

TBV

PRESSURE SWITCH

- Versatile and Reliable
- Adjustable Range and Differential Settings
- Low, Mid and High Pressure Ranges Available
- Concealed Adjusters for Range and Differential
- Dual Scales
- Bellows Variants for Fast Cycling Applications

Application

The TBV has been designed for the control of pressurised systems up to 450lb/in² (30bar). Applications include refrigeration plant, water systems, air compressors, pressurised central heating systems, beverage dispensers and process control.

Physical Description

The TBV range of pressure switches is versatile and robust, with easily adjustable range and differential settings (The differential can be adjusted independently of the range setting). The TBV is made up of three elements, the case, the pressure unit and the switch. The pressure unit is a seamless brass bellows used on refrigeration or pressurised heating system applications. A restrictor is incorporated into the pressure element to minimise the effect of pump pulsation's. The switch is a single pole change overswitch that enables wiring for make on rise or break on rise. Automatic and manual reset versions are also available.



Operation

The range and the differential (Automatic Reset Versions) are set using the adjustment screws at the top of the unit before being locked in position. Electrical connection is via three clamp down type terminals, terminal 1(2) common, terminal 2(1) break on rise and terminal 4(3) make on rise. The switch will change over from terminal 2 to terminal 4 when the system pressure reaches the range setpoint. The switch will not change back until the pressure has fallen to the range value less the differential value. E.g. If the range setting is 2.5bar and the differential setting is 0.5bar, the switch will change over when the pressure has risen to 2.5bar and will not change back until the pressure has fallen below 2.0bar.

Technical Specification

Electrical

Switch	-	Single Pole Double Throw
Max Current	-	16(10) A
Max LRC	-	80A
Voltage	-	250Vac only

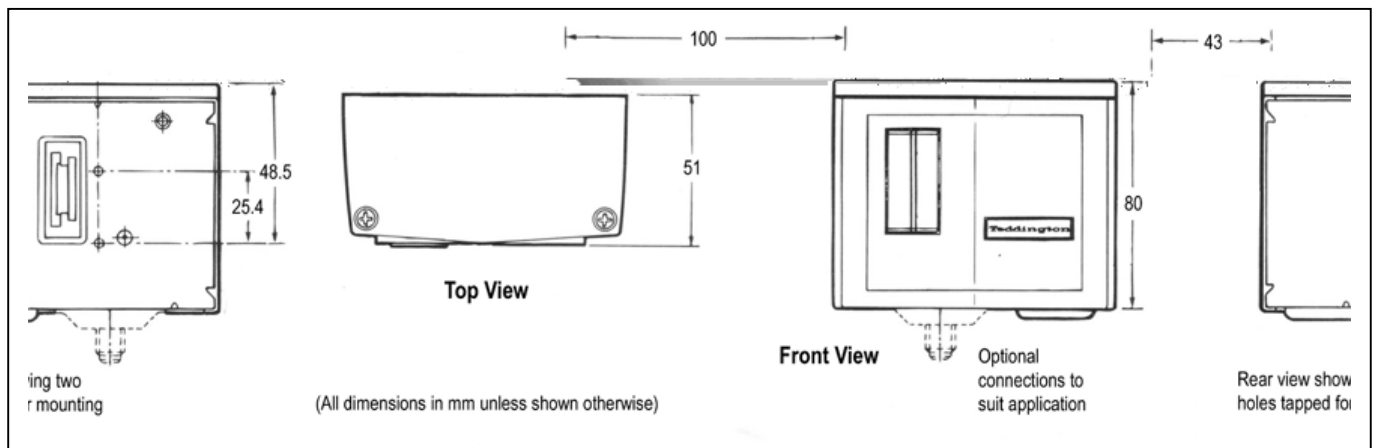
Mounting

The TBV can be wall mounted using bracket TBU 77 or from a base plate bracket TBU 193 (both optional extras), It can also be mounted directly on to a metal panel using the two tapped holes at the back of the case and the special screws provided.

Setting

Range and differential adjustments are made with two the two screws at the top of the case for which a single setting knob and locking plate are provided. After setting and locking, limited or full adjustment of either range set point or differential is possible with the knob, depending on the position in which the locking plate and knob have been fitted. There are two visible scales, the right-hand scale is the Range and the left-hand is the Differential.

Outline Details



Other Variants

Special variants of TBV are available, or can be made available, to quantity requirements, and can include:

- Special settings for use with specific equipment.
- Special pressure ranges for particular equipment.
- Other special features for customer requirements.

Pressure Surges

The TBV is fitted with a restrictor orifice to reduce system transient pressure surges at the bellows. If this feature is not required, the model number will include a suffix letter 'A' (e.g. TBV CS 13A).

Weight (approx.)

400g

Approvals

WRAS – for Models TBV XQ 25K, TBV CS 13* AND TBV CQ 13*

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TBV Models

Type	Range	Differential	1/4" Flare	1/4" Flare 90°	1/4" BSP	1/8" BSP	Capillary + 1/4" Flare Nut	
Bellows Models								
TBV XQ 25K	10 – 40lbf/in ²	< 4lbf/in ²					•	
TBV ES 13	15" Hg Vac to 100lbf/in ² (-0.5 to 7bar)	9 to 60lbf/in ² (0.6 to 4bar)	•					
TBV AS 13				•				
TBV CS 13					•			
TBV HS 13								•
TBV ER 13			Manual Reset	•				
TBV AR 13			Manual Reset		•			
TBV HR 13	Manual Reset					•		
TBV PS 23	70 to 315 lbf/in ² (5 to 22bar)	20 to 100lbf/in ² (1.4 to 7bar)		•				
TBV TS 23					•			
TBV PT 23			Manual Reset		•			
TBV SS 15	150 to 450 lbf/in ² (10 to 30bar)	20 to 100lbf/in ² (1.4 to 7bar)	•					
TBV BS 15				•				
TBV JS 15								•
TBV ST 15				•				
TBV BT 15			Manual Reset		•			
TBV JT 15								•
Pressurised Heating System Models								
TBV CQ 13AL	15" Hg Vac to 100lbf/in ² (-0.5 to 7bar)	7.5lbf/in ²			•			
TBV CQ 13AM		30lbf/in ²			•			

Auto Reset
 Non Standard Product

Ordering Information

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