



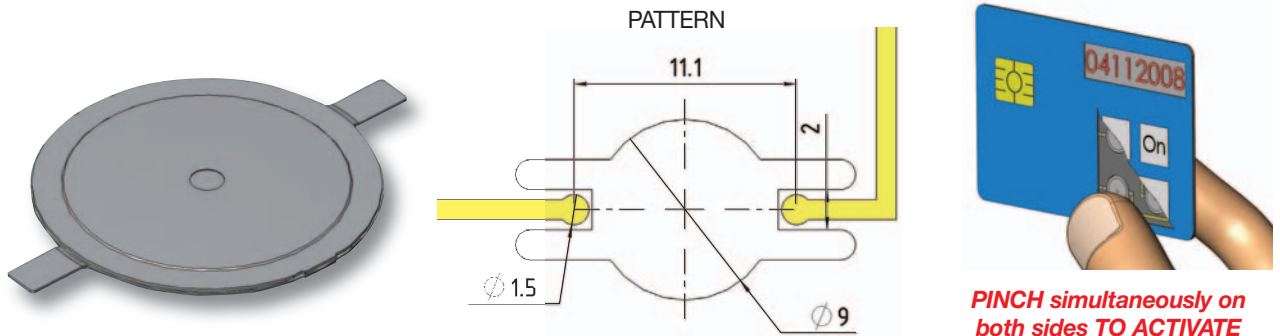
# P-Switch® for smart cards

**Innovation  
Contact us!**

Thanks to its long established knowledge in the metal dome switching technology, NICOMATIC has developed and patented the Pinching Switch - P-Switch® - solution for the Smart Card Business & Industry. The P-Switch® is designed to fit ultra-thin environment size requirements and adapt to fully automated Pick & Place systems. It is suitable to all card assembling processes with built-in electronics.

## CONCEPT

The P-Switch® button must be pressed simultaneously on both sides. Its use provides an accurate and effective tactile feeling. It also insures the electrical signal integrity and offers a very long life expectancy. The overall P-Switch® thickness meets the Card market Standards thanks to a slight acceptable preloading at the lamination step of the process.



## MARKETS

The P-Switch® is mainly dedicated to Smart Cards with built-in electronics: power source, chip, display, flex circuits or PCB, single or several buttons keypads. It can also apply to Contactless Cards with security high level requirements.

- One-Time Password (OTP) Identification
- RFID
- Secure Access : ID / Financial Transactions
- Data Storage / Tracking
- Other applications: Medical & Lab.equipment, intelligent textiles...

## ADVANTAGES

- Outstanding tactile feeling
- Fit to various sizes & thicknesses (preloading)
- Activation force stable and homogeneous per delivery batch
- Durable & Reliable (extra-long life expectancy)
- 100 % mechanical & dimensional features controlled
- 100% traceability per batch number

## TECHNICAL FEATURES

The following values are given for the P-Switch® device itself; some of them could slightly evolve once built-in to your application. Please feel free to contact us !

- Material : Ni-plated or Ni-plated + selective Au on solder tabs and contact area if required
- Size : dia. 8,5mm
- Overall thickness : 0,5 ± 0,05mm
- Acceptable pre-loading : 0,10mm
- Pinch stroke : 0,34mm
- Overstroke : 0,1mm max.
- Actuation force : 1,9N (190g) ± 0,3N (30g)
- Rebound force : 0,35 N (35g) ± 0,2N (20g)
- Life expectancy : 5 Million actuations
- Rated voltage : up to 100V
- Rated current : up to 1A
- Contact resistance : < 300 mΩ
- Dielectric breakdown voltage : 350V
- Switching capacity at rated current : up to 80W
- Temperature range: -40°C to 110°C
- SMT process compliant
- Packaging: in Tape and Reel

**NICOMATIC INTERNATIONAL**  
**SUBSIDIARIES :**  
**NICOMATIC**  
**NORTH AMERICA**  
 165 Veterans Way, Unit 200  
 Warminster, PA 18974 - USA  
 Phone: +1 (215) 444-9580  
 Fax: +1 (215) 444-9581  
 E-mail: sales@nicomatic.net

**NICOMATIC**  
**SOUTH AMERICA**  
 Rue Ministro de Godoy,  
 478 Cj. 73 Perdizes  
 05015-000 São Paulo - SP - BRAZIL  
 Tel (55) 11 3872-2791 - Cel (55) 11 9685-9671  
 Fax : (55) 11 36 72 -8830  
 E-mail : nicomatic@nicomatic.com.br

**NICOMATIC CHINA**  
 6A XEDA Jimel Industrial Park  
 Xiqing Economic & Development Area  
 Tianjin - CHINA  
 Tel : (86) 22 23888050  
 Fax : (86) 22 23888060  
 E-mail : sales@nicomatic.cn

**NICOMATIC INDIA**  
 Ground Floor Mohan Cooperative  
 Industrial Area Mathura Road,  
 New-Delhi 110044 India  
 Tel : +91 (0) 11 420 919 21  
 Fax : +91 (0) 11 420 919 99  
 E-mail : info@nicomatic.co.in



**NICOMATIC HEADQUARTERS**  
 173, rue des Fougères / Z.I. les Bracots / F-74890 Bons-en-Chablais  
 Tél. 33 (0)4 50 36 13 85 - Fax 33 (0)4 50 36 11 33  
 E-mail : nicomatic@nicomatic.fr



**NICOMATIC FRANCE**  
is certified ISO 9001