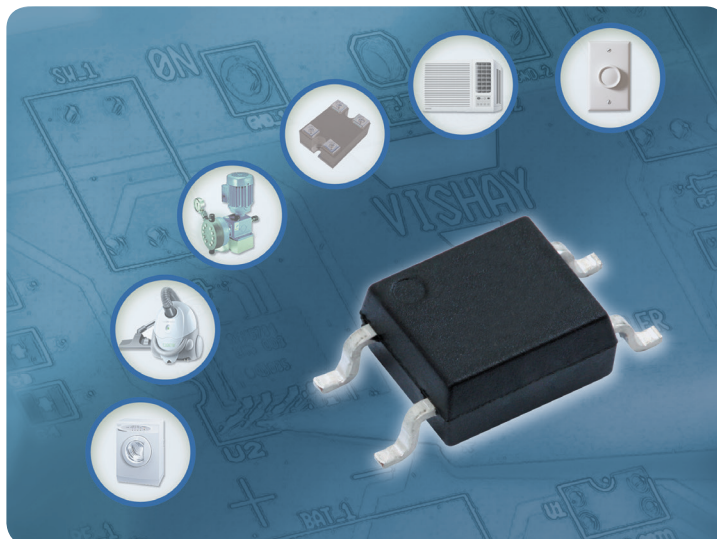




OPTOCOUPLER

Phototriac

Broad Range of Phototriacs



The phototriac optocoupler consists of an infrared LED optically coupled to a photosensitive TRIAC detector die. The detector chip is a complex device which functions in the same manner as a small TRIAC, generating the signals necessary to drive the gate of a larger TRIAC.

For electrically noisy environments, the integrated zero-crossing circuit (ZCC) on the detector chip eliminates current surges and the resulting EMI noise and reliability issues.

FEATURES

- Zero crossing or non-zero crossing
- dV/dt range: 10 kV/ μ s, 5 kV/ μ s, 1.5 kV/ μ s, 0.5 kV/ μ s, 100 V/ μ s, 10 V/ μ s
- V_{DRM} range: 250 V, 400 V, 600 V, 700 V, 800 V
- Isolation test voltage up to 5300 V_{RMS}
- Worldwide safety agency certifications: UL, cUL, CSA, CQC, VDE, DIN EN (60747-5-5), FIMKO
- DIP, SMD, SOP with leadbend options available

RESOURCES

- Datasheets: <http://www.vishay.com/optocouplers/opto-triac/>
- Application note: <http://www.vishay.com/docs/84780/phototri.pdf>
- Optocoupler product portfolio: <http://www.vishay.com/optocouplers/>
- Technical support: optocoupleranswers@vishay.com
- Sales contacts: <http://www.vishay.com/doc?99914>
- Material categorization: For definitions of compliance please see <http://www.vishay.com/doc?99912>

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OPTOCOUPLER

Phototriac

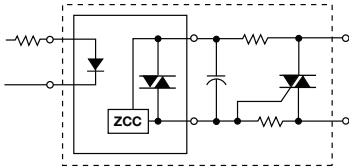
Optocouplers - Zero or Non-Zero Crossing Phototriac

Applications

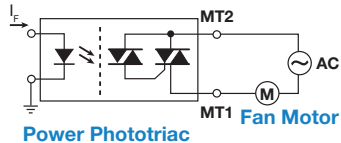
- Solid-state relays
- Lighting controls
- AC motor starters and drives
- Utilities metering over AC lines
- Solenoid/valve controls
- Temperature controls
- Electromechanical contactors
- Static power switches

