



S201 / S202 Directional Control Valve - 2-Way, 2-Position Poppet

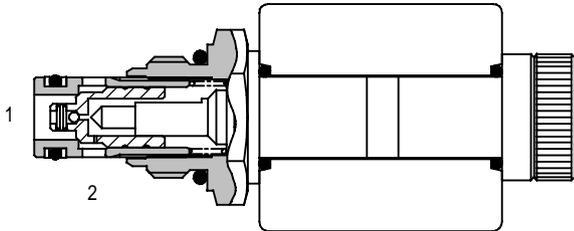
30 litres/min (8 US GPM) • 210 bar (3000 PSI)

S201

**NORMALLY OPEN
(as shown)**

S202

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.
- Reversible coil without affecting performance.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/14

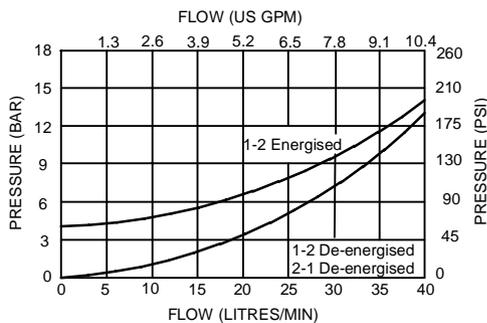
Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

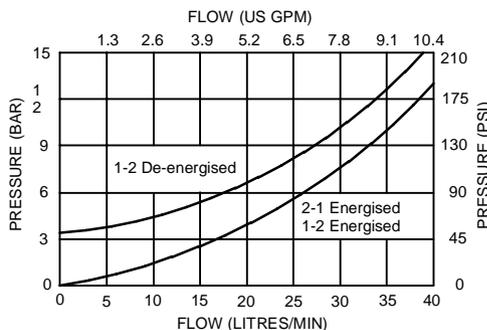
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S201 (Normally Open)



S202 (Normally Closed)



SPECIFICATIONS

Basic Model Code	S201 (N.O.)	S202 (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	30 litres/min (8 US GPM)	
Nominal flow (at Delta P = 5 bar (70 psi))	25 litres/min (6.5 US GPM)	
Internal Leakage	0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1043 (Nitrile)	SK1043V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.125 kg (0.28 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A879 (See Section 17)	
Torque into Cavity	20 Nm (15 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

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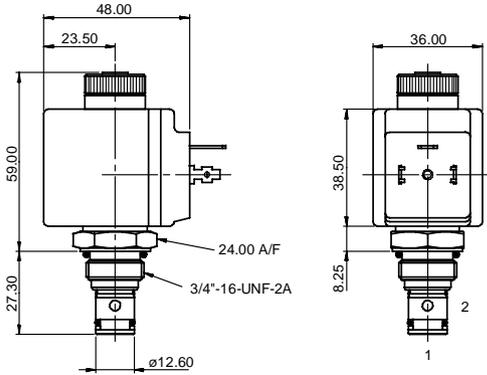
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CARTRIDGE ONLY

BASIC CODE: S201 (Normally Open)

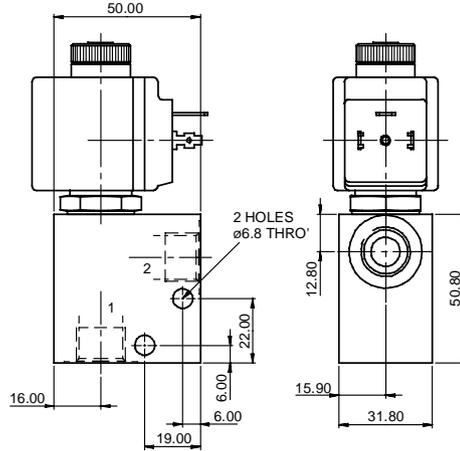


COMPLETE VALVE 1/4" 3/8" PORTS

BASIC CODE: S201 (Normally Open)

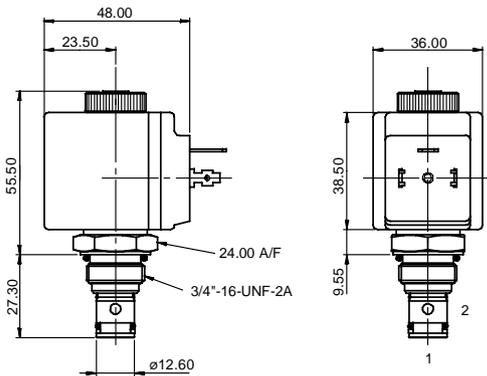
Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, steel
1/4" A1485	3/8" A15676	3/8" A14175	3/8" A14843
3/8" A1043			



CARTRIDGE ONLY

BASIC CODE: S202 (Normally Closed)

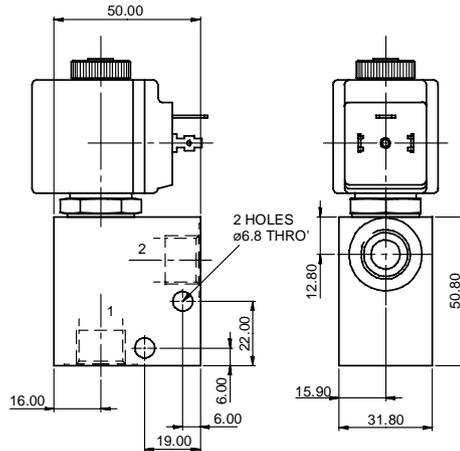


COMPLETE VALVE 1/4" 3/8" PORTS

BASIC CODE: S202 (Normally Closed)

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, steel
1/4" A1485	3/8" A15676	3/8" A14175	3/8" A14843
3/8" A1043			



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S201 N H 24 3W

Basic Code

S201 = (normally open)
S202 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

1 = Push and twist (S202 Only)
2 = Screw (S201 & S202)

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S205 / S206 Directional Control Valve - 2-Way, 2-Position Poppet

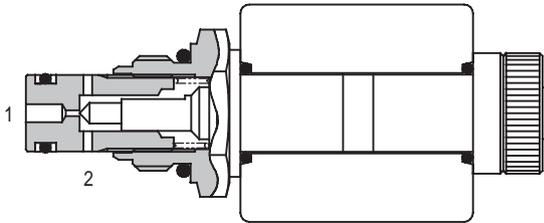
1 litre/min (0.25 US GPM) • 210 bar (3000 PSI)

S205

NORMALLY OPEN
(as shown)

S206

NORMALLY CLOSED



FEATURES

- Pilot flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

APPLICATION

To give on-off control of flows up to 1 litre/min (0.25 US GPM) and pressures up to 210 bar (3000 psi). Typical usage includes the control of the pilot or vent flow of another valve, for example a ventable relief valve. (See Section 2).

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/14

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

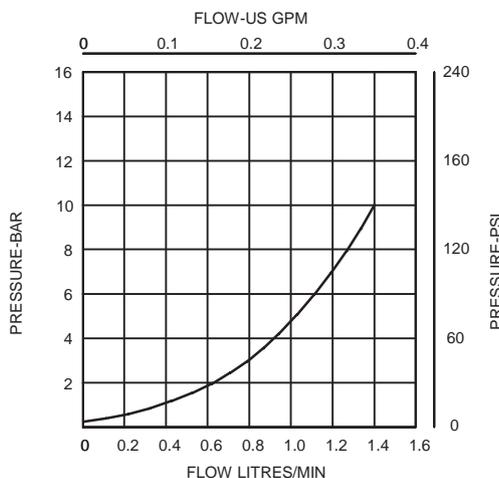
SPECIFICATIONS

Basic Model Code	S205 (N.O.)	S206 (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	1 litre/min (0.25 US GPM)	
Nominal Flow (at Delta P = 5 bar (70 psi))	1 litre/min (0.25 US GPM)	
Internal Leakage	0.3 ml/min (5 dpm) when closed 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1043 (Nitrile) SK1043V (Viton)	
Mounting Position	Unrestricted	
Cartridge Weight	0.1 kg (0.2 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A879 (See Section 17)	
Torque into Cavity	22 Nm (15 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

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PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



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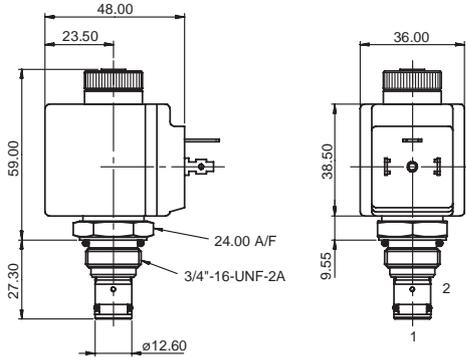
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CARTRIDGE ONLY

BASIC CODE: S205 (Normally Open)



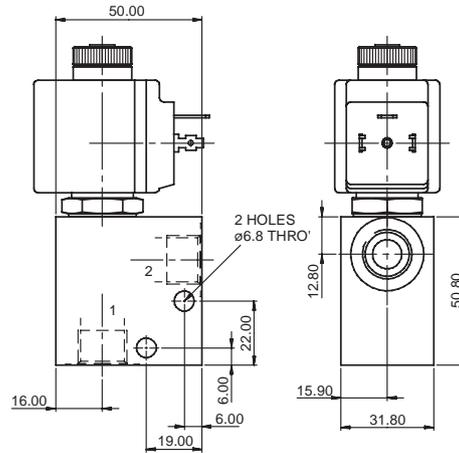
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S205 (Normally Open)

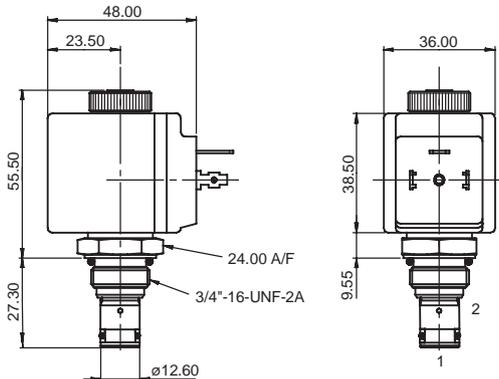
Body ONLY part numbers

BSP, aluminium		SAE, aluminium		BSP, steel		SAE, steel	
1/4"	A1485	3/8"	A15676	3/8"	A14175	3/8"	A14843
3/8"	A1043						



CARTRIDGE ONLY

BASIC CODE: S206 (Normally Closed)



