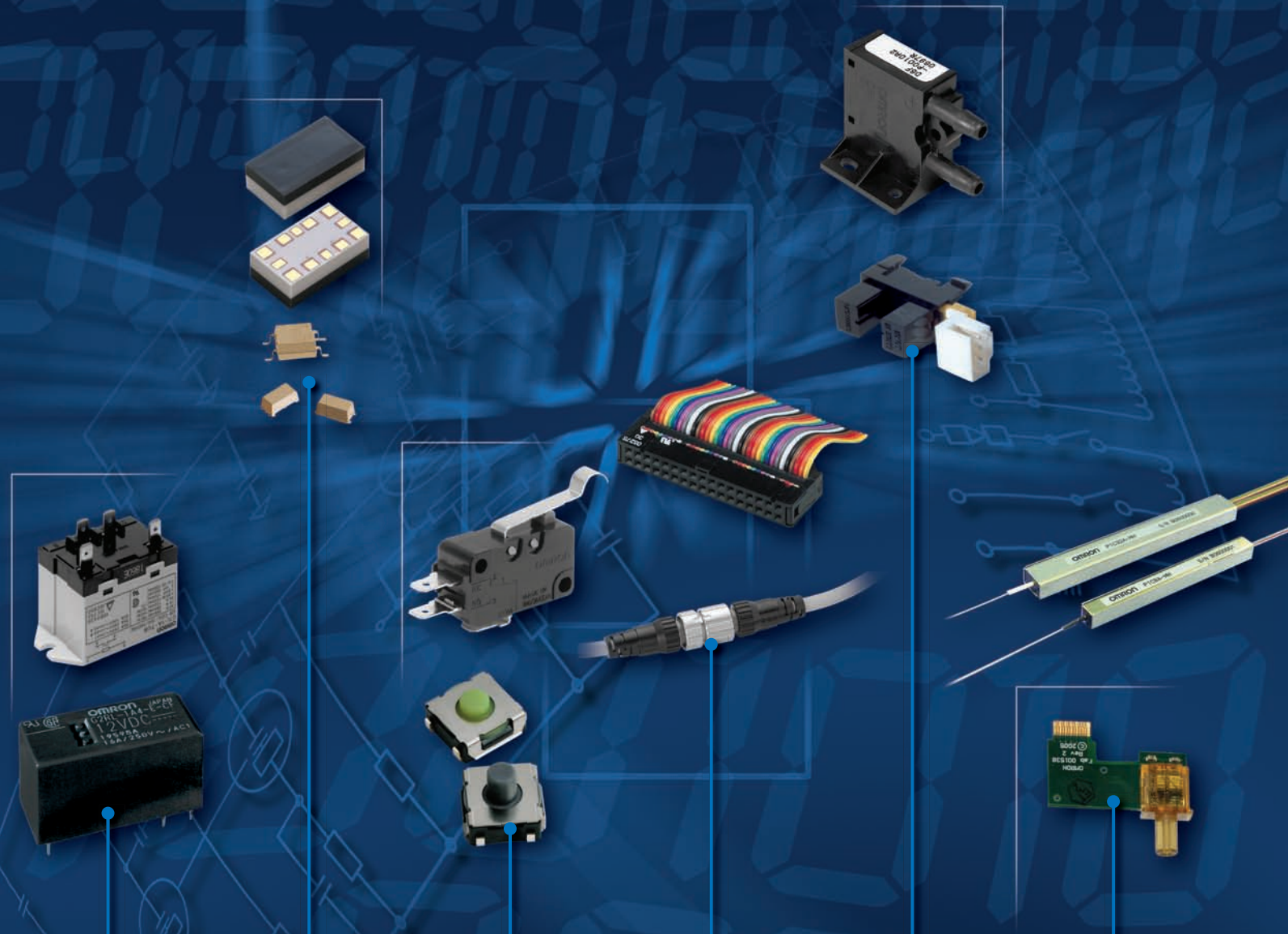


# Electronic Components



# Master Selection Guide

Relays  
Electromechanical

Relays  
Microelectronic

Switches

Connectors

Sensors

Fiber Optic

**OMRON**<sup>®</sup>  
ELECTRONIC COMPONENTS

# Omron Electronic Components LLC

## Stability and Experience

With over 70 years experience, Omron continues to apply the latest technologies providing you with innovative efficient control component solutions. Our wide range of relays, switches, sensors, and connectors allows our customers to streamline vendor lists and reduce the cost of procurement.

## Quality First

### Our commitment, your benefit

Omron makes a conscious choice to relentlessly pursue quality. Our quality engineers are part of the design and manufacturing process from the start. We design and evaluate at the component level, test and adjust during manufacturing, and examine every physical, mechanical, and electrical aspect of each final product before it leaves the factory.

## Customer Support

Omron's sales engineers, inside sales representatives, and customer service staff have experience with all types of electronic applications. No matter what the application or volume, we will find just the right component for your project.

## Broad Product Offering

### Relays: The #1 Supplier In The World:

- MOS FET
- Low Signal
- RF/HF
- RF MEMS
- Power PCB
- Automotive
- General-Purpose
- Solid State

### Switches:

- Snap Action
- Tactile
- DIP
- Dome Array
- Thumbwheel
- Rocker

### Sensors:

- Flow
- Pressure
- Tilt
- Vibration

### Connectors:

- FPC
- Industrial
- PCB

### Fiber Optic:

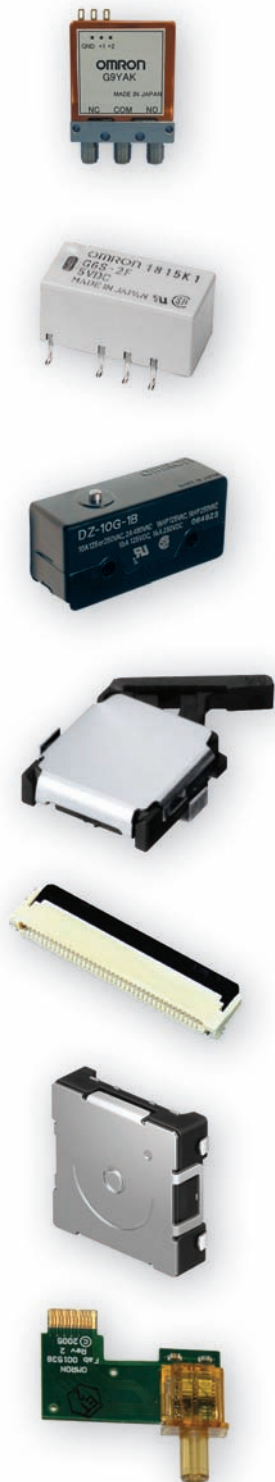
- Tosa/Rosa
- Tx/Rx Module
- Splitters
- MLA

Additional information can be found at [www.components.omron.com](http://www.components.omron.com), or by calling us at: 847.882.2288 Monday through Friday 7:30 AM until 6:00 PM CST. Our inside sales staff will be ready to provide you with detailed product information, technical design support, or the location of your local Omron sales office or authorized distributor.



**RoHS**  
COMPLIANT

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Relays  
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# OMRON History & Profile

## History:

Omron was founded May 10, 1933 in Kyoto, Japan, by founder Kazuma Tateisi. The first product developed and released by Omron was a timer for X-ray equipment. Since then, Omron has expanded globally and produced a steady stream of breakthroughs in electronic components that have contributed to the improvement of productivity in many different industries. Omron's consistent striving to accurately anticipate the potential needs of society and develop businesses to satisfy those needs has made the Omron Group what it is today. Dr. Tateisi's passion and progressive attitude are instilled to this day in all Omron employees, and the challenge-oriented spirit remains the main source of Omron's identity. By consistently preserving the spirit and philosophy of Omron's founder, we are determined to continue meeting the challenges of creating a better tomorrow.

## Achievements:

- **December 1943** – Development of Japan's first precision switch; established Omron (then Tateisi Electric) as a 'technological pioneer' in Japan.
- **1948** – Establishment of Omron Tateisi Electronics Co. coincided with the successful development and production of a new current limiter integrating Omron's precision switch and protective relay technologies.
- **1955-1965** – Launched the full-scale production of control components and the introduction of a steady stream of new products including advanced precision switches & compact protective relays.
- **1960** – Development of the innovative solid-state proximity switch and solid-state relay.
- **1963** – Introduction of the world's first automatic meal-ticket vending machine.
- **1969 and 1971** – Development of the first off-line and on-line automatic cash dispensers which established Omron as one of the pioneers of the banking revolution in Japan.
- **1967** – Completion of the world's first automated train station system achieved by drawing on the company's advanced card system technology.
- **January 1990** – the company was renamed to Omron Corporation and marked a commitment to continue expansion of business lines and global-scale production.
- **April 1999** – Omron establishes a strategic system of five specialized, independent business units.
- **2002** – Establishment of Omron China to accelerate market expansion in to China and Asia-Pacific.
- **2008** – Omron celebrates 75 years of business with a commitment to "Building on tradition, focused on the future."

## Profile:

Omron Corporation is a \$7.5 billion leading global supplier of electronics and control system components and services.



# OMRON's Core

## Competencies:

**Materials**  
**Precision Assembly**  
**Stamping**  
**Molding**  
**Welding**  
**Integration of Active Elements**

## Technologies:

**Advanced Devices**  
 Micromachining  
 MEMS, Lens and Mirror

**Sensing**  
 Flow, Pressure, Vibration, Tilt

**Control**  
 Switching, Magnetic Actuators

## **Electronic Components Business**

### Markets Served:

**Communications • Transportation**  
**Consumer Electronics • Industrial • HVAC**  
**Appliances • Medical • Test & Measurement**

## **Other Omron Businesses**

**Automotive  
 Electronics  
 Business**



**Industrial  
 Automation  
 Business**

**Social  
 System  
 Business**



**Healthcare  
 Business**

**Design Synthesis:** Our product designs are based on a combination of our core competencies and core technologies to effectively meet customer and market needs. By efficiently and creatively manipulating these competencies, we are able to develop and manufacture a broad offering of cost effective, high quality, and environmentally friendly products. As the global market's demand for new and innovative products continues to grow, Omron pledges to expand its research and development of new core technologies.

**Commitment to the Environment:** Omron is committed to creating products that are designed with consideration for the environment throughout their entire lifespan (what we call "Eco-Products"). These considerations address energy and resource conservation, extended product life, reuse and recycling, as well as avoidance of hazardous chemical substances. Our goal is to make a proactive contribution to reducing the harm caused by our societal system to the environment through the development of more environmentally sound products.

**Relays  
 Electromechanical**

**Relays  
 Microelectronic**





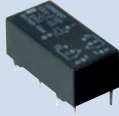
**Switches**

**Connectors**






**Sensors**

**Fiber Optic**

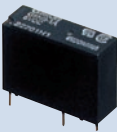
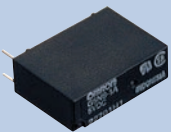


# Relays - Low Signal

					
<i>General Attributes</i>	<b>G6J-Y</b>	<b>G6K</b>	<b>G6H</b>	<b>G6S</b>	<b>G6A</b>
<b>Dimensions mm (in)</b>	10.0 H x 10.6 L x 5.7 W (0.39 x 0.42 x 0.22)	5.30 H x 10.20 L x 6.70 W (0.21 x 0.40 x 0.26)	5.08 H x 13.97 L x 8.89 W (0.20 x 0.55 x 0.35)	9.40 H x 15 L x 7.50 W (0.37 x 0.59 x 0.30)	8.40 H x 20.20 L x 10.10 W (0.33 x 0.80 x 0.40)
<b>Switching</b>	1A max.	1A max.	1A max.	2A max.	2A max.
<b>Features</b>	<ul style="list-style-type: none"> <li>Slimline, 2 Form C, 1 Amp relay</li> <li>SMT &amp; PCB versions</li> <li>2.5kV surge withstand</li> <li>Available in SMT &amp; PCB</li> <li>Latching &amp; non-latching versions</li> <li>Ideal for Telecom, Test &amp; Measurement, Medical, Security, Computer Peripheral, Office Automation</li> </ul>	<ul style="list-style-type: none"> <li>Small real estate, 2 Form C, 1 Amp relay</li> <li>100mW power consumption</li> <li>2.5kV surge withstand</li> <li>SMT &amp; PCB versions</li> <li>Latching &amp; non-latching models</li> <li>Ideal for Telecom, Test &amp; Measurement, Medical, Security, Office Automation, Computer Peripheral</li> </ul>	<ul style="list-style-type: none"> <li>Low profile (5mm), 2 Form C, 1 Amp relay</li> <li>Available in SMT &amp; PCB</li> <li>1.5kV surge withstand</li> <li>140mW power consumption</li> <li>Ideal for Telecom, Test &amp; Measurement, Medical, Security, Office Automation, Computer Peripheral</li> </ul>	<ul style="list-style-type: none"> <li>Industry standard, 2 Form C, 2 Amp relay</li> <li>2.5 kV surge withstand</li> <li>SMT gullwing, SMT inside-L, PCB models</li> <li>Latching &amp; non-latching versions</li> <li>European version available (supplementary insulation at 250V at pollution degree 2 per EN60950/EN41003)</li> <li>Ideal for Telecom, Thermostats, Medical, Test &amp; Measurement, Security</li> </ul>	<ul style="list-style-type: none"> <li>Industry standard, 2 Form C, 2 Amp relay</li> <li>200mW, 400mW versions</li> <li>2 Pole &amp; 4 Pole models</li> <li>Latching &amp; non-latching versions</li> <li>1.5kV surge withstand</li> <li>Ideal for Telecom, Test &amp; Measurement, Security</li> </ul>
<b>Contact Information</b>					
<b>Contact form</b>	2 Form C	2 Form C	2 Form C	2 Form C	2 Form C, 4 Form C
<b>Contact type(s)</b>	Bifurcated crossbar	Bifurcated crossbar	Bifurcated crossbar	Bifurcated crossbar	Bifurcated crossbar
<b>Contact material</b>	Ag with Au alloy clad	Ag with Au clad	Ag with Au clad	Ag with Au clad; AgPd with Au clad	Ag with Au clad; AgPd with Au clad
<b>Rated load (under resistive load)</b>	0.3A @ 125VAC, 1A @ 30VDC	0.3A @ 125VAC, 1A @ 30VDC	0.5A @ 125VAC, 1A @ 30VDC	0.5 @ 125VAC, 2A @ 30VDC	0.3A to 0.5A @ 125VAC, 1A to 2A @ 30VDC
<b>Max. operating voltage</b>	125VAC, 110VDC	125VAC, 60VDC	125VAC, 110VDC	250VAC, 220VDC	250VAC, 220VDC
<b>Max. switching capacity under resistive load</b>	37.5VA, 30W (NO)	37.5VA, 30W	62.5VA, 33W	62.5VA, 60W	125VA, 60W
<b>Min. electrical service life (operations at rated load)</b>	100,000	100,000	100,000	100,000	500,000
<b>Min. permissible load (for reference only)</b>	10µA @ 10mVDC	10µA @ 10mVDC	10µA @ 10mVDC	10µA @ 10mVDC	10µA @ 10mVDC
<b>Coil Information</b>					
<b>Coil voltage</b>	3, 4.5, 5, 12, 24VDC	3, 4.5, 5, 6, 9, 12, 24VDC	3, 5, 6, 9, 12, 24, 48VDC	3, 4.5, 5, 6, 9, 12, 24VDC	3, 5, 6, 9, 12, 24, 48VDC
<b>Power consumption</b>	140mW (230mW for DC24)	100mW (standard and latching)	140mW (standard)	140mW (standard) 140mW, 200mW (latching)	200mW (DPDT standard) 180mW (DPDT latching) 360mW (4PDT standard)
<b>Characteristics</b>					
<b>Dielectric strength between coil &amp; contacts (50/60 Hz for 1 minute)</b>	1,500VAC	1,500VAC	1,000VAC	2,000VAC	1,000VAC
<b>Surge withstand</b>	2.5kV (2 x 10µs)	2.5kV (2 x 10µs)	1.5kV (10 x 160µs)	2.5kV (2 x 10µs)	1.5kV (10 x 160µs)
<b>Terminal choices</b>	SMT Gullwing, PCB	SMT Gullwing, SMT Inside-L, PCB	PCB (G6H), SMT Gullwing (G6H-2F)	SMT Gullwing, SMT Inside-L, PCB	PCB
<b>Packaging</b>	Tape & reel available	Tape & reel available	Tape & reel available	Tape & reel available	—
<b>Approved standards</b>	Bellcore 2.5kV / Telcordia GR-1089-CORE 2.5kV between coil and contacts	Bellcore 2.5kV / Telcordia GR-1089-CORE 2.5kV between coil and contacts	UL, CSA, (FCC Part 68)	Bellcore 2.5 kV / Telcordia GR-1089-CORE 2.5 kV (between coil and contacts)	UL, CSA, (FCC Part 68)

# Relays - Low Signal





					
<b>General Attributes</b>	<b>G5A</b>	<b>G5V-1</b>	<b>G6L</b>	<b>G5V-2</b>	<b>G6E</b>
<b>Dimensions mm (in)</b>	8.38 H x 16 L x 9.9 W (0.33 x 0.63 x 0.39)	10.0 H x 12.50 L x 7.50 W (0.39 x 0.49 x 0.30)	4.5 H x 10.6 L x 7.0 W (0.18 x 0.42 x 0.28)	11.43 H x 20.32 L x 9.91 W (0.45 x 0.80 x 0.39)	8.38 H x 16 L x 9.9 W (0.33 x 0.63 x 0.39)
<b>Switching</b>	1A max.	1A max.	1A max.	2A max.	3A max.
<b>Features</b>	<ul style="list-style-type: none"> <li>General use, 2 Form C, 1 Amp relay</li> <li>Semi-sealed or fully-sealed construction</li> <li>Ideal for Telecom, Security, Computer Peripheral, Office Automation</li> </ul>	<ul style="list-style-type: none"> <li>General use, 1 Form C, 1 Amp relay</li> <li>150mW power consumption</li> <li>1.5kV surge withstand</li> <li>Ideal for Telecom, Security, Computer Peripheral</li> </ul>	<ul style="list-style-type: none"> <li>Very low profile, 1 Form A, 1 Amp relay</li> <li>1.5kV surge withstand</li> <li>SMT &amp; PCB versions</li> <li>Ideal for Security &amp; General Use</li> </ul>	<ul style="list-style-type: none"> <li>2 Form C, 1-2 Amp relay</li> <li>Ideal for general use</li> <li>Industry standard footprint</li> <li>150mW, 360mW &amp; 500mW coil power versions</li> <li>1.5 kV surge withstand</li> </ul>	<ul style="list-style-type: none"> <li>General use, 1 Form C, 3 Amp relay</li> <li>2.5 kV surge withstand</li> <li>200mW, 400mW models</li> <li>Latching and non-latching versions</li> </ul>
<b>Contact Information</b>					
<b>Contact form</b>	2 Form C	1 Form C	1 Form A	2 Form C	1 Form C
<b>Contact type(s)</b>	Bifurcated crossbar	Single crossbar	Single crossbar	Bifurcated crossbar	Bifurcated crossbar
<b>Contact material</b>	Ag with Au clad	Ag with Au clad	Ag with Au clad	Ag with Au clad	Ag with Au clad
<b>Rated load (under resistive load)</b>	0.5A @ 24VAC, 1A @ 24VDC	0.5A @ 125VAC, 1A @ 24VDC	0.3A @ 125VAC, 1A @ 24VDC	0.5A @ 125VAC, 2A @ 30VDC	0.4A @ 125VAC, 2A @ 30VDC
<b>Max. operating voltage</b>	125VAC, 125VDC	125VAC, 60VDC	125VAC, 60VDC	125VAC, 125VDC	250VAC, 220VDC
<b>Max. switching capacity under resistive load</b>	37.5VA, 33W	62.5VA, 30W	37.5VA, 24W	62.5VA, 60W	50VA, 60W
<b>Min. electrical service life (operations at rated load)</b>	100,000	100,000	100,000	300,000	100,000
<b>Min. permissible load (for reference only)</b>	1mA @ 5VDC	1mA @ 5VDC	1mA @ 5VDC	10µA @ 10mVDC	10µA @ 10mVDC
<b>Coil Information</b>					
<b>Coil voltage</b>	5, 6, 9, 12, 24, 48VDC	5, 6, 9, 12, 24VDC	3, 4.5, 5, 12, 24VDC	3, 5, 6, 9, 12, 24, 48VDC	3, 5, 6, 9, 12, 24, 48VDC
<b>Power consumption</b>	200mW (standard & latching)	150mW	180mW (standard)	500mW (standard) 360mW (high-sensitivity) 150mW (ultra-sensitive)	200mW (standard) 400mW (standard)
<b>Characteristics</b>					
<b>Dielectric strength between coil &amp; contacts (50/60 Hz for 1 minute)</b>	1,000VAC	1,000VAC	1,000VAC	1,000VAC	1,500VAC
<b>Surge withstand</b>	—	1.5kV (10 x 160µs)	—	1.5kV (10 x 160µs)	2.5kV (2 x 10µs)
<b>Terminal choices</b>	PCB	PCB	PCB, SMT Gullwing	PCB	PCB
<b>Packaging</b>	—	—	Tape & reel available	—	—
<b>Approved standards</b>	UL, CSA	UL, CSA	UL/CSA (FCC Part 68)	UL, CSA	UL/CSA (FCC Part 68) Bellcore 2.5kV / Telcordia GR-1089-CORE 2.5kV between coil and contacts

