OUMAN BUILDING AUTOMATION Price list

2021



https://ouman.fi

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PRODUCT CATEGORIES:













Heating and air handling unit controllers

EH-800 AND EH-800B HEATING CONTROLLER FOR SMALL HOMES

A new heating controller with one heating circuit, which is also possible to expand to have two heating circuits or alternatively to control two heating sources simultaneously. The controller can be used either with a home network or an internet web browser (not EH-800B). It is also possible to connect it to GSM.

With EH-800 it is delievered the heating controller and the actuator as a compact device, supply water sensor (TMS), outdoor temperature sensor with a plug-connection, power supply and the necessary adapter for the most common control valve (e.g. Termomix). It is possible also to order the adapters for Esbe VRG, VRB and Belimo R4-series valves. The controller is easy to install and use. It has 3 years warranty.



EH-800 0MA0559	Heating controller	B1	568
EH-800B 0MA0558	Heating controller without Internet option	B1	482
SOV-ESBE2 OMA0266	Adapter for Esbe VRG and VRB valves	B1	28

EXP-800 EXPANSION PACKAGE FOR THE EH-800 CONTROLLERS

Another heating circuit / for parallel control of another source of heat

Product package content: Pre-connected expansion unit, connecting cable, Belimo HTC24-SR valve engine, adapter for the most common mixing valve, TMS-3M surface temperature sensor and the introduction of the necessary instructions.



EXP-800 OMA0160	Expansion package for the EH-800 controllers	B1	339
UMAUIOU			

EXU-800 EXTERNAL UNIT FOR EH-800 AND EH-800B

External unit EXU-800 makes it possible to control a second valve actuator, another relay and also add two measurement information to the EH-800 heating controller.

EXU-800 product packaging containing the encapsulated control card, RJ45 cord and the coupling guide.



EXU-800 OMA0161	External unit for EH-800 and EH-800B	B1	74

OPTIONAL EQUIPMENT

TMR OMA0011	Room sensor (NTC10)	A1	41
TMR/SP OMAO310	Room sensor with fine-tuning knob	A1	48
TMS-4M 0MA0321	Surface sensor (NTC10), connection cable 4 m	A1	27
C01A 0MA0043	Thermostat, surface mounting, 20 90 °C, differential range 7 °C	A2	62
GSMMOD11 OMA0598	OUMAN GSM/GPRS -modem for EH-800	C1	183

Heating and air handling unit controllers

OUMAN S203 HEATING CONTROLLER FOR THREE CIRCUITS

Ouman S203 is a new generation wall-mounted heating controller. Its versatility, intelligence and openness make it an ideal heating controller for all water circulation heating systems. Ouman S203 is really easy to use - informative display panel and GSM Control - feature enable reliable use anytime, anywhere. S203 can be connected to Ounet-service via Oulink-ETH-adapter (TCP/IP, optional) or other monitoring systems using a Modbus RTU.



- Operating voltage: 230 VAC, 50 Hz
- The internal 24 V power source, total load capacity of max. 1 A/23 VA
- Dimensions W230 x H160 x D60

S203 OMA0253	Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit)	A1	932
RB-40 0MA0249	External relay unit in casing, 4 pcs changeover relays (24V, 250VAC/16A), IP66	A1	96

OUMAN C203 HEATING CONTROLLER FOR THREE CIRCUITS

Ouman C203 is a new generation DIN-rail mounted heating controller. Its versatility, intelligence and openness make it an ideal heating controller for all water circulation heating systems. Ouman C203 is really easy to use - informative display panel and GSM Control - feature enable reliable use anytime, anywhere! C203 can be connected to Ounet-service via Oulink-ETH-adapter (TCP/IP, optional) or other monitoring systems using a Modbus RTU.



- Operating voltage: 230 VAC, 50 Hz
- The internal 24 V power source, total load capacity of max. 0.4A/10VA
- Dimensions W214 (13M) x H90 x D94

C203 OMA0044	Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit)	A1	966

OUMAN H23 HEATING CONTROLLER FOR THREE CIRCUITS

Ouman H23 is suitable for every house with central water heating. H23 is open to different types of remote monitoring solutions. House heating can now be monitored and controlled from the display of a GSM-phone, PC, and from the controller. Alarm messages can be received as text messages into a GSM-phone. H23 can be connected to Ounet-service via Oulink-ETH-adapter (TCP/IP, optional) or other monitoring systems using a Modbus RTU.



