OMRON

Industrial Control Components
Selection Guide

RELAYS
GENERAL PURPOSE
DC POWER
AUTOMOTIVE
POWER PCB
SOLID STATE

SNAP ACTION SWITCHES

Sensing tomorrow™

Industrial Applications
Unequaled quality and reliability to keep productivity high

This selection guide features the most popular industrial grade products from Omron's Electronic & Mechanical Components Division and a handy cross-reference guide to relays and switches on the back cover foldout. These world-class products perform reliably in tough environments to keep your productivity up, maintenance time down and long-term cost of ownership low.

Trust these control components for your machine and I/O interface applications, including:

Control panels

Production machinery

HVAC controls

Material handling

Packaging

Automated assembly

Board-level controls

Semiconductor manufacturing

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Relays

With 70 years of experience designing innovative relays, Omron is the world's leading supplier of relays. We manufacture electromechanical and solid state relays to the highest quality level in the market to ensure each piece works right out of the box, performs consistently to specification and keeps working for a long service life. Time saving and innovative relay products include:

- P2RF-S and PYF-S screwless terminal sockets for MY and G2R series relays to cut installation time without compromising wire retention
- Hermetically sealed MY4H relay for hazardous locations
- Ultra compact, high capacity DC power relay G9E for use in industrial applications and fuel cells, designed with unique arc extinguishing technology

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Switches

Omron has a reliable snap action switch to match your application, regardless of environment or space constraints. We offer a wide range of switching capacities, sizes and actuators for precision positioning applications. Our IP67 sealed switches handle wet, humid and dusty installations. Shorten installation and servicing time with these wiring options: screw terminals, quick-connect tab terminals in three sizes and prewired versions. Innovative switch designs include:

- Two independent switches in one compact housing making model DZ ideal for switching circuits operating on two different voltages
- Subminiature D2SW switch that fits conveyor rails for home position and end-of-travel inputs

	MK	MY	MY4H
Dimensions mm (in)	52.58 H x 34.54 L x 34.54 W (2.07 x 1.36 x 1.36)	36 H x 28 L x 21.5 W (1.42 x 1.10 x 0.85)	35 H x 28.5 L x 22 W (1.38 x 1.12 x 0.87) max.
Switching	10 A max.	10 A max. (2 pole); 5 A max. (4 pole)	3 A max.
Features	• Octal base plug-in • Exceptional reliability • Push-to-test button standard • Latching style available	• Ideal for sequence control and power switching applications • Name plate and mechanical indicator standard • Variations include push-to-test, LED and bifurcated contacts • Hermetically sealed version available (MY4H)	• Fully hermetically sealed for hazardous locations • UL Class I, Division II approved (MY4ZH) • Cadmium-free contacts • Models with bifurcated contacts also available
Contact Ratings			
Contact form	2 Form C, 3 Form C	2 Form C, 4 Form C	4 Form C
Contact type	Single button	Single button, bifurcated button	Single button, bifurcated button
Contact material	Ag	AgNi	Ag Alloy
Max. operating current under resistive load	10 A	10 A (DPDT); 5 A (4PDT)	3 A
Max. operating voltage	250 VAC, 250 VDC	250 VAC, 125 VDC	125 VAC, 125 VDC
Max. switching capacity under resistive load	2 pole: 2,500 VA, 280 W; 3 pole: 2,500 VA/1,250 VA 280 W	2 pole: 2,500 VA, 300 W; 4 pole: 1,250 VA, 150 W	330 VA, 72 W
Minimum permissible load	100 mA, 1 VDC	2 pole: 1 mA, 5 VDC; 4 pole: 1 mA, 1 VDC	100 µA, 1 VDC1 for MY4H 100 µA 100 mVDC for MY4ZH (Bifurcated)
Rated load (under resistive load)	2 pole: 10 A at 250 VAC, 28 VDC; 3 pole: 10 A at 250 VAC, 28 VDC	2 pole: 5 A at 250 VAC, 30 VDC; 4 pole: 3 A at 250 VAC, 30 VDC	3 A at 110 VAC, 3 A at 24 VDC (p.f.=1)
Coil Ratings			
Coil voltage	12, 24, 110/120, 220/240 VAC; 12, 24, 48, 100 VDC	6, 12, 24, 48, 110/120, 220/240 VAC; 6,12, 24, 48, 100/110 VDC	12, 24 VDC; 12, 24, 110/120 VAC
Power consumption	2.7 VA, 1.5 W	Approx. 1.1 VA, 0.9 W	330 VA, 72 W
Dielectric strength (50/60 Hz for 1 minute)	2,000 VAC	2,000 VAC	1,000 VAC, 1 minute between coil and contacts; 1,000 VAC, 1 minute between contacts of different polarity; 700 VAC, 1 minute between contacts of same polarity
Electrical service life (operations)	100,000 minimum	2P 500,000 at 5 A, 100,000 at 10 A; 4P 500,000 at 3 A, 100,000 at 5 A	100,000 minimum
Terminal choices	Plug-in	PCB terminal, plug-in	Plug-in, PCB
Approved standards	UL, CSA, TUV, VDE, CE	UL, CSA, SEV, CE, VDE	UL/CSA
Sockets and accessories	DIN rail mounted sockets: • DPDT: PF083A-E • 3PDT: PF113A-E Back connecting sockets: PCB terminal sockets: • DPDT: PLE08-0 • 3PDT: PLE11-0 Solder terminal sockets: • DPDT: PL08 • 3PDT: PL11 Hold down clips and DIN rail spacers also available	DIN rail mounted sockets: • DPDT: PYF08A-E, PYF08A-N PYF-08-S (Screwless terminal style) • 4PDT: PYF14A-E, PYF14A-N PYF14-S (Screwless terminal style) Screwless terminal style requires PYF-S tool Back connecting sockets: PCB terminal sockets: • DPDT: PY08-02 • 4PDT: PY14-02 Solder terminal sockets: • DPDT: PY08 • 4PDT: PY14 Hold down clips and DIN rail spacers also available	DIN rail mounted sockets: • PYF14A-E, PYF14A-N