# Relays - Power PCB





	<b>NEW!</b> 	<b>NEW!</b> 		
<b>General Attributes</b>	<b>G5NB</b>	<b>G5NB-E</b>	<b>G5SB</b>	<b>G6D-ASI</b>
<b>Dimensions mm (in)</b>	15.3 H x 20.5 L x 7.2 W (0.60 x 0.81 x 0.28) max.	15.3 H x 20.5 L x 7.2 W (0.60 x 0.81 x 0.28) max.	15.8 H x 20.3 L x 10.3 W (0.62 x 0.80 x 0.41) max.	12.5 H x 17.5 L x 6.5 W (0.49 x 0.69 x 0.26)
<b>Switching</b>	3A	5A (AC Loads) 3A (DC Loads)	5A(NO)/3A(NC)	5A
<b>Features</b>	<ul style="list-style-type: none"> <li>• Compact 3A relay with PCB area of 148mm<sup>2</sup></li> <li>• Meets EN tracking resistance CTI&gt;250</li> <li>• Sealed models available</li> </ul>	<ul style="list-style-type: none"> <li>• 5A switching capability AC loads)</li> <li>• Meets EN tracking resistance CTI&gt;250</li> <li>• Sealed models available</li> </ul>	<ul style="list-style-type: none"> <li>• High insulation between coil &amp; contact</li> <li>• Impulse withstand of 8kV</li> <li>• Fully Sealed</li> <li>• Incorporates 5A NO contact</li> </ul>	<ul style="list-style-type: none"> <li>• Subminiature, slim lightweight design</li> <li>• Low power consumption</li> <li>• Fully Sealed</li> </ul>
<b>Contact Information</b>				
<b>Contact form</b>	1 Form A	1 Form A	1 Form C	1 Form A
<b>Contact type(s)</b>	Single button	Single button	Single button	Single button
<b>Contact material</b>	Ag-Alloy	Ag-Alloy	Ag-Alloy	Ag-Alloy
<b>Electrical service life (@ 1800 ops./hr. (resistive load))</b>	200,000: 3A @ 125VAC/30VDC	200,000: 3A @ 30VDC 100,000: 5A @ 250VAC	200,000 3A (NO)/3A (NC) at 125VAC 50,000 5A (NO) at 250VAC 10,000 5A (NO)/3A (NC) at 30VDC	300,000: 2A @ 30VDC/250VAC 70,000: 5A @ 30VDC/250VAC
<b>Max. switching capacity under resistive load</b>	375VA, 90W	1,250VA, 90W	1,250VA, 150W(NO) 750 VA, 90 W (NC)	1,250VA, 150W
<b>Min. permissible load (for reference only)</b>	10mA @ 5VDC	10mA @ 5VDC	10mA @ 5VDC	10mA @ 5VDC
<b>Coil Information</b>				
<b>Coil voltage</b>	5, 12, 18, 24VDC	5, 12, 18, 24VDC	5, 9, 12, 24VDC	5, 12, 24, 48VDC
<b>Power consumption</b>	200mW	200mW	400mW	200mW
<b>Insulation class</b>	—	—	—	—
<b>Characteristics</b>				
<b>Operating temperature</b>	-40 to +70°C	-40 to +70°C	-40 to +70°C	-25 to +70°C
<b>Impulse withstand voltage (1.2 x 50µ sec. unless noted)</b>	10kV	10kV	8kV	6kV
<b>Dielectric strength</b>	4,000VAC (coil-contact) 750VAC (open contacts)	4,000VAC (coil-contact) 750VAC (open contacts)	4,000VAC (coil-contact) 1,000VAC (open contacts)	3,000VAC (coil-contact) 750VAC (open contacts)
<b>Terminal choices</b>	PCB	PCB	PCB	PCB
<b>Protection level</b>	Sealed, semi-sealed	Sealed, semi-sealed	Sealed	Sealed
<b>Accessories</b>	N/A	N/A	N/A	Back connecting socket
<b>Approved standards</b>	UL, CSA, VDE	UL, CSA, VDE	UL, CSA, VDE	UL, CSA, TUV




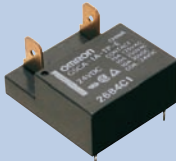
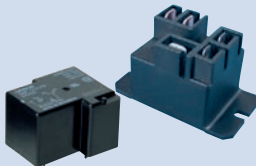
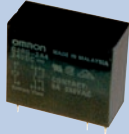
# Relays - Power PCB

	<b>NEW!</b> 		<b>NEW!</b> 	
<b>General Attributes</b>	<b>G6DS</b>	<b>G6M</b>	<b>G6RL</b>	<b>G6RN</b>
<b>Dimensions mm (in)</b>	12.4 H x 20 L x 5.0 W (0.60 x 0.81 x 0.28)	17.7 H x 20.3 L x 5.08 W (0.70 x 0.80 x 0.20) max.	12.3 (H) x 28.5 (L) x 10.0 (W) (0.48 x 1.12 x 0.39) max.	15 H x 28.5 L x 10 W (0.59 x 1.12 x 0.39)
<b>Switching</b>	5A	5A	10 A (NO)/ 8 A (NC) AC loads 5 A DC loads	8A AC loads 5A DC loads
<b>Features</b>	<ul style="list-style-type: none"> <li>• Slim 5mm for max. density mounting</li> <li>• High sensitive coil option reduces power consumption</li> <li>• Operating temperature -40C to + 85C</li> <li>• Fully sealed</li> <li>• Low profile of 12.5mm max</li> </ul>	<ul style="list-style-type: none"> <li>• Very small PCB area of 104mm<sup>2</sup> ideal for high-density mounting</li> <li>• Very low 120mW nominal power</li> <li>• Satisfies IEC 61131-2 and 61010</li> </ul>	<ul style="list-style-type: none"> <li>• 10mm creepage/clearance distance</li> <li>• Low profile: 12.3mm in height</li> <li>• 5 kV Dielectric Strength</li> <li>• Sealed and flux tight models</li> <li>• Maximum voltage of 400VAC or 300VDC</li> </ul>	<ul style="list-style-type: none"> <li>• 8 mm coil/contact creepage</li> <li>• Low profile</li> <li>• Sealed construction standard</li> <li>• Ideal for switching contactors, solenoids &amp; motors</li> </ul>
<b>Contact Information</b>				
<b>Contact form</b>	1 Form A	1 Form A	1 Form A, 1 Form C	1 Form A, 1 Form C
<b>Contact type(s)</b>	Single button	Single button	Single Button	Single button
<b>Contact material</b>	AgNi	Ag-Alloy	Ag-Alloy	Ag-Alloy
<b>Electrical service life (@ 1800 ops./hr.) (resistive load)</b>	100,000: 5A @ 30VDC/250VAC 80,000 (high sensitivity): 5A @ 30VDC/250VAC	100,000 minimum 3 A at 250 VAC/ 30 VDC	See datasheet for details	100,000: 8A @ 250VAC 5A @ 30VDC
<b>Max. switching capacity under resistive load</b>	1,250VA, 150W	750VA, 90W	2,500 VA (NO) 2,000 VA (NC) 150 W	2,000VA, 150W
<b>Min. permissible load (for reference only)</b>	5mA @ 24VDC	10mA @ 5VDC	10 mA, 5 VDC	10mA @ 5 VDC
<b>Coil Information</b>				
<b>Coil voltage</b>	5, 12, 24VDC	5, 12, 24VDC	3, 5, 6, 12, 24, 48 VDC	5, 6, 12, 24, 48VDC
<b>Power consumption</b>	180mW 120mW (high-sensitivity)	120mW	Standard, ASI, PL Models: Approx. 220 mW Shock Resistant Models "SR": Approx. 300mW	220 mW, 250 mW (48 VDC)
<b>Insulation class</b>	—	—	Class B	—
<b>Characteristics</b>				
<b>Operating temperature</b>	-40 to +85°C	-40 to +85°C	-40C to +85C	-40 to +85°C
<b>Impulse withstand voltage (1.2 x 50µ sec. unless noted)</b>	6kV	5.08kV	10kV	4.5kV
<b>Dielectric strength (50/60 Hz for 1 minute)</b>	3,000VAC (coil-contacts) 750VAC (open contacts)	3,000VAC, (coil-contact) 750VAC, (open contacts)	5,000 VAC (coil and contacts) 1,000 VAC (contacts of same polarity)	4,000VAC (coil-contact) 1,000 (open contacts)
<b>Terminal choices</b>	PCB	PCB	PCB	PCB
<b>Protection level</b>	Fully Sealed	Fully Sealed	Sealed, semi-sealed	Sealed
<b>Accessories</b>	Socket for back connecting, sockets with PCB terminals	N/A	N/A	N/A
<b>Approved standards</b>	UL, CSA, VDE	UL, CSA, VDE	UL, CSA, VDE	UL, CSA, VDE

# Relays - Power PCB


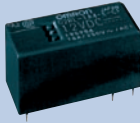

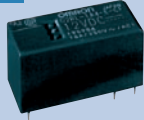
	<b>NEW!</b> 	<b>NEW!</b> 		
<b>General Attributes</b>	<b>G5LA</b>	<b>G5LE-E</b>	<b>G5Q</b>	<b>G6B</b>
<b>Dimensions mm (in)</b>	15.6 (H) x 19.6 (L) x 15.6 (W) (0.61 x 0.77 x 0.61)	19 H x 22.5 L x 16.5 W (0.75 x 0.89 x 0.65)	15.8 H x 20.3 L x 10.3 W (0.62 x 0.80 x 0.41) max.	9.91 H x 20.07 L x 9.91 W (0.39 x 0.79 x 0.39)
<b>Switching</b>	10 A (SPST-NO)	10A (16A for Semi-sealed "E" type)	10A (NO contacts)	8A/5A
<b>Features</b>	<ul style="list-style-type: none"> <li>Economical Sugar Cube Relay</li> <li>Ideal applications: Appliance, HVAC</li> <li>UL Rating 15 A @ 125 VAC, general use, 50,000 cycles</li> <li>UL Rating of 10 A @ 277 VAC, general use, 100,000 cycles (NC) high capacity "E" type.</li> <li>Class F models available</li> </ul>	<ul style="list-style-type: none"> <li>Sugar Cube Relay</li> <li>High capacity "-E" handles resistive loads up to 16A (NO) and 12A (NC)</li> <li>Large contact gap "-G" available</li> <li>Standard models: Class B coil insulation. Class F models available</li> </ul>	<ul style="list-style-type: none"> <li>Compact relay with Class F coil insulation</li> <li>8kV Surge Withstand Voltage</li> <li>UL 1/4HP Rating @ 250VAC (NO), 30,000 cycles</li> <li>Low nominal power</li> <li>CTI &gt; 250 models available</li> </ul>	<ul style="list-style-type: none"> <li>Low profile 12.5mm or less</li> <li>Small PCB area of 200mm<sup>2</sup></li> <li>LED + Diode suppression models available</li> <li>Single and dual coil latching types available</li> </ul>
<b>Contact Information</b>				
<b>Contact form</b>	1 Form A, 1 Form C	1 Form A, 1 Form C	1 Form A, 1 Form C	1 Form A, 2 Form A, 2 Form B 1 Form A + 1 Form B
<b>Contact type(s)</b>	Single Button	Single button	Single button	Single button
<b>Contact material</b>	Ag-Alloy	Ag-Alloy	Ag-Alloy	Ag-Alloy
<b>Electrical service life (@ 1800 ops./hr.) (resistive load)</b>	100,000: 10A @ 250VAC/24VDC (NO) 5A @ 125VAC/24VDC (NC) 5A @ 250VAC/24VDC "E" (NC)	G5LE: 100,000 at rated load UL Rating 13A, 120VAC, resistive, 100,000 cycles, @ 85C G5LE-E: 50,000 (NO) at rated load 30,000 (NC) at rated load (600 operations/hour) UL Rating 12A @ 250VAC (NO), general use, 100,000 cycles, @105C	200,000: 3A (NO)/3 A (NC) @ 125VAC 100,000: 3A (NO)/3 A (NC) @ 250VAC 5A (NO)/3 A (NC) @ 30VDC 50,000: 10A (NO) @125VAC (900 ops. per hour)	100,000: 5A @ 30 VDC/250VAC 8A @ 30 VDC/250VAC (high-capacity)
<b>Max. switching capacity under resistive load</b>	2,500 VA, 240 W (NO) 625 VA, 120 W (NC) standard 1,250 VA, 120 W (NC) high capacity	1,200VA, 240W	1,250VA, 150W (NO) 375 VA, 90W (NC)	1,250VA, 150W 2,000VA, 240W (high-capacity type)
<b>Min. permissible load (for reference only)</b>	100 mA, 5 VDC	G5LE: 1200VA, 240W G5LE-E: 4000VA (NO) G5LE-G: 350W	10mA @ 5VDC	10mA @ 5VDC
<b>Coil Information</b>				
<b>Coil voltage</b>	5, 9, 12, 24, 48 VDC	5, 6, 9, 12, 24, 48VDC	5, 12, 24VDC	5, 6, 12, 24VDC
<b>Power consumption</b>	Approx. 360 mW (480 mW 48 VDC)	G5LE/G5LE-E: 400mW (360mW models available) G5LE-G: 700mW	400mW Form C 200mW Form A	Standard non latching types 200mW (1 pole) 300mW (2 pole)
<b>Insulation class</b>	Class F models available	G5LE: Class B, G5LE-E/G: Class F	Class F	—
<b>Characteristics</b>				
<b>Operating temperature</b>	-40 to +85°C	-40 to +85°C	-40 to +105°C	-25 to +70°C
<b>Impulse withstand voltage (1.2 x 50µ sec. unless noted)</b>	4.5kV	4.5kV	8kV	—
<b>Dielectric strength (50/60 Hz for 1 minute)</b>	2,000 VAC (coil and contacts) 750 VAC (contacts of same polarity)	2,000VAC (coil-contact) 750VAC (open contacts)	4,000VAC (coil-contact) 1,000VAC (open contacts)	see data sheet for full details
<b>Terminal choices</b>	PCB	PCB	PCB	PCB
<b>Protection level</b>	Sealed, semi-sealed	G5LE: sealed, flux tight G5LE-E/G: flux tight	Standard: Semi-sealed/vented, Option: sealed	Sealed (LED + Diode type flux tight)
<b>Accessories</b>	—	N/A	N/A	Back connecting PCB Sockets
<b>Approved standards</b>	UL, CSA, VDE, CQC	UL, CSA, VDE	UL, CSA, VDE	UL, CSA

# Relays - Power PCB

				
<b>General Attributes</b>	<b>G6C</b>	<b>G5CA</b>	<b>G8PT</b>	<b>G2RG</b>
<b>Dimensions mm (in)</b>	9.91 H x 20.07 L x 14.99 W (0.39 x 0.79 x 0.59)	11 H x 16 L x 22 W (10A) (0.43 x 0.63 x 0.87) 11 H x 22 L x 25 W (15A)	Multiple, refer to catalog. Basic: 20.1(H)x 32.1(L) x 27.7(W)	25.5 H x 29 L x 13 W (1.00 x 1.14 x 0.51)
<b>Switching</b>	1 Form A: 10A 1 Form A + 1 Form B: 8A	10A (15A high capacity)	1 Form A: 30A 1 Form C: 20A (NO)/10A (NC)	8A
<b>Features</b>	<ul style="list-style-type: none"> <li>Low power consumption for high power switching</li> <li>Low profile 10A power relay</li> <li>Single &amp; dual coil latching types available</li> <li>Sealed construction available</li> <li>Back connecting sockets available</li> </ul>	<ul style="list-style-type: none"> <li>Low profile of 11mm</li> <li>High capacity "-E" models have 15A resistive load rating</li> <li>High sensitivity "-H" models have 150mW Nominal Power</li> <li>PCB or PCB + Q.C. terminal options</li> <li>Sealed models available for PCB only (excluding high capacity)</li> </ul>	<ul style="list-style-type: none"> <li>30A switching capacity for 1 Form A models (AC loads)</li> <li>Class F coil insulation</li> <li>Operating temperature: -55C to 105C</li> <li>UL Rating 1 Form A models 15FLA/75LRA, 120VAC, 85C, 130,000 cycles</li> <li>PCB, PCB + Q.C., and Q.C. terminal options</li> </ul>	<ul style="list-style-type: none"> <li>1.5mm contact gap between terminals of same polarity</li> <li>Dimensions &amp; mounting holes are same as G2R relay series</li> <li>Sealed construction, standard</li> <li>Meets EN tracking resistance CTI &gt; 250</li> </ul>
<b>Contact Information</b>				
<b>Contact form</b>	1 Form A + 1 Form B, 1 Form A	1 Form A	1 Form A, 1 Form C	2 Form A
<b>Contact type(s)</b>	Single button	Single button	Single button	Single button
<b>Contact material</b>	Ag-Alloy	Ag-Alloy	Ag-Alloy	Ag-Alloy
<b>Electrical service life (@ 1800 ops./hr.) (resistive load)</b>	100,000: 10A @ 30VDC/250VAC (1 Form A models) For 1 Form A + 1 Form B models see datasheet	100,000 (1,200 ops/hour): 10A @ 30VDC 15A @ 110VAC (high capacity) 10A @ 250VAC (fully sealed, std) 300,000: 10A @ 250VAC (semi-sealed)	100,000 (1 Form A): 30A @ 250VAC, 20A @ 28VDC 100,000 (1 Form C): 20A @ 250VAC, 20A @ 28VDC (NO) 10A @ 250VAC, 10A @ 28VDC (NC) (360 ops/hour apply to all ratings)	10,000: 8A @ 250VAC
<b>Max. switching capacity under resistive load</b>	2,500VA, 300W 2,000VA, 240W (latching)	2,500VA, 300W	1 Form A: 7,500VA, 560W 1 Form C: 5000/2500VA, 560W/280W*	2,000 VA
<b>Min. permissible load (for reference only)</b>	10mA @ 5VDC	100mA @ 5VDC	500mA @ 5VDC	10mA @ 5VDC
<b>Coil Information</b>				
<b>Coil voltage</b>	3, 5, 6, 12, 24VDC	5, 12, 24VDC	5, 9, 12, 24, 48, 110VDC Other coil voltages available	12, 24VDC
<b>Power consumption</b>	200mW (monostable & single coil latching) 280mW (dual coil latching)	200mW (standard & high capacity) 150mW (high sensitivity)	900mW	800mW
<b>Insulation class</b>	—	—	Class F	—
<b>Characteristics</b>				
<b>Operating temperature</b>	-25°C to +70°C	-25 to +70°C	-55°C to +105°C	-40 to +70°C
<b>Impulse withstand voltage (1..2 x 50µ sec. unless noted)</b>	4.5kV	4.5kV	6kV	10kV
<b>Dielectric strength (50/60 Hz for 1 minute)</b>	Non latching types: 2,000VAC (coil-contact) 1,000VAC (contacts same polarity)	2,500VAC (coil-contact) 1,000VAC (open contacts)	2,500VAC, (coil-contact) 1,500VAC, (open contacts)	5,000VAC, (coil-contact) 3,000VAC, (contacts pole-pole) 1,000VAC (open contacts)
<b>Terminal choices</b>	PCB, self clinching	PCB, Optional: PCB+quick-connect contact terminals	PCB, PCB+quick-connect contact terminals Flange mount all quick connect	PCB
<b>Protection level</b>	Semi-sealed Fully sealed option	Semi-sealed Fully sealed option	Open frame, Vented/semi-sealed, Fully sealed	Fully Sealed
<b>Accessories</b>	Back connecting PCB sockets, socket clips	N/A	N/A	N/A
<b>Approved standards</b>	UL, CSA, VDE	UL, CSA, TUV	UL, CSA	UL, CSA, VDE (0700/0110)





\* N.O. Contact / N.C. Contact

# Relays - Power PCB

			<b>NEW!</b> 	<b>NEW!</b> 
<i>General Attributes</i>	<b>G2R</b>	<b>G2RL</b>	<b>G2RL-TP</b>	<b>G5RL</b>
<b>Dimensions mm (in)</b>	25.5 H x 29 L x 13 W (1 x 1.14 x 0.51) max.	15.5 H x 28.8 L x 12.5 W (0.61 x 1.13 x 0.49)	15.9 H x 40.4 L x 12.6 W (0.63 x 1.59 x 0.50)	15.5 H x 28.8 L x 12.5 W (0.61 x 1.13 x 0.49)
<b>Switching</b>	3A/5A/10A/16A options	8A/10A/12A/16A options	16A max.	see datasheet
<b>Features</b>	<ul style="list-style-type: none"> <li>8mm creepage/clearance</li> <li>Latching models available</li> <li>10kV Surge Withstand</li> <li>"H" 360mW models 1 or 2 pole plus flux tight or sealed</li> <li>"T" quick connect models ideal for thin space panel mounting</li> <li>Class B models available</li> </ul>	<ul style="list-style-type: none"> <li>Low profile 15.7mm</li> <li>Class F coil insulation</li> <li>10kV Surge Withstand</li> <li>SPDT "H" 250mW models available</li> <li>CTI &gt; 250</li> </ul>	<ul style="list-style-type: none"> <li>Electrical life of 50,000 operations at 16A 250VAC @ 105C</li> <li>Simplifies PCB design by allowing removal of high power PCB tracings.</li> <li>Maximum load voltage 440VAC</li> <li>Operating Temperature -40C to 105C</li> </ul>	<ul style="list-style-type: none"> <li>Low profile of 15.7mm</li> <li>AC coil models "-E"</li> <li>High inrush models "-HR" handling up to 100A peak inrush current</li> <li>Low noise models "-LN" for sound sensitive environments</li> </ul>
<b>Contact Information</b>				
<b>Contact form</b>	1 Form A, 1 Form C, 2 Form A, 2 Form C	1 Form A, 1 Form C, 2 Form A, 2 Form C	1 Form A	1 Form C ("HR" and AC coil type) 1 Form A ("HR" and "LN" type)
<b>Contact type(s)</b>	Single button, bifurcated button	Single button	Single button	Single button
<b>Contact material</b>	Ag alloy	Ag alloy	Ag alloy	Ag alloy
<b>Electrical service life (@ 1800 ops./hr. (resistive load))</b>	100,000: (high-capacity type) 16A @ 30VDC/250VAC Consult catalog for other ratings	100,000 (360 ops/hour): High capacity 16A 250VAC 1 Pole: 12A 250VAC 2 Pole: 8A 250VAC	50,000 16A @ 250VAC (900 ops/hour)	AC coil and "HR" models: 50,000 at 16A 250VAC/24VDC (NO) 50,000 at 5A 250VAC/24VDC (NC) "LN" models: standard/high capacity 100,000 12A 250VAC (standard) 50,000 16A 250VAC (high capacity)
<b>Max. switching capacity under resistive load</b>	4,000VA, 480W (high-capacity 1 pole) Consult catalog for other ratings	4,000VA, 384W (high-capacity 1 pole) Consult catalog for other ratings	4,000VA,	4,000VA, 384W (NO) 1,250VA, 120W (NC)
<b>Min. permissible load (for reference only)</b>	1 pole: 100mA @ 5VDC; 2 pole: 10mA @ 5VDC	40mA, 24VDC	—	AC coil: 40mA @ 24VDC "HR" and "LN": 100mA @ 5VDC
<b>Coil Information</b>				
<b>Coil voltage</b>	AC coil: 6, 12, 24, 120, 240 VAC DC coil: 3, 5, 6, 12, 24, 48 VDC See datasheet for more details	5, 12, 24, 48VDC "H" Type: 5, 9, 12, 24 VDC	12, 24VDC Consult Omron for additional coil voltages	AC coil: 24, 115/120, 230/240 VAC "HR" type: 5, 12, 24, 48 vDC "LN" type: 5, 12, 24 VDC
<b>Power consumption</b>	0.9VA, 530mW (standard) 360mW (high sensitivity) 850mW (latching set), 600mW (latching reset)	400mW (430mW for 48VDC) "H" Type: 250mW	400mW	AC coil: 0.75VA "HR" type: 400mW "LN" type: 530mW
<b>Insulation class</b>	Class B available	Class F	Class F	—
<b>Characteristics</b>				
<b>Operating temperature</b>	-40 to +70°C (+85°C option)	-40 to +85°C	-40 to +105°C	-40 to +70°C (AC coil) -40 to +85°C (DC coil)
<b>Impulse withstand voltage (1.2 x 50µ sec. unless noted)</b>	10kV	10kV	10kV	10kV
<b>Dielectric strength (50/60 Hz for 1 minute)</b>	5,000VAC (coil-contact) 1,000 VAC (open contacts)	5,000VAC (coil-contact) 1,000 VAC (open contacts)	5,000 VAC, (coil-contact) 1,000 VAC, (open contacts)	6,000VAC (coil-contact) 1,000VAC (open contacts)
<b>Terminal choices</b>	PCB quick connect (flange mount)	PCB	PCB (coil terminals) Quick-connect (contact terminals)	PCB
<b>Protection level</b>	Sealed, semi-sealed	Fully sealed (except "H" type)	Semi-sealed	Semi-sealed
<b>Accessories</b>	N/A	N/A	N/A	N/A
<b>Approved standards</b>	UL, CSA, SEV SEMKO, VDE, TUV	UL, CSA, VDE	UL, CSA, VDE	UL, CSA, VDE



