

Latching Relay NIF1/NIF2 Series Solid State Relay

Discontinued Product



10 YEAR WARRANTY

- Totally Solid State Latching Relay--Encapsulated
- 1 ... 20 A with up to 200 A Inrush
- Optically Isolated Output, Either N.O. or N.C.
- NIF1--Random Switching for Inductive Loads
- NIF2--Zero Voltage Switching for Lamp & Resistive Loads

Accessories



Female quick connect P/Ns:
P1015-13 (AWG 10/12)
P1015-64 (AWG 14/16)
P1015-14 (AWG 18/22)



Quick connect to screw adaptor
P/N: **P1015-18**

See accessory pages for specifications.

Description

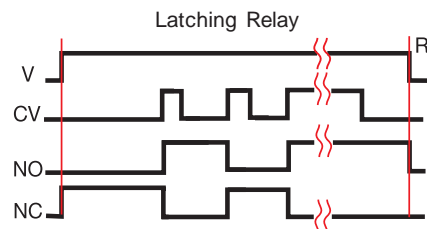
The NIF Series provides a *Flip-Flop* latching function with optical isolation between the solid state output and the control voltage. If voltage to the output is maintained, each time a control voltage is applied, the output changes state and latches. Designed for industrial applications requiring rugged reliable operation and long silent operation. Zero voltage switching NIF2 extends the life of an incandescent lamp up to 10 times. Random switching NIF1 is ideal for inductive loads. When accessory fully insulated female terminals are used on the connection wires, the system meets the requirements for touch-proof connections.

Operation

The solid state output is located between terminals 1 and 2 and is normally open (or closed) without control voltage applied to terminals 4 and 5. When momentary or maintained control voltage is applied to terminals 4 and 5, the output closes (or opens) and latches. If control voltage is removed, and then reapplied, the output transfers each time the control voltage is applied.

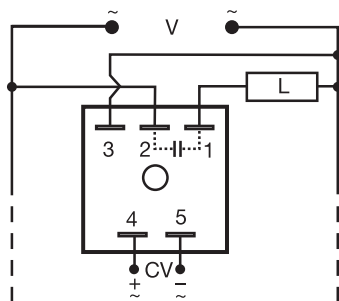
Reset: Remove and reapply control voltage. Reset is also accomplished by removing and reapplying output voltage.

Function



V = Voltage CV = Control Voltage
R = Reset NO = Normally Open Output
NC = Normally Closed Output
—||— = Undefined time

Connection



CV = Control Voltage L = Load
Dashed lines are internal connections.

Ordering Table

X Series	X Control Voltage	X Output Rating	X Output Form	X Output Voltage
NIF1 (Random Switching)	A - 9 ... 30 V AC or DC B - 90 ... 150 V AC or DC C - 190 ... 290 V AC or DC	1 A 6 A 10 A 20 A	A - Normally Open B - Normally Closed	2 - 24 V AC 4 - 120 V AC 6 - 230 V AC
NIF2 (Zero Voltage Switching)				

Example P/N: **NIF1A10A6, NIF2B6B2**

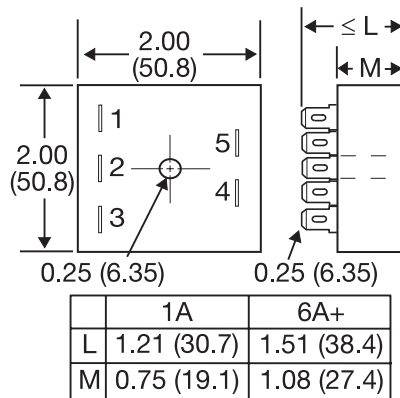
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Technical Data

Output Type Form Voltage Tolerance Ratings	Optical isolation, totally solid state SPST, normally open or normally closed 24, 120, or 230 V AC +/-20%	
Minimum Load Current Voltage Drop (at Rated Current) Leakage Current (Open State)	50 mA $\cong 2.0\text{ V} - 6, 10, \& 20\text{ A units}; \cong 2.5\text{ V} - 1\text{ A units}$ $\leq 5\text{ mA}$	
Input Type Control Voltage Power Consumption Operations Per Second	Optical isolation, LED/photo transistor 9 ... 290 V AC/DC in 3 Ranges $\leq 0.5\text{ W}$ ≤ 5	
Protection Circuitry Dielectric Breakdown Insulation Resistance	Encapsulated $\geq 2000\text{ V RMS terminals to mounting surface}$ $\geq 100\text{ M}\Omega$	
Mechanical Mounting * Package Termination	6, 10, 20 A units 1 A units	Surface mount with one #10 (M5 x 0.8) screw 2 x 2 x 1.51 in. (50.8 x 50.8 x 38.4 mm) 2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7 mm) 0.25 in. (6.35 mm) male quick connect terminals
Environmental Operating Temperature Storage Temperature Humidity Weight	-20°C ... +60°C -40°C ... +85°C 95% relative, non-condensing 1 A unit: $\cong 2.4\text{ oz (68 g)}$; 6, 10, 20 A units: $\cong 3.9\text{ oz (111 g)}$	

*Units rated $\geq 6\text{ A}$ must be bolted to a metal surface using the included heat sink compound. The maximum mounting surface temperature is 90°C. Inrush: Non-repetitive for 16 ms.

Mechanical View



Inches (Millimeters)