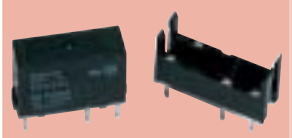
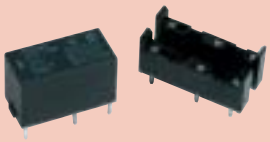
Need DIN Rail?
See PFP-series rail and accessories on back cover foldout or at **www.omron.com/oei**.

General Purpose

	LY	G7J	G7L
Dimensions mm (in)	35.56 H x 27.94 L x 21.59 W (1.40 x 1.10 x 0.85)	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)
Switching	15 A max.	25 A max.	30 A max.
Features	• Compact power relay • LED, Push-to-test button, bifurcated contacts and other features available	• Ideal for 3 phase motor control • 4 pole mini contactor • DIN rail mountable	• Low cost, high power relay • 3 mm contact gap • Conforms to IEC 950/UL 1950 • Class B insulation standard
Contact Ratings			
Contact form	1 Form C, 2 Form C, 3 Form C, 4 Form C	4 Form A, 3 Form A/1 Form B, 2 Form A/2 Form B	1 Form A-DM, 2 Form A-DM
Contact type	Single button	Single button	Single button
Contact material	AgCdO	AgCdO	AgCdO
Max. operating current under resistive load	15 A (SPDT); 10 A (DPDT, 3PDT, 4PDT)	25 A (NO contacts), 8 A (NC contacts)	30 A (SPST-NO), 25 A (DPST-NO)
Max. operating voltage	250 VAC, 125 VDC	250 VAC, 125 VDC	250 VAC
Max. switching capacity under resistive load	1 pole: 1,700 VA, 360 W; 2, 3, 4 poles: 1,100 VA, 240 W	5,500 VA (NO contacts), 1,760 VA (NC contacts)	1 pole : 6,600 VAC; 2 pole: 5,500 VAC
Minimum permissible load	100 mA, 5 VDC	100 mA, 24 VDC	100 mA, 5VDC
Rated load (under resistive load)	1 pole: 15 A at 110 VAC, 24 VDC; 2, 3, 4 pole: 10 A at 110 VAC, 24 VDC	25 A at 220 VAC (NO contacts); 8 A at 220 VAC (NC contacts)	1 pole: 30 A at 250 VAC; 2 pole: 25 A at 220 VAC
Coil Ratings			
Coil voltage	12, 24, 110/120, 220/240 VAC, 12, 24, 48, 100 VDC	12, 24, 100/120, 200/240 VAC; 12, 24, 48, 100 VDC	12, 24, 100/120, 200/240 VAC; 12, 24, 48, 100 VDC
Power consumption	1.1 VA, 0.9 W (1 pole); 1.1 VA, 0.9 W (DPDT); 1.6 VA, 1.4 W (3PDT); 1.95 VA, 1.5 W (4PDT)	1.8 to 2.6 VA, 2.0 W	1.7 to 2.5 VA, 1.9 W
Dielectric strength (50/60 Hz for 1 minute)	2,000 VAC	4,000 VAC	4,000 VAC
Electrical service life (operations)	200,000 minimum, 500,000 minimum (2P)	100,000 minimum	100,000 minimum
Terminal choices	Plug-in, PCB, quick-connect	Quick-connect, screw, PCB	Quick-connect, screw, PCB
Approved standards	UL, CSA, SEV, VDE, CE	UL, CSA, TUV, CE	UL, CSA, VDE, CE
Sockets and accessories	DIN rail mounted sockets: • SPDT/DPDT: PTF08A-E • 3PDT: PTF11A • 4PDT: PTF14A-E Back connecting sockets: PCB terminal sockets: • SPDT/DPDT: PT08-0 • 3PDT: PT11-0 • 4PDT: PT14-0 Solder terminal sockets: • SPDT/DPDT: PT08 • 3PDT: PT11 • 4PDT: PT14 Hold down clips and DIN rail spacers also available	Mounting bracket: R99-04 for G5F	Mounting bracket: R99-07G5D DIN rail adapter: P7LF-D DIN rail mount socket: P7LF-06

Need DIN Rail?
See PFP-series rail and accessories on back cover foldout or at **www.omron.com/oei**.

