D262/263 Series, Vacuum - 2/2 Normally closed

| Specifications |  |
| :---: | :---: |
| Function (single acting) | Flow direction overseat $1 \rightarrow 2$ |
| Maximum Viscosity | Max. 21CST ( $3^{\circ} \mathrm{E}$ ) |
| Body Material (Std) | Brass CW617N (EN 12165) |
| Orifice Material | Stainless Steel 1.4305 EN 10088 (AISI 303) |
| Flange | Stainless Steel 1.4305 EN 10088 (AISI 303) |
| Tube | Stainless Steel AISI 304 |
| Plunger | Stainless Steel 1.4106 EN 10088 (AISI 430F) |
| Top Stop | Stainless Steel 1.4105 EN 10088 (AISI 430F) |
| Springs | Stainless Steel AISI 302 |
| Seal Material (Std) | Foodgrade FKM |
| Connection Type (Std) | G parallel thread (ISO 228-1) |
| Shading Ring | Copper |
| Electrical Characteristics |  |
| Standard <br> Coil Voltage DC (=) | 24 V |
| Standard Coil Voltage AC 50 Hz (~) | $24 \mathrm{~V}, 110 \mathrm{~V}, 200 \mathrm{~V}, 230 \mathrm{~V}$ |
| Standard Coil Voltage AC 60 Hz (~) | $24 \mathrm{~V}, 120 \mathrm{~V}, 220 \mathrm{~V}, 240 \mathrm{~V}$ |
| Voltage Tolerance | +10\% to -15\% (AC) |
|  | +10\% to -5\% (DC) |
| Duty Cycle | 100\% ED |
| Protection Class | IP65 (EN 60529) <br> with plug and gasket correctly fitted * |
| Electrical Connection | to EN 175301-803-A (ex DIN 43650) |
| Coil Insulation | Class F $155{ }^{\circ} \mathrm{C}$ |
| Power Rating (Standard) | AC 18 VA (holding) AC 36 VA (inrush) DC 14 W |

## Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Configuration suitable for vacuum
- Stainless steel AISI 430F operators with low
 residual magnetism
- Coils tested $100 \%$ in compliance to RoHS directive and to relevant international standards
- Choice of high quality seal materials
- Response time 5 to 25 ms

| Pipe <br> Size | Cv (gpm) | $\left\|\begin{array}{c} \mathrm{Kv} \\ \left(\mathrm{~m}^{3} / \mathrm{h}\right) \end{array}\right\|$ | OPD (bar) |  | Orifice (mm) | Seal Material | Valve Code |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | AC <br> Voltages | DC <br> Voltages |  |  |  |
| $1 / 4$ " | 0.04 | 0.03 | -0.9 to 1 | -0.9 to 1 | 1.0 | $\begin{aligned} & \text { FKM } \\ & \text { NBR } \end{aligned}$ | $\begin{aligned} & \text { D263DVAL } \\ & \text { D263DBAL } \end{aligned}$ |
| $1 / 4$ " | 0.09 | 0.08 | -0.9 to 1 | -0.9 to 1 | 1.5 | $\begin{aligned} & \text { FKM } \\ & \text { NBR } \end{aligned}$ | $\begin{aligned} & \text { D263DVCL } \\ & \text { D263DBCL } \end{aligned}$ |
| $1 / 4$ " | 0.24 | 0.20 | -0.9 to 1 | -0.9 to 1 | 2.5 | $\begin{aligned} & \hline \text { FKM } \\ & \text { NBR } \end{aligned}$ | $\begin{aligned} & \text { D263DVGL } \\ & \text { D263DBGGL } \end{aligned}$ |
| $1 / 4{ }^{\prime \prime}$ | 0.32 | 0.27 | -0.9 to 1 | -0.9 to 1 | 3.0 | $\begin{aligned} & \text { FKM } \\ & \text { NBR } \end{aligned}$ | $\begin{aligned} & \text { D263DVHL } \\ & \text { D263D태HL } \end{aligned}$ |
| $1 / 4$ " | 0.42 | 0.36 | -0.9 to 1 | -0.9 to 1 | 4.0 | $\begin{aligned} & \text { FKM } \\ & \text { NBR } \end{aligned}$ | $\begin{aligned} & \text { D263DVLL } \\ & \text { D263DBLLL } \end{aligned}$ |
| $1 / 4$ " | 0.53 | 0.45 | -0.9 to 1 | -0.9 to 1 | 5.0 | $\begin{aligned} & \text { FKM } \\ & \text { NBR } \end{aligned}$ | $\begin{aligned} & \text { D263DVNL } \\ & \text { D263DBNL } \end{aligned}$ |
| $1 / 4 "$ | 0.56 | 0.48 | -0.9 to 1 | -0.9 to 1 | 6.0 | $\begin{aligned} & \text { FKM } \\ & \text { NBR } \end{aligned}$ | $\begin{aligned} & \text { D263DVPL } \\ & \text { D263D토PL } \end{aligned}$ |

