

# DRY Contact Output Modules

## G-1AMP Series Latching

G-Type I/O

### I/O Compatibility

G-Series  
'G4' types  
'C4' types  
'G5' types

## Overview

The G-1AMPx-LTCH Latching Output Modules provide "fail-safe" control by latching the last output contact state (ON or OFF) prior to power-down. It is designed for applications where the contact state must be maintained when power is removed or lost.

Power to the module is only required to change the output contact state (<3mS), making control applications practical where power is limited, such as in solar or battery powered equipment (e.g. RTUs). The LED indicator operates from an auxiliary set of internal relay contacts to indicate the true state of the output contact in "real-time" (power applied). The output contact state is latched by low voltage sense circuitry. Optional power-on delay circuitry prevents any state change during system start-up.

The G-1AMPx-LTCH module is compatible with industry standard I/O mounting racks for G-Series, G4, G5 and C4 type\* modules and are available for 5V, 12V, 15V and 24V logic operation.

Available in 5V, 12V, 15V & 24V Logic Voltages.

### Recommended Operating Parameters

SYMBOL	PARAMETER	LIMITS			UNIT	CONDITION
		MIN	TYP	MAX		
$V_{CC}$	Supply Voltage (5V Models)	4.6	5	5.25	Vdc	Pins 3 & 5
	(12V Models)	10.5	12	14		
	(15V Models)	12	15	18		
	(24V Models)	21.5	24	28		
$I_{CC}$	Supply Current (5V Models) (12, 15 & 24V Models)			15/(50) 20/(40)	mAdc	Idle/(Instantaneous) Note 4
TA	Operating Temperature	-40		+70	°C	
$t_{on}/t_{off}$	Switching Time		2	3	mSec	
$V_{IL}$	Input Logic Voltage Low		1.0	0.8	V	(5V Models), Note 3
$V_{IH}$	Input Logic Voltage High	3.0	2.4		V	(5V Models), Note 3
$V_{iso}$	Isolation Voltage (Coil-Contact)			1000	Vac	@60Hz for 1 minute

Note(s) con't:

3. No input sourcing current is required. Input may be driven by an open-collector logic circuit. ( $I_{IL}=7.5mA$  @ 24V logic.)

4. Idle current, power applied in ON/Closed state. ( ) - Denotes instantaneous current draw while changing output state <3mS.

\*Designed for Industry Standard I/O racks and sockets which accept 5-pin I/O modules.

\*\* Refer to warranty section for limited warranty details.

Latching Relay



POWER APPLIED: Operates as standard output module (transparent mode)

POWER REMOVED OR LOST: Retains last output state (latch mode)

## Product Features

- ▶ Transparent & Latch Modes
- ▶ AC/DC Switching
- ▶ 'Real-time' LED Indicator
- ▶ 3 mS Switching Time (max)
- ▶ Black I/O Case
- ▶ Captive #4-40 Screw
- ▶ 0.5A/1A AC/DC Contacts
- ▶ Encapsulated Design
- ▶ Operating Temp -40°C to +70°C
- ▶ 3 Year Limited warranty\*\*
- ▶ (N.O.) FORM 1A Standard
- ❖ (N.C.) FORM 1B (Optional)
- ❖ Power-up Delay (Optional)

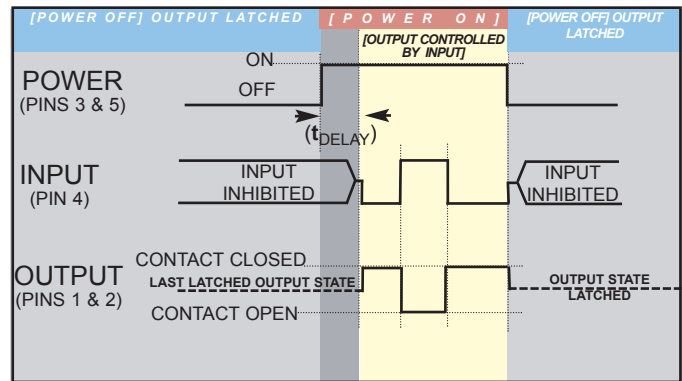
# G-1AMP Series Latching

# DRY Contact Output Modules

## Operation

**POWER OFF [latch mode]:** The Latching Dry Contact Relay Output latches the last “Open”/(OFF) or “Closed”/(ON) contact state prior to power loss.

