

DATA SHEET #PHF120

PRESSURE REDUCING VALVE with Tamper Proof Switch

Models

- **18-457: Female NPT Inlet x Male.** (Local Fire Department Thread) Outlet with Wheel. Finish: Cast, polished trim, cast chrome, polished trim chrome.
- **18-458: Double Female.** Inlet and outlet, NPT only, with wheel. Finish: Cast, polished trim, cast chrome, polished trim chrome.
- **18-459: Double Female.** Inlet and outlet, NPT, with hand wheel. Note: Groove x groove connections optional - see Data Sheet #PHF150 for PRV with grooved connections. Finish: Cast, polished trim, cast chrome, polished trim chrome. **Note: Types 85, 90 and 95 require 7½" Handwheel.**

Description - Valve

Pow-R-Matic™ is a true combination shut-off and pressure reducing valve, available in 1½" and 2½" sizes.

The 1½" size reduces inlet pressure of 300 psi (2069 kPa) or less to working pressures of 10 through 175 psi (69-1207 kPa). The 2½" sizes are designed to reduce inlet pressures of 400 psi (2758 kPa) or less to desired working pressures from 20 through 175 psi (138-1207 kPa) under discharge or static conditions.

Pow-R-Matic™ 18-458 1½", 2½" and 18-459 2½" valves are furnished with open/closed indicators for rapid conformation of the valves status in the system.

Description - Tamper Proof Switch

A tamper proof switch is an accessory device used on pressure reducing valves to hasten valve operation while monitoring its open condition.

The PRV Model TPS is UL listed for use with the "POW-R-MATIC" Pressure Reducing Valves.

- Honey Well Micro Switch UL Listed-File E12252 Code L22 1A-125VAC.
- L288, L299, L307.
- Tamper Resistant Screws.
- ½" NPT conduit mounting.



Construction

The housing of the cover is zinc finished with gray paint. The mounting bracket is stainless steel.

Tamperproof Screws

Removing the screws will require special tooling by the spanner tamper action screw associated with the switch mounting. Over tighten the screw may break the tool. **Caution:** Disabling the tamper action will void UL listing.

Electrical Characteristics

The PRV Model TPS has a rating of 1A-125 VAC single pole double throw. Note: The switch does not have a NEMA rating. Also, while it may be considered weather-resistant, suitable for both indoor and outdoor use, it is not waterproof. The switch is to be wired using the common and the normally closed terminals.

Service Use

Automatic Sprinkler NFPA-13
National Fire Alarm Code NFPA-72

Availability

The complete switch, with bracket and housing, is also available for field mounting. It will fit most of the PRV valves with an inlet and outlet of 2-1/2". To order the Tamper Proof Switch separately, specify part number 1845710000.

Approvals

Pow-R-Matic™ Valves are Listed by Underwriters Laboratories for:

- Automatic Sprinkler Systems as floor or zone control valves.
- Standpipe Systems, Class I, II and III
- Automatic Check Valve for Dual Riser Systems, Approved by the New York City Board of Standards & Appeals 97-74-SM, the City of Los Angeles and the City of San Francisco (ULC 2½”).

Ordering Information

To order, specify:

- ___ (qty) PRV Model 18-4571 with Tamper Proof Switch.
- ___ (qty) PRV Model 18-4581 with Tamper Proof Switch.
- ___ (qty) PRV Model 18-4591 with Tamper Proof Switch.

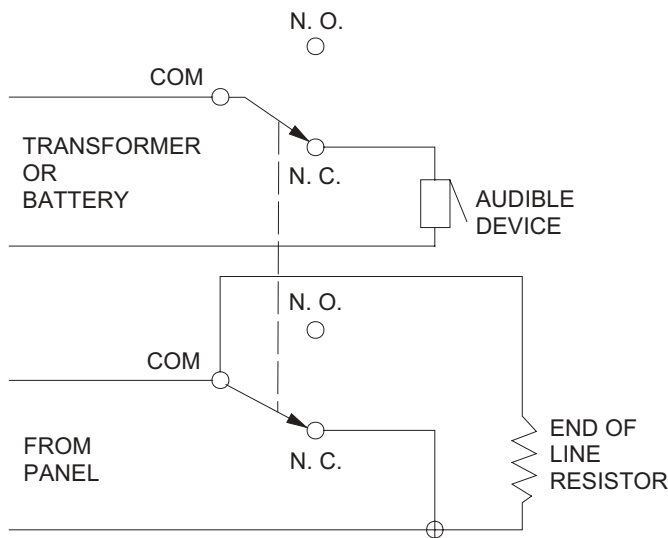
Maximum Rated Inlet Pressure

Pressure		Valve Type
Psi	KPa	
200	(1379)	55,60
225	(1551)	15,65
250	(1724)	70
275	(1896)	75
300	(2069)	30 through 50, 80
350	(2413)	85
400	(2758)	90,95

