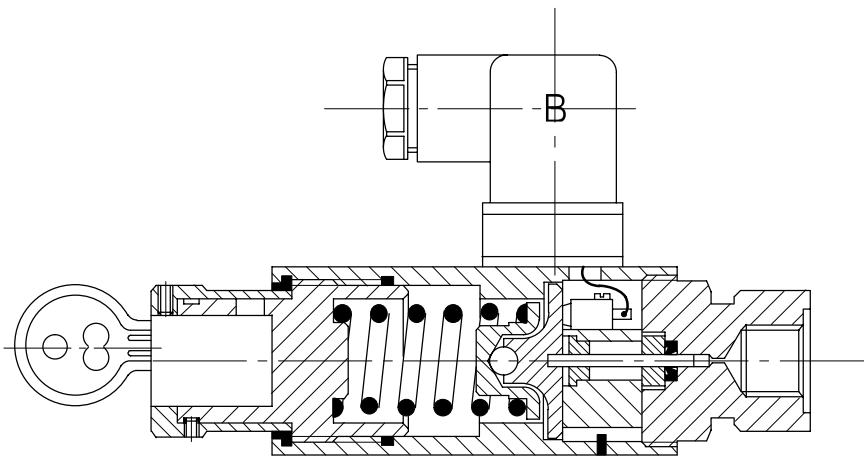


Pressure Switches

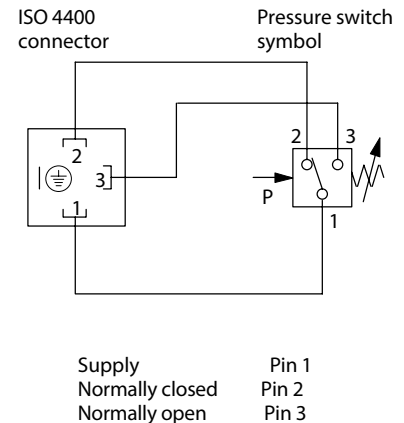
S*307 Series

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 $G^{1/4}$ " (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 by Danfoss SystemStak™ valves (see catalogue BC430856919687en-000101).

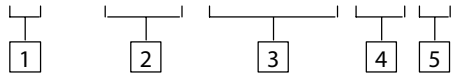
Features and Benefits

- 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



For Pressure Switches

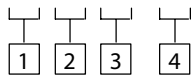
S * 307(-***)-(**-**-**-**-***(-**)



1 Hydraulic system connection T = Threaded pipe connection G = O-seal for subplate connection	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)
2 Mounting Blank = Two tapped holes for base mounting (type T only) SCH = Panel mounting F = Subplate mounting	5 Thread combinations: port/mounting bolt tappings B = G 1/4" (BSPF) port and/or metric mountings ST307 models only: S = SAE 6 port and/or UNC mountings
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	

For Stacking Adaptor Blocks

DGMP-3 - * - * -1 *



1 Valve/subplate mounting interface 3 = ISO 4401 size 03 (ANSI B93.7M, size D03)	3 Pressure switch mounting bolt tappings B = Metric S = UNC
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)	4 Design number, 10 series Subject to change. Installation dimensions unchanged for design numbers 10 to 19 inclusive.

Operating Data

General Information			
Design	Piston spring-loaded, mechanical stop prevents compression spring seizing due to excessive turning		
Connection	Internal G 1/4 thread or flange surface		
Adjusting	Adjusting screw cover or adjusting knurl		
Setting protection	Fixing cover or lockable adjusting knurl (E10 H2 closure)		
Installation	Arbitrary		
Weight	0,5 kg		
Hydraulic			
Switching pressure ranges	55 = 5-55 bar	150 = 20-150 bar	350 = 20-350 bar
P max. (standard seal)	300 bar	500 bar	600 bar
Repetitive accuracy	Deviation less than 1% (depending on operating range)		
Ambient temperature	- 40 °C to + 90 °C		
Pressure fluid	Oil, oil-water-emulsion		
Viscosity range	10 bis 800 mm²/s		
Load change	≥5x106		
Electrical			
Switch element	Electromechanical changeover switch CEE 24; VDE 0630, T85 UL 1054/CSA C22.2 No. 55 6 TSD, T90 pure silver profile contact, gold on silver palladium coated profile contact on request		
Voltage type	Alternating voltage / direct voltage		
Protection class DIN 60529	IP 65		
Electrical connection	Cable socket conforming to EN 175301-803, model type A, Pg11		
Cable cross-section	0,5 mm² to 1,5 mm²		
Seal	Outer jacket seal		
Switching Power			
Voltage	250 V/AC		24 V/DC
Max. ohmic load	5 A		5 A
Max. inductive load	1 A		4 A
Other Details			
Housing	Black painted aluminium		
Pressure connection	Brass		
Switch movement	Approx. 0.5 mm consequently very little wear on seal and tappet guide		
Connection plates	For NG6 and NG10 valve linking (only for pressure switches suitable for flange connection)		