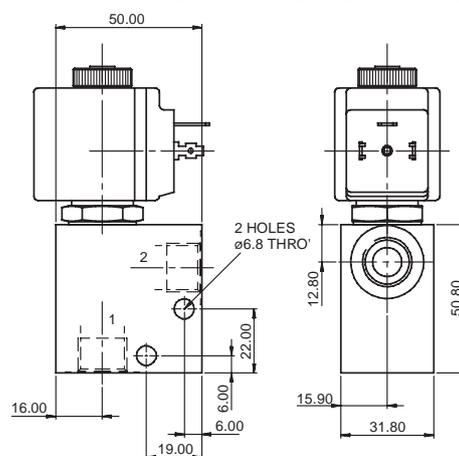
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S206 (Normally Closed)

Body ONLY part numbers

BSP, aluminium		SAE, aluminium		BSP, steel		SAE, steel	
1/4"	A1485	3/8"	A15676	3/8"	A14175	3/8"	A14843
3/8"	A1043						



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S205 N H 24 3W

Basic Code
S205 = (normally open)
S206 = (normally closed)

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
1 = Push and twist (S206 Only)
2 = Screw (S205 & S206)

Port Sizes
2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage
12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination
H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice

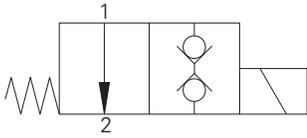
S207 - Solenoid Valve

Poppet type, normally open solenoid valve

Port 1 - 1 L/min (0.25 USgpm) • 350 bar (5000 psi)

Port 2 - 1 L/min (0.25 USgpm) • 210 bar (3000 psi)

A



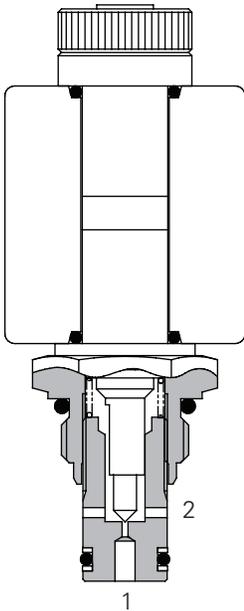
Operation

In the de-energized position the valve allows free flow from port 1 to 2. When the solenoid is energized the poppet closes the valve blocking flow from port 1 to 2 and 2 to 1.

Features

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with valves of same series.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

Sectional View



Performance Data

Ratings and Specifications

Performance data is typical with viscosity at 32 cST (150 SSU)

Max working pressure	Port 2 210 bar (3000 psi) Port 1 350 bar (5000 psi)
Rated flow	1 L/min (0.25 USgpm)
Internal leakage	0.3 ml/min (5 dpm) when energized 210 bar differential at 32 est.
Temperature range	-30° to 120°C (-22° to +248°F)
Cavity	A879 (see Section M)
Torque cartridge into cavity	20 Nm (15 lbs ft)
Mounting position	Unrestricted
Fluids	All general purpose hydraulics fluids such as MIL-H-5606, SAE 10, SAE 20, etc
Seal Material	Standard Viton with PTFE back up rings
Filtration	BS5540/4 Class 18/13 (25 micron or better)
Nominal viscosity range	15 to 250 cSt
Standard housing materials	Aluminium
Cartridge material	Working parts hardened and ground steel. External surfaces zinc plated.
Coil Weight	0.2 kg (0.4 lbs)
Weight	0.1 kg (0.2 lbs)
Seal kit	SK1043V (Viton)
Coil part number	C13-*/*/22
Coil voltage available	12, 24 VDC, 110, 220, VAC*

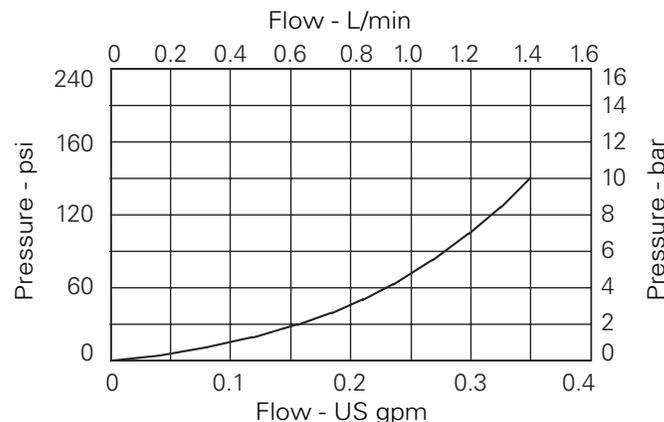
Viton is a registered trademark of E.I. DuPont

*AC coils must be used with a rectifying connector

Description

This is a 2-way, 2-position, poppet type, low flow, high pressure, normally open solenoid valve. This valve is used as a pilot valve to control pilot lines or as the pilot valve for logic elements. It can be used to vent systems up to 350 bar (5000psi) on the inlet port but the outlet port should be limited to 210 bar (3000psi).

Pressure Drop



Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

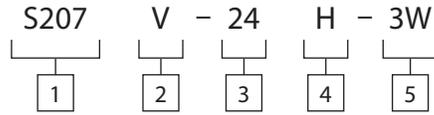
S207 - Solenoid Valve

Poppet type, normally open solenoid valve

Port 1 - 1 L/min (0.25 USgpm) • 350 bar (5000 psi)

Port 2 - 1 L/min (0.25 USgpm) • 210 bar (3000 psi)

Model Code



1 Function
S207 - Normally open

2 Seal Material
V - Viton®

3 Voltage
12 - 12VDC
24 - 24VDC
110 - 110VAC
220 - 220VAC

4 Coil Termination
H - DIN43650
F - Flying lead
DM - Deutsch moulded
Other terminations available on request.

5 Port Sizes

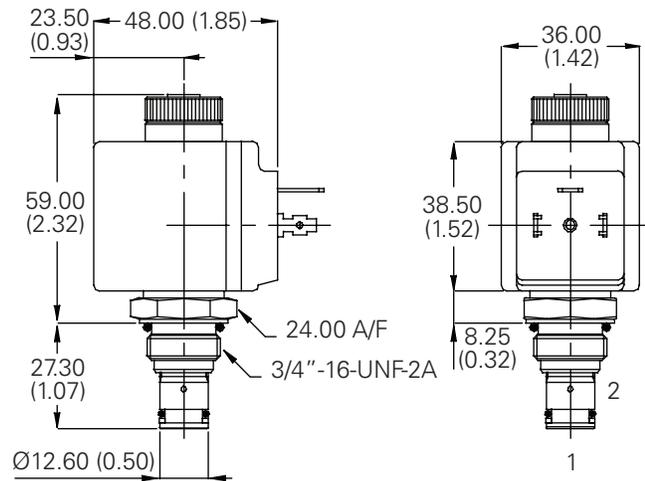
Code	Port Size	Housing Number - Body Only	
		Aluminium	Steel
2W	1/4" BSP	A1485	
3W	3/8" BSP	A1043	A14175
6T	3/8" SAE	A15676	A14843

Dimensions

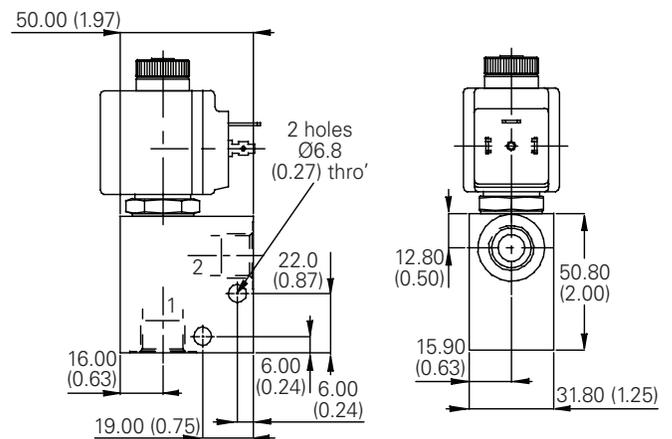
mm (inch)

Note: For applications above 210 bar please consult our technical department or use the steel body option.

Cartridge Only



Installation Drawing (Aluminum, steel)





S210 / S211 Directional Control Valve - 2-Way, 2-Position Spool

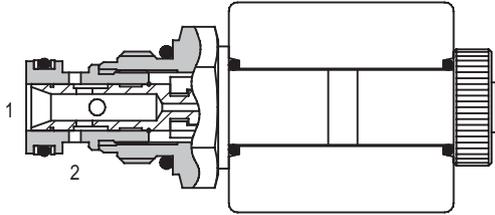
Up to 20 litres/min (5 US GPM) • 210 bar (3000 PSI)

S210

NORMALLY OPEN
(as shown)

S211

NORMALLY CLOSED



COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*/*/14

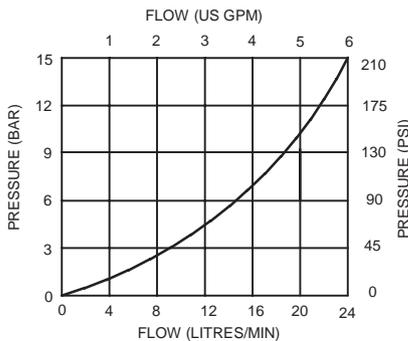
Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

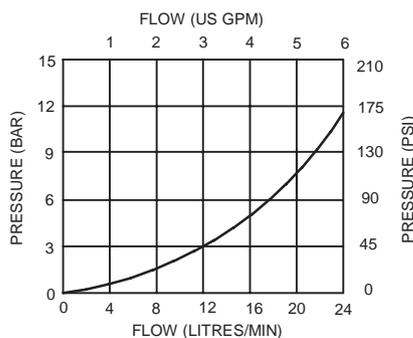
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S210 (Normally Open)



S211 (Normally Closed)



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	S210 (N.O.)	S211 (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	See performance graphs	
Nominal Flow (at Delta P = 5 bar (70 psi))	15 litres/min (4 US GPM)	
Internal Leakage	Less than 60 ml/min 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK972 (Nitrile)	SK972V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.125 kg (0.3 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A6701 (See Section 17)	
Torque into Cavity	20 Nm (15 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

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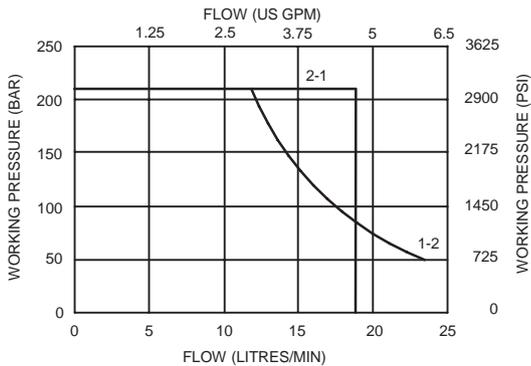
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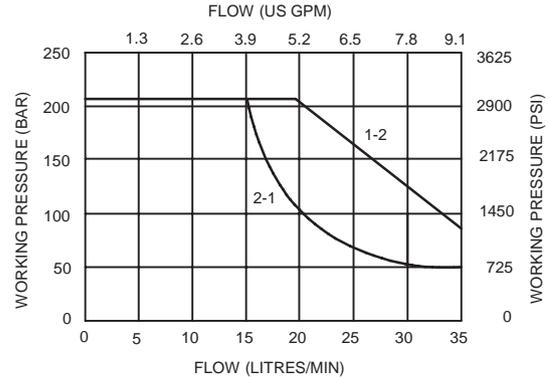
PERFORMANCE