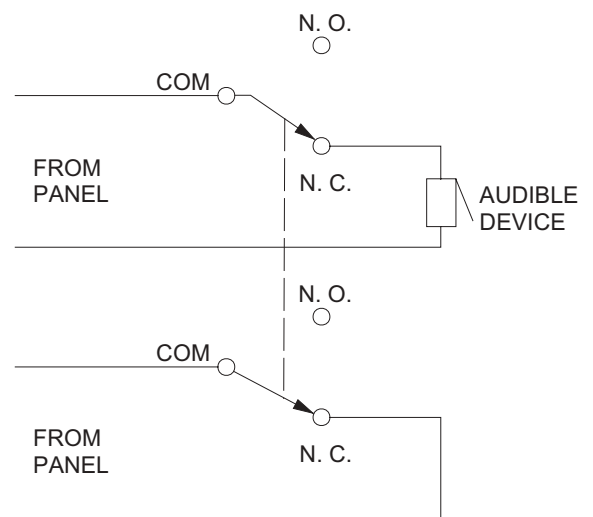
WIRING DIAGRAMS:

NOTE: CONTACTS SHOWN IN NORMAL (VALVE OPEN) CONDITION

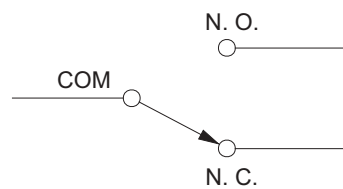
LOCAL AUDIBLE/CONTROL PANEL



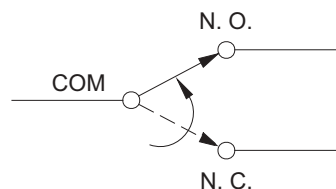
LOCAL AUDIBLE/REMOTE TRANSMITTER



TYPICAL SWITCH ACTION



OPEN VALVE POSITION

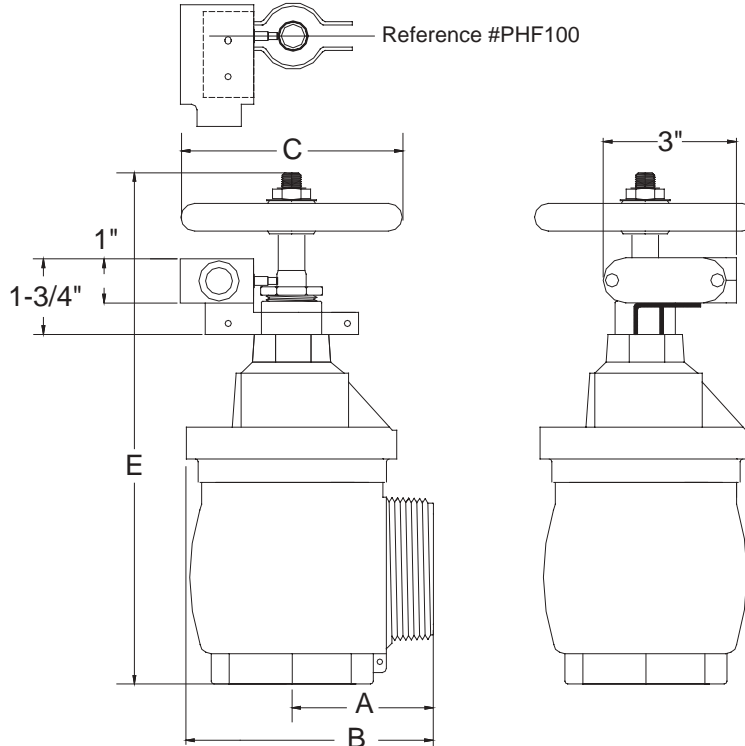


CLOSED VALVE POSITION

POW-R-MATIC Pressure Reducing Valves Submittal Sheet

Dimensions

Size	Style	A	B	C	E/Open	E/Closed	Weight
1-1/2	18-457-458	2-7/32 (56)	4-5/32 (106)	3-3/4 (95)	9-25/64 (239)	8-53/64 (224)	8 lb. - 13 oz. (3.70 kg)
2-1/2	18-457-458	3-7/32 (82)	6-3/32 (155)	5-3/4 (146)	11-3/8 (289)	10-13/16 (275)	21 lb. - 7 oz. (9.5 kg)
2-1/2	18-459	3-7/8 (98)	7-3/4 (197)	5-3/4 (146)	12-3/4 (324)	12-13/16 (325)	23 lb. - 15 oz. (10.5 kg)



Specification Chart

Qty	Location		Inlet				Outlet Desired		Actual			Type
	Tag	Style	Size (in.)	Static (psi)	Residual (psi)	@ Flow of (gpm)	Static (psi)	Residual Min-Max (psi)	Static (psi)	Residual (psi)	@ Flow (gpm)	

GUIDELINES:

- Customer is requested to furnish as much information as possible to insure delivery of the appropriate valve. Flow values for inlet static and residual pressure readings are needed for all types of valves (standpipe or sprinkler). Please provide a Desired Residual Outlet pressure range.
- Styles available: 18-457, 18-458, 18-459.
- Sizes: 1½" or 2½" (18-459, 2½" only).
- "Actual" columns to be filled out by Factory. Actual values given above have an accuracy of ± 10%.
- Valves are permanently tagged for correct floor placement.

This information is only a general guideline. The company reserves the right to change any portion of this information without notice. Terms and conditions of sale apply and are available on request. 05/02 Printed in USA (PHF120.PMD)