	General Purpose		DC Power
			
	MGN	**MJN**	**G9E**
Dimensions mm (in)	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)	67.2 H x 73 L x 36 W (2.64 x 2.87 x 1.42)
Switching	30 A max.	30 A max.	200 A max.
Features	• 30 Amp heavy duty power relay • Class F coil insulation system for 155°C (311°F) total temperature • Coil molded in DuPont Rynite® for environmental protection • Rugged construction rivets terminals to base	• Rugged power driver offers superior 3/16" through-air and 3/8" over-surface spacing • Interlocked frame and contact block prevent contact misalignment during plug-in • Open or dust covered available with indicator lamps and push-to-operate buttons	• Compact and capable of switching high voltage, high current DC loads • Hermetically sealed switching section • Unique arc deflection and extinguishing design
Contact Ratings			
Contact form	–	1 Form C, 2 Form C, 3 Form C (non-latching); 1 Form C, 2 Form C (latching/unlatching)	1 Form A
Contact type	Single button	Single button	Single button
Contact material	5/16" diameter AgCdO	3/16" diameter AgCdO	Ag Alloy
Max. operating current under resistive load	–	–	60 A (G9EA-1); 100 A (G9EA-1-CA); 200 A (G9EC)
Max. operating voltage	–	–	400 VDC
Max. switching capacity under resistive load	–	–	24 kW
Minimum permissible load	–	–	–
Rated load (under resistive load)	30 A or 1-1/2 HP at 120 or 240 VAC; 2 HP at 240 VAC; 3,600 W at 120 or 240 VAC (ballast); 30 A at 240 VAC, 100,000 cycle (resistive), 20 A at 600 VAC; 30 A at 28 VDC	10 A at 28 VDC and 120/240 VAC at 80% pf; 1/3 HP at 120 VAC; 1/2 HP at 277/240/480/600 VAC 36 LRA-8.5FLA at 18 VDC; 3 A at 480/600 VAC at 80% pf; 10 A at 277 VAC resistive; 20 A at 28 VDC and 120/240/277 VAC; 10 A at 480/600 VAC; 3/4 HP at 120 VAC; 1-1/2 HP at 240 VAC, 17 FLA, 65 LRA, 300 VDC; 30 A at 28 VDC; 15 A at 480/600 VAC; 1 HP at 120 VAC; 1-1/2 at 240 VAC	60 A at 400 VDC (G9EA-1); 100 A at 120 VDC, 50 A at 240 VDC (G9EA-1-CA); 200 A at 400 VDC (G9EC)
Coil Ratings			
Coil voltage	6, 12, 24, 120, 240, 480 VAC; 6, 12, 24, 48, 110 VDC	6, 12, 24, 120, 240 VAC; 5, 6, 24, 48, 110 VDC	12, 24, 48, 60, 100 VDC
Power consumption	9.5 VA nominal (AC); 2 W nominal (DC)	Latching/Non-latching AC 1.7 VA nominal (1, 2PDT); 2.0 VA (3PDT) Non-latching DC 1.2 W nominal	Approximately 5 W (G9EA); Approximately 11 W (G9EC)
Dielectric strength (50/60 Hz for 1 minute)	2200 VRMS, 60 Hz between contacts; 2200 VRMS, 60 Hz between other elements	Greater than 750 VAC, RMS 60 Hz across open contacts; greater than 2500 VAC, RMS 60 Hz all other mutually insulated elements	2500 VAC
Electrical service life (operations)	100,000 minimum	100,000 minimum	200,000 minimum
Terminal choices	Screw type	Quick-connect, plug-in	Screw terminals, pre-wired
Approved standards	UL recognized, CSA	UL, CSA	UL, CSA pending
Sockets and accessories	Dust cover - sealed knock-out holes for standard conduit fittings Relay mounts on pre-drilled base Constructed of aluminum Snap action cover release 127 W x 76.20 H x 101.60 D (5 x 3 x 4)	DIN rail mounted socket: • SPDT, DPDT, 3PDT: PTF11PC Panel mounted socket: • SPDT, DPDT, 3PDT: PTF21PC Back connecting sockets: PCB terminal socket: • SPDT, DPDT, 3PDT: PTFPCB Solder terminal socket: • SPDT, DPDT, 3PDT: PTF11QDC	–

