

**Features**

- Choice of Through-Hole, Surface Mounting and Small Outline Package (SOP) in all popular load voltages
- New range includes, 1 and 2 Form A, 1 and 2 Form B and 1 Form A + 1 Form B (C/O) models
- Models switching DC to 600V AC
- I/O isolation 1500V RMS – 5000V RMS
- Some models with current limit function (CLR) built in



**Benefits**

- Long life
- High reliability
- Small size
- Silent contactless operation
- Maintenance free

**Low CxR – typically for ATE, (Test & Measurement) Semiconductor Test, Shrink Small Outline Package (SSOP), and high current models are also available (contact Omron for more details)**

**Part Numbering System**

G3VM-	1. Load Voltage	2. Contact Form	3. Terminal Style	4. Additional Functions
	2: 20V	1: SPST-NO	A: THD 4 pin	L: Current Limit Function (CLF)
	4: 40V	2: DPST-NO	B: THD 6 pin	M: Basic multi-function
	6: 60V	3: SPST-NC	C: THD 8 pin	N: Multi-function w/o diode
	8: 80V	4: DPST-NC	D: SMD 4 pin	O: Single input LED
	10: 100V	5: SPST-NO	E: SMD 6 pin	P: Special pin arrangement
	20: 200V	+ SPST-NC	F: SMD 8 pin	Q: Multi-function with current limit
	25: 250V	6: Others	G: SOP 4 pin	R: Low ON resistance
	35: 350V		H: SOP 6 pin	S: Slow-on / Slow-off
	40: 400V		J: SOP 8 pin	T: Multi-function with current limit w/o diode
	60: 600V		K: SOP 18 pin	Y: I/O dielectric strength > 2.5kV
			L: SSOP 4 pin	



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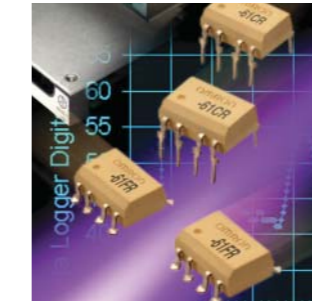
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**MOSFET Relay Selector Guide**



Omron's new range of MOSFET relays set the benchmark for Solid State Relays. Products are manufactured using the latest advances in automated production and include a variety of improved construction technologies within the areas of the LED, PDA (Photo Diode Array) and FET chips. As a result, further reductions in package size and power requirements have been achieved.

**Complete Versatility...** Combining the advantages of mechanical and solid state technology, the new G3VM range gives you unprecedented capability to design. All models featured include a dual MOSFET load circuit, enabling the designer complete versatility since it makes no difference whether an AC or DC load in either direction is connected. Thus, the MOSFET relay is a fully functional alternative to an electromechanical relay with minimal additional drive circuitry.

The built-in Current Limit Function (CLR models) have many uses. Traditionally used to clamp excessive over current fault conditions in telecom equipment, this feature can also be used to good effect to resist transient and short circuit conditions.

**Telecom Solutions...** MOSFET relays are the ideal telecomm solution for line seizing, line switching, hook switching, Data Access Arrangement function, line transformer circuit control and other feature phone functions. Central office applications require high reliability and long life. G3VM is ideal for use in the areas of Subscriber Line Interfaces, Multiplexers and Routers. Local Area Networks and Network Termination Units, including Set-Top Boxes can take advantage of the G3VMs' small size and low ON resistance.

Advances in performance and cost reduction enable MOSFET relays to be used as alternatives to Reed Relays in applications such as security motion detectors (standard and anti-mask PIRs) and other surveillance alarm equipment.



