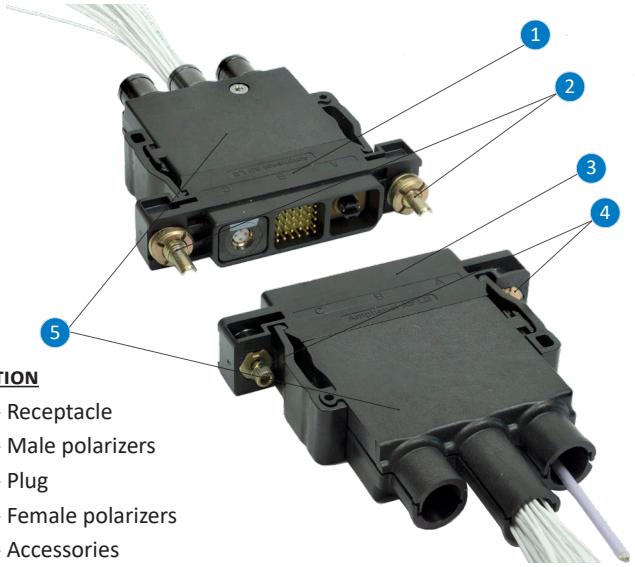
All connector shells and modules are conformed to the REACH spec.
All modules are conformed to the RoHS spec.
All connector shells are conformed to the RoHS spec (except with Olive Drab Cadmium plating).
1/4 turn polarizers and Zn/Ni standard polarizers are conformed to the REACH and RoHS spec.

MODULES

Power
Signal
Quadrax, Triax, Twinax, Coax
Optical fiber
RJ45 Ethernet

CONTACTS

Copper Alloy: Crimp or PCB contacts (straight or angled)
Size 23 to 8



CAPTION

1 - Receptacle
2 - Male polarizers
3 - Plug
4 - Female polarizers
5 - Accessories

MAIN TECHNICAL FEATURES

MATERIAL

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

ENVIRONMENTAL

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

Plating (Plug + Receptacle mated)			
Without plating	Nickel	Olive Drab Cadmium	Zinc Nickel
/	500h	500h	consult us

ELECTRICAL

Insulation resistance : ≥ to 5000 MΩ

	Contact size						
	23	22	20	16	12	8	8
Withstanding voltage	1500 V eff. 50 Hz		1800 V eff. 50 Hz				
Max. current rating (A)	5		7,5	13	23	46	80

CONTACTS RETENTION IN INSERT

# Contacts	23	22	20	16	12	8
daN	4,4		6,7	11	11	11

MODULE RETENTION IN SHELL

25,4 daN

MECHANICAL

Shocks : 6 shock/direction of each axis, half-sinusoidal form, amplitude 50 g, duration 11 ms
Vibrations : Sinusoidal, frequencies from 5 to 3000 Hz, acceleration 20 g, 4h/axis
Endurance : 500 full mating and unmating cycles

SEALING

IP66
Intercavity : according to EN2591 test 324 pressure = 147 hPa
Crossing : leak ≤ 4 cm^3/h under differential pressure of 1 bar
Interfacial : according to EN2591 test 314 pressure = 147 hPa

METALLIZATION RESISTANCE (CEM SEALING)

Metallization continuity by conductive plating
Nickel plating : < 3 mΩ under 1 A per connection
Olive Drab Cadmium plating : < 3 mΩ under 1 A per connection
Zinc Nickel plating : consult us

WEIGHT

Products	Without plating	With plating
Plug	10,00 g	11,80 g
Standard receptacle	11,00 g	12,90 g
Flanged receptacle	12,80 g	15,00 g

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PART NUMBERING SYSTEM

CONNECTORS

1900SIM 2 * 3 * * * ** **

Material:
Standard composite (without plating) — S
Shielded composite (with plating) — B

Shell type:
Plug — 0
Standard receptacle — 2
Flanged receptacle — 4
Backshell — 10 to 14

