

Monitoring devices



Function	Liquid level control	Capacitive level control	3 pump sequence relay	
Model	LV1 (SPDT)	LVC1 (SPDT)	PSR1	PSR4
Description of Operation	<p>Failsafe control and monitoring of high and / or low levels of conductive liquids. Configurable for "filling" or "emptying" applications. With adjustable sensitivity.</p> <p>"HIGH" pins 7 + 5 "LOW" pins 7 + 6</p> <p> <input type="checkbox"/> <input type="checkbox"/> FILLING <input type="checkbox"/> <input type="checkbox"/> DRAINING 1 2 </p>	<p>Failsafe control and monitoring of high and / or low levels of solids, liquids or granules. Interfaces with standard DC capacitive proximity sensors or photo switches. (DC supply incorporated).</p>	<p>Pump sequence module designed to optimise wear on pumps, compressors or generators by alternating between 3 devices. 3 inputs are monitored and will switch one (or more) of three output relays sequentially depending on load requirements. The no. of outputs correspond to the no. of inputs, ensuring the load is equally divided between the three outputs.</p>	
Standard voltages	AC: 12, 24, 48, 110, 230, 400, 525V ±15% DC: 12, 24, 48V ±15%			only 24Va
Galvanic isolation	110, 230, 400, 525V are equipped with internal transformer, providing effective galvanic separation of the electronic circuitry from supply voltage. (test volts: 2kV)			
General information	<p>configurable for charging or discharging via rear mounted dip switches providing failsafe control. Accessories: SN1 stainless steel single-line level probe</p>	<p>configurable for charging or discharging via rear mounted dip switches providing failsafe control. Accessories: NPN capacitive proximity switches</p>	<p>for spreading pump workload evenly between 3 pumps load dependent. 3/4</p>	
Contact rating	10A 250VAC			
Consumption	AC: ±2.4 VA DC: ±100mA			
Technical information	sensitivity: adjustable 0-50K probe voltage: 4VAC	incorporated DC supply 12VDC 30mA for standard DC proximity / photo switches	pump sequencing for optimal, even wear between motors	
Insulation	2kV between supply and output adjacent and adjacent contacts 1kV between open contacts			
Mechanical life	30 million operations			
Ambient limits	(operating) -20 + 60°C			
Type of duty	continuous (100%)			
Response time	±0.5sec			
Connection diagram				
price				



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Percentage Timer	Namur sensor relay	Flip flop relay		
PCT1	M1S (SPDT)	F10 SPDT	F12 DPDT	F23 DPDT
<p>Applying supply activates the pre-set percentage "ON" time of the overall time range where after the pre-set percentage "OFF" time is activated. This cycle is repeated until the supply removed. If the unit is set to 30% of 60min the relay will energise for 18min and remain off for 42min. SCxx</p>	<p>The Namur relay converts the charging current of a sensor into a relay output. Ideal for intrinsically safe applications. Can be configured to energise when sensor is activated, providing fail-safe operation in all applications.</p>	<p>F10: Pulse controlled (with memory). With supply applied closure of cont. 5+7 energises the relay. The relay remains in the state even on removal of supply. Closure of contact 5+7 once again resets relay.</p> <p>F12: Pulse controlled (without memory) same as F10 but relay resets on removal of supply.</p> <p>F23: Mains controlled. Applying supply for 30sec or longer and then removing supply will change the relay state.</p>		
110, 230, 400V are equipped with internal transformer voltage. (test volts: 2kV)				
$\pm 0.5\%$				
$\pm 0.2\%$				
via dedicated calibrated front knob (scale accuracy: $\pm 5\%$)				
AC: 110,230,400,525V +/- 15%				
16A 250VAC				
AC: ± 2.4 VA DC: 100 mA				
0.5 sec (500 mSec)				
4kV between supply / output and adjacent contacts 1kV between open contacts.				
30 million operations				
(operating) -20 + 60°C				

