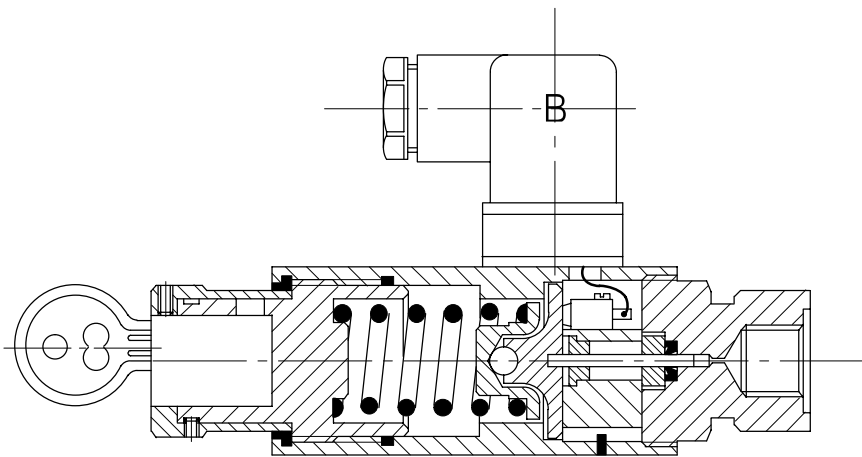


Pressure Switches

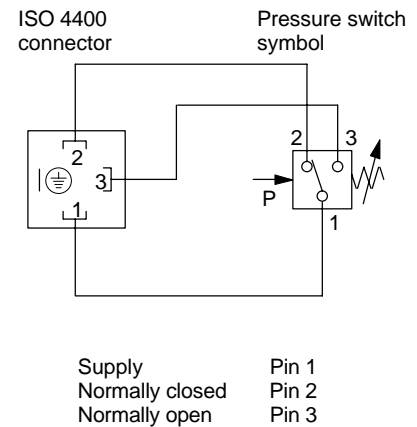
S*307 Series

Sectional Arrangement

ST307-V2-AS-H2 example



Functional Symbol



General Description

A range of piston-operated pressure switches for general applications where an electrical signal is needed to indicate a given pressure condition in a hydraulic circuit.

The microswitch is actuated by the operating plate of an adjustable loading spring. The spring load holds the operating plate against the switch until applied hydraulic pressure on a small piston forces the operating plate away from the switch to change over the switch contacts. The switch will reset when the hydraulic pressure falls by a small differential.

Switches in three pressure adjustment ranges are available for panel or base mounting with G $\frac{1}{4}$ " (BSPF) or SAE/UNF port connection, or for subplate mounting. Adjustment options are screwdriver or handknob (both with locking screw) or handknob with keylock. Pressure switches are supplied complete with an ISO 4400 (DIN 43650) type connector plug.

Separate stacking adaptor blocks to ISO 4401 size 03 are available to allow pressure switches to be installed into compact stack assemblies using Vickers SystemStak™ valves (see catalog 2027).

Features and Benefits

- Switching accuracy less than 1% of pressure setting
- Low hysteresis
- Suitable for AC or DC current
- Galvanic gold-plated silver switch contacts for long life
- Small, easy to install
- Electrical protection to IEC 144 class IP65
- Select requirements from:
 - 3 pressure ranges
 - 3 adjustment types
 - 3 mounting styles
- Locking screw and keylock options

Model Code

For Pressure Switches

S* 307(-*)-(**-**-**-*** (-*)**



1 Hydraulic system connection

T = Threaded pipe connection
G = O-seal for subplate connection

2 Mounting

Blank = Two tapped holes for base mounting (type T only)
SCH = Panel mounting
F = Subplate mounting

3 Type of adjustment

Blank = Screwdriver slot with locking set screw
V2 = Knurled handknob with locking set screw
V2-AS-H2 = Knurled handknob with keylock