S210 (Normally open)



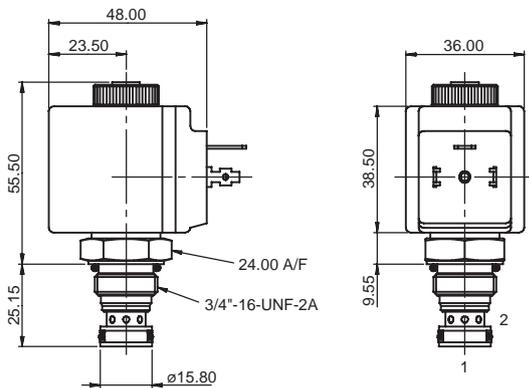
PERFORMANCE

S211 (Normally closed)



CARTRIDGE ONLY

BASIC CODE: S210 (Normally Open)
S211 (Normally Closed)

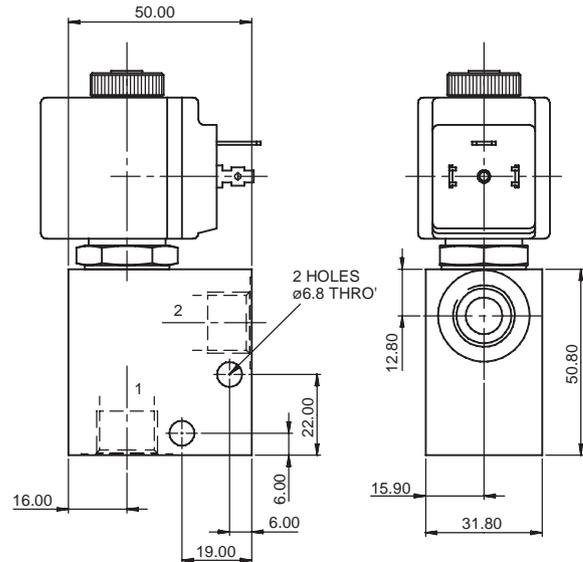


COMPLETE VALVE 1/4" 3/8" PORTS

BASIC CODE: S210 (Normally Open)
S211 (Normally Closed)

Body ONLY part numbers

BSP, aluminium *SAE, aluminium*
1/4" A12592 3/8" A19355
3/8" A7450



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S21* **N** **H** **24** **3W**

Basic Code

S210 = (normally open)
S211 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

1 = Push and twist (S210 & S211)
2 = Screw (S210 & S211)

Port Sizes

2W = 1/4" BSP 6T = 3/8" SAE
3W = 3/8" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice

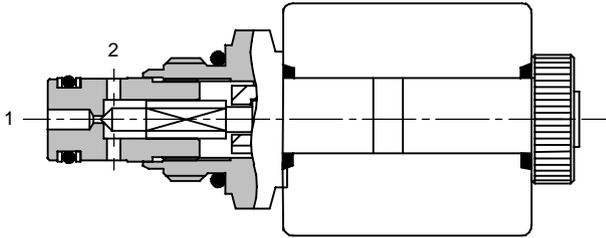


S215 Directional Control Valve 2-Way, 2-Position Bi-Directional Poppet

Up to 1 litre/min (0.26 US GPM) • Up to 210 bar (3000 PSI)

S215

NORMALLY CLOSED



FEATURES

- Very low leakage poppet design.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

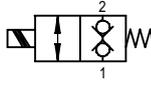
(See Page 11-1021)

Part Number: C13-*-/27

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

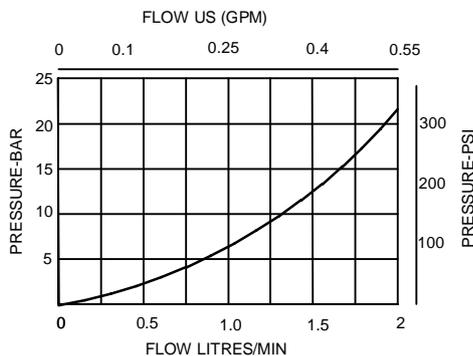
SPECIFICATIONS

Basic Model Code	S215
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	1 litres/min (0.26 US GPM)
Internal Leakage	Less than 0.3 ml/min (5 dpm) 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1043 (Nitrile) SK1043V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.15 kg (0.3 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A879 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



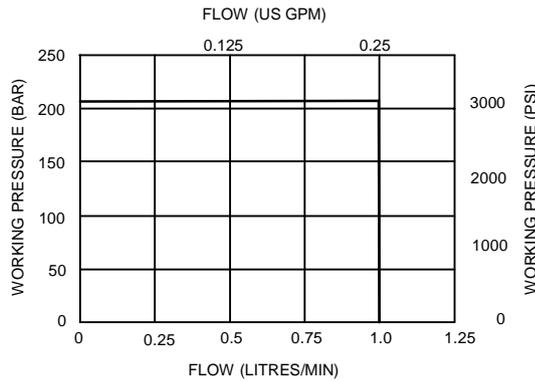
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Integrated Hydraulics Inc

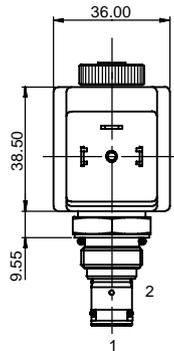
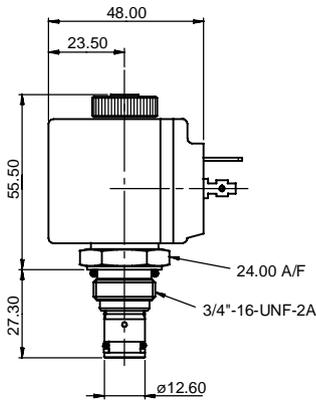
7047 Spinach Drive, Mentor, Ohio 44060, USA
Tel: (440) 974 3171 Fax: (440) 974 3170
Website: www.integratedhydraulics.com

PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S215



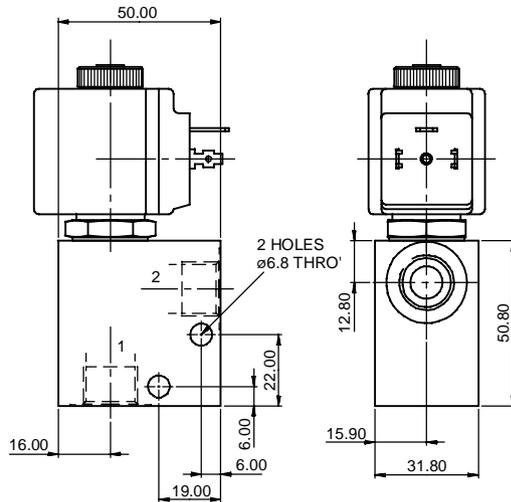
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S215

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, steel
1/4" A1485	3/8" A15676	3/8" A14175	3/8" A14843
3/8" A1043			



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S215 N H 24 3W

Basic Code
S215

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
1 = Push and Twist
2 = Screw

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice

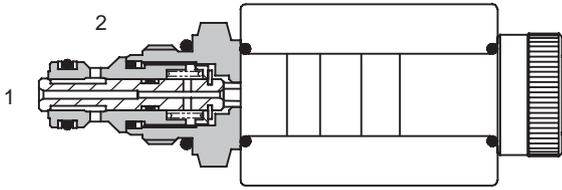


S217(H) Directional Control Valve 2-Way, 2-Position Bi-Directional Poppet

Up to 20 litres/min (5 US GPM) • Up to 210 bar (3000 PSI)

S217(H)

NORMALLY CLOSED



COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19 (S217)
C16-*/29 (S217H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

FEATURES

- Very low leakage poppet design.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

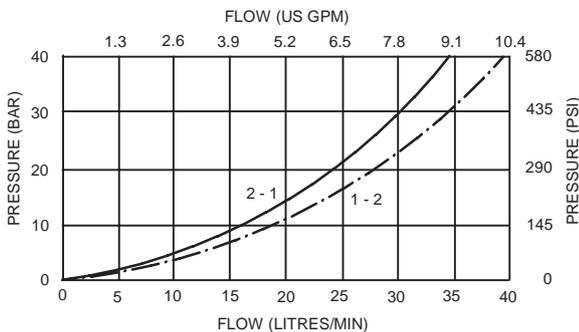
SPECIFICATIONS

Basic Model Code	S217(H)
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	20 litres/min (5 US GPM)
Internal Leakage	Less than 0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1157 (Nitrile) SK1157V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.17 kg (0.37 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A879 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



Integrated Hydraulics Ltd

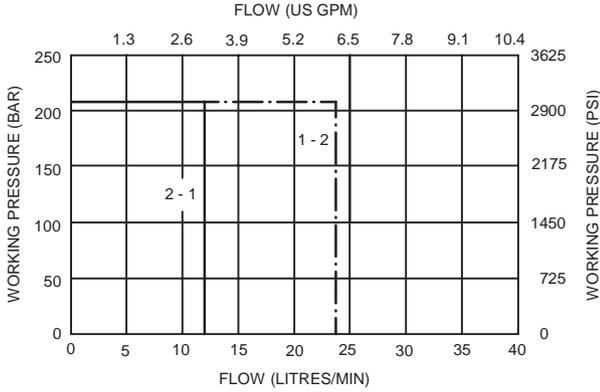
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Website: www.integratedhydraulics.com

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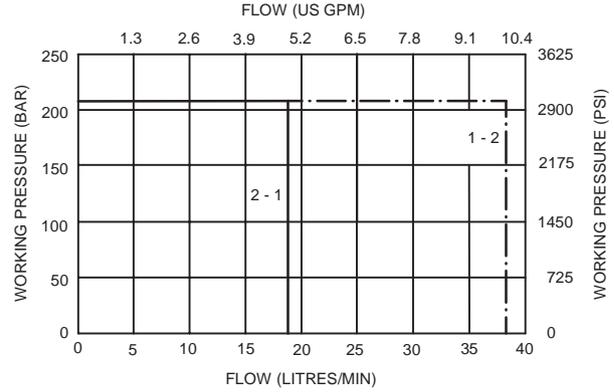
PERFORMANCE

