

**Molex ChipSIM connectors and cardholders are designed for data transfer when used with removable SIM cards and remote equipment utilizing GSM, GPRS, SMS and MMS technology**



ChipSIM connectors and cardholders are part of the SIM (Subscriber Identification Module) product offering from Molex. The ChipSIM connectors and cardholders are designed to be used in conjunction with a removable SIM card for use in GSM based systems.

Global System for Mobile (GSM) communications is a globally accepted standard for digital-cellular communications, transmitting both mobile voice and data services. The 6-circuit ChipSIM connectors and cardholders are used in remote equipment, supporting GSM, GPRS, SMS and MMS technology. Molex ChipSIM products comply with the GSM 11.11 Version 5.3.0: July 1999 specification.

Molex offers standard and custom designs for the connector and cardholder. The 6-circuit ChipSIM connector (series 91228) can be supplied with an active- or passive-latch mechanism, location tabs and various button designs and colors. The cardholder (series 91236) fascia can be modified to suit customer requirements. Custom connector / PCB assemblies are available to shorten a customer's assembly process. For additional information visit: [www.molex.com/link/chipsim.html](http://www.molex.com/link/chipsim.html)

## FEATURES AND BENEFITS

- |   |  |
|---|--|
| • Gold-plated interface   | • Ensures high-durability  |
| • Last-mate/first-break switch  | • Alerts system that card is being entered / removed and protects data on card   |
| • Lead-in on terminals  | • No risk of stubbing when card is entered   |
| • Push-button eject mechanism   | • Gives easy access to cardholder and SIM card and allows to insert/withdraw card without exposing expensive/sensitive electronic components to potential damage |
| • LCP material used on housing  | • RoHs compatible  |
| • Locking-feature button must be pressed to release active latch/cardholder | • Prevents cardholder from backing out of the connector, either in error or due to vibration   |
| • Side-action spring on cardholder  | • Polarization of the SIM card in the cardholder   |

## MARKETS AND APPLICATIONS

- Automotive
  - Audio, navigation, infotainment
  - Car LCD panel
- Consumer
  - Point-of-sale terminals
  - Smart meters
- Data/Communications
  - Global positioning system (GPS)
  - Surveillance cameras
- Industrial Automation
  - Security cameras
- Medical
  - Equipment consols/testing
  - Medical front panels



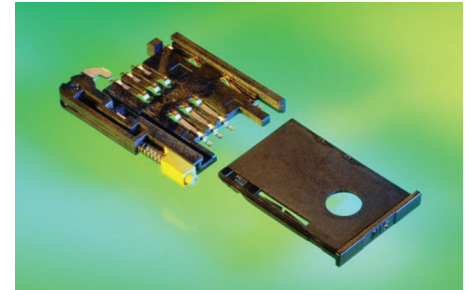
Smart meter



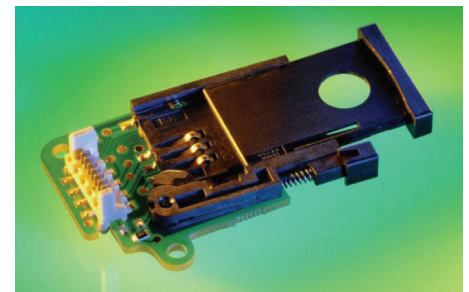
Surveillance camera

## ChipSIM Connectors and Cardholders

91228 ChipSIM Connectors  
91236 ChipSIM Cardholders



ChipSIM Connector and Cardholder



ChipSIM connector and cardholder soldered to PCB with Picoflex® header on the PCB

## SPECIFICATIONS



### Reference Information

Packaging: Embossed tape on reel  
UL File No.: E29179  
Designed In: Millimeters  
RoHS: Yes

### Electrical

Voltage (max.): 50V DC  
Current (max.): 0.5A per contact  
Contact Resistance: <50 mOhms  
Dielectric Withstanding Voltage: 1000V AC  
Insulation Resistance: 1000 MOhms min.

