

VM242A

BasicMes-2 Handheld flow measurement computer

Product specification sheet



Construction

The VM242A BasicMes-2 consists of:

- Handheld flow measuring computer with colour display, rechargeable batteries and lanyard
- Bypass assembly for zero calibration and venting of the hoses
- Red and blue pressure hose
- Adapters and accessories
- Carry case

Note: For a detailed parts list see 'Scope of Delivery' further below

Application

The BasicMes-2 is a handheld measuring computer for flow measurements in hydronic heating and cooling systems.

The BasicMes-2 measures the differential pressure over an orifice, for example a valve seat. Together with the k_v -value of the orifice the flow is calculated using the k_v formula. The k_v -value of all Honeywell balancing valves as well as some common valves of other manufacturers are stored in an internal database. Manual input of the k_v -value is also possible.

Apart from differential pressure and flow measurement the BasicMes-2 has the following functions:

- Two temperature sensor inputs for simultaneous (using two sensors) or successive (using one sensor) temperature measurements
- Data logging function with programmable interval and duration
- Leakage test with programmable test pressure and duration
- Memory to save measured values
- PC connectivity to download measured data from the device onto a PC including PC user software
- Print function in combination with optional pocket printer (accessory)

Special Features

- Easy to use device with compact dimensions
- Large backlit colour display
- Integrated valve database
- Bypass for venting of hoses and zero calibration
- PC connectivity with software included
- Robust case for device, accessories and optional pocket printer
- Magnet on back to attach to metal surfaces

Technical specifications**Basic device specification**

Medium	Water or glycol-water mixture, glycol content max. 50%. Quality to VDI 2035
Medium temperature	-20...120°C (-4...248°F)
Ambient temperature	5...40°C (41...104°F)
Storage temperature	-20...60°C (-4...140°F); see note below
Static (burst) pressure	max. 32bar (464psi)
Differential pressure	max. 17 bar (247psi) min. 0,05 bar (0,73 psi)
Differential pressure resolution	up to 1bar: 0.1mbar above 1bar: 1mbar
Accuracy	<3% of measured value in range of ± 10 mbar better than ± 0.3 mbar at stable conditions in ambient temperature range
Scan rate	Normal: 1Hz, average value of four scans (time slot four seconds) Fast: 4Hz, no averaging
Interface	USB, HP-IR for communication with pocket printer
Weight	2.5kg including accessories and carry case
Dimensions	470 x 370 x 110mm (length x width x height)

Note: Storage temperature below 2°C (36°F) only when device and pressure hose assembly are drained

Units and Display

Pressure units	mbar, bar, hPa, kPa, mH ₂ O, inH ₂ O, psi
Temperature units	°C, °F
Flow display	up to 5mbar: no display 0...1,000l/h: resolution 1l/h 1...100m ³ /h: resolution 0.01m ³ /h 100...1,000m ³ /h: resolution 0.1m ³ /h 1,000...10,000m ³ /h: resolution 1m ³ /h
k_v-value input	k _v < 1 in increments of 0.001 k _v 1...99.99 in increments of 0.01 k _v 100...999.9 in increments of 0.1 k _v 1,000...10,000 in increments of 1
Density correction factor	0.10...5.00kg/l in increments of 0.01kg/l

Internal Temperature Measurement

Measuring range	-20...60°C (-4...140°F)
Accuracy	< ± 1 K
Resolution	0.1°C

External Temperature Measurement

Measuring range	-20...300°C (-4...572°F)
Accuracy	± 2 K from 0°C to 133°C otherwise 1.5% of actual value, according to EN50379-2
Resolution	0.1°C
Power	
Power supply	Four rechargeable batteries type AA, mains charging adapter supplied with device
Power consumption	Typically 70mA with display brightness of 60% (default) max. 120mA with 100% brightness 50µA for real time clock during power down and log mode

Languages

Standard languages	English, Dutch, French, German, Italian and Spanish
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For other countries a flash upgrade can be downloaded from the DocuServer.