Service Life

The service life of a piston pressure switch depends on numerous factors. Minimum and maximum pressures, cycle rate, load change, hydraulic vibration, the load (amp.) on the electrical switch, etc. Where a pressure switch needs to meet special requirements, we are in a position to address the most varied requirements in a flexible and targeted manner, thanks to our years of experience with material pairings, machining processes and production tolerances. The pressure switches must be installed so that the device is not exposed to damaging vibrations during operation and eventually cause a failure. The use of suitable damping materials can significantly extend the service life.

Reset Differential Pressure

Standard seal (normal version): The hysteresis achieved during continuous operation is approx. 7-12 % of the final value at a set pressure of approx. 60-70 % of the max. adjustable switching pressure.

Example: In the case of a SG307-F-150 pressure switch with a pressure range of 20-150 bar, a hysteresis of approx. 10,5-18,0 bar is achieved at a set pressure of 105 bar.

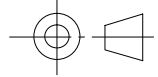
These values depend of course on the temperature and viscosity or the operating medium. The pressure ranges with different piston diameters also influences these values.

Installation Dimensions mm (inches)

Base Mounted Models, Blank at Model Code Position

2

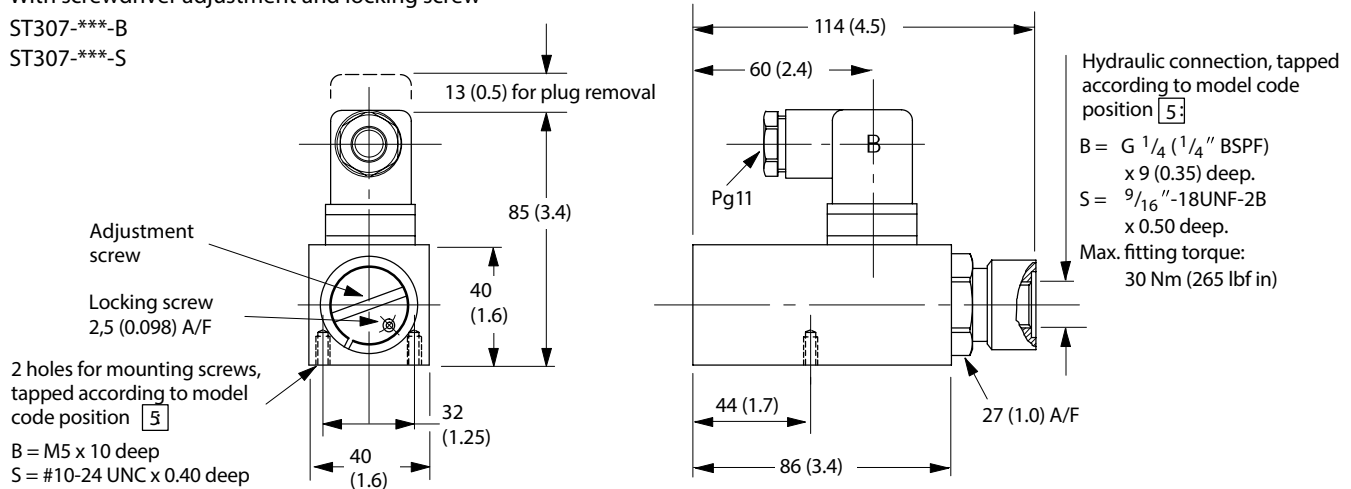
3rd angle
projection



With screwdriver adjustment and locking screw

ST307-***-B

ST307-***-S

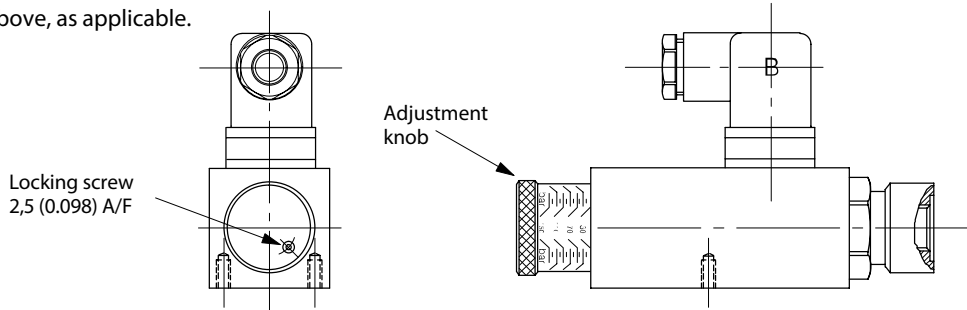


With knurled handknob adjuster and locking screw

ST307-V2-***-B

ST307-V2-***-S

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

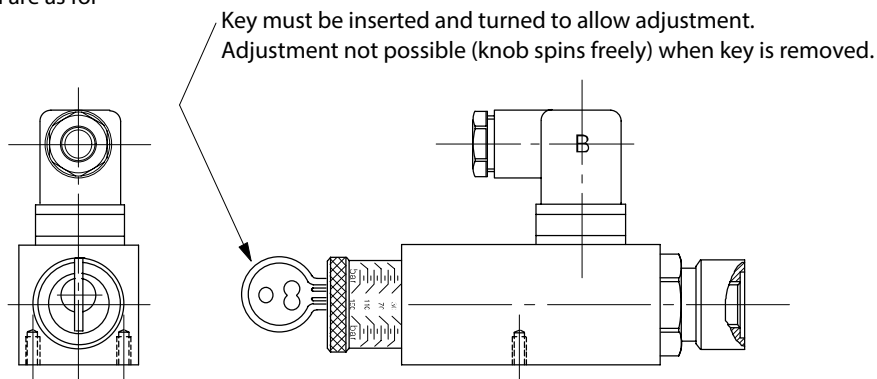


With knurled handknob adjuster and keylock

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

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

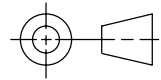
Dimensions/data not shown are as for
model above, as applicable.



