

# HEILIND

Performance. Trust. Innovation.



## E-SWITCH®



# Switches for the WEARABLE TECHNOLOGY AND HANDHELD DEVICES MARKET



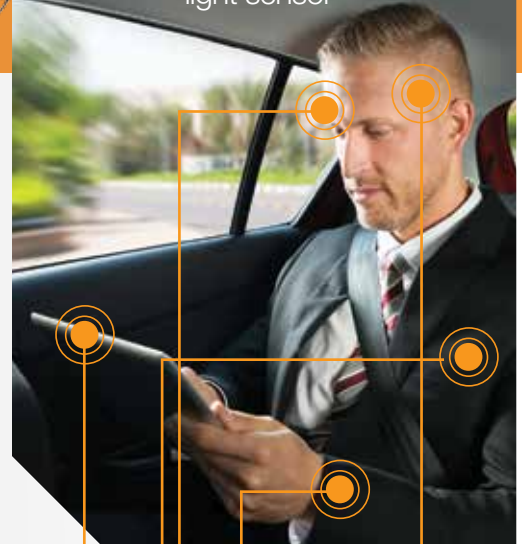
# BIG TECH, MINIATURE PACKAGE

Wearable devices can be worn all over the body and each location has a unique set of considerations to optimize for both form and function.

Whether you require a tact switch that is surface mount, right angle actuation, illuminated or even a navigational switch or a detector switch for your application, E-Switch provides a wide range of miniature switches to fit nearly any compact product developed for the wearable and handheld technology market.



Cycling Helmet with directional light sensor



Smart Tablet  
Smart Phone

Smart Watch  
Smart Glasses



Virtual Reality Headset



*An aging population has created a demand for wearable technology by providing real-time measurement and memory of a patient's vital signs. Products designed for the elderly require special switch considerations such as a firm tactile response to know that the product has been turned on or off in order to capture data.*



*Two decades ago, one computer consumed the space of an entire room. Today, you can conduct many of your business tasks from your wrist. As wearable and handheld devices get smaller in size, it is increasingly important to maximize component functionality.*



Hearing Aid



Alert Cuff Bracelet



Armband Tracker for vital signs

Smart Glove Tracking to improve sports performance



Chronic Pain Therapy Device

Smart Patch to help improve range of motion while preventing further injury

# SMART GADGETS COME IN MANY FORMS

Besides offering kids and adults endless entertainment with virtual reality video games and helping improve your fitness program with tracking apps, wearable/handheld technology can filter your phone calls, provide personal safety aide, alert you to your baby's vital signs, monitor your home security, release stimuli to manage chronic pain and even track the family dog's whereabouts and his activity level.

Successful wearable applications currently take on seventeen forms: anklet, armband/wristband, belt, bra, bracelet, contact lenses, chest mounted, earring, earpiece, glasses, glove, headphone, head mounted, necklace, ring, shoe and watch.

Wearable technology extends the capabilities of the wearer in a wide range of situations. The wearer wants the wearable or handheld device to be discrete and accessible as though an extension of one's own body. Miniature and micro-miniature switches lend themselves to the compact design of the devices, which contributes to a seamless and positive user experience.














*Wearable technology is becoming mainstream for every member of the modern family. Today's wearable product designs utilize miniature tact, navigation and detector switches. Our tact switch line offers a wide variety of dimensions, profiles, actuation heights and styles from surface mount, right angle and illuminated.*



► This brochure shows a small sample of wearable/handheld devices applications. Suitable switch style and

# APPLICATION & SWITCH MATRIX

The applications listed below are only a small sampling of the many wearable technology and handheld devices available in the marketplace today.

													
	TL1015	TL3315	TL3365	TL3700	TL3750	TL3780	TL3301	TL3302	TL3303	TL3305	TL3313	TL3342	TL612
	4.4mm x 2.9mm	4.5mm x 4.5mm	4.2mm x 3.2mm	3.0mm x 2.6mm	3.0mm x 2.0mm	3.0mm x 2.0mm	6.0mm x 6.0mm	3.5mm x 6.0mm	6.0mm x 6.0mm	4.5mm x 4.5mm	4.8mm x 4.8mm	5.0mm x 5.0mm	7.4mm x 7.4mm
	2.0mm	.55mm	2.5mm	.65mm	.58mm	.55mm	2.4mm to 13.0mm	4.3mm	3.10mm	3.8mm, 5.0mm, 7.0mm	1.5mm	1.54mm	4.7mm

