750 Series 2/2 and 2/3 encloses in a single body eight shutters in NC or NO configuration. The series modularity allows to have at disposal a single outlet or 2, 4, 8 independent outlets. All innovations offered by Matrix technology are present. Said characteristics couple manufacturing simplicity and ability of dynamic high-performances. Response times are of millisecond range, while operation life is over 500 million cycles. The Series includes the Vacuum versions designed for uses with vacuum technique. Due to the facility to be speed-up controlled, dynamic characteristics are even more improved; standard solenoid valves equipped with 24 VDC control present response times lower than 5 ms in opening and 2 ms in closing, with a maximum operation frequency 200 Hz. On the contrary, solenoid valves equipped with speed-up control present a response time both in opening and closing lower than 2 ms, with a maximum operation frequency 300 Hz.

Besides high-speed characteristics, solenoid valves 720 Series offer flow rate value to 100 l/minute (ANR), with supply pressure from 0 to 8 bar.

For 750 multi-function series, a lot of accessories are available, such as IP 52 or IP 56 connectors, manifolds with different positions and speed-up driver boards.

---

**Advantages**

- Compact dimension.
- High duct diameter and flow rate.
- Short response times.
- Insensitivity to frequency work and to vibrations.
- Low absorbed power.
- Precision, repetitiveness and flexibility.
- Long operating life.

**Applications**

- Process and precision instrumentation.
- Pressure and flow rate control devices.
- Positioning systems.
- Pilot system.
- Selection systems.
- Metering systems.
- Biomedical and measure sector.

**Materials**

- Body in PPS.
- Flanges in Al. (in INOX if required).
- Seals in NBR. (shutters in HNBR if required).
IDENTIFICATION CODE

- OUTLET

1 1 Outlet

- FLOW RATE (at 8 bar)
  
  H 420 N/min
  B 600 N/min
  M 700 N/min (control tension JJ XX KK)

- VERSION
  
  Standard
  H HNBR Shutters

- No. ELECTRICAL CONTROLS
  
  1 1 Control
  2 2 Controls
  4 4 Controls
  8 8 Controls
  C 4 Controls / Integrated diodes with common 0 V
  D 8 Controls / Integrated diodes with common 0 V
  F 4 Controls / Integrated diodes with common 12/24 V
  G 8 Controls / Integrated diodes with common 12/24 V

- PORT CONNECTION
  
  0 Integrated cables IP 62 L = 500 mm
  E Presetting for easy connection Easy IP 52 - IP 65 (only 4 and 8 controls)

- SPECIAL PROTECTIONS
  
  Only with EASY IP 65 port connection
  M Stainless steel (INOX) flanges
  N EPOXY BLACK varnished flanges

- FUNCTION
  
  A NO
  C NC

- TYPE
  
  2 2/2

- CONTROL TENSION
  
  12 12 VDC ± 10% ED 100% 1.4 + 11.8W
  24 24 VDC ± 10% ED 100% 1.2 + 10.0W
  JJ 24 VDC ± 10% ED 100% 1.9 + 15.2W
  XX Speed-up in current ED 100% —
  KK Speed-up in tension ED 100% —
  (1) Only with Electronic Driver Boards PRB or UDS

- GENERAL CHARACTERISTICS
  
  FLUID Non-lubricated dry air, neutral gases (~10 + 50°C)
  FILTRATION RATING Min 40 micron
  TEMPERATURE ~ 10 + 50°C (Standard version)
  RESPONSE TIME IN OPENING 12 / 24 < 7 ms JJ < 5 ms XX / KK < 2 ms
  RESPONSE TIME IN CLOSING 12 / 24 < 3 ms JJ < 2 ms XX / KK < 2 ms
  MAXIMUM FREQUENCY 100 Hz 200 Hz 300 Hz
  WEIGHT 380 g
  PRODUCT LIFE EXPECTANCY ≥ 500 M/s cycles
  IP RATING IP 52 - IP 62 - IP 65

