

# Vacuum generator OVEM-30-H-C-QO-CE-N-LK

Part number: 8070098

FESTO



## Data sheet

 General operating condition

| Feature                       | Value   |
|-------------------------------|---|
| Nominal size, Laval nozzle    | 3 mm  |
| Grid dimension                | 36 mm   |
| Silencer design               | Open  |
| Mounting position             | Any   |
| Ejector characteristic        | High vacuum<br>Standard   |
| Grade of filtration           | 40 µm   |
| Manual override               | Non-detenting<br>Additionally via operating buttons   |
| Integrated function           | Ejector pulse valve, electric<br>Flow control<br>On/off valve, electric<br>Filter<br>Air-saving function, electric<br>Check valve<br>Open silencer<br>Vacuum switch |
| Design                        | Modular   |
| Short circuit current rating  | Yes   |
| Measured variable             | Relative pressure   |
| Measuring principle           | Piezoresistive  |
| Switching element function    | N/C contact<br>N/O contact  |
| Switching function            | Window comparator<br>Threshold value comparator   |
| Symbol                        | 00992094  |
| Valve function                | Closed  |
| Reverse polarity protection   | For all electrical connections  |
| Standard switching input      | IEC 61131-2   |
| Display type                  | 4-place alphanumeric<br>Back-lit LCD  |
| Indicating range              | -0.999 bar ... 0 bar  |
| Displayable units             | bar   |
| Setting range hysteresis      | -0.9 bar ... 0 bar  |
| Setting options               | IO-Link®<br>Via display and buttons   |
| Switching position indicator  | LCD   |
| Switching status indication   | Optical   |
| Setting range threshold value | -0.999 bar ... 0 bar  |

| Feature  | Value  |
|--|--|
| Operating pressure                                 | 2 bar ... 8 bar  |
| Operating pressure for max. vacuum                 | 4 bar  |
| Max. vacuum  | 93 %   |
| Nominal operating pressure                         | 6 bar  |
| Max. suction flow rate against atmosphere          | 181 l/min  |
| Air supply time at nominal operating pressure      | 0.2 s  |
| Operational voltage range DC                       | 20.4 V ... 27.6 V  |
| Duty cycle   | 100%   |
| Insulation voltage                                 | 50 V   |
| No-load supply current                             | <70 mA   |
| Max. output current                                | 100 mA   |
| Off-state current                                  | 0.1 mA   |
| Switching output                                   | 2xPNP  |
| Voltage drop                                       | ≤1.8 V   |
| Characteristic coil data                           | 24 V DC: low-current phase 0.3 W, high-current phase 2.55 W  |
| Immunity to surge                                  | 0.8 kV   |
| Overload protection                                | Available  |
| Pollution degree                                   | 3  |
| Approval   | RCM<br>c UL us - Listed (Oil)  |
| KC mark  | KC-EMV   |
| CE mark (see declaration of conformity)            | To EU EMC Directive  |
| UKCA marking (see declaration of conformity)       | To UK instructions for EMC   |
| Operating medium                                   | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on operating and pilot medium                 | Lubricated operation not possible  |
| Corrosion resistance class CRC                     | 2 - Moderate corrosion stress  |
| LABS (PWIS) conformity                             | VDMA24364 zone III   |
| Media temperature                                  | 0 °C ... 50 °C   |
| Relative air humidity                              | 5 - 85%  |
| Sound pressure level at nominal operating pressure | 75 dB(A)   |
| Degree of protection                               | IP65   |
| Protection class                                   | III  |
| Ambient temperature                                | 0 °C ... 50 °C   |
| Max. tightening torque                             | 0.8 Nm with female thread<br>2.5 Nm with through-hole  |
| Product weight                                     | 825 g  |
| Pressure measuring range                           | -1 bar ... 0 bar   |
| Accuracy in ± % FS                                 | 3 %FS  |
| Reproducibility of switching values FS             | 0.6 %  |
| Protocol   | IO-Link®   |
| IO-Link, Protocol version                          | Device V 1.1   |
| IO-Link, Profile                                   | Smart sensor profile   |
| IO-Link, Function classes                          | Binary data channel (BDC)<br>Process data variable (PDV)<br>Identification<br>Diagnostics<br>Teach channel |
| IO-Link, communication mode                        | COM2 (38.4 kBaud)  |
| IO-Link, Port class                                | A  |
| IO-Link, Process data length OUT                   | 1 bytes  |
| IO-Link, Process data content OUT                  | 1 bit (ejector pulse ON/OFF)<br>1 bit (vacuum ON/OFF)  |
| IO-Link, Process data length IN                    | 2 bytes  |
| IO-Link, Process data content IN                   | 14 bit PDV (pressure measurement value)<br>2 bit BDC (pressure monitoring)                                 |

| <b>Feature</b>                 | <b>Value</b>  |
|--------------------------------|---|
| IO-Link, Min. cycle time       | 3.5 ms  |
| IO-Link, Data storage required | 500 Byte  |
| IO-Link, Device ID             | 0x00003E  |
| Electrical connection          | M12x1<br>Plug   |
| Protection against tampering   | Electronic interlock  |
| Type of mounting               | With through-hole<br>With female thread<br>With accessories |
| Pneumatic connection, port 1   | QS-10   |
| Pneumatic connection, port 3   | Silencer  |
| Vacuum connection              | QS-12   |
| Note on materials              | RoHS compliant  |
| Material seals                 | HNBR<br>NBR   |
| Material receiver nozzle       | POM   |
| Material filter                | Fabric<br>Process automation<br>Sintered steel              |
| Material filter housing        | Reinforced PA   |
| Material housing               | Wrought aluminium alloy<br>Reinforced PA                    |
| Material adjusting screw       | Steel   |
| Material silencer              | Wrought aluminium alloy<br>POM<br>Polyurethane foam         |
| Material screws                | Steel   |
| Material screen                | Process automation  |
| Material connector housing     | Brass, nickel-plated  |
| Material electrical contact    | Gold-plated brass   |
| Material pins                  | Steel   |
| Material transmitter nozzle    | Wrought aluminium alloy                                     |
| Material keypad                | TPE-U   |
| Material fitting               | Brass, nickel-plated  |