FEATURES

- High quality coil resistance to heat & moisture and suitable for high ambient temperature & harsh environment
- The same spool valve can be adapted for 3/2* or 5/2 functions for controlling double-acting and single-acting actuators
- All the exhaust ports of this spool valve are pipe-able, providing better environmental protection, particularly recommended for sensitive areas such as applications in the pharmaceutical and food industries
- Non Breathing construction where the spring return chambers of the single or double acting actuator are collected with the solenoid valve exhaust
- NAMUR design (LH Orientation & RH Orientation) ensures supply and exhaust ports of the solenoid valve are facing down to prevent water and ingress
- Robust and long lasting 316L Stainless Steel Manual Operator (maintained manual operator)
- The solenoid valves satisfy all relevant EU Directives

* For NAMUR type, 5/2 can be converted to 3/2 NC by rotating NAMUR plate

GENERAL

Differential pressure 2 - 8 bar [1 bar = 100 kPa]
Flow (Qv at 6 bar) 820 l/min (ANR)

<table>
<thead>
<tr>
<th>Fluids</th>
<th>Temperature range (TS)</th>
<th>Seal materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air, inert gas, filtered</td>
<td>-20°C to +60°C</td>
<td>NBR (nitrile)</td>
</tr>
</tbody>
</table>

MATERIALS IN CONTACT WITH FLUID

(*) Ensure that the compatibility of the fluids in contact with the materials is verified

Body: Aluminium, anodized
Pilot and spring end: Polyamide PA6.6, 30% FV
Internal parts: POM (Polyacetal), stainless steel, aluminium
Seals: NBR
Core tube: Brass
Plugnut: Stainless steel
Shading coil: Copper

ELECTRICAL CHARACTERISTICS

Coil insulation class F
Electrical safety IEC 335
Standard voltages DC ( = ) : 24V - 48V
AC ( ~ ) 50/60Hz : 24V - 48V - 115V - 230V ; Other voltages are available on request

<table>
<thead>
<tr>
<th>Power ratings</th>
<th>Operator ambient temperature range</th>
<th>Safety code</th>
<th>Electrical enclosure protection (EN 60529)</th>
<th>Replacement coil / kit</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>(VA) VA (W) (W) (C°)</td>
<td>-20 to +60</td>
<td>EN 60730</td>
<td>IP65, moulded</td>
<td>400125-097 400125-042</td>
<td>01</td>
</tr>
</tbody>
</table>

* Refer to the dimensional drawings on page 3.

ELECTRICAL CONNECTIONS

Type | Connection
--- | ---
01 | Spade plug connector with cable gland DIN 43650, 11 mm, industry standard B, for cables with an outer diameter from 6 to 8 mm.
SERIES 521

SPECIFICATIONS
Pipe size 1/4
Main valve orifice size 6 mm
Operating pressure differential 2 to 8 bar

<table>
<thead>
<tr>
<th>Function</th>
<th>Construction</th>
<th>Symbol</th>
<th>Thread Type</th>
<th>Basic Code (2) (without Voltage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solenoid air pilot operated - spring return (monostable)</td>
<td>LH construction</td>
<td><img src="image" alt="Symbol" /></td>
<td>G</td>
<td>G521A2B12S83M**</td>
</tr>
<tr>
<td>Solenoid air pilot operated and return ( bistable)</td>
<td>LH construction</td>
<td><img src="image" alt="Symbol" /></td>
<td>G</td>
<td>G521A2B42S83M**</td>
</tr>
<tr>
<td>Solenoid air pilot operated - spring return (monostable)</td>
<td>RH construction</td>
<td><img src="image" alt="Symbol" /></td>
<td>G</td>
<td>G521A2B12S83P**</td>
</tr>
<tr>
<td>Solenoid air pilot operated and return (bistable)</td>
<td>RH construction</td>
<td><img src="image" alt="Symbol" /></td>
<td>G</td>
<td>G521A2B42S83P**</td>
</tr>
</tbody>
</table>