Eastern Europe	English, Czech, Hungarian, Polish and Slovakian
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Northern/Southern Europe	English, Danish, Swedish and Turkish
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Scope of Delivery

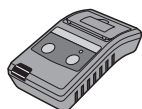
- VM242A BasicMes-2 handheld measuring computer with four rechargeable batteries and lanyard
- Set of hoses with bypass assembly and Honeywell SafeCon™ quick connections
- Battery charger
- USB cable
- Two adapters Honeywell SafeCon™ onto Rectus 21 (for connection of BasicMes-2 to Honeywell valves with old style PT valves)
- Two adapters Rectus 21 onto 3/4" internal thread
- Carry case with foam insert
- User software on CD-ROM
- Instruction manual with pocket guide

Ordering Information

OS-No.	Description
VM242A0101	Honeywell VM242A BasicMes-2 handheld flow measuring computer

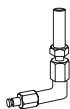
Accessories

Pocket printer for VM242 Series



Pocket printer	VMA242A001
Spare paper rolls (pack of ten)	VMA242A002

Needle adapter with Rectus 21 socket (1 piece)



for all VM242, also suitable for VM241 and any other device with Rectus 21 plug	VMA242A003
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Temperature sensor with clamp



for all VM242	VMA242A004
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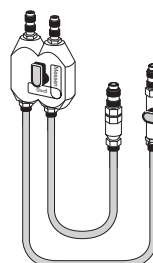
Spare Parts

Handheld measuring computer



Device only, without accessories, carry case or batteries	VMS242A001
USB interface cable	VMS242A005
Battery charger	VMS242A006

Pressure hose



Pressure hose assembly for all VM242 including bypass assembly, red and blue pressure hose, fittings and ballvalve	VMS242A002
Spare filters (set of two)	VMS242A003
SafeCon™ plug (for blue hose)	VMS242A008
SafeCon™ plug with ballvalve (for red hose)	VMS242A009

Adapters



Rectus 21 socket onto 3/4" internal thread, with sealing	VMS242A004
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SafeCon™ socket onto Rectus 21 plug	VA2500B001
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Carry case

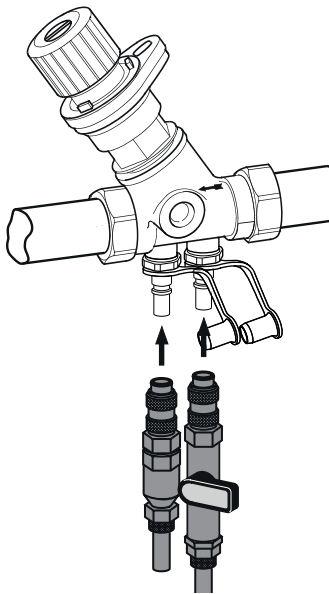


Carry case with foam insert for VM242A	VMS242A007
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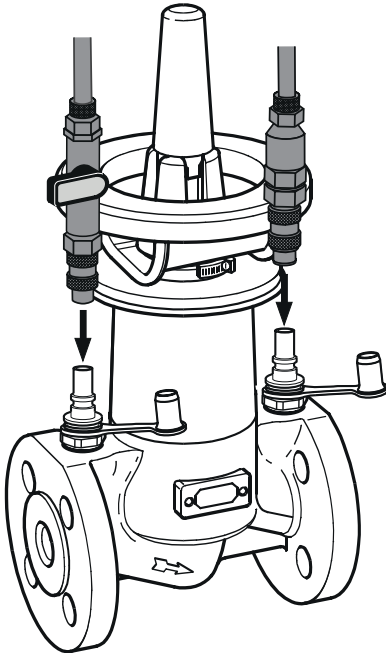
Examples