	Automotive	Power PCB		
				
	G8JN	**G6D**	**G6B**	**G6C**
Dimensions mm (in)	25 H x 28 L x 28 W (0.98 x 1.10 x 1.10)	12.5 H x 17.5 L x 6.5 W (0.49 x 0.69 x 0.26)	9.91 H x 20.07 L x 9.91 W (0.39 x 0.79 x 0.39)	9.91 H x 20.07 L x 14.99 W (0.39 x 0.79 x 0.59)
Switching	35 A max.	5 A max.	8 A max.	10 A max.
Features	• General purpose automotive power relay • Mini ISO footprint • Handles heavy automotive load • High current path fully welded; reduces heat buildup at full load • Wide temperature range: -40°C to +125°C • Made in North America	• Subminiature, slim lightweight design • Low power consumption • Sealed construction	• Subminiature and low power • Sealed construction • Latching types available	• Low power consumption • Low profile • Latching types available
Contact Ratings				
Contact form	1 Form C	1 Form A	1 Form A, 2 Form A, 1 Form A + 1 Form B	1 Form A + 1 Form B, 1 Form A
Standard contact type	Single Button	Single button	Single button	Single button
Standard contact material	AgSnIn	Ag alloy	AgCdO	AgCdO
Max. operating current under resistive load	35 A (NO) / 20 A (NC)	5 A	5 A	10 A (SPST-NO); 8 A (SPST-NO+SPST-NC)
Max. operating voltage	16 VDC	250 VAC, 30 VDC	380 VAC, 125 VDC	380 VAC, 125 VDC
Max. switching capacity under resistive load	–	1,250 VA, 150 W	1,250 VA, 150 W	2,500 VA, 300 W; 2,000 VA, 240 W (SPST-NO+SPST-NC)
Minimum permissible load	–	10 mA, 5 VDC	10 mA, 5 VDC	10 mA, 5 VDC
Rated load (under resistive load)	35 A (NO) / 20 A (NC) carry current 100 A (NO) / 40 A (NC) inrush current	5 A at 250 VAC, 5 A at 30 VDC	5 A at 250 VAC, 5A at 30 VDC	10 A at 250 VAC, 10 A at 30 VDC; 8 A at 250 VAC, 8 A at 30 VDC
Coil Ratings				
Coil voltage	12 VDC	5, 12, 24 VDC	5, 6, 12, 24 VDC	5, 6, 12, 24 VDC
Power consumption	1.85 W	200 mW	200 mW (standard and latching)	200 mW (standard and single coil latching)
Dielectric strength (50/60 Hz for 1 minute)	800 VDC for 1 minute	3,000 VAC	3,000 VAC	2,000 VAC
Electrical service life (operations)	100,000 operations min. (14 V / 35 A)	100,000 minimum	100,000 minimum	100,000 minimum
Terminal choices	Plug-in	PCB	PCB	PCB
Approved standards	N/A	UL, CSA, TUV, SEV	UL, CSA, (FCC Part 68)	UL, CSA, VDE, SEV
Sockets and accessories	–	PCB terminal socket: P6D-04P	PCB terminal sockets: • G6B-1: P6B-04P • G6B-2: P6B-26P • G6BK: P6B-06P • G6BU: P6B-04P Hold down clip: P6B-C2	PCB terminal sockets: • G6C-1, G6C-2, G6CV: P6C-06P • G6CK: P6C-08P
	For additional automotive relay options please go to **www.oeiweb.omron.com/relays**			

