The valve is intended to be used in the ATEX environment specified

### 2. ATEX classification
- Nature of explosive environment: G - gas
- Temperature class: maximum surface temperature: T4...T5: 100°C-135°C (this is the maximum temperature that can be reached by the valve during its operation under normal conditions of use)
- Protection level: Gb: equipment for use in areas in which explosive atmospheres caused by gases, vapours & mists or air mixtures are likely to occur

### Gas:
- Type of protection: db - flameproof enclosure
- Group IIIC: electrical equipment for places with an explosive gas atmosphere other than mines susceptible to firedamp (nature of gas: propane, ethylene, hydrogen)

### Dust:
- Type of protection: tb: protection by enclosure
- Group IIIIC: electrical equipment for places with an explosive dust atmosphere other than mines susceptible to firedamp (nature of dust: combustible flyings, non-conductive dust, conductive dust)
- Nature of explosive environment: D: dust
- Temperature class: maximum surface temperature: T135°...T4...T5: 100°C-135°C (this is the maximum temperature that can be reached by the valve during its operation under normal conditions of use)
- Protection level: Db: equipment for use in areas in which explosive atmospheres caused by gases, vapours & mists or air mixtures are likely to occur

It is the responsibility of the user to make sure that the valves are used in the explosive environment described above.

### 3. Application parameters

The valves have to be used according to the conditions of use described in the technical data sheet (DOC-FT-200 series) joined to the valve

### 4. Mounting instructions

As the valves are intended to be connected to compressed air, vacuum or neutral gases and to be operated by an electrical signal, air and electrical connections have to be considered

### Electrical connection
- The ATEX protection of the valve ends with the cable
- The user is responsible for an ATEX approved electrical connection and for using an appropriate junction box for the flying leads and the cable
- The cable must not be damaged when mounting the valve and connecting the wires
- A valve with damaged cable has to be replaced by a new one
- The cable gland is fixed on the solenoid with a specific torque during the production and cannot be dismounted by the user
- The cable nut is tightened on the cable with a specific torque during the production and cannot be dismounted by the user
- The screw on the body of the valve has to be connected to the earth grounding of the machine
- Further connection instructions have to be found in the technical data sheet of the valve (DOC-FT-200 series)

### Pneumatic connection

#### Inline valves
- Inline valves are intended to be used with appropriate fittings assembled with the correct mounting torque
- All ATEX valves are clearly identified by the following features:
  - ATEX identification plate on top of the solenoid
  - Cable gland
- As the valves are universal, compressed air, vacuum and cylinder can be connected to either one of the 3 ports marked 1, 2 & 3. This allows the valve to be working as NO or NC valves can be mounted in all directions

### Manifold valves
- Manifold valves have to be mounted with their function plate on an appropriate base (pneumatic connection, mounting threads)
- Mounting screw torque : 2.6 - 2.7 Nm
- As the valves are universal, compressed air, vacuum and cylinder can be connected to either one of the 3 ports marked 1, 2 & 3. This allows the valve to be working as NO or NC
- The function plate on the valve allows to operate the valve as NO or NC
- Valves can be mounted in all directions

### 5. Maintenance

- Valves have to be operated according to the conditions of use mentioned on the technical data sheet
- No maintenance is required during their entire lifetime
- Valve cannot be dismounted by the user
- Valves with faulty operation have to be replaced by new ones
- Faulty valves have to be returned to the supplier for internal technical investigation according to the manufacturer’s return procedure

### 6. Repair

- Valves are not repairable
- Faulty valves have to be replaced by new one
- Faulty valves have to be returned to the supplier for internal technical investigation according to manufacturer’s return procedure

### 7. Warranty

- Valves that are failing during the period of time covered by the warranty have to be returned to the supplier for internal technical investigation according to the manufacturer return procedure
- Based on the results of the investigation made by the manufacturer, the manufacturer will decide if the failure is covered by the warranty or not
- Valves presenting failures covered by the warranty will be replaced for free
MAC ATEX Certified 200 Series - Manifold Valve

- Balanced poppet, immune to variations of pressure
- Short stroke with high flow
- The patented solenoid develops high shifting forces
- Powerful return spring
- Burn-out proof solenoid on AC service

How to order - Valve

<table>
<thead>
<tr>
<th>PORT SIZE</th>
<th>UNIVERSAL VALVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>11</td>
<td>110 V~/50 Hz - 120 V~/60 Hz</td>
</tr>
<tr>
<td>12</td>
<td>220 V~/50 Hz - 240 V~/60 Hz</td>
</tr>
<tr>
<td>22</td>
<td>24 V~/50 Hz - 24 V~/60 Hz</td>
</tr>
<tr>
<td>50</td>
<td>24 V~/6 W</td>
</tr>
<tr>
<td>51</td>
<td>24 V~/4.5 W</td>
</tr>
<tr>
<td>60</td>
<td>12 V~/8.5 W</td>
</tr>
<tr>
<td>61</td>
<td>24 V~/8.5 W</td>
</tr>
<tr>
<td>62</td>
<td>120 V~/12.5 W</td>
</tr>
<tr>
<td>76</td>
<td>100 V~/9 W</td>
</tr>
<tr>
<td>78</td>
<td>24 V~/24 W</td>
</tr>
</tbody>
</table>

Valve less base

250B-XX/SEE EX ECG

How to order - Solenoid

<table>
<thead>
<tr>
<th>VOLTAGE</th>
<th>MANUAL OPERATOR</th>
<th>ELECTRICAL CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>0 No operator</td>
<td>EE Explosion proof enclosure</td>
</tr>
</tbody>
</table>

Device marking : II 2 G / Ex db IIIC T4/T5* Gb
II 2 D / Ex tb IIIC T135°/T100°C* Db

*the marked temperature class and assigned maximum surface temperature depend on the model and power rating. Refer to description and conditions of manufacture.

Ta = -18°C to +40°C *the ambient range is given as a specific condition of use

List of eligible valves:
Air valves 200B Series

250B-YY/SEE EX ECG
250B-YYD0E 005 EY ECG
with following options:
valve body YY = 11, 12, 22, 50, 51, 60, 61, 68, 76, 78
rated voltage V = H, F, T
cable length code

Notified body for type examination and certificate number:
CML - n°2503
Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom
CML 18ATEX1240X

Notified body for quality system and certificate number:
CML - n°2503
Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom
CML ATEXQ11654

Ans, 07.01.2019,
Thierry Delvaux
Managing Director

Declaration of conformity
MAC VALVES EUROPE, INC.
Rue Marie Curie, 12
B-4431 ANS
Belgique

hereby declares that following valve series, produced after 2019.01.07, are in compliance with the directive:
2014/34/UE

Applicable standards
EN 60079-1 : 2014
EN 60079-31 : 2014
EN 60079-31 : 2014
EN 60079-31 : 2014

This declaration is valid as long as the product is not damaged or modified, and if the safety recommendations described in the technical data sheet are respected.

Device marking : II 2 G / Ex db IIIC T4/T5* Gb
II 2 D / Ex tb IIIC T135°/T100°C* Db

For GAZ
II 2 G / Ex db IIC T4/T5 Gb for voltage option 11, 12, 22, 68, 78
II 2 G / Ex db IIC T5 Gb for voltage options 50, 51, 60, 61, 76

For DUST
II 2 D / Ex tb IIIC T135°C Db for voltage option 11, 12, 22, 68, 78
II 2 D / Ex tb IIIC T100°C Db for voltage options 50, 51, 60, 61, 76

MATERIAL:
Epoxy encapsulated - Class F wires

Lubrication:
Non-lube service

Vacuum to 10 bar

Temperature range:
-18°C to 40°C

Orifice:
40 µ

Flow (at 6 bar, ΔP=1bar):
500 Nl/min (0.5 Cv)

Coil:
500 Nl/min (0.5 Cv)

Protection:
IP6X

Flow (at 6 bar, ΔP=1bar):
500 Nl/min (0.5 Cv)

MAC VALVES - Highly engineered solutions for the highest performing applications since 1948
MAC Valves, Inc.
Wixom, Michigan - Dundee, Michigan - Liège, Belgium - Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom
Wixom, Michigan - Dundee, Michigan - Liège, Belgium - Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom

For order:
120 V~/12, 3 W
24 V~/8, 5 W
60 V~/9 W
76 V~/9 W
78 V~/24 W

Device marking : II 2 G / Ex db IIIC T4/T5* Gb
II 2 D / Ex tb IIIC T135°/T100°C* Db

For GAZ
II 2 G / Ex db IIC T4/T5 Gb for voltage option 11, 12, 22, 68, 78
II 2 G / Ex db IIC T5 Gb for voltage options 50, 51, 60, 61, 76

For DUST
II 2 D / Ex tb IIIC T135°C Db for voltage option 11, 12, 22, 68, 78
II 2 D / Ex tb IIIC T100°C Db for voltage options 50, 51, 60, 61, 76

Technical data

Dimensions

Fluid: Compressed air, vacuum, inert gases
Pressure range: Vacuum to 10 bar
Lubrication: Non-lube service
Filtration: 40 µ
Temperature range: -18°C to 40°C
Orifice: 4.8 mm
Flow (at 6 bar, ΔP=1bar): 500 Nl/min (0.5 Cv)
Coil: Epoxy encapsulated - Class F wires
Voltage range: -15% to +10% of nominal voltage
Protection: IP6X