Style	Through-hole Device - 4 pin	Surface Mount Device - 4 pin	Small Outline Package - 4 pin	Super Small Outline Package - 4 pin	Through Hole Device - 6 pin	Surface Mount Device - 6 pin	Small Outline Package - 6 pin	Through-hole Device - 8 pin	Surface Mount Device - 8 pin	Small Outline Package - 8 pin
Dimensions (L x W x H mm)	4.58 x 6.4 x 3.65	4.58 x 6.4 x 3.65	3.0 x 4.4 x 2.1	1.7 x 4.2 x 1.8	7.12 x 6.4 x 3.65	7.12 x 6.4 x 3.65	6.3 x 4.4 x 2.1	9.66 x 6.4 x 3.65	9.66 x 6.4 x 3.65	9.4 x 4.4 x 2.1
Type	General Purpose	General Purpose	General Purpose	Special Purpose	General Purpose	Telecom	General Purpose	Special Purpose	General Purpose	General Purpose
Part Number (G3VM-)	-61A1 -351A -353A -353A1 -401A	-61D1 -351D -353D -353D1 -401D	-61G1 -81G1 -201G -351G -351GL -353G -353G1 -401G	-21GR -21GR1 -41GR5 -41GR6 -61GR1	-21LR -21LR1 -41LR5 -41LR6	-61E1 -61E1R -351E -353E -353E1 -401E	-61H1 -81HR -201H1 -351H -353H -353H1 -401H	-22CO -61CR -62C1 -352C -354C -354C1 -355C -355CR -402C	-22FO -61FR -62F1 -352F -354F -354F1 -355F -355FR -402F	-62J1 -202J1 -352J -354J -354J1 -355J -355JR -402J
Output	60V 350V 350V 350V 400V	60V 350V 350V 350V 400V	60V 80V 200V 350V 350V	20V 20V 40V 40V	60V 60V 350V 350V 350V	60V 60V 350V 350V 400V	60V 80V 200V 350V 350V	20V 60V 60V 350V 350V	20V 60V 60V 350V 350V	20V 200V 350V 350V 350V
Load Voltage	1a 1a 1b 1b 1a	1a 1a 1b 1b 1a	1a 1a 1a 1a 1a	1a 1a 1a 1a	1a 1a 1a 1a	1a 1a 1a 1a	1a 1a 1a 1a	1a 1a 1a 1a	1a 1a 1a 1a	1a 1a 1a 1a
Cont. load current (connection A)	500 mA 120 mA 150 mA 100 mA 120 mA	500 mA 120 mA 150 mA 100 mA 120 mA	400 mA 350 mA 50 mA 110 mA 120 mA	160 mA 450 mA 300 mA 120 mA	500 mA 2,500 mA 120 mA 150 mA 100 mA	500 mA 2,500 mA 120 mA 150 mA 100 mA	400 mA 1,250 mA 200 mA 110 mA 120 mA	150 mA 500 mA 500 mA 120 mA 100 mA	150 mA 500 mA 500 mA 120 mA 100 mA	400 mA 200 mA 110 mA 120 mA 90 mA
ON resistance	1Ω 35Ω 15Ω 30Ω 18Ω	1Ω 35Ω 15Ω 30Ω 18Ω	1Ω 1Ω 40Ω 35Ω 15Ω	5Ω 0.8Ω 1Ω 10Ω	1Ω 0.065Ω 25Ω 15Ω 27Ω	1Ω 0.065Ω 25Ω 15Ω 27Ω	1Ω 2 Ω 5 Ω 25 Ω 15 Ω	2 Ω - 1 Ω 25 Ω 15 Ω 30 Ω	2 Ω - 1 Ω 25 Ω 15 Ω 30 Ω	1 Ω 5 Ω 35 Ω 15 Ω 30 Ω
Input	LED forward current (max) 50 mA	LED forward current (max) 50 mA	LED forward current (max) 50 mA	LED forward current (max) 50 mA	LED forward current (max) 50 mA	LED forward current (max) 50 mA	LED forward current (max) 50 mA	LED forward current (max) 50 mA	LED forward current (max) 50 mA	LED forward current (max) 50 mA
	LED reverse voltage (max) 5V	LED reverse voltage (max) 5V	LED reverse voltage (max) 5V	LED reverse voltage (max) 5V	LED reverse voltage (max) 5V	LED reverse voltage (max) 5V	LED reverse voltage (max) 5V	LED reverse voltage (max) 6V	LED reverse voltage (max) 5V	LED reverse voltage (max) 5V