S217 (standard valve)



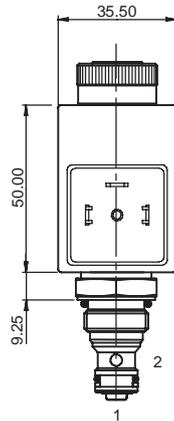
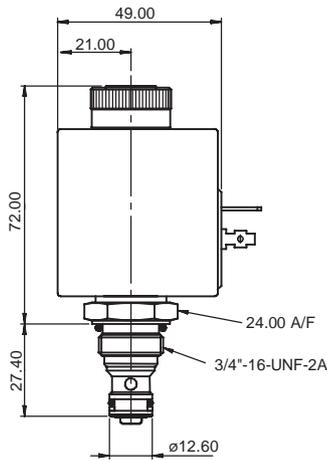
PERFORMANCE

S217H (Heavy duty valve)



CARTRIDGE ONLY

BASIC CODE: S217(H)



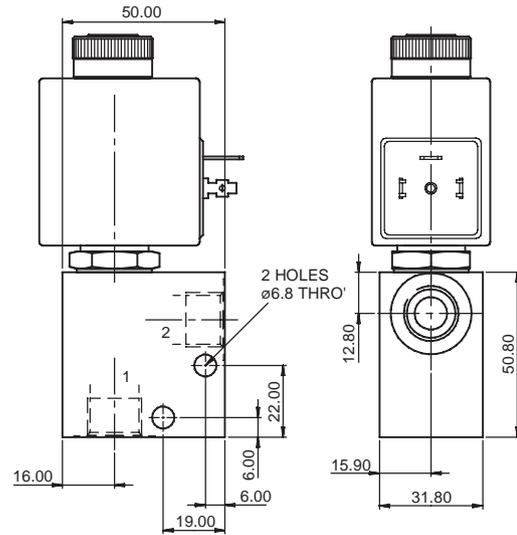
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S217(H)

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, steel
1/4" A1485			
3/8" A1043	3/8" A15676	3/8" A14175	3/8" A14843



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S217* **N** **H** **24** **3W**

Basic Code

S217 = (standard valve)
S217H = (heavy duty valve)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw
3 = Push

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

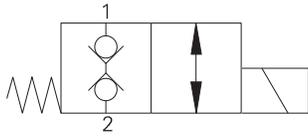
H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice

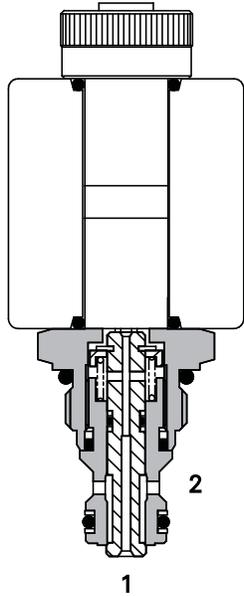
S217A - Directional control valve

Bi-directional, normally closed poppet solenoid valve
Up to 10 L/min (2.6 USgpm) • Up to 210 bar (3000 psi)

A



Sectional view



Operation

In the de-energized position the valve is blocked in both directions. When the solenoid is energized the poppet is pushed off the seat allowing flow in both directions.

Features

- Very low leakage poppet design.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with valves of same series.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

Performance data

Ratings and specifications

Performance data is typical with fluid at Viscosity 32 cST (150 SSU)

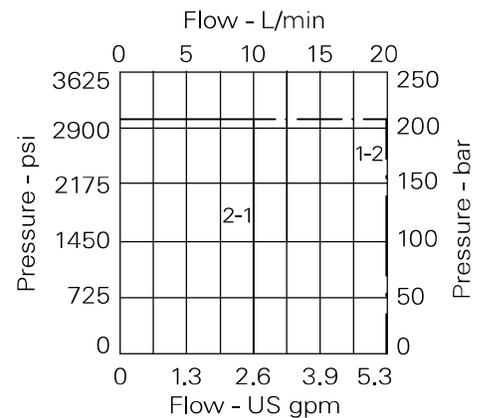
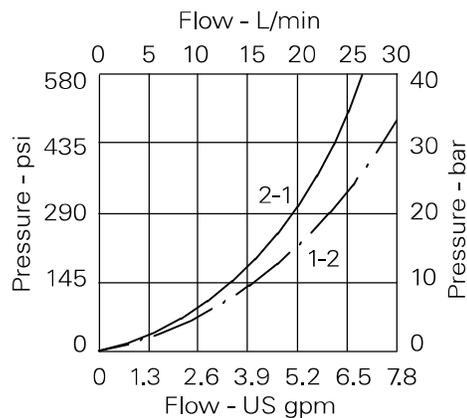
Typical application pressure	210 bar (3000 psi)
Rated flow	Up to 10 L/min (2.6 USgpm)
Nominal flow	10 L/min (2.6 USgpm)
Internal leakage	Less than 0.6 ml/min (10 dpm) 210 bar differential at 32 cSt
Temperature range	-30° to +120°C (-22° to +248°F)
Cavity	A879 (see Section M)
Electrical data	See coil data sheet
Torque cartridge into cavity	20 Nm (15 lbs ft)
Mounting position	Unrestricted
Fluids	All general purpose hydraulics fluids such as: MIL-H-5606, SAE 10, SAE 20 etc
Seal material	Standard nitrile with PTFE back up rings
Filtration	BS5540/4 Class 18/13 (25 micron or better)
Nominal viscosity range	15 to 250 cSt
Standard housing materials	Aluminium alloy
Coil weight	0.2 kg (0.4 lbs)
Cartridge weight	0.2 kg (0.4 lbs)
Seal kit	SK1043 (Nitrile) SK1043V (Viton)
Coil part number	C13-*.*/27
Coil voltage available	12, 24 VDC, 110, 220, VAC*

Viton is a registered trademark of E.I. DuPont
*AC coils must be used with a rectifying connector

Description

This is a direct acting, electrically operated 2 way 2 position normally closed poppet style screw in cartridge valve. Ideal for load holding and load lowering applications.

Pressure drop

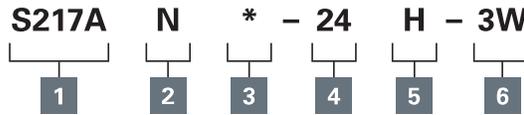


Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

S217A - Directional control valve

Bi-directional, normally closed poppet solenoid valve
Up to 10 L/min (2.6 USgpm) • Up to 210 bar (3000 psi)

Model code



1 Function

S217A - Normally open

2 Seal material

N - Nitrile

V - Viton[®]

3 Manual Override

2 - Screw

3 - Push

(Consult factory for availability)

See page A-980.

4 Voltage

12 - 12 VDC

24 - 24 VDC

110 - 110 VAC

220 - 220 VAC

5 Coil Termination

H - ISO 4400 DIN 43650

F - Flying lead

DM - Deutsch moulded

Other terminations available on request.

6 Port sizes

Code	Port size	Housing number	
		Aluminium	Steel
2W	1/4" BSP	A1485	
3W	3/8" BSP	A1043	A14175
6T	3/8" SAE	A15676	A14843

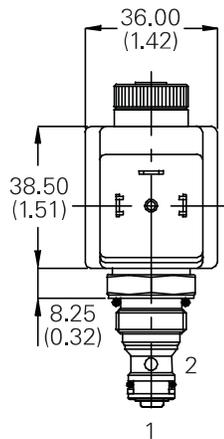
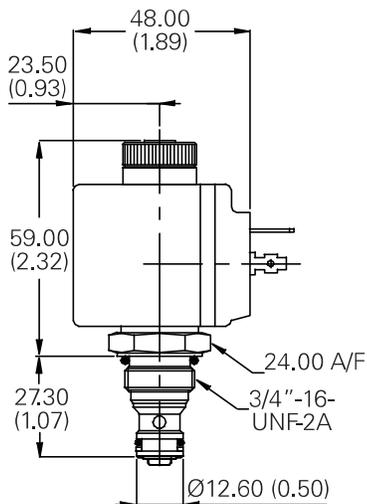
Dimensions

mm (inch)

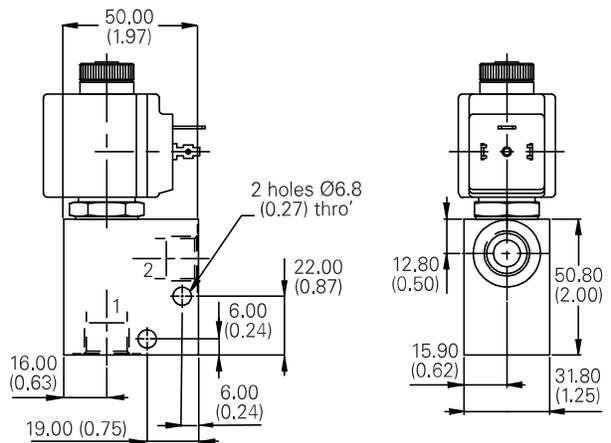
Cartridge only

Basic code

S217



Installation drawing



Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.