- Operating voltage: 230 VAC, 50 Hz
- The internal 24 V power source, total load capacity of max. 1A/23VA
- Dimensions W230 x H160 x D60
- Three switches on the cover for circulation pumps

H23 0MA0180	Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit)	A1	943
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RU23 SCREEN UNIT FOR ROOM CONTROLLER

The Ouman RU23 room controller screen unit works with the programmable Ouflex product family. Not in direct sunlight. The device is intended for indoor installation.



- Capacitive 2.3" TFT touch screen
- Built-in 10K NTC sensor, external NTC sensor option
- IP20
- Dimensions 88x88x35. Mechanically designed to fit the common 55x55 frames (Schneider Exxact, Merten, Gira, Elko...)
- Operating voltage 12-40 VDC, power needs 0,5W
- Modbus RTU master/slave
- Operating temperature +5...+40°C

RU23 OMA0560 Screen unit for room controller	A1	102
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GSM modems

OUMAN GSM MODEMS

Delivery includes GSM modem, DIN bracket, AC adapter, a separate power cable, data cable, and accessory bag attachment.



GSMMOD10 OMA0597	OUMAN GSM/GPRS modem for EH-105 and EH-200 series controllers	C1	183
GSMMOD11 OMA0598	OUMAN GSM/GPRS modem for EH-800, Ouflex M and Ouflex C controllers	C1	183
GSMMOD12 OMA0599	OUMAN GSM/GPRS modem for Ouman Plus and Ouman Ouflex	C1	200

ANT1 EXTERNAL ANTENNA

- Magnet antenna
- Antenna cable 2,5 m, interface FME
- Antenna extension cable ANT-C-10M, see page 9.

Casing packages

K118 CASING PACKAGE, 18 MODULES

Contents:

- casing (enclosure rating IP 54), 1 x 18 modules, size: 403 x 333 x 129 [mm]
- transformer (230/24 VAC, capacity 10 VA)
- master switch

K118 OMA189	Casing package 18 modules (one DIN rail)	C2	131
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K212 CASING PACKAGE, 24 MODULES

Contents:

- casing (enclosure rating IP54); 12 + 3 modules, size: 295 x 457 x 129 [mm]
- transformer (230 / 24 VAC, capacity 40 VA)
- master switch

K212	Casing package 24 modules (two DIN rails)	C2	138
OMA0190	casing package 21 modules (two birt rails)	02	100

K218 CASING PACKAGE, 36 MODULES

Contents:

- casing (enclosure rating IP 54), 2 x 18 modules, size: 403 x 483 x 129 [mm]
- transformer (230/24 VAC, capacity 40 VA)
- · master switch

K218 OMA0192	Casing package 36 modules (two DIN rails)	C2	195

K312 CASING PACKAGE, 36 MODULES

Contents:

- casing (enclosure rating IP54); 12 + 12 + 2 modules, size: 295 x 457 x 129 [mm]
- transformer (230 / 24 VAC, capacity 63 VA)
- · master switch

K312	Casing package 36 modules (three DIN rails)	Ca	183
OMA0193	Casing package 50 modules (timee bird rails)	02	103

K318 CASING PACKAGE, 54 MODULES

Contents:

- casing (enclosure rating IP54); 18 + 12 + 11 modules, size: 403 x 630 x 129 [mm]
- transformer 24 VAC, capacity 63 VA, 12 VDC 24W
- master switch

K318 OMA0194	Casing package 54 modules (three DIN rails)	C2	267	

K412 CASING PACKAGE, 48 MODULES

Contents:

- casing (enclosure rating IP54); 12 + 12 + 12 + 2 modules, size: 665 x 295 x 129 [mm]
- transformer 230 / 24 VAC, capacity 63 VA
- · master switch

Thaster switter			
K412 0MA0553	Casing package 48 modules (three DIN rails)	C2	250

Freely programmable automation units

OUMAN OUFLEX A FREELY PROGRAMMABLE AUTOMATION UNIT

Ouflex A is a freely programmable and DIN-rail-attachable building automation system for control and monitoring. Ouflex A includes 34 I/O-points, and also versatile data transfer and field bus connections. In addition, the device contains 24 VAC and 15 VDC outputs. Display unit is detachable, and can be relocated. It is possible to increase the number of I/O-points with external I/O-modules via bus connections. The DIN-standard-compatible structure of the Ouflex A device enables installation to most common cabinets. Detachable strip connectors make installation easier.



