

## - GENERAL FEATURES

Direct acting micro solenoid valve; minimum overall dimensions. Quick response time and high number of cycles.
Suitable to shut off liquid and gaseous fluids (verify the compatibility of fluid with materials in contact).

## - TECHNICAL FEATURES

Opening time
Closing time
Fluid temperature

Max viscosity

16 bar
from $\sim 5 \mathrm{~ms}$ to $\sim 10 \mathrm{~ms}$
from $\sim 5 \mathrm{~ms}$ to $\sim 10 \mathrm{~ms}$
$0^{\circ} \mathrm{C}+130^{\circ} \mathrm{C}$ (FPM)
$0^{\circ} \mathrm{C}+140^{\circ} \mathrm{C}$ (FFPM)
$-10^{\circ} \mathrm{C}+90^{\circ} \mathrm{C}$ (HNBR)
$3^{\circ} \mathrm{E}\left(\sim 22 \mathrm{cStokes}\right.$ or $\left.\mathrm{mm}^{2} / \mathrm{s}\right)$
(Other voltages and frequencies on request.- AC : $\max 24 \mathrm{~V}$ )


| - COIL | ZE30 | Z031 |
| :---: | :---: | :---: |
| Continuous duty | ED 100\% |  |
| Encapsulation material | PA (Polyamide) fiberglass reinforced |  |
| Coil insulation class | $\mathrm{F}\left(155^{\circ} \mathrm{C}\right)$ |  |
| Ambient temperature | $-10^{\circ} \mathrm{C}+60^{\circ} \mathrm{C}$ |  |
| Electric connections | DIN 46340 | DIN 46340 - 3 micro-poles connectors |
| Protection degree | IP65 (EN 60529) with plug micro-connector |  |
| Voltages | $\begin{aligned} & \hline \text { DC: } 12-24 \mathrm{~V} \\ & (+10 \%-5 \%) \end{aligned}$ | $\begin{gathered} \hline \mathrm{AC}: 24 \mathrm{~V} / 50 \mathrm{~Hz} \\ (+10 \%-15 \%) \end{gathered}$ |

- MATERIALS IN CONTACT WITH FLUID

| Body | Brass (see notes) |
| :--- | :--- |
| Sealing | FPM or FFPM or HNBR |
| Internal components | Stainless steel |
| Seat | Brass |
| Guide assembly | Stainless steel |
| Shading ring (only for V165V02) | Copper |


| $\begin{gathered} \text { Port size } \\ \text { ISO-UNI } \\ 4534 \end{gathered}$ | Orifice <br> size <br> (mm) | Differential pressure (bar) |  |  |  |  | $\begin{gathered} \mathrm{K} v \\ \left(\mathrm{~m}^{3} / \mathrm{h}\right) \end{gathered}$ | Series and type |  | Power absorption |  |  | Sealings | Notes | Weight <br> (kg) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \Delta \mathrm{p} \\ & \mathrm{~min} \end{aligned}$ | $\Delta \mathrm{pmax}$ |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | Gases |  | Liquids |  |  | Valve | Coil | AC (VA) |  | $\begin{aligned} & \text { DC } \\ & \text { (W) } \end{aligned}$ |  |  |  |
|  |  |  | AC | DC | AC | DC |  |  |  | Inrush | Holding |  |  |  |  |
| M5 | 1,1 | 0 | - | 0,5 | - | 0,5 | 0,04 | V165V03 | ZE30L | - | - | 0,5 | FPM |  | 0,060 |
|  |  |  | 14 | 10 | 14 | 10 |  | V165V02 | Z031C / ZE30C | 4 | 3 | 2,5 |  |  |  |
|  |  |  | - |  | - |  |  | V165V04 | ZE30C | - | - |  |  | 1 |  |
|  |  |  |  |  |  |  |  | V165V01 |  |  |  |  |  | - |  |
|  |  |  |  | 14 |  | 14 |  | V165N01 | ZE30A |  |  | 4 | HNBR | 2 |  |
|  | 2 |  | 8 | 4 | 8 | 4 | 0,10 | V165V02 | Z031A / ZE30A | 6 | 5 |  | FPM |  |  |
|  |  |  | 5 | 1,5 | 5 | 1,5 |  |  | Z031C / ZE30C | 4 | 3 | 2,5 |  |  |  |
|  |  |  | - |  | - |  |  | V165V01 | ZE30C | - | - |  |  | - |  |
|  |  |  |  | 4 |  | 4 |  | V165Z08 | ZE30A |  |  | 4 | FFPM | 1 |  |
|  |  |  |  |  |  |  |  | V165Z15 |  |  |  |  |  | 1-3 |  |

## - NOTES

- These micro-solenoid valves are not suitable for stagnating media subject to vaporization which deposit solid, calcareous, incrusting residues or similar.
- Seal: FPM = Fluoro-carbon elastomer FFPM = Perfluorate elastomer HNBR = Hydrogenated nitrile-butylene elastomer
- DC versions available with Z031 coil on request (Electric connections: DIN 46340 - micro plug connector; Protection degree: IP65)

1 - Solenoid valves with body and bonnet in chemically nickel plated brass (Ni-P).
2 - Particularly suitable to shut off refrigerating fluids (version available on request)
3 - FFPM complying with FDA standards; particularly suitable for applications in the food and pharmaceutical sector (version available on request).

## - SPARE PARTS