- OPERATING PRESSURE
  
<table>
<thead>
<tr>
<th>RANGE</th>
<th>MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 - 4 bar</td>
</tr>
<tr>
<td>2</td>
<td>4 - 8 bar</td>
</tr>
<tr>
<td>3</td>
<td>0 - 6 bar</td>
</tr>
<tr>
<td>6</td>
<td>2 - 6 bar</td>
</tr>
</tbody>
</table>
CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK

V1 = 24 VDC  \( t_1 = 2 \text{ ms} \)  \( V2 = 5 \text{ VDC} \)

N.B. KK MODELS ARE CONTROLLED IN TENSION

CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS XX

\( I_1 = 5.6 \text{ A} \)  \( I_1 = 2 \text{ ms} \)  \( I_2 = 2.4 \text{ A} \)

N.B. XX MODELS ARE CONTROLLED IN CURRENT

FLOW RATE

\( Q_n = 662 \text{ Nl/min} \)
\( C = 100 \text{ Nl/min bar} \)
\( b = 0.425 \)

ELECTRICAL PORT CONNECTION

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>1 CONTROL</th>
<th>2 CONTROLS</th>
<th>4 CONTROLS</th>
<th>8 CONTROLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLACK</td>
<td>COMMON</td>
<td>COMMON</td>
<td>COMMON</td>
<td>COMMON</td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>RED</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>ORANGE</td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
<td></td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>GREEN</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>BLUE</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>VIOLET</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>GREY</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>
**GENERAL CHARACTERISTICS**

- **FLUID:** Non-lubricated dry air, neutral gases (~10°C - 50°C)
- **FILTRATION RATING:** Min 40 micron
- **TEMPERATURE:** ~ 10°C - 50°C (Standard version)
- **RESPONSE TIME IN OPENING:** 12 / 24 V = 7 ms  JJ = 5 ms  XX / KK = 2 ms
- **RESPONSE TIME IN CLOSING:** 12 / 24 V = 3 ms  JJ = 2 ms  XX / KK = 2 ms
- **MAXIMUM FREQUENCY:** 100 Hz  200 Hz  300 Hz
- **WEIGHT:** 340 g
- **PRODUCT LIFE EXPECTANCY:** ≥ 500 M/s cycles
- **IP RATING:** IP 52 - IP 62 - IP 65

**IDENTIFICATION CODE**

- **OUTLETS:** 4 4 Outlets

- **FLOW RATE** (at 6 bar)
  - H 100 N/min
  - B 160 N/min
  - M 200 N/min (control tension JJ | XX | KK )

- **VERSION**
  - Standard
  - H HNBR Shutters

- **No. ELECTRICAL CONTROLS**
  - 4 4 Controls
  - 8 8 Controls
  - C 4 Controls / Integrated diodes with common 0 V
  - D 8 Controls / Integrated diodes with common 0 V
  - F 4 Controls / Integrated diodes with common 12 / 24 V
  - G 8 Controls / Integrated diodes with common 12 / 24 V

- **PORT CONNECTION**
  - 0 Integrated cables  IP 62 - L = 500 mm
  - E Presetting for Easy connection  IP 52 - IP 65

- **SPECIAL PROTECTIONS**
  - M Stainless steel (INOX) flanges
  - N EPOX BLACK varnished flanges

- **FUNCTION**
  - A NO
  - C NC

- **TYPE**
  - 2 2/2

- **CONTROL TENSION**
  - 12 12 VDC ± 10%  ED 100%  1.4 ± 2.9 W
  - 24 24 VDC ± 10%  ED 100%  1.2 ± 2.5 W
  - JJ 24 VDC ± 10%  ED 100%  1.9 ± 3.8 W
  - XX Speed-up in current ED 100% —
  - KK Speed-up in tension ED 100% —
  - (1) Only with Electronic Driver Boards PRB or UDB