Ouflex A I/O-points

- 16 pcs universal measurements (UI)
- 2 pcs digital inputs (DI)
- 6 pcs 0...10V analog outputs (AO)

Data transfer connections

- 3 pcs RS-485 bus connections
- **USB-host-connection**
- **Ethernet**

- 2 pcs change-over contact relays (DO)
- 4 pcs normally open contact relays (DO)
- 4 pcs 24 VAC Triac-outputs (TR)

Operating voltage

24 VAC, 50 Hz

Access-functionality option is built-in to the all Ouflex-devices. Activation as an option.

Ouman Access is flexible way to get remote connecton to the automation device. Access can use internet connection that already exists in the building. That's why internet connection is immediately ready to use. Access remote connection is device-specific and the service is available the whole life cycle of the automation device.

OUFLEX A OMAO518	Freely programmable automation unit	A1	1677
OPTIONS			
GSMMOD12 OMAO599	OUMAN GSM/GPRS -modem for Ouflex.	C1	200
OUMAN LCD FRAM OMAO519	Wall installation frame for Ouflex	C1	29
OUMAN LCD GREY	Display for Ouflex	A1	117

OUMAN OUFLEX M BA FREELY PROGRAMMABLE AUTOMATION UNIT

Operating voltage 24 VAC or 24 VDC, local display 132 x 64 px.

Ouflex M BA I/O points

- 15 pcs. universal inputs (UI)
- 4 pcs. 0...10 V analog outputs (AO)
- 6 pcs. relay outputs NO, 230V 5A

Data transfer connections

- 2 pcs. RS-485 bus
- 2 pcs. RS-232 bus
- 1 USB device

TPWM output (neating cor	etnernet with M-LINK		
OUFLEX M BA OMAO496	Freely programmable automation unit	A1	853
OUFLEX M LCD KIT GREY	Ouflex M LCD with cable and frame	A1	161

I/O-EXTENSION UNITS

I/O-extension units are used to increase I/O capacity of the Ouflex device. Units are DIN-rail attachable and possible to connect to bus. They are easy to decentralize as needed. I/O-extension units have the necessary 24 VAC power supply connectors for field devices.

Measurements: width 213,5 mm (13M), height 90 mm, depth 93,3 mm

Operating voltage

24 VAC, 50 Hz

FLEX COMBI 32 OMA0526	16 pcs universal inputs (UI) 6 pcs 010V analog outputs (AO)	2 pcs change-over contact relays (D0) 4 pcs normally open contact relays (D0) 4 pcs 24 VAC Triac-outputs (TR)	A1	658
FLEX COMBI 21 OMA0524	9 pcs universal inputs (UI) 2 pcs 010V analog outputs (AO)	2 pcs change-over contact relays (D0) 4 pcs normally open contact relays (D0) 4 pcs 24 VAC Triac-outputs (TR)	A1	431
FLEX UI 16 0MA0523	16 pcs universal inputs (UI)		A1	300







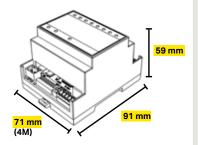


FLEX UI8 is a DIN-rail-attachable Modbus RTU input module which can be connected to RS-485 bus. It has 8 configurable universal inputs.