# Relays - General Purpose

				
<b>General Attributes</b>	<b>G2RV</b>	<b>G2R-S (S)</b>	<b>MY</b>	<b>LY</b>
<b>Dimensions mm (in)</b>	99.2 H x 97.4 L x 6.2 W (3.91 x 3.83 x 0.24) max.	35.5 H x 29 L x 13 W (1.40 x 1.14 x .51)	36 H x 28 L x 21.5 W (1.42 x 1.10 x 0.85)	35.56 H x 27.94 L x 21.59 W (1.40 x 1.10 x 0.85)
<b>Switching</b>	6A max.	1 pole: 10A max. 2 pole: 5A max.	10A (2 pole); 5 A (4 pole)	1 pole: 15A 2-4 pole: 10A
<b>Features</b>	<ul style="list-style-type: none"> <li>Mechanical flag, clear case, and LED on socket provide quick easy proof of relay operation</li> <li>Large quick connect terminals allow for reliable connection between relay and socket</li> <li>Ideal for automation applications</li> </ul>	<ul style="list-style-type: none"> <li>Nameplate and mechanical flag indicator standard</li> <li>LED diode, and lockable test button option available</li> <li>Wide variety of sockets including screwless clamp type</li> </ul>	<ul style="list-style-type: none"> <li>Exceptional reliability</li> <li>Push-to-test button standard</li> <li>Arc barrier built into 4 pole</li> <li>Options include LED Indicator, Diode, and test button</li> <li>Name plate and mechanical indicator, standard</li> </ul>	<ul style="list-style-type: none"> <li>Compact power relay</li> <li>LED, Push-to-test button, bifurcated contacts and other features available</li> <li>Space efficient power switching</li> <li>Long life, 2 pole 500,000 ops, 1,3, and 4 pole 200,000 ops.</li> </ul>
<b>Contact Information</b>				
<b>Contact form</b>	1 Form C	1 Form C 2 Form C	2 Form C, 4 Form C	1 Form C, 2 Form C, 3 Form C, 4 Form C
<b>Contact type(s)</b>	Single button	Single button	Single button, bifurcated	Single button, bifurcated
<b>Contact material</b>	Ag Alloy	Ag Alloy	Ag-Alloy	Ag-Alloy
<b>Electrical service life (@ 1800 ops./hr.) (resistive load)</b>	6A @ 250 VAC/ 30 VDC: 70,000 minimum (NO) 50,000 minimum (NC)	100,000 min. (at rated loads) (see data sheet for more information)	2P 500,000: 5A @ 30VDC/250VAC 4P 200,000: 3A @ 30VDC/250VAC 100,000: 3A@30VDC/250VAC (bifurcated)	200,000 min: 15A @ 24VDC/110VAC (1 pole) 10A @ 24VDC/110VAC 500,000 min: (2 pole) 10A @ 110VAC
<b>Maximum switching capacity</b>	1,500VA, 180W (resistive load)	2,500VA, 300W (1-pole resistive load)	2,500VA, 300W (NO)	1,650VA, 360W (1 pole)
<b>Minimum permissible load (@1800 ops./hr.)</b>	10mA @ 5VDC	100mA @ 5VDC , 10mA @ 5VDC (2 pole)	2 pole: 1mA @ 5VDC 4 pole: 1mA @ 1VDC 10µA @ 1 VDC (bifurcated contacts)	100mA @ 5VDC 10mA @ 5VDC (bifurcated contacts)
<b>Coil Information</b>				
<b>Coil voltage</b>	12, 24, 48VDC 24, 48, 110, 230VAC	6, 12, 24, 48VDC; 24, 110 120, 230, 240VAC	AC coils: 6, 12, 24, 120, 240 VAC DC coils: 6, 12, 24, 48, 110 VDC	6, 12, 24, 110/120, 220/240 VAC 6, 12, 24, 48, 100/110 VDC
<b>Power consumption</b>	see datasheet for details	0.9VA, 0.53W	AC Coil: 0.9 to 1.2VA DC Coil: 0.9W	1.1VA, 0.9W (1 pole); 1.1VA, 0.9W (DPDT); 1.6VA, 1.4W (3PDT); 1.95VA, 1.5W (4PDT)
<b>Insulation class</b>	—	—	—	—
<b>Characteristics</b>				
<b>Operating temperature</b>	-40°C to +55°C	-40 to +70°C	-55C to 70C	Carry current 4A or less: 1-3 pole: -25C to 70C 4 pole: -25C to 55C
<b>Impulse withstand voltage (1.2 x 50µ sec. unless noted)</b>	—	—	—	—
<b>Dielectric strength (50/60 Hz for 1 minute)</b>	4,000VAC (coil-contacts) 1,000VAC (open contacts)	1 pole:5,000VAC (coil-contacts) 1,000VAC (open contacts) 2 pole: 5,000VAC (coil-contacts) 3,000VAC (different polarity) 1,000VAC (open contacts)	2,000VAC (coil-contact) 1,000VAC (open contacts)	2,000VAC (coil-contact) 1,000VAC (open contacts)
<b>Terminal choices</b>	Relay: Quick connect Socket: Push-in wire or screw terminals.	Plug-in	PCB, plug-in	PCB, quick connect, plug-in
<b>Protection level</b>	Unsealed	Unsealed	Unsealed	Unsealed (other options possible)
<b>Accessories</b>	Replacement relays, cross bars, separator plates, labels, PLC interface, and interface cables	Sockets for track mount, sockets with screw terminals, & back connecting sockets with solder & PCB terminals. Note: P2RF-S series screwless clamp terminal socket available. SSR option: G3R.	Track mount sockets, clips, and DIN Rails	Sockets & clips for track mount sockets with screw terminals, & back connecting sockets with solder & PCB terminals
<b>Approved standards</b>	UL, CSA, VDE	UL, CSA, VDE	UL, CSA, VDE	UL, CSA




# Relays - General Purpose

Coming Soon!



General Attributes	MK-S	G7J	G7L
<b>Dimensions mm (in)</b>	52.58 H x 34.54 L x 34.54 W (2.07 x 1.36 x 1.36)	64 H x 53.5 L x 34.5 W (2.52 x 2.11 x 1.36)	49.02 H x 68.58 L x 34.54 W (1.93 x 2.70 x 1.36)
<b>Switching</b>	10 A max.	25A max.	30A max.
<b>Features</b>	<ul style="list-style-type: none"> <li>Octal base plug-in</li> <li>IEC Rating 7A 250VAC, general use, 100,000 cycles</li> <li>New two way lockable test button models available</li> <li>Options include test button, LED Indicator, Diode, Varistor, and wiring styles</li> <li>Wider operating temperature versus previous MK Relays.</li> </ul>	<ul style="list-style-type: none"> <li>Variety of contact forms</li> <li>Ideal for 3 phase motor control</li> <li>UL 3 phase rating (NO) 5HP, 277VAC 30,000 cycles</li> <li>Minimal chattering</li> <li>UL94V-0</li> </ul>	<ul style="list-style-type: none"> <li>Reliable high power relay</li> <li>3 mm contact gap</li> <li>Conforms to IEC 950/UL 1950</li> <li>Class B insulation standard</li> <li>Most cost effective solution in its class.</li> <li>Ideal for pump, motor loads</li> </ul>
<b>Contact Information</b>			
<b>Contact form</b>	2 Form C, 3 Form C	4 Form A, 3 Form A/1 Form B, 2 Form A/2 Form B	1 Form A-(Double Make) 2 Form A-(Double Make)
<b>Contact type(s)</b>	Single button	Single button	Single button
<b>Contact material</b>	Ag-Alloy	Ag Alloy	Ag Alloy
<b>Electrical service life (@ 1800 ops./hr. (resistive load))</b>	100,000 min. 10A @ 250VAC/30VDC (NO)	100,000 min. (at rated loads) (see data sheet for more information)	100,000 min. (at rated loads) (see data sheet for more information)
<b>Max. switching capacity under resistive load</b>	2,500VA, 300W (NO)	5,500VA, 750W (NO contacts) 1,760VA, 240W (NC contacts)	Screw/Q.C. 6,600VA (1 pole) 5,500VA (2 pole)
<b>Min. permissible load (for reference only)</b>	100mA @ 1VDC	100mA @ 24VDC	100mA @ 5VDC
<b>Coil Information</b>			
<b>Coil voltage</b>	AC coils: 6, 12, 24, 120, 240 VAC DC coils: 6, 12, 24, 48, 110 VDC	6, 12, 24, 48, 100/110VDC; 24, 50, 100/120, 200/240VAC	12, 24, 48, 100VDC; 12, 24, 100/120, 200/240VAC
<b>Power consumption</b>	Approx. 2.3VA 60Hz, 1.4W	1.8 to 2.6VA, 2.0W	1.7 to 2.5VA, 1.9W
<b>Insulation class</b>	—	Class B available	Class B
<b>Characteristics</b>			
<b>Operating temperatur</b>	LED Type: -25C to 60C non LED: -40C to 60C	-25°C to +60°C	-25C to +60C
<b>Impulse withstand voltage (1.2 x 50µ sec. unless noted)</b>	—	10kV (coil-contacts)	10kV (coil-contacts)
<b>Dielectric strength (50/60 Hz for 1 minute)</b>	2,500VAC (coil-contact) 1,000VAC (open contacts)	4,000VAC (coil-contacts) 4,000VAC (different polarity) 2,000VAC (open contacts)	4,000VAC (coil-contacts) 2,000VAC (different polarity) 2,000VAC (open contacts)
<b>Terminal choices</b>	Plug-in	Quick-connect, screw, PCB	Quick-connect, screw, PCB
<b>Protection level</b>	Unsealed	Unsealed Semi-sealed (PCB type only)	Unsealed Semi-sealed (PCB type only)
<b>Accessories</b>	Track mount sockets, clips, and DIN Rails	R99-04-FOR-G5F bracket	R99-07G5D E bracket; P7LF-D adapter; P7LF-06 front connecting socket
<b>Approved standards</b>	UL, CSA, TUV	UL, CSA, TUV, CE, IEC	UL, CSA, TUV

# Relays - General Purpose

	<b>NEW!</b> 		
<b>General Attributes</b>	<b>G7Z</b>	<b>MGN</b>	<b>MJN</b>
<b>Dimensions mm (in)</b>	84 H x 62 L x 45 W (3.31 x 2.44 x 1.77)	Short Base: 55.88 H x 63.50 L x 63.50 W (2.20 x 2.50 x 2.50) Long Base: 60.45 H x 84.33 L x 63.50 W (2.38 x 3.32 x 2.50)	48.38 H x 35.56 L x 38.73 W (1.91 x 1.40 x 1.53)
<b>Switching</b>	40A max.	30A max.	10A, 20A, 30A (UL ratings) (see: Electrical service life)
<b>Features</b>	<ul style="list-style-type: none"> <li>Carry up to 160A for 4 pole NO all terminals tied in parallel</li> <li>Nominal power 3.7W</li> <li>Reduced size versus typical IEC-AC1 50A contactor</li> <li>NC auxiliary contact can be used to monitor contact weld on Main NO Contacts.</li> </ul>	<ul style="list-style-type: none"> <li>30 Amp heavy duty power relay</li> <li>Class F coil insulation system for 155°C (total temperature)</li> <li>Coil molded in DuPont Rynite® for environmental protection</li> <li>Rugged construction rivets terminals to base</li> <li>Magnetic blow-out option</li> </ul>	<ul style="list-style-type: none"> <li>Rugged power driver offers superior 3/16" through-air &amp; 3/8" over-surface spacing</li> <li>Interlocked frame &amp; contact block prevent contact misalignment during plug-in</li> <li>Indicator lamp, push-to-operate options</li> <li>10A-30A in same package</li> <li>Continuous duty at 125% coil voltage</li> </ul>
<b>Contact Information</b>			
<b>Contact form</b>	4A, 3A/1B, 2A/2B	1 Form A, 1 Form B, 1 Form C, 2 Form A, 2 Form C (long base)	1 Form C, 2 Form C, 3 Form C (monostable); 2 Form C (latching)
<b>Contact type(s)</b>	Single button (Load) Bifurcated Crossbar (Aux.)	Single button	Single button
<b>Contact material</b>	AgSnIn	5/16" diameter AgCdO <sub>2</sub>	3/16" diameter AgCdO <sub>2</sub>
<b>Electrical service life (@ 1800 ops./hr.) (resistive load)</b>	100,000: 5A @ 110VDC (at 1,2000 ops/hr) 80,000: 40A @ 440VAC	100,000 min. 30A @ 28VDC/240VAC	100,000 min. 10A @ 28VDC/240VAC 20A @ 28VDC/277VAC 30A @ 28VDC
<b>Max. Switching Capacity (resistive load)</b>	17,600VA, 550W 440VA, 110W (aux. contact block)	N/A	N/A
<b>Minimum permissible load (@1800 ops./hr.)</b>	2A @ 24VDC 1mA @ 5VDC (auxiliary contact block)	N/A	N/A
<b>Coil Information</b>			
<b>Coil voltage</b>	12, 24VDC	6, 12, 24, 120, 240, 480VAC; 6, 12, 24, 48, 110VDC	6, 12, 24, 120VAC 5, 6, 12, 24, 48, 110VDC
<b>Power consumption</b>	3.7W	9.5VA nominal; 2W nominal	AC 1.7VA (1, 2PDT) 2.0VA (3PDT DC 1.2W)
<b>Insulation class</b>	—	Class F	—
<b>Characteristics</b>			
<b>Operating temperature</b>	-25°C to +60°C	At 30Amps: -45°C to +80°C (AC coil) -45°C to +115°C (DC coil)	-45°C to +60°C (1 & 2 pole AC coil), + 70°C (DC coil) -45°C to +45°C (3 pole AC coil) -45°C to +70°C (3 pole DC coil)
<b>Impulse withstand voltage (1.2 x 50µ sec. unless noted)</b>	10kV (coil to contacts or different polarity) 4.5kV (open contacts)	N/A	N/A
<b>Dielectric strength (50/60 Hz for 1 minute)</b>	4,000VAC (coil-contacts) 4,000VAC (different polarity) 2,000VAC (open contacts)	2,200Vrms, 60Hz between contacts; 2,200Vrms, 60Hz between other elements	750VAC, rms 60Hz across open contacts; 2,500VAC, rms 60Hz all other mutually insulated elements
<b>Terminal choices</b>	Screw	Screw	Quick-connect plug-in
<b>Protection level</b>	Unsealed	Unsealed	Unsealed
<b>Accessories</b>	Auxiliary contact blocks	Aluminum dust cover - sealed knock-out holes for standard conduit fittings. Relay mounts on pre-drilled base. Snap action cover release 127 W x 76.20 H x 101.60 D (5 x 3 x 4)	PTF11PC Socket; PTF11QDC Socket; PTF21PC Socket; PTFPCB Socket; PYMJN-PCB Retaining Clips; PYMJN-S Retaining Clips
<b>Approved standards</b>	UL, CSA, TUV	UL, CSA	UL, CSA

# Relays - DC Power





Interrupt High-capacity DC Loads while Enabling Compact, Low-noise, Safe Applications







General Attributes	G9EA		G9EB	G9EC
Model	G9EA-1(-B)	G9EA-1(-B)-CA	G9EB (-1B)	G9EC-1(-B)
<b>Classification</b>	Switching/current conduction	High-current conduction	Switching/current conduction	Switching/current conduction
<b>Features</b>	Standard compact model carries/switches 400VDC, 60A loads	Carries 100A Low contact resistance when carrying current	Smallest in series 250VDC, 25A loads	Largest capacity in series Carries/switches 400V, 200A loads
<b>Contact Information</b>				
<b>Contact form</b>	SPST-NO	SPST-NO	SPST-NO	SPST-NO
<b>Contact structure</b>	Double-break, single	Double-break, single	Double-break, single	Double-break, single
<b>Contact resistance</b>	30mΩ max. (0.6mΩ typical)	10mΩ max. (0.3mΩ typical)	30mΩ max.	30mΩ max. (0.2mΩ typical)
<b>Switching voltage drop</b>	0.1V max. (for a carry current of 60A)	0.1V max. (for a carry current of 100A)	0.1V max (for a carry current of 25A)	0.1V max. (for a carry current of 200A)
<b>Electrical endurance</b>	120VDC, 100A, 3,000 operations min. 400VDC, 60A, 3,000 operations min. 400VDC, 30A, 30,000 operations min.	400VDC, 30A, 1,000 operations min. 120VDC, 30A, 2,500 operations min.	250VDC, 25A, 30,000 operations min.	400VDC, 200A, 3,000 operations min.
<b>Max. switching current</b>	100A	30A	25A	200A
<b>Rated carry current</b>	60A	100A	25A	200A
<b>Short-time carry current</b>	100A (10 min.)	150A (10 min.)	50A (5 min.), 40A (10min.)	300A (15min.)
<b>Max. interruption current</b>	600A @ 300VDC (5 times)	—	100A @ 250VDC (5 times)	1,000A @ 400VDC (10 times)
<b>Overload interruption</b>	180A @ 400VDC (100 times min.)	100A @ 120VDC (150 times min.)	50A @ 250VDC (50 times min.)	700A @ 400VDC (40 times min.)
<b>Reverse polarity interruption</b>	-60A @ 200VDC (1,000 times min.)	—	—	-200A @ 200VDC (1,000 times min.)
<b>Coil Information</b>				
<b>Rated voltage</b>	12, 24, 48, 60 & 100VDC	12, 24, 48, 60 & 100VDC	12, 24, 48, 60 & 100VDC	12, 24, 48, 60 & 100VDC
<b>Power consumption</b>	Approx. 5 to 5.4W	Approx. 5 to 5.4W	Approx. 2W	Approx. 11W
<b>Mechanical endurance</b>	200,000 operations min.	200,000 operations min.	100,000 operations min.	200,000 operations min.
<b>Insulation resistance</b>				
<b>Between Coil &amp; Contacts</b>	1,000MΩ min.	1,000MΩ min.	1,000MΩ min.	1,000MΩ min.
<b>Between contacts of the same polarity</b>	1,000MΩ min.	1,000MΩ min.	1,000MΩ min.	1,000MΩ min.
<b>Dielectric strength</b>				
<b>Between coil &amp; contacts</b>	2,500VAC for 1min.	2,500VAC for 1min.	2,500VAC for 1min.	2,500VAC for 1min.
<b>Between contacts of the same polarity</b>	2,500VAC for 1min.	2,500VAC for 1min.	2,500VAC for 1min.	2,500VAC for 1min.
<b>Impulse withstand voltage</b>	4,500V	4,500V	4,500V	4,500V
<b>Ambient operating temperature</b>	-40 to +70°C (with no icing or condensation)	-40 to +70°C (with no icing or condensation)	-40 to +70°C (with no icing or condensation)	-40 to +50°C (with no icing or condensation)
<b>Terminals</b>				
<b>Screw terminals</b>	Yes	Yes	Yes	Yes
<b>Lead wire output</b>	Yes	Yes	No	Yes
<b>Approvals</b>	UL, CSA, UL508	UL, CSA, UL508	—	UL, CSA, UL508