- **OPERATING PRESSURE**

<table>
<thead>
<tr>
<th>RANGE</th>
<th>MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 - 4 bar</td>
</tr>
<tr>
<td>2</td>
<td>4 - 8 bar</td>
</tr>
<tr>
<td>3</td>
<td>0 - 8 bar</td>
</tr>
<tr>
<td>5</td>
<td>2 - 6 bar</td>
</tr>
</tbody>
</table>
CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK

| V1 | 24 VDC | t1 | 2 ms | V2 | 5 VDC |

N.B. KK MODELS ARE CONTROLLED IN TENSION

CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS XX

| I1 | 1.4 A | t1 | 2 ms | I2 | 0.6 A |

N.B. XX MODELS ARE CONTROLLED IN CURRENT

FLOW RATE

\[ Q_n = 118 \text{ Nl/min} \]
\[ C = 28.57 \text{ Nl/min bar} \]
\[ b = 0.256 \]

ELECTRICAL PORT CONNECTION

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>4 CONTROLS</th>
<th>8 CONTROLS (STATED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLACK</td>
<td>COMMON</td>
<td>COMMON</td>
</tr>
<tr>
<td>BROWN</td>
<td>1</td>
<td>1 (1)</td>
</tr>
<tr>
<td>RED</td>
<td>2</td>
<td>2 (1)</td>
</tr>
<tr>
<td>ORANGE</td>
<td>3</td>
<td>3 (2)</td>
</tr>
<tr>
<td>YELLOW</td>
<td>4</td>
<td>4 (2)</td>
</tr>
<tr>
<td>GREEN</td>
<td>—</td>
<td>5 (3)</td>
</tr>
<tr>
<td>BLUE</td>
<td>—</td>
<td>6 (3)</td>
</tr>
<tr>
<td>VIOLET</td>
<td>—</td>
<td>7 (4)</td>
</tr>
<tr>
<td>GREY</td>
<td>—</td>
<td>8 (4)</td>
</tr>
</tbody>
</table>
**GENERAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLUID</td>
<td>Non-lubricated dry air, neutral gases (−10 to 50°C)</td>
</tr>
<tr>
<td>FILTRATION RATING</td>
<td>Min 40 micron</td>
</tr>
<tr>
<td>TEMPERATURE</td>
<td>−10 to 50°C (Standard version)</td>
</tr>
<tr>
<td>RESPONSE TIME IN OPENING</td>
<td>12 / 24 &lt; 7 ms</td>
</tr>
<tr>
<td>RESPONSE TIME IN CLOSING</td>
<td>12 / 24 &lt; 3 ms</td>
</tr>
<tr>
<td>MAXIMUM FREQUENCY</td>
<td>100 Hz, 200 Hz, 300 Hz</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>350 g</td>
</tr>
<tr>
<td>PRODUCT LIFE EXPECTANCY</td>
<td>≥500 M/s cycles</td>
</tr>
<tr>
<td>IP RATING</td>
<td>IP 52 - IP 62 - IP 65</td>
</tr>
</tbody>
</table>

**IDENTIFICATION CODE**

- **FLOW RATE** (at 6 bar)
  - H: 50 N/m
  - B: 80 N/m
  - M: 100 N/m (control tension JJ XX KK)

- **VERSION**
  - Standard
  - H: NBR Shutters

- **OUTLETS**
  - 8 Outlets

- **FUNCTION**
  - A: NO
  - C: NC

- **TYPE**
  - 2/2

- **CONTROL TENSION**
  - 12 VDC ± 10% ED 100% 1.4 W
  - 24 VDC ± 10% ED 100% 1.2 W
  - JJ 24 VDC ± 10% ED 100% 1.9 W
  - XX Speed-up in current ED 100% —
  - KK Speed-up in tension ED 100% —
  - Only with Electronic Driver Boards PR6 or UCB

- **OPERATING PRESSURE**
  - RANGE MODELS
<table>
<thead>
<tr>
<th>RANGE</th>
<th>MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 - 4 bar All</td>
</tr>
<tr>
<td>2</td>
<td>4 - 8 bar All</td>
</tr>
<tr>
<td>3</td>
<td>0 - 8 bar XX / KK</td>
</tr>
<tr>
<td>8</td>
<td>2 - 6 bar All</td>
</tr>
</tbody>
</table>

**PORT CONNECTION**

- 0: Integrated cables IP 62 L = 500 mm
- E: Presetting for Easy connection IP 62 - IP 65