4 Pressure adjustment range

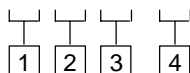
55 = 5 to 55 bar (73 to 797 psi)
150 = 20 to 150 bar (290 to 2175 psi)
350 = 20 to 350 bar (290 to 5075 psi)

**5 Thread combinations:
port/mounting bolt tappings**

B = G¹/₄" (BSPF) port and/or metric mountings
ST307 models only:
S = SAE 6 port and/or UNC mountings

For Stacking Adaptor Blocks

DGMP-3 - * - * -1 *



1 Valve/subplate mounting interface

3 = ISO 4401 size 03
(ANSI B93.7M, size D03)

2 Port connection to pressure switch

P = Port P (at A end of block)
A = Port A (at A end of block)
B = Port B (at B end of block)

3 Pressure switch mounting bolt tappings

B = Metric
S = UNC

4 Design number, 10 series

Subject to change. Installation dimensions unchanged for design numbers 10 to 19 inclusive.

Operating Data

Pressure Switches

Maximum pressure, all models	350 bar (5075 psi)
Pressure adjustment ranges	See model code position 4
Electrical data Current capacity Switching connections Connector plug (supplied) Protection (general)	See "Switching Capacity" below See "Functional Symbol" page 1 Female receptacle to ISO 4400 (DIN 43650) IEC 144 class IP65
Microswitch details Type Travel Contacts Protection	Electromechanical, double-throw 0,5 mm (0.020") Refined silver, galvanic gold-plated IEC 144 class IP67; dustproof to DIN 40050
Switching repeatability	<1%
Hydraulic fluids	Antiwear hydraulic oil or water-in-oil emulsions
Fluid temperatures	−50°C to +100°C (−58°F to +212°F)
Main housing materials	Aluminium and brass
Mass	0,62 kg (1.4 lb)

Stacking Adaptor Blocks

Mass	1 kg (2.2 lb)
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Switching Capacity

AC current

Voltage	Resistive load (A)	Bulb load, metallic filament (A)	Inductive load (A)
110 to 125	3	0.5	3
220 to 250	3	0.5	3

DC current

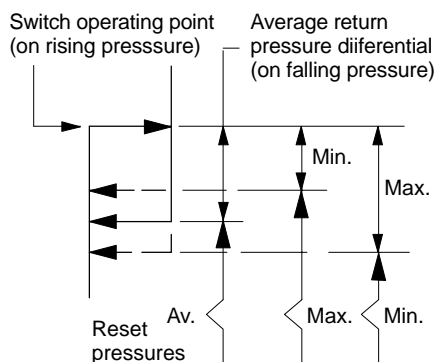
Voltage	Resistive load (A)	Bulb load, metallic filament (A)		Inductive load (A)
		NC▲	NO▲	
Up to 15	3.0	3.0	1.5	3.0
>15 to 30	3.0	3.0	1.5	3.0
>30 to 50	1.0	0.7	0.7	1.0
>50 to 75	0.75	0.5	0.5	0.25
>75 to 125	0.5	0.4	0.4	0.05
>125 to 250	0.25	0.2	0.2	0.03

▲ At normally closed (NC) and normally open (NO) contacts respectively.

Hysteresis Diagrams

The pressure differential between switching point (on rising pressure) and switch reset point (on falling pressure) varies according to the switching point set pressure.

Switching Points



Example 1 ("bar" units of pressure)

Model S*307---150 set at 140 bar

Max. reset pressure 134 bar

Average reset pressure 132 bar

Min. reset pressure 130 bar

At this level the return pressure differential may vary between 6 and 10 bar, the average being 8 bar.