Monitoring devices



Function	temperature relay	thermistor relay	tachometer relay multi-range	defrost timer
Model	T1R (SPDT)	TPR1/M	RRP1 (SPDT)	DEF1/F with fan delay
Description of operation	<p>Directly interface with conventional PT100 (3 wire) sensors, the relay energises and remains so until pre-set maximum temperature limit is reached. Whereupon the relay resets until the temperature drops below the hystaria. Can be configured for heating or cooling applications. Hysteresis 5-50%</p>	<p>Typically used for protection of AC and DC motor windings equipped with embedded thermistors. Under normal conditions relay is energised, when one of the thermo-detectors reaches tripping temperature the relay is reset. The relay will energise again when temperature falls at least 5°C below trip value. A latch facility can be enabled by bridging pins 8 + 9. Reset is obtainable by front mounted membrane switch or N/C remote p/button. A front mounted test button is also incorporated.</p>	<p>Programmable for:</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> <input type="checkbox"/> "OVER" <input type="checkbox"/> "UNDER" </div> <p>speed detection. Relay remains energised for as long as detected speed remains within the pre-set limits. Relay resets if detected speed exceeds upper (overspeed) or drops below (underspeed) pre-set limit. Interfaces directly with Namur (2 wire) proximity or limit switches.</p>	<p>Selectable cycle times 4-6-8-12 hr. On energisation the (3-60min) "defrost" time begins whereafter the "cooling" cycle takes place. Bridging pins 5 + 6 overrides the defrost time, starting the cooling cycle first. The unit incorporates a 0.3-6min fan delay operating on initiation of every cooling cycle. LED indication of "cooling", "defrost" "fan on".</p>
Standard Voltages	AC: 12, 24, 48, 110, 230, 400, 525V ±15% DC: 12, 24, 48V ±15%			
Galvanic isolation	110, 220, 400, 525V are equipped with internal transformer, providing effective galvanic separation of the electronic circuitry from supply voltage. (test volts: 2kV)			
General information	<p>Selectable temperatures:</p> <p>-20°- 80°C <input type="checkbox"/></p> <p>80°-180°C <input type="checkbox"/></p>	<p>Used for protection of motors with thermistor embedded into windings</p> <p>LED indication of "normal" and tripped condition</p> <p>P.T.C. voltage ≤2.5V</p> <p>TPR1/M has fault memory after power loss</p>	<p>Selectable speeds:</p> <div style="display: flex; flex-direction: column; gap: 5px;"> <div><input type="checkbox"/> <input type="checkbox"/> 1-10 rpm</div> <div><input type="checkbox"/> <input type="checkbox"/> 10-100 rpm</div> <div><input type="checkbox"/> <input type="checkbox"/> 100-1000 rpm</div> <div><input type="checkbox"/> <input type="checkbox"/> 1000-10.000 rpm</div> </div>	<p>cycle times</p> <div style="display: flex; flex-direction: column; gap: 5px;"> <div><input type="checkbox"/> 4 hour</div> <div><input type="checkbox"/> 6 hour</div> <div><input type="checkbox"/> 8 hour</div> <div><input type="checkbox"/> 12 hour</div> </div> <p>Defrost 3-60min Fan 0.3-6min</p>
Contact rating	10A 250VAC			
Consumption	AC: ±2.4 VA DC: ±100mA	AC: ±2.4 VA	AC: ±2.4 VA DC: ±100mA	AC: ±2.4 VA DC: ±100mA
Technical information	Interfaces with conventional 3 wire or 2 wire Pt100 temperature sensors	Number of thermistors to be connected are limited by the sum of resistance of all detectors in series not exceeding 1.5 kohm at 25°C	SELECTABLE: 10sec START-UP DELAY <input type="checkbox"/> "ON" <input type="checkbox"/> "OFF"	SELECTABLE: 10sec START-UP DELAY <input type="checkbox"/> "ON" <input type="checkbox"/> "OFF"
Connection Diagram				
Price				