Supported signals and sensor types are:

- Transmitters 0-10 V or 0/4-20 mA
- Supported passive sensors: NTC10, NTC1.8, NTC2.2 ja NTC20 Ni 1000 LG, Ni 1000 DIN 43760, Pt 1000
- Potential free digital contact
- Potential free pulse counter (min 30ms)

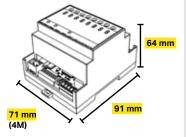
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



 $\label{lem:FLEX A08} \textbf{ is a DIN-rail-attachable Modbus RTU output module which can be connected to RS-485 bus. It has 8 analog outputs.}$

- Output voltage range 0...10V
- Output current max. 7mA/output
- · Each output has AUTO-MANUAL switch.
- Manual position is controlled via potentiometer in each channel separately

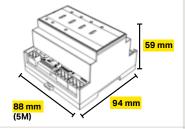
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



FLEX D04-R is a DIN-rail-attachable Modbus RTU relay unit which can be connected to RS-485 bus. It has 4 relay controls.

- In each relay control it is possible to choose either the automatic control or foced ON or OFF control (ON - AUTO- OFF).
- Change-over contact relay 230 VAC/ 4A or 24 VDC/4A
- Easy to install in electrical cabinet

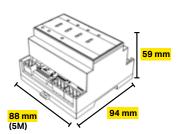
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



FLEX DO4-TRS is a DIN-rail-attachable Modbus RTU triac module which can be connected to RS-485 bus. It has 4 AC triac switches.

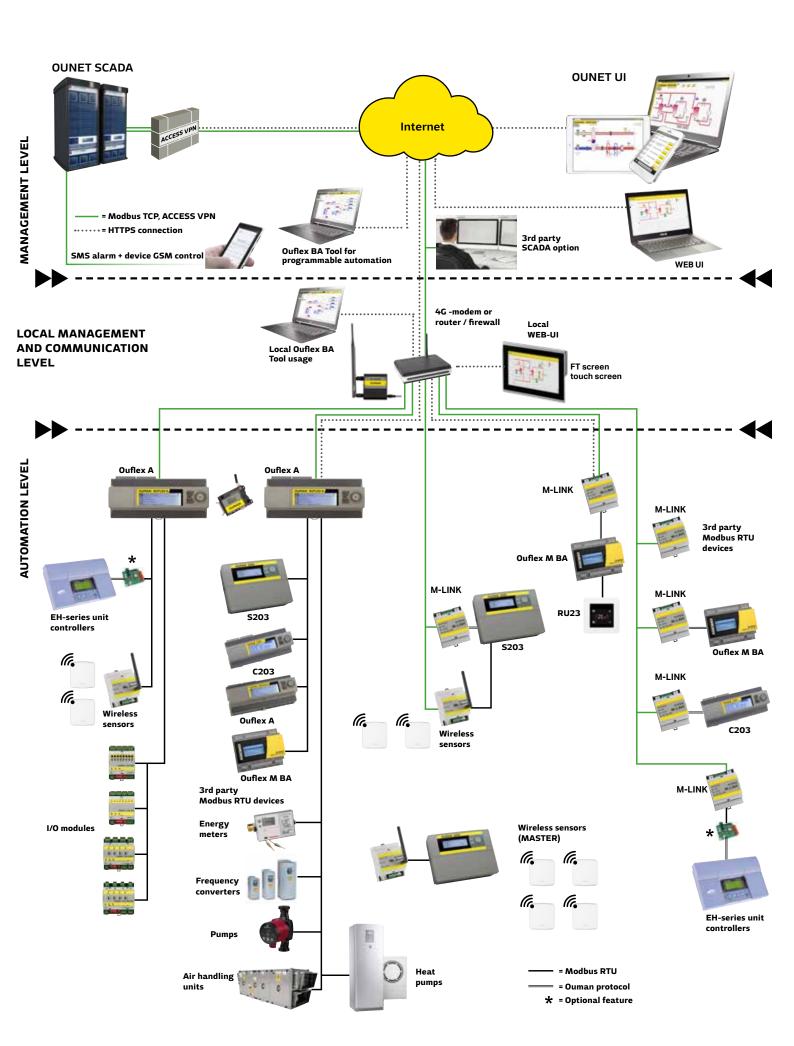
- Each triac control has 3 stage switch for selection between automatic control, forced ON or OFF (ON - AUTO - OFF).
- 24...230VAC, max 1A/output
- Potential-free AC switch
- DC controls require a supplementary relay in installation

Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



FLEX UI8 OMAO471	Universal input module	A1	251
FLEX AO8 OMAO472	Universal output module	A1	241
FLEX DO4-R OMAO473	Universal relay module	A1	198
FLEX DO4-TRS OMAO474	Universal triac module	A1	187

Building automation system topology



Ouman system components

Ouman Access server

- Secure VPN connection
- Plug & play connectivity
- Including name server (DHCP)
- Creating easy access and secure connection to devices.
- Customer register functionality for OEMs offers capability to connect devices securely to internet and gives possibility to create own solution based web interface for specific



Ouflex BA Tool

- Uses secure VPN connection to devices in the field
- Remote plug & play connection to devices
- Upload/download of applications
- Online process monitoring
- Automatic updates
- Free trial for 14 days
- Software license available on demand for certified



OUNET browser UI (HTML5)



OUNET in mobile or tablet (HTML5)

OUNET SCADA solution in cloud service

- Cloud solution offers maintenance free usage
- Use your OUNET from any location by using web browser
- Only one login is needed to access all your facilities/targets
- Enables easy process management and system fine tuning
- Alarm routing by using email and SMS. Also alarm groups avail-
- Target calendar with diary function for easy follow up of tasks
- Trend data is stored to cloud for further analysis and reports
- Flexible report generation for all stored trend data
- Automated report sending to selected receivers

ACCESS V

- Compact and meets industry level requirements
- Easy installation
- Optional external antenna available
- Suitable for any operator SIM card which supports mobile data



2G GSM SMS Modem

- Compact and meets industry level requirements
- Easy installation
- Optional external antenna available
- SMS alarm and device GSM control via SMS



FT screen touch screen

- Can be used for ounet.fi or local WEB UI browsing
- Capacitive touch screen
- Available in size 10",12",15" and 18"

Ouflex A



Programmable controller platforms

- Three device platforms available (A,C and M)
- Platform specific template available in Ouflex
- Easy and fast forward programming with ready made library components
- Built-in Access and TCP/IP modbus -with C and M platforms M-LINK device is required
- Remote device management
- Read/Write functions trough controller gateway
- Easy to connect new Modbus devices (TCP/IP and RTU)
- External display available for C & M platforms





Ouman Wireless

- Easy and fast installation
- Any browser can be used to access base station data
- Good radio coverage with 868Mhz mesh network
- Built-in secure Access VPN functionality in WL-base
- Sensors can be used as routers with external power supply



ditional auxiliary measurement Sensors are povered with standard AA batteries

Sensors are providing temperature, humidity and ad-

Modbus TCP/IP and RTU communication



- Intelligent calculation of collected data in base sta-
- Automated average calculation of measurements e.g. for heating curve optimization



M-LINK - new model with more functions



- Can be used similarly like previous Oulink model
- Provides remote tool management for C & M plat-
- Modbus TCP/IP to Modbus RTU gateway converter for any 3th party RTU slave device
- **OPC UA communication protocol**



Ouflex M BA



Ouflex I/O modules

- These I/O modules can be used to expand controller 10 capabilities
- Modules are compatible with any systems supporting Modbus RTU
- UI8 is configurable input module with resistive sensors, digital contacts, pulse counters and transmitters with voltage and mA outputs
- A08 is analog output module with 8 pcs of 0-10V outputs. Selection between automatic and manual state with switches.
- DO4-R module includes four bistable relays.
- DO4-TRS is module with four triac switches from 24VAC up to 240VAC



3rd party

Modbus RTU devices

Air handling units



Energy

Frequency converters

Pumps



OUMAN unit controllers

- New generation controllers based on Ouflex platform
- **Built-in Modbus RTU bus**
- Easy conficuration with setup wizard
- Software version can be updated by using SD
- With OULINK device optional Modbus TCP/IP connection and Access VPN functionality for secure connection and easy integration to OUNET SCADA svstem.

Ouman Ounet

OUNET WEB BASED SCADA FOR BUILDING AUTOMATION

Ounet is a modern web-based SCADA for building automation. It enables fluent control of technical building services from any location and whenever needed. Ounet provides effective, easy-to-use tools for property management and maintains the appropriate conditions.