	Power PCB		
			
	G2R	**G2RL**	**G8PT**
Dimensions mm (in)	25.5 H x 29 L x 13 W (1 x 1.14 x 0.51)	15.5 H x 29 L x 12.7 W (0.61 x 1.14 x 0.50)	Varies by type
Switching	16 A max.	16 A max.	30 A max. (SPST) 20 A/10 A max. (SPDT)
Features	• High dielectric withstand • 8 mm coil/contact spacing • 1 and 2 pole models • Class B insulation • 3 mm contact gap version available • Flange mount type available	• Low profile • High isolation • Class F insulation • Low power consumption	• High switching capacity • UL Class F insulation standard • Wide range of coil ratings • Sealed and Open frame models • UL508/UL873 spacing Column A • High impulse withstand of 6kV coil to contacts including the 6kV 100kHz ring wave (per IEC 1000-4-12)
Contact Ratings			
Contact form	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
Standard contact type	Single button	Single button	Single button
Standard contact material	AgCdO	$AgSnO_2$ (1 pole); AgNi (2 pole)	AgCdO
Max. operating current under resistive load	16 A (high capacity, 1-pole); 10 A (general purpose, 1-pole); 5 A (general purpose, 2-pole); 5 A (latching, 1-pole); 5 A (high sensitivity, 1-pole); 3 A (high sensitivity, 2-pole); 3 A (latching, 2-pole)	16 A (high capacity, 1-pole); 12 A (general purpose, 1-pole); 8 A (2-pole)	AC 30 A, DC 20 A (SPST-NO); AC 20/10 A, DC 20/10 A* (SPDT) *NO contact/NC contact
Max. operating voltage	380 VAC, 125 VDC	440 VAC	250 VAC, 28 VDC
Max. switching capacity under resistive load	4,000 VA, 480 W (1 pole); 1,250 VA, 150 W (2 pole)	4,000 VA, 384 W (high capacity, 1-pole); 3,000 VA, 288 W (general purpose 1-pole); 2,000 VA, 240 W (2 pole)	7,500 VA, 560 W (SPST-NO); 5,000/2,500 VA, 560/280 W* (SPDT) *NO contact/NC contact
Minimum permissible load	1 pole: 100 mA, 5 VDC; 2 pole: 10 mA, 5 VDC	10 mA, 5 VDC	DC 5 V, 500 mA
Rated load (under resistive load)	16 A at 250 VAC, 30 VDC (high capacity); 10 A at 250 VAC, 30 VDC, General purpose (1 pole); 5 A at 250 VAC, 30 VDC, General purpose (2 pole)	16 A at 250 VAC, 24 VDC (high capacity 1 pole); 12 A at 250 VAC, 24 VDC, General purpose (1 pole); 8 A at 250 VAC, 30 VDC, (2 pole)	30 A at 250 VAC, 20 A at 28 VDC (SPST-NO); 20/10 A* at 250 VAC, 20/10 A at 28 VDC *NO contact/NC contact
Coil Ratings			
Coil voltage	12, 24, 120, 240 VAC; 5, 6, 12, 24, 48 VDC	5, 12, 24, 48 VDC	5, 9, 12, 24, 48, 110 VDC
Power consumption	0.9 VA, 530 mW, 360 mW (high sensitivity); 850 mW (set), 600 mW (reset) latching	400 mW (430 mW for 48 VDC)	Approx. 900 mW
Dielectric strength (50/60 Hz for 1 minute)	5,000 VAC	5,000 VAC	2,500 VAC, 50/60 Hz for 1 minute (coil to contacts); 1,500 VAC, 50/60 Hz for 1 minute (between contacts)
Electrical service life (operations)	100,000 minimum	Consult catalog page	100,000 minimum
Terminal choices	PCB terminal, plug in, and quick-connect	PCB	PCB, PCB with quick-connect load terminals, flange mount with quick-connect terminals
Approved standards	UL, CSA, SEV SEMKO, VDE, TUV	UL, CSA, VDE	UL/CSA, VDE
Sockets and accessories	DIN rail sockets: • SPDT: P2RF-05-E • P2RF05S (Screwless terminal style) • DPDT: P2RF-08-E • P2RF08S(Screwless terminal style) Screwless terminal style requires PYF-S tool Back connecting sockets: PCB terminal sockets: • SPDT: P2R-05P • DPDT: P2R-08P Solder terminal sockets: • SPDT: P2R-05A • DPDT: P2R-08A	–	–

Need DIN Rail?
See PFP-series rail and accessories on back cover foldout or at **www.omron.com/oei**.

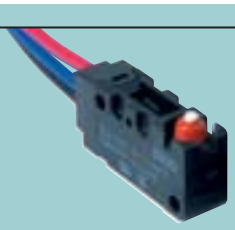
	G3R I/O	G3TB	G3TC
Dimensions mm (in)	Input & Output modules: 28 H x 29 L x 13 W (1.10 x 1.14 x 0.51)	Input module: 20.5 H x 43.5 L x 10 W (0.81 x 1.70 x 0.39) Output module: 30.5 H x 43.5 L x 10 W (1.20 x 1.70 x 0.39)	31.8 H x 43.2 L x 15.2 W (1.25 x 1.7 x 0.6)
Switching	Input module: 100 mA; Output module: 2A	Input module: 25 mA; Output module: 3 A	Input Module: 12 mA, 15 mA, or 18 mA (depending on model) Output Module: 3 A (1 A on DC output models rated up to 200 VDC)
Features	• 4 kV insulation • Operation indicator standard • Interchangeable with G2R electromechanical relay • Ideal for DIN rail mount I/O operations	• Color-coded modules • Industry standard footprint • 4 kV dielectric strength	• Color-coded modules • Industry standard footprint • Built-in hold down screw • Optical isolation – Dielectric strength of 4 kV • Zero cross on AC output modules
Operating input	Input module: 5 VDC; 6.6-32 VDC; 60-264 VAC; Output module: 4-32 VDC	Input module: 80-264 VAC, 3-32 VDC; Output module: 3-32 VDC	Input Module: 90-140 VDC/AC, 180-280 VDC/AC, 10-32 VDC/AC (depending on model) Output Module: 5-24 VDC (depending on model)
Output voltage	Input module: 4-32 VDC; Output module: 75-264 VAC, 4-200 VDC	Input module: 4-32 VDC; Output module: 75-264 VAC, 4-200 VDC	Input Module: 4.5-6 VDC, 12-18 VDC, 20-30 VDC (depending on model) Output Module: 75-140 VAC, 75-280 VAC, 5-60 VDC, 5-200 VDC (Depending on model)
Isolation	Photocoupler, Phototriac	Photocoupler	AC Input, DC Input, DC Output: Photocoupler AC Output: Phototriac
Dielectric	4,000 VAC	4,000 VAC	4,000 VAC
Zero crossing	Input module: No; Output module: Yes	Input module: No; Output module: Yes	Yes (AC output modules only)
Snubber circuit	Input module: No; Output module: Yes	Input module: No; Output module: Yes	Yes (AC output modules only)
Life (MTTF)	100,000 hours	100,000 hours	100,000 hours
Mounting	Socket	PCB	PCB
Terminal	Plug-in	PCB	PCB
Approvals	UL, CSA, TUV	UL, CSA	UL, CSA, TUV, CE
Equivalent Omron EMR footprint	G2R	N/A	N/A
Optional heat sink	N/A	N/A	N/A
Socket	P2RF-05E	N/A	N/A