### Mechanical

Contact Retention to Housing: 2.9N min.  
Mating Force: 4.9N max.  
Push Button Force: 20N max.  
Durability: 5,000 mating cycles

### Physical

Housing: Liquid Crystal Polymer (LCP)  
Contact: Phosphor Bronze  
Plating: 0.1um Gold over Palladium Nickel  
in contact area, 2.5um min Tin on SMT Tails  
Plating mating — Gold (Au)  
Plating termination — Tin (Sn)  
Storage temperature range: -40 to +90°C  
Operating Temperature: -40 to +85°C

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## ADDITIONAL PRODUCT FEATURES

### PCB Assemblies

- Molex also offers connector/ PCB assemblies. This removes elements of the customer's process by having Molex solder the ChipSIM Connector to the required PCB. Molex can also add other connectors if required.

## 91228 6-CIRCUIT CONNECTOR FEATURES AND BENEFITS

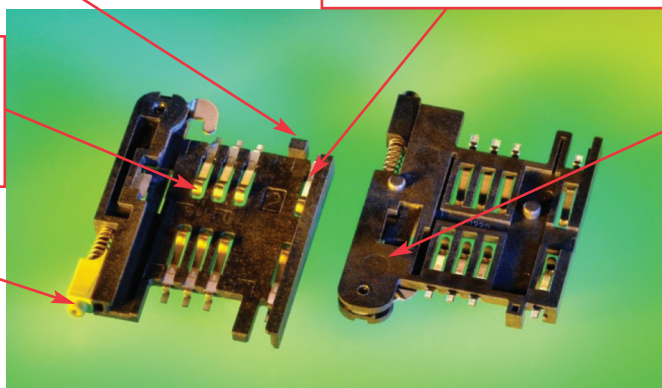
**Feature** Cardholder back-stop  
**Benefit** Locates cardholder in connector

**Feature** Last mate/first break switch  
**Benefit** Alerts system that card is being entered /removed  
Also protects the data on the card

**Feature** Lead-in on terminals  
**Benefit** No risk of stubbing when card is entered

**Feature** Gold plated interface  
**Benefit** High durability (5000 cycles)

**Feature** Push button eject mechanism  
**Benefit** Easy access to cardholder and card  
Allows to insert/withdraw card without exposing expensive/ sensitive electronic components to potential damage



**Feature** LCP material used on housing  
**Benefit** Lead-free RoHS compatible  
No blistering

## 91236 CARDHOLDER 6-CIRCUIT FEATURES AND BENEFITS

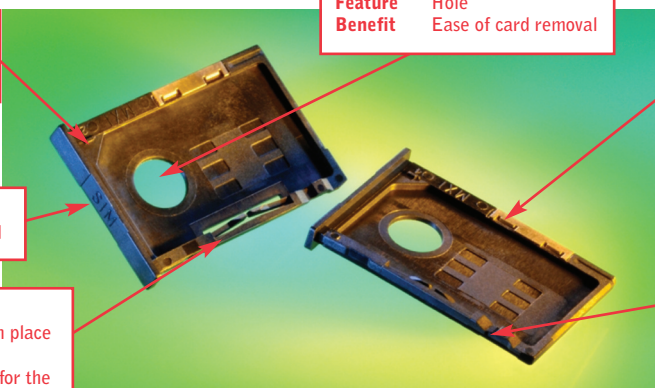
**Feature** SIM card polarisation feature  
**Benefit** Ensures proper orientation of SIM card in holder

**Feature** Hole  
**Benefit** Ease of card removal

**Feature** Last mate/first break switch  
**Benefit** Stops cardholder alerts system that card is being entered/removed. Also protects the data on the card

**Feature** Fascia  
**Benefit** Can be modified as required

**Feature** Spring  
**Benefit** Holds card in place  
Also used as polarisation for the card. Side action



**Feature** Active latch  
**Benefit** Stops cardholder from backing out of the connector, either in error or due to vibration. Button must be pressed to release active latch/cardholder

## ORDERING INFORMATION

### Connectors

Order Number	Description	Pegs	Button	Minimum Order Quantity
91228-3001	2.54mm Pitch, 6-Circuit ChipSIM Connector	No	Yellow	800
91228-3005			Natural	
91228-3002		Yes	Black	
91228-3006			Black (Extended length)	
91228-3007			Blue	

### Cardholders

Order Number	Description	Minimum Order Quantity
91236-0001	Straight Fascia	1500
91236-0002	Angled Fascia	