Options Available

| Valve Options (see coding chart) |
| :---: |
| Body threaded connection $\mathrm{G} 1 / 8^{\prime \prime}$ |


| Seal Material <br> Temperature Range | Media | Ambient Temperature <br> Range |  |
| :---: | :---: | :---: | :---: |
|  |  | Min | Max |
|  | Water, oil, air | $-10^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C}$ |
| NBR $\left(-10^{\circ} \mathrm{C}\right.$ to $\left.+90^{\circ} \mathrm{C}\right)$ | Water, oil, air | $-10^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C}$ |

1 See corrosion reference guide and sealing solutions for material compatability. Other seals material on request.


## Connection scheme



| Pipe Size | A | B | C | D | Weight (kg) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 8^{\prime \prime}-1 / 4{ }^{\prime \prime}$ | 40 | 77.5 | 18.5 | 9.5 | 0.26 |

Dimensions (mm)

## Solenoid enclosures

7--0 Type Coil - Insulation class F
External material: PBT (reinforced fiberglass 30\%)
Electrical connection: DIN EN 175301-803 form A
Winding insulation: Class H (E180)
Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*

* Plug and gasket not supplied as standard, must be ordered separately.

Type 600 011- Plug
Rated Voltage (max.): 250 VAC / 300 VDC
Nominal Current: 10A (rated) / 16A (max)
Wire cross-section: $\quad 1.5 \mathrm{~mm}^{2} \max$
Cable Entry: $\quad$ PG9 (6 to 8 mm )
Enclosure classification: Conforms to IP65 (according to EN 60529)
with supplied gasket
Insulation class: group C- VDE 0110
Housing colour: black
UL approved, file No: E205538

## Coding chart



## Product coding example:

D263DBPL 7700
$1 / 4 / \mathrm{G}$, auto operation, brass body, FKM seals, 6.0 mm orifice, $230 \mathrm{~V} / 50 \mathrm{~Hz}-240 \mathrm{~V} / 60 \mathrm{~Hz}$, without plug.

D362/363 Series, Vacuum - 3/2 Normally Closed

| Specifications |  |
| :---: | :---: |
| Function (single acting) | Flow direction underseat $2 \rightarrow 1$ |
| Maximum Viscosity | Max. 21cST ( $3^{\circ} \mathrm{E}$ ) |
| Body Material (Std) | Brass CW617N (EN 12165) |
| Orifice Material | Stainless Steel 1.4305 EN 10088 (AISI 303) |
| Flange | Stainless Steel 1.4305 EN 10088 (AISI 303) |
| Tube | Stainless Steel AISI 304 |
| Plunger | Stainless Steel 1.4106 EN 10088 (AISI 430F) |
| Top Stop | Stainless Steel 1.4105 EN 10088 (AISI 430F) |
| Springs | Stainless Steel AISI 302 |
| Seal Material (Std) | Foodgrade FKM |
| Connection Type (Std) | G parallel thread (ISO 228-1) |
| Shading Ring | Copper |
| Electrical Characteristics |  |
| Standard and Class H Coil Voltage DC (=) | 24 V |
| Standard and Class H Coil Voltage AC 50 Hz (~) | $24 \mathrm{~V}, 110 \mathrm{~V}, 200 \mathrm{~V}, 230 \mathrm{~V}$ |
| Standard and Class H Coil Voltage AC 60 Hz (~) | $24 \mathrm{~V}, 120 \mathrm{~V}, 220 \mathrm{~V}, 240 \mathrm{~V}$ |
| c ${ }^{\circ}$ <br> Coil Voltage DC (=) | 24 V |
| $c=\mathrm{N}_{\text {us }}$ Coil Voltage $A C 50 \mathrm{~Hz}(\sim)$ | $24 \mathrm{~V}, 110 \mathrm{~V}, 230 \mathrm{~V}$ |
| $c T$ Uns $_{\text {us }}$ Coil Voltage $A C 60 \mathrm{~Hz}(\sim)$ | $120 \mathrm{~V}, 240 \mathrm{~V}$ |
| Voltage Tolerance | +10\% to -15\% (AC) |
|  | +10\% to -5\% (DC) |
| Duty Cycle | 100\% ED |
| Protection Class | IP65 (EN 60529) <br> with plug and gasket correctly fitted * |
| Electrical Connection | to EN 175301-803-A (ex DIN 43650) |
| Coil Insulation | Class F $155{ }^{\circ} \mathrm{C}$ |
| Power Rating (Standard and Class H) | AC 18 VA (holding) AC 36 VA (inrush) DC 14 W |
| Power Rating (c $\mathrm{HN}_{\mathrm{us}}$ ) | AC 15 VA (holding) AC 30 VA (inrush) DC 10 W |

## Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Configuration suitable for vacuum
- Zero pressure rated

- Stainless steel AISI 430F operators with low residual magnetism
- Coils tested $100 \%$ in compliance to RoHS directive and to relevant international standards
- High quality seal materials
- Response time 5 to 25 ms

| Pipe Size | Cv (gpm) | $\left\|\begin{array}{c} \mathrm{Kv} \\ \left(\mathrm{~m}^{3} / \mathrm{h}\right) \end{array}\right\|$ | OPD (bar) |  | Orifice (mm) | Seal Material | Valve <br> Code |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | AC <br> Voltages | DC <br> Voltages |  |  |  |
| $1 / 4$ " | 0.15 | 0.13 | 0 to -0.95 | 0 to -0.95 | 2.0 | FKM | D363CVEL |
| $1 / 4 "$ | 0.24 | 0.20 | 0 to -0.95 | 0 to -0.95 | 2.5 | FKM | D363CVGL |
| $1 / 4{ }^{\prime \prime}$ | 0.32 | 0.27 | 0 to -0.95 | 0 to -0.95 | 3.0 | FKM | D363CVHL |
| $1 / 4{ }^{\prime \prime}$ | 0.42 | 0.36 | 0 to -0.95 | 0 to -0.95 | 4.0 | FKM | D363CVLL |

Options Available

| Valve Options (see coding chart) |
| :---: |
| Body threaded connection $\mathrm{G}^{1 / 8} \mathrm{~m}^{\prime \prime}$ |


| Seal Material 1 and Media <br> Temperature Range | Media | Ambient Temperature <br> Range |  |
| :---: | :---: | :---: | :---: |
|  |  | Min | Max |
|  | Water, oil, air | $-10^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C}$ |

${ }^{1}$ See corrosion reference guide and sealing solutions for material compatability. Other seals material on request.


| Pipe Size | A | B | C | D | Weight (kg) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 8^{\prime \prime}-1 / 4^{\prime \prime}$ | 40 | 87 | 13 | 9.5 | 0.26 |

Dimensions (mm)

## Solenoid enclosures

7--0 \& 7--1 Type Coil - Insulation class F \& H External material (7--0): PBT (reinforced fiberglass 30\%) External material (7-1): PPS (glass fiber \& mineral filled)
 Electrical connection: DIN EN 175301-803 form A
Winding insulation: Class H (E180)
Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*

7--R ${ }^{[T H}$ us Type Coil - Insulation class F
Encapsulation material: PET 815ER Rynite ${ }^{\circledR}$
Electrical connection: DIN EN 175301-803 form A


Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*
UL approved, file No: E193928

* Plug and gasket not supplied as standard, must be ordered separately.


## Coding chart



## Product coding example:

D362CVGL 7250
$1 / 8^{\prime \prime} \mathrm{G}$, auto operation, brass body, FKM seals, 2.5 mm orifice, 24 VDC , without plug.