Need DIN Rail?
See PFP-series rail and accessories on back cover foldout or at **www.omron.com/oei**.

	G3NE	G3NA	G3PB
Dimensions mm (in)	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)	Consult Omron for specific model
Switching	20 A max.	50 A max.	45 A max.
Features	• High capacity • Panel mount • Quick-connect terminals	• Ideal for industrial controls • Hockey puck design • Operation indicator standard	• Available with or without built-in heat sink • 3-phase or single phase models • DIN rail mountable
Operating input	5, 12, 24 VDC	4-32 VDC; 75-264 VAC	10 mA max
Output voltage	75-264 VAC	19-528 VAC; 5-200 VDC	12-24 VDC
Isolation	Phototriac	Phototriac, Photocoupler	Phototriac
Dielectric	2,000 VAC	2,500 VAC	2,500 VAC, 50/60 Hz
Zero crossing	Yes	Yes	Yes
Snubber circuit	Yes	Yes	Yes
Life (MTTF)	100,000 hours	100,000 hours	100,000 hours
Mounting	Plug-in	Panel	DIN rail
Terminal	Quick connect	Screw	Screw
Approvals	UL, CSA, TUV	UL, CSA, TUV	UL, UL508, CSA, CE
Equivalent Omron EMR footprint	N/A	N/A	N/A
Optional heat sink	Track mount heat sinks: • G3NE-205T(L), -210T(L): Y92B-N50 • G3NE-220T(L): Y92B-N100	Standard heat sinks: • G3NA-205B, -210B, -0D210B, -220B, -410B, -420B: Y92A-100 • G3NA-225B, -240B, -425B, -440B: Y92A-150N • G3NA-440B: Y92A-250 Track mount heat sinks: • G3NA-205B, -210B, -D210B, -410B: Y92B-N50 • G3NA-220B, -420B: Y92B-N100 • G3NA-225B, -240B, -425B, -440B: Y92B-N150	Y92B-P50 (depending on model)
Socket	N/A	N/A	N/A

Need DIN Rail?
See PFP-series rail and accessories on back cover foldout or at **www.omron.com/oei**.

	Snap Action			
				
	A	**DZ**	**X**	**Z**
Dimensions mm (in)	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 1.94)	24.2 H x 17.45 D x 49.2 W (0.95 x 0.69 x 1.94)	24.2 H x 17.45 D x 49.2 W (0.95 x 0.69 x 1.94)
Features	• General Purpose Snap Action Switch • High capacity switch handles loads with large inrush currents	• Incorporates two completely independent built-in switches • Ideal for switching the circuits operating on two different voltages • Ideal for controlling two independent circuits	• Ideal for switching DC circuits • Direct current switch with built-in magnetic blowout • Incorporates a small permanent magnet in the contact mechanism that deflects and extinguishes arcs	• High precision • Wide margins of operating conditions that increase operating speed range
Contact Ratings				
Resistive load	20 A, 250 VAC	10 A, 250 VAC/30 VDC	10 A, 125 VDC	15 A, 250 VAC; 0.5 A, 125 VDC
Contact form	SPDT	DPDT	SPDT	SPDT, SPST-NC, SPST-NO
Operating force (OF)*	400 g to 625 g	170 g to 570 g	110 g to 510 g	28 g to 540 g
Mechanical service life	1,000,000 ops.min. (at rated OT load)	1,000,000 operations min. at rated OT value	1,000,000 operations min. at rated OT value	20,000,000 operations min.*
Electrical service life	500,000 ops. min. (at rated OT load)	500,000 operations min. (under rated load)	100,000 operations min. (under rated load)	500,000 operations min.**
Mounting pitch mm (in)	25.4 (1.0)	25.4 (1.0)	25.4 (1.0)	25.4 (1.0)
Actuator types	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; Hinge lever; Short hinge roller lever; Hinge roller lever	Pin plunger; Short spring plunger; Panel mount plunger; Panel mount roller plunger; Panel mount cross roller plunger; Short hinge lever; Hinge lever; Short hinge roller lever; Hinge roller lever	Pin plunger; Slim spring plunger; Short spring plunger; Panel mount plunger; Panel mount cross roller plunger; Panel mount roller plunger; Hinge lever; Hinge roller lever; Short hinge roller lever
Terminal choices	Solder, Screw, or Quick connect (#250)	Screw terminal; Solder terminal	Screw terminal; Solder terminal	Screw terminal; Solder terminal; Quick connect terminal (#250)
Approved standards	UL, CSA, SEV	UL, CSA	UL, CSA, SEV	UL, CSA, SEV
*Values are for pin plunger type only				*Applies to pin plunger models **Applies to pin plunger or lever models