# Relays - Solid State

				
<b>General Attributes</b>	<b>G3M</b>	<b>G3MB</b>	<b>G3MC</b>	<b>G3DZ</b>
<b>Dimensions mm (in)</b>	20 H x 40 L x 9 W (0.79 x 1.58 x 0.35)	20.5 H x 24.5 L x 5.5 W (0.81 x 0.96 x 0.22)	13.5 H x 24.5 L x 4.5 W (0.53 x 0.96 x 0.18)	12.5 max. H x 18.5 L x 6.5 W (0.49 x 0.73 x 0.26) max.
<b>Switching current (resistive)</b>	2A, 3A, 5A @ 240VAC	2A @ 240VAC	1A @ 120VAC 2A @ 240VAC	0.6A @ 240VAC 0.6A @ 100VDC
<b>Features</b>	<ul style="list-style-type: none"> <li>• Zero cross models</li> <li>• Space-saving SIP design</li> <li>• Ideal for high density Power PCB applications</li> <li>• High current switching capability</li> </ul>	<ul style="list-style-type: none"> <li>• Bottom surface area is less than 1/2 of G3M</li> <li>• Special 7-20mA input models available</li> <li>• Two footprints for design flexibility</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced height thin profile SIP</li> <li>• Ideal for close PCB mounting</li> <li>• Monoblock construction results in ultimate reliability</li> <li>• Industry standard footprint</li> </ul>	<ul style="list-style-type: none"> <li>• AC/DC &amp; AC half-wave switching with one model</li> <li>• 10µA max. leakage current</li> <li>• Matches G6D form factor</li> </ul>
<b>Operating temperature</b>	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +85°C
<b>Operating input</b>	5, 12, 24VDC	5, 12, 24VDC (Current controlled versions are available.)	5, 12, 24VDC	5, 12, 24VDC
<b>Output voltage</b>	75-264VAC	75-264VAC	75-264VAC	5-240VAC 5-100VDC
<b>Leakage Current (max.)</b>	2mA @ 100VAC/5mA @ 200VAC (2Amp versions) 1.5mA @ 200VAC (3 & 5 Amp versions)	1.5mA (at 200VAC)	1.5mA (at 200VAC)	10µA (at 125VDC)
<b>Isolation</b>	Phototriac	Phototriac	Phototriac	Photodiode array
<b>Dielectric strength (50/60Hz for 1 min.)</b>	2,000VAC (2A versions) 2,500VAC (3A and 5A versions)	2,500VAC	2,500VAC	2,500VAC
<b>Zero crossing</b>	Optional	Optional	Yes	No
<b>Snubber circuit</b>	No	Optional	Yes	No
<b>Life (MTTF)</b>	100,000 hours	100,000 hours	100,000 hours	100,000 hours
<b>Mounting</b>	PCB	PCB	PCB	PCB or PCB socket
<b>Terminal</b>	PCB	PCB	PCB	PCB
<b>Approvals</b>	"UTU" models: UL, CSA, TUV	"UTU" models: UL, CSA, TUV	"VD" models: UL, CSA, VDE	UL, CSA
<b>Equivalent Omron EMR footprint</b>	N/A	N/A	N/A	G6D
<b>Optional heat sink</b>	N/A	N/A	N/A	N/A
<b>Socket</b>	N/A	N/A	N/A	P6D-04P

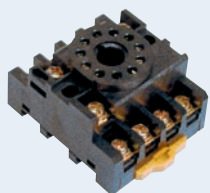
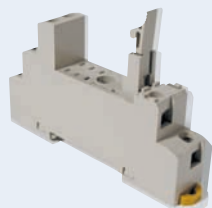
# Relays - Solid State

	DIP 	DIP 		SIP 
General Attributes	G3S/G3SD	G3CN	G3R I/O	G3TB
<b>Dimensions mm (in)</b>	16.5 H x 20 L x 10 W (0.65 x 0.79 x 0.39)	Vertical type 26.5 H x 33 L x 14 W (1.04 x 1.30 x 0.55) max. Flat type 14.5 H x 33 L x 25 W (0.57 x 1.30 x 0.98) max.	Input & Output modules: 28 H x 29 L x 13 W (1.10 x 1.14 x 0.51)	Input module: 20.5 H x 43.5 L x 10 W (0.81 x 1.70 x 0.39) Output module: 30.5 H x 43.5 L x 10 W (1.20 x 1.70 x 0.39)
<b>Switching</b>	1A @ 240VAC (1.2A, G3S-PD & heatsink) (1.1A, G3SD-PD & heatsink)	AC models: 2A or 3A @ 240VAC DC models: 2A or 3A @ 48VDC	Input module: 100mA; Output module: 2A	Input module: 25mA @ 4 to 32VDC Output module: 3mA max. @ 5 to 48VDC 3mA max. @ 100 to 240 VAC 1.5 max. @ 48 to 200 VDC
<b>Features</b>	<ul style="list-style-type: none"> <li>AC and DC models available</li> <li>Socketable</li> <li>Heatsink, available</li> <li>Same footprint as G6B (1 Form A standard type)</li> </ul>	<ul style="list-style-type: none"> <li>Low profile "Flat" type has 14.5mm max. height</li> <li>AC and DC load models</li> <li>Zero cross models</li> <li>Input voltage 3-28VDC possible</li> </ul>	<ul style="list-style-type: none"> <li>4 kV insulation</li> <li>Operation indicator standard</li> <li>Footprint is similar to G2R-S(S)</li> <li>Ideal for DIN rail mount I/O</li> </ul>	<ul style="list-style-type: none"> <li>Color-coded input &amp; output modules</li> <li>Industry standard footprint</li> <li>4kV dielectric strength</li> <li>LED indicator</li> </ul>
<b>Operating temperature</b>	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C
<b>Operating input</b>	5, 12, 24VDC	5, 12, 24; 3~28VDC	Input module: 5VDC; 6.6-32VDC; 60-264VAC; Output module: 4-32VDC	Input module: 80-264VAC, 3-32VDC; Output module: 3-32VDC
<b>Output voltage</b>	"201" models 100-240VAC "Z01" models 4-24VDC	75~264VAC 3~53VDC	Input module: 4-32VDC; Output module: 75-264VAC, 4-200VDC	Input module: 4-32VDC; Output module: 75-264VAC, 4-200VDC
<b>Leakage Current (max.)</b>	2mA (G3S) 0.1mA @ 26VDC (G3SD)	AC loads: 10mA @ 200VAC (fast on): 5mA @ 200VAC DC loads: 5mA @ 50VDC	Input Module: 5µA Output Module: 1.5mA (AC) 1mA (DC)	Input module: 100µA max. Output module: 5mA @ 200VAC (AC) 1mA max. (DC)
<b>Isolation</b>	Phototriac (G3S) Photocoupler (G3SD)	Phototriac Photocoupler	Photocoupler, Phototriac	Photocoupler
<b>Dielectric strength (50/60Hz for 1 min.)</b>	2,500VAC	2,500VAC	4,000VAC	4,000VAC
<b>Zero crossing</b>	Optional	Optional	Input module: No; Output module: Yes	Input module: No; Output module: Yes
<b>Snubber circuit</b>	Yes (AC load models only)	No	No	Input module: No; Output module: Yes
<b>Life (MTTF)</b>	100,000 hours	100,000 hours	100,000 hours	100,000 hours
<b>Mounting</b>	PCB or Socket	PCB	Socket	PCB
<b>Terminal</b>	PCB	PCB	Plug-in	PCB
<b>Approvals</b>	"US" models: UL, CSA	"US" models: UL, CSA	UL, CSA, TUV	"US" models: UL, CSA
<b>Equivalent Omron EMR footprint</b>	G6B	N/A	G2R	N/A
<b>Optional heat sink</b>	Y92B-S08N	N/A	N/A	N/A
<b>Socket</b>	P6B-04P (PCB)	N/A	P2RF-05E	N/A

# Relays - Solid State

	SIP	Quick Connect	Quick Connect	
<i>General Attributes</i>	<b>G3TC</b>	<b>G3NE</b>	<b>G3NA</b>	<b>G3PE</b>
<b>Dimensions mm (in)</b>	31.8 H x 43.2 L x 15.2 W (1.25 x 1.7 x 0.6)	11.5 H x 47 L x 37.5 W (0.45 x 1.90 x 1.50)	27 H x 58 L x 43 W (1.06 x 2.28 x 1.69)	100 H x 84 L x 22.5 W 15A, 25A Models 100 H x 84 L x 44.5 W 35A, 45A Models (dimensions apply to single phase models only)
<b>Switching current (resistive) (max.)</b>	Input module: 12mA, 15mA, or 18mA (depending on model) Output module: 3A (1A on DC output models rated < 200VDC)	20A max. @ 240VAC (264VAC max.)	Versions range from 10A to 90A max. (when using heat sink)	Models range from 15A to 45A
<b>Features</b>	<ul style="list-style-type: none"> <li>Color-coded modules</li> <li>Industry standard footprint</li> <li>Built-in anchor screw</li> <li>Optical isolation – Dielectric 4kV</li> <li>Zero cross on AC output modules</li> </ul>	<ul style="list-style-type: none"> <li>High capacity</li> <li>Panel Mount</li> <li>Quick-connect terminals</li> <li>Low profile of 11.5mm height</li> </ul>	<ul style="list-style-type: none"> <li>Ideal for industrial controls &amp; commercial cooking</li> <li>"Hockey Puck" standard</li> <li>Operation indicator standard</li> </ul>	<ul style="list-style-type: none"> <li>Industrial SSR with attached heatsink</li> <li>Zero cross or Fast turn on models</li> <li>Panel or track mounting</li> </ul>
<b>Operating temperature</b>	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30C to +80C
<b>Operating input</b>	Input module: 90-140VDC/AC, 180-280 VDC/ AC, 10-32VDC/AC Output module: 5, 15, 24VDC	5, 12, 24VDC	4-32VDC; 75-264VAC	12-24VDC
<b>Output voltage</b>	Input module: 4.5-6VDC, 12-18VDC, 20-30VDC Output module: 75-140 VAC, 75-280VAC, 5-60 VDC, 5-200VDC	75-264VAC	19 - 264VAC 180 - 528VAC 4 - 220VDC (10A model) 400 - 600VAC (10, 25, 50A models)	100-240VAC
<b>Leakage Current (max.)</b>	Input module: 100µA AC Output modules: 5mA @ 240VAC 2.5mA @ 120VAC DC Output modules: 1mA	2mA (at 100VAC) 5mA (at 200VAC)	5mA @ 100VAC 10mA @ 200VAC 20mA @ 400VAC	10mA (200VAC)
<b>Isolation</b>	AC Input, DC Input, DC Output: Photocoupler AC Output: Phototriac	Phototriac	Phototriac, Photocoupler	Phototriac
<b>Dielectric strength (50/60Hz for 1 min.)</b>	4,000VAC	2,000VAC	2,500VAC 4000VAC (75 and 90A models)	2,500VAC
<b>Zero crossing</b>	Yes (AC output modules only)	Optional	Yes	Yes
<b>Snubber circuit</b>	Yes (AC output modules only)	Yes (built in varistor)	Yes	Yes
<b>Life (MTTF)</b>	100,000 hours	100,000 hours	100,000 hours	100,000 hours
<b>Mounting</b>	PCB with anchor screw	Panel	Panel	Panel, DIN
<b>Terminal</b>	PCB	Quick connect	Screw	Screw
<b>Approvals</b>	UL, CSA, TUV, CE	"US": UL, CSA, TUV	"UTU": UL, CSA, TUV	UL, CSA, TUV
<b>Equivalent Omron EMR footprint</b>	N/A	N/A	N/A	N/A
<b>Optional heat sink</b>	N/A	Y92B-N50, -N100	Y92B-A □, -B □, -P □	N/A
<b>Socket</b>	N/A	DIN Adapter available	DIN Adapter available	N/A

# Sockets



Relay Type	Track Mount Sockets	Back Connecting Sockets	
		Solder terminals	PCB terminals
G2R-1-S	P2RF-05 P2RF-05-E P2RF-05-S	P2R-05A	P2R-05P
G2R-2-S	P2RF-08 P2RF-08-E P2RF-08-S	P2R-08A	P2R-08P
G2RV	G2RL-SL500, -SL700	–	–
G6B	–	–	P6B-04P (1-pole), P6B-26P (2-pole)
G6D	–	–	P6D-04P
G6BK	–	–	P6B-06P
G6BU	–	–	P6B-04P
G6C-1, G6C-2	–	–	P6C-06P
G6CK	–	–	P6C-08P
G6CU	–	–	P6C-06P
LY1, LY2	PTF08A-E	PT08	PT08-0
LY3	PTF11A	PT11	PT11-0
LY4	PTF14A-E	PT14	PT14-0
MK2	PF083A-E	PL08	PLE08-0
MK3	PF113A-E	PL11	PLE11-0
MY2	PYF08A-E PYF08A-N PYF08-S	PY08	PY08-02
MY3	PYF11A	PY11	PY11-02
MY4	PYF14A-E PYF14A-N PYF14S	PY14	PY14-02
MY2K	PYF14A-E	PY14	PY14-02
MY4(Z)H	PYF14A-E	–	–

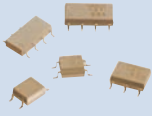


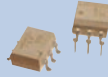

NOTES: 1. -E and -N models are finger-protect construction. Round terminals cannot be used. Use Y-shaped terminals.  
2. -S types are screwless terminal styles.

Relay Type	Mounting	Adaptor	Front Connecting Socket
	Bracket	Track Mount/Panel Mount	Track Mount/Panel Mount
G7J-(ALL)	R99-04-FOR-G5F W bracket	–	–
G7L-1A-T	R99-07G5D E bracket	P7LF-D	P7LF-06
G7L-1A-TJ			P7LF-06
G7L-1A-B			–
G7L-1A-BJ			–
G7L-2A-T			P7LF-06
G7L-2A-TJ			P7LF-06
G7L-2A-B			–
G7L-2A-BJ			–





Terminal Cover	Socket Bridge
P&LE-C	PYD






# Relays - MOS FET

					
<b>General Attributes</b>	<b>G3VM-200</b>	<b>G3VM-350</b>	<b>G3VM-400</b>	<b>G3VM High Voltage &amp; Dielectric</b>	<b>G3VM Current Limiting</b>
<b>Dimensions mm (in)</b>	Please refer to specific data sheets for all dimensional information	Please refer to specific data sheets for all dimensional information	Please refer to specific data sheets for all dimensional information	Please refer to specific data sheets for all dimensional information	Please refer to specific data sheets for all dimensional information
<b>Features</b>	<ul style="list-style-type: none"> <li>• 1 &amp; 2 channel configurations</li> <li>• Ideal for Instrumentation, Broadband Systems, Measurement Devices, Data Loggers, Consumer Electronics, Medical Equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Broad product offering</li> <li>• Form A &amp; Form B configurations</li> <li>• Ideal for Instrumentation, Broadband Systems, Measurement Devices, Data loggers, Consumer Electronics, Security Systems, Electronic Automatic Exchange Systems, Industrial Automation Equipment, Medical Equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Broad product offering</li> <li>• 10kV surge withstand models available</li> <li>• Ideal for Instrumentation, Broadband Systems, Measurement Devices, Data Loggers, Consumer Electronics, Security Systems, Electronic Automatic Exchange Systems, Industrial Automation Equipment, Medical Equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Capable of switching loads up to 600V (AC and DC)</li> <li>• 10kV surge withstand</li> <li>• Ideal for Instrumentation, Electronic Automatic Exchange Systems, Industrial Automation Systems, Measurement Devices, Security Systems, Medical Equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Current limiting of 150 to 300mA</li> <li>• Ideal for Electronic Automatic Exchange Systems, Multi-function Telephones, Cordless Telephones, Measurement Devices, Instrumentation</li> </ul>
<b>Lead voltage</b>	0-200V (AC or DC)	0-350V (AC or DC)	0-400V (AC or DC)	0-600V (AC or DC)	0-350V (AC or DC)
<b>Maximum Ratings and Electrical</b>					
<b>Continuous load current</b>	0-50mA & 0-200mA	0-90mA, 0-100mA, 0-110mA, 0-120mA, 0-150mA	0-120mA	0-100mA	0-120mA
<b>ON resistance (typical)</b>	5 & 30	15, 27, 30, 25, 40	17 & 18	25	22
<b>Output capacitance</b>	—	—	—	—	—
<b>Available switching configurations</b>	1 Form A, 2 Form A	1 Form A, 1 Form B, 1 Form A + 1 Form B 2 Form A, 2 Form B	1 Form A, 2 Form A	1 Form A	1 Form A, 2 Form A
<b>Leakage current</b>	10nA (max.) & 1.0µA (max.)	1.0µA (max.)	1.0µA (max.)	1.0µA (max.)	1.0µA (max.)
<b>turn-ON time (typical)</b>	40ms & 600ms	0.1ms, 0.25ms, 0.3ms, 0.5ms, 1.0ms	0.3ms & 0.5ms	0.2ms	0.3ms & 0.5ms
<b>turn-OFF time (typical)</b>	100ms	0.1ms, 0.15ms, 0.5ms, 1.0ms, 3.0ms	0.1ms & 0.5ms	0.2ms	0.3ms & 0.5ms
<b>Dielectric strength (AC for 1 minute between input and output)</b>	1,500Vrms (min.)	1,500Vrms (min.) 2,500Vrms (min.)	1,500Vrms (min.) 2,500Vrms (min.) 5,000Vrms (min.)	5,000Vrms (min.)	1,500Vrms (min.) 2,500Vrms (min.)
<b>Available packaging &amp; terminal choices</b>	SOP 4 PIN, 6 PIN, 8 PIN	PCB, SMT, SOP 4 PIN, 6 PIN, 8 PIN	PCB, SMT, SOP 4 PIN, 6 PIN, 8 PIN	PCB & SMT 6 PIN	PCB, SMT & SOP 4 PIN, 6 PIN, 8 PIN
<b>Accessories</b>	Tape & reel	Tape & reel	Tape & reel	Tape & reel	Tape & reel
<b>Approved standards</b>	UL 1577	UL 1577	UL 1577	UL 1577	UL 1577

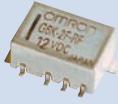


# Relays - MOS FET

				
<i>General Attributes</i>	<b>G3VM GR</b>	<b>G3VM LR</b>	<b>G3VM-60</b>	<b>G3VM-80</b>
<b>Dimensions mm (in)</b>	Please refer to specific data sheets for all dimensional information	Please refer to specific data sheets for all dimensional information	Please refer to specific data sheets for all dimensional information	Please refer to specific data sheets for all dimensional information
<b>Features</b>	<ul style="list-style-type: none"> <li>• C x R characteristics as low as 5pF*</li> <li>• Low leakage current</li> <li>• Very high operating speed</li> <li>• Ideal for IC and Memory Test Equipment, SoC Testers, Measurement Devices, Instrumentation, Medical Equipment, Broadband Systems, Data Loggers, Security Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Smallest MOS FET relay on the market</li> <li>• C x R characteristics as low as 5pF*</li> <li>• Low leakage current</li> <li>• Very high operating speed</li> <li>• Ideal for IC and Memory Test Equipment, SoC Testers, Measurement Devices, Instrumentation, Medical Equipment, Broadband Systems, Data Loggers, Security Systems</li> </ul>	<ul style="list-style-type: none"> <li>• High current switching capability</li> <li>• Low ON-resistance</li> <li>• Low leakage current</li> <li>• Cost effective solutions</li> <li>• Ideal for Measurement Devices, Instrumentation, Security Systems, Medical Equipment, Alarm Controls, Consumer Electronics</li> </ul>	<ul style="list-style-type: none"> <li>• High current switching capability</li> <li>• Low leakage current</li> <li>• Ideal for Broadband Systems, Measurement Devices, Instrumentation, Medical Equipment, Data Loggers, Consumer Electronics</li> </ul>
<b>Lead voltage</b>	0-20V (AC or DC) 0-40V (AC or DC)	0-20V (AC or DC) 0-40V (AC or DC)	0-60V (AC or DC)	0-80V (AC or DC)
<b>Maximum Ratings and Electrical Characteristics</b>				
<b>Continuous load current</b>	0-120mA 0-160mA 0-300mA	0-120mA 0-160mA 0-300mA 0-450mA	0-400mA 0-500mA 0-1,000mA 0-2,000mA 0-2,500mA	0-350mA 0-1,250mA
<b>ON resistance (typical)</b>	1, 5, 10	0.8, 1, 5, 10	0.12 (max.) 7 (max.) 1 (typ.)	0.11 & 1.0
<b>Output capacitance</b>	1.0pF (typ.) 5.0pF (typ.) 10pF (typ.)	0.8pF (typ.) 1.0pF (typ.) 5.0pF (typ.) 10pF (typ.)	—	—
<b>Available switching configurations</b>	1 Form A	1 Form A	1 Form A	1 Form A
<b>Leakage current</b>	1.0nA (max.)	1.0nA (max.)	1.0nA (max.) & 1.0µA (max.)	0.2nA (typ.) & 1.2nA (typ.)
<b>turn-ON time (typical)</b>	0.3ms	0.3ms	0.8ms 1.0ms 1.4ms	0.3ms 2.0ms
<b>turn-OFF time (typical)</b>	0.3ms	0.3ms	0.1ms 0.2ms 0.6ms	0.3ms 0.7ms
<b>Dielectric strength (AC for 1 minute between input and output)</b>	1,500Vrms (min.)	1,500Vrms (min.)	1,500Vrms (min.) 2,500Vrms (min.)	1,500Vrms (min.)
<b>Available packaging &amp; terminal choices</b>	SOP 4 PIN	SOP 4 PIN	SOP, PCB, SMT 4 PIN, 6 PIN	SOP 4 PIN, 6 PIN
<b>Accessories</b>	Tape & reel	Tape & reel	Tape & reel	Tape & reel
<b>Approved standards</b>	UL 1577	UL 1577	UL 1577	UL 1577