Application Examples

- Phototriac in a solid-state relay design

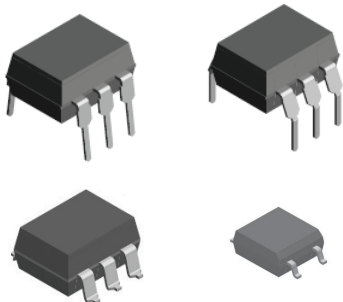


- Power phototriac driving a fan motor

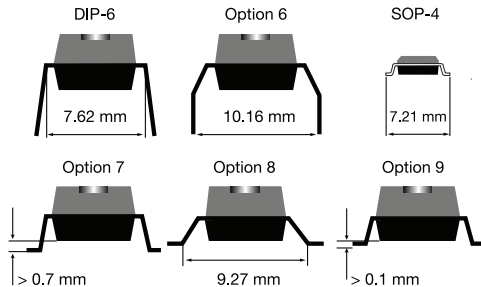


Package

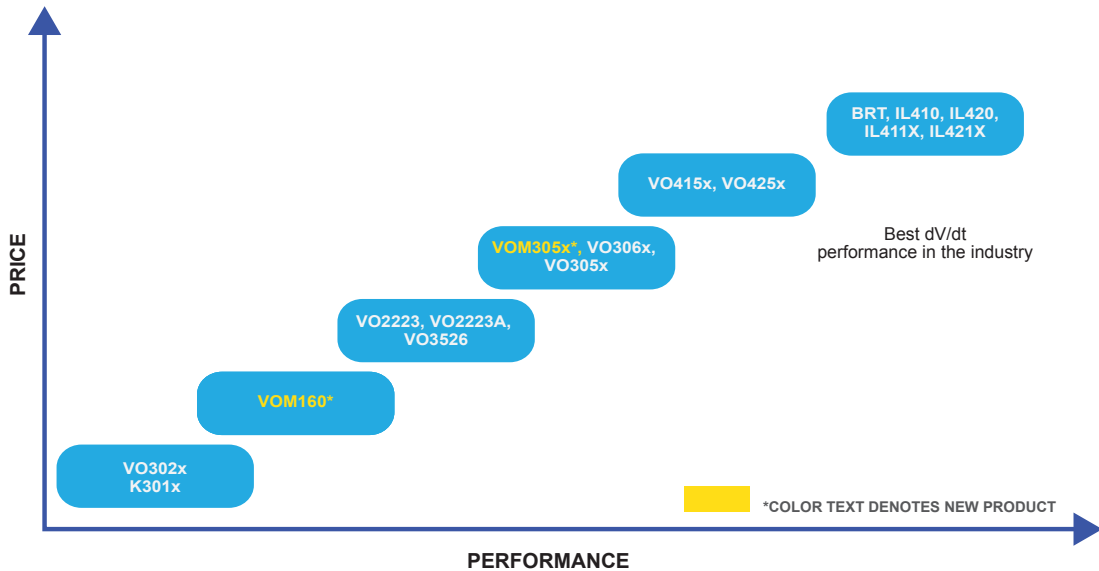
Both the non-zero and zero-crossing output detector chips are designed to drive TRIACs controlling loads on 115 V and 220 V AC power lines. Power phototriacs combine a phototriac and a power TRIAC in the same package, thereby eliminating the need for an external power TRIAC.



Package Option: DIP, SMD and SOP



Lead Form Option



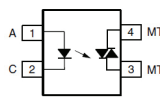


OPTOCOUPLER

Phototriac

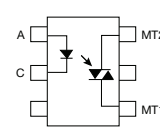
Optocouplers - Zero or Non-Zero Crossing Phototriac

