Braukmann VM242A

BasicMes-2

Handheld flow measurement computer

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 kv formula. The k_V-value of all Resideo 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

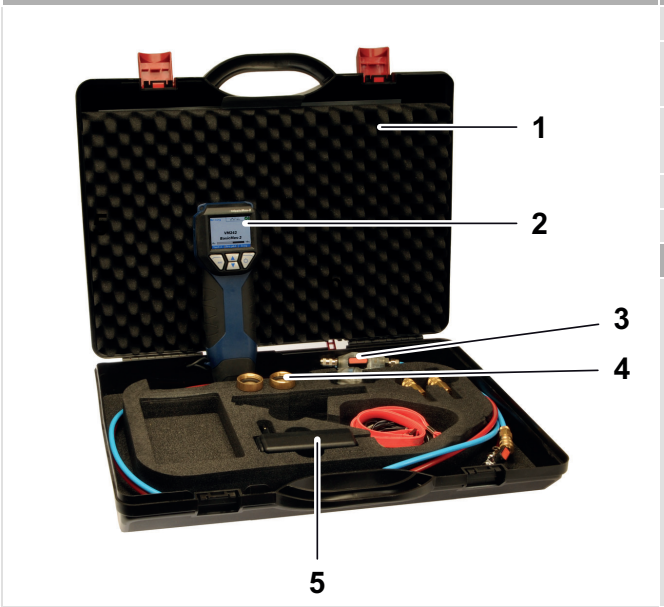
Technical Data

Medium	
Medium:	Water with max. 50 % glycol according to VDI 2035
Pressure values	
Static (burst) pressure:	max. 32 bar (464 psi)
Differential pressure:	min. 0.05 bar (0.73 psi) max. 17 bar (247 psi)
Differential pressure resolution:	up to 1 bar: 0.1 mbar above 1 bar: 1 mbar
Operating temperatures	
Max. operating temperature medium:	-20 - 120 °C (-4 - 248 °F)
Max. ambient temperature:	5 - 40 °C (41 - 104 °F)
Storage temperature:	-20 - 60 °C (-4 - 140 °F)*
Specifications	
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: 1 Hz, average value of four scans (time slot four seconds) Fast: 4 Hz, no averaging
To guarantee perfect functioning, a filter must be inserted ahead of the pressure reducing valve	USB, HP-IR for communication with pocket printer
Weight:	2.5 kg including accessories and carry case
Dimensions:	470 x 370 x 110 mm (length x width x height)
Units and Display	
Pressure units:	mbar, bar, hPa, kPa, mH_2O, inH_2O, psi
Temperature units:	°C, °F
Flow display:	up to 5 mbar: no display 0 - 1,000 l/h: resolution 1 l/h 1 - 100 m^3/h: resolution 0.01 m^3/h 100 - 1,000 m^3/h: resolution 0.1 m^3/h 1,000 - 10,000 m^3/h: resolution 1 m^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 - 5.00 kg/l in increments of 0.01 kg/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 EN 50379-2
Resolution:	0.1 °C
Power	
Power supply:	Four rechargeable batteries type AA, mains charging adapter supplied with device
Power consumption:	Typically 70 mA with display brightness of 60 % (default) max. 120 mA with 100 % brightness 50 µA for real time clock during power down and log mode
Languages	
Standard languages:	English, Dutch, French, German, Italian and Spanish For other countries a flash upgrade on request.
Eastern Europe:	English, Czech, Hungarian, Polish and Slovakian
Northern/Southern Europe:	English, Czech, Hungarian, Polish and Slovakian

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

Construction

Overview		Components
	**1**	Carry case with foam insert
	2	VM242A BasicMes-2 handheld measuring computer with four rechargeable batteries and lanyard
	3	Set of hoses with bypass assembly and Resideo SafeCon™ quick connections
	4	Two adapters Rectus 21 onto $^{3}/_{4}$" internal thread
	5	Battery charger
		Not depicted components:
		USB cable
		User software on CD-ROM
		Instruction manual with pocket guide

Transportation and Storage

Keep parts in their original packaging and unpack them shortly before use.

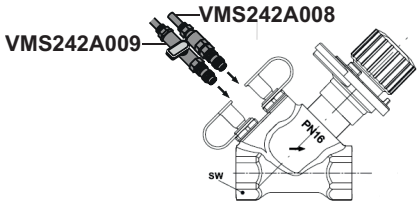
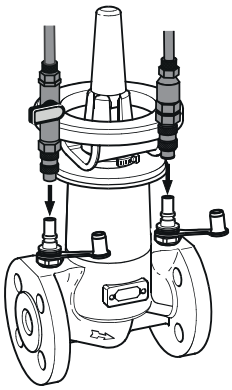
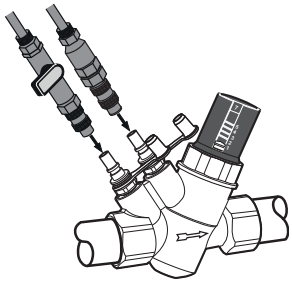
Parameter	Value
Environment:	clean, dry and dust free*