OUNET Web based SCADA for building automation

192/year/target/1500 points



Technical details

Languages: Finnish, English, Swedish, Estonian

Technology: HTML5

Browsers: Internet Explorer/Edge, Chrome, Firefox, Safari

Alarm forwarding: SMS and email Address: www.ounet.fi

Customer devices

Operating systems: Windows, Android, IOS, Linux

Recommended screen size: 3,2" and larger

Screen technology: Passive screens or touchscreens

Display modes: Mobile and desktop

FT-Screen touch screen panels

- · Cutout installation, fits to covers and doors, IP65
- · Capacitive touch screen, selainpaneeli
- Linux, Cromium browser -> HTML5 ja SSL
- Can be used for browsing ounet.fi or local WEB UI

Available sizes 10",12",15" ja 18"



FT-SCREEN 10 OMB0517	10" capacitive touch screen	C2	1095
FT-SCREEN 12 OMB0518	12" capacitive touch screen	C2	1302
FT-SCREEN 15 OMB0519	15" capacitive touch screen	C2	1547
FT-SCREEN 18 OMB0520	18" capacitive touch screen	C2	1656
FT-SCREEN 10 FRAME OMA0640	Surface mounting frame for 10" touch screen	C2	26

M-LINK interface converter

The M-LINK interface converter can be used to connect Ouman controllers and 3rd party equipment via the RTU interface to the Ounet SCADA solution. Device can be also used to convert Modbus RTU protocol to Modbus TCP/IP protocol. This enables connectivity to other SCADA systems by using Modbus TCP/IP protocol. Maximum quantity of connected RTU devices is 10 units.

By connecting device to internet connection, secure VPN connection is established between M-LINK device and Ounet SCADA solution. VPN connection is built up by using OUMAN Access solution, which is secure M2M connection, which is provided for all OUMAN devices using internet connection.

If local area network connection does not exist, device can be connected to internet by using the 4G-MOD1 Modem.

Internal WEB-server enables easy connectivity to OUMAN unit controllers. For example S203, C203, H23, EH-203 and EH-105 controllers can be configured by using ready made templates which can be selected from M-LINK WEB-server interface. Server can also provide point transfer between devices within same IP network and buffering of trend data. With OUFLEX TOOL server can be programmed to use Modbus description files to be used for 3rd party devices.

M-LINK can be connected to one OUMAN controller through C-serial RJ45 connector and this enables updating of applications for example to OUFLEX M BA unit.

Communication protocols:

- Modbus RTU
- · Modbus TCP / IP



M-LINK OMA0443 Interface converter with ACCESS-function A	<mark>41</mark>	595

Ouman 4G-internet product

WIRELESS 4G-COMMUNICATION

4G-MOD1 is a wireless connection to Access -devices or for their verification. You can buy the subscription from your preferred operator.

4G-MOD1 0MA0594	4G-modem	C1	270
UMAU594			

ADDITIONAL PRODUCTS

ANT2 0MB0009	Omnidirectional 3G-antena with 8 meter cable	C1	168
ANT3 0MB0010	Directional 3G-antenna 7 meter cable	C1	168
ANT-C-10M 0MB0012	10 meter extension cable for GSM- and 3G-antenna	C1	47

Channel adapter cards and converters

MODBUS AND EH-485 CHANNEL ADAPTER CARDS

Modbus- and EH-485 cards are channel adapter cards with which controllers traffic route are made to be compatible with an Modbus or RS-485 field channel.



MODBUS-100 OMA0208	Modbus adapter card for EH-105 controller	A1	159
MODBUS-200	Modbus adapter card for EH-200 controller	A1	159

M-BUS/MODBUS converters

MBUS-MODBUS-2 OMB0509	M-Bus/Modbus converter (max. 2 devices)	C2	165
MBUS-MODBUS-8 OMB0510	M-Bus/Modbus converter (max. 8 devices)	C2	237
MBUS-MODBUS-80 OMB0511	M-Bus/Modbus converter (max. 80 devices)	C2	469

Casing solutions

LM1-HC 4G Remote monitoring solution for unit controllers (Ouman C203, S203 and EH-203)

Content:

- M-LINK interface converter pre programmed for Ounet remote control and monitoring, room compensation also included
- Space reservation for WL-Base gateway unit
- 3G modem
- · Casing package with power supply
- Ounet SCADA setup



NOTE!