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

2

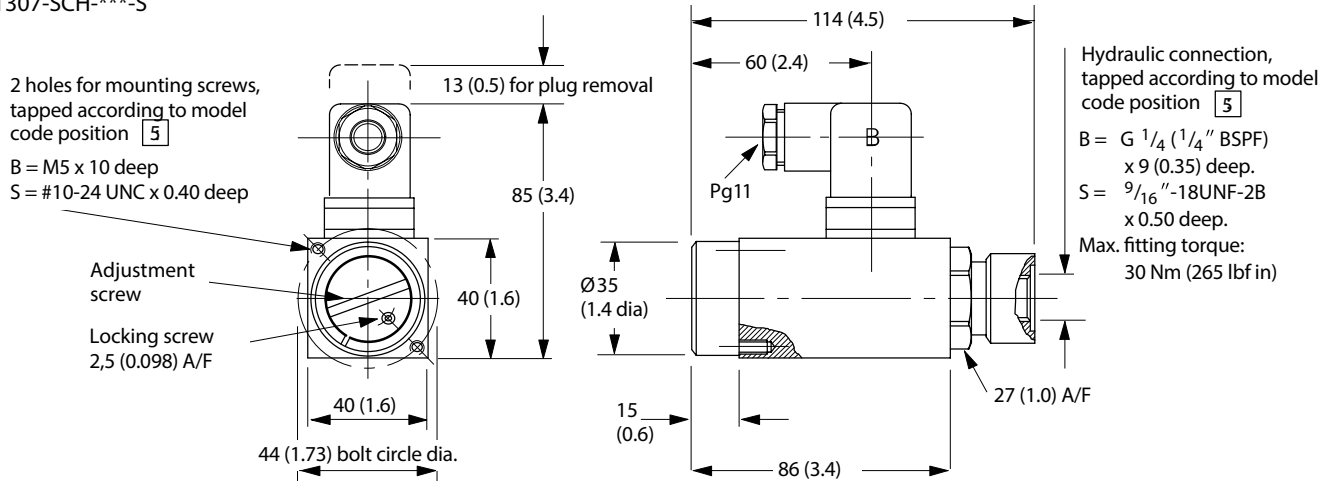
3rd angle
projection



With screwdriver adjustment and locking screw

ST307-SCH-***-B

ST307-SCH-***-S

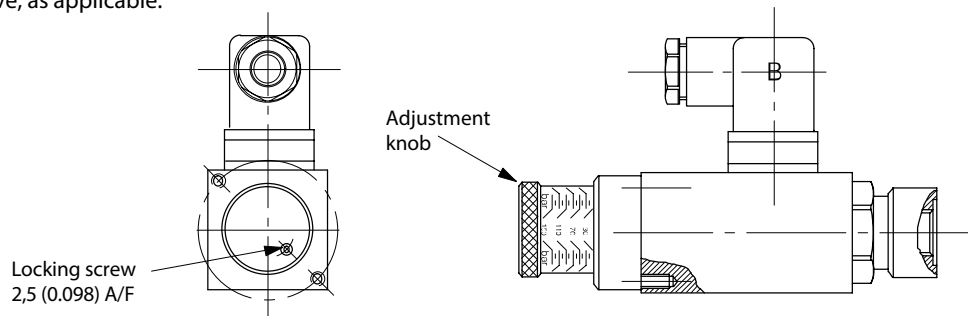


With knurled handknob adjuster and locking screw

ST307-SCH-V2-***-B

ST307-SCH-V2-***-S

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

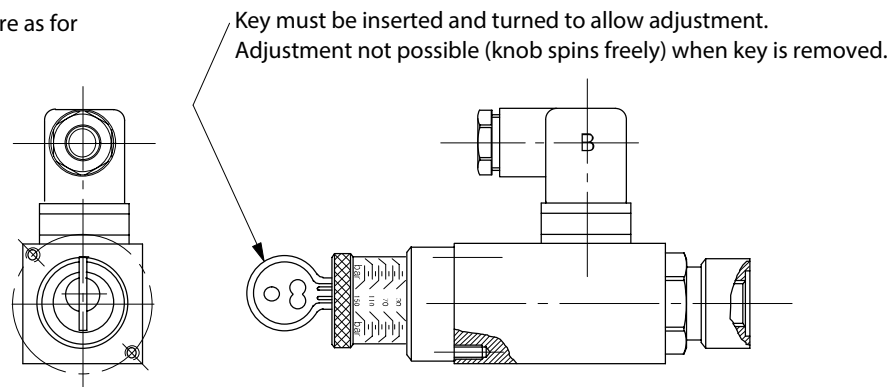


With knurled handknob adjuster and keylock

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