S501 / S502 Directional Control Valve - 2-Way, 2-Position Poppet

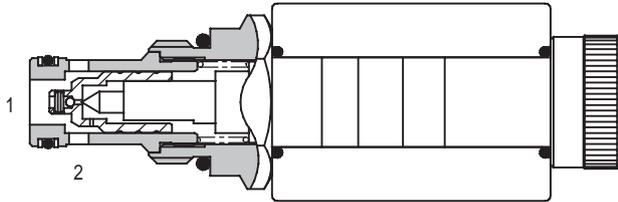
60 litres/min (16 US GPM) • 210 bar (3000 PSI)

S501

NORMALLY OPEN
(as shown)

S502

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/*/19

Voltage available: 12, 24 VDC
110, 220 VAC*

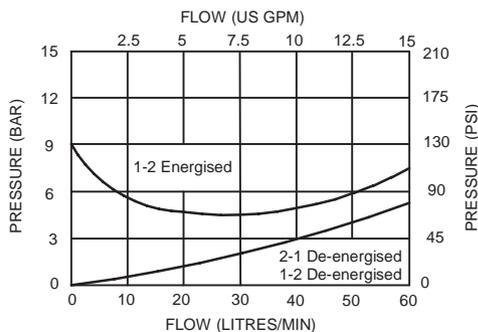
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

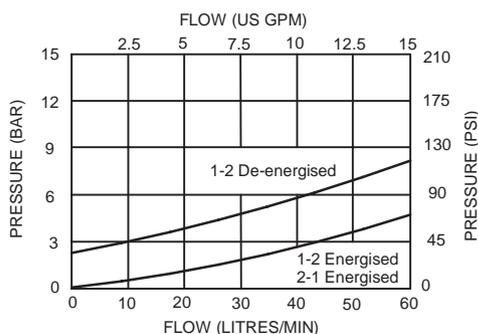
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S501 (Normally Open)



S502 (Normally Closed)



Basic Model Code	S501 (N.O.)	S502 (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	60 litres/min (16 US GPM)	
Nominal Flow (at Delta P = 5 bar (70 psi))	60 litres/min (16 US GPM)	
Internal Leakage	0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1028 (Nitrile)	SK1028V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.2 kg (0.4 lbs)	
Coil Weight	0.3 kg (0.6 lbs)	
Cavity Number	A12370 (See Section 17)	
Torque into Cavity	30 Nm (22 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

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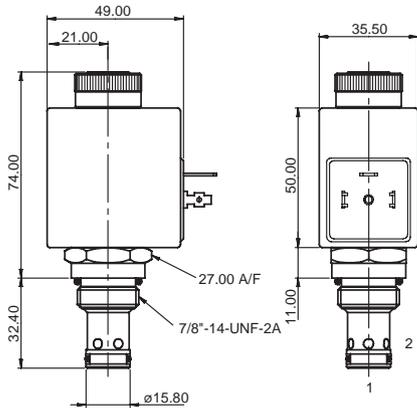
Collins Road, Heathcote Ind. Est., Warwick, CV34 6TF, UK.
Tel: +44 (0) 1926 881171 Fax: +44 (0) 1926 315729
Website: www.integratedhydraulics.com

Integrated Hydraulics Inc

7047 Spinach Drive, Mentor, Ohio 44060, USA
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Website: www.integratedhydraulics.com

CARTRIDGE ONLY

BASIC CODE: S501 (Normally Open)



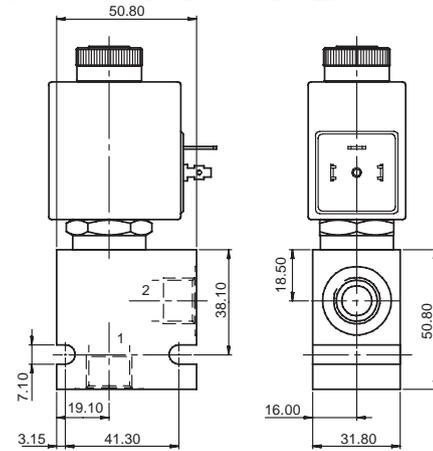
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S501 (Normally Open)

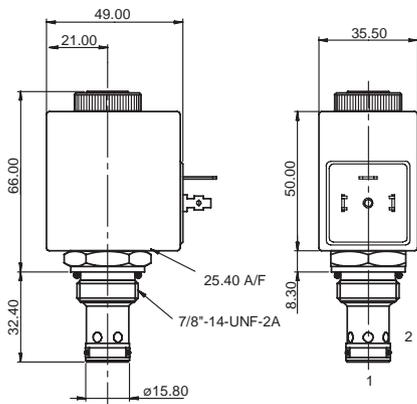
Body ONLY part numbers

BSP, aluminium	SAE, aluminium	SAE, steel
3/8" B19053	1/2" B19402	1/2" B20601
1/2" B19356		



CARTRIDGE ONLY

BASIC CODE: S502 (Normally Closed)



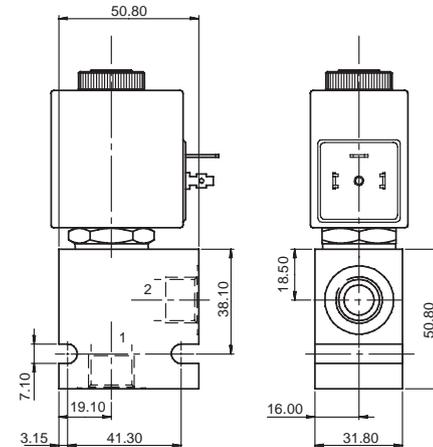
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S502 (Normally Closed)

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	SAE, steel
3/8" B19053	1/2" B19402	1/2" B20601
1/2" B19356		



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S501 N H 24 3W

Basic Code

S501 = (normally open)
S502 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw (S501, S502)

Port Sizes

3W = 3/8" BSP
4W = 1/2" BSP
8T = 1/2" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S510(H) / S511(H) Directional Control Valve 2-Way, 2-Position Spool

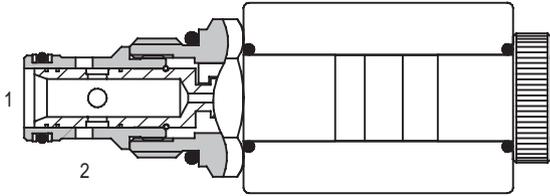
Up to 25 litres/min (6.5 US GPM) • Up to 210 bar (3000 PSI)

S510(H)

NORMALLY OPEN
(as shown)

S511(H)

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19 (S510 / S511)
C16-*/29 (S510H / S511H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

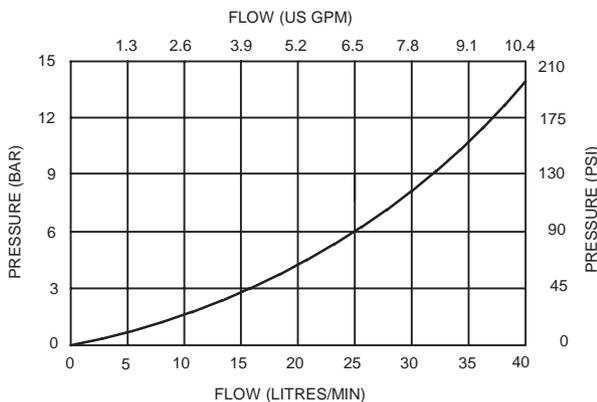
SPECIFICATIONS

Basic Model Code	S510(H) (N.O.)	S511(H) (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	See performance graphs	
Nominal flow (at Delta P = 5 bar (70 psi))	22 litres/min (6 US GPM)	
Internal Leakage	Less than 120 ml/min 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1028 (Nitrile)	SK1028V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.2 kg (0.4 lbs)	
Coil Weight	0.3 kg (0.6 lbs)	
Cavity Number	A12370 (See Section 17)	
Torque into Cavity	30 Nm (22 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



Integrated Hydraulics Ltd

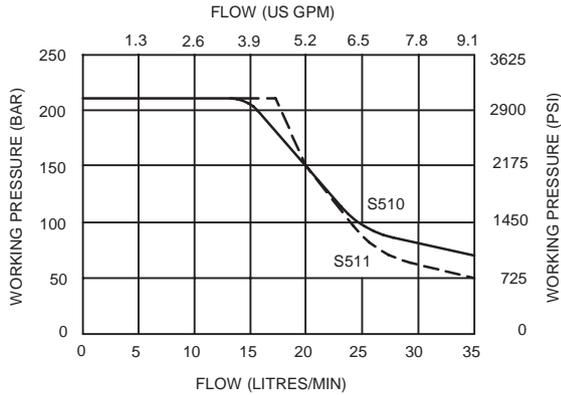
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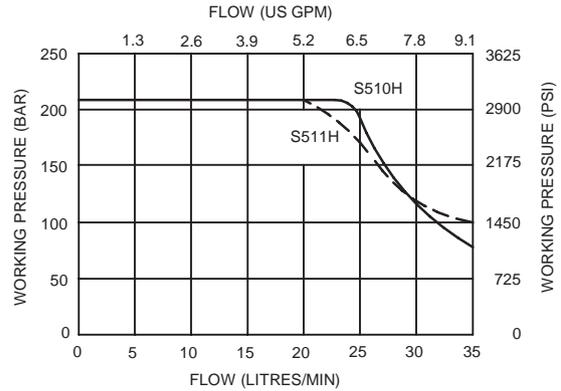
PERFORMANCE

S510 / S511 (Standard valve)



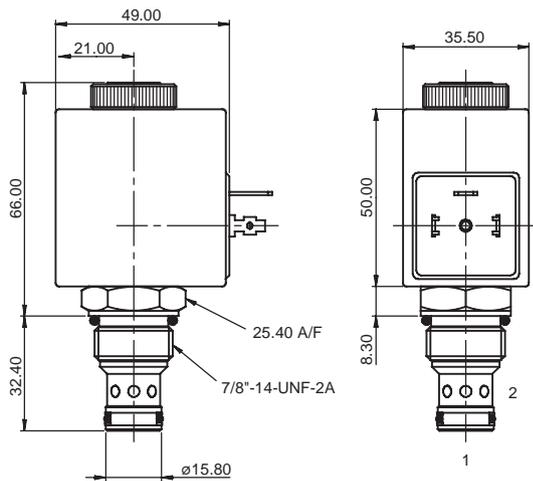
PERFORMANCE

S510H / S511H (Heavy duty valve)



CARTRIDGE ONLY

**BASIC CODE: S510(H) (Normally Open)
S511(H) (Normally Closed)**



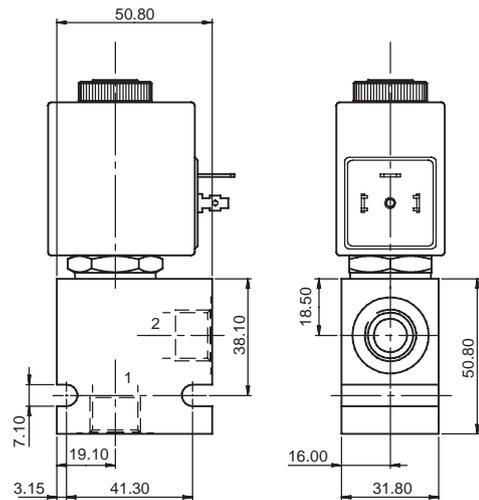
COMPLETE VALVE

3/8" 1/2" PORTS

**BASIC CODE: S510(H) (Normally Open)
S511(H) (Normally Closed)**

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	SAE, steel
3/8" B19053		
1/2" B19356	1/2" B19402	1/2" B20601



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S51 N H 24 3W**

Basic Code

S510 = (normally open - standard valve)
S510H = (normally open - heavy duty valve)
S511 = (normally closed - standard valve)
S511H = (normally closed - heavy duty valve)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw (S510(H) & S511(H))

Port Sizes

3W = 3/8" BSP
4W = 1/2" BSP
8T = 1/2" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S600 / S609 Directional Control Valve - 2-Way, 2-Position Poppet

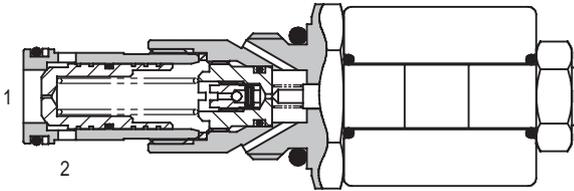
100 litres/min (26 US GPM) • 250 bar (3600 PSI)

S600

**NORMALLY OPEN
(as shown)**

S609

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

APPLICATION

To give on-off control of flows up to 100 litres/min (26 US GPM) and pressures up to 250 bar (3600 psi).

