

OMRON

Relays, Switches, Sensors  
and Connectors for the  
Medical Market



# MEDICAL

Vital Monitoring, Imaging, Respiratory

[www.components.omron.eu](http://www.components.omron.eu)

## Leading-edge Technologies for the Medical Market

Omron is a €7 billion global supplier of electronic components and solutions for a broad range of applications. With over 75 years of experience in manufacturing electronic and electromechanical components, Omron provides global and local networks of technical and sales support from design through to delivery.

### Combining Core Competencies and New Technologies

Omron applies a thorough mix of manufacturing and technological skills to make reliable, replicable electromechanical and solid state components.

### Competencies

- Materials
- Precision Replication & Assembly
- Stamping & Moulding
- Integration of Active Elements
- Packaging

### Technologies

- Switching
- Sensing
- Micro Lens Arrays
- Magnetic Actuators
- Nano Machining
- Micro Electromechanical Systems
- Solid State Components



**Omron Electronic Components is a premier supplier of a variety of electronic component and sub-assembly solutions designed for use in Medical Devices.**

We supply the world with innovative electronic and mechanical components that create smooth interfaces between people and machines, supporting universal computing.

Whether you are designing Medical Devices for Respiratory, Radiology/ Imaging, the Hospital Floor, Surgical Suite, Laboratory or the Home, Omron has component solutions for your specific application needs.

We are committed to providing quality-driven products and reliable support to satisfy the design needs of the Medical Industry worldwide.





## Monitoring

Omron has been supplying NIBP devices to the market for over 30 years, surpassing the 100 Million Unit mark in 2009. In 2006 Omron acquired Colin Medical, expanding their professional grade product line, including OEM NIBP modules.



### M3600 OEM NIBP Module

The Omron M3600 Hospital Grade module is a self-contained Non-Invasive Blood Pressure (NIBP) module with double safety circuits and a durable pump. It combines the hardware and software necessary to perform complete blood pressure measurements from adults, children or neonates utilising the non-invasive oscillometric method.

### Coming soon

### Reusable Blood Pressure Cuff

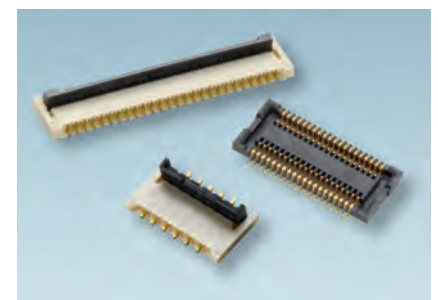
Produced in a soft material, this cuff is designed with patient comfort in mind. It is fan shaped to fit onto the arm easily and comfortably and is also very simple to use. The size of the cuff is easy to read and the range of arm circumference can be seen when the cuff is wrapped around an arm. Various sizes are also available.



### M1200 OEM NIBP Module

This is a Medical Grade device for medical centres and home monitoring systems. It has a highly durable pump and offers the same performance as the M3600 but is lower cost. It does not incorporate the redundancy required for hospital use.

These professional grade modules (M3600 & M1200) include Omron's proprietary Smart Inflation and Dynamic Linear Deflation features for added patient comfort and speed.



### FPC Connectors

Solve FPC mounting problems with its industry-leading backlock construction.

Applications: Mains Power, Cameras, LCD Displays, Input Devices  
Benefits: Lowest profile (0.6mm) and Reduced board space (0.25mm pitch) with High retention force.



# Medical Components & Technologies



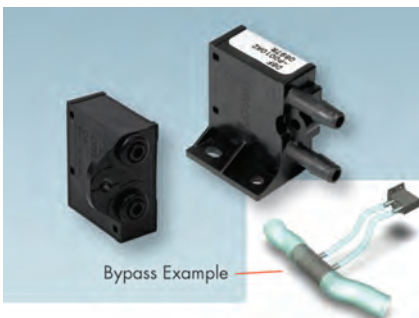
## Anaesthesia

### MEMS Flow Sensors

Omron's mass flow sensors utilise a highly sensitive MEMS flow chip with excellent low flow resolution making them an ideal solution for a variety of applications including CPAP, Anaesthesia, Pulmonary Tests and Oxygen Concentrators.



### Bypass Style Flow Sensors



#### D6F-P

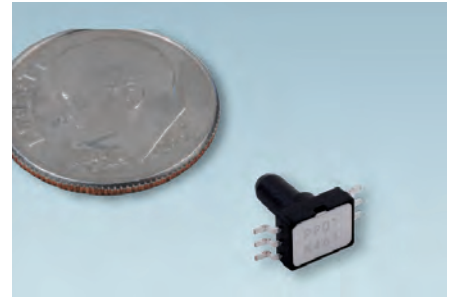
1 LPM Flow Sensors with integrated dust segregation system, can be used in a bypass setup to measure flow rates over 200 LPM. Great alternative to differential pressure sensors, for better low flow resolution. Bi-directional version available on request.