			
	V (V-15, V-10)	**D2VW**	**D2SW**
Dimensions mm (in)	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 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)
Features	• Miniature Snap Action Switch • Industry standard design with 15 A (V-15G) or 10 A (V-10G) rating • Cadmium-free contacts	• Miniature Snap Action Switch • Sealed water-tight switch conforms to IP67 (lead wire type) and IP50 (terminal type)	• Subminiature Snap Action Switch • Small sealed switch conforms to IP67 (lead wire type) and IP50 (terminal type)
Contact Ratings			
Resistive load	15 A, 250 VAC (V-15G) 10 A, 250 VAC (V-10G)	0.1 A, 125 VAC or 5 A, 125/250 VAC	0.1 A, 125 VAC or 3 A, 125 VAC
Contact form	SPDT, SPST-NC, SPST-NO	SPDT (SPST-NC, SPST-NO per request)	SPDT (SPST-NC, SPST-NO per request)
Operating force (OF)*	100 g, 200 g, or 400 g (V-15G) 100 g or 200 g (V-10G)	200 g	180 g
Mechanical service life	50,000,000 operations min.	10,000,000 operations min.	5,000,000 operations min.
Electrical service life	100,000 operations min. (V-15G) 300,000 operations min. (V-10G)	1,000,000 operations min. (0.1 A, 125 VAC) 100,000 operations min. (3 A, 125/250 VAC)	200,000 operations min. (0.1 or 3 A, 125 VAC) 100,000 operations min. (2A, 250 VAC)
Mounting pitch mm (in)	10.3 x 22.2 (0.41 x 0.87)	10.3 x 22.2 (0.41 x 0.87)	9.5 (0.37)
Actuator types	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; Hinge lever; Simulated roller lever; Hinge roller lever
Terminal choices	Solder/Quick connect (#187) Quick connect (#187), Quick connect (#250), Short solder, Screw	Solder/Quick connect (#187 tab terminals) Lead wires	Solder, Quick connect (#110), PCB, Lead wires
Approved standards	UL, CSA, SEV, VDE, SEMKO, DENMARK	UL, CSA (refer to "Ratings" section of data sheet)	UL, CSA

*Values are for pin plunger type only

Complete Component Solutions

Switches

Omron switches deliver consistent performance under all conditions, including excessive dust and humidity. Our board level components include snap action, DIP, thumbwheel, and tactile switches with a variety of options to match your application's requirements.

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Get high reliability and different load capacities in a variety of sizes and mounting styles with Omron's relays. From tiny low signal models to solid state relays with integrated heat sinks, we are the world's most trusted source for relays. Solve your toughest switching application with one of our relays.

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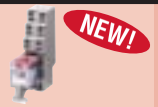





OMRON	P2RF-S	P2RF	PYF-S	PYF-A/E/N	PTF-A/E	PF	PTF-PC
Relay Series	G2R	G2R	MYS, MY, MY4H	MYS, MY, MY4H	LY	MK	MJN
Allen-Bradley	–	700-HN121, 122	–	700-HN103, 128	HN116, 138, 139	700-HN125, 126	700-HN153, 154
American Zettler	–	–	–	–	–	–	–
Aromat	–	–	–	HC-SFD	HL-SFD	–	HG-SFD
Carlo Gavazzi	–	–	–	ZDM14	–	ZVD/ZPD	–
Custom Connector	–	ES	–	MT	GT/GR	OT	ST/SS/QC
Cutler Hammer	–	D4PA	–	D2PA	D7PA	D3PA	D5PA
Deltrol	–	–	–	–	–	20983	20982
Finder	–	48 Series	–	94	96	90	92
Fujitsu	–	–	–	–	–	–	–
Hasco	–	–	–	–	–	–	–
Hongfa	–	–	–	18FF-4Z-B/C	13F-2Z-C	–	–
IDEC	–	SH1/SY2	SU	SY4	SH2/3/4	SR2/3P	SR2/3B
Magnecraft	–	70-781	–	70-461	70-459	70-464/465	70-463
Midtex/Tyco	–	–	–	670	S258	670, DOCT, SOCT	D157
NTE	–	–	–	R95-106A/117	R95-110/121	R95-113/114	R95-105/115
P&B/Tyco	–	–	–	27E894	27E895	27E891/892	27E893
Schrack/Tyco	–	–	–	PT 78	TM 78	MT 78, MR 78	RM 78
Sky	–	–	–	–	–	–	–
Song Chuan	–	–	–	–	–	–	–
Square D	–	NR41	–	NR45	NR42, 43, 34	NR51, 52, 61, 62	–

