

|                                                                                  |                                                               |                                             |
|----------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------|
|  | <b>DECLARATION OF DESIGN<br/>AND PERFORMANCE</b>              | <b>Reference</b><br>DDP SIM PCB<br>contacts |
|                                                                                  | <i>SIM modules serie 2<br/>with contacts for PCB mounting</i> | <b>Page 1 / 4</b>                           |

- **Name and address of supplier:** Amphenol Air LB  
2, rue Clément Ader  
ZAC de WE  
08 110 CARIGNAN France

- **Description of product:** SIM modules serie 2 shells with contacts for PCB mounting.

- **Part number:**

SIM module 30 straight contacts size 23: SIM X 3023 X X X;  
SIM module 30 removable straight contacts size 23: SIM X 3023 P X R;  
SIM module 30 angled contacts size 23 (for 2 & 4 modules housing): SIM X 3023 XN X BS;  
SIM module 30 angled contacts size 23 (for mono module housing): SIM X 3023 XN X BR;

SIM module 20 straight contacts size 22: SIM X 2022 X X X;  
SIM module 20 removable straight contacts size 22: SIM X 2022 P X R;  
SIM module 20 wire wrap contacts size 22: SIM X 2022 P X K;  
SIM module 20 angled contacts size 22 (for 2 & 4 modules housing): SIM X 2022 XN X BS;  
SIM module 20 angled contacts size 22 (for mono module housing): SIM X 2022 XN X BR;

SIM module 12 straight contacts size 20: SIM X 1220 X X X;  
SIM module 12 removable straight contacts size 20: SIM X 1220 P X R;  
SIM module 12 angled contacts size 20 (for 2 & 4 modules housing): SIM X 1220 XN X BS;  
SIM module 12 angled contacts size 20 (for mono module housing): SIM X 1220 XN X BR;

SIM module 8 straight contacts size 16: SIM X 0816 X X X;  
SIM module 8 removable straight contacts size 16: SIM X 0816 P X R;  
SIM module 8 angled contacts size 16 (for 2 & 4 modules housing): SIM X 0816 XN X BS;  
SIM module 8 angled contacts size 16 (for mono module housing): SIM X 0816 XN X BR;

SIM module 4 straight contacts size 12: SIM X 0412 X X X;  
SIM module 4 removable straight contacts size 12: SIM X 0412 P X R;  
SIM module 4 angled contacts size 12 (for 2 & 4 modules housing): SIM X 0412 XN X BS;  
SIM module 4 angled contacts size 12 (for mono module housing): SIM X 0412 XN X BR

SIM module 1 straight contact size 08: SIM X 0108 X X X;  
SIM module 1 angled contacts size 08 (for 2 & 4 modules housing): SIM X 0108 XN X BS;  
SIM module 1 angled contacts size 08 (for mono module housing): SIM X 0108 XN X BR

SIM module 6 straight contacts size 16 + 5 straight contacts size 22: SIM X 9901 X X X;  
SIM module 6 removable straight contacts size 16 + 5 removable contacts 22: SIM X 9901 P X R;  
SIM module 6 angled contacts size 16 + 5 angled contacts size 22 (for 2 & 4 modules housing):  
SIM X 9901 XN X BS;  
SIM module 6 angled contacts size 16 + 5 angled contacts size 22 (for mono module housing):  
SIM X 9901 XN X BR;

- **Specification number:** NF EN 4165-001

- **Overall dimensions, interfaces, connections (electrical, hydraulic, etc.), installation information in drawing:**

According to SIM connectors catalogue

|                                                                                  |                                                               |                                             |
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- **Compliance statement related to the specification (including any limitations on use):**

The qualification is equivalent to EN 4165-001

- **Inspection and maintenance instruction reference:** As specified in Amphenol Air LB quality manual

- **Qualification test report reference:** QTR 14-007 issue 0 / QTR 13-012 issue 0 / CRE 08-016 issue.0