*non condensing

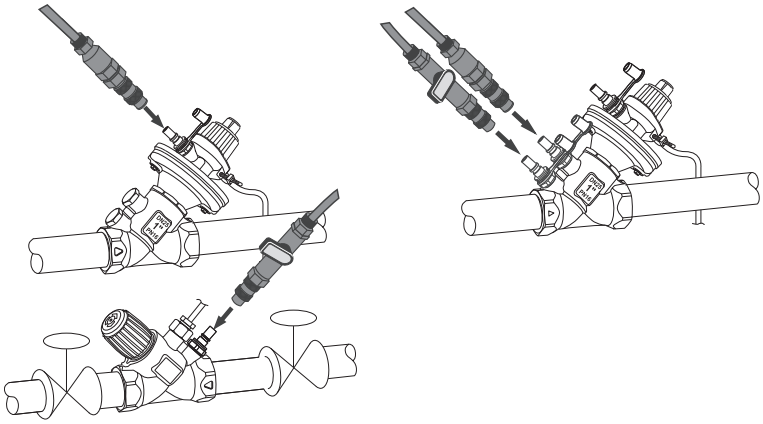
Installation Guidelines

Installation Example

Direct connection to Resideo valves

V5032...B - Kombi-2-plus	V6000...A - Kombi-F	V5003F - Kombi-VX
		

V5001 - Kombi Auto



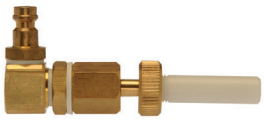
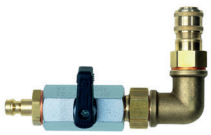
Ordering Information

The following tables contain all the information you need to make an order of an item of your choice.

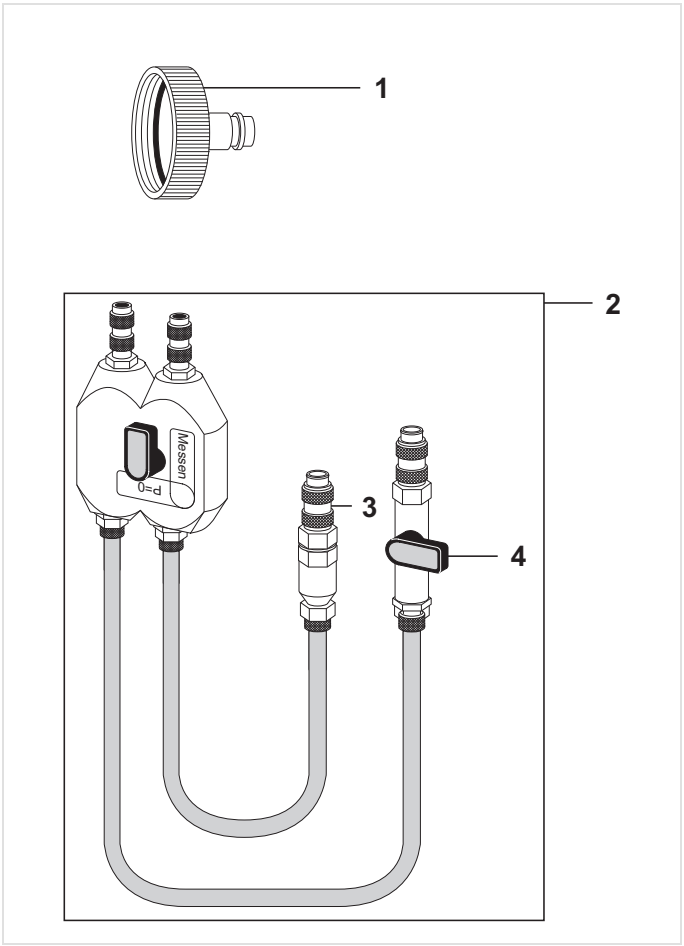
Options

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

Accessories

	Description		Dimension	Item No.
	**VMA242**	**Needle adapter with Rectus 21 socket (1 piece)**		
	also suitable for VM241 and any other device with Rectus 21 plug		for all VM242	VMA242A003
	**VA5032A**	**Draining adapter for SafeCon™ connections** Can be used to drain the water from a SafeCon connection provided on the balancing valve families as shown below		
			for all dimensions	VA5032A001
	**VA3600**	**Measuring adapter (2 pcs.)**		
	For measuring computer VM241			VA3600C001
	**VA3502**	**Pressure measuring set**		
			for V5000 Kombi-3-plus RED	VA3502A001

Spare Parts

Overview


	Description	Dimension	Item No.
1	**Adapter (1 piece)**		
	Rectus 21 socket onto $^{3}/_{4}$" internal thread, with sealing		VMS242A004
2	**Pressure hose assembly**		
	Pressure hose assembly for all VM242 including bypass assembly, red and blue pressure hose, fittings and ball valve	6 mm x 1 mm - ISO 7628-Cat2	VMS242A002
3	**Plug**		
	SafeCon™ plug (for blue hose)		VMS242A008
4	**Plug**		
	SafeCon™ plug with ball valve (for red hose)		VMS242A009

resideo

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For more information
resideo.com

For support
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