Watchdog Relay

Red Lion Automation Series

▶▶▶ Rugged Hardware-Based Solution for Fail-Safe Shutdown



Red Lion's Watchdog Relay is the industry's only rugged hardware-based solution that reliably monitors and provides fail-safe shutdown of processes controlled by RTUs, PLCs and other automation devices.

By monitoring the pulsing output heartbeat of a connected device, Watchdog Relay adds an extra level of safety that helps protect critical processes. If the heartbeat stops for reasons that may include power surges, extreme weather or device malfunctions, Watchdog's built-in form C relay will immediately energize and provide a signal that can be used to safely shut down the process. The signal sent upon loss of control helps to avoid costly damage to materials and equipment.

APPLICATIONS

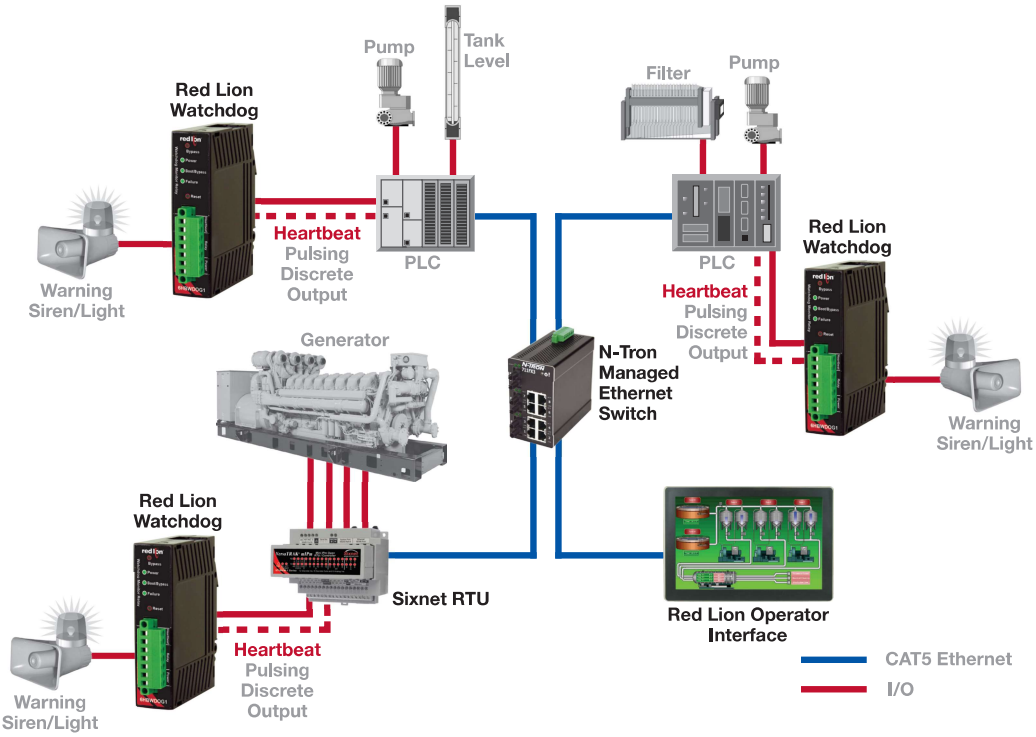
- Oil & Gas
- Maritime
- Power & Energy

PRODUCT HIGHLIGHTS

- Rugged Hardware-Based Solution
- Fail-Safe Shutdown
- Heartbeat Monitoring
- Hazardous Location Certifications
- Extreme Operating Temperatures

FEATURES & BENEFITS

- Reliable, rugged design
  - -40° C to 80° C operating temperature
  - Class 1, Div II and ATEX hazardous location certifications
  - Marine and offshore tested and/or verified to meet standards such as ABS, DNV No. 2.4 and Lloyds
- Fail-safe shutdown
  - Monitors heartbeats from RTUs, PLCs and controllers
  - Automatically powers down systems when malfunction occurs
  - Adds a level of safety to the network



industrial automation

CE

▶▶▶ Watchdog Relay Specifications

ENVIRONMENTAL

Power supply voltage: 12 – 24 VDC
Operating temperature: -40˚ C to +80˚ C (-40˚ to +85˚ C Storage)
Humidity: 5 to 95% RH (non-condensing)

STANDARDS COMPLIANCE

Electrical Safety UL 508, CSA C22.2/142; IEC61010-1; CE
EMI Emissions FCC part 15, ICES-003, Class A; EN55022 IEC 61000-6-4; CE
EMC Immunity IEC 61000-6-2 (EN61000-4-2,3,4,5,6,8); CE
Vibration: IEC 60068-2-6
Shock: IEC 60068-2-27
Hazardous locations (Class 1, Div II, Groups A, B, C, D) ISA 12.12.01, CSA C22.2/213, ATEX (Zone 2) IEC 60079-0, -15 (pending)
Marine and offshore tested and/or verified to meet various marine and maritime standards such as ABS, DNV No. 2.4 and Lloyds
Packaging impact resistant Lexan® polycarbonate
Ingress protection: IP30
Dimensions: 1.00" (2.54 cm) width x 4.00" (10.16 cm) height x 3.72" (9.45 cm) length

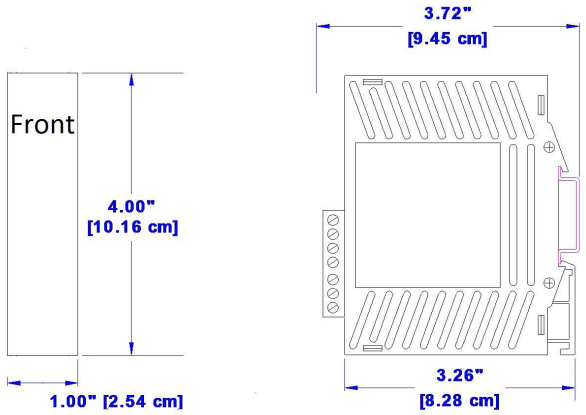
HEARTBEAT INPUT

Voltage range: 10 – 30 VDC
Input polarity: Sourcing
Input isolation: 150 Volts
Guaranteed ON voltage: 9 VDC
Guaranteed OFF voltage: 1.0 VDC
Guaranteed OFF current: 1.0 mA DC
Input resistance (@24VDC): 2.6Kohms
Input current (@ 24 VDC) 10 mA
Input protection: High Impedance with overvoltage protection
Heartbeat frequency: 1 – 50Hz*
Heartbeat timeout (configurable): 1s to 200s*
** 1Hz may not work at fastest heartbeat timeout time of 1 second*

OUTPUT CIRCUIT

Relay type: Form C
Maximum switching voltage: 30 VDC
Rated operational current: 2A@30 VDC

DIMENSIONS *In inches (cm)*



ORDERING INFORMATION

PART NUMBER	DESCRIPTION
6HBWDOG1	Heartbeat Watchdog Relay with form C relay
ST-PS-024-05	DIN rail mounted power supply; 115-220AC to 24VDC with 5 Amp capacity

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As the global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our award-winning technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, N-Tron and Sixnet. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. For more information, please visit www.redlion.net. Red Lion is a Spectris company.

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