Plating / Shell metallization [1]**:**
Without plating (S material only) — Nothing
Bright Nickel (B material only) — K
Olive Drab Cadmium (B material only) — V

[1] For a Black Zinc Nickel version, please consult us

Equipment code (polarizer material according to shell metallization):

OPTIONS

Shell delivered with its Cadmium Female standard polarizers (by screw)[2] — A
Shell delivered with its Cadmium Male standard polarizers (by screw)[3] — B
Shell delivered with its Inox Female 1/4 turn polarizers[2] — C
Shell delivered with its Inox Male 1/4 turn polarizers[3] — D
Shell delivered with its Zn/Ni Female standard polarizers (by screw)[2] — E
Shell delivered with its Zn/Ni Male standard polarizers (by screw)[3] — F

[2] Only for plug [3] Only for receptacle

Polarizing code:
Polarizers not mounted on shells — 00
Polarizers mounted and polarized on shells[4] — XX

[4] Ex : XX = 16 mean Polarizer 1 in position 1 / Polarizer 2 in position 6

Seal supply (for flanged receptacle only):
Without seal — Nothing
With non conductive seal — JN
With conductive seal — JC

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
Backshell with single chimney (except optical)		1900SIM2*310*
Backshell for removable chimneys (all versions included optical)		1900SIM2*311*
Backshell with integrated chimneys (all versions included optical)		1900SIM2*312*
Short backshell for removable chimneys (except optical)		1900SIM2*313*
Backshell with integrated chimneys (except optical)		1900SIM2*314*
Cylindrical chimney	Metallic with plating	006114 051**
Cylindrical chimney with tie-rap	Composite without plating	3351 0042 303 SIM
	Metallic with plating	3350 5009 ***
Non conductive seal		3365 6010 502 SIM
Conductive seal		consult us

See part numbering system above

Bright Nickel 18
Olive Drab Cadmium 07

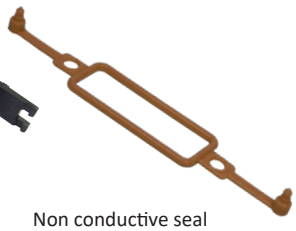
Bright Nickel 018SIM
Olive Drab Cadmium 012


Cylindrical chimney


Cylindrical chimney with tie-rap


Standard straight cable-clamp


Standard angled cable-clamp


Non conductive seal


Backshell with single chimney


Backshell for removable chimneys


Backshell with integrated chimneys

POLARIZERS AND TOOLS

Designation				Part Number
Standard polarizers (by screw)	Cadmium	For Composite connectors with Olive Drab Cadmium plating	Female F	001901 170 00
			Male M	001901 160 00
	Zn / Ni	For Composite connectors without plating, with Bright Nickel plating	Female F	3354 5170 086 CRE
			Male M	3354 5160 086 CRE
1/4 Turn polarizers	Inox	For Composite connectors without plating, with Bright Nickel or Olive Drab Cadmium plating	Female F	001901 270 00
			Male M	001901 260 00
Tools		Tool for polarizer extraction		001901 003 00


Cadmium standard polarizers (by screw)


Zn / Ni standard polarizers (by screw)


Inox 1/4 turn polarizers

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 / without peripheral sealing