Example 2 ("psi" units of pressure)

Model S*307---150 set at 2000 psi

Max. reset pressure 1910 psi

Average reset pressure 1880 psi

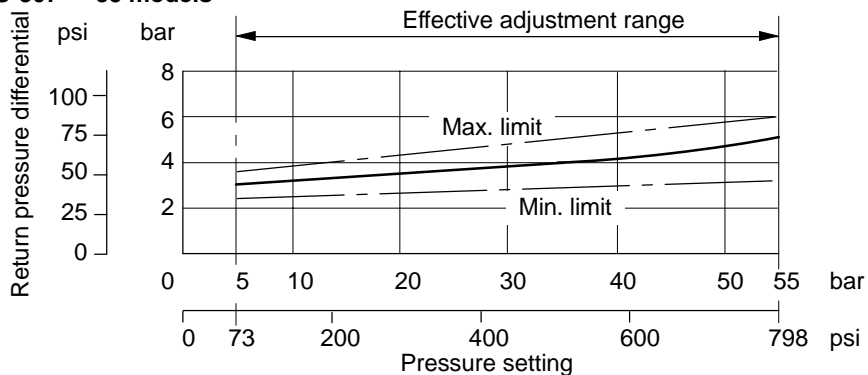
Min. reset pressure 1860 psi

At this level the return pressure differential may vary between approximately 90 and 140 psi, the average being 120 psi.