D203/204/205 Series, Vacuum - 2/2 Normally closed

| Specifications |  |
| :---: | :---: |
| Function (single acting) | Flow direction underseat $2 \rightarrow 1$ |
| Maximum Viscosity | Max. $21 \mathrm{CST}\left(3^{\circ} \mathrm{E}\right)$ |
| Body Material (Std) | Brass CW617N (EN 12165) |
| Flange | Stainless Steel 1.4305 EN 10088 (AISI 303) |
| Tube | Stainless Steel AISI 304 |
| Plunger | Stainless Steel 1.4106 EN 10088 (AISI 430F) |
| Top Stop | Stainless Steel 1.4105 EN 10088 (AISI 430F) |
| Springs | Stainless Steel AISI 302 |
| Seal Material (Std) | NBR |
| Connection Type (Std) | G parallel thread (ISO 228-1) |
| Shading Ring | Copper |
| Electrical Characteristics |  |
| $\begin{gathered} \text { Standard } \\ \text { Coil Voltage DC (=) } \end{gathered}$ | 24 V |
| Standard Coil Voltage AC 50 Hz (~) | $24 \mathrm{~V}, 110 \mathrm{~V}, 200 \mathrm{~V}, 230 \mathrm{~V}$ |
| Standard Coil Voltage AC 60 Hz (~) | $24 \mathrm{~V}, 120 \mathrm{~V}, 220 \mathrm{~V}, 240 \mathrm{~V}$ |
|  | 24 V |
| Coil Voltage AC $50 \mathrm{~Hz}(\sim)$ | $24 \mathrm{~V}, 110 \mathrm{~V}, 230 \mathrm{~V}$ |
| $\begin{gathered} c \mathbb{N}_{\text {us }} \\ \text { Coil Voltage } A C 60 \mathrm{~Hz}(\sim) \end{gathered}$ | $120 \mathrm{~V}, 240 \mathrm{~V}$ |
| Voltage Tolerance | +10\% to -15\% (AC) |
|  | +10\% to -5\% (DC) |
| Duty Cycle | 100\% ED |
| Protection Class | IP65 (EN 60529) <br> with plug and gasket correctly fitted * |
| Electrical Connection | to EN 175301-803-A (ex DIN 43650) |
| Coil Insulation | Class F $155{ }^{\circ} \mathrm{C}$ |
| Power Rating (Standard) | AC 18 VA (holding) AC 36 VA (inrush) DC 14 W |
| Power Rating (cNNus) | AC 15 VA (holding) AC 30 VA (inrush) DC 10 W |

## Features and Benefits

- Pilot operated
- Robust construction for industrial applications
- Configuration suitable for vacuum
- Stainless steel AISI 430F operators with low residual magnetism

- Coils tested $100 \%$ in compliance to RoHS directive and to relevant international standards
- High quality seal materials
- Response time 50 to 500 ms

| Pipe Size | $\left\|\begin{array}{c} \mathrm{Cv} \\ (\mathrm{gpm}) \end{array}\right\|$ | $\begin{gathered} \mathrm{Kv} \\ \left(\mathrm{~m}^{3} / \mathrm{h}\right) \end{gathered}$ | OPD (bar) |  | Orifice (mm) | Seal Material | Valve Code |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | AC <br> Voltages | DC <br> Voltages |  |  |  |
| $1 / 4$ " | 1.83 | 1.56 | $\begin{gathered} -0.2 \\ \text { to } \\ -0.95 \end{gathered}$ | $\begin{gathered} -0.2 \\ \text { to } \\ -0.95 \end{gathered}$ | 13 | NBR | D203DBZL |
| $3 / 8{ }^{\prime \prime}$ | 3.86 | 3.30 |  |  | 13 | NBR | D204DBZL |
| $1 / 2{ }^{\prime \prime}$ | 4.42 | 3.78 |  |  | 13 | NBR | D205DBZL |

## Options Available

| Seal Material <br> Temd Media <br> Temperature Range | Media | Ambient Temperature <br> Range |  |
| :---: | :---: | :---: | :---: |
|  |  | Min | Max |
| NBR $\left(-10^{\circ} \mathrm{C}\right.$ to $\left.+90^{\circ} \mathrm{C}\right)$ | Water, oil, air | $-10^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C}$ |

${ }^{1}$ See corrosion reference guide and sealing solutions for material compatability. Other seals material on request.

Coil Rotation


Preferred Valve Mounting Options


Connection scheme

$\Rightarrow$ flow direction

| Pipe Size | A | B | C | D | Weight (kg) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 4$ " to $1 / 2^{\prime \prime}$ | 67 | 102 | 45.6 | 15 | 0.49 |

Dimensions (mm)
Solenoid enclosures

7--0 Type Coil - Insulation class F
External material: PBT (reinforced fiberglass 30\%) Electrical connection: DIN EN 175301-803 form A Winding insulation: Class H (E180)
Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*

7--R civius Type Coil - Insulation class F
Encapsulation material: PET 815ER Rynite ${ }^{\circledR}$
Electrical connection: DIN EN 175301-803 form A
Winding insulation: Class H (P180)
Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*
UL approved, file No: E193928

* Plug and gasket not supplied as standard, must be ordered separately.