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*/14

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

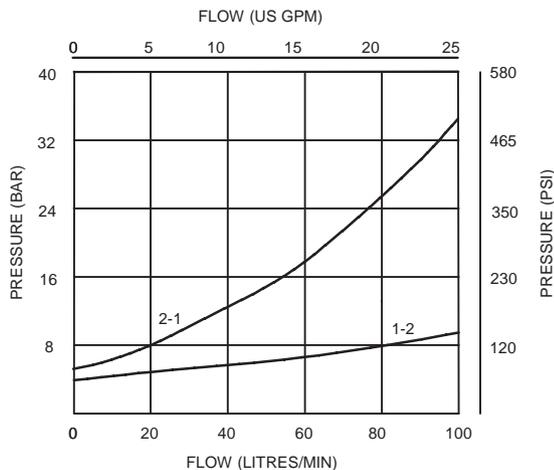
SPECIFICATIONS

Basic Model Code	S600 (N.O.)	S609 (N.C.)
Symbol		
Max. Working Pressure	250 bar (3600 psi)	
Flow Rating	100 litres/min (26 US GPM)	
Nominal Flow (at Delta P = 5 bar (70 psi))	60 litres/min (16 US GPM)	
Internal Leakage	0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK390 (Nitrile)	SK390V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.25 kg (0.55 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A881 (See Section 17)	
Torque into Cavity	60 Nm (44 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy (up to 210 bar*)	

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



*For applications above 210 bar please consult our technical department or use the steel body option.

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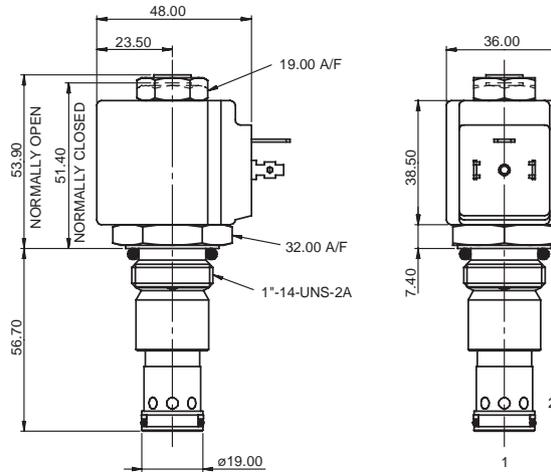
Collins Road, Heathcote Ind. Est., Warwick, CV34 6TF, UK.
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Website: www.integratedhydraulics.com

Integrated Hydraulics Inc

7047 Spinach Drive, Mentor, Ohio 44060, USA
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Website: www.integratedhydraulics.com

CARTRIDGE ONLY

**BASIC CODE: S600 (Normally Open)
S609 (Normally Closed)**



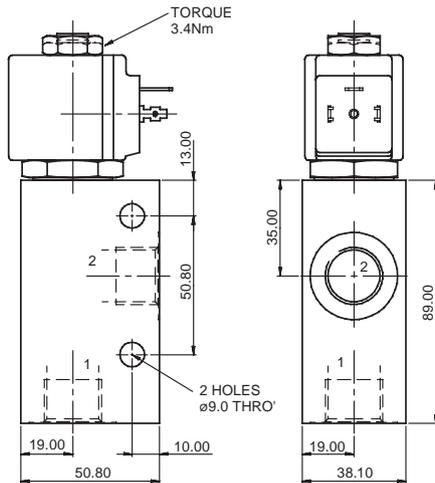
COMPLETE VALVE

1/2" 3/4" PORTS

**BASIC CODE: S600 (Normally Open)
S609 (Normally Closed)**

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
1/2" B4851	1/2" B19403
3/4" B3954	3/4" B19404



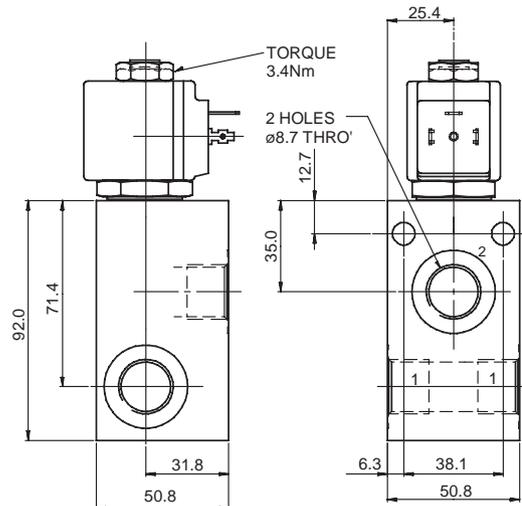
COMPLETE VALVE

3/8" 1/2" 3/4" PORTS

**BASIC CODE: S600T (Normally Open)
S609T (Normally Closed)**

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, aluminium
3/8" C1084	3/8" B10784	1/2" C593	
1/2" C1044	1/2" C7140	3/4" C4917	3/4" B10742
3/4" C1086	3/4" B10506		



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S60* **N** **H** **24** **4W** **T**

Basic Code

S600 = (normally open)
S609 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

3 = Push (S600 Only)

Body Type

Omit = Standard
T = Through ported

Port Sizes

3W = 3/8" BSP **6T** = 3/8" SAE
4W = 1/2" BSP **8T** = 1/2" SAE
6W = 3/4" BSP **12T** = 3/4" SAE

Voltage

12 = 12 VDC **110** = 110 VAC
24 = 24 VDC **220** = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



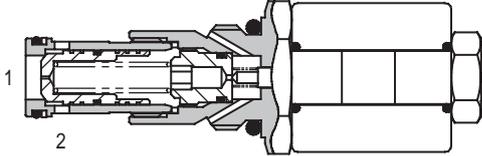
S607 / S608 & S612 / S613 Directional Control Valve

2-Way, 2-Position Poppet/Spool

100 litres/min (26 US GPM) • 250 bar (3600 PSI)

S607

**POPPET TYPE
NORMALLY OPEN
(as shown)**

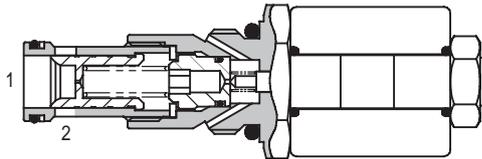


S608

**POPPET TYPE
NORMALLY CLOSED**

S612

**SPOOL TYPE
NORMALLY OPEN
(as shown)**



S613

**SPOOL TYPE
NORMALLY CLOSED**

FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	S607 Poppet Type (N.O.) S608 Poppet Type (N.C.) S612 Spool Type (N.O.) S613 Spool Type (N.C.)
Symbol	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>S607</p> </div> <div style="text-align: center;"> <p>S608</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <p>S612</p> </div> <div style="text-align: center;"> <p>S613</p> </div> </div>
Max. Working Pressure	250 bar (3600 psi)
Flow Rating	100 litres/min (26 US GPM)
Nominal Flow (at Delta P = 5 bar (70 psi))	90 litres/min (23 US GPM)
Internal Leakage	S607/S608: 0.6 ml/min (10 dpm) S612/S613: Less than 60 ml/min 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK390 (Nitrile) SK390V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.25 kg (0.55 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A881 (See Section 17)
Torque into Cavity	60 Nm (44 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy (up to 210 bar*)

APPLICATION

To give on-off control of flows up to 100 litres/min (26 US GPM) and pressures up to 250 bar (3600 psi).

COIL INFORMATION

(See Page 11-1021)

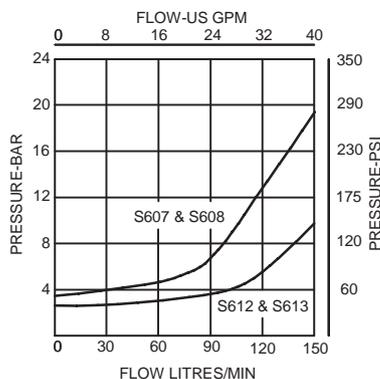
Part Number: C13-*/*/14

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



*For applications above 210 bar please consult our technical department or use the steel body option.

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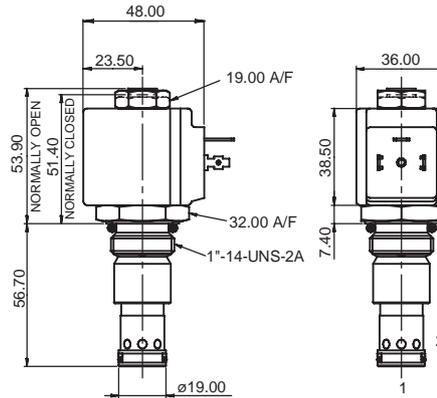
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CARTRIDGE ONLY

BASIC CODE: S607 Poppet Type (N.O.) S612 Spool Type (N.O.)
S608 Poppet Type (N.C.) S613 Spool Type (N.C.)



COMPLETE VALVE 1/2" 3/4" PORTS

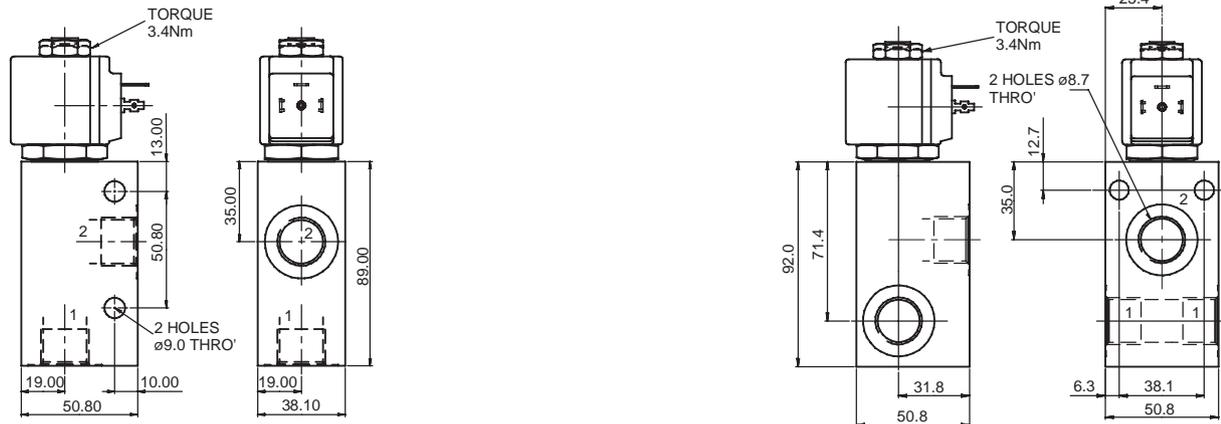
BASIC CODE: S607 Poppet Type (N.O.) S612 Spool Type (N.O.)
S608 Poppet Type (N.C.) S613 Spool Type (N.C.)

