

### Watchdog Timer Modules

Gx2™-Series

**Gx2-WDT5**  
**Gx2-WDT12**  
**Gx2-WDT15**  
**Gx2-WDT24**

Fits Universal and HDX™  
High Density I/O Racks

### Description

Gx2™ Watchdog Timer Modules use the same advanced timing technology to monitor control system integrity as the G-Series but offer additional contact options, including FORM 1C, 2 FORM B, 1 FORM A/1 FORM B and 2 FORM A (Standard). Packaging provides direct plug-in compatibility for Universal I/O racks. Fixed timeouts are available ranging from 0.1 seconds to 50 seconds (2 Seconds standard).

Gx2™ Watchdog Timers monitor activity from the control system by detecting transitions with an edge-triggered input. While the internal timer is reset by CPU activity, the DRY Contact Outputs are maintained. Upon time-out, the reed relay outputs de-energizes, indicating "Loss of Control".

Loss of Control caused by CPU latch-up, control system faults and loss of power are detected by the Gx2™ Watchdog Timers. The DRY Contact outputs are de-energized upon time-out which can be used to ALARM, RESET or SHUTDOWN a system or process, or divert communications or control signals, depending on the application.



### Features

- System Fail-Safe
- Integral LED Indicator
- Versatile DRY Contact Outputs
- Blue Color Code
- High Reliability
- Captive #4-40 Screw
- "Loss of Control" Detection
- Operating Temp. -40°C to +85°C
- 3 Year Factory Warranty

### Recommended Operating Parameters

SYMBOL	PARAMETER	LIMITS			UNIT	CONDITION
		MIN	TYP	MAX		
Vcc	Supply Voltage (Gx2-WDT5) (Gx2-WDT12) (Gx2-WDT15) (Gx2-WDT24)	4.5 10.8 13.5 21.6		5.25 14.0 18.0 28.0	Vdc	Pins 3 & 5
Icc	Supply Current		12	18	mAdc	Notes 1, 2
TA	Ambient Temp.	-40		+85	°C	Operating max.
fmax	RESET (WDI) Toggle Frequency	1/timeout		50	KHz	
Tin	RESET (WDI) Period	20		T	µSec	Edge to Edge
T	Standard Timeout	1.60	2	2.40	Sec	Gx2-WDT5
VIL	Input Logic Voltage Low		1.0	0.8	V	Gx2-WDT5
VIH	Input Logic Voltage High	3.0	2.4		V	Gx2-WDT5
RI	Insulation Resistance	10 <sup>10</sup>				ΩHMS @ 20°C

Patented

### Output Contact Ratings

PARAMETER	2 FORM A (-2A) [FAIL-OPEN]	FORM B & C [FAIL-CLOSED]	5Amp Option (-5A) [FAIL-OPEN]	UNIT
Switching Voltage	175/250	140/200	250/30	ac/dc Volts
Switching Current	1	0.5	5	Amps
Carry Current	2	1	5	Amps
VA Rating	20	10	1250	VA
Initial Contact Resistance	0.15	0.15	0.03	Ohms

Note(s):

1. Current is specified for each energized contact, total maximum supply current for 2 FORM A and 2 FORM B types is 36mA and 100mA for types with -5A option.

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# Watchdog Timer Modules

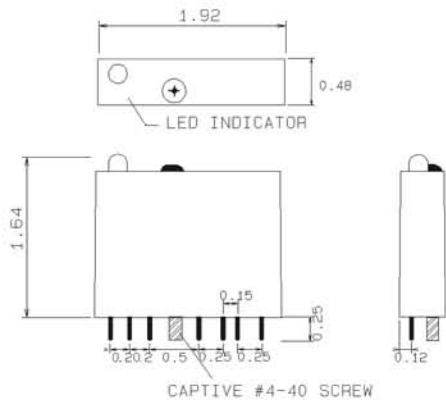
**\*Absolute Maximum Ratings** (some options offer extended ratings)

Supply Voltage (between pins 3 & 5).... (see Operating Parameters)  
 RESET (WDI) Input (pins 4 & 5).....  $\pm 40V$   
 Contact Voltage (pins 1 & 2)..... 200 Vac/dc  
 Contact Switching Current..... 1 Amp  
 Contact Rating..... 20VA  
 Ambient Operating Temperature ..... -40 to +85°C

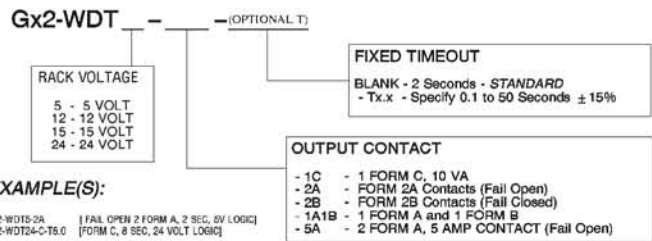
**\*NOTE:** STRESSES ABOVE THOSE LISTED UNDER ABSOLUTE MAXIMUM RATINGS MAY CAUSE PERMANENT DEVICE DAMAGE. OPERATION AT THESE RATINGS FOR EXTENDED PERIODS MAY AFFECT RELIABILITY.

## Part Numbering

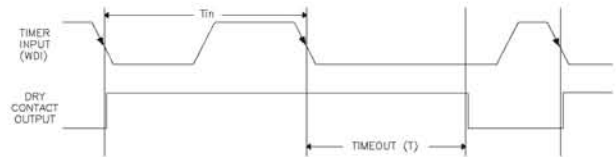
## Dimensions



Dimensions are in inches except where noted otherwise.



## Timing Diagram

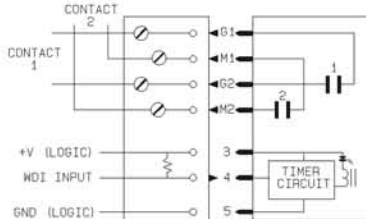


## Operation

The Gx2 Watchdog Timer Modules are reset on the negative-going edge of the WDI input (pin 4). Timeout occurs only when the WDI input does not detect a negative-going transition within the fixed timeout period. While the Gx2-WDT5 is reset, the output relay remains energized. Loss of control (WDI input latched high, low or open) or loss of power, is indicated by the DRY Contact outputs thus providing a very high level of control system integrity.

## Connection Diagram

FORM 2A & 2B  
OUTPUT CONTACTS



FORM 1C OUTPUT CONTACTS

