



### Model number

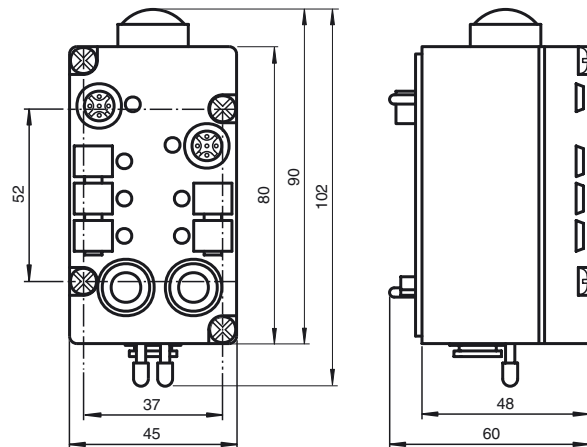
**VAA-4E2A-G1-ZE/P-S**

Pneumatic module  
4 inputs/2 pneumatic outputs

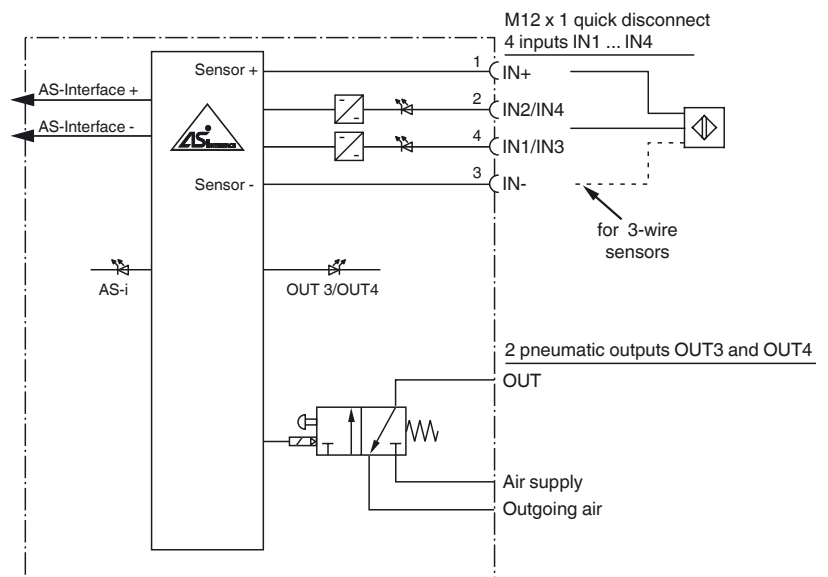
### Features

- AS-Interface certificate
- Degree of protection IP65
- Flat or round cable connection (via standardized EMS base, not included with delivery)
- Cable piercing method for flat cable
- Inputs for 2- and 3-wire sensors
- Function display for bus, inputs and outputs
- Direct connection of pneumatic cylinders

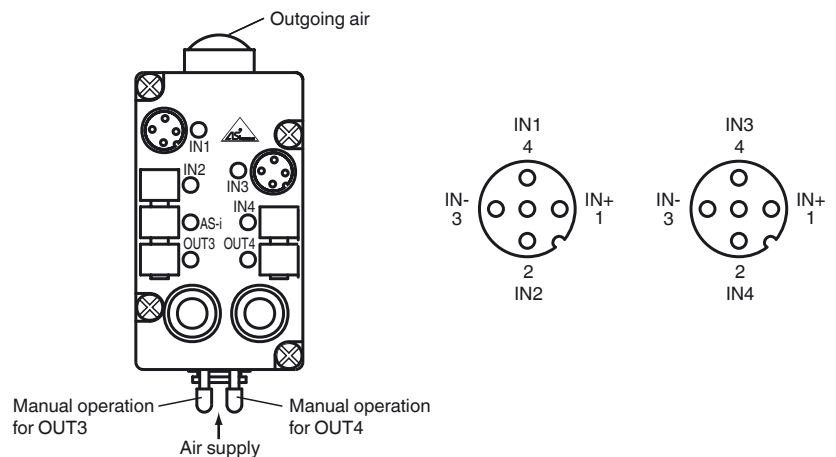
### Dimensions



### Electrical connection



### Indicating / Operating means



**Technical data****General specifications**

|            |                |
|------------|----------------|
| Slave type | Standard slave |
|------------|----------------|

**Functional safety related parameters**

|                                |      |
|--------------------------------|------|
| MTTF <sub>d</sub>              | 44 a |
| Mission Time (T <sub>M</sub> ) | 10 a |
| Diagnostic Coverage (DC)       | 0 %  |

