Solenoid valve 3/2 way N.C. Direct acting

PRESENTATION:
Direct acting S.V. for interception of fluids compatible with the construction materials.
Minimum operational pressure is not required.
The materials used and the tests carried out ensure maximum reliability and duration.

USE:
- Hot water
- Steam (180°C)

PIPES:
- subplate mounting

COILS:
- 8W - Ø 13
- BDA - BDS - BSA 155°C (class F)
- BDP 160°C (high temperature)
- BDF 180°C (class H)
- SDH 180°C (class H)

MOULDING AND BOBBIN ARE MADE BY 100% VIRGIN MATERIAL.
Max. allowable pressure (PS) 40 bar
Environment temperature:
- with class F or high temperature coils -40°C + 60°C
- with class H coil -40°C + 80°C

<table>
<thead>
<tr>
<th>Gaskets</th>
<th>Temperature</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>R=RUBY</td>
<td>-40°C + 180°C</td>
<td>Hot water, Steam</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pipe</th>
<th>Code</th>
<th>Max viscosity</th>
<th>Ø</th>
<th>Kv</th>
<th>Power</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mm</td>
<td>(watt)</td>
<td>min</td>
</tr>
<tr>
<td>SUBPLATE MOUNTING</td>
<td>31A1AR10</td>
<td>-</td>
<td>1*</td>
<td>0.45</td>
<td>8</td>
<td>0</td>
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<tr>
<td></td>
<td>31A1AR15</td>
<td>-</td>
<td>1.5*</td>
<td>1.4</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>31A1AR20</td>
<td>-</td>
<td>2*</td>
<td>2</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>31A1AR25</td>
<td>-</td>
<td>2.5*</td>
<td>3.2</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Note
* 3rd way exhaust= Ø 2.5 mm
Also available with brass body without lead.
The use of rigid sealings usually implies a slight leakage, limited within 2scc/min at the pressure of 1 bar.

The "ODE" reserves the right to carry out technical and aesthetic modifications without prior notification.

17-11-2005
ODE 31A1AR10 + 31A1AR25
MATERIALS:

- Body: Brass - UNI EN 12165 CW617N
- Armature tube: Stainless steel AISI series 300
- Fixed core: Stainless steel AISI series 400
- Plunger: Stainless steel AISI series 400
- Phase displacement ring: Copper - Cu 99.9%
- Spring: Stainless steel AISI series 300
- Seal: R=RUBY
- Orifice: Insert slot
- Stainless steel AISI series 300

On request:

- Connector: Pg 9 or Pg 11
- Connector conformity: ISO 4400

FEATURES:

- Electrical conformity: IEC 335
- Protection degree: IP 65 EN 60529 (DIN 40050)
- with coil fitted by connector.

SPARE PARTS:

1. Coil:
   - See coils list
2. Complete plunger:
   - Code R450873
3. Complete armature tube:
   - Code R450944/AL
4. Gasket O-Ring:
   - Code R990002/S

KIT:

- KT130AR30-A=2+3

DIMENSIONS:

<table>
<thead>
<tr>
<th>COIL</th>
<th>POWER ABSORPTION</th>
<th>TYPE</th>
<th>DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td></td>
<td>B</td>
<td>D</td>
</tr>
<tr>
<td>8 W</td>
<td>Inrush VA ~</td>
<td>S</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>Hold VA ~</td>
<td></td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17-11-2005
Solenoid valve 2/2 way N.C. Direct acting

PRESENTATION:
Direct acting S.V. for interception of fluids compatible with the construction materials. Minimum operational pressure is not required. The materials used and the tests carried out ensure maximum reliability and duration.

USE:
- Automation
- Heating

PIPES:
- subplate mounting

COILS:
- 8W - Ø 13 (1)
- BDA - BDS - BSA 155°C (class F)
- BDP 160°C (high temperature)
- BDF 180°C (class H)
- SDH 180°C (class H)
- 12W - Ø 13
- UDA 155°C (class F)
- 14W - Ø 13
- GDH 180°C (class H)
(1) Explosion-proof housing for coils with electrical connections EN 175301-803 on request.