Type 600 011- Plug
Rated Voltage (max.): 250 VAC / 300 VDC
Nominal Current: 10A (rated) / 16A (max)
Wire cross-section: $\quad 1.5 \mathrm{~mm}^{2} \mathrm{max}$
Cable Entry: PG9 (6 to 8 mm )
Enclosure classification: Conforms to IP65 (according to EN 60529)
with supplied gasket
Insulation class: group C- VDE 0110
Housing colour: black
UL approved, file No: E205538

Coding chart


## Product coding example:

## D205DBZL 725R

$1 / 2^{\prime \prime} \mathrm{G}$, auto operation, brass body, NBR seals, 13 mm orifice, $24 \mathrm{~V} / 50 / 60 \mathrm{~Hz}$ c $\mathrm{N}_{\text {us }}$ approved, without plug.

D237/238/239 \& CD237/238/239 Series, Vacuum - 2/2 Normally closed

| Specifications |  |
| :---: | :---: |
| Function (single acting) | Flow direction overseat $1 \rightarrow 2$ |
| Maximum Viscosity | Max. $21 \mathrm{CST}\left(3^{\circ} \mathrm{E}\right)$ |
| Body Material (Std) | Brass CW617N (EN 12165) |
| Flange | Stainless Steel 1.4305 EN 10088 (AISI 303) |
| Additional Flange (HEX 30) | Brass CW614N (EN 12164) |
| Tube | Stainless Steel AISI 304 |
| Plunger | Stainless Steel 1.4106 EN 10088 (AISI 430F) |
| Top Stop | Stainless Steel 1.4105 EN 10088 (AISI 430F) |
| Springs | Stainless Steel AISI 302 |
| Seal Material (Std) | NBR |
| Connection Type (Std) | G parallel thread (ISO 228-1) |
| Shading Ring | Copper |
| Electrical Characteristics |  |
| High Power Coil Voltage DC (=) | 24 V |
| High Power Coil Voltage AC $50 \mathrm{~Hz}(\sim)$ | $24 \mathrm{~V}, 110 \mathrm{~V}, 230 \mathrm{~V}$ |
| High Power Coil Voltage AC 60 Hz (~) | $24 \mathrm{~V}, 120 \mathrm{~V}, 240 \mathrm{~V}$ |
| Voltage Tolerance | +10\% to -15\% (AC) |
|  | +10\% to -5\% (DC) |
| Duty Cycle | 100\% ED |
| Protection Class | IP65 (EN 60529) <br> with plug and gasket correctly fitted * |
| Electrical Connection | to EN 175301-803-A (ex DIN 43650) |
| Coil Insulation | Class H $180^{\circ} \mathrm{C}$ |
| Power Rating (High Power) | AC 25 VA (holding) AC 50 VA (inrush) DC 22 W |

## Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Configuration suitable for vacuum
- Stainless steel AISI 430F operators with low residual magnetism
- Coils tested $100 \%$ in compliance to RoHS directive and to relevant international standards
- Choice of high quality seal materials
- Response time 5 to 25 ms

| Pipe Size | $\left\|\begin{array}{c} \mathrm{Cv} \\ (\mathrm{gpm}) \end{array}\right\|$ | $\begin{gathered} \mathrm{Kv} \\ \left(\mathrm{~m}^{3} / \mathrm{h}\right) \end{gathered}$ | OPD (bar) |  | Orifice (mm) | Seal Material | Valve Code |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | AC <br> Voltages | DC <br> Voltages |  |  |  |
| $1 / 4{ }^{1}$ | 1.49 | 1.27 | 0 to -0.95 | - | 10.5 | NBR | D237DBU1 |
|  |  |  |  |  |  | EPDM | D237DEU1 |
| $3 / 8{ }^{\prime \prime}$ | 1.68 | 1.44 | 0 to -0.95 | - | 10.5 | NBR | D238DBU1 |
|  |  |  |  |  |  | EPDM | D238DEU1 |
| 1/2" | 1.76 | 1.50 | 0 to -0.95 | - | 10.5 | NBR | D239DBU1 |
|  |  |  |  |  |  | EPDM | D239DEU1 |
| $1 / 4{ }^{\prime \prime}$ | 1.49 | 1.27 | - | 0 to -0.95 | 10.5 | NBR | C D237DBU1 |
|  |  |  |  |  |  | EPDM | C D237DEU1 |
| $3 / 8{ }^{\prime \prime}$ | 1.68 | 1.44 | - | 0 to -0.95 | 10.5 | NBR | C D238DBU1 |
|  |  |  |  |  |  | EPDM | C D238DEU1 |
| $1 / 2{ }^{\prime \prime}$ | 1.76 | 1.50 | - | 0 to -0.95 | 10.5 | NBR | C D239DBU1 |
|  |  |  |  |  |  |  | C D239DEU1 |