	Trigger LED current	Typical 1.6mA 1mA 1mA 1mA 1mA	Typical 1.6mA 1mA 1mA 1mA 1mA	Typical 1.6mA 1mA 1mA 1mA 1mA	Typical 1.6mA 1mA 1mA 1mA 1mA	Typical 1.6mA 1mA 1mA 1mA 1mA	Typical 1.6mA 2mA 1mA 1mA 1mA	Typical 1.15mA - 1.6mA 1mA 1mA 1mA	Typical 1.15mA - 1.6mA 1mA 1mA 1mA	Typical 1.6mA 1mA 1mA 1mA 1mA
Switching Characteristics	Turn on Time	Typical 0.8ms 0.3ms 0.1ms 0.25ms -	Typical 0.8ms 0.3ms 0.1ms 0.25ms -	Typical 0.8ms 0.3ms - 0.3ms 0.3ms	Typical 0.8ms 1ms 0.3ms 0.1ms 0.25ms	Typical 0.8ms 1ms 0.3ms 0.1ms 0.25ms	Typical 0.8ms 2ms 0.6ms 0.3ms -	Typical 0.8ms 2ms 1ms 1ms 1ms	Typical 0.8ms 2ms 1ms 1ms 1ms	Typical 0.8ms 0.6ms 0.3ms - 0.25ms 0.3ms
	Turn off Time	Typical 0.1ms 0.1ms 1ms 0.5ms -	Typical 0.1ms 0.1ms 1ms 0.5ms -	Typical 0.1ms 0.1ms - 1ms 0.1ms	Typical 0.1ms 0.2ms 0.1ms 1ms 0.5ms	Typical 0.1ms 0.2ms 0.1ms 1ms 0.5ms	Typical 0.1ms 0.7ms 0.1ms 0.1ms -	Typical 0.1ms 0.1ms 1ms 0.5ms 0.15ms	Typical 0.1ms 0.1ms 1ms 0.5ms 0.15ms	Typical 0.1ms 0.1ms 0.1ms - 0.5ms 0.15ms
	Max.	0.5ms 1ms 3ms 1ms 1ms	0.5ms 1ms 3ms 1ms 1ms	0.5ms 1ms 1ms 3ms 1ms	0.5ms 0.5ms 0.5ms 0.5ms	0.5ms 0.4ms 1ms 3ms 1ms	0.5ms 0.4ms 1ms 3ms 1ms	1ms 5ms 0.5ms 1ms 3ms	1ms 5ms 0.5ms 1ms 3ms	0.5ms 1ms 1ms 3ms 1ms
Dielectric Strength between I/O terminals	2,500 VAC	2,500 VAC	1,500 VAC	1,500 VAC	2,500 VAC	2,500 VAC	1,500 VAC	2,500 VAC	2,500 VAC	1,500 VAC
Temperature	Operating -40°C to 85°C	Operating -40°C to 85°C	Operating -40°C to 85°C	Operating -20°C to 85°C	Operating -40°C to 85°C	Operating -40°C to 85°C	Operating -40°C to 85°C	Operating -40°C to 85°C	Operating -40°C to 85°C	Operating -40°C to 85°C
	Storage -55°C to 125°C	Storage -55°C to 125°C	Storage -55°C to 125°C	Storage -40°C to 125°C	Storage -40°C to 125°C	Storage -40°C to 125°C	Storage -55°C to 125°C	Storage -55°C to 125°C	Storage -55°C to 125°C	Storage -55°C to 125°C
Floating capacity between I/O terminals	0.8 pF	0.8 pF	0.8 pF	0.8 pF	0.8 pF	0.8 pF	0.8 pF	0.8 pF	0.8 pF	0.8 pF
Insulation resistance	1,000 MΩ	1,000 MΩ	1,000 MΩ	1,000 MΩ	1,000 MΩ	1,000 MΩ	1,000 MΩ	1,000 MΩ	1,000 MΩ	1,000 MΩ
Stick Quantity	100 100 100 100 100	100 100 100 100 100	100 100 100 100 100	100 100 100 100 100	50 50 50 50 50	50 50 50 50 50	75 75 75 75 75	50 50 50 50 50	50 50 50 50 50	50 50 50 50 50
Reel Quantity (Tape & Reel)	- - - - -	1,500 1,500 1,500 1,500 1,500	2,500 2,500 2,500 2,500 2,500	1,500 1,500 1,500 1,500 -	- - - - -	1,500 1,500 1,500 1,500 1,500	2,500 2,500 2,500 2,500 2,500	- - - - -	1,500 1,500 1,500 1,500 1,500	2,500 2,500 2,500 2,500 2,500
Terminal Arrangement										
Mounting Holes										

Omron Electronic Components Europe BV reserves the right to make any changes to the specifications of the products described in this brochure at its sole discretion and without prior notice.

Note: Part pictures & illustrations not to scale.