MOULDING AND BOBBIN ARE MADE BY 100% VIRGIN MATERIAL.
Max allowable pressure (PS) 40 bar
Environment temperature:
- with coil class F and high temperature -10°C + 60°C
- with coil class H -10°C + 80°C

Gaskets | Temperature | Medium
---|---|---
V=FKM (fluorelastomer) | -10°C - 140°C | Mineral oils (2E), gasoline, gas oil, fuel oils (7E)
B=NBR (nitrile rubber) | -10°C + 90°C | Air, inert gas, water
E=EPDM (ethylene-propylene) | -10°C + 140°C | Water, steam

For seals other than FKM replace the letter "V" with the ones corresponding to the other seals. E.g. 21A1KB15.

Pipe | Code | Max viscosity | Ø | Kv | Power | Pressure |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>cSt</td>
<td>°E</td>
<td>mm</td>
<td>(l/min)</td>
<td>(watt)</td>
</tr>
<tr>
<td>SUBPLATE MOUNTING</td>
<td>21A1KV15</td>
<td>12</td>
<td>~2</td>
<td>1.5</td>
<td>1.4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>21A1KV20</td>
<td>37</td>
<td>~5</td>
<td>2</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>21A1KV25</td>
<td>53</td>
<td>~7</td>
<td>2.5</td>
<td>3.2</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>21A1KV30</td>
<td>53</td>
<td>~7</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
</tbody>
</table>

ODE 4 21A1KV25-0RV + 220 V

The "ODE" reserves the right to carry out technical and aesthetic modifications without prior notification.

30-06-2002 ODE 21A1KV15 + 21A1KV30
MATERIALS:
Body
Brass - UNI EN 12165 CW617N
Armature tube
Stainless steel AISI series 300
Fixed core
Stainless steel AISI series 400
Plunger
Stainless steel AISI series 400
Phase displacement ring
Copper - Cu 99,9%
Spring
Stainless steel AISI series 300
Seal
On request: B=NBR E=EPDM
Orifice: Insert slot
Stainless steel AISI series 300
On request:
Connector
Connector conformity
PG 9 or PG 11
ISO 4400
FEATURES:
Electrical conformity
IEC 335
Protection degree
IP 65 EN 60529 (DIN 40050)
with coil fitted by connector.

SPARE PARTS:
1. Coil:
See coils list
2. Complete plunger:
Code R450886/V
3. Complete armature tube:
Code R450606
4. Gasket O-Ring:
Code R990002/V

KIT:
KT130KV30-A=2+3

DIMENSIONS:

<table>
<thead>
<tr>
<th>COIL</th>
<th>POWER ABSORPTION</th>
<th>DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inrush VA~</td>
<td>Hold VA~</td>
</tr>
<tr>
<td>W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 W</td>
<td>25</td>
<td>14,5</td>
</tr>
<tr>
<td>12 W</td>
<td>35</td>
<td>25</td>
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<tr>
<td>14 W</td>
<td>43</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21A1KV15 + 21A1KV30
ODE
30-06-2002
Solenoid valve 2/2 way N.C.
Direct acting

PRESENTATION:
Direct acting S.V. for interception of fluids compatible with the construction materials.
Minimum operational pressure is not required.
The materials used and the tests carried out ensure maximum reliability and duration.

USE:
- Automation
- Heating

PIPES:
- G 1/8 - G 1/4

COILS:
- 8W - Ø 13
- BDA - BDS - BSA 155°C (class F)
- BDP 160°C (high temperature)
- BDF 180°C (class H)
- SDH 180°C (class H)
- 12W - Ø 13
- UDA 155°C (class F)
- 14W - Ø 13
- GDH 180°C (class H)
- (1) Explosion-proof housing for coils with electrical connections EN 175301-803 on request.

MOULDING AND BOBBIN ARE MADE BY 100% VIRGIN MATERIAL.