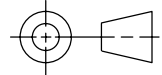
ST307-SCH-V2-AS-H2-***-S

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



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

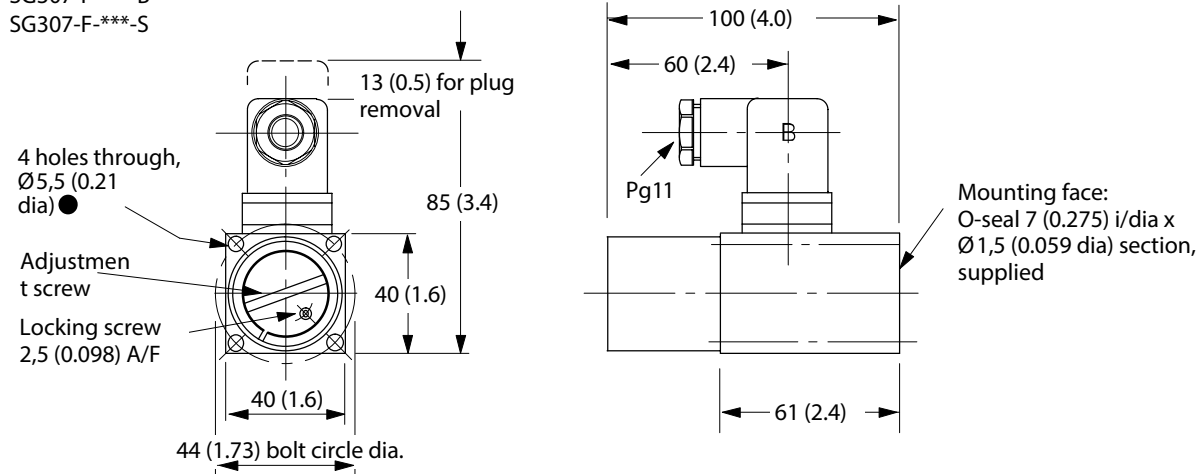
3rd angle
projection



With screwdriver adjustment and locking screw

SG307-F-***-B

SG307-F-***-S



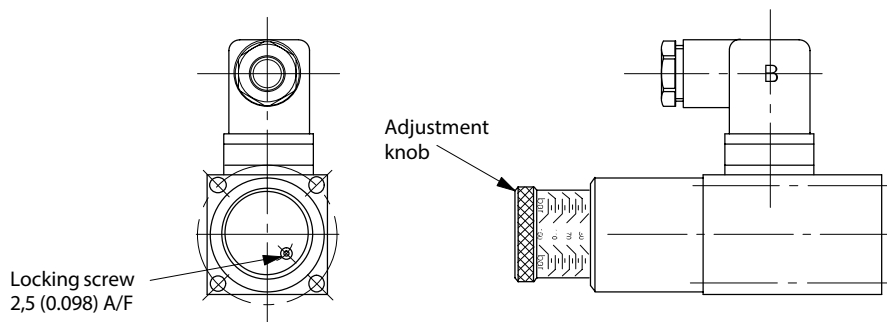
● Only two mounting bolts required, see Mounting Surface, this page.

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.

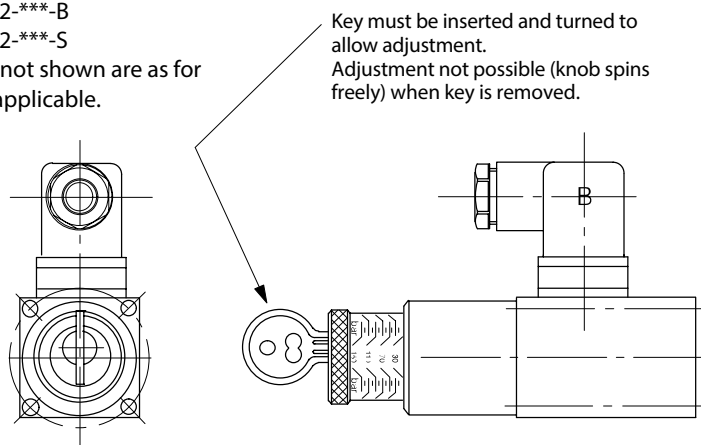


With knurled handknob adjuster and keylock

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

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

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

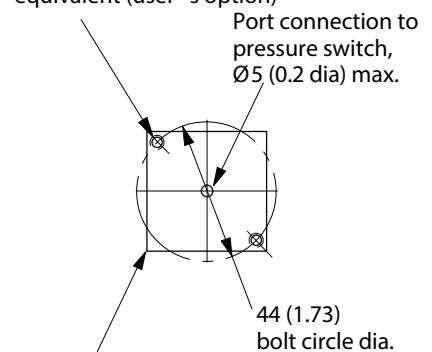


Mounting Surface
for Model Types SG307-F

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)

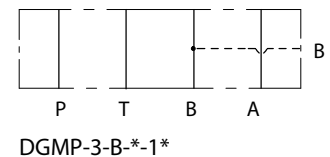
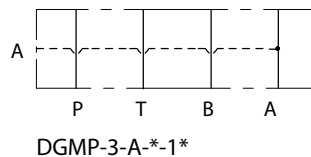
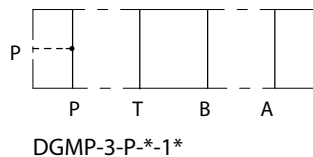
Port connection to pressure switch, Ø5 (0.2 dia) max.