**SPECIAL PROTECTIONS**

- M: Stainless steel (INOX) flanges
- N: EPOX BLACK varnished flanges

- Only with EASY IP 65 port connection
ACCESSORIES

<table>
<thead>
<tr>
<th>Reference</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>PUSH-IN FITTING D 10</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>PUSH-IN FITTING D 4/3</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>PLUG</td>
</tr>
</tbody>
</table>

NOTE: Inch size available

CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK

\[
\begin{align*}
V_1 &= 24 \text{ VDC} \\
T_1 &= 2 \text{ ms} \\
V_2 &= 5 \text{ VDC}
\end{align*}
\]

CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS XX

\[
\begin{align*}
I_1 &= 0.7 \text{ A} \\
T_1 &= 2 \text{ ms} \\
I_2 &= 0.3 \text{ A}
\end{align*}
\]

FLOW RATE \([M]\)

\[
\begin{align*}
Q_0 &= 67 \text{ Nl/min} \\
C &= 15.2 \text{ Nl/min bar} \\
\beta &= 0.35
\end{align*}
\]

ELECTRICAL PORT CONNECTION

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>8 CONTROLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLACK</td>
<td>COMMON</td>
</tr>
<tr>
<td>BROWN</td>
<td>1</td>
</tr>
<tr>
<td>RED</td>
<td>2</td>
</tr>
<tr>
<td>ORANGE</td>
<td>3</td>
</tr>
<tr>
<td>YELLOW</td>
<td>4</td>
</tr>
<tr>
<td>GREEN</td>
<td>5</td>
</tr>
<tr>
<td>BLUE</td>
<td>6</td>
</tr>
<tr>
<td>VIOLET</td>
<td>7</td>
</tr>
<tr>
<td>GREY</td>
<td>8</td>
</tr>
</tbody>
</table>
**GENERAL CHARACTERISTICS**

- **FLUID**: Non-lubricated dry air, neutral gases (-10 to 50°C)
- **filtration rating**: Min 40 micron
- **temperature**: -10 to 50°C (Standard version)
- **response time in opening**: 12 / 24 < 7 ms JJ < 5 ms XX / KK < 2 ms
- **response time in closing**: 12 / 24 < 3 ms JJ < 2 ms XX / KK < 2 ms
- **maximum frequency**: 100 Hz 200 Hz 300 Hz
- **weight**: 380 g
- **product life expectancy**: ≥ 500 M/s cycles
- **IP rating**: IP 62

**IDENTIFICATION CODE**

- **H**
- **X**
- **7**
- **5**
- **1**
- **1**
- **0**
- **2**
- **C**
- **3**
- **24**

- **OUTLETS**: 1 1 Outlet
- **flow rate** (at 6 bar):
  - **H**: 420 N/min
  - **B**: 600 N/min
  - **M**: 700 N/min (control tension JJ XX KK)
- **version**:
  - Standard
  - **H**: HNBR Shutter
- **No. electrical controls**: 1 1 Control
- **function**:
  - A: NO
  - C: NC
- **type**: 3 3/2
- **control tension**:
  - **12**: 12 VDC ± 10% ED 100% 11.6 W
  - **24**: 24 VDC ± 10% ED 100% 10.0 W
  - **JJ**: 24 VDC ± 10% ED 100% 15.2 W
  - **XX**: Speed up in current ED 100% 15.2 W
  - **KK**: Speed up in tension ED 100% 15.2 W
  - (1) Only with Electronic Driver Boards PDF or UDB
- **pressione di esercizio**:
  - **range** | **models**
  - 1 | 0 - 4 bar All
  - 2 | 4 - 8 bar All
  - 3 | 0 - 8 bar XX / KK
  - 8 | 2 - 6 bar All

**Port connection**: Integrated cables IP 62 L = 500 mm

**Special protections**:
- **M**: Stainless steel (INOX) flanges
- **N**: EPOX BLACK varnished flanges
CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK

N.B. KK MODELS ARE CONTROLLED IN TENSION

\[
\begin{align*}
V1 &= 24 \text{ VDC} \\
I1 &= 2 \text{ ms} \\
V2 &= 5 \text{ VDC}
\end{align*}
\]

CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS XX

N.B. XX MODELS ARE CONTROLLED IN CURRENT

\[
\begin{align*}
I1 &= 5.6 \text{ A} \\
I1 &= 2 \text{ ms} \\
I2 &= 2.4 \text{ A}
\end{align*}
\]

FLOW RATE \[ M \]

\[
Qm = 462 \text{ Nl/min} \\
C = 100 \text{ Nl/min bar} \\
b = 0.425
\]

ELECTRICAL PORT CONNECTION

<table>
<thead>
<tr>
<th>COLORE</th>
<th>1 CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLACK</td>
<td>COMMON</td>
</tr>
<tr>
<td>BROWN</td>
<td>1</td>
</tr>
</tbody>
</table>
### GENERAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>FLUID</th>
<th>Non-lubricated dry air, neutral gases (−10 to 50°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FILTRATION RATING</td>
<td>Min 40 micron</td>
</tr>
<tr>
<td>TEMPERATURE</td>
<td>− 10 to 50°C (Standard version)</td>
</tr>
<tr>
<td>RESPONSE TIME IN OPENING</td>
<td>12 / 24 &lt; 7 ms  JJ &lt; 5 ms  XX / KK &lt; 2 ms</td>
</tr>
<tr>
<td>RESPONSE TIME IN CLOSING</td>
<td>12 / 24 &lt; 3 ms  JJ &lt; 2 ms  XX / KK &lt; 2 ms</td>
</tr>
<tr>
<td>MAXIMUM FREQUENCY</td>
<td>100 Hz  200 Hz  300 Hz</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>330 g</td>
</tr>
<tr>
<td>PRODUCT LIFE EXPECTANCY</td>
<td>≥ 500 M/s cycles</td>
</tr>
<tr>
<td>IP RATING</td>
<td>IP 52 - IP 62</td>
</tr>
</tbody>
</table>

### IDENTIFICATION CODE

```
H X 7 5 2 2 0 2 C 3 2 4
```

- **OUTLETS**
  - 2 Outlets
- **FLOW RATE (at 6 bar)**
  - H 200 N/min
  - B 310 N/min
  - M 360 N/min (control tension JJ, XX, KK)
- **VERSION**
  - Standard
  - H HNBR Shutters
- **No. ELECTRICAL CONTROLS**
  - 2 Controls
- **FUNCTION**
  - A NO
  - C NC
- **TYPE**
  - 3 3/2
- **CONTROL TENSION**
  - 12 12 VDC ± 10 % ED 100 % 5.8 W
  - 24 24 VDC ± 10 % ED 100 % 7.6 W
  - JJ 24 VDC ± 10 % ED 100 % 5.0 W
  - XX Speed-up in current ED 100 % —
  - KK Speed-up in tension ED 100 % —
  - (1) Only with Electronic Driver Boards PRB or UDB

### OPERATING PRESSURE

<table>
<thead>
<tr>
<th>RANGE</th>
<th>MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 - 4 bar</td>
</tr>
<tr>
<td>2</td>
<td>4 - 8 bar</td>
</tr>
<tr>
<td>3</td>
<td>0 - 8 bar</td>
</tr>
<tr>
<td>8</td>
<td>2 - 6 bar</td>
</tr>
</tbody>
</table>

### PORT CONNECTION

- D Integrated cables IP 62 L = 500 mm
- E Presetting for Easy connection IP 52
CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK

 Voltage: V1 = 24 VDC, V2 = 5 VDC
 Time: t1 = 2 ms, t2 = 5 ms

Pressure run
Tension run

N.B. KK MODELS ARE CONTROLLED IN TENSION

CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS XX

 Voltage: I1 = 2.8 A, I2 = 1.2 A
 Time: t1 = 2 ms, t2 = 5 ms

Pressure run
Current run

N.B. XX MODELS ARE CONTROLLED IN CURRENT

FLOW RATE [M]

Gn = 215 Nl/min
C = 51.43 Nl/min bar
b = 0.278

PRESSURE [P (bar)]