- WL-Base and wireless sensors are sold separately
- Ounet contract 192€/year not included
- 3G-L3 subscription 12€/kk not included

LM1-HC 4G	Remote monitoring solution for unit controllers	A1 1290
0440540	Remote monitoring solution for unit controllers	A1 1290

Temperature sensors and room units

TMO OUTDOOR SENSOR

Outdoor sensor measures the outside air temperature. The sensor color is white-gray, so the measuring difference caused by solar radiation is as small as possible. The sensor comes with a cable gland.



NTC10: For Ouman controllers
Pt1000: For Danfoss and Honeywell controllers

Ni1000LG: For Siemens controllers

NTC10 P+1000

Ni1000LG

			NTC10	Pt1000	Ni1000LG
TMO OMA0015	Outdoor sensor	A1	29	31	36

PTE-LUX PASSIVE TEMPERATURE AND ILLUMINANCE SENSOR

PTE sensor is used to sense outside air temperature and ambient lighting conditions

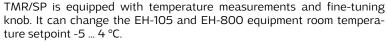
- Protection class IP54
- Illuminance measurement range 0...1000lx



PTE-LUX/NTC10 OMB0504	Passive temperature and illuminance sensor	A1	55
PTE-LUX/NTC20 OMB0505	Passive temperature and illuminance sensor	A1	55
PTE-LUX/Pt1000	Passive temperature and illuminance sensor	A1	58
PTE-LUX/Ni1000 OMB0507	Passive temperature and illuminance sensor	A1	60
PTE-LUX/Ni1000LG	Passive temperature and illuminance sensor	A1	60

ROOM SENSORS

The room sensor can be used with Ouman air handling unit controller EH-105 as well as the EH-200 and EH-800 series heating controllers. Position the room sensor so that it measures the facility's average temperature.





·			141610	1 (1000	MIIOOOLG
TMR 0MA0011	Room sensor	A1	41	43	45
TMR/SP OMAO310	Huonelämpötila-anturi kaukoasetuspotentiometrillä	A1	48		

TMS SURFACE SENSOR

The surface sensor is used to measure the temperature of the liquid flowing in the pipe. The sensor is installed on the surface of the pipe with a fastening strap. Suitable for pipe sizes DN 20...80.



			NICIO	Pt 1000	NIIOOOLG
TMS 0MA0312	Surface sensor	A1	23	-	-
TMS-C/NTC10 OMA0497	Surface sensor with connector, NTC10	A1	22	-	-
TMS-2M 0MA0016	Surface sensor, connection cable 2 m	A1	24	36	45
TMS-3M 0MA0318	Surface sensor, connection cable 3 m	A1	25	-	=
TMS-4M 0MA0321	Surface sensor, connection cable 4 m	A1	27	39	48

TMW-C CONNECTION CABLES

TMW-C KYTKENTÄ KAAPELI 2 M OMAO516	2m connection cable for temperature sensors with connector	A1	11
TMW-C KYTKENTÄ KAAPELI 3 M	3m connection cable for temperature sensors with connector	A1	15

Temperature sensors

TMW WATER SENSOR

The water sensors installed on the water pipes are suitable for heating and domestic hot water control. Sensors are made of stainless steel (AISI 304), but the TMW-300 sensors thread nipple is made of brass. Sensors come with immersion tube of different lenghts as follows (Ø 4 mm). TMW-50, -100 and -210 are suitable for pressure class PN16 and TMW-300 for PN10.