Switch Cross Reference Guide







OMRON	A	DZ	X	Z	V	D2VW	D2SW
	Microswitch BA Series; Unimax HB/HL Series	Microswitch DT Series	Microswitch MT Series	Microswitch BZ Series; Unimax HB Series	Microswitch V3/V3L Series; Cherry E34/K Series Unimax TF Series	Matsushita ABV Series	Matsushita FS/QS Series Cherry

For more details on relays, sockets and switches please visit our web site at

www.omron.com/oei

OMRON

General Purpose Relay Cross Reference Guide



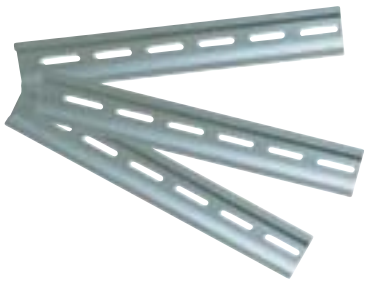







OMRON	G2RS	MYS	MY	MY4H	LY	MK	MJN	MGN	G7L	G7J
DIN Rail Socket	P2RF	PYF-S, PYF-A/E/N	PYF-S, PYF-A/E/N	PYF-S, PYF-A/E/N	PTF-A/E	PF	PTF-PC	–	P7LF	–
Allen-Bradley	700-HK	700-HC	–	–	700-HF	700-HA	700-HB/HD	700-HG	–	–
American Zettler	–	AZ165	–	–	AZ165	–	–	–	AZ2700/2800	–
Aromat	–	HC	HJ	–	HL	–	HG	–	HE	JH
Carlo Gavazzi	–	RMI 2-10/4-5	–	–	–	RCP	–	–	–	–
Custom Connector	–	–	–	–	–	–	–	–	–	–
Cutler Hammer	D4PR	D2PR	–	–	D7PR	D3PR	D5PR	–	D8PR	D9PR
Deltrol	–	–	320	–	310	105	160	900	–	–
Finder	48 Series	55	–	–	56	60	62	–	–	–
Fujitsu	–	MAT	–	–	MAT	–	–	–	–	–
Hasco	–	–	–	–	UJ,UJJ	–	–	–	–	–
Hongfa	JQX-14FF QC	–	JZX-18FF	–	JQX-13F	JQX-10FF	–	–	JQX-116F-1	–
IDEC	RH1/RY2	RU/RY4/RM	–	–	RH2/3/4	RR-P	RR-B	–	–	–
Magnecraft	781	–	782XDX	782XDXH	782XBX	750	788	W199	W92	–
Midtex/Tyco	–	–	156,158	156 Hermetic	258	155	157	–	–	–
NTE	–	–	R12	R12-H	R14	R02	R10	R04	–	–
P&B/Tyco	–	–	KHA	KHS	K10	KRP	KUP	PRD	T92	–
Schrack/Tyco	–	PT	–	–	TM	MT	RM	–	–	–
Sky	–	–	RE	–	RET	–	–	–	–	–
Song Chuan	–	–	SCLB,SCLD	–	SCL,SCLA	703	731, 735	–	841	–
Square D	8501RS41	–	8501RS4	8501RS34	8501RS42/43/44	–	8501KU	8501C	–	–

DIN Rail	
PFP-100N	1 meter x 7.3 mm depth
PFP-50N	0.5 meter x 7.3 mm depth
PFP-100N2	1 meter x 16 mm depth
PFP-M	DIN rail end plate
PFP-S	DIN rail spacer



Solid State Relay Cross Reference Guide





OMRON	G3TC	G3NA	G3NE	G3PB	G3R
Opto 22	G1	120/240	Z120D	–	–
Crydom	IAC/OAC, IDC/ODC	Series 1	Series CS	–	–
Gordos/Crouzet	84	G Series	G Series	GDR	–
P&B/Tyco	IAC/OAC, IDC/ODC	SSRT	SSRT	–	OACM & ODCM
Contentinal	–	SSAA	RLDA	RSDA	–
Grayhill	70	70S Series	70S Series	GA3	–