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/2" B4851 1/2" B19403
3/4" B3954 3/4" B19404

Body ONLY part numbers

BSP, aluminium SAE, aluminium BSP, steel SAE, aluminium
3/8" C1084 3/8" B10784 1/2" C593 3/4" B10742
1/2" C1044 1/2" C7140 3/4" C4917
3/4" C1086 3/4" B10506



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S6** **N** **H** **24** **4W** **T**

Basic Code

S607 = Poppet Type (normally open)
S608 = Poppet Type (normally closed)
S612 = Spool Type (normally open)
S613 = Spool Type (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

3 = Push (S607 & 612)

Body Type

Omit = Standard
T = Through ported

Port Sizes

3W = 3/8" BSP 6T = 3/8" SAE
4W = 1/2" BSP 8T = 1/2" SAE
6W = 3/4" BSP 12T = 3/4" SAE

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S701 / S702 Directional Control Valve - 2-Way, 2-Position Poppet

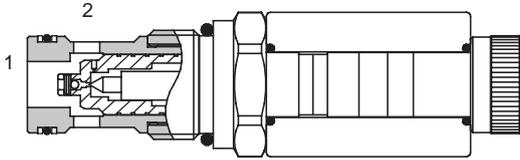
100 litres/min (26 US GPM) • 210 bar (3000 PSI)

S701

NORMALLY OPEN
(as shown)

S702

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.
- Reversible coil without affecting performance.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/*/19

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

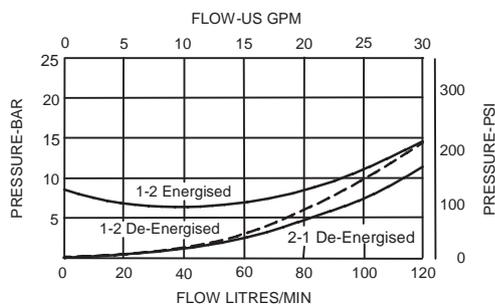
SPECIFICATIONS

Basic Model Code	S701 (N.O.)	S702 (N.C.)
Symbol		
Max. Pressure	210 bar (3000 psi)	
Flow Rating	100 litres/min (26 US GPM)	
Nominal flow (at Delta P = 5 bar (70 psi))	80 litres/min (20 US GPM)	
Internal Leakage	0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 à +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1207(Nitrile)	SK1207V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.3 kg (0.6 lbs)	
Coil Weight	0.3 kg (0.6 lbs)	
Cavity Number	A21473	
Torque into Cavity	60 Nm (44 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

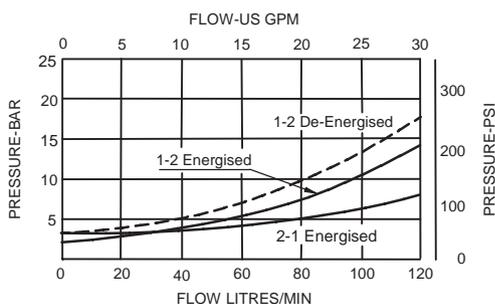
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S701 (Normally Open)



S702 (Normally Closed)



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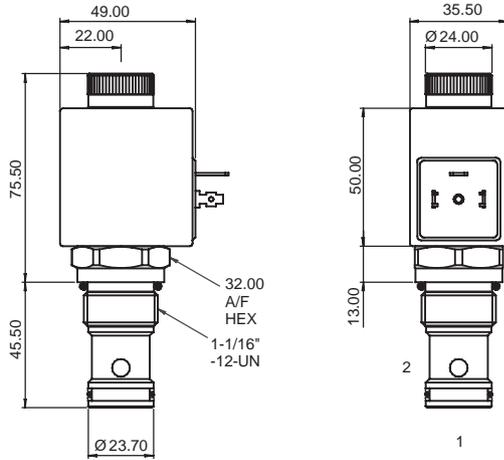
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CARTRIDGE ONLY

BASIC CODE: S701 (Normally Open)

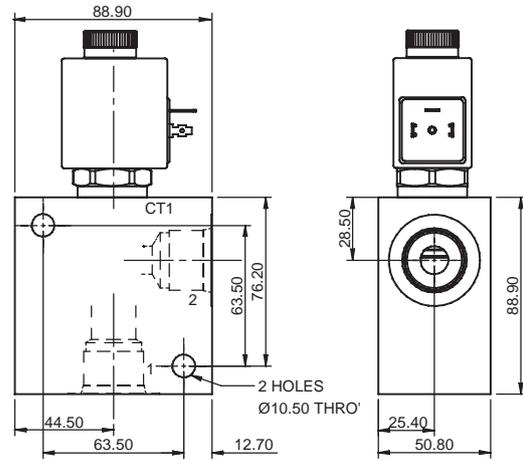


COMPLETE VALVE 3/4" PORTS

BASIC CODE: S701 (Normally Open)

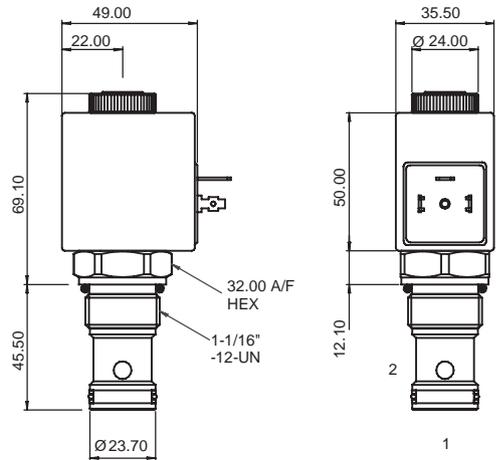
Body ONLY part numbers

BSP, aluminium 3/4" B22258	SAE, aluminium 3/4" B22260	BSP, steel 3/4" B22262	SAE, steel 3/4" B22264
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CARTRIDGE ONLY

BASIC CODE: S702 (Normally Closed)

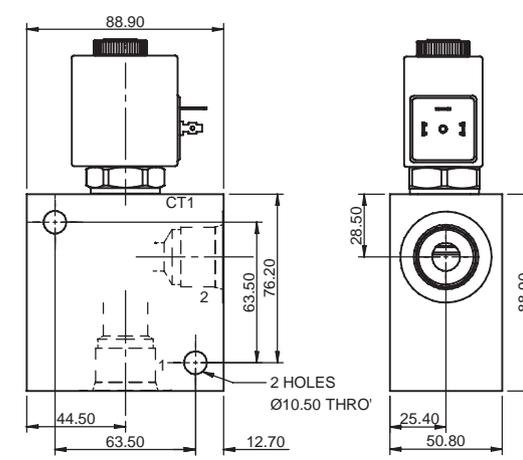


COMPLETE VALVE 3/4" PORTS

BASIC CODE: S702 (Normally Closed)

Body ONLY part numbers

BSP, aluminium 3/4" B22258	SAE, aluminium 3/4" B22260	BSP, steel 3/4" B22262	SAE, steel 3/4" B22264
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Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S701 N H 24 6W

Basic Code

S701 = (normally open)
S702 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

1 = Push and twist (S702 Only)
2 = Screw (S701 & S702)

Port Sizes

6W = 3/4" BSP 12T = 3/4" SAE

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded

Other terminations available on request

We reserve the right to change specifications without notice



S716 / S717 Directional Control Valve 2-Way, 2-Position Bi-Directional Poppet

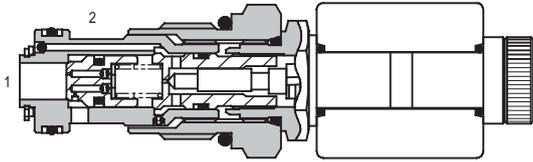
Up to 90 litres/min (24 US GPM) • Up to 350 bar (5000 PSI)

S716

NORMALLY OPEN

S717

**NORMALLY CLOSED
(as shown)**



FEATURES

- Very low leakage poppet design.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*/*/22

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

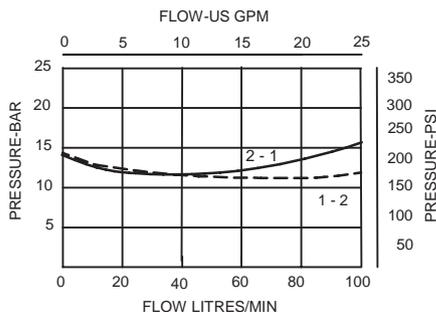
SPECIFICATIONS

Basic Model Code	S716 (N.O.)	S717 (N.C.)
Symbol		
Max. Working Pressure	S716: 280 bar (4060 psi) S717: 350 bar (5000 psi)	
Flow Rating	See performance graphs	
Nominal flow	90 litres/min (24 US GPM)	
Internal Leakage	Less than 2.7 ml/min (40 dpm) 350 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1225 (Nitrile)	SK1225V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.17 kg (0.37 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A21473 (See Section 17)	
Torque into Cavity	110 Nm (81 ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy / Steel for pressures above 210 bar.	

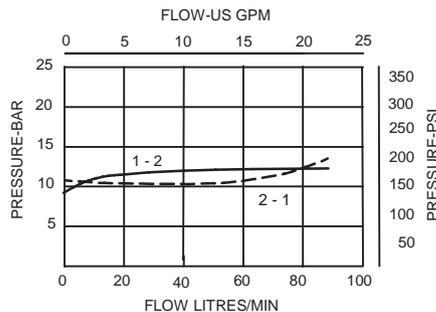
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S716 (Normally Open)



S717 (Normally Closed)



*For applications above 210 bar please consult our technical department or use the steel body option.