**Indicators/operating means**

|          |                                        |
|----------|----------------------------------------|
| LED AS-i | AS-Interface voltage; LED green        |
| LED IN   | switching state (input); 4 LED yellow  |
| LED OUT  | Switching state (output); 2 LED yellow |

**Electrical specifications**

|                         |                |                                                  |
|-------------------------|----------------|--------------------------------------------------|
| Rated operating voltage | U <sub>e</sub> | 26.5 ... 31.6 V from AS-Interface                |
| Rated operating current | I <sub>e</sub> | ≤ 45 mA (without sensors)<br>≤ 200 mA (complete) |

**Input**

|                          |                                                |
|--------------------------|------------------------------------------------|
| Number/Type              | 2x 2 inputs for 2- or 3-wire sensors (PNP), DC |
| Supply                   | from AS-Interface                              |
| Current loading capacity | ≤ 100 mA, short-circuit protected              |
| Switching point          | OFF: ≤ 1.5 mA<br>ON: ≥ 5 mA, ≥ 10 V            |

**Output**

|             |                                                   |
|-------------|---------------------------------------------------|
| Number/Type | 2 pneumatic outputs with separated 3/2-way valves |
|-------------|---------------------------------------------------|

**Pneumatic output**

|                     |                                                                       |
|---------------------|-----------------------------------------------------------------------|
| Venting guide       | Sinter filter                                                         |
| Compressed air      | 2 ... 8 bar, filtered (5 µm), oiled or unoled compressed air          |
| Air throughput      | 550 NI/min at 6/0 bar<br>350 NI/min at 6/5 bar<br>NI = Standard litre |
| Valve cross-section | 5 mm                                                                  |

**Programming instructions**

|          |       |
|----------|-------|
| Profile  | S-7.F |
| IO code  | 7     |
| ID code  | F     |
| ID1 code | F     |
| ID2 code | F     |

| Data bits (function via AS-Interface) | input | output |
|---------------------------------------|-------|--------|
| D0                                    | IN1   | -      |
| D1                                    | IN2   | -      |
| D2                                    | IN3   | OUT3   |
| D3                                    | IN4   | OUT4   |

**Parameter bits (programmable via AS-i) function**

|    |          |
|----|----------|
| P0 | not used |
| P1 | not used |
| P2 | not used |
| P3 | not used |

**Ambient conditions**

|                     |                               |
|---------------------|-------------------------------|
| Ambient temperature | 0 ... 55 °C (32 ... 131 °F)   |
| Storage temperature | -20 ... 85 °C (-4 ... 185 °F) |

**Mechanical specifications**

|                      |                                                                                                                                                        |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Degree of protection | IP65 according to EN 60529                                                                                                                             |
| Connection           | cable piercing methos or terminals<br>flat cable or standard round cable<br>inputs: M12 x 1 quick disconnect<br>outputs: plug-in hose connector (8 mm) |
| Mass                 | approx. 200 g                                                                                                                                          |
| Mounting             | DIN rail or screw mounting                                                                                                                             |

**Function**

The VAA-4E2A-G1-ZE/P-S module features 4 inputs for the connection of 2- or 3-wire sensors and 2 pneumatic outputs with a high air flow rate for direct control of pneumatic drives in the field. 2 separate 3/2-way valves are integrated in the module. Both the valve and the sensors connected to the module are supplied via the bus cable.

The sensors are connected to the module via M12 x 1-circular connectors; the outputs are connected to the pneumatic drive via standard hose plug-in connectors (LEGRIS LF 3000, 8 mm).

Various bases are available for the module. The U-G1F (or U-G1FA) base provides the connection to the AS-Interface flat cable; the U-G1P base provides the connection to a round cable.

It happens very frequently that output modules must be installed in series with the pneumatic module. If the outputs of the output modules are supplied with external power transferred via a flat cable, a suitable EEMS base (U-G1FF or U-G1FFA) must be used for the pneumatic module. In this case, VAA-4E2A-G1-ZE/P-S accesses the AS-Interface cable instead of the power supply cable.

**Note:**

The slave address must be programmed before commissioning (default setting 0).

Medium: Filtered (5 µm), oiled or unoled compressed air (2 ... 8 bars).

**Warning:**

Dangerous electric voltage can lead to electric shock and burns. The system must be disconnected from the power supply before the beginning of the works.

**Accessories****VBP-HH1-V3.0-KIT**

AS-Interface Handheld with accessory

**VBP-HH1-V3.0**

AS-Interface Handheld

**Matching system components****U-G1F**

AS-Interface module mounting base for connection to flat cable (AS-Interface)

**U-G1P**

AS-Interface module mounting base for connection to round cable (AS-Interface)

**U-G1FA**

AS-Interface module mounting base with addressing jack for connection to flat cable (AS-Interface)

## Notes

## Examples for functions of the AS-Interface Airbox

