



## CS8X RIC Plug/Socket



## Features

1. Seamless integration
2. Integrated sealing ring
3. Innovative snap lock mechanism
4. Drop shape for easy mating
5. Steel-to-steel lock for constant and reliable retention force
6. 8 contacts in a small size

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Sonion reserves the right to make changes at any time to improve reliability, function or design, in order to provide the best product possible.

## 1. History Revision

Revision Number / Date	Change from last revision
001/2014-10-10	First released version
002/2019-07-16	Change of storage temperature and humidity (CR3860)

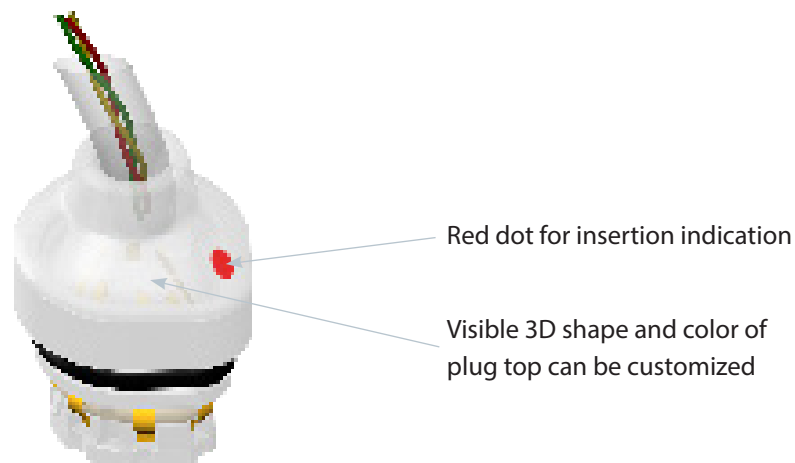
## 2. Product Description

The scalable CS8X RIC Plug/Socket system offers a reliable connection of up to 8 wire connections, meeting future RIC-module requirements.

The CS8X is designed with a robust locking mechanism and a special electrical contact system

1. Seamless integration: Plug top color and shape can be customized
2. The plug has a unique contact support ring that prevents deformation of the contact springs and the contact pins are equally supported by the walls inside the socket housing
3. Integrated sealing ring: The CS8x Plug/Socket combination has been certified according to IP57 (the certification is not part of the release criteria)
4. Drop shape for easy mating
5. Steel-to-steel, tactile, snap lock mechanism
6. Reflow SMD, flexible or rigid terminals





### CS8X Plug

The Plug features the following:

- 8 Contact springs, gold plated.
- Contact springs are supported by a unique contact support ring to secure a constant contact force
- Tool-less snap lock connection to the socket, tactile feedback
- Red dot for insertion indication
- Translucent top plug is standard, but color and shape can be customized
- Integrated sealing ring



### CS8X Socket

The socket features the following:

- 8 contact pins, gold plated.
- Contact pins are supported by the socket wall to prevent deformation.
- Tool-less snap lock connection to the plug, tactile feedback
- Flange for fixation in the hearing aid
- Drop shape facilitate correct connection

Possible production assembly process methods between the socket terminals and the hearing aid:

- a. Reflow SMD terminals
- b. Rigid terminals for soldering through flex print
- c. Rigid terminals for wire soldering

### 3. Mechanical Specifications

Plug and socket	Specification
Connection/disconnection force	9,5 +/- 3N (25 test cycles for the plug, 50 test cycles for the socket)

### 4. Electrical Specifications

#### General

The CS8X connector always accommodates 8 terminals to be used for the receiver [-, GND, +], RIC identification and potential additional components in the RIC-Module for future RIC solutions.

#### Wire and Electrical Connection Specifications at Normal Environmental Conditions

Characteristics	Specification
Insulation Resistance	1 MΩ (min)
End to End Resistance (wires)	1.0Ω (max)

