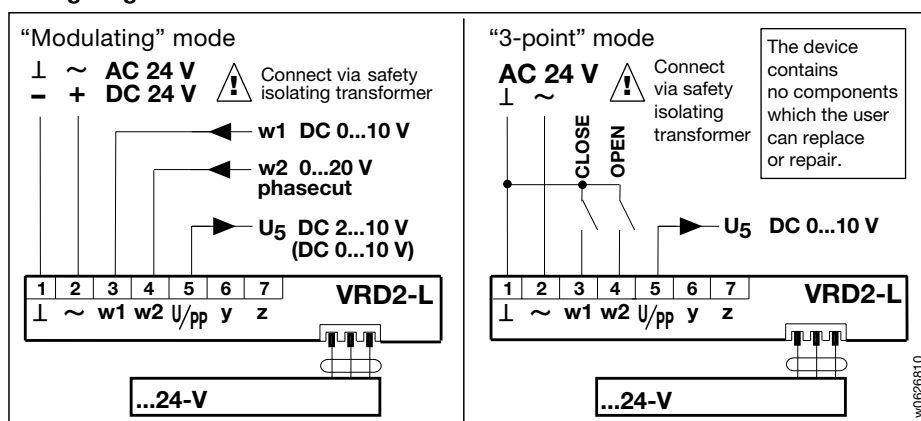




p0039707

Wiring diagram


w0526810

| Technical data | VRD2-L |
|--|--|
| Nominal voltage | AC 24 V 50/60 Hz, DC 24 V ("Modulating" mode only) |
| Nominal voltage range | AC 19.2...28.8 V, DC 21.6...26.4 V |
| Power consumption | 1.6 W (1.3 W in "Modulating" mode) |
| For wire sizing | 3 VA (without damper actuator) |
| Reference value w1 | DC 0...10 V @ input resistance 100 kΩ |
| Reference value w2 | 0...20 V phasecut @ input resistance 8 kΩ |
| Reference value w1/w2 | 3-point signal (from air volume controller) Selection ..."0...10 V"/"0...20 V" or "3-point" with jumper |
| Operating range | |
| • Modulating control input | DC 2...10 V (DC 0...10 V changeover with ZEV) |
| Actual-value signal for volumetric flow U5 | |
| • Modulating control input | DC 2...10 V @ 0.6 mA (DC 0...10 V changeover with ZEV) |
| • 3-point control input | DC 0...10 V @ 0.6 mA Signals linear, corresponds to 0...100% \dot{V}_{NOM} |
| Adjusting ranges | |
| • \dot{V}_{MAX} (max. volumetric flow) | 30...100% of adjusted reference value (\dot{V}_{NOM}) |
| • \dot{V}_{MIN} (min. volumetric flow) | 0...80% of adjusted \dot{V}_{MAX} |
| Sensor range | 2... ≈ 300 Pa (OEM-dependent) |
| Connection | Screw terminals for 2 × 1.5 mm ² |
| Protection class | III safety extra-low voltage |
| Degree of protection | IP40 |
| Ambient temperature range | 0... +50 °C |
| Storage temperature range | -20... +80 °C |
| Humidity test | to EN 60730-1 |
| EMC | CE according to 89/336/EEC |
| Mode of operation | Type 1 (EN 60730-1) |
| Weight | 400 g |

All-in-one pressure sensor and controller
Control input DC 0...10 V, 0...20 V phasecut or "3-point"
Communication capacity (PP)
Application

The VAV-Universal VRD2-L is used in conjunction with a suitable ...24-V actuator for pressure-independent air flow control of VAV boxes. Since it can be combined with many different types of actuators, the VRD2-L can be used with different sizes of dampers.

Construction

The VAV-Universal VRD2-L circuit contains a dynamic differential-pressure sensor and an electronic measuring and control unit incorporating a microprocessor.

Operation and adjustment

The parameters for \dot{V}_{MIN} and \dot{V}_{MAX} are set by means of the appropriate potentiometers.

The VRD2-L is controlled with reference signals of DC 0...10 V (w1), 0...20 V phasecut (w2) or with a 3-point signal. "Modulating" or "3-point" modes can be selected by means of a jumper (accessible from the front of the unit).

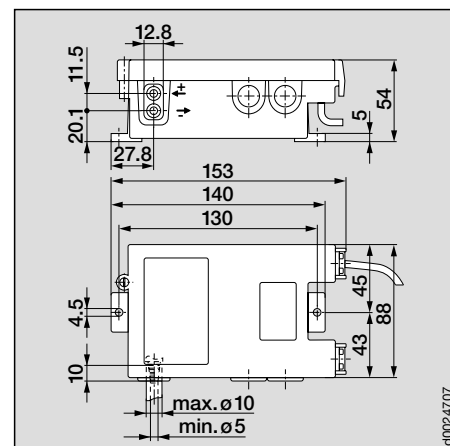
The operating range and the actual-value signal range of the VRD2-L are set at DC 2...10 V ("Modulating" mode) by the manufacturer. These ranges can be changed to DC 0...10 V when necessary with the aid of the ZEV adjuster via the PP connector.

Damper actuators

NM24-V, SM24-V, AM24-V, GM24-V, LF24-V, AF24-V

Important

The manufacturer of the VAV boxes (i.e. the OEM) is responsible for the proper assembly and correct adjustment of the VRD2-L and the total accuracy of the VAV boxes.

Dimensions


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