# Relays - HF/RF

			
<b>General Attributes</b>	<b>G6W</b>	<b>G6Y</b>	<b>G6Z</b>
<b>Dimensions mm (in)</b>	8.9 H x 20 L x 9.4 W (0.35 x 0.79 x 0.37)	9.20 H x 20.70 L x 11.70 W (0.36 x 0.81 x 0.46)	8.9 H x 20 L x 8.6 W (0.35 x 0.79 x 0.34)
<b>Switching</b>	0.5A max.	1A max.	0.5A max.
<b>Features</b>	<ul style="list-style-type: none"> <li>• 5GHz+ HF relay</li> <li>• 1 Form C</li> <li>• Tri-plate micro strip line technology</li> <li>• Latching &amp; non-latching models</li> <li>• SMT and PCB versions</li> <li>• Ideal for Base Station LNA &amp; TMA switching, Test &amp; Measurement, Broadcast, FWA</li> </ul>	<ul style="list-style-type: none"> <li>• 900MHz+ HF relay</li> <li>• 1 Form C</li> <li>• Micro strip line technology</li> <li>• Ideal for CATV, Digital TV tuners, Test &amp; Measurement</li> </ul>	<ul style="list-style-type: none"> <li>• 2.6GHz+ HF relay</li> <li>• 1 Form C</li> <li>• Micro strip line technology</li> <li>• 75 &amp; 50 impedance models</li> <li>• Latching &amp; non-latching models</li> <li>• Reverse terminal configurations</li> <li>• Y &amp; E terminal configurations</li> <li>• SMT and PCB versions</li> <li>• Ideal for Base Station LNA &amp; TMA switching, CATV, Digital TV tuners, Test &amp; Measurement, Broadcast, FWA</li> </ul>
<b>HF Characteristics</b>			
<b>Isolation</b>	65dB (2GHz) 60dB (2.5GHz) 40dB (5.0GHz)	65dB (900MHz)	60 - 65dB (900MHz) 30 - 45dB (2.6GHz)
<b>Insertion loss</b>	0.2dB (2GHz) 0.2dB (2.5GHz) 0.4dB (5.0GHz)	0.5dB (900MHz)	0.1 - 0.2dB (900MHz) 0.3 - 0.5dB (2.6GHz)
<b>VSWR</b>	1.2 (2GHz) 1.2 (2.5GHz) 1.5 (5.0GHz)	1.5 (900MHz)	1.1 - 1.2 (900MHz) 1.3 - 1.5 (2.6GHz)
<b>Contact Information</b>			
<b>Contact form</b>	1 Form C	1 Form C	1 Form C
<b>Contact type(s)</b>	Twin crossbar	Twin crossbar	Twin crossbar
<b>Contact material</b>	Au clad Cu alloy	Au clad Cu alloy	Au clad Cu alloy
<b>Rated load (under resistive load)</b>	10mA @ 30VAC 10mA @ 30VDC 2.5GHz, 10W	10mA @ 30VAC; 10mA @ 30VAC; 900 MHz, 1W	10mA @ 30VAC; 10mA @ 30VDC; 900MHz, 10W
<b>Max. operating voltage</b>	30VDC, 30VAC	30VDC, 30VAC	30VDC, 30VAC
<b>Max. switching capacity under resistive load</b>	10VA, 10W	10VA, 10W	10VA, 10W
<b>Min. electrical service life (operations at rated load)</b>	300,000	300,000	300,000
<b>Coil Information</b>			
<b>Coil voltage</b>	3, 4.5, 9, 12, 24VDC	3, 4.5, 5, 6, 9, 12, 24VDC	3, 4.5, 5, 9, 12, 24VDC
<b>Power consumption</b>	200mW (standard) 200mW (single latching) 360mW (dual latching)	200mW	200mW (standard) 200mW (single latching) 360mW (dual latching)
<b>Characteristics</b>			
<b>Dielectric strength between coil &amp; contacts (50/60 Hz for 1 minute)</b>	1,000VAC	1,000VAC	1,000VAC
<b>Terminal choices</b>	PCB, SMT Gullwing	PCB	PCB, SMT Gullwing
<b>Packaging / Options</b>	—	—	Tape & reel available

# Relays - HF/RF and MEMS

		<b>NEW!</b> 	<b>NEW!</b> 
<b>General Attributes</b>	<b>G6K-RF</b>	<b>G9YA</b>	<b>2SMES-01</b>
<b>Dimensions mm (in)</b>	5.4 H x 10.3 L x 6.9 W (0.21 x 0.41 x 0.27)	39.0 H x 34.0 L x 13.2 W (1.54 x 1.34 x 0.52)	1.8 H x 5.2 L x 3.0 W (0.07 x 0.20 x 0.12)
<b>Switching</b>	1A max.	100mA max.	No hot switching (>0.5mA@0.5VDC)
<b>Features</b>	<ul style="list-style-type: none"> <li>• 1GHz+ HF relay</li> <li>• 2 Form C</li> <li>• 100mW coil power</li> <li>• Smallest 2 Form C on the market</li> <li>• Ideal for Test &amp; Measurement, CATV, Digital TV tuners</li> <li>• New "-S" terminal arrangement facilitates end-to-end PCB layout.</li> </ul>	<ul style="list-style-type: none"> <li>• 26.5GHz bandwidth</li> <li>• Coaxial HF relay</li> <li>• 60dB isolation (26.5GHz)</li> <li>• Contact carry power of 120W at 3GHz</li> <li>• Available in failsafe &amp; TTL-driven models</li> <li>• Also available in non-latching and dual latching configurations</li> <li>• Ideal for Mobile Communications Infrastructure Equipment, Broadcast Equipment, Test and Measurement Equipment, Wireless LAN</li> </ul>	<ul style="list-style-type: none"> <li>• Superior high-frequency characteristics at 10 GHz typical / 8 GHz rated (50Ω)</li> <li>• Isolation of 30 dB</li> <li>• Insertion loss of 1dB</li> <li>• Return loss of 10 dB</li> <li>• Ultra-miniature 5.2×3.0×1.8 mm (L×W×H).</li> <li>• Contact Reliability 100million operations (0.5mA at 0.5VDC Resistive load)</li> <li>• Rated power consumption of 10μW</li> </ul>
<b>HF Characteristics</b>			
<b>Isolation</b>	20 - 30dB (1GHz)	60dB (26.5GHz) 65dB (12.4GHz)	30dB (10GHz typical, 8GHz rated)
<b>Insertion loss</b>	0.2dB (1GHz)	0.8dB (26.5GHz) 0.4dB (12.4GHz) 0.3dB (8GHz)	1dB (10GHz typical, 8GHz rated) 3dB (12GHz rated)
<b>VSWR</b>	0.2dB (1GHz)	1.7 (26.5GHz) 1.35 (12.4GHz) 1.25 (8GHz)	1.2 at rated load
<b>Contact Information</b>			
<b>Contact form</b>	2 Form C	1 Form C 2 Form C* (Transfer Contacts)	SPDT (transfer contacts)
<b>Contact type(s)</b>	Bifurcated crossbar	Twin crossbar	Single-side stable
<b>Contact material</b>	Au alloy on Ag base	Au clad Cu alloy	Proprietary
<b>Rated load (under resistive load)</b>	0.3A @ 125VAC; 1A @ 30VDC	100mA @ 30VDC	100mA @ 10VDC (carry) RF: 30dB
<b>Max. operating voltage</b>	60VDC, 125VAC	30VDC	0.5VDC (switching)
<b>Max. switching capacity under resistive load</b>	37.5VA, 30W	120W (3GHz)	0.25mW
<b>Min. electrical service life (operations at rated load)</b>	300,000	5,000,000	100M
<b>Coil Information</b>			
<b>Coil voltage</b>	3, 4.5, 5, 6, 9, 12, 24VDC	4.5, 5, 12, 15, 24, 28VDC	No Coil MEMS Electrostatic Drive 34VDC +/-5%
<b>Power consumption</b>	100mW	500mW (dual latching 700mW (failsafe))	10μW
<b>Characteristics</b>			
<b>Dielectric strength between coil &amp; contacts (50/60 Hz for 1 minute)</b>	750VAC	500VAC	No Dielectric rating ESD 100V (Human Body Model)
<b>Terminal choices</b>	SMT Gullwing	SMA Terminals, Solder Terminals, Pin Terminals, Connector Cables	LGA12
<b>Packaging / Options</b>	—	—	50 pc IC pack & 200 pc JEDEC tray

\*Coming Soon

# Technical Considerations

Omron Electronic Components has a great variety of standard options. We can deliver a snap action switch that will drop right into your application. Saving you time, component counts, & cost while improving your products overall quality.

These options include:

## Actuators:

- Long & short panel mount plungers
- Long & short spring plungers
- Hinge levers in various lengths & orientation
- Roller levers in various lengths & orientations
- Simulated roller
- Leaf

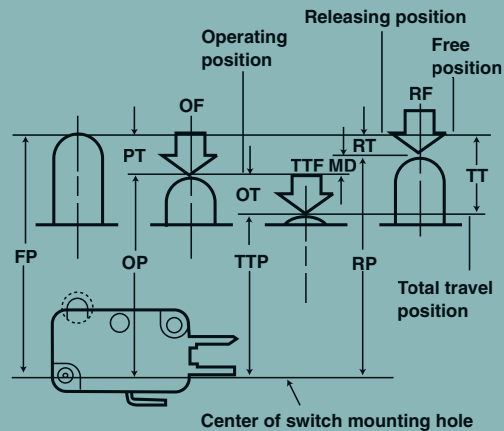
## Termination styles:

- PCB
- Solder
- Quick Connect
- Screw
- Wire Leads
- Connector

## Additional Features:

- Sealed / Unsealed versions available.
- Class N (200C) types available. (D3V-T)

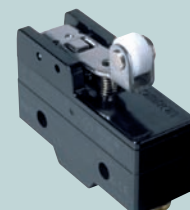
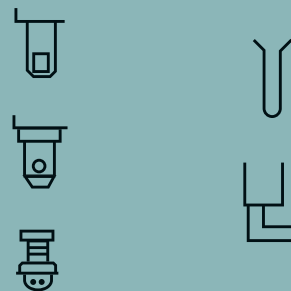
**Contact Omron Components and have it your way. Configure a switch that meets your application needs.**



## Plunger & Lever Options







## Terminal Options









# Switches - Snap Action

				
	Z	A	X	DZ
<b>Dimensions mm (in)</b>	24.2 H x 17.45 D x 49.2 W (0.95 x 0.69 x 1.93)	24.2 H x 17.45 D x 49.2 W (0.95 x 0.69 x 1.93)	24.2 H x 17.45 D x 49.2 W (0.95 x 0.69 x 1.93)	22.7 H x 17.45 D x 49.2 W (0.89 x 0.69 x 1.93)
<b>Features</b>	<ul style="list-style-type: none"> <li>General Purpose Snap Action Switch</li> <li>High precision 15 A switch available in a variety of styles</li> </ul>	<ul style="list-style-type: none"> <li>General Purpose Snap Action Switch</li> <li>High capacity switch handles loads with large inrush currents</li> </ul>	<ul style="list-style-type: none"> <li>DC switch</li> <li>Magnetic blowout to extinguish arc</li> </ul>	<ul style="list-style-type: none"> <li>DPDT basic switch</li> <li>Incorporates two completely independent built-in switches</li> <li>Can switch two independent circuits operating on different voltages</li> </ul>
<b>Contact Rating(s) Resistive load</b>	0.1A @ 125VAC 15A @ 250VAC*	20A @ 250VAC	10A @ 125VDC 3 A @ 250VDC	10A @ 250VAC
<b>Contact form</b>	SPDT	SPDT	SPDT	DPDT
<b>Operating force (OF)*</b>	250g to 350g	400g to 625g	510g	570g
<b>Mechanical service life</b>	Refer to "SPECIFICATIONS" section of data sheet for detailed service life information	1,000,000 ops. min. (at rated OT load)	1,000,000 operations min.	1,000,000 operations min.
<b>Electrical service life</b>	Refer to "SPECIFICATIONS" section of data sheet for detailed service life information	500,000 ops. min. (at rated OT load)	100,000 operations min.	500,000 operations min.
<b>Mounting pitch mm (in)</b>	25.4 (1.0)	25.4 (1.0)	25.4 (1.0)	25.4 (1.0)
<b>Actuator types</b>	Pin plunger, slim spring plunger, short spring plunger, panel mount plunger, panel mount roller plunger, panel mount cross roller plunger, hinge lever, low force hinge lever, short hinge roller lever, hinge roller lever, unidirectional short hinge roller lever, spring plunger, flexible rod	Pin plunger, short spring plunger, panel mount plunger, panel mount roller plunger, panel mount cross roller, short hinge lever, hinge lever, short hinge roller lever, hinge roller lever	Pin plunger, short spring plunger, slim spring plunger, panel mount plunger, panel mount cross-roller plunger, panel mount roller plunger, leaf spring, hinge lever, hinge roller lever, short hinge lever, short hinge roller lever	Pin plunger, hinge lever, short hinge roller lever, hinge roller lever
<b>Terminal choices</b>	Solder, Screw	Solder, Screw, or Quick connect (#250)	Solder, Screw	Solder, Screw
<b>Approved standards</b>	UL, CSA, SEV	UL, CSA, SEV	UL, CSA	UL, CSA





\* Values are for pin plunger type only

# Switches - Snap Action

				
	TZ	D3V	V	VX
<b>Dimensions mm (in)</b>	32 H x 17.45 D x 49.2 W (1.26 x 0.69 x 1.93)	15.9 H x 10.3 D x 27.8 W (0.63 x 0.41 x 1.09)	15.9 H x 10.3 D x 27.8 W (0.63 x 0.41 x 1.09)	18.8 H x 10.3 D x 27.8 W (0.74 x 0.41 x 1.09)
<b>Features</b>	<ul style="list-style-type: none"> <li>Stable operation at 400°C ambient temperature</li> <li>High contact reliability</li> <li>Smooth operation</li> </ul>	<ul style="list-style-type: none"> <li>Miniature Snap Action Switch</li> <li>Environmentally friendly: free of beryllium copper &amp; lead</li> <li>Maximum operating temperature of 105°C (standard versions)</li> <li>Internally or externally fitted levers</li> <li>200°C versions available (D3V-T)</li> </ul>	<ul style="list-style-type: none"> <li>Miniature Snap Action Switch</li> <li>Industry standard design with 15 A (V-15G) or 10 A (V-10G) rating</li> <li>Cadmium-free contacts</li> <li>Internal lever options</li> </ul>	<ul style="list-style-type: none"> <li>Miniature Snap Action</li> <li>Low operating force</li> <li>High contact reliability</li> <li>0.1 A to 5 A</li> </ul>
<b>Contact Rating(s) Resistive load</b>	1A @ 250VAC	21/16/11/6A @ 125/250VAC 0.1A @ 125VAC	15A @ 250VAC (V-15G) 10A @ 250VAC (V-10G)	5A @ 250VAC 0.1A @ 125VAC
<b>Contact form</b>	SPST	SPDT, SPST-NC, SPST-NO	SPDT, SPST-NC, SPST-NO	SPDT, SPST-NO, SPST-NC
<b>Operating force (OF)*</b>	500g	50g, 100g, or 200g	100g, 200g, or 400g (V-15G) 100g or 200g (V-10G)	25g, 50g
<b>Mechanical service life</b>	100,000 operations min.	10,000,000 operations min.	50,000,000 operations min.	50,000,000 (5A) 10,000,000 (0.A)
<b>Electrical service life</b>	50,000 operations min.	100,000 operations min. (D3V-16) 200,000 operations min. (D3V-11) 500,000 operations min. (D3V-6 / D3V-01)	100,000 operations min. (V-15G) 300,000 operations min. (V-10G)	500,000 (5A ) 1,000,000 (0.1A )
<b>Mounting pitch mm (in)</b>	25.4 (1.0)	–	10.3 x 22.2 (0.41 x 0.87)	22.2
<b>Actuator types</b>	Pin plunger, hinge lever, short hinge roller lever, hinge roller lever	Pin plunger, short hinge lever, hinge lever, long hinge lever, simulated roller lever, short hinge roller lever, hinge roller lever	Pin plunger, short hinge lever, hinge lever, long hinge lever, simulated roller lever, short hinge roller lever, hinge roller lever	Pin plunger, short hinge lever, hinge lever, long hinge lever, simulated roller lever, short hinge roller lever, hinge roller lever
<b>Terminal choices</b>	Bolt	Solder/Quick connect (#187) Quick connect (#187) Quick connect (#250)	Solder/Quick connect (#187) Quick connect (#187), Quick connect (#250), Short solder, Screw	Solder, Quick-connect (#187)
<b>Approved standards</b>	–	UL, CSA, VDE, SEMKO	UL, CSA, SEV, VDE, SEMKO, DENMARK	UL, CSA, VDE

\*Values are for pin plunger type only

# Switches - Snap Action

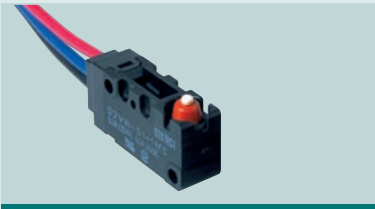


		<b>NEW!</b> 	<b>NEW!</b> 	
	<b>SS-P/SS</b>	<b>SSG</b>	<b>D3M</b>	<b>D2F</b>
<b>Dimensions mm (in)</b>	10.2 H x 6.4 D x 19.8 W (0.40 x 0.25 x 0.78)	10.2 H x 6.4 D x 19.8 W (0.40 x 0.25 x 0.78)	10 H x 7 D x 31.6 W (0.39 x 0.28 x 1.24)	6.5 H x 5.8 D x 12.8 W (0.26 x 0.23 x 0.50)
<b>Features</b>	<ul style="list-style-type: none"> <li>Subminiature Snap Action Switch</li> <li>SS-01: Switches microcurrent/ microvoltage load with cross-bar contacts</li> <li>SS-3: Single-leaf moveable spring</li> <li>SS-5: Split double spring mechanism for a long life of up to 30 million operations</li> <li>SS-10: Split double spring mechanism for a long life of up to 10 million operations</li> <li>Internal lever options</li> </ul>	<ul style="list-style-type: none"> <li>Subminiature Snap Action Switch</li> <li>SS-01: Switches microcurrent/ microvoltage load with crossbar contacts</li> <li>SS-5: Split double spring mechanism for a long life of up to 30 million operations</li> <li>Wide operating temp. range of -25 to + 125°C</li> <li>Internal lever options</li> <li>Global switch conforming to EN, UL &amp; CSA</li> </ul>	<ul style="list-style-type: none"> <li>External actuators</li> <li>Easy wiring through connector terminals</li> </ul>	<ul style="list-style-type: none"> <li>Subminiature Snap Action Switch</li> <li>Switches microvoltage/ micro-current loads</li> <li>Long lifespan assured by high-precision dual spring reverse-action mechanism</li> </ul>
<b>Contact Rating(s) Resistive load</b>	0.1A @ 125VAC (SS-01) 3A @ 125VAC (SS-3) 5A @ 125VAC (SS-5) 10.1A @ 125/250VAC (SS-10)	3A @ 250VAC 0.1A @ 250VAC	0.1A @ 30VDC	0.1A @ 30VDC (D2F-01) 3A @ 125VAC (D2F) 1A @ 125VAC (D2F-F)
<b>Contact form</b>	SPDT (SPST-NC, SPST-NO per request)	SPDT, SPST-NO, SPST-NC	SPST-NC, SPST-NO	SPDT
<b>Operating force (OF)*</b>	25g, 50g, or 150g (SS-01) 150g (SS-3) 50g or 150g (SS-5) 150g (SS-10)	25g, 51g, 153g	153g	75g (D2F-01) 150g (D2F) 75g (D2F-F)
<b>Mechanical service life</b>	30,000,000 ops. min. (SS-01, SS-5)* 1,000,000 ops. min. (SS-01P, SS-3) 10,000,000 ops. min. (SS-10)*	10,000,000 operations min.	500,000 operations min.	1,000,000 operations min.
<b>Electrical service life</b>	200,000 operations min. (SS-01, SS-5)** 70,000 operations min. (SS-3) 50,000 operations min. (SS-10)**	200,000 operations min.	200,000 operations min.	30,000 operations min. (OT: full stroke)
<b>Mounting pitch mm (in)</b>	9.5 (0.37)	9.5	9.5	6.5 (0.26)
<b>Actuator types</b>	Pin plunger, hinge lever, simulated roller lever, formed hinge lever, hinge roller lever	Pin plunger, hinge lever, simulated roller lever, hinge roller lever	Pin plunger, hinge lever, hinge roller lever, simulated roller lever	Pin plunger, hinge lever, simulated roller lever, roller lever
<b>Terminal choices</b>	SS-01, SS-3, SS-5: PCB (straight, parallel left, parallel right), Solder, Quick connect SS-10: PCB (straight), Solder, Quick connect (#110)	Solder, quick-connect (#110), PCB	Dipole XA Connector	PCB (straight, self-supporting, right and left angle), Solder
<b>Approved standards</b>	UL, CSA, EN	UL, CSA, EN	UL, CSA	UL, CSA

\*Values are for pin plunger type only

\*at rated OT value

\*\*at rated load


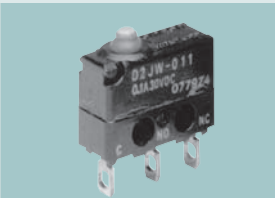
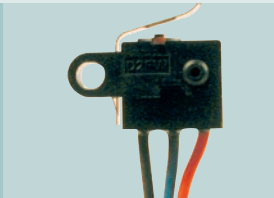

# Switches - Sealed Snap Action

			
	D2VW	D2SW	D2SW-P
<b>Dimensions mm (in)</b>	15.9 H x 10.3 D x 33 W (0.63 x 0.41 x 1.29)	10.1 H x 6.4 D x 19.8 W (0.40 x 0.25 x 0.78)	7.7 H x 6.4 D x 19.8 W (0.30 x 0.25 x 0.78)
<b>Features</b>	<ul style="list-style-type: none"> <li>• Miniature Snap Action Switch</li> <li>• Sealed water-tight switch conforms to IP67 &amp; IP68</li> </ul>	<ul style="list-style-type: none"> <li>• Subminiature snap action switch</li> <li>• Small sealed switch conforms to IP67 &amp; IP68</li> </ul>	<ul style="list-style-type: none"> <li>• Sealed basic switch (IP67)</li> <li>• Single leaf movable spring construction</li> <li>• Microload versions available</li> </ul>
<b>Contact Rating(s) Resistive load</b>	0.1A @ 125VAC or 5A @125/250VAC	0.1A @ 125VAC or 3A @ 125VAC	2A @ 250VAC or 0.1A @ 125VAC
<b>Contact form</b>	SPDT (SPST-NC, SPST-NO per request)	SPDT (SPST-NC, SPST-NO per request)	SPDT, SPST-NO, SPST-NC
<b>Operating force (OF)*</b>	200g	180g	183g
<b>Mechanical service life</b>	10,000,000 operations min.	5,000,000 operations min.	1,000,000 operations min.
<b>Electrical service life</b>	1,000,000 operations min. (0.1A, 125VAC) 100,000 operations min. (3A, 125/250VAC)	200,000 operations min. (0.1 or 3A, 125VAC) 100,000 operations min. (2A, 250VAC)	50,000 (2 A) or 200,000 (0.1A) operations min.
<b>Mounting pitch mm (in)</b>	10.3 x 22.2 (0.41 x 0.87)	9.5 (0.37)	9.5mm
<b>Actuator types</b>	Pin plunger, short hinge lever, hinge lever, long hinge lever, simulated roller lever, short hinge roller lever, hinge roller lever	Pin plunger, hinge lever, simulated roller lever, hinge roller lever	Pin plunger, hinge lever, hinge roller lever, simulated roller lever
<b>Terminal choices</b>	Solder/Quick connect (#187 tab terminals) lead wires	Solder, Quick connect (#110), PCB, lead wires	Solder, Quick connect (#110), PCB (even & uneven pitch), Molded lead wires
<b>Approved standards</b>	UL, CSA (refer to "Ratings" section of data sheet)	UL, CSA	UL, CSA

\*Values are for pin plunger type only

\*\*IP68 Ratings are based on specific application environments and conditions, per IEC 529. Test conditions for Grade 8 pertaining to continuous immersion are subject to prior agreement between Omron and the user. Acceptance of the test requirements and the ratings may or may not occur, solely based on the specific conditions of each application. Consult Omron for consideration of specific usage conditions.