<table>
<thead>
<tr>
<th>Gaskets</th>
<th>Temperature</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>V=FKM (fluoroolastomer)</td>
<td>-10°C ~ +140°C</td>
<td>Mineral oils (2°E), gasoline, gas oil, fuel oils (7°E)</td>
</tr>
<tr>
<td>B=NBR (nitrile rubber)</td>
<td>-10°C ~ +90°C</td>
<td>Air, inert gas, water</td>
</tr>
<tr>
<td>E=EPDM (ethylene-propylene)</td>
<td>-10°C ~ +140°C</td>
<td>Water, steam</td>
</tr>
</tbody>
</table>

For seals other than FKM replace the letter “V” with the corresponding to the other seals. E.g. 21A2KE20.

Max. allowable pressure (PS) 40 bar
Environment temperature:
- with coil class F and high temperature -10°C ~ +60°C
- with coil class H -10°C ~ +80°C

Pipe ISO 228/1

<table>
<thead>
<tr>
<th>Code</th>
<th>Max viscosity</th>
<th>Ø</th>
<th>Kv</th>
<th>Power</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>cSt</td>
<td>°E</td>
<td>mm</td>
<td>l/min</td>
<td>(watt)</td>
</tr>
<tr>
<td>21A3KV15</td>
<td>12</td>
<td>~ 2</td>
<td>1.5</td>
<td>1.4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>~ 5</td>
<td>2</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>21A3KV25</td>
<td>3</td>
<td>~ 7</td>
<td>2.5</td>
<td>3.2</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>53</td>
<td>~ 7</td>
<td>3</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>21A3KV30</td>
<td>4.5</td>
<td>6.5</td>
<td>12</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>21A3KV45</td>
<td>5.5</td>
<td>9</td>
<td>12</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>21A2KV15</td>
<td>12</td>
<td>~ 2</td>
<td>1.5</td>
<td>1.4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>~ 5</td>
<td>2</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>21A2KV25</td>
<td>2.5</td>
<td>3.2</td>
<td>12</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>21A2KV30</td>
<td>3</td>
<td>~ 7</td>
<td>2.5</td>
<td>3.2</td>
<td>12</td>
</tr>
<tr>
<td>21A2KV45</td>
<td>4.5</td>
<td>6.5</td>
<td>12</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>21A2KV55</td>
<td>5.5</td>
<td>9</td>
<td>12</td>
<td>12</td>
<td>14</td>
</tr>
</tbody>
</table>

Note: Also available with brass body without lead.

The "ODE" reserves the right to carry out technical and aesthetic modifications without prior notification.
MATERIALS:

Body Brass - UNI EN 12165 CW617N
Armature tube Stainless steel AISI series 300
Fixed core Stainless steel AISI series 400
Plunger Stainless steel AISI series 300
Phase displacement ring Copper - Cu 99.9%
Spring Stainless steel AISI series 300
Seal Standard: V=FKM
Orifice: On request: B=NBR E=EPDM
≤ 3 mm Insert slot Stainless steel AISI series 300
> 3 mm Brass - UNI EN 12165 CW617N
On request: Connector Pg 9 or Pg 11
Connector conformity ISO 4400
Connector conformity IEC 335
Protection degree IP 65 EN 60529 (DIN 40050)

FEATURES:

Electrical conformity
Protection degree

SPARE PARTS:

1. Coil:
   See coils list

2. Complete plunger:
   For orifice ≤ 3 mm
   Code R450886/V
   For orifice > 3 mm
   Code R450898/V

3. Complete armature tube:
   Code R450606

KIT:

≤ 3 mm
KT130K V30-A=2+3
> 3 mm
KT130K V55-A=2+3

DIMENSIONS:

<table>
<thead>
<tr>
<th>Type</th>
<th>Pipe ISO 228/1</th>
</tr>
</thead>
<tbody>
<tr>
<td>21A3KV</td>
<td>G 1/8</td>
</tr>
<tr>
<td>21A2KV</td>
<td>G 1/4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COIL</th>
<th>POWER ABSORPTION</th>
<th>DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>W ===</td>
<td>Inrush VA ~</td>
<td>Hold VA ~</td>
</tr>
<tr>
<td>8 W</td>
<td>25</td>
<td>14,5</td>
</tr>
<tr>
<td>12 W</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td>14 W</td>
<td>43</td>
<td>27</td>
</tr>
</tbody>
</table>

21A3KV15 + 21A2KV55
ODE
30-06-2002
Solenoid valve 3/2 way N.C.  
Direct acting

PRESENTATION:
Direct acting S.V. for interception of fluids compatible with the construction materials.  
Minimum operational pressure is not required.  
The materials used and the tests carried out ensure maximum reliability and duration.