Direct connection to Honeywell valves

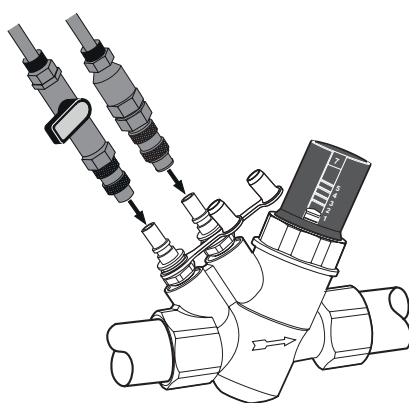
V5032...A – Kombi-2-plus



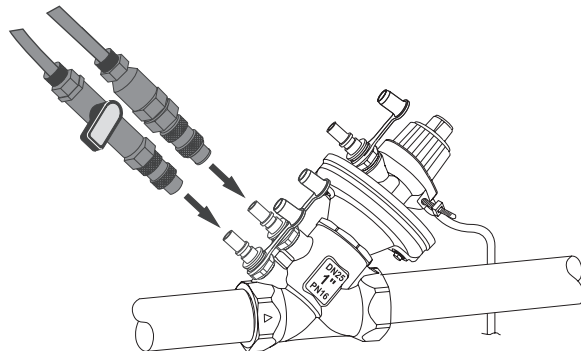
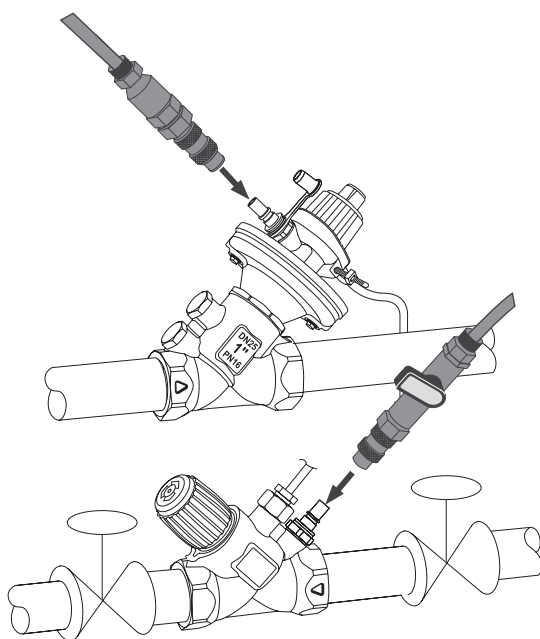
V6000...A – Kombi-F

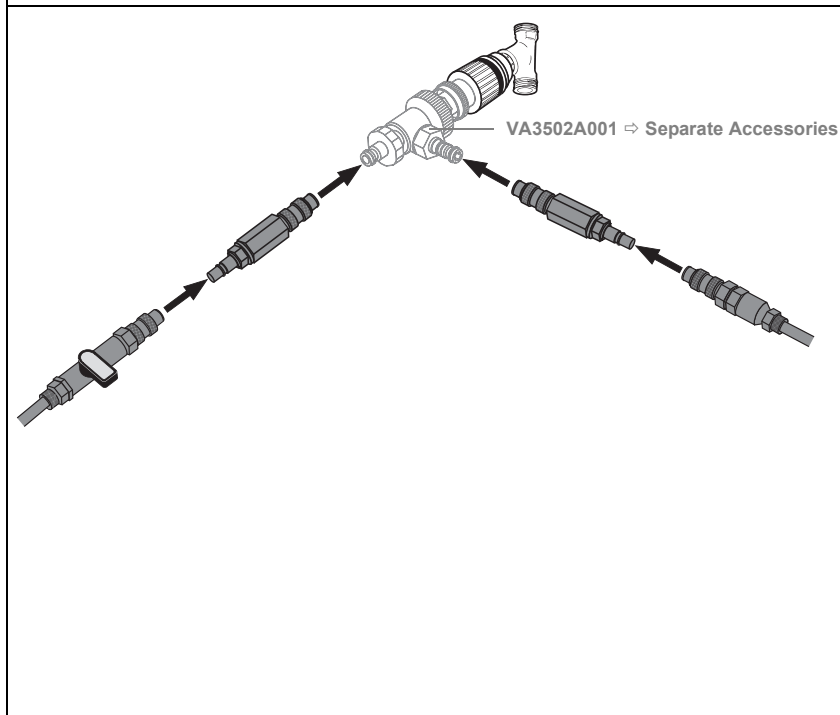
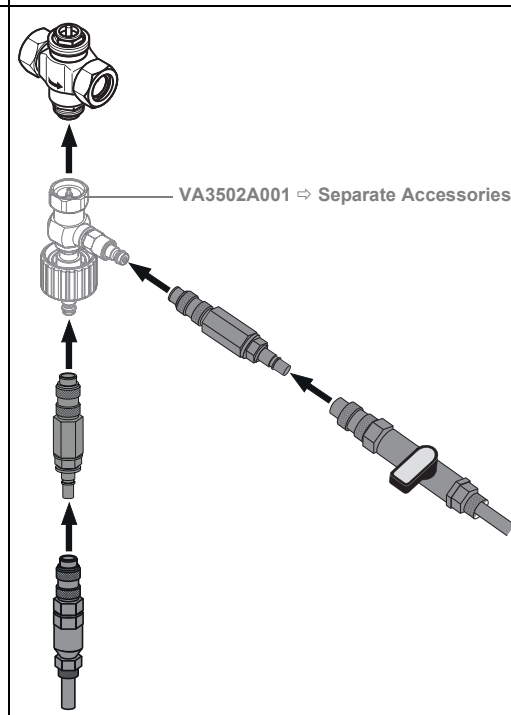
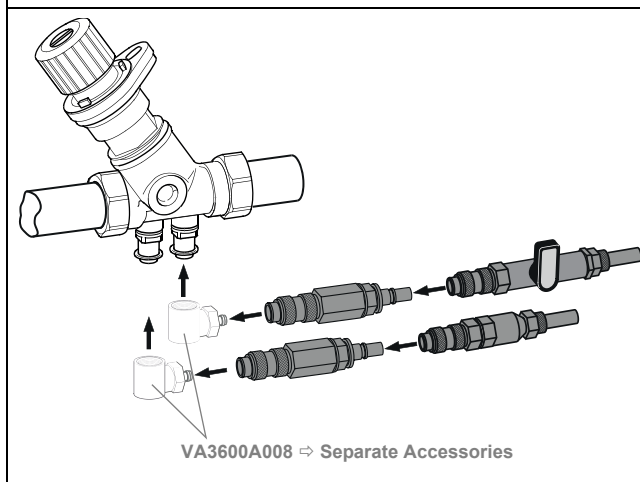
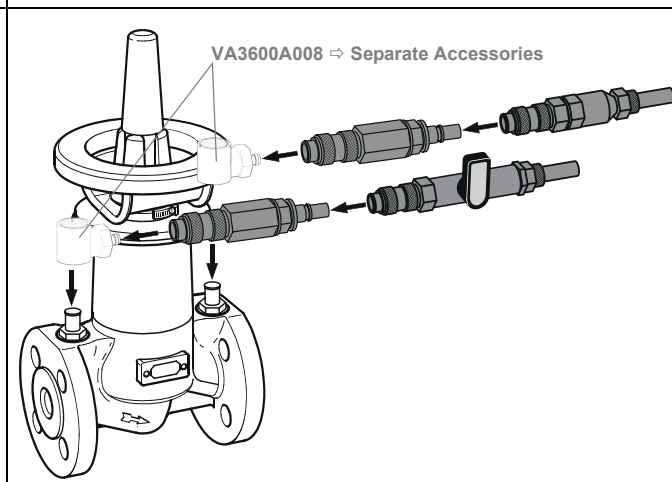