# Switches - Sealed Snap Action

	 <b>D2HW</b>	 <b>D2JW</b>	 <b>D2FW-G</b>	 <b>D2X</b>
<b>Dimensions mm (in)</b>	7 H x 5.3 D x 13.3/18.5 W (0.28 x 0.21 x 0.52/0.73)	9.4 H x 5.3 D x 12.7 W (0.37 x 0.21 x 0.50)	13.5 H x 8.0 D x 23.5 W (0.53 x 0.31 x 0.93)	28.1 H x 8.4 D x 5.3 W (1.11 x 0.33 x 0.21)
<b>Features</b>	<ul style="list-style-type: none"> <li>Subminiature Snap Action Switch</li> <li>Small sealed switch with long stroke for reliable ON/OFF action</li> <li>Conforms to IP67</li> </ul>	<ul style="list-style-type: none"> <li>Small size</li> <li>Gold crossbar contact and coilspring for long life</li> <li>IP67 rating for molded lead wire versions</li> </ul>	<ul style="list-style-type: none"> <li>Subminiature Snap Action Switch</li> <li>Small sealed switch with lead wires</li> <li>Conforms to IP67</li> </ul>	<ul style="list-style-type: none"> <li>High contact force</li> <li>Wiping action for greater contact reliability</li> </ul>
<b>Contact Rating(s) Resistive load</b>	2A @ 12VDC/ 1A @ 24VDC/ 0.5A @ 42VDC	0.1A @ 30VDC	0.5A @ 30VDC or 50mA @ 30VDC	0.1A @ 30VDC
<b>Contact form</b>	SPDT, SPST-NC, SPST-NO	SPDT	SPDT, SPST-NC, SPST-NO	SPST-NC
<b>Operating force (OF)*</b>	76g	250g	120g	50g
<b>Mechanical service life</b>	1,000,000 operations min.	1,000,000 operations min.	300,000 operations min.	1,000,000 operations min.
<b>Electrical service life</b>	100,000 operations min.	500,000 operations min.	100,000 operations min.	50,000 operations min.
<b>Mounting pitch mm (in)</b>	8 (0.32) posts, 13 (0.51 ) screw	4.8	16 (0.63)	12.2
<b>Actuator types</b>	Pin plunger, hinge lever, long hinge lever, simulated roller lever, leaf lever, simulated leaf lever, long leaf lever	Pin plunger, short hinge lever, hinge lever, simulated roller lever, hinge roller lever	Leaf lever, Long leaf lever	Bi-directional paddle
<b>Terminal choices</b>	PCB (straight, angled), Solder, Lead wire (bottom, right side, left side)	Solder, molded lead wire	Lead wires	Crimp connector
<b>Approved standards</b>	UL, CSA	UL, CSA, VDE	–	–

\*Values are for pin plunger type only


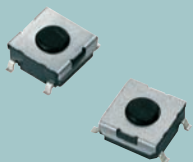
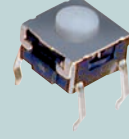



# Switches - Snap Action

	 <b>D3C</b>	<b>NEW!</b>  <b>D3D</b>	 <b>D2T</b>
<b>Dimensions mm (in)</b>	6 H x 4.2 D x 8 W (0.24 x 0.17 x 0.31)	30.7 H x 15 D x 36.4 W (1.21 x 0.59 x 1.43)	24.65 H x 11.5 D x 28.8 W (0.97 x 0.45 x 1.13)
<b>Features</b>	<ul style="list-style-type: none"> <li>• Low torque built-in slide mechanism for selecting shorting or non-shorting timing</li> </ul>	<ul style="list-style-type: none"> <li>• Miniature door switch</li> <li>• Low-noise</li> <li>• Disconnectable crimp connector</li> <li>• Gold crossbar contacts</li> </ul>	<ul style="list-style-type: none"> <li>• Compact door switch</li> <li>• Incorporates two circuits for power loads &amp; micro loads</li> </ul>
<b>Contact Rating(s)</b> Resistive load	0.1A @ 30VDC	1A @ 125VAC or 0.5A @ 250VAC	5A @ 250VAC 0.1A @ 25VAC
<b>Contact form</b>	SPDT	SPDT, SPST-NC, SPST-NO	DPST-NO
<b>Operating force (OF)*</b>	40g, 130g	204g	330g
<b>Mechanical service life</b>	50,000 operations min.	300,000 operations min.	100,000 operations min.
<b>Electrical service life</b>	50,000 operations min.	100,000 operations min.	100,000 operations min.
<b>Mounting pitch mm (in)</b>	5.7	Panel-mount	26.4
<b>Actuator types</b>	Rotary lever	Pin plunger, lever	Pin plunger, hinge lever
<b>Terminal choices</b>	PCB	Connector	Solder
<b>Approved standards</b>	–	UL, CSA	UL, CSA, VDE, SEMKO

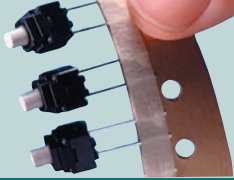



\* Values are for pin plunger type only

# Switches - Tactile

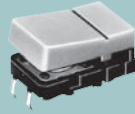
				<b>NEW!</b> 
	<b>B3F</b>	<b>B3FS</b>	<b>B3W</b>	<b>B3W-9</b>
<b>Dimensions mm (in)</b>	Varies by type	Varies by type	Varies by type	11 H x 10 W x 10 D (0.43 x 0.39 x 0.39)
<b>Features</b>	<ul style="list-style-type: none"> <li>Tactile 6 mm/12 mm Square Switch</li> <li>Space saving switch with extended mechanical/electrical service life</li> <li>Taped radial packaging available*</li> </ul>	<ul style="list-style-type: none"> <li>Tape &amp; Reel Surface Mount Switches</li> <li>Tactile switch that incorporates a snap action contact mechanism which ensures sharp switching operations</li> </ul>	<ul style="list-style-type: none"> <li>6 mm/12 mm Square Tactile Switch</li> <li>Sealed Construction allows immersion cleaning with Alcohol based solution</li> </ul>	<ul style="list-style-type: none"> <li>Bright, Uniform illumination in SPST-NO (momentary) configuration</li> <li>Keycap option includes LED color match, transparent or opaque white</li> <li>Monocolor illumination, with 1 or 2 LED's</li> <li>Tricolor operation possible - - Red + Green LED's produce Orange when used with white cap</li> <li>Dust tight internal switch mechanism</li> </ul>
<b>Service life (Mechanical/Electrical)</b>	B3F-1 □□□ /3 □□□ 1,000,000 operations min. (High force: 300,000 operations min.) B3F-4 □□□ 3,000,000 operations min. (High force: 300,000 operations min.) B3F-5 □□□ 10,000,000 operations min.) B3F-6 □□□ 1,000,000 operations min. (High force: 300,000 operations min.)	1,000,000 operations min. (General purpose) 300,000 operations min. (High force)	B3W-1 □□□ Standard force: 1,000,000 operations min. High-force: 300,000 operations min. B3W-4 □□□ Standard force: 3,000,000 operations min. High force: 1,000,000 operations min.	1,000,000 operations min. (Standard force) 300,000 operations min. (High force)
<b>Contact Rating(s)</b>				
<b>Resistive load</b>	50mA @ 24 VDC	50mA @ 24 VDC	50mA @ 24VDC	1 to 50 mA @ 5 to 24 VDC
<b>Contact form</b>	SPST-NO	SPST-NO	SPST-NO	SPST-NO
<b>Action</b>	Momentary	Momentary	Momentary	Momentary
<b>Ground terminal</b>	Models available with or without ground terminal	None	Models available with or without ground terminal	None
<b>Keycap (optional)</b>	Refer to "ACCESSORIES" section of data sheet for Keycap information	None	Refer to "ACCESSORIES" section of data sheet for Keycap information	Transparent, Translucent White or Color Matched
<b>Operating force (OF)</b>	Refer to "OPERATING CHARACTERISTICS" section of data sheet	100gf (General purpose) 150gf (High force)	Refer to "OPERATING CHARACTERISTICS" section of datasheet	160 gf max. (Standard force) 230 gf max. (High force)
<b>Actuator type</b>	Plunger	Plunger	Plunger	Integral keycap ith unique diffusion panel
<b>Terminal choices</b>	PCB	Surface mount	PCB	PCB
<b>Cleaning</b>	Not possible	Not possible	Possible	Not Possible

NOTE: (1) None of the Tactile switch models listed within this catalog are water-washable.  
 (2) B32 Keytops are available for projected plunger versions of the B3F, B3FS and B3W.  
 See datasheet, available at <http://www.components.omron.com>

# Switches - Tactile

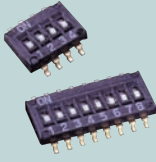
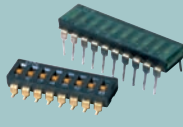

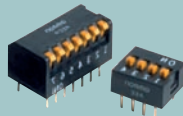
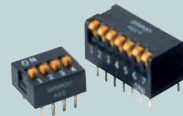
			<b>NEW!</b> 	
	<b>B3WN</b>	<b>B3S</b>	<b>B3SL</b>	<b>B3SN</b>
<b>Dimensions mm (in)</b>	13 H x 8.0 D x 8.0 W (0.51 x 0.31 x 0.31)	4.3 H x 6.0 D x 6.0 W (0.17 x 0.24 x 0.24)	3.4 H or 5.1H x 6.2 W x 6.5 D (0.13 or 0.20 x 0.24 x 0.26)	3.1 H x 6.5 D x 7.0 W (0.12 x 0.26 x 0.28)
<b>Features</b>	<ul style="list-style-type: none"> <li>• Radial Tape Sealed Tactile Switch</li> <li>• Compact 8 x 8 mm square size with double sealing construction</li> <li>• Assures water-tight/ dust-tight protection</li> </ul>	<ul style="list-style-type: none"> <li>• Surface Mount Tactile Switch</li> <li>• Sealed Construction allows immersion cleaning with Alcohol based solution</li> </ul>	<ul style="list-style-type: none"> <li>• 90°C Maximum operating Temperature</li> <li>• Sealed construction conforming to IP64 (IEC 60529)</li> <li>• Crisp click feeling and middle stroke with rubber plunger.</li> <li>• Two heights available, 3.4 mm and 5.1 mm</li> <li>• Tape packing is available</li> </ul>	<ul style="list-style-type: none"> <li>• Surface Mount Tactile Switch</li> <li>• Low profile sealed construction for dust or humid environments</li> <li>• Available in bulk or tape packaging</li> </ul>
<b>Service life (Mechanical/Electrical)</b>	100,000 operations min.	500,000 operations min. (General purpose) 300,000 operations min. (High force)	100,000 operations min.	50,000 operations min.
<b>Contact Rating(s)</b>				
<b>Resistive load</b>	50mA @ 12VDC	50mA @ 24VDC	1 to 50 mA @ 5 to 12 VDC	1 to 30mA @ 5 to 24VDC
<b>Contact form</b>	SPST-NO	SPST-NO	SPST-NO	SPST-NO
<b>Action</b>	Momentary	Momentary	Momentary	Momentary
<b>Ground terminal</b>	None	Models available with or without ground terminal	None	Models available with or without ground terminal
<b>Keycap (Optional)</b>	None	None	None	None
<b>Operating force (OF)</b>	200 ±70gf	160gf (General purpose) 230gf (High force)	200 ± 50 gf	160 ±50g max.
<b>Actuator type</b>	Plunger	Plunger	Plunger	Plunger
<b>Terminal choices</b>	PCB	Surface mount	Surface Mount	Surface mount
<b>Cleaning</b>	Possible	Possible	Not Possible	Possible

# Switches - Tactile

**B3M****B3J****B3D****B3DA**

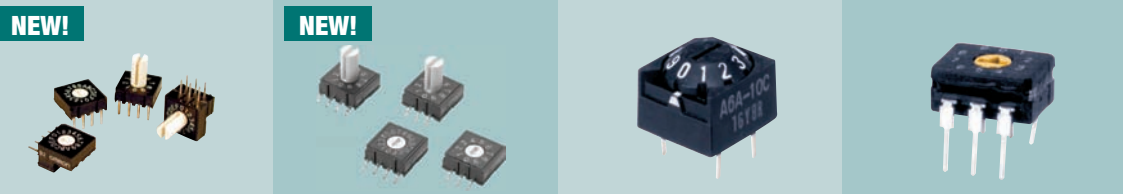
	<b>B3M</b>	<b>B3J</b>	<b>B3D</b>	<b>B3DA</b>
<b>Dimensions mm (in)</b>	7.3 H x 6.0 D x 6.0 W (0.29 x 0.24 x 0.24)	10.3 H x 18.0 D x 12.0 W (0.41 x 0.71 x 0.47)	4 mm or 5 mm domes	4 mm or 5 mm domes
<b>Features</b>	<ul style="list-style-type: none"> <li>• High Profile Tactile Switch</li> <li>• Stroke length of 0.85mm</li> <li>• Light touch with a minimum overstroke of 0.25mm</li> </ul>	<ul style="list-style-type: none"> <li>• Hinged Tactile Switch</li> <li>• Available with 1, 2 or no LED's</li> </ul>	<ul style="list-style-type: none"> <li>• Adhesive-backed individual dome</li> <li>• Superior dust-tight performance</li> <li>• No soldering required</li> </ul>	<ul style="list-style-type: none"> <li>• Adhesive-backed individual array</li> <li>• Superior dust-tight performance</li> <li>• No soldering required</li> </ul>
<b>Service life (Mechanical / Electrical)</b>	2,000,000 operations min.	3,000,000 operations min.	500,000 (4 mm) / 1,000,000 (5 mm)	500,000 (4 mm) / 1,000,000 (5 mm)
<b>Contact Rating(s)</b>				
<b>Resistive load</b>	50mA @ 12VDC	1 to 50mA @ 5 to 24VDC	10mA @ 12VDC	—
<b>Contact form</b>	SPST-NO	SPST-NO	N/A	N/A
<b>Action</b>	Momentary	Momentary	Momentary	Momentary
<b>Ground terminal</b>	None	None	None	None
<b>Keycap (Optional)</b>	Built in	None	None	None
<b>Operating force (OF)</b>	70 ±20gf	130 ±50gf	170g	160g
<b>Actuator type</b>	Plunger	Hinge lever	Dome	Dome
<b>Terminal choices</b>	PCB	PCB	Surface mount	Surface mount
<b>Cleaning</b>	Not possible	Not possible	Not possible	Not possible

# Switches - DIP

			 <b>NEW!</b>		
	<b>A6H</b>	<b>A6T/A6S-H</b>	<b>A6TR/A6SR</b>	<b>A6D/A6DR</b>	<b>A6E/A6ER</b>
<b>Dimensions mm (in)</b>	Varies by type	Varies by type	Varies by type	Varies by type	Varies by type
<b>Features</b>	<ul style="list-style-type: none"> <li>• Half-pitch Surface Mount DIP Switch</li> <li>• Low profile of 1.55mm</li> <li>• Seal tape models available</li> </ul>	<ul style="list-style-type: none"> <li>• Straight PCB/ Surface Mount DIP Switch</li> <li>• Flat actuated types with or without seal tape, &amp; tape seal versions in embossed tape packaging</li> <li>• Raised actuator types also available</li> </ul>	<ul style="list-style-type: none"> <li>• Piano DIP versions of the popular A6T and A6S-H</li> <li>• Low profile, end stackable design</li> <li>• Gold-plated twin contacts and slide-type self cleaning contact mechanism</li> <li>• Surface Mount or Through-hole PCB terminals</li> </ul>	<ul style="list-style-type: none"> <li>• Dustproof construction</li> <li>• Top, raised &amp; side actuators</li> <li>• Smooth switching action</li> </ul>	<ul style="list-style-type: none"> <li>• Available in a variety of model types: A6E: Flat/Raised actuator A6ER: Side actuator</li> </ul>
<b>Contact Rating(s) Resistive load</b>	25mA @ 24VDC	25mA @ 24VDC	25 mA @ 25 VDC	30mA @ 30VDC	25mA @ 24VDC
<b>Switching positions</b>	—	—	—	—	—
<b>Number of poles</b>	4, 8	A6T: 1, 2, 4, 6, 8, 10 A6S: 2, 3, 4, 5, 6, 7, 8, 9, 10 A6S (embossed tape): 4, 6, 8	2, 4, 6, 8, 10	4, 6, 8, 10	2, 3, 4, 5, 6, 7, 8, 9, 10
<b>Operating force (OF)*</b>	30gf	30gf	30.5 to 795 gf	500gf	30gf
<b>Mechanical service life,</b>	1,000 operations min.	1,000 operations min.	1,000 operations min.	5,000 operations min.	1,000 operations min.
<b>Electrical service life</b>	1,000 operations min.	1,000 operations min.	1,000 operations min.	2,000 operations min.	1,000 operations min.
<b>Actuator types</b>	Top	Top, raised	Side (piano style) – short or long lever	Top, raised, side	Top, raised, side
<b>Terminal choices</b>	Surface mount	PCB terminal; Surface mount	PCB - Through-hole or Surface mount	PCB terminal	PCB terminal
<b>Washable</b>	Yes (seal tape only)	Yes (seal tape only)	No	Yes	No



# Switches - DIP






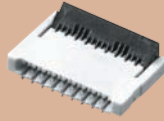

	A6R/A6RV	A6RS	A6A	A6C
<b>Dimensions mm (in)</b>	Varies by type	Varies by type	Varies by type	Varies by type
<b>Features</b>	<ul style="list-style-type: none"> <li>Economical rotary DIP switch</li> <li>Top, side &amp; extended shaft models</li> <li>O-ring sealed construction to prevent ingress of dust and dirt</li> </ul>	<ul style="list-style-type: none"> <li>Temperature-resistant resin allows peak reflow of 260°C</li> <li>Flat and extended-shaft models</li> <li>Two different terminal arrangements for maximum design flexibility</li> <li>-25 C to 80 °C operating temperature</li> </ul>	<ul style="list-style-type: none"> <li>Subminiature Rotary DIP Switch</li> <li>Small housing for high-density mounting &amp; sealed construction for immersion cleaning</li> </ul>	<ul style="list-style-type: none"> <li>Subminiature Rotary DIP Switch Internal sealed construction eliminates the need for tape sealing, &amp; automatic, high-density mounting is possible</li> </ul>
<b>Contact Rating(s) Resistive load</b>	25mA @ 24VDC	25 mA @ 24 VDC	1~100mA @ 5~28VDC	100mA @ 30VDC
<b>Switching positions</b>	10-BCD 16-Hexidecimal	10-BCD 16-Hexidecimal	10-BCD 16-Hexadecimal	10-BCD 16-Hexidecimal
<b>Number of poles</b>	—	—	—	—
<b>Operating force (OF)*</b>	200g-cm max.	$1.96 \times 10^{-2}$ N-m max. operating torque	120 to 250g-cm	15 to 100g-cm
<b>Mechanical service life</b>	5,000 detent operations min.	—	10,000 detent operations min.	10,000 operations min.
<b>Electrical service life</b>	5,000 detent operations min.	5,000 detent operations min.	2,000 detent operations min.	2,000 operations min.
<b>Actuator types</b>	Rotary	Rotary	Rotary	Rotary
<b>Terminal choices</b>	PCB terminal	Surface mount	PCB terminal	PCB terminal
<b>Washable</b>	No	No	Yes	Yes