## Options Available

| Seal Material <br> Temperature Range | Media | Ambient Temperature <br> Range |  |
| :---: | :---: | :---: | :---: |
|  |  | Min | Max |
| NBR 60 shore $\left(-10^{\circ} \mathrm{C}\right.$ to $\left.+90^{\circ} \mathrm{C}\right)$ | Water, oil, air | $-10^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C}$ |
| EPDM $\left(-10^{\circ} \mathrm{C}\right.$ to $\left.+120^{\circ} \mathrm{C}\right)$ | Water, hot water | $-10^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C}$ |

1 See corrosion reference guide and sealing solutions for material compatability.

## D237/238/239 \& CD237/238/239 Series, Vacuum - 2/2 Normally Closed

Coil Rotation




Preferred Valve Mounting Options


| Pipe Size | A | B | C | D | Weight (kg) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 4^{\prime \prime}-3 / 8^{"}-1 / 22^{\prime \prime}$ | 54 | 89 | HEX 27 | 15 | 0.45 |

Dimensions (mm)

## Solenoid enclosures

7-K1 \& 7-Z1 Type Coil - Insulation class H
External material: $\quad$ PPS (glass fiber \& mineral filled) Electrical connection: DIN EN 175301-803 form A


Winding insulation: Class H (E180)
Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*

* Plug and gasket not supplied as standard, must be ordered separately.


## Type 600 011- Plug

Rated Voltage (max.): 250 VAC / 300 VDC
Nominal Current: 10A (rated) / 16A (max)
Wire cross-section: $\quad 1.5 \mathrm{~mm}^{2}$ max
Cable Entry: $\quad$ PG9 ( 6 to 8 mm )
Enclosure classification: Conforms to IP65 (according to EN 60529) with supplied gasket
Insulation class: group C- VDE 0110
Housing colour: black
UL approved, file No: E205538

## Coding chart



## Product coding example:

D238DEU1 77K1
$3 / 8^{\prime \prime} \mathrm{G}$, auto operation, brass body, EPDM seals, 10.5 mm orifice, $230 \mathrm{~V} / 50 \mathrm{~Hz}-240 \mathrm{~V} / 60 \mathrm{~Hz}$, without plug.

## D187/188/189/190/192 Series, Vacuum - 2/2 Normally Closed

| Specifications |  |
| :---: | :---: |
| Function (single acting) | Flow direction underseat $2 \rightarrow 1$ |
| Maximum Viscosity | Max. $21 \mathrm{CST}\left(3^{\circ} \mathrm{E}\right)$ |
| Body Material (Std) | Brass CW617N (EN 12165) |
| Flange | Stainless Steel 1.4305 EN 10088 (AISI 303) |
| Tube | Stainless Steel AISI 304 |
| Plunger | Stainless Steel 1.4106 EN 10088 (AISI 430F) |
| Top Stop | Stainless Steel 1.4105 EN 10088 (AISI 430F) |
| Springs | Stainless Steel AlSI 302 |
| Seal Material (Std) | NBR |
| Connection Type (Std) | G parallel thread (ISO 228-1) |
| Shading Ring | Copper |
| Electrical Characteristics |  |
| Standard <br> Coil Voltage DC (=) | 24 V |
| Standard Coil Voltage AC 50 Hz (~) | $24 \mathrm{~V}, 110 \mathrm{~V}, 200 \mathrm{~V}, 230 \mathrm{~V}$ |
| Standard Coil Voltage AC 60 Hz (~) | $24 \mathrm{~V}, 120 \mathrm{~V}, 220 \mathrm{~V}, 240 \mathrm{~V}$ |
| ${ }_{c} \boldsymbol{N}_{u s}$ <br> Coil Voltage DC (=) | 24 V |
| Coil Voltage AC $50 \mathrm{~Hz}(\sim)$ | $24 \mathrm{~V}, 110 \mathrm{~V}, 230 \mathrm{~V}$ |
| Coil Voltage AC $60 \mathrm{~Hz}(\sim)$ | $120 \mathrm{~V}, 240 \mathrm{~V}$ |
| Voltage Tolerance | +10\% to -15\% (AC) |
|  | +10\% to -5\% (DC) |
| Duty Cycle | 100\% ED |
| Protection Class | IP65 (EN 60529) <br> with plug and gasket correctly fitted * |
| Electrical Connection | to EN 175301-803-A (ex DIN 43650) |
| Coil Insulation | Class F $155{ }^{\circ} \mathrm{C}$ |
| Power Rating (Standard) | AC 18 VA (holding) AC 36 VA (inrush) DC 14 W |
| Power Rating (c엔) | AC 15 VA (holding) AC 30 VA (inrush) DC 10 W |