(1) For NAMUR type, 5/2 can be converted to 3/2 NC by rotating NAMUR plate
(2) For the voltage, please replace the 2 last digits by the ones according to the required voltage (see below valve selection table)

ACTUATOR MOUNTING POSITION

<table>
<thead>
<tr>
<th>Port No.</th>
<th>NAMUR 3/2 NC</th>
<th>NAMUR 5/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pilot inlet pressure</td>
<td>Pilot inlet pressure</td>
</tr>
<tr>
<td>2</td>
<td>Actuator piloting</td>
<td>Actuator piloting</td>
</tr>
<tr>
<td>3</td>
<td>Pilot exhaust</td>
<td>Pilot exhaust</td>
</tr>
<tr>
<td>4</td>
<td>Exhaust actuator</td>
<td>Actuator piloting</td>
</tr>
<tr>
<td>5</td>
<td>Pilot exhaust</td>
<td>Pilot exhaust</td>
</tr>
</tbody>
</table>

Depending on the actuator's port orientation, the ASCO 521 NAMUR Design (LH construction NAMUR & RH construction NAMUR) is to ensure that the supply port (1) and exhaust ports (3 & 5) are always facing down to prevent water dust ingress.

HOW TO ORDER

Valve Selection

G 521 A 2 B 1 2 S 83P F1

Thread connection
G = ISO228/1-G
8 = NPTF

Product series
521

Revision letter
A

Actuation
2 = Rubber Packed

Valve type
B = Solenoid air pilot

Function
1 = 3/2-5/2 NAMUR Spring Return
4 = 3/2-5/2 NAMUR Dual Solenoid

Port size
2 = 1/4

Voltage
EW = 115/50, 120/60
EY = 110/50-60
FH = 230/50-60
FQ = 24/50-60
FS = 48/50-60
F1 = 24/DC
F3 = 12/DC
F9 = 48/DC

Options
83M = Namur version LH construction
83P = Namur version RH construction

Electrical interface
S = With spade plug connector (2)
(2) For non standard connector (e.g. LED connector), please contact us.

All leaflets are available on: www.asco.com
ADDITIONAL OPTIONS

- Plug with visual indication and peak voltage suppression or with cable length of 2 m (Contact us)

INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- Spool valve supplied with one adapter plate with NAMUR mating surface. Adapter plate can be rotated 180° and converted to 3/2 or 5/2 function. The plate must be mounted on the actuator prior to assembling the solenoid valve
- It is strongly recommended to connect pipes or fittings to the exhaust ports to protect the internal parts of the spool valve and its pneumatic operator if used outside or in harsh environments (dusts, liquids, etc.)
- NAMUR accessories (Bolts, Gaskets, Nuts & Plate) are standard supplied for NAMUR version
- Threaded pipe connection is standard: G = G (ISO 228/1); 8 = NPT (ANSI 1.20.3)
- Installation/maintenance instructions are included with each valve

DIMENSIONS (mm), WEIGHT (kg)

| TYPE | Solenoid with DIN spade plug connector | Moulded IP65 | Reduced power | LH construction NAMUR | RH construction NAMUR |

<table>
<thead>
<tr>
<th>weight (1)</th>
<th>type 01</th>
<th>01 Actuator mounting M5 screw (2x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>monostable</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>bistable</td>
<td>0.38</td>
<td></td>
</tr>
</tbody>
</table>

For NAMUR type, 5/2 can be converted to 3/2 NC by rotating NAMUR plate

(1) Incl. coil(s) and connector(s).
NAMUR ADAPTOR KIT
(LH construction NAMUR & RH construction NAMUR)

<table>
<thead>
<tr>
<th>Det. No</th>
<th>Part Name</th>
<th>Qty</th>
<th>LH construction</th>
<th>RH construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Mounting Screws M3 x 25</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>Profile Gasket</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>Adapter Mounting Screw M5 x 10</td>
<td>2</td>
<td>R521AT514630001</td>
<td>R521AT514630002</td>
</tr>
<tr>
<td>04</td>
<td>NAMUR Plate</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>M3 Nut</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>O Ring</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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