# Connectors - Industrial






	Sensor I/O Cables			PCB
General Attributes	 <b>NEW!</b>			 <b>NEW!</b>
	<b>XS5</b>	<b>XS2</b>	<b>XS3</b>	<b>XN2</b>
<b>Connector Type</b>	M12 Sensor I/O Connector (Bayonet Locking Mechanism)	M12 Sensor I/O Connector	M8 Sensor I/O Connector	Sensor I/O Connector (Easy-wire connection)
<b>Available Models</b>	<ul style="list-style-type: none"> <li>Standard cables</li> <li>Vibration-Proof Robot Cables</li> <li>Oil-Resistant Polyurethane Cables</li> <li>CL3 Cables</li> </ul>	<ul style="list-style-type: none"> <li>Standard Cables</li> <li>Vibration-Proof Robot Cables</li> <li>PVC Cables</li> <li>PUR Cable</li> </ul>	<ul style="list-style-type: none"> <li>Standard Cables</li> <li>Vibration-Proof Robot Cables</li> </ul>	<ul style="list-style-type: none"> <li>Cable Plug, Cable Socket,</li> <li>Single-Socket, Four Socket</li> </ul>
<b>Cable Length</b>	1 to 20m (depending on specific p/n)	1 to 20m (depending on specific p/n)	1 to 5m (depending on specific p/n)	N/A
<b>Rated Current</b>	4.0 Amps	3.0 Amps	1.0 Amp	3 amps/pole (0.5m <sup>2</sup> wire) 2 amps/pole (0.3m <sup>2</sup> wire) 1 amps/pole (0.2m <sup>2</sup> wire) 0.5 amps/pole (0.1m <sup>2</sup> wire)
<b>Rated Voltage</b>	250VDC	125VDC, 250VAC	125VDC	32VDC
<b>Contact Resistance</b>	40mΩ max.	40mΩ max.	40mΩ max.	30mΩ max.
<b>Dielectric Strength</b>	1,500VAC, 1 min.	1,500VAC, 1 min.	1,000VAC, 1 min.	1,000VAC, 1 min.
<b>Insertion tolerance</b>	50 times	200 times	200 times	50 times
<b>Ambient Temperature Range</b>	-25 to 70°C	-25 to 70°C	-25 to 70°C	-30 to 75°C
<b>Degree of Protection</b>	IP67 (IEC60529)	IP67 (IEC60529)	IP67 (IEC60529)	N/A
<b>Features</b>	<ul style="list-style-type: none"> <li>Waterproof</li> <li>Smackclick: Twist-Click connection with approximately 1/8th of a turn.</li> <li>Au audible "Click" and tactile response</li> <li>Interchangeable with standard screw type M12 connector</li> </ul>	<ul style="list-style-type: none"> <li>Waterproof</li> <li>Screw type</li> <li>Wide range of product variation</li> <li>IP69K version is also available</li> </ul>	<ul style="list-style-type: none"> <li>Waterproof</li> <li>Screw type</li> </ul>	<ul style="list-style-type: none"> <li>Easy connection</li> <li>Easy repair</li> <li>Accepts any size wire from AWG28 to AWG22</li> </ul>

# Connectors - FPC (Flexible Printed Circuit)

## FPC Connectors

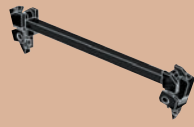
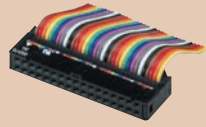
	<b>NEW!</b> 	<b>NEW!</b> 	<b>NEW!</b> 		<b>POPULAR</b> 
	<b>XF3C</b>	<b>XF3B</b>	<b>XF3H</b>	<b>XF2B</b>	<b>XF2M</b>
<b>Pitch mm</b>	0.25mm	0.3mm	0.3mm	0.3mm	0.5mm
<b>Insertion type</b>	ZIF	ZIF	ZIF	ZIF	ZIF
<b>Cable lock type</b>	Rotary Backlock	Rotary Backlock	Rotary Frontlock	Rotary Backlock	Rotary Backlock
<b>Plating on contacts</b>	Gold plating	Gold plating	Gold plating	Gold plating	Gold plating
<b>PCB mounting</b>	SMT	SMT	SMT	SMT	SMT
<b>Cable insertion</b>	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
<b>Contact type(s)</b>	Dual Contact	Dual Contact	Lower Contact	Dual Contact	Dual Contact
<b>Dimensions mm (in)</b>	10.5W x 3.8D x 0.85H (0.41 x 0.15 X 0.033) for 35 circuits	12.4W x 4.0D x 0.9H (0.49 X 0.16 X 0.035) for 35 circuits	12.0W x 3.5D x 0.9H (0.47 X 0.14 X 0.035) for 35 circuits	12.4W x 5.5D x 1.2H (0.49 x 0.22 X 0.047) for 35 circuits	16.1W x 5.9D x 2.0H (0.63 x 0.23 x 0.079) for 24 circuits
<b>Available circuits</b>	17,35,51	35,67	13,25,31,35,39,45, 51,57,61	17,21,23,25,27,31,33, 35,39,41,45,51,61	10,12,14,18,20,22,24, 26,30,32,33,34,35,36,38, 40,42,45,50,55,60
<b>Packaging</b>	Tape & reel	Tape & reel	Tape & reel	Tape & reel	Tape & reel
<b>Applicable FPC Thickness</b>	0.12mm	0.2mm	0.2mm	0.2mm	0.3mm
<b>Features</b>	<ul style="list-style-type: none"> <li>• Ultra Fine Pitch 2.5mm</li> <li>• Realized Dual contact with 0.85mm height</li> </ul>	<ul style="list-style-type: none"> <li>• Fine pitch : 0.3mm</li> <li>• Realized Dual contact with 0.9mm height</li> </ul>	<ul style="list-style-type: none"> <li>• Fine pitch : 0.3mm</li> <li>• Ultra slim body : 3.5mm depth</li> </ul>	<ul style="list-style-type: none"> <li>• Fine pitch : 0.3mm</li> <li>• Realized Dual contact with 0.9mm height</li> </ul>	<ul style="list-style-type: none"> <li>• High reliability Rotary Backlock</li> <li>• Wide range of circuits available</li> </ul>
<b>Specifications</b>					
<b>Rated current</b>	0.2A	0.2A	0.2A	0.2A	0.5A
<b>Rated voltage</b>	50V	50V	50V	50VDC	50VDC
<b>Contact resistance (@ 20mV, 100mA)</b>	80mΩ max.	80mΩ max.	80mΩ max.	50mΩ max.	50mΩ max.
<b>Insulation resistance (min.)</b>	100MΩ @ 250VDC	100MΩ @ 250VDC	100MΩ @ 250VDC	100MΩ @ 250VDC	100MΩ @ 250VDC
<b>Withstand voltage (leakage current: 1mA max.)</b>	250VAC, 1min.	250VAC, 1min.	250VAC, 1min.	250VAC, 1min.	250VAC, 1min.
<b>Insertion tolerance</b>	20 times	20 times	20 times	20 times	20 times
<b>Ambient operating temperature</b>	-30°C to +85°C	-30°C to +85°C	-30°C to +85°C	-30°C to +85°C	-30°C to +85°C

# Connectors - FPC (Flexible Printed Circuit)

	FPC Connectors				Board to Board
					 <b>NEW!</b>
	XF2W	XF2U	XF2L	XF2J	XB4A(Plug) XB4B (Socket)
<b>Pitch mm</b>	0.5mm	0.5mm	0.5mm	0.5mm	0.4mm
<b>Insertion type</b>	ZIF	ZIF	ZIF	ZIF	—
<b>Cable lock type</b>	Rotary Backlock	Rotary Backlock	Slide Lock	Slide Lock	—
<b>Plating on contacts</b>	Gold plating	Gold plating	Gold plating	Gold plating	Gold plating
<b>PCB mounting</b>	SMT	SMT	SMT	SMT	SMT
<b>Cable insertion</b>	Horizontal	Horizontal	Horizontal	Vertical	—
<b>Contact type(s)</b>	Dual Contact	Dual Contact	Upper / Lower Contact	Single-sided contact	—
<b>Dimensions mm (in)</b>	14.0W x 3.5D x 1.1H (0.55 x 0.14 x 0.043) for 24 circuits	14.0W x 3.5D x 0.9H (0.55 x 0.14 x 0.035) for 24 circuits	19.9W x 3.45D x 1.2H (0.78 x 0.14 x 0.047) for 30 circuits	19.5W x 3.4D x 4.15H (0.77 x 0.13 x 0.16) for 30 circuits	7.2W x 5.0D x 0.9H (0.28 x 0.20 x 0.035) for 24 circuits
<b>Available circuits</b>	5,7,8,9,16,20,24,45,50, 55,64	4,8,11,14,18,20,24,27, 30,32,40	4,5,6,7,8,9,10,12,13, 15,18,19,20,21,22,24, 26,30	6,8,10,12,14,16,18,20, 22,24,26,28,30,40	24,40,80
<b>Packaging</b>	Tape & reel	Tape & reel	Tape & reel	Tape & reel	Tape & reel
<b>Applicable FPC Thickness</b>	0.3mm	0.2mm	0.3mm	0.3mm	—
<b>Features</b>	<ul style="list-style-type: none"> <li>Long slider also available for easy operation.</li> <li>Ultra slim body: 3.5mm depth</li> </ul>	<ul style="list-style-type: none"> <li>Ultra slim body with low profile: 3.5 mm depth</li> <li>Realized dual contact with 0.9mm height</li> </ul>	<ul style="list-style-type: none"> <li>Ultra slim body : 3.45mm depth</li> </ul>	<ul style="list-style-type: none"> <li>Low profile, Top-entry</li> <li>Reverse terminal arrangement also available</li> </ul>	<ul style="list-style-type: none"> <li>Ultra Low Profile (Stacking height : 0.9mm)</li> <li>Provide positive click sound</li> </ul>
<b>Specifications</b>					
<b>Rated current</b>	0.5A	0.5A	0.5A	0.5A	0.3A
<b>Rated voltage</b>	50V	50V	50VDC	50V	50V
<b>Contact resistance (@ 20mV, 100mA )</b>	60mΩ max.	60mΩ max.	30mΩ max.	30mΩ max.	60mΩ max.
<b>Insulation resistance (min.)</b>	100MΩ @ 250VDC	100MΩ @ 250VDC	100MΩ @ 250VDC	100MΩ @ 250VDC	100MΩ @ 250VDC
<b>Withstand voltage (leakage current: 1mA max.)</b>	250VAC, 1min.	250VAC, 1min.	250VAC, 1min.	250VAC, 1min.	250VAC, 1min.
<b>Insertion tolerance</b>	20 times	20 times	20 times	30 times	50 times
<b>Ambient operating temperature</b>	-30°C to +85°C	-30°C to +85°C	-30°C to + 85°C	-30°C to +85°C	-30°C to +85°C

# Connectors - PCB





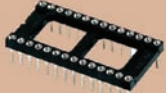
## Ribbon Cable



	XG4M	XG4U	XG4A	XG4E	XG4C
<b>Description</b>	MIL connector	MIL Connector, Accessory	MIL connector	MIL connector	MIL connector
<b>Pitch mm</b>	2.54	—	2.54	2.54	2.54
<b>Socket / Plug</b>	Socket	Strain relief	Plug with lock	Relay Plug with Locks	Box plug
<b>Plating on contacts</b>	Gold plating	—	Gold plating	Gold plating	Gold plating
<b>PCB mounting</b>	Thru-hole	—	Thru-hole	Thru-hole	Thru-hole
<b>Connect type</b>	IDC	—	IDC	IDC	IDC
<b>Cable type</b>	Flat ribbon cable	—	Flat ribbon cable	Flat ribbon cable	Flat ribbon cable
<b>Dimensions mm (in)</b>	Please consult product specifications for more information	Please consult product specifications for more information	Please consult product specifications for more information	Please consult product specifications for more information	Please consult product specifications for more information
<b>Available circuits</b>	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64
<b>Packaging</b>	Tray	Bag	Tray	Tray	Tray
<b>Features</b>	<ul style="list-style-type: none"> <li>• Unique locking mechanism on socket with XG4U (Strain Relief)</li> <li>• Easy lock lever available</li> <li>• Save space</li> </ul>	<ul style="list-style-type: none"> <li>• Unique locking mechanism : Strain Relief with Locks for XG4M (Socket).</li> <li>• Easy connect/ Disconnect with one hand</li> <li>• Save space</li> </ul>	<ul style="list-style-type: none"> <li>• Both long lock and short lock available</li> <li>• 2-tier plugs available</li> <li>• Straight and Right angle terminal available</li> </ul>	<ul style="list-style-type: none"> <li>• Both long lock and short lock available</li> <li>• Straight and Right angle terminal available</li> </ul>	<ul style="list-style-type: none"> <li>• Straight and Right angle terminal available</li> </ul>
<b>Specifications</b>					
<b>Rated current</b>	1A	—	3A	1A	3A
<b>Rated voltage</b>	250VAC	—	300VAC	250VAC	300VAC
<b>Contact resistance (@20mV, 100mA)</b>	20mΩ max.	—	20mΩ max.	20mΩ max.	20mΩ max.
<b>Insulation resistance (min)</b>	100MΩ @ 500VDC	—	100MΩ @ 500VDC	1000MΩ @ 500VDC	100MΩ @ 500VDC
<b>Withstand voltage (leakage current: 1mA max.)</b>	500VAC, 1 min.	—	500VAC, 1 min.	500VAC, 1 min.	500VAC, 1 min.
<b>Insertion tolerance</b>	50 times	—	50 times	50 times	50 times
<b>Ambient operating temperature</b>	-55°C to +105°C	-55°C to +105°C	-55°C to +105°C	-55°C to +105°C	-55°C to +105°C







# Connectors - PCB

	Discrete Wire	Board to Board	IC Socket		
					
General Attributes	XG5	XC5	XH3	XH4	XR2
<b>Description</b>	MIL connector	DIN Connector	Half-Pitch Connector	Half-Pitch Low Profile Connector	IC Sockets
<b>Pitch mm</b>	2.54	2.54	1.27	1.27	2.54
<b>Socket/Plug</b>	Socket	Socket, Plug	Socket, Plug	—	IC Sockets
<b>Plating on contacts</b>	Gold plating	Gold plating	Gold/Palladium plating	Gold plating	Gold plating/Gold flash plating
<b>PCB Mounting</b>	Thru-hole	Thru-hole	Thru-hole	Thru-hole, SMT	Thru-hole
<b>Connect Type</b>	IDC	—	—	—	—
<b>Cable type</b>	Discrete-Wire	—	—	—	—
<b>Dimensions mm (in)</b>	Please consult product specifications for more information.	Please consult product specifications for more information.	Please consult product specifications for more information.	Please consult product specifications for more information.	Please consult product specifications for more information.
<b>Available circuits</b>	10,14,16,20,26,30,34,40,50,60,64	20,32,44,50,64,100	20,30,40,50,60,68,80,100,120	40,50,60,80&100	8,14,16,18,20,22,24,28,32,40,42,48,50,64
<b>packaging</b>	Tray	Tray	Tray	Tray	Tray / Tube
<b>Features</b>	<ul style="list-style-type: none"> <li>Wiring performed with simple IDC tool</li> <li>Semi-cover/Hood cover is available</li> </ul>	<ul style="list-style-type: none"> <li>DIN Twin Contact Connectors</li> <li>Wide product range, Double-Row: B-type &amp; Q-type, Triple Row: C-type &amp; R-type</li> </ul>	<ul style="list-style-type: none"> <li>Adjustable Stacking height of 12mm to 20mm</li> <li>Screw mount eliminated to save space</li> </ul>	<ul style="list-style-type: none"> <li>Adjustable Stacking height of 5mm to 11mm (for Low Profile)</li> <li>Integrated male (plug) and female (socket) connector</li> </ul>	<ul style="list-style-type: none"> <li>Ideal for high-speed data processing</li> <li>A wide product range</li> </ul>
<b>Specifications</b>					
<b>Rated current</b>	3A	2A	0.5A	0.5A	1A
<b>Rated voltage</b>	300VAC	300VAC	125VAC	125VAC	300VAC
<b>Contact resistance (@20mV, 100mA)</b>	20mΩ max.	20mΩ max.	30mΩ max.	30mΩ max.	20mΩ max.
<b>Insulation resistance (min.)</b>	1000 MΩ @ 500VDC	10 <sup>6</sup> MΩ @ 100VDC	1000 MΩ @ 500VDC	1000 MΩ @ 500VDC	1000 MΩ @ 500VDC
<b>Withstand Voltage (leakage current: 1mA max.)</b>	650VAC, 1min.	1,000VAC, 1min.	650VAC, 1min.	650VAC, 1min.	1,000VAC, 1min.
<b>Insertion tolerance</b>	50 times	200 times	400 times	50 times	100 times for 0.75um-gold plating, 50 times for 0.25um-gold plating. 20 times for gold flash plating
<b>Ambient operating temperature</b>	-55°C to +85°C	-55°C to +125°C	-55°C to +105°C	-55°C to +105°C	-55°C to +125°C

# Sensors - MEMS In-Line Mass Flow

Air/Gas Applications Include: Medical Devices • Fuel Cells • Lab Equipment • Welding Equipment

		 Ultra-Compact Size	 Aluminum Alloy Body	
Part Number	D6F-01A/02A	D6F-03A	D6F-01N/02L/05N	D6F-10/20/50
Dimensions mm (in)	15 H x 20 D x 66 L (0.60 x 0.79 x 2.60)	16.8 H x 8 D x 36.6 L (0.66 x 0.32 x 1.44)	22 H x 22 D x 62 L (0.87 x 0.87 x 2.4)	30 H x 30 D x 78 L (1.18 x 1.18 x 3.07)
Features	<ul style="list-style-type: none"> <li>• Excellent low flow resolution down to 0.01% full scale range</li> <li>• Precision unidirectional mass airflow up to 2 LPM</li> <li>• Stable output</li> <li>• Low power consumption</li> <li>• High accuracy and repeatability</li> </ul>	<ul style="list-style-type: none"> <li>• Precision unidirectional mass airflow up to 3 LPM</li> <li>• Fast Response, (&lt;5 msec typical, for reference only)</li> <li>• Low power consumption</li> <li>• High accuracy and repeatability</li> <li>• Perfect for tight space requirements such as pick &amp; place equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Precision unidirectional mass airflow up to 5 LPM</li> <li>• Stable output</li> <li>• Low power consumption</li> <li>• High accuracy and repeatability</li> <li>• Aluminum Alloy Body</li> </ul>	<ul style="list-style-type: none"> <li>• Precision unidirectional mass airflow up to 50LPM</li> <li>• Stable output</li> <li>• Alternate manifold mount with NBR 'O'ring (A5 version)</li> <li>• Low power consumption</li> <li>• High accuracy and repeatability</li> </ul>
Applicable gases	Air*	Air*	Natural gas, Propane gas*	Air*
Supply voltage	10.8 to 26.4VDC	10.8 to 26.4VDC	10.8 to 26.4DC	10.8 to 26.4VDC
Output voltage	1 to 5VDC	1 to 5VDC	1 to 5VDC	1 to 5VDC
Operating temp.range	-10°C to +60°C	0°C to +50°C	-10°C to +60°C	-10°C to +60°C
<b>Ordering information</b>				
Part number	D6F-01A-110	D6F-03A3-000	D6F-01N2-000	D6F-10A6-000
Cal. Gas	Air	Air	Natural gas	Air
Flow range	0-1LPM	0-3LPM	0-1LPM	0-10LPM
Port size	Barbed fitting, 5/16" ID Tube	M5	1/4" BSPT	1/4" BSPT
Part number	D6F-02A1-110		D6F-02L2-000	D6F-20A6-000
Cal. Gas	Air		Propane	Air
Flow range	0-2LPM		0-2LPM	0-20LPM
Port size	Barbed fitting, 5/16" ID Tube		1/4" BSPT	1/4" BSPT
Part number			D6F-05N2-000	D6F-50A6-000
Cal. Gas			Natural Gas	Air
Flow range			0-5LPM	0-50LPM
Port size			1/4" BSPT	1/4" BSPT
Part number				D6F-10A61-000
Cal. Gas				Air
Flow range				0-10LPM
Port size				1/8-27 NPT
Part number				D6F-20A61-000
Cal. Gas				Air
Flow range				0-20LPM
Port size				1/8-27 NPT
Part number				D6F-50A61-000
Cal. Gas				Air
Flow range				0-50LPM
Port size				1/8-27 NPT

\*Contact Omron for other calibration gases. Omron mass flow sensors are compatible with a wide variety of noncorrosive gases including nitrogen, oxygen, carbon dioxide, argon, heliox, nitrogen oxides.

For Additional Information Call 847.882.2288 • email:components@omron.com  
visit [www.components.omron.com](http://www.components.omron.com)

# Sensors - MEMS Mass Flow & Velocity

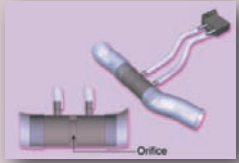
## With Integrated Dust Segregation System

### MEMS Mass Flow Sensors



### MEMS Air Velocity Sensors



Part Number	D6F-P		D6F-W	D6F-V
<b>Dimensions mm (in)</b>	27.2H x 17.2D x 35W (1.07 x 0.68 x 1.38)		9H x 20Dx 39L (0.35 x 0.79 x 1.53)	14H x 8D x 24L (0.55 x 0.32 x 0.94)
<b>Features</b>	<p><b>**The Advantages Of A Bypass Set-up</b></p> <p>The D6F-P mass flow sensor when applied in a bypass set-up can measure flow rates way beyond its 1LPM in-line rating. The pressure differential required to pull airflow through the sensor can be accomplished by installing a flow restrictor between the two</p> 		<ul style="list-style-type: none"> <li>• Compact size</li> <li>• Integral passive Dust Segregation System (DSS)</li> <li>• Fast fit for easy installation</li> <li>• High accuracy</li> <li>• Amplified &amp; temperature compensated output signal</li> </ul>	<ul style="list-style-type: none"> <li>• Value engineered version of D6F-W</li> <li>• Smaller package</li> <li>• Lower Supply Voltage</li> <li>• Built for OEM designs</li> <li>• Internal passive Dust Segregation System (DSS)</li> </ul>
<b>Applicable gases</b>	Air*		Air*	Air*
<b>Supply voltage</b>	4.75 to 9.45VDC		10.8 to 26.4VDC	3.15 to 9.45VDC
<b>Output voltage</b>	0.5 to 2.5VDC		1-5VDC	0.5 to 2VDC
<b>Operating temp.range</b>	-10°C to +60°C		-10°C to +60°C	-10°C to +60°C
<b>Ordering information</b>				
<b>Part number</b>	D6F-P0010A1		D6F-W01A1	D6F-V03A1
<b>Cal. Gas</b>	Air		Air	Air
<b>Flow range</b>	0-1 LPM		0-1m/sec	0-3m/sec
<b>Terminal type</b>	PCB Terminals			
<b>Part number</b>	D6F-P0010A2		D6F-W04A1	
<b>Cal. Gas</b>	Air		Air	
<b>Flow range</b>	0-1 LPM		0-4m/sec	
<b>Terminal type</b>	Plug-In Connector			

### Air Velocity Sensors Applications Include:

HVAC velocity measurement, Clogged filter detection on A/V equipment, computers, and a variety of other equipment, Clean room / laboratory hood velocity monitoring

### The Dust Segregation System (DSS)

All of the products on this page incorporate a DSS in their internal flow path design. It creates centrifugal forces pulling particulate matter thru a separate flow path away from the sensing element. By keeping the element clean a longer more dependable life is realized for the sensor.