V5003F – Kombi-VX

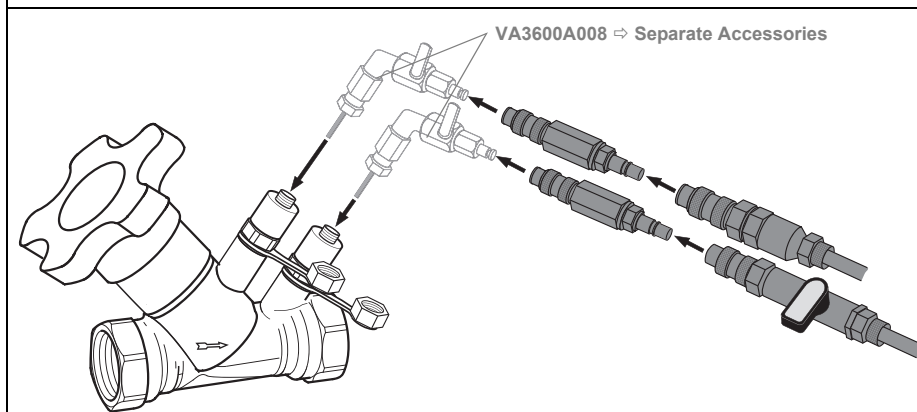


V5001 – Kombi-Auto



Connection to valve with separate accessories:**V5000/V5010 – Kombi-3-plus****V9406 – Verafix-Cool****Connection to Honeywell valves with old measuring connections****V5032 – Kombi-2-plus****V6000 – Kombi-F****Connection to non Honeywell valves**

BasicMes-2 can be connected to all valves with a needle type measuring system like Danfoss, Oventrop, TA, VIR and many others.

Example of Needle System

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Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Z.A. La Pièce 16, 1180 Rolle, Switzerland or its Authorized Representative.

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