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engineers
technologists



Fire Sprinkler Pump Watchdog-3phase

The Martech Sprinkler Pump Watchdog-3phase builds on the original watchdog concept with new features and 3phase pump capability to help simplify sprinkler system installation. Watchdog-PLUS includes the following key features:

- Automatic periodic pump test
- Check for pump failure
- Routine maintenance reminder
- Integration of sprinkler system controls
- Input for pressure and flow sensors
- Input for Fire Alarm signal
- Relay outputs for fault, flow or water level and alarm
- 3 phase pump capability

During normal operation the Watchdog-3phase automatically runs the pump periodically (typically every week) and measures key parameters to check the pump's performance and health helping to ensure the fire sprinkler system is fully operational when it matters.

LED indicators on the Watchdog-3phase front panel illuminate to show the status of the system including

- Power (mains power connected)
- Pump active (running)
- Fault detected
- Service required
- Alarm (triggered by external fire alarm).

In addition an internal sounder provides an audible alert to alarm and fault conditions.

A single push button on the front panel allows the pump to be manually tested at any time, and also allows the internal timer to be reset to perform the automatic periodic test on that day and time, every week thereafter.

Designed and manufactured in the UK, the Sprinkler Pump Watchdog-3phase complies with all safety requirements, and gives you the peace of mind that your fire safety system is in full working order.



Technical specification

Dimensions	Width	180mm																																												
	Height	150mm																																												
	Depth	60mm																																												
Construction	Fire resistant ABS to UL 94V, IP65 rated																																													
Safety	CE compliant																																													
Power	<p>3 phase 380 to 415Vac, 20A maximum pump current (Watchdog standby <5Watts) (controller requires one Live phase and Neutral for operation) Internal battery backup for clock/timer – standard AAA cell switching of pump is via an integrated 3phase contactor Optional phase failure detection is available, connected to the spare controller input. <i>Requires installation by a qualified electrician</i></p>																																													
control logic: ✓ = active when input conditions met, * = active only during fault conditions, § = to be defined																																														
Inputs and outputs	Inputs are all 24Vdc. Outputs are volt free NO, except pump = 230Vac																																													
		<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="5">Output Relays</th> <th rowspan="2">Note</th> </tr> <tr> <th colspan="2"></th> <th>Fault</th> <th>Low Water</th> <th>Alarm</th> <th>Pump</th> <th>Spare output</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Inputs</td> <td>Pressure switch (low pressure)</td> <td>*</td> <td></td> <td></td> <td>✓</td> <td>§</td> <td>Primary input to detect if sprinkler head activated.</td> </tr> <tr> <td>Low water level <u>or</u> flow switch</td> <td>*</td> <td>✓</td> <td></td> <td>✓</td> <td>§</td> <td>60 second delay before activation</td> </tr> <tr> <td>Fire Alarm</td> <td>*</td> <td></td> <td>✓</td> <td></td> <td>§</td> <td>Sounder also on</td> </tr> <tr> <td>Spare Input</td> <td>§</td> <td>§</td> <td>§</td> <td>§</td> <td></td> <td>Custom response</td> </tr> </tbody> </table>			Output Relays					Note			Fault	Low Water	Alarm	Pump	Spare output	Inputs	Pressure switch (low pressure)	*			✓	§	Primary input to detect if sprinkler head activated.	Low water level <u>or</u> flow switch	*	✓		✓	§	60 second delay before activation	Fire Alarm	*		✓		§	Sounder also on	Spare Input	§	§	§	§		Custom response
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Custom logic combinations for fault, low water and alarm outputs can be created on special request																																														
<p>Front panel LED indicators:</p> <ul style="list-style-type: none"> Power; on when main power is applied to the unit Fault; on if a fault is detected such as pump not running (fault o/p also becomes active) Pump; on when power is applied to pump (pump should be running) Service; on when the next pump service is due Alarm; on when an external alarm condition in raised (when alarm input active) 																																														
Controls & indicators	<p>Sounder - sounds to alert when a fault condition is detected, a service is required or for low battery OR when a fire alarm condition is raised on the fire alarm input.</p> <p>Test button – press once to manually test the pump. Press and hold to reset the timer and for other functions - refer to operation manual for full instructions.</p>																																													
Operation	<p>Upon a sprinkler head being activated (drop in water pressure), pump runs to maintain water flow. Otherwise, the pump is cycled for 10 seconds every week and key electrical parameters measured to determine the health of the pump including checking for excess current (e.g. the pump is seized or developing a fault) and for low/no current (e.g. the wiring is open circuit, a fuse has blown and pump is not running).</p>																																													
Other features	<p>Battery backed internal clock timer ensures that time and day selected for automatic pump testing is maintained in the event of a power failure</p> <p>Custom front panel with your logo and branding available on orders of 50+ units</p>																																													

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