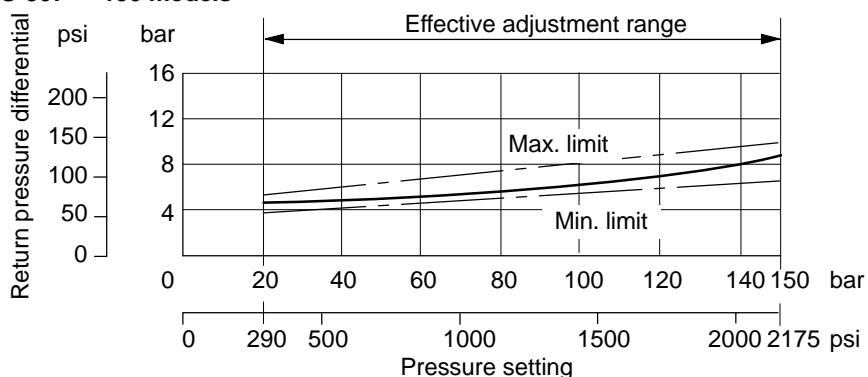
Average values

Max./Min. limits

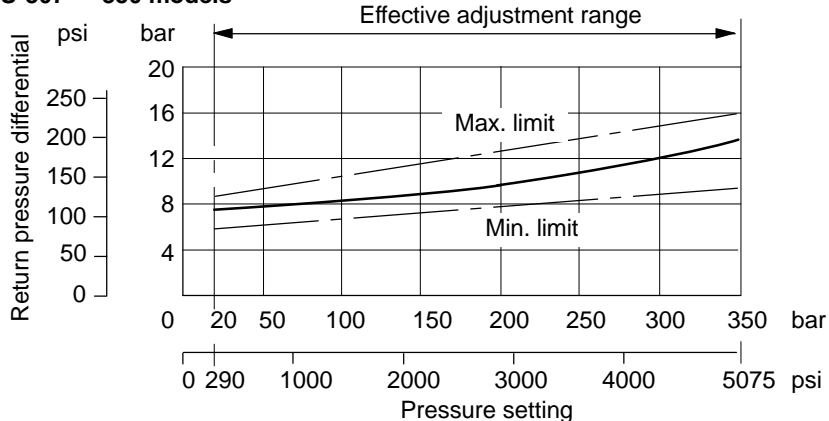
S*307---55 models



S*307---150 models



S*307---350 models



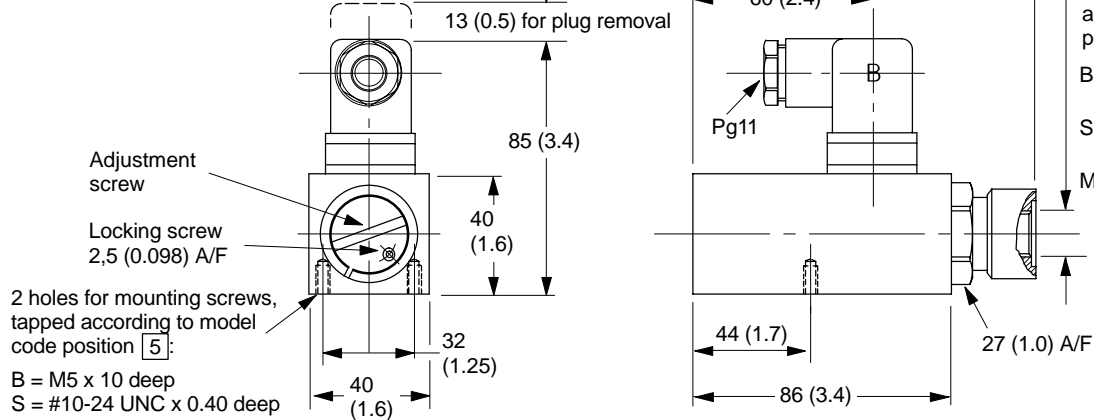
Installation Dimensions mm (inches)

Base Mounted Models, Blank at Model Code Position 2

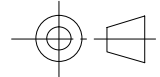
With screwdriver adjustment and locking screw

ST307-*-B**

ST307-*-S**



3rd angle projection

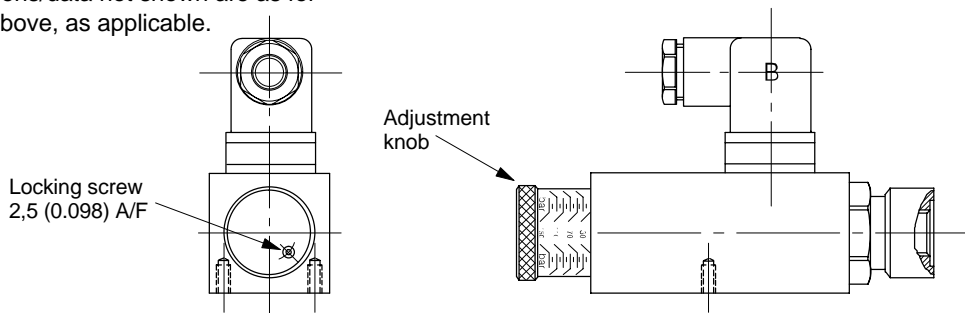


With knurled handknob adjuster and locking screw

ST307-V2-*-B**

ST307-V2-*-S**

Dimensions/data not shown are as for model above, as applicable.

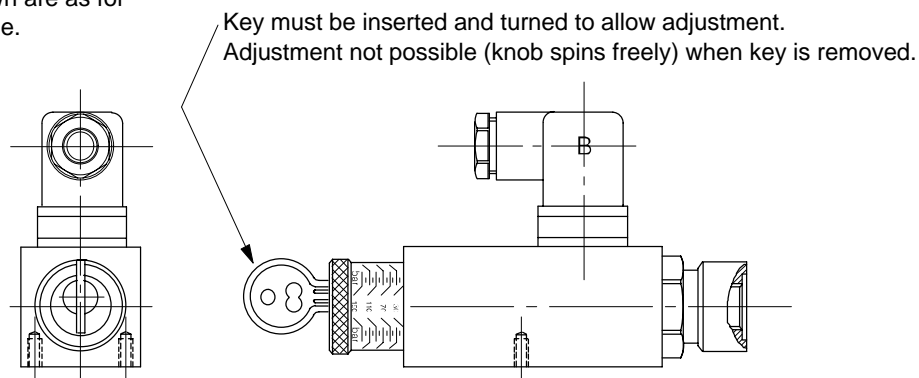


With knurled handknob adjuster and keylock

ST307-V2-AS-H2-*-B**

ST307-V2-AS-H2-*-S**

Dimensions/data not shown are as for model above, as applicable.