### In-line Style Flow Sensors



#### D6F-10, 20, 50, 70 & 200

High Accuracy Mass Flow Sensors featuring Omron's MEMS Flow Chip. 10, 20, 50, 70 & 200 LPM versions with numerous port options available.



### MEMS Pressure Sensors

Omron has been producing MEMS Pressure Sensors for over 15 years. The latest, 2SMPP-01 piezo resistive gauge sensor offers excellent characteristics and a 0-280mmHg measurement range.

## Respiratory



*Photo courtesy of Philips Home Healthcare Solutions*



#### D6F-03

This 3 LPM Mass Flow Sensor is contained in Omron's smallest overall package size for space-constrained applications.



## Gas Flow

Omron's MEMS Mass Flow Gas Sensors improve the surgical electiveness of argon-enhanced electro-surgical devices.

## Electrosurgery



### D6F-01/02, D6F-05

Mass Flow Sensors for 1 LPM up to 5 LPM incorporate a series of inlet screens ensuring an even laminar flow across the sensing element.

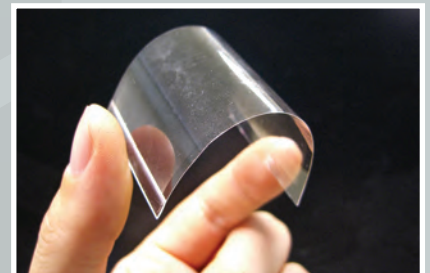
## Handheld Glucose Monitor



## Handheld Ultrasound



*Photo courtesy of Siemens Healthcare*



## Optical Back Light for Key Pad

Applications: Ultra Thin LCD Backlight (multi-layer possible). Benefits: Ultra-thin LCD Backlight with White LED for High Brightness; 0.59mm thickness.

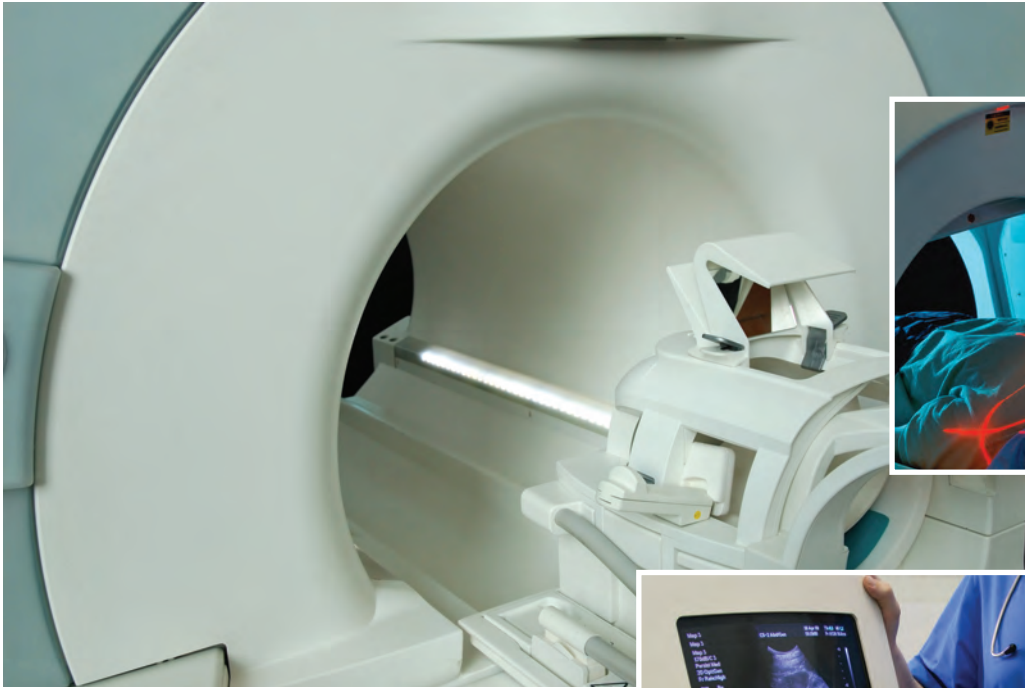


## Tactile Switches

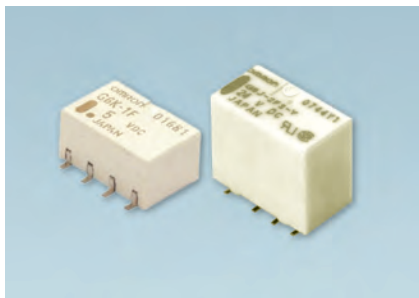
Consistent switching characteristics enable excellent performance. Available with a wide variety of actuators, mounting styles and switching capabilities.