\*Contact Omron for other calibration gases. Omron mass flow sensors are compatible with a wide variety of noncorrosive gases including nitrogen, oxygen, carbon dioxide, argon, heliox, nitrogen oxides.

For Additional Information Call 847.882.2288 • email:components@omron.com  
visit [www.components.omron.com](http://www.components.omron.com)

## Sensors - Vibration/Tilt

### Micro Tilt Sensor

#### Applications:

Perfect Solution for hand-held devices, Digital Cameras & Picture Frames, Cell Phones, MP3 devices & PDA's.



**D6BN**

<b>Dimensions mm (in)</b>	2 H x 7 D x 7 W (0.08 x 0.28 x 0.28)
<b>Features</b>	<ul style="list-style-type: none"> <li>Utilizes Hall Effect technology</li> <li>Low profile</li> <li>Surface mount</li> <li>No EMC bounce</li> <li>Economical - requiring only 2 micro processor ports and no additional circuitry</li> </ul>
<b>Operating angle</b>	40 – 80° (left to right)
<b>Return angle</b>	50 – 10° (left to right)
<b>Operating voltage (Vdd)</b>	2.4 to 3.6 VDC
<b>Output voltage</b>	
<b>Low</b>	0.4VDC max.
<b>High</b>	0.4VDC min.
<b>Current consumption</b>	10 µA max.
<b>Operating temp. range</b>	-10°C to +60°C
<b>Ordering information</b>	<b>D6BN-1P</b> (2500 pc tape and reel)

### Vibration/Tilt Sensors



**D7E**

<b>Dimensions mm (in)</b>	23.1 H x 23.6 D x 36.4 W (0.91 x 0.93 x 1.43)
<b>Features</b>	<ul style="list-style-type: none"> <li>Pure Mechanical Detector</li> <li>Self Resetting</li> <li>Quick Connect Terminals</li> <li>Great option for space heaters or other tilt-sensitive equipment</li> </ul>
<b>Contact capacity</b>	0.1mA at 5VDC to 100mA at 30VDC
<b>Contact form</b>	SPST-NC
<b>Operating temp. range</b>	-25° to +60°C
<b>Service life</b>	5000 operations min.
<b>Ordering information</b>	
<b>Part number</b> Vibration	<b>D7E-1</b> 130 to 200 gal Seismic Intensity
<b>Part number</b> Vibration	<b>D7E-2</b> 100 to 170 gal Seismic Intensity
<b>Part number</b> Tilt	<b>D7E-3</b> Operating Angle 50 to 80° Return Angle 25° or greater

## Non-Invasive Blood Pressure (NIBP)



### Module P/N M3600

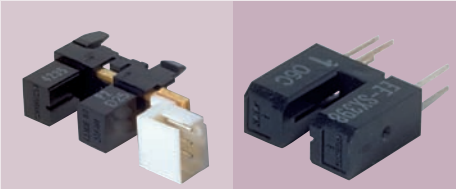
Omron's Self contained Non-invasive Blood Pressure (NiBP) module combines the hardware and software necessary to perform complete blood pressure measurements utilizing a non-invasive oscillometric method. The module includes our proprietary Smart Inflation™ and Dynamic Linear Deflation for added comfort and speed.

#### Features:

- Adult/Pediatric/Neonatal
- Pulse Rates: 40 to 240bpm
- Pulse Rate Accuracy: ±2bpm or 2% reading
- Blood Pressure complies with ANSI/AAMI SP10:2002
- Power Supply: 12VDC @ 680mA, 2.0A inrush current
- Dimensions (in): 2.36 x 1.57 x 3.78
- Weight: 0.44 lbs.

# Sensors - Photomicrosensors

## Photo IC - Slotted



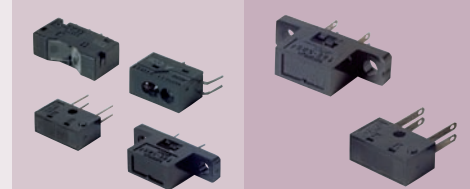
### Non-Amplified

### Non-Amplified

Sub-category	Slotted Photo IC with connector	Slotted Photo IC
<b>Models</b>	EE-SX4235A-P2	EE-SX398, EE-SX3070, EE-SX3081, EE-SX3088, EE-SX498, EE-SX4070, EE-SX4081, EE-SX4088
<b>Connection type</b>	Connector*	PCB mount
<b>Features</b>	<ul style="list-style-type: none"> <li>Unique snap-in mounting mechanism eliminates screws &amp; nuts</li> <li>Compatible with 1.0, 1.2, &amp; 1.6 mm PCBs</li> </ul>	<ul style="list-style-type: none"> <li>Built-in Schmitt trigger circuit</li> <li>Directly compatible with TTL and CMOS</li> </ul>
<b>Slot width mm (in)</b>	5 (0.2)	3 to 8 (0.12 to 0.315)
<b>Output logic</b>	Light-ON	Light-ON or Dark-ON
<b>Max. forward current mA</b>	—	50mA
<b>Supply voltage (VDC)</b>	7VDC	4.5 to 16VDC
<b>Operating temperature</b>	-25° to +75°C	-40° to +75°C
<b>Output low voltage (V)</b>	0.35V max.	0.4V max.
<b>Output high voltage (V)</b>	(Vcc x 0.9) Vmin.	15V min.
<b>Response frequency (Hz)</b>	3,000Hz	3,000Hz
<b>Output permissible dissipation (mW)</b>	250mW	250mW
<b>Forward voltage (V)</b>	—	1.2V – typ.
<b>Hysteresis</b>	—	15%
<b>Rising time (low to high)</b>	—	3µS – typ.
<b>Falling time (high to low)</b>	—	20µS – typ.
<b>Current consumption (mA)</b>	30mA max.	10mA max.

\*Applicable Mating Connector  
AMP 175778-3  
AMP 173977-3

## Phototransistor - Reflective



### Non-Amplified


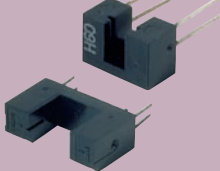


### Non-Amplified

Sub-category	Reflective PCB mount phototransistor	Reflective solder terminal phototransistor
<b>Model numbers</b>	EE-SY169, EE-SY169A, EE-SY169B, EE-SB5-B, EE-SF5-B	EE-SB5, EE-SF5
<b>Connection type</b>	PCB mount	Solder terminals
<b>Features</b>	<ul style="list-style-type: none"> <li>Ideal for office automation and computer peripheral equipment</li> <li>Infrared LED &amp; photo-transistor assure long life</li> </ul>	<ul style="list-style-type: none"> <li>Sensor housing reduces external light's influence</li> <li>High resolution sensing</li> </ul>
<b>Sensing distance mm (in)</b>	5 (0.2)	5 (0.2)
<b>Max. forward current (mA)</b>	50mA (40 mA: EE-SY169, EE-SY169B)	50mA
<b>Supply voltage (VDC)</b>	5 to 30V	5 to 30V
<b>Light current (mA)</b>	EE-SY169(A)(B): 160µA to 2,000µA; EE-SB5/EE-SF5-B: 200µA to 2,000µA	200µA to 2,000µA
<b>Response frequency (Hz)</b>	15kHz	15kHz
<b>Ambient operating temperature (°C)</b>	0° to +70°C	-25° to +85°C

NOTE: The above specifications do not apply to all models listed.  
For specific model information and additional product variations,  
visit [www.components.omron.com](http://www.components.omron.com) or contact your local Omron representative.

# Sensors - Photomicrosensors

## Phototransistors - Slotted

				
	Non-Amplified	Non-Amplified	Non-Amplified	Non-Amplified
<b>Sub-category</b>	Slotted phototransistor with connector	Miniature PCB mount transmissive	Slotted surface mount phototransistor output	Slotted actuator adaptable phototransistor output
<b>Models</b>	EE-SX1235A-P2	EE-SX198, EE-SX1018, EE-SX1035, EE-SX1041, EE-SX1042, EE-SX1046, EE-SX1055, EE-SX1070, EE-SX1071, EE-SX1081, EE-SX1088, EE-SX1096, EE-SX1103, EE-SX1105, EE-SX1106	EE-SX1107, EE-SX1108, EE-SX1109, EE-SX1131 (dual channel)	EE-SA107-P2
<b>Connection type</b>	Connector*	PCB mount	Surface mount	Connector*
<b>Features</b>	<ul style="list-style-type: none"> <li>Electrical connections using AMP connector</li> <li>Compact and high-resolution</li> </ul>	<ul style="list-style-type: none"> <li>Infrared LED &amp; phototransistor for long life</li> <li>Narrow aperture slit for high resolution sensing</li> <li>Compact size</li> </ul>	<ul style="list-style-type: none"> <li>Ultra-compact</li> <li>High-resolution sensing with phototransistor output</li> <li>Ideal for restricted space applications</li> </ul>	<ul style="list-style-type: none"> <li>High resolution sensing</li> <li>Non-contact, noiseless sensing</li> </ul>
<b>Slot width mm (in)</b>	5 (0.2)	2 to 8 (0.08 to 0.32)	1 to 3 (0.04 to 0.12)	3.6 (0.14)
<b>Max. forward current (mA)</b>	50mA	50mA	25mA	50mA
<b>Max. collector dissipation (mW)</b>	100mW	100mW	75mW	100mW
<b>Operating temperature (°C)</b>	-25° to +95°C	-25° to +85°C	-30° to +85°C	-25° to +85°C
<b>Forward voltage (V)</b>	1.2V typ.	1.2 to 1.3V	1.1V typ.	1.2V typ.
<b>Light current (mA)</b>	0.6mA to 14mA max.	0.03 to 14mA max.	0.05 to 0.50mA	0.5 to 14mA
<b>Collector-emitter saturated voltage (V)</b>	0.4V max.	0.4V max.	0.1V typ.	0.4V max.
<b>Rising time (low to high)</b>	8µS typ.	4µS typ. (10µS typ.: EE-SX1103, EE-SX1105, EE-SX1106)	10µS typ.	8µS typ.
<b>Falling time (high to low)</b>	8µS typ.	4 µS typ. (10µS typ.: EE-SX1103, EE-SX1105, EE-SX1106)	10µS typ.	8µS typ.

\*Applicable Mating Connector  
AMP 175778-3  
AMP 173977-3

\*Applicable Mating Connector  
AMP 175778-3  
AMP 173977-3

NOTE: The above specifications do not apply to all models listed.  
For specific model information and additional product variations,  
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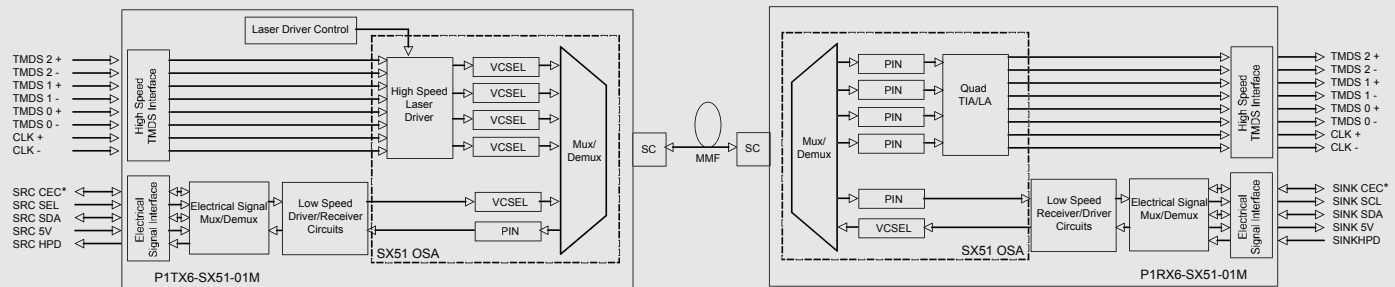


# Fiber Optic - TOSA/ROSA



	SX4 OSA	SX51 OSA	SX51 Module
<b>Features</b>	<ul style="list-style-type: none"> <li>Four isolated channels on one multi-mode fiber</li> <li>Designed to allow transmission over 300m of 50μ multi-mode fiber at 3.5Gbps</li> <li>Integrated driver &amp; TIA/LA</li> <li>Ideal for DVI applications</li> </ul>	<ul style="list-style-type: none"> <li>Six isolated channels (4 high speed and a low speed Bi-Di pair) on one multi-mode fiber</li> <li>Designed to allow transmission over 300m of 50μ multi-mode fiber at 3.5Gbps</li> <li>Integrated driver &amp; TIA/LA</li> <li>Ideal for DVI, HDMI or other HDCP Video Standards</li> </ul>	<ul style="list-style-type: none"> <li>Enables an HDMI signal to be sent uncompressed over a single multimode fiber.</li> <li>The P1TX/RX6-SX51-01M will maintain full HDCP/EDID compliance over a single fiber.</li> </ul>
<b>Number of Channels</b>	4	6	6
<b>Directivity</b>	Unidirectional	Bidirectional	Bidirectional
<b>Fiber Type</b>	One Multimode Fiber	One Multimode Fiber	One Multimode Fiber
<b>Data Rate per Channel (High Speed Channels)</b>			
"V" version	1.65 Gb/s	1.65 Gb/s	1.65 Gb/s
"D" version	3.50 Gb/s	3.50 Gb/s	3.50 Gb/s
<b>Aggregate Data Rate</b>			
"V" version	6.6 Gb/s	6.6 Gb/s	6.6 Gb/s
"D" version	14.0 Gb/s	14.0 Gb/s	14.0 Gb/s
<b>Data Input</b>	PECL, CML, and LVDS	PECL, CML, and LVDS	TMDS, HDMI
<b>Data Output</b>	CML	CML	TMDS, HDMI
<b>Optical Connector Type</b>	SC	SC	SC
<b>Electrical Connector Type</b>	FPC (ZIF)	FPC (ZIF)	Plug Down (PCB mount)

## Block Diagram of SX51 OSA and SX51M Module



\*CEC functionality not currently enabled

# Fiber Optic - Splitter P1C

## Features

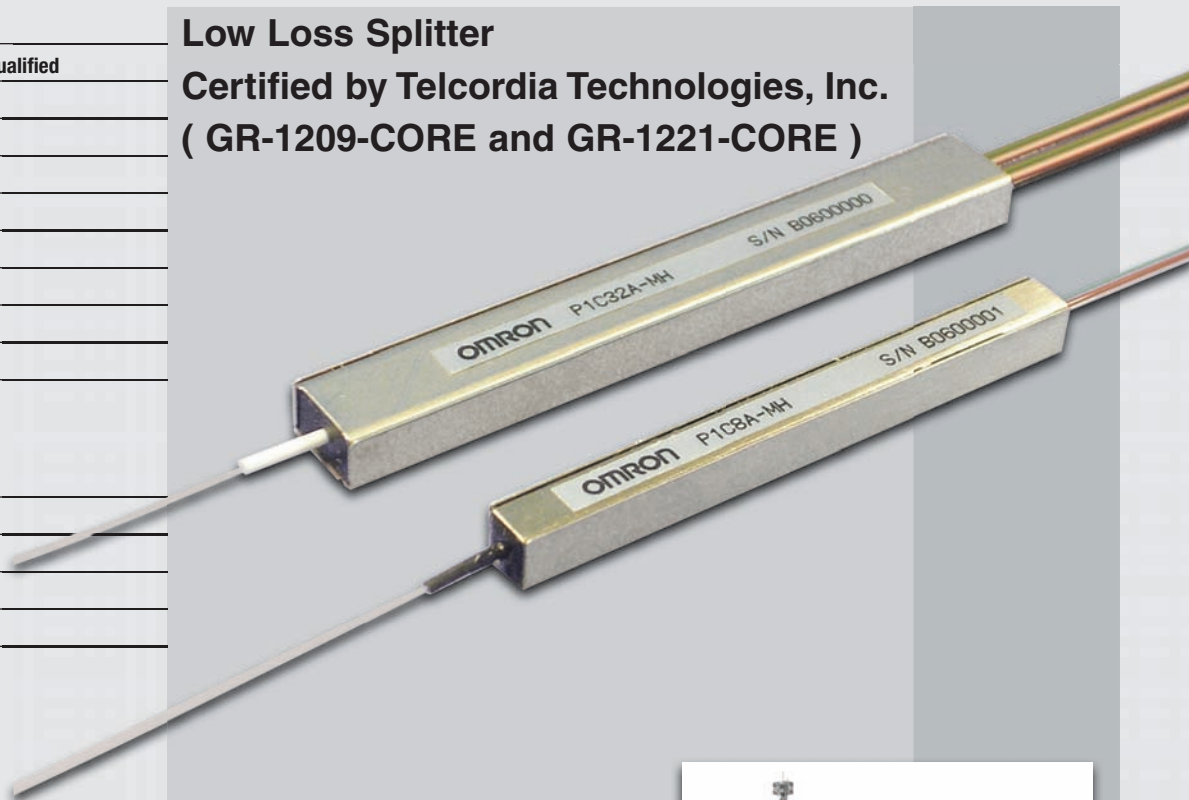
- Telcordia GR-1209 and GR-1221 qualified
- Low PDL
- Low insertion loss
- Low back reflection
- High output uniformity
- Compact package
- Stable optical parameters
- -40 to +85 Operate Temp.
- Broadband operating wavelength
- 4ch, 8ch, 16ch, 32ch

## Applications

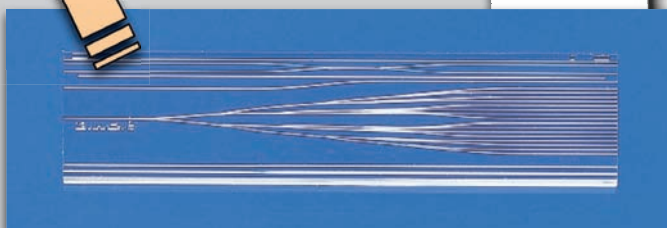
- FTTH, FTTB, FTTC
- Telecom
- Datacom
- LANs, CATV

## Low Loss Splitter

Certified by Telcordia Technologies, Inc.  
( GR-1209-CORE and GR-1221-CORE )

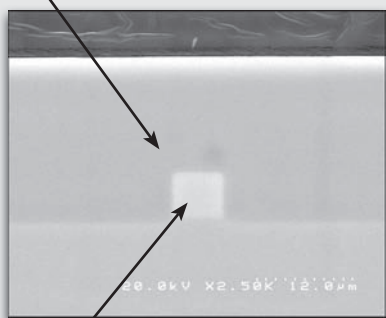


Splitter module



Bare Splitter

FHD



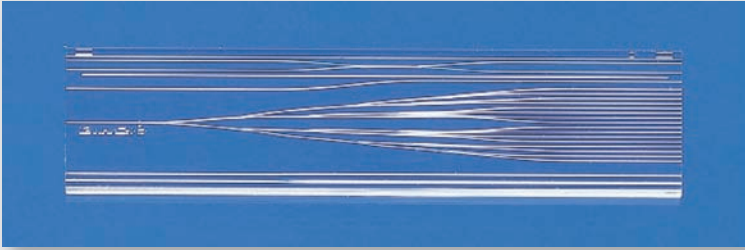
PCVD

Plasma Chemical Vapor Deposition and Flame Hydrolysis Deposition are used to make a low loss splitter.



# Fiber Optic - Splitters

## Bare Splitter Specifications



		1 x 4	1 x 8	1 x 16	1 x 32	1 x 64
Operating Wavelength (nm)		1260 ~ 1360 / 1480 ~ 1600				
Insertion Loss (dB)	Max	≤ 7.0	≤ 10.3	≤ 13.3	≤ 16.5	≤ 20.4
	Uniformity	≤ 0.6	≤ 0.8	≤ 0.8	≤ 1.1	≤ 1.8
PDL (dB)		≤ 0.15				
Chip Size (mm)*	L x W	10.0 x 2.3	13.6 x 2.5	11.6 x 2.3	14.9 x 2.7	19.1 x 4.7
	T	1.0				
Output Waveguide Pitch (μm)		250		127**		127

\* Before polishing size. Please ask for the details of chip size.

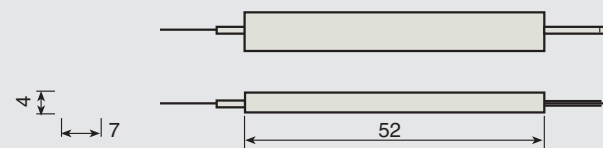
\*\* The 1 x 32 splitter output waveguide pitch between #16 to #17 is only 254μm

We also have the 1x32 splitter in which the pitch is 127μm.

1x4 1x8



1x16 1x32

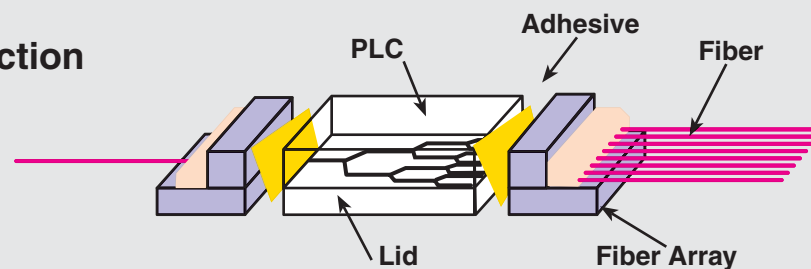


## Splitter Module Specifications



		1 x 4	1 x 8	1 x 16	1 x 32	1 x 64
		P1C4A-M	P1C8A-M	P1C16A-M	P1C32A-M	P1C64A-M
Operating Wavelength (nm)		1260 ~ 1360 / 1480 ~ 1600				
Insertion Loss (dB)	Max	≤ 7.5	≤ 11.0	≤ 13.7	≤ 17.0	≤ 21.0
	Uniformity	≤ 0.8	≤ 1.0	≤ 1.0	≤ 1.3	≤ 2.0
PDL (dB)		≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3
Return Loss (dB)		≥ 50	≥ 50	≥ 55	≥ 55	≥ 55
Operating Temperature		- 40° ~ + 85°				
Module Size W x H x L (mm)		4 x 4 x 40		7 x 4 x 52		14.7 x 58 x 4

## Splitter Module Construction





# World-Wide Headquarter Locations

## Japan – World Headquarters

### Japan

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