ACCESSORIES

<table>
<thead>
<tr>
<th>Reference</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>PUSH-IN FITTING Ø 19</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>PUSH-IN FITTING Ø 8/6</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>SILENCER</td>
</tr>
</tbody>
</table>

NOTE: Inch size available
**GENERAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FLUID</strong></td>
<td>Non-lubricated dry air, neutral gases (~10°C - 50°C)</td>
</tr>
<tr>
<td><strong>FILTRATION RATING</strong></td>
<td>Min 40 micron</td>
</tr>
<tr>
<td><strong>TEMPERATURE</strong></td>
<td>-10°C - 50°C (Standard version)</td>
</tr>
<tr>
<td><strong>RESPONSE TIME IN OPENING</strong></td>
<td>12 / 24 &lt; 7 ms, JJ &lt; 5 ms, XX / KK &lt; 2 ms</td>
</tr>
<tr>
<td><strong>RESPONSE TIME IN CLOSING</strong></td>
<td>12 / 24 &lt; 3 ms, JJ &lt; 2 ms, XX / KK &lt; 2 ms</td>
</tr>
<tr>
<td><strong>MAXIMUM FREQUENCY</strong></td>
<td>100 Hz, 200 Hz, 300 Hz</td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
<td>340 g</td>
</tr>
<tr>
<td><strong>PRODUCT LIFE EXPECTANCY</strong></td>
<td>≥ 500 M/s cycles</td>
</tr>
<tr>
<td><strong>IP RATING</strong></td>
<td>IP 52 - IP 62 - IP 65</td>
</tr>
</tbody>
</table>

**IDENTIFICATION CODE**

- **FLOW RATE** (at 6 bar)
  - **H** 100 N/min
  - **B** 160 N/min
  - **M** 200 N/min (control tension JJ, XX, KK)

- **VERSION**
  - Standard
  - **H** HNBR Shutters

- **OUTLETS**
  - **4** 4 Outlet

- **FUNCTION**
  - **A** NO
  - **C** NC

- **TYPE**
  - **3** 3/2

- **CONTROL TENSION**
  - **12** 12 VDC ± 10% ED 100% 2.9 W
  - **24** 24 VDC ± 10% ED 100% 2.5 W
  - **JJ** 24 VDC ± 10% ED 100% 3.8 W
  - **XX** Speed up in current ED 100% 2.9 W
  - **KK** Speed up in tension ED 100% 2.9 W

- **No. ELECTRICAL CONTROLS**
  - **4** 4 Controls
  - **C** 4 Controls / Integrated diodes with common 0 V
  - **F** 4 Controls / Integrated diodes with common 12/24 V

- **PORT CONNECTION**
  - **0** Integrated cables IP 62 L = 500 mm
  - **E** Presetting for Easy connection IP 52 - IP 65

- **SPECIAL PROTECTIONS**
  - Only with EASY IP 65 port connection
  - **M** Stainless steel (INOX) flanges
  - **N** EPOX BLACK varnished flanges

**PRESSIONE DI ESERCIZIO**

<table>
<thead>
<tr>
<th>RANGE</th>
<th>MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 - 4 bar</td>
</tr>
<tr>
<td>2</td>
<td>4 - 8 bar</td>
</tr>
<tr>
<td>3</td>
<td>0 - 8 bar</td>
</tr>
<tr>
<td>8</td>
<td>2 - 6 bar</td>
</tr>
</tbody>
</table>
CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK

**N.B. KK MODELS ARE CONTROLLED IN TENSION**

- \( V_1 = 24 \) VDC
- \( t_1 = 2 \) ms
- \( V_2 = 5 \) VDC

CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS XX

**N.B. XX MODELS ARE CONTROLLED IN CURRENT**

- \( I_1 = 1.4 \) A
- \( t_1 = 2 \) ms
- \( I_2 = 0.6 \) A

FLOW RATE \( M \)

- \( Q_n = 118 \) Nl/min
- \( C = 28.57 \) Nl/min bar
- \( b = 0.258 \)

ELECTRICAL PORT CONNECTION

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>I CONTROLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLACK</td>
<td>COMMON</td>
</tr>
<tr>
<td>BROWN</td>
<td>1</td>
</tr>
<tr>
<td>RED</td>
<td>2</td>
</tr>
<tr>
<td>ORANGE</td>
<td>3</td>
</tr>
<tr>
<td>YELLOW</td>
<td>4</td>
</tr>
</tbody>
</table>
CONTROL: DIRECT

<table>
<thead>
<tr>
<th>N. 8 NC</th>
<th>N. 8 NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Diagram of 8 NC control valve]</td>
<td>![Diagram of 8 NO control valve]</td>
</tr>
</tbody>
</table>

**GENERAL CHARACTERISTICS**

- **FLUID**: Non-lubricated dry air, neutral gases (−10 to 50°C)
- **FILTRATION RATING**: Min 40 micron
- **TEMPERATURE**: −10 to 50°C (Standard version)
- **RESPONSE TIME IN OPENING**: 12/24 < 7 ms JJ < 5 ms XX/KK < 2 ms
- **RESPONSE TIME IN CLOSING**: 12/24 < 3 ms JJ < 2 ms XX/KK < 2 ms
- **MAXIMUM FREQUENCY**: 100 Hz 200 Hz 300 Hz
- **WEIGHT**: 350 g
- **PRODUCT LIFE EXPECTANCY**: ≥ 500 M/s cycles
- **IP RATING**: IP 62 - IP 62 - IP 65

**IDENTIFICATION CODE**

- **OUTLETS**: 8 8 Outlet
- **FLOW RATE** (at 6 bar):
  - H: 50 Nl/min
  - B: 80 Nl/min
  - M: 100 Nl/min (control tension JJ XX KK)
- **VERSION**:
  - Standard
  - H: HNBR Shutters
- **No. ELECTRICAL CONTROLS**:
  - 8: 8 Controls
  - D: 8 Controls / Integrated diodes with common 0 V
  - G: 8 Controls / Integrated diodes with common 12/24 V
- **FUNCTION**:
  - A: NO
  - C: NC
- **TYPE**: 3 3/2
- **CONTROL TENSION**:
  - 12 VDC ± 10 %: ED 100 % 1.4 W
  - 24 VDC ± 10 %: ED 100 % 1.2 W
  - JJ: 24 VDC ± 10 %: ED 100 % 1.9 W
  - XX: Speed-up in current ED 100 %
  - KK: Speed-up in tension ED 100 %
    - Only with Electronic Driver Boards PR8 or UDB
- **OPERATING PRESSURE**
  - RANGE | MODELS
  - 1: 0 - 4 bar | All
  - 2: 4 - 8 bar | All
  - 3: 0 - 8 bar | XX / KK
  - 8: 2 - 6 bar | All

**PORT CONNECTION**

- 0: Integrated cables IP 62 L = 500 mm
- E: Presetting for Easy connection IP 52 - IP 65

**SPECIAL PROTECTIONS**

- Only with EASY IP 65 port connection
- M: Stainless steel (INOX) flanges
- N: EPOX BLACK varnished flanges
CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK

\[ \text{V1 = 24 VDC} \quad \text{t1 = 2 ms} \quad \text{V2 = 5 VDC} \]

N.B. KK MODELS ARE CONTROLLED IN TENSION

FLOW RATE M

\[ q = 67 \text{NI/min} \quad c = 15.3 \text{NI/min bar} \quad b = 0.35 \]

ELECTRICAL PORT CONNECTION

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLACK</td>
<td>COMMON</td>
</tr>
<tr>
<td>BROWN</td>
<td>1</td>
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<td>RED</td>
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<td>3</td>
</tr>
<tr>
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<td>4</td>
</tr>
<tr>
<td>GREEN</td>
<td>5</td>
</tr>
<tr>
<td>BLUE</td>
<td>6</td>
</tr>
<tr>
<td>VIOLET</td>
<td>7</td>
</tr>
<tr>
<td>GREY</td>
<td>8</td>
</tr>
</tbody>
</table>