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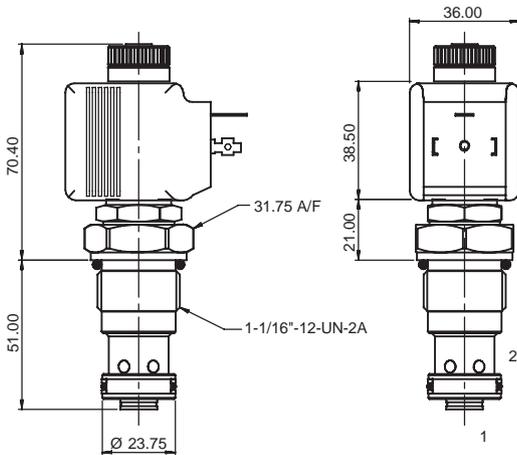
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CARTRIDGE ONLY

BASIC CODE: S716 (Normally Open)



COMPLETE VALVE

3/4" PORTS

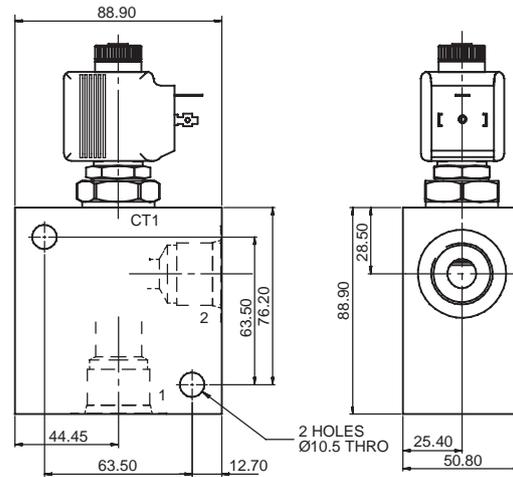
BASIC CODE: S716

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
3/4" B22258	3/4" B22260

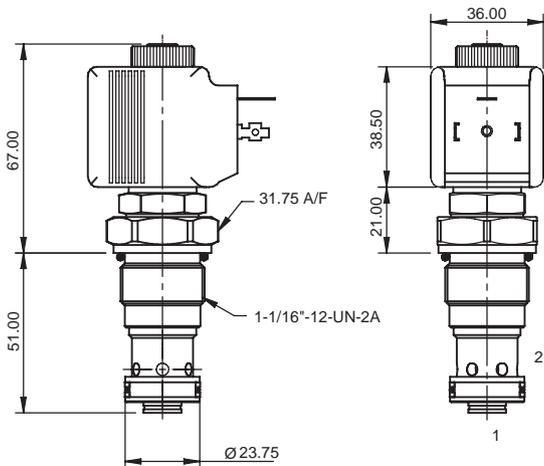
BSP, steel
3/4" B22262

SAE, steel
3/4" B22264



CARTRIDGE ONLY

BASIC CODE: S717 (Normally Closed)



COMPLETE VALVE

3/4" PORTS

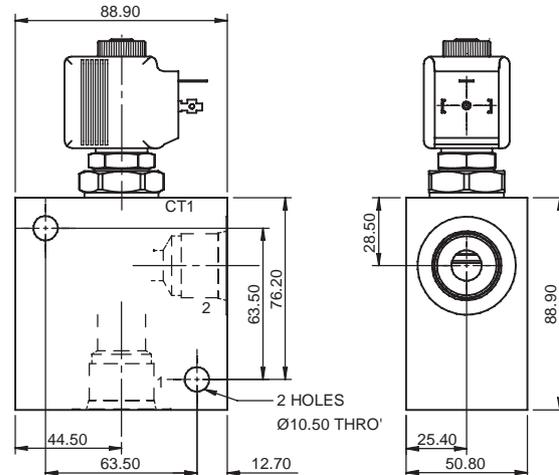
BASIC CODE: S717

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
3/4" B22258	3/4" B22260

BSP, steel
3/4" B22262

SAE, steel
3/4" B22264



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S717 N H 24 6W

Basic Code

S716 = (Normally open)
S717 = (Normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw (S717 only)

Port Sizes

6W = 3/4" BSP **12T** = 3/4" SAE

Voltage

12 = 12 VDC **110** = 110 VAC
24 = 24 VDC **220** = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



SX203 / SX204 Directional Control Valve - 2-Way, 2-Position

Poppet

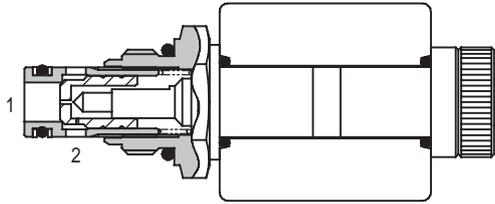
20 litres/min (5 US GPM) • 350 bar (5000 PSI)

SX203

NORMALLY OPEN
(as shown)

SX204

NORMALLY CLOSED



APPLICATION

To give on-off control of flows of 20 litres/min (5 US GPM) and pressures up to 350 bar (5000 psi). Typical usage includes the control of actuators in a hydraulic system.

OPERATION

Normally Open

De-energised; 2 to 1 – full flow, pressure difference through the pilot orifice holds the main poppet open. 1 to 2 – restricted flow, main poppet pressure biased onto its seat, pilot orifice open.

Energised; 2 to 1 - No flow, pilot orifice closed, main poppet pressure biased onto its seat. 1 to 2 – full flow when solenoid force overcome.

Normally Closed

De-energised; 2 to 1 – no flow, pilot orifice closed, main poppet pressure biased onto its seat. 1 to 2 – full flow when spring force overcome.

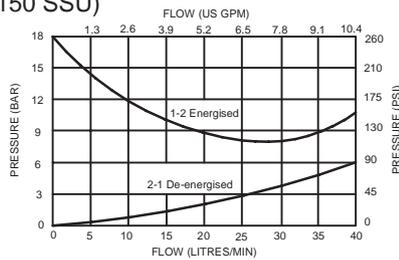
Energised; 2 to 1- full flow, pressure difference through the pilot orifice holds the main poppet open. 1 to 2 – restricted flow, main poppet pressure biased onto its seat, pilot orifice open.

11

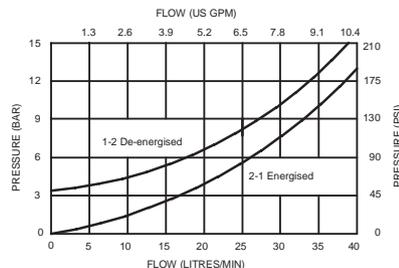
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

SX203 (280 bar) (Normally Open)



SX204 (350 bar) (Normally Closed)



*For applications above 210 bar please consult our technical department or use the steel body option.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/22

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	SX203 (N.O.)	SX204 (N.C.)
Basic Model Code		
Max. Working Pressure	SX203: 280bar (4000psi) SX204: 350bar (5000psi)	
Cartridge Material	Working parts hardened and ground steel	
Body Material	Standard aluminium (up to 210 bar*) Add suffix '377' for steel option	
Mounting Position	Unrestricted	
Cavity Number	A879 (See Section 17)	
Torque Cartridge into Cavity	30 Nm (22 lbs ft)	
Weight (exc. coil)	0.08 kg (0.18lbs)	
Seal Kit Number	SK1043 (Nitrile) SK1043V (Viton)	
Recommended Filtration Level	BS5540/4 (25 micron nominal) Class 18/13	
Operating Temp	-20 C to +90 C	
Leakage	0.6 millilitres/min (10 dpm) closed	
Nominal Viscosity Range	5 to 500 cSt	

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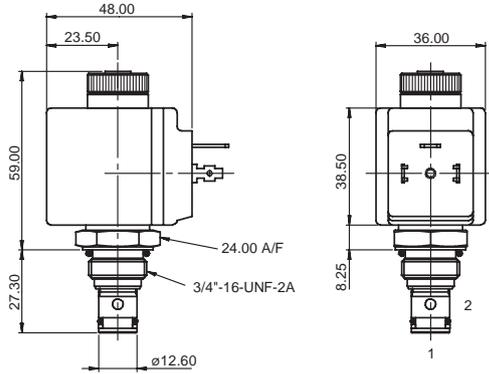
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CARTRIDGE ONLY

BASIC CODE: SX203 (Normally Open) 280 bar



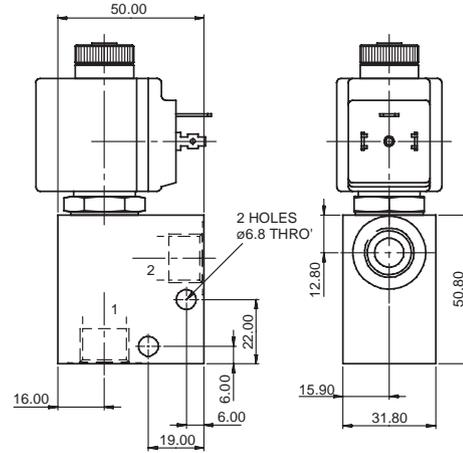
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: SX203 (Normally Open) 280 bar

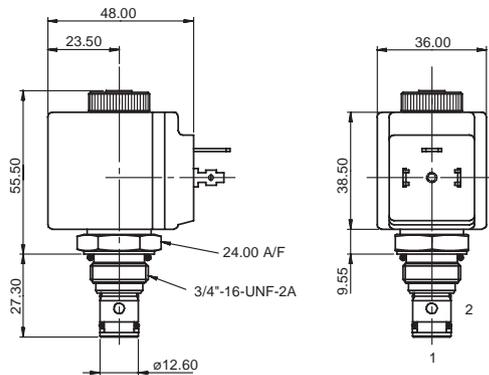
Body ONLY part numbers

BSP, aluminium		SAE, aluminium		BSP, steel		SAE, steel	
1/4"	A1485	3/8"	A15676	3/8"	A14175	3/8"	A14843
3/8"	A1043						



CARTRIDGE ONLY

BASIC CODE: SX204 (Normally Closed) 350 bar



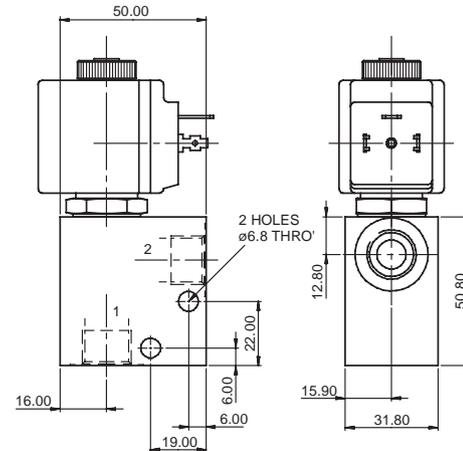
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: SX204 (Normally Closed) 350 bar

Body ONLY part numbers

BSP, aluminium		SAE, aluminium		BSP, steel		SAE, steel	
1/4"	A1485	3/8"	A15676	3/8"	A14175	3/8"	A14843
3/8"	A1043						



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

SX* N H 24 3W**

Basic Code

SX203 = (normally open) 280 bar
SX204 = (normally closed) 350 bar

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice