

## 6311 Series

**THOMAS**

by Gardner Denver

### FEATURES

- > Linear controllability of flow against pressure
- > Pump components are specially designed for maximum lifetime performance, even with higher pressures
- > Full compatibility with corrosive and abrasive media
- > Flexible design for customized solutions

### TYPICAL APPLICATIONS

- > Continuous Inkjet (CIJ)
- > Drop-on-Demand Inkjet (DOD)
- > In-vitro diagnostic analysis machines

### BASE MODEL

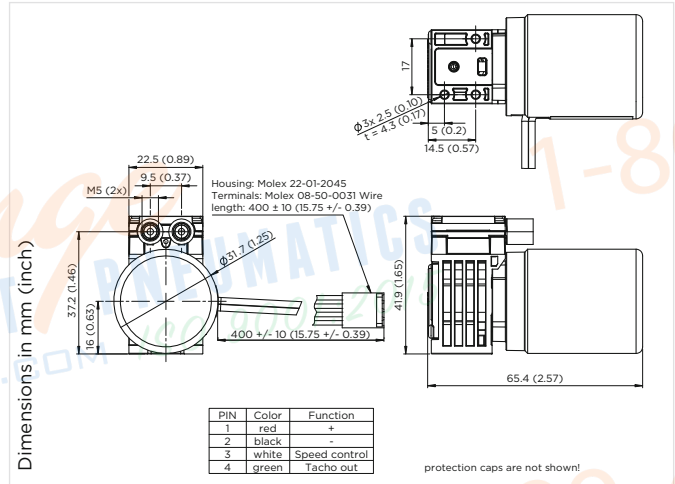
6311 BLDC



Diaphragm

# Diaphragm Liquid Pump 6311 BLDC

|                        |                            |
|------------------------|----------------------------|
| <b>Flow</b>            | <b>190 ml/min</b>          |
| <b>Pressure height</b> | <b>40 m H<sub>2</sub>O</b> |
| <b>Suction height</b>  | <b>3 m H<sub>2</sub>O</b>  |



| HYDRAULIC DATA                  |                           |                  |
|---------------------------------|---------------------------|------------------|
| Description                     | 6311 BLDC HP PP/EPDM/EPDM |                  |
| Part number                     | 12 V DC                   | 6311 0001        |
|                                 | 24 V DC                   | <b>6311 0002</b> |
| Free flow                       | 190 ml/min                |                  |
| Max. continuous pressure height | 40 m H <sub>2</sub> O     |                  |
| Max. suction height             | 3 m H <sub>2</sub> O      |                  |

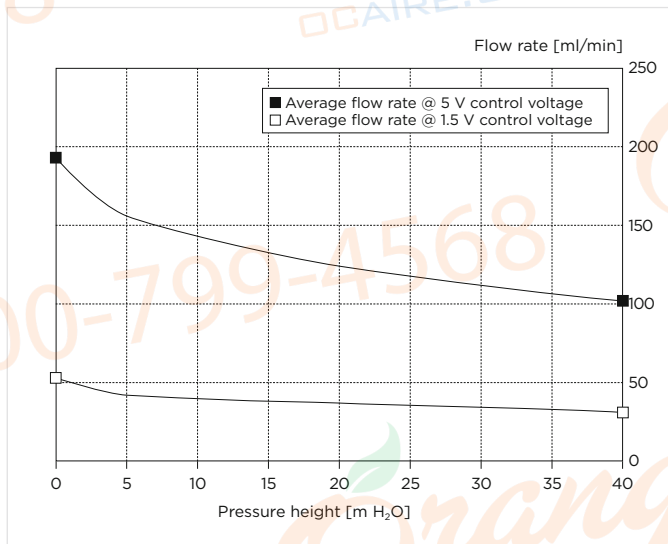
| WETTED PARTS         |      |  |
|----------------------|------|--|
| Pump head            | PPS  |  |
| Diaphragm            | EPDM |  |
| Valve plate          | EPDM |  |
| Resonating diaphragm | EPDM |  |

| ELECTRICAL DATA  |              |                     |
|--|--------------|---------------------|
| Motor type   | Brushless DC |                     |
| Nominal speed @ 10 m H <sub>2</sub> O                  | 2800 rpm     |                     |
| Nominal voltage  | 24 V DC      |                     |
| Max. nominal power consumption @ 40 m H <sub>2</sub> O | 2.8 W        |                     |
| Motor insulation class                                 | B            |                     |
| Protection class                                       | IP54         |                     |
| EMC protection   | Yes          |                     |
| Connector  | Housing      | Molex KK 22-01-2045 |
|  | Terminal     | Molex KK 08-50-0031 |

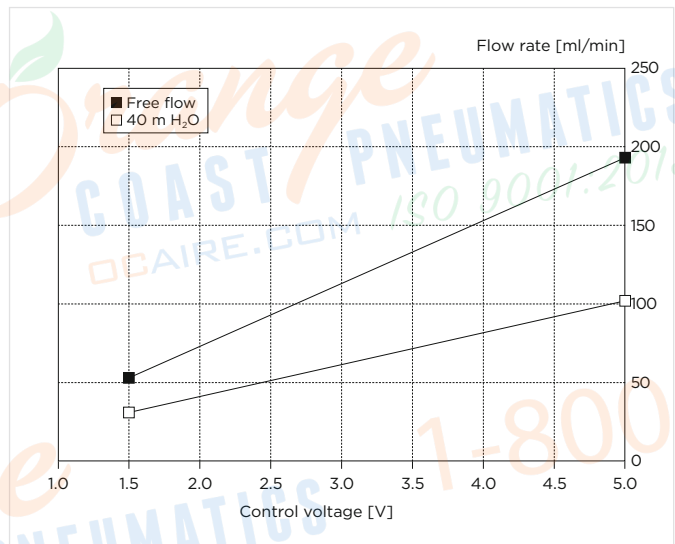
| GENERAL DATA         |                |  |
|----------------------|----------------|--|
| Ambient temperature  | 15 to 40 °C    |  |
| Media temperature    | 5 to 55 °C     |  |
| Weight               | 130 g          |  |
| Pneumatic connection | thread size M5 |  |

The technical data is based on the use of PTFE measuring tubes Shore D 55, 6 x 1 mm (O.D. x wall thickness), 65 cm length / 8 x 1 mm, 15 cm length / 6 x 1 mm, 10 cm length. The use of a different tubing will change the flow.

## FLOW CURVES

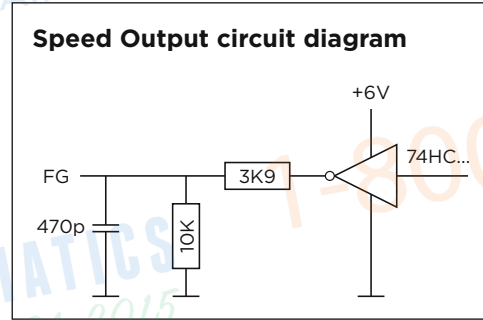
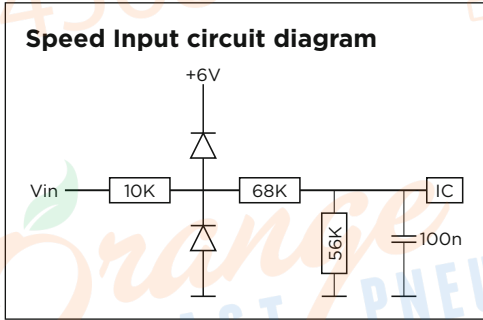


## CONTROLLABILITY

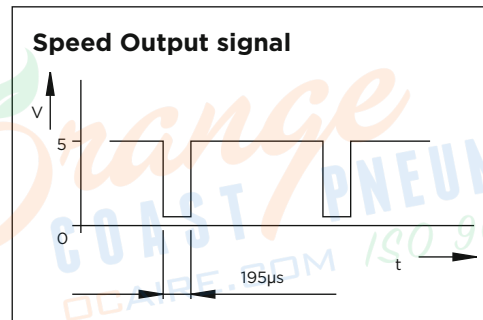


# Wiring diagram (Brushless DC motor)

|       | Function      | Colour | Control   |
|-------|---------------|--------|---|
| Pin 1 | V Supply      | Red    | 12 V DC (10 - 18 V, reverse polarity protected)<br>24 V DC (10 - 28 V, reverse polarity protected)  |
| Pin 2 | Ground        | Black  | Ground for V supply (PIN 1) and Speed Control (PIN 3)   |
| Pin 3 | Speed Control | White  | Speed control range 0 - 5 V   PWM: 6 - 20 kHz   |
| Pin 4 | Tacho out     | Green  | 18 pulses per revolution<br>Pulse time "LOW": 195 $\mu$ s<br>Output level "LOW": 0 / Max. 0.5 V<br>Output level "HIGH": Min. 4 V / Max. 5 V |



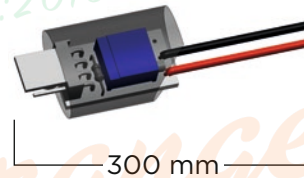
Optional: Adapter for 2-wire duty incl. potentiometer for speed adjustment



## Options / Accessories

29011932 **Adapter for BLDC motor**  
4-2 wire w/ manual speed control  
12 V DC "red"

29011933 **Adapter for BLDC motor**  
4-2 wire w/ manual speed control  
24 V DC "black"



96311001 **Hose barb connectors for M5 female thread**  
2x connectors / 2x O-rings



PUMP AND COMPRESSOR SOLUTIONS FOR OEMS WORLDWIDE

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