P/N: SIM201

Seal for peripheral sealing





Without peripheral sealing

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

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	/	/	001704 001 02	M22520/2-01	K1461 (Daniels)	001112 010 25
						P		/	001714 001 02			
		20 cts size 22	SIM ∗ 2022 P∗∗	SIM ∗ 2022 S∗∗	22	S	/	M39029/57-354	001704 100 02	M 22520/2-01 M 22520/7-01	M 22520/2-06 M 22520/7-06 M 22520/2-09 M 22520/7-07	M 81969/14-01 001112 100 25 ou 001112 130 25
						P	/	M39029/58-360	001714 100 02			
		12 cts size 20	SIM ∗ 1220 P∗∗	SIM ∗ 1220 S∗∗	20	S	/	M39029/57-357	001704 203 02	M 22520/1-01 M 22520/2-01 M 22520/7-01	M 22520/1-04 M 22520/2-10 M 22520/7-08	M 81969/14-10 001112 250 25
						P	/	M39029/58-363	001714 203 02			
		8 cts size 16	SIM ∗ 0816 P∗∗	SIM ∗ 0816 S∗∗	16	S	/	M39029/57-358	001704 301 02	M 22520/1-01 M 22520/7-01	M 22520/1-04 M 22520/7-04	M 81969/14-03 001112 300 25
						P	/	M39029/58-364	001714 301 02			
		4 cts size 12	SIM ∗ 0412 P∗∗	SIM ∗ 0412 S∗∗	12	S	/	M39029/57-359	001704 400 02	M22520/1-01	M22520/1-04	M 81969/14-04 001112 400 25
						P	/	M39029/58-365	001714 400 02			
		1 ct size 8	SIM ∗ 0108 P∗∗	SIM ∗ 0108 S∗∗	8	S	/	/	001704 700 02	M300 BT	SP593	Extraction only M 81969/14-06 001112 700 25
						P	/		001714 700 02			
		1 ct Quadrax anti rotate polarizer side	SIM ∗ 0118 P∗∗	SIM ∗ 0118 S∗∗	QUADRAX	S	075 F 08 A		001704 705 02	int : M 22520/2-01 ext : M 22520/5-01	int : K709 ext : M 22520/5-45	
						P	074 M 08 A		001714 705 02			
		1 ct Quadrax anti rotate polarizer opposite side	SIM ∗ 0128 P∗∗	SIM ∗ 0128 S∗∗		S	075 F 08 A		001704 705 02			
						P	074 M 08 A		001714 705 02			
		5 cts size 22 + 6 cts size 16	SIM ∗ 9901 P∗∗	SIM ∗ 9901 S∗∗	22	S	/	M39029/57-354	001704 100 02	M 22520/2-01 M 22520/7-01	M 22520/2-06 M 22520/7-06 M 22520/2-09 M 22520/7-07	M 81969/14-01 001112 100 25 ou /001112 130 25
						P	/	M39029/58-360	001714 100 02			
					16	S	/	M39029/57-358	001704 301 02	M 22520/1-01 M 22520/7-01	M 22520/1-04 M 22520/7-04	M 81969/14-10 001112 250 25
						P	/	M39029/58-364	001714 301 02			
		Sealing module	SIM ∗ L0000 PN	/								

Tools for modules		
Module insertion	Module extraction	RJ45 module extraction
006101 006 00	006101 000 00	006101 008 00

STANDARD MODULES PART NUMBERING SYSTEM

(EXAMPLE) SIM ∗ 2022 P∗∗

With peripheral sealing: E
Without peripheral sealing: M

Polarization : N, A, B, C, D

With contacts : C
Without contact : Nothing

Optical / Ethernet 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
		Standard SIMTac03 Short SIMTac03	SIMTAC 03 EPN SIMTAC 03 EMN	SIMTAC 03 ESN SIMTAC 03 EFN		Consult us	/
		MPO	SIM E O MPO PN	SIM E O MPO SN			/
		6 optical cts EN4639 (ferrule 1,25 mm)	SIM E O 06LU PN	SIM E O 06LU SN	EN4830		001112 300 25
		4 optical cts EN4531 (ferrule 2,5 mm)	SIM E O 04EL PN	SIM E O 04EL SN	EN 4701		006101 009 00
		Standard RJ45 Ethernet (Classe C)	SIM M D 0145 PN	SIM M D 0145 SN			
		Standard RJ45 Ethernet (Classe Ea)		SIM M D 0145 ESN			

Note : For more information, see our SIM catalogue.

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