Watchdog Relay

Red Lion Automation Series

PDD Rugged Hardware-Based Solution for Fail-Safe Shutdown

Red Lion's Watchdog Relay is the industry's only rugged hardwarebased 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







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 awardwinning 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.