

Differential Pressure Controller

Introduction

SP74JA Principle: two highly sensitive pressure elements which directly oppose each other. It is used on cooling station system to balance pressure differential between water controller and water separator. It has a SPDT floating action contact. Through operating bypass valve switch, which realize pressure differential balance between supply and return water. When the system differential pressure increases above the control's set point, the valve opens further. More water is diverted through the bypass valve, resulting in a reduction in system pressure differential between supply and return lines. The SP74JA controller is also suitable for using on other air and liquid pressure differential applications.

Function

- *Single-pole, double-throw, totally enclosed non-snap acting Penn switch.
- *1/4 in. flared tube pressure connection on the sensing element permits easy field installation.
- *Direct reading scale for quick set point determination.
- *Pressure differential setting can be easily changed without removing the cover.

Technical parameters

Product	SP74JA Differential pressure controller
Scale range	55 to 414kPa
Operating pressure differential	14kPa, Fixed
Max. low pressure bellows overrun	1241kPa
Max.allowable difference in pressure between bellows	830kPa
Electrical rating	1A, 24VAC, 50/60Hz
Contact unit	SPDT, totally enclosed non-snap acting Penn switch
Material	0.062" (1.6mm) cold rolled steel +ABS top cover
Finish	Gray baked
Mounting	Mounts to flat surface/with a 271-51 universal mouting bracket
Wiring connections	Color coded screw type RED terminal (See Page2 wiring diagram)
Shipping weight	2.4 pounds(1.1 kg)
Ambient operating temperature	Min. 30 ° F(-1) Max. 140F(60)

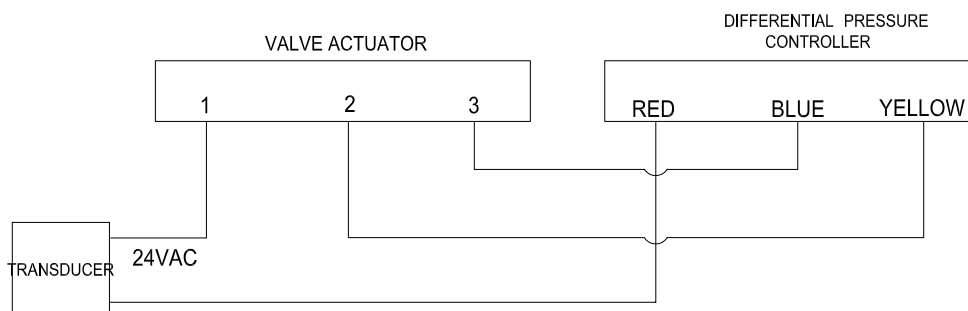
Installation

- *The **SP74JA** controller can be installed to control cabinet, connect copper tube between high pressure and low pressure side.
- *Allow some slack in capillary to avoid "violin string" vibration which can cause tubing to break.
- *Don't allow tubing to rub against surrounding surfaces or objects where friction can damage capillary.

Adjustment

Insert a screwdriver into the slot in the wheel and rotate the wheel until the scale pointer is opposite the set point desired. Rotate the wheel to the left to increase the differential set point or to the right to decrease the differential set point.

Wiring diagram



See picture: *When actuator terminal 1 and 2 is on, the valve moved toward the closed position; terminal 1 and 3 is on, the valve moved toward the open position.

*When the system pressure differential decreases, floating contact makes common RED to BLUE terminal; on the opposite when the pressure differential increases, common RED to YELLOW terminal.