See following table for the main performances:

| Constitution             |               |
|--------------------------|---------------|
| Shell material           | Thermoplastic |
| Shell plating material   | Not concerned |
| Insulation material      | Silicone      |
| Contact material         | Copper alloy  |
| Contact plating material | Gold          |

| Mechanical performances               |                                                                      |                |
|---------------------------------------|----------------------------------------------------------------------|----------------|
| Description                           | Data                                                                 | Units          |
| Insert retention in housing (minimum) | 25.4                                                                 | daN            |
| Contact retention in insert (minimum) | 4.4 for size 23 & 22<br>6.7 for size 20<br>11.0 for size 16; 12 & 08 | daN            |
| Mechanical endurance                  | 500                                                                  | Cycles         |
| Vibrations (type)                     | Random                                                               | Not applicable |
| Vibrations (maximum frequency)        | 2000                                                                 | Hz             |
| Vibrations (amplitude)                | 22.6                                                                 | g              |
| Vibrations (duration)                 | 24                                                                   | hours          |
| Shocks (type)                         | Sinusoidal                                                           | Not applicable |
| Shocks (amplitude)                    | 100                                                                  | g              |
| Shocks (duration)                     | 6                                                                    | ms             |
| Resonant frequency minimum            | Not concerned                                                        | Hz             |
| Static loads (minimum)                | Not concerned                                                        | daN            |

|                                                                                                                                    |                                                               |                                             |
|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------|
| <br>Your Satisfaction.<br>Everyday.<br>Everywhere. | <b>DECLARATION OF DESIGN<br/>AND PERFORMANCE</b>              | <b>Reference</b><br>DDP SIM PCB<br>contacts |
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| Climatic performances         |                                                                                                                                     |                       |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Description                   | Data                                                                                                                                | Units                 |
| Maximum temperature of use    | 175                                                                                                                                 | °C                    |
| Minimum temperature of use    | -55                                                                                                                                 | °C                    |
| Salt mist resistance          | 500                                                                                                                                 | hours                 |
| Resistance to fluids          | Fuel / Mineral and synthetic hydraulic fluid / Mineral and synthetic lubricant / Cleaning products / De icing fluid / Cooling fluid | Not applicable        |
| Interfacial sealing           | 11.0                                                                                                                                | mb                    |
| Air leakage                   | 4                                                                                                                                   | cm <sup>3</sup> /hour |
| Immersion at low air pressure | 11.0                                                                                                                                | mb                    |
| IP indice                     | Not concerned                                                                                                                       | Not applicable        |

| Electrical performances     |                                                                                                     |       |
|-----------------------------|-----------------------------------------------------------------------------------------------------|-------|
| Description                 | Data                                                                                                | Units |
| Insulation resistance       | 5000                                                                                                | MΩ    |
| Voltage proof test          | 1500 for size 23<br>1800 for other size                                                             | V     |
| Maximum intensity           | 5.0 for size 23 & 22<br>7.5 for size 20<br>13.0 for size 16<br>26.0 for size 12<br>43.0 for size 08 | A     |
| Contact resistance          | Not concerned                                                                                       | mΩ    |
| Shell electrical continuity | Not concerned                                                                                       | mΩ    |

| Optical performances |               |       |
|----------------------|---------------|-------|
| Description          | Data          | Units |
| Insertion loss       | Not concerned | dB    |
| Return loss          | Not concerned | dB    |

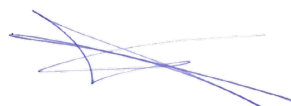
| Fire behaviour              |                        |
|-----------------------------|------------------------|
| In compliance with standard | ABD 0031 / EN 2591-317 |

|                                                                                  |                                                               |                                             |
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I hereby declare on behalf of the supplier that the information contained in this declaration of design and performance (DDP) is correct.

Date : 09/20/2019

Sign :



Company : Amphenol Air LB

Position held : Engineering Manager

Name : Jerome CHEVALIER

Date : 09/30/2019

Sign :



Company : Amphenol Air LB

Position held : Quality Manager

Name : Vincent BEYRIES