Features and Benefits

- Pilot operated
- Robust construction for industrial applications
- Configuration suitable for vacuum
- Stainless steel AISI 430F operators with low residual magnetism

- Coils tested $100 \%$ in compliance to RoHS directive and to relevant international standards
- High quality seal materials
- Response time 50 to 500 ms

| Pipe <br> Size | $\underset{(\mathrm{gpm})}{\mathrm{Cv}}$ | $\underset{\left(\mathrm{m}^{3} / \mathrm{h}\right)}{\mathrm{Kv}}$ | OPD (bar) |  | Orifice (mm) | Seal Material | Valve Code |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | AC Voltages | $\begin{gathered} \text { DC } \\ \text { Voltages } \end{gathered}$ |  |  |  |
| 1/4" | 3.51 | 3.00 | $\begin{gathered} 0 \\ \text { to } \\ -0.95 \end{gathered}$ | $\begin{gathered} 0 \\ \text { to } \\ -0.95 \end{gathered}$ | 15 | NBR | D187DBWL |
| 3/8" | 4.21 | 3.60 |  |  | 15 | NBR | D188DBWL |
| $1 / 2{ }^{\prime \prime}$ | 4.56 | 3.90 |  |  | 15 | NBR | D189DBWL |
| $3 / 4$ " | 5.62 | 4.80 |  |  | 15 | NBR | D190DBWL |
| $1^{\prime \prime}$ | 5.97 | 5.10 |  |  | 15 | NBR | D192DBWL |

## Options Available

| Seal Material1 and Media <br> Temperature Range | Media | Ambient Temperature <br> Range |  |
| :---: | :---: | :---: | :---: |
|  |  | Min | Max |
| NBR $\left(-10^{\circ} \mathrm{C}\right.$ to $\left.+90^{\circ} \mathrm{C}\right)$ | Water, oil, air | $-10^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C}$ |

${ }^{1}$ See corrosion reference guide and sealing solutions for material compatability. Other seals material on request.

## D187/188/189/190/192 Series, Vacuum - 2/2 Normally closed



Connection scheme


| Pipe Size | A | B | C | D | Weight (kg) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 4 "-1 / 2 "$ | 75 | 108 | 55 | 14 | 0.5 |
| $3 / 4 "-1 "$ | 85 | 108 | 55 | 21.5 | 0.8 |

Dimensions (mm)

## Solenoid enclosures

7--0 Type Coil - Insulation class F
External material: PBT (reinforced fiberglass 30\%) Electrical connection: DIN EN 175301-803 form A Winding insulation: Class H (E180)
Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*

7--R cTus Type Coil - Insulation class F
Encapsulation material: PET 815ER Rynite ${ }^{\circledR}$
Electrical connection: DIN EN 175301-803 form A
Winding insulation: Class H (P180)


## Type 600 011- Plug

Rated Voltage (max.): 250 VAC / 300 VDC
Nominal Current: 10A (rated) / 16A (max)
Wire cross-section: $\quad 1.5 \mathrm{~mm}^{2} \max$
Cable Entry: $\quad$ PG9 ( 6 to 8 mm )
Enclosure classification: Conforms to IP65 (according to EN 60529)


Insulation class:
Housing colour: black
UL approved, file No: E205538

Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*
UL approved, file No: E193928

* Plug and gasket not supplied as standard, must be ordered separately.

Coding chart


## Product coding example:

D189DBWL 7200
$1 / 22^{\prime \prime} \mathrm{G}$, auto operation, brass body, NBR seals, 15 mm orifice, $24 \mathrm{~V} / 50 / 60 \mathrm{~Hz}$, without plug.

