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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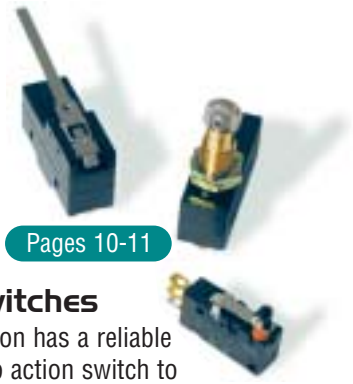
Relays

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

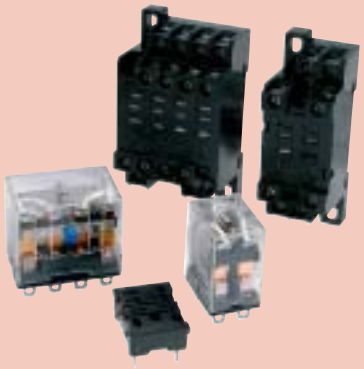
Omron has a reliable snap action switch to match your application, regardless of environment or space constraints. We offer a wide range of switching capacities, sizes and actuators for precision positioning applications. Our IP67 sealed switches handle wet, humid and dusty installations. Shorten installation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

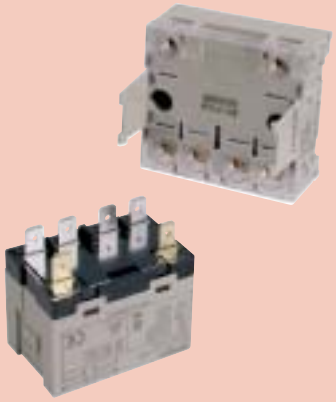
- Two independent switches in one compact housing making model DZ ideal for switching circuits operating on two different voltages
- Subminiature D2SW switch that fits conveyor rails for home position and end-of-travel inputs

	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	–