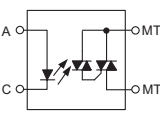
Zero Crossing				
	Minimum Critical Rate of Rise of Off-State Voltage Min. dV/dt_{cr} (V/ μ s)	Trigger Current I_{FT} (mA)	Blocking Voltage V_{DRM} (V)	Isolation Test Voltage V_{ISO} (V_{RMS})
Part Number				
BRT21F	10,000	1.2	400	5,300
BRT22F	10,000	1.2	600	5,300
BRT23F	10,000	1.2	800	5,300
IL4116	10,000	1.3	600	5,300
IL4117	10,000	1.3	700	5,300
IL4118	10,000	1.3	800	5,300
BRT21H	10,000	2	400	5,300
IL410 (BRT22H)	10,000	2	600	5,300
IL4108 (BRT23H)	10,000	2	800	5,300
BRT21M	10,000	3	400	5,300
BRT22M	10,000	3	600	5,300
BRT23M	10,000	3	800	5,300
VO4154D	5,000	1.6	400	5,300
VO4156D	5,000	1.6	600	5,300
VO4157D	5,000	1.6	700	5,300
VO4158D	5,000	1.6	800	5,300
VO4154H	5,000	2	400	5,300
VO4156H	5,000	2	600	5,300
VO4157H	5,000	2	700	5,300
VO4158H	5,000	2	800	5,300
VO4154M	5,000	3	400	5,300
VO4156M	5,000	3	600	5,300
VO4157M	5,000	3	700	5,300
VO4158M	5,000	3	800	5,300
VO3063	1,500	5	600	5,300
VO3062	1,500	10	600	5,300

Non Zero Crossing (SOP-4)				
	Minimum Critical Rate of Rise of Off-State Voltage Min. dV/dt_{cr} (V/ μ s)	Trigger Current I_{FT} (mA)	Blocking Voltage V_{DRM} (V)	Isolation Test Voltage V_{ISO} (V_{RMS})
Part Number				
VOM3053	1500	5	600	3750
VOM3052	1500	10	600	3750
VOM160N	500	5	600	3750
VOM160P	500	7	600	3750
VOM160R	500	10	600	3750

Note: color indicates new products.

To see the complete Phototriac portfolio, go to: <http://www.vishay.com/optocouplers/opto-triac/>

Non Zero Crossing DIP-6				
	Minimum Critical Rate of Rise of Off-State Voltage Min. dV/dt_{cr} (V/ μ s)	Trigger Current I_{FT} (mA)	Blocking Voltage V_{DRM} (V)	Isolation Test Voltage V_{ISO} (V_{RMS})
Part Number				
BRT11F	10,000	1.2	400	5,300
BRT12F	10,000	1.2	600	5,300
BRT13F	10,000	1.2	800	5,300
IL4216	10,000	1.3	600	5,300
IL4217	10,000	1.3	700	5,300
IL4218	10,000	1.3	800	5,300
BRT11H	10,000	2	400	5,300
IL420 (BRT12H)	10,000	2	600	5,300
IL4208 (BRT13H)	10,000	2	800	5,300
BRT12M	10,000	3	600	5,300
VO4254D	5,000	1.6	400	5,300
VO4256D	5,000	1.6	600	5,300
VO4257D	5,000	1.6	700	5,300
VO4258D	5,000	1.6	800	5,300
VO4254H	5,000	2	400	5,300
VO4256H	5,000	2	600	5,300
VO4258H	5,000	2	800	5,300
VO4254M	5,000	3	400	5,300
VO4256M	5,000	3	600	5,300
VO4257M	5,000	3	700	5,300
VO4258M	5,000	3	800	5,300
VO3053	1,500	5	600	5,300
VO3052	1,500	10	600	5,300
VO3023	100	3.6	400	5,000
K3012P	10	5	250	6,000
VO3023	100	5	400	5,000
VO3022	100	10	400	5,000
K3010P	10	15	250	6,000
VO3021	100	15	400	5,000
VO3020	100	30	400	5,000

Non Zero Crossing Power Phototriac				
	Trigger Current I_{FT} (mA)	On-State RMS Current $I_{T(RMS)}$ (A)	Blocking Voltage V_{DRM} (V)	Peak On-State Voltage V_{TM} (V)
Part Number				
VO3526	10	1.0	600	1.7
VO2223	10	0.9	600	2.5
VO2223A	10	1.0	600	1.7



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