**POWER ON [transparent mode]:** Power applied, the Latching Dry Contact Relay Output is directly controlled by the input (pin 4), operating the same as a standard Relay Output Module. For (FORM A) types, asserting pin 4 to logic low closes the output (ON). Logic high on pin 4 opens the output contact (OFF).  
*(For units with optional “initial power-up delay” (-DT option), pin 4 is inhibited during the delay period.)*



**Optional INITIAL POWER-UP DELAY (-DT option):** Upon initial power-up, the output contact remains latched and the input is temporarily inhibited during the power-up delay period ( $t_{DELAY}$ ) preventing any change in the output contact state during power-up. Power-up Delay times are available from 0.25 seconds to 60 seconds.

## Part Numbering

G-1AMP - LTCH - (options)

LOGIC VOLTAGE	
5	5 VOLT
12	12 VOLT
15	15 VOLT
24	24 VOLT

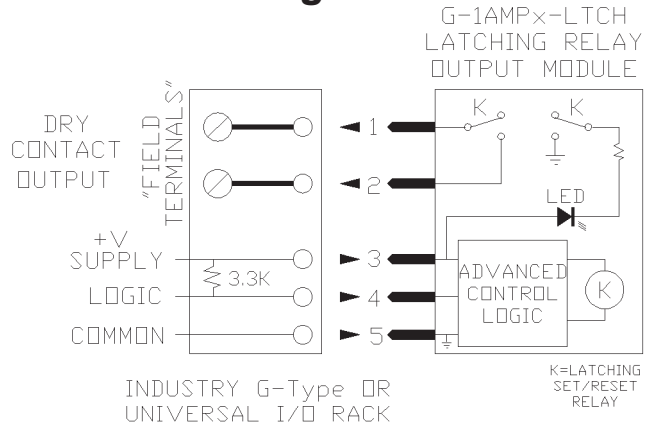
-DTx	x=initial power-up delay (specify -DT0.25 to -DT60 seconds)
-B	FORM B (reverse logic)

### Examples:

G-1AMP5-LTCH — Specifies: G-series Latching Dry Output Module; 1 AMP, FORM A contact, 5 volt logic, no power-up delay.

G-1AMP24-LTCH-DT1 — Specifies: G-series Latching Dry Output Module; 1 AMP, FORM A contact, 24 volt logic, 1 second initial power-up delay.

## Connection Diagram



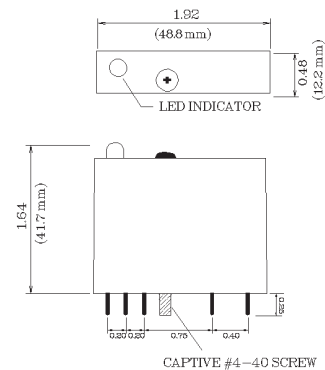
## Output Contact Ratings

SYMBOL	PARAMETER	LIMITS			UNIT	CONDITION
		MIN	TYP	MAX		
$V_{SW}$	Switching Voltage		125/30		Vac/Vdc	Notes 1, 2
$I_{SW}$	Switching Current			1	Amps	Notes 1, 2
$VA_{SW}$	Switching Capacity			62/33	VA/W	

Note(s):

1. Non-inductive load rated; Minimum load current=10 $\mu$ A.
2. Maximum output load must be calculated to be within all rated parameters and not to exceed  $VA_{SW}$  for maximum reliability and cycle life.

## Dimensions



DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.