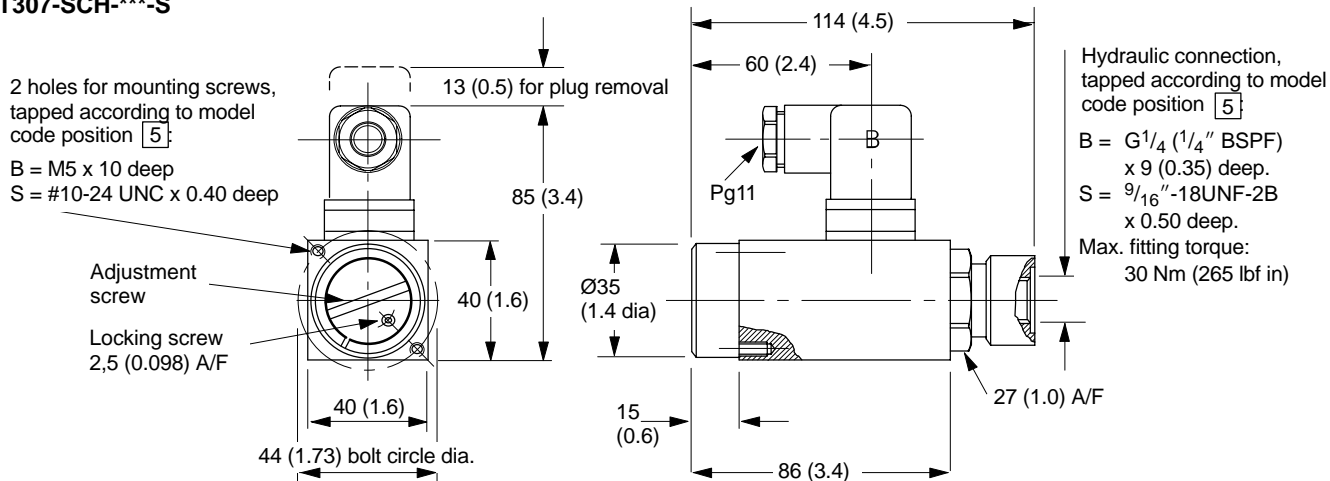
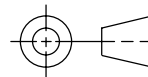
Models for Panel Mounting, "SCH" at Model Code Position 2

With screwdriver adjustment and locking screw

ST307-SCH-*-B**

ST307-SCH-*-S**

3rd angle
projection

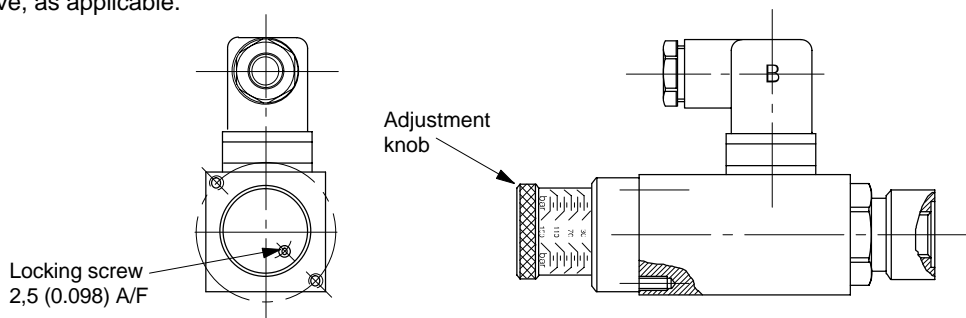


With knurled handknob adjuster and locking screw

ST307-SCH-V2-*-B**

ST307-SCH-V2-*-S**

Dimensions/data not shown are as for model above, as applicable.