## Healthcare & Fitness

Smart Watches, Wrist & Arm Band Trackers	◆	◆	◆	◆	◆	◆						◆	
Insulin (medication) Auto-Delivery Systems	◆	◆	◆	◆	◆	◆				◆	◆	◆	
Fall Detection Monitors	◆	◆	◆	◆	◆	◆			◆		◆	◆	
Hearing Aids	◆	◆	◆	◆	◆	◆					◆	◆	
Smart Thermometers	◆	◆	◆	◆	◆	◆							
Chronic Pain Management Devices	◆	◆	◆				◆		◆	◆	◆	◆	◆

## Sports, Travel, Gaming & Entertainment

Virtual Reality (VR) Headsets and Gaming Controls							◆	◆	◆	◆	◆	◆	◆
Smart Earpiece/Headphones	◆	◆	◆	◆	◆	◆				◆	◆	◆	
GPS Devices	◆	◆	◆				◆	◆	◆	◆	◆	◆	◆
Wristbands, Gloves, Clips to track & improve performance	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycling Helmet-directional/signal lights			◆				◆	◆	◆	◆	◆	◆	◆

















## Workplace & Manufacturing

Smart Communion Devices: Phones, Watches, Tablets		◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Laptop Computers	◆	◆	◆				◆	◆	◆	◆	◆	◆	◆
Smart Jewelry: Watches, Cuff Bracelets	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Smart Glasses	◆	◆	◆	◆	◆	◆					◆	◆	

## Safety Devices

Smart Jewelry: Pendants, Charms	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clips, Keychains, Tags	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Smart Home Hubs	◆	◆	◆	◆			◆	◆	◆	◆	◆	◆	◆
Pet Trackers- GPS & Activity Level	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Infant Monitors & Webcam Devices	◆	◆	◆					◆	◆	◆	◆	◆	◆

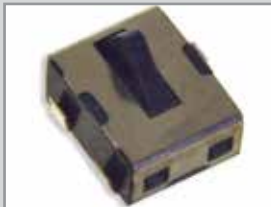
features depend on the product requirements. Visit [www.e-switch.com](http://www.e-switch.com) for complete specifications of each switch.

																
Dimensions (mm)	6.2mm x 6.9mm	6.0mm x 66.0mm	6.4mm x 4.5mm	3.4mm x 7.8mm	4.0mm x 3.3mm	6.0mm x 6.5mm	7.3mm x 6.0mm	6.2mm x 2.5mm	4.8mm x 2.2mm	4.5mm x 6.8mm	4.9mm x 4.9mm	6.2mm x 4.6mm	9.8mm x 9.8mm	9.0mm x 9.0mm	3.5mm x 3.0mm	4.8mm x 5.0mm
Height (mm)	3.4mm	5.0mm	1.65mm	3.5mm	3.4mm	2.3mm, 2.8mm, 4.0mm, 4.35mm	2.3mm	2.0mm	2.9mm	2.0mm	2.0mm	3.72mm	1.55mm	2.8mm	2.53mm	3.8mm
Feature 1			◆	◆	◆		◆	◆	◆							
Feature 2			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				
Feature 3			◆	◆	◆	◆	◆	◆	◆							
Feature 4	◆		◆	◆	◆			◆	◆							
Feature 5	◆															
Feature 6										◆	◆	◆	◆	◆		
Feature 7	◆	◆														
Feature 8	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆		
Feature 9	◆	◆		◆	◆	◆				◆	◆	◆				
Feature 10			◆	◆	◆			◆	◆							
Feature 11	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				
Feature 12	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆		
Feature 13	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				

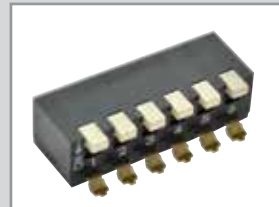
E-Switch offers a large selection of electromechanical switches to fit numerous applications in industries, such as audio/visual, telecommunications, consumer electronics, medical equipment, testing/instrumentation, computer peripherals, industrial type environments and wearable technology devices. Visit [www.e-switch.com](http://www.e-switch.com) to view our complete line.



**Anti-vandal**



**Detector**



**DIP**



**Keylock**



**Navigation**



**Pushbutton**



**Rocker**



**Rotary**



**Rotary DIP**



**Slide**



**Snap Action**



**Tact**



**Tilt**



**Toggle**



**Trigger**



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