# Medical Components & Technologies

## Radiology



## Ultrasound



### Signal Relays

These highly reliable relays have an ultra compact and slim design; the smallest mounting area with the G6J-Y and the G6K with the lowest power consumption (100mW).



### Speciality Switches

New models and a broad selection range provide an array of solutions meeting the needs of today's high performance applications.



### MOSFET Relays

Omron's MOSFET line-up of relays deliver the speed and reliability needed for imaging, diagnostic and electromedical equipment.



### Transmissive Photomicrosensors

Omron offers one of the largest ranges of photointerruptors suitable for your most challenging medical applications. The line-up opens options for choice by different mounting methods counting THT, SMD, snap-in, solder tab or screw.



### Reflective Photomicrosensors

Omron Reflective sensors are used wherever objects are detected by reflecting a light beam. The new SMD photomicrosensor EE-SY 1200 achieves reliable sensing up to 4mm with dimensions of only 3.2mm x 1.9mm x 1.1mm.



Laboratory/  
Diagnostic  
Equipment



Omron Electronic Components provides a variety of electronic component solutions that are suitable for use in Medical Devices. Whether you are designing equipment for Respiratory, Radiology/Imaging, the Hospital Floor, Surgical Suite, or Laboratory, Omron has a component solution for your specific application needs. We are committed to providing quality-driven products and reliable support to satisfy the design needs of the Medical Industry worldwide.



Home Care



### MEMS Pressure Sensors

The new MEMS Pressure sensor (2SMPP-02) is a super miniature high accuracy sensor based on MEMS and CMOS technology. This is a piezo resistive sensing type. Typical applications include: Blood pressure measurement and wound management.



### Detection Switches

Sealed and unsealed snap-action switches are available with a variety of ratings, actuators and termination options. Sealed versions, rated to IP67 and IP50, are suitable for use in wet locations.



### Solid State Relays

Compact, low cost, solid state power switching. From 1A to 5A for the rated current, up to 90A in the DIN track mounting models.



### HF/RF Relays

The industry's widest range of design options in high frequency relays. Our patented microstrip line construction within the relay eliminates crosstalk and improves isolation.



*Head Office*

**Omron Electronic Components Europe B.V.**

Wegalaan 57

2132 JD Hoofddorp

The Netherlands

Tel: +31 23 568 1200

Fax: +31 23 568 1222

**Ref. U02E-EN-02**

**Omron Electronic Components Europe B.V.**

Sales Division France

14, rue de Lisbonne

93561 Rosny Sous Bois

France

Tel: +33 1 56 63 19 00

Fax: +33 1 48 55 97 75

**Omron Electronic Components Europe B.V.**

Sales Division Central Europe

Gruber Strasse 60d

85586 Poing

Germany

Tel: +49 8121 77240

Fax: +49 8121 77244

**Omron Electronic Components Europe B.V.**

Sales Division Italy

Viale Certosa 49

20149 Milano

Italy

Tel: +39 02 3268 850

Fax: +39 02 3268 851

**Omron Electronic Components Europe B.V.**

Sales Division Benelux

Wegalaan 57

2132 JD Hoofddorp

The Netherlands

Tel: +31 23 568 1200

Fax: +31 23 568 1212

**Omron Electronic Components Europe B.V.**

Emerging Markets Operations

CBC 1

Karadžićova 8

821 08 Bratislava

Slovakia

Tel: +421 2582 40950

Fax: +421 2582 40999

**Omron Electronic Components Europe B.V.**

Sales Division Iberia

Arturo Soria 95

28027 Madrid

Spain

Tel: +34 91 377 7900

Fax: +34 91 377 7987

**Omron Electronic Components Europe B.V.**

Sales Division Nordic

Färgögatan 7

S-164 40 Kista

Sweden

Tel: +46 8 632 3520

Fax: +46 8 632 3535

**Omron Electronic Components Europe B.V.**

Sales Division United Kingdom & Ireland

Building A, Campus Six, Caxton Way

Stevenage, Hertfordshire, SG1 2XD

United Kingdom

Tel: +44 870 750 5661

Fax: +44 870 750 5662

**[www.components.omron.eu](http://www.components.omron.eu)**