### 5. Material Specifications

All materials comply with ISO 10993-1

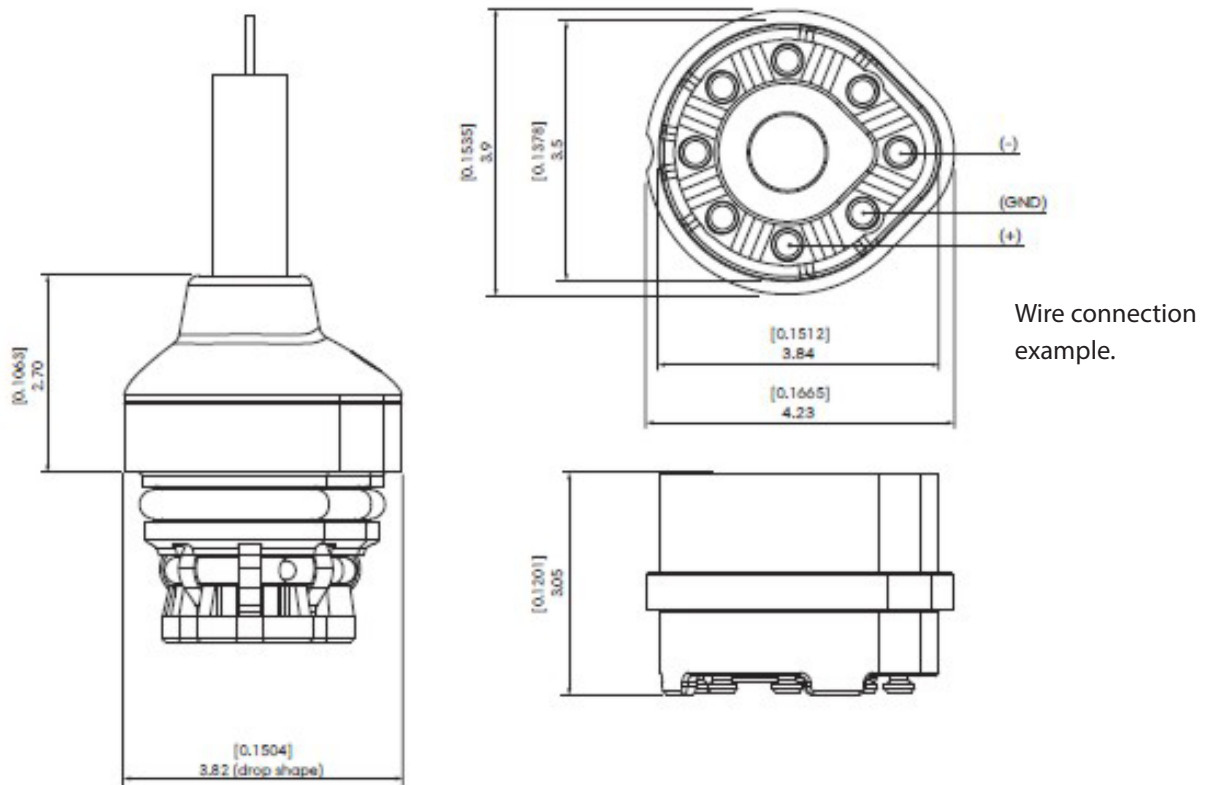
Bio-compatibility: the product has been tested for cytotoxicity

Plug	
Plug plastic material	PA66
Snap ring	Stainless Steel
Locking pin	Stainless Steel
Plug washer	Stainless Steel
Sealing ring	Silicone
Contact support ring	NBR
Contact spring	Palladium alloy, Au plated
Socket	
Socket housing	LCP
Contact pin	German Silver, Ni and Au coated
Snap head	Stainless Steel
Snap ball	Stainless Steel

### 6. Environmental Conditions

Storage	
Temperature	25°C
Humidity	60% RH
Purpose is to protect from high humidity and keep at driest condition as much as possible	

## 7. Mechanical Dimensions



Dimensions are in [inch] mm. First angle projection.

### Note:

The drawings illustrates the main external dimensions. We refer to our 3D CAD files for the exact and complete dimensions.

## 8. Packaging

Socket: Standard packaging: Tape-on-reel  
Plug: Standard packaging: Trays

## 9. Configuration Table

Only applicable when CS8X is sold as a stand-alone connector

Part	Parameters	Options	Comments
CS8X Socket	Terminal style	1. Reflow SMD terminals 2. Rigid terminals 3. Flexible terminals	For flexible terminals a back reinforcement is required.
	Number of contact pins	Standard design	The CS8X Socket will always have 8 contact pins installed.
	Housing style	Standard design	Drop shaped. Full flange.
	Plastic color	Standard design	Uncolored LCP only.
CS8X Plug	Number of contact springs	Standard design	The CS8X Plug will always have 8 contact springs installed.
	Tubing diameter	Standard Ø1.0/0.5mm tube	A Ø1.0/0.5mm tube will accommodate up to 8 unshielded litz wires.
	Plug top color	1. Translucent (standard) 2. Color matching	The plug top color can be color matched against the RIC shell color.