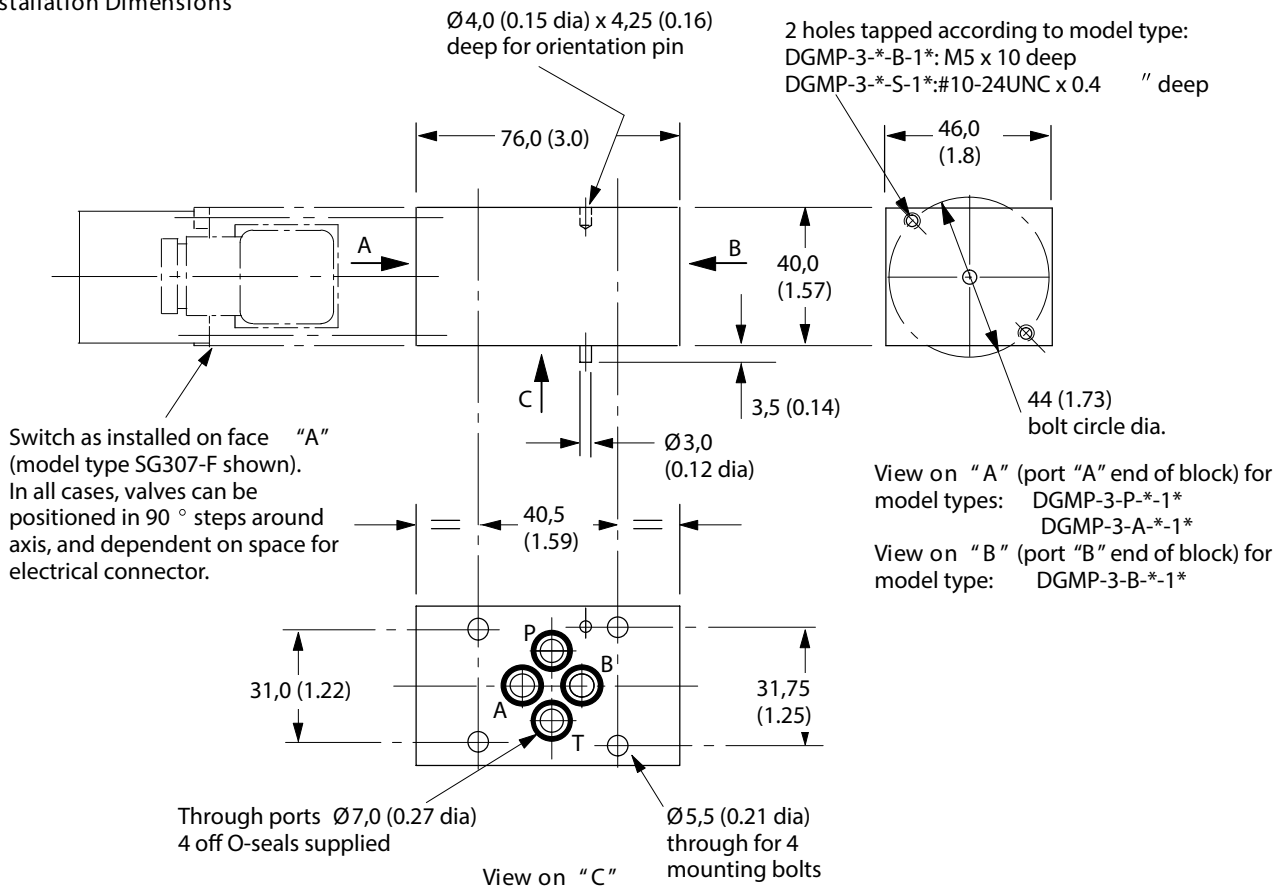
Stacking Adaptor Blocks

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

Functional Symbols



Installation Dimensions



Ordering Procedure

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

Spare Parts

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

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- Electric machines
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