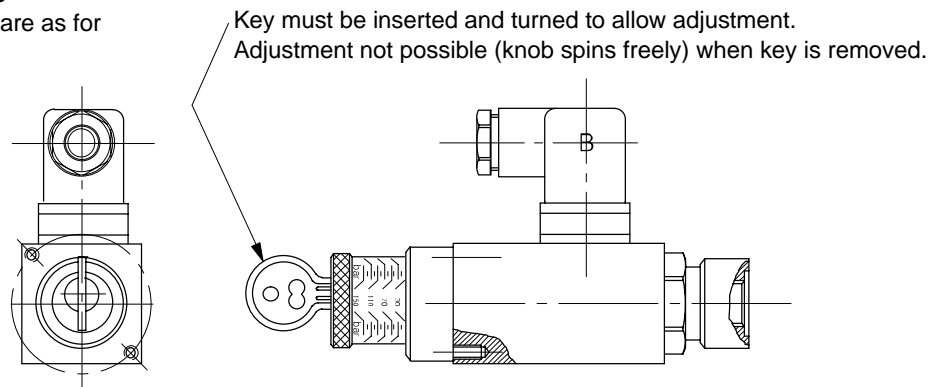


With knurled handknob adjuster and keylock

ST307-SCH-V2-AS-H2-*-B**

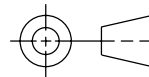
ST307-SCH-V2-AS-H2-*-S**

Dimensions/data not shown are as for model above, as applicable.



Subplate Mounted Models, "F" at Model Code Position 2

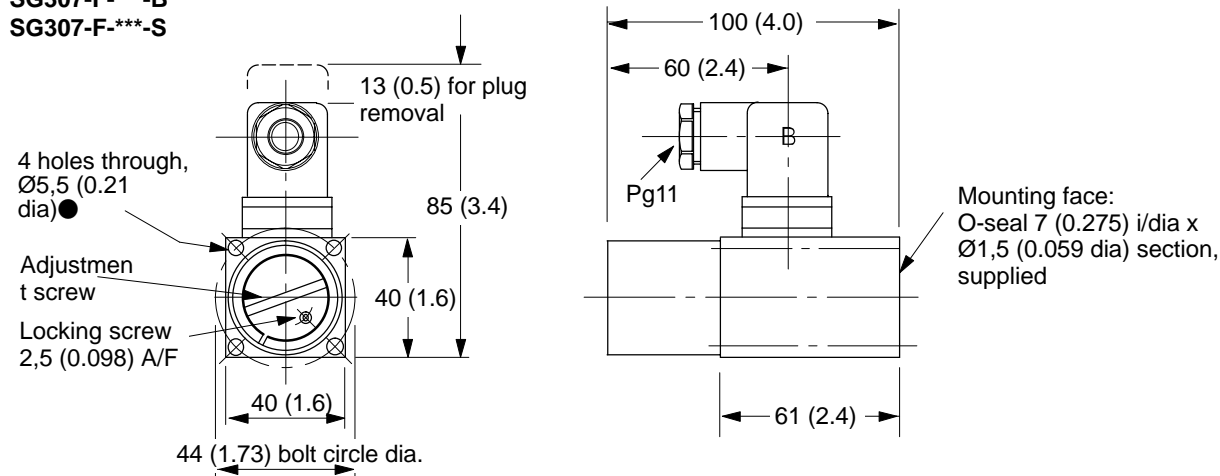
3rd angle
projection



With screwdriver adjustment and locking screw

SG307-F-*-B**

SG307-F-*-S**



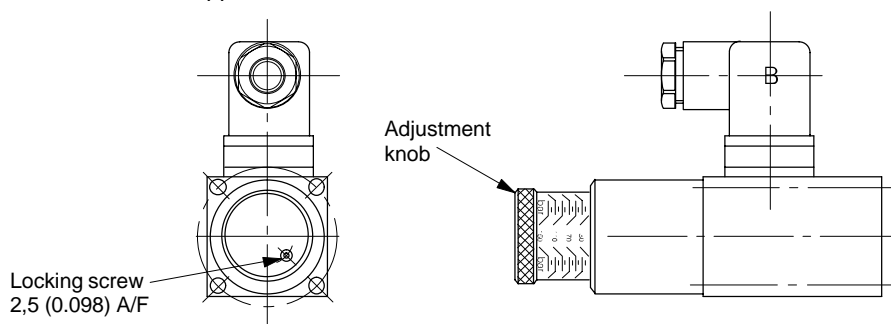
● Only two mounting bolts required, see Mounting Surface, this page.