D223/224/225 Series, Vacuum - $2 / 2$ Normally closed

| Specifications |  |
| :---: | :---: |
| Function (single acting) | Flow direction underseat $2 \rightarrow 1$ |
| Maximum Viscosity | Max. $21 \mathrm{CST}\left(3^{\circ} \mathrm{E}\right.$ ) |
| Body Material (Std) | Brass CW617N (EN 12165) |
| Flange | Stainless Steel 1.4305 EN 10088 (AISI 303) |
| Tube | Stainless Steel AISI 304 |
| Plunger | Stainless Steel 1.4106 EN 10088 (AISI 430F) |
| Top Stop | Stainless Steel 1.4105 EN 10088 (AISI 430F) |
| Springs | Stainless Steel AlSI 302 |
| Seal Material (Std) | NBR |
| Connection Type (Std) | G parallel thread (ISO 228-1) |
| Shading Ring | Copper |
| Electrical Characteristics |  |
| $\begin{gathered} \text { Standard } \\ \text { Coil Voltage DC (=) } \end{gathered}$ | 24 V |
| Standard Coil Voltage AC 50 Hz (~) | $24 \mathrm{~V}, 110 \mathrm{~V}, 200 \mathrm{~V}, 230 \mathrm{~V}$ |
| Standard Coil Voltage AC 60 Hz (~) | $24 \mathrm{~V}, 120 \mathrm{~V}, 220 \mathrm{~V}, 240 \mathrm{~V}$ |
| Voltage Tolerance | +10\% to -15\% (AC) |
|  | +10\% to -5\% (DC) |
| Duty Cycle | 100\% ED |
| Protection Class | IP65 (EN 60529) <br> with plug and gasket correctly fitted * |
| Electrical Connection | to EN 175301-803-A (ex DIN 43650) |
| Coil Insulation | Class F $155{ }^{\circ} \mathrm{C}$ |
| Power Rating (Standard) | AC 18 VA (holding) AC 36 VA (inrush) DC 14 W |

## Features and Benefits

- Pilot operated
- Robust construction for industrial applications
- Configuration suitable for vacuum
- Stainless steel AISI 430F operators with low residual magnetism
- Coils tested $100 \%$ in compliance to RoHS directive and to relevant international standards
- High quality seal materials
- Speed control screw as standard
- Response time 50 to 500 ms

| Pipe <br> Size | $\left\|\begin{array}{c} \mathrm{Cv} \\ (\mathrm{gpm}) \end{array}\right\|$ | $\begin{gathered} \mathrm{Kv} \\ \left(\mathrm{~m}^{3} / \mathrm{h}\right) \end{gathered}$ | OPD (bar) |  | Orifice (mm) | Seal Material | Valve Code |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | AC <br> Voltages | DC <br> Voltages |  |  |  |
| $11 / 4{ }^{\prime \prime}$ | 25.97 | 22.20 | $\begin{gathered} -0.5 \\ \text { to } \\ -0.95 \end{gathered}$ | $\begin{gathered} -0.5 \\ \text { to } \\ -0.95 \end{gathered}$ | 40 | NBR | D223DBKL |
| $11 / 2{ }^{\prime \prime}$ | 28.08 | 24.00 |  |  | 40 | NBR | D224DBKL |
| 2" | 37.91 | 32.40 |  |  | 50 | NBR | D225DBJL |

Options Available

| Seal Material <br> Temper <br> Temperat Media | Media | Ambient Temperature <br> Range |  |
| :---: | :---: | :---: | :---: |
|  |  | Min | Max |
| NBR $\left(-10^{\circ} \mathrm{C}\right.$ to $\left.+90^{\circ} \mathrm{C}\right)$ | Water, oil, air | $-10^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C}$ |

${ }^{1}$ See corrosion reference guide and sealing solutions for material compatability. Other seals material on request.



๑ flow direction

| Pipe Size | A | B | C | D | Weight (kg) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1 \frac{1}{4} 4^{\prime \prime}-11 / 2^{\prime \prime}$ | 140 | 140 | 96 | 31 | 2.8 |
| $2^{\prime \prime}$ | 168 | 158 | 112 | 39 | 3.9 |

Dimensions (mm)

## Solenoid enclosures

7--0 Type Coil - Insulation class F
External material: PBT (reinforced fiberglass 30\%) Electrical connection: DIN EN 175301-803 form A


Winding insulation: Class H (E180)
Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*

* Plug and gasket not supplied as standard, must be ordered separately


## Type 600 011- Plug

Rated Voltage (max.): 250 VAC / 300 VDC
Nominal Current: 10 A (rated) / 16A (max)
Wire cross-section: $\quad 1.5 \mathrm{~mm}^{2} \mathrm{max}$
Cable Entry: $\quad$ PG9 ( 6 to 8 mm )
Enclosure classification: Conforms to IP65 (according to EN 60529) with supplied gasket
Insulation class: group C- VDE 0110
Housing colour: black
UL approved, file No: E205538

## Coding chart


${ }^{1}$ DN40 for D223 and D224; DN50 for D225.

## Product coding example:

D225DBJL 7250
$2^{\prime \prime} \mathrm{G}$, auto operation, brass body, NBR seals, 50 mm orifice, 24 VDC, without plug.