USE:  
Automation  
Heating

PIPES:  
G 1/8 - G 1/4

COILS:  
8W - Ø 13 (1)  
BDA - BDS - BSA 155°C (class F)  
BDP 160°C (high temperature)  
BDF 180°C (class H)  
SDH 180°C (class H)  

(1) Explosion-proof housing for coils with electrical connections EN 175301-803 on request.

MOULDING AND BOBBIN ARE MADE BY 100% VIRGIN MATERIAL.

Max. allowable pressure (PS) 40 bar  
Environment temperature:  
with class F or high temperature coils -10°C + 60°C  
with class H coil -10°C + 80°C

<table>
<thead>
<tr>
<th>Gaskets</th>
<th>Temperature</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>V=FKM (fluorolastomer)</td>
<td>-10°C +140°C</td>
<td>Mineral oils, gasoline/gas oil</td>
</tr>
<tr>
<td>B=NBR (nitrile rubber)</td>
<td>-10°C + 90°C</td>
<td>Air, inert gas, water</td>
</tr>
</tbody>
</table>

For seals other than FKM replace the letter "V" with the ones corresponding to the other seals. E.I. 31A3AB15.

<table>
<thead>
<tr>
<th>Pipe ISO 228/1</th>
<th>Code</th>
<th>Max viscosity</th>
<th>Ø mm</th>
<th>Kv</th>
<th>Power</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>cSt</td>
<td>°E</td>
<td></td>
<td>l/min</td>
<td>(watt)</td>
</tr>
<tr>
<td>G 1/8</td>
<td>31A3AV10</td>
<td>12</td>
<td>~2</td>
<td>1+</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31A3AV15</td>
<td></td>
<td></td>
<td>1.5*</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31A3AV20</td>
<td>37</td>
<td>~5</td>
<td>2*</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31A3AV25</td>
<td>53</td>
<td>~7</td>
<td>2.5*</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31A3AV30</td>
<td></td>
<td></td>
<td>3*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>G 1/4</td>
<td>31A2AR10</td>
<td>12</td>
<td>~2</td>
<td>1+</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31A2AV15</td>
<td></td>
<td></td>
<td>1.5*</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31A2AV20</td>
<td>37</td>
<td>~5</td>
<td>2*</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31A2AV25</td>
<td>53</td>
<td>~7</td>
<td>2.5*</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31A2AV30</td>
<td></td>
<td></td>
<td>3*</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Note

* 3rd way exhaust= Ø 2.5 mm  
Also available with brass body without lead.

The "ODE" reserves the right to carry out technical and aesthetic modifications without prior notification.

17-11-2005  
ODE  
31A3AV10 + 31A2AV30
MATERIALS:
- Body: Brass - UNI EN 12165 CW617N
- Armature tube: Stainless steel AISI series 300
- Fixed core: Stainless steel AISI series 400
- Plunger: Stainless steel AISI series 400
- Phase displacement ring: Copper - Cu 99.9%
- Spring: Stainless steel AISI series 300
- Seal: Standard: V=FKM
  On request: B=NBR
  Stainless steel AISI series 300

Orifice: Insert slot
On request: Connector
Connector conformity

FEATURES:
- Electrical conformity
- Protection degree

SPARE PARTS:
1. Coil:
   See coils list
2. Complete plunger:
   Code R450675/V
3. Complete armature tube:
   Code R450944

KIT:
KT130AV30-A=2+3

DIMENSIONS:

<table>
<thead>
<tr>
<th>Type</th>
<th>Pipe ISO 228/1</th>
</tr>
</thead>
<tbody>
<tr>
<td>31A3AV</td>
<td>G 1/8</td>
</tr>
<tr>
<td>31A2AV</td>
<td>G 1/4</td>
</tr>
</tbody>
</table>

COIL POWER ABSORPTION

<table>
<thead>
<tr>
<th>W</th>
<th>Inrush VA ~</th>
<th>Hold VA ~</th>
<th>TYPE</th>
<th>DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 W</td>
<td>25</td>
<td>14,5</td>
<td>B</td>
<td>30 32 42 54</td>
</tr>
</tbody>
</table>

31A3AV10 + 31A2AV30
ODE
17-11-2005
Solenoid valve 2/2 way N.C.
Direct acting

PRESENTATION:
Direct acting S.V. for interception of fluids compatible with the construction materials. Minimum operational pressure is not required. The materials used and the tests carried out ensure maximum reliability and duration.

USE:
Automation
Heating

PIPES:
G 1/8

COILS:
2.5W - Ø 10
LBA 155°C (class F)
5W - Ø 10
LBA 155°C (class F)
LBF 180°C (class H)

MOULDING AND BOBBIN ARE MADE BY 100% VIRGIN MATERIAL.
Max. allowable pressure (PS) 40 bar
Environment temperature:
with class F or high temperature coils - 10°C + 60°C
with class H coil - 10°C + 80°C

<table>
<thead>
<tr>
<th>Gaskets</th>
<th>Temperature</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>V=FKM (fluoroplastic)</td>
<td>-10°C +140°C</td>
<td>Mineral oils (2°E), gasoline, gas oil, fuel oils (5°E)</td>
</tr>
<tr>
<td>B=NBR (rubber)</td>
<td>-10°C + 90°C</td>
<td>Air, inert gas, water</td>
</tr>
</tbody>
</table>

For seals other than FKM replace the letter “V” with the ones corresponding to the other seals. E.g. 21JN1R0B12.

<table>
<thead>
<tr>
<th>Pipe ISO 228/1</th>
<th>Code</th>
<th>Max viscosity</th>
<th>Ø</th>
<th>Kv</th>
<th>Power</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>G 1/8</td>
<td>21JN1R0V12</td>
<td>12</td>
<td>2</td>
<td>1.2</td>
<td>2.5</td>
<td>20</td>
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<td></td>
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<td>37</td>
<td>5</td>
<td>2.3</td>
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<td>18</td>
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</tbody>
</table>

Note
Available also with brass body without lead.

The “ODE” reserves the right to carry out technical and aesthetic modifications without prior notification.

30-06-2002
ODE

ODE 10 21JN1R0V23 + 220V ~ 2/2 1/8
ODE 11 21JN1R0V23 + 24V = 2/2 1/8
MATERIALS:

Body: Brass - UNI EN 12165 CW617N
Armature tube: Stainless steel AISI series 300
Fixed core: Stainless steel AISI series 400
Plunger: Stainless steel AISI series 400
Phase displacement ring: Copper - Cu 99.9%
Spring: Stainless steel AISI series 300
Seal: Standard: V=FKM
Orifice: On request: B=NBR

Brass - UNI EN 12165 CW617N
Pg 9 or Pg 11
ISO 4400

FEATURES:

Electrical conformity: IEC 335
Protection degree: IP 65 EN 60529 (DIN 40050)
with coil fitted by connector.

SPARE PARTS:

1. **Coil:**
   - See coils list

2. **Complete plunger:**
   - Code R451101/V

3. **Complete armature tube:**
   - Code R452062

4. **Gasket O-Ring:**
   - Code R990597/V

KIT:

KT100R0V25-FJ=2+3+4

DIMENSIONS:

<table>
<thead>
<tr>
<th>COIL</th>
<th>POWER ABSORPTION</th>
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<tbody>
<tr>
<td>W</td>
<td>Inrush VA</td>
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<tr>
<td>2.5 W</td>
<td>7</td>
</tr>
<tr>
<td>5 W</td>
<td>15</td>
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G 1/8