With knurled handknob adjuster and locking screw

SG307-F-V2-*-B**

SG307-F-V2-*-S**

Dimensions/data not shown are as for model above, as applicable.

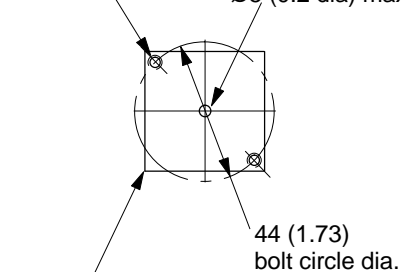


Mounting Surface for Model Types SG307-F

Valve can be positioned in 90° steps around axis, and dependent on space for electrical connector.

2 holes tapped M5 or #10-24UNC, or equivalent (user's option)

Port connection to pressure switch, Ø5 (0.2 dia) max.



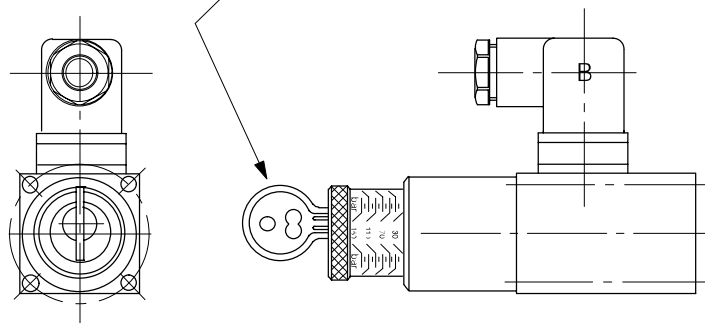
With knurled handknob adjuster and keylock

SG307-F-V2-AS-H2-*-B**

SG307-F-V2-AS-H2-*-S**

Dimensions/data not shown are as for model above, as applicable.

Key must be inserted and turned to allow adjustment. Adjustment not possible (knob spins freely) when key is removed.



Allows type SG307 switches to be incorporated into Vickers SystemStak assemblies.

Technical drawing of a valve block showing three views: side view, top view, and bottom view.

Side View: Shows the valve assembly with dimensions 76,0 (3.0) and 40,0 (1.57). The valve is labeled "A" and "B".

Top View: Shows the valve body with dimensions 46,0 (1.8) and 44 (1.73) bolt circle dia. The valve is labeled "A" and "B".

Bottom View: Shows the valve body with dimensions 40,5 (1.59) and 31,0 (1.22). The valve is labeled "A", "B", "C", and "T".

Dimensions and Notes:

- Ø4,0 (0.15 dia) x 4,25 (0.16) deep for orientation pin
- 2 holes tapped according to model type:
DGMP-3-*B-1*: M5 x 10 deep
DGMP-3-*S-1*: #10-24UNC x 0.4" deep
- Ø3,0 (0.12 dia)
- 3,5 (0.14)
- 44 (1.73) bolt circle dia.
- View on "A" (port "A" end of block) for model types: DGMP-3-P-*1*, DGMP-3-A-*1*
- View on "B" (port "B" end of block) for model type: DGMP-3-B-*1*
- Through ports Ø7,0 (0.27 dia) 4 off O-seals supplied
- Ø5,5 (0.21 dia) through for 4 mounting bolts

Specify full model code for pressure switches and for stacking adaptor blocks.

No spare parts are available for products shown in this catalog.