NTC10: For Ouman controllers

Pt1000: For Danfoss and Honeywell controllers

Ni1000LG: For Siemens controllers

class i iiio ana	7.MW 300 101 1 1110.		NTC10	Pt1000	Ni1000LG
TMW-50 OMA0012	Water sensor, 50 mm, thread R1/2"	A1	50	59	64
TMW-100 OMA0013	Water sensor, 100 mm, thread R1/2"	A1	51	60	65
TMW-210 0MA0340	Water sensor, 210 mm, thread R1/2"	A1	54	62	67
TMW-300 OMA0343	Water sensor, 300 mm (adjustable), thread R1/2"	A1	57	65	71



TMW-50-C/NTC10 OMA0499	Water sensor with connector, 50 mm, thread R1/2"	A1	39
TMW-100-C/NTC10 OMA0500	Water sensor with connector, 100 mm, thread R1/2"	A1	41
TMW-210-C/NTC10 OMA0501	Water sensor with connector, 210 mm, thread R1/2"	A1	43

TMW-ST WATER SENSOR WITH PROTECTIVE POCKET

The water sensors installed on the water pipes are suitable for heating and domestic hot water control (also with aggressive water). Immersion tubes are made of stainless steel (AISI 304) and the thread nipple is made of same material. Sensor's tube is a diameter of 4 mm and protection tube 5 mm. Sensors are suitable for pressure class PN16.



tion tube 5 mm. Sensors are suitable for pressure class PN16.			NTC10	Pt1000	Ni1000LG
TMW-81ST OMA0352	Water sensor and protection pocket 80 mm, thread R1/2"	A1	76	86	92
TMW-121ST OMA0330	Water sensor and protection pocket 120 mm, thread R1/2"	A1	77	87	93
TMW-201ST OMA0337	Water sensor and protection pocket 200 mm, thread R1/2"	A1	81	91	96

TMI ICE FROST SENSOR

Ice frost sensors are used to measure the air conditioning ice frost function and return water regulation temperature. The sensor is made of stainless steel (AISI 304). A sensor has 2 m long immersion pipe, which has a diameter of 4 mm.



	NTC10	Pt1000	Ni1000LG
Α1	51	59	64

TMD DUCT SENSOR

Duct sensor is used for air conditioning duct temperature measurements. Brassy protection tube has a diameter of 8 mm and a length of 250 mm.

Ice frost sensor, R 1/4"



			NICIO	Ptiooo	MIIOOOLG
TMD OMAQQ14	Duct sensor	A1	39	48	54

PTL-10 WATER PRESSURE SENSOR

- Operating voltage 15-24 VDC / 24 VAC (+-10%)
- Output 0-10V
- Thread G1/4, includes adapter G1/4-G1/2
- IP 65

TMI

		HEA .		
PTL-10-V 0MB0470	Water pressure sensor	A	<mark>.2</mark> 1	183

Ouman wireless sensor system

The wireless Ouman sensor system enables quick and easy collection of precise room temperature data in a building without laborious laying of cables and drilling of walls. The sensor system comprises a gateway unit, wireless sensors in router mode that are connected to the mains, and battery-operated wireless sensors. A predefined description file makes it easy to connect the wireless sensors to a SCADA system. In the event of failure, a damaged sensor can be replaced without changing the template file. This makes the installation of the replacement sensor quicker and easier.

WL-BASE GATEWAY UNIT

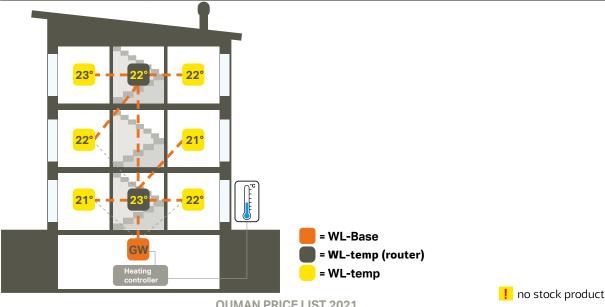
- Linux based
- Access feature
- Built-in Web server to facilitate installation
- Separate installation mode with a short 10 s. measurement interval
- Measurement interval freely adjustable (1-240 min)
- Ethernet, Modbus TCP/IP
- RS-485, Modbus

WIRELESS TEMPERATURE AND HUMIDITY SENSOR WL-TEMP-RH 2.1

- Built-in antenna
- 2 x AA batteries (does not include)
- In addition to serving as a measuring sensor, the same antenna also serves a router if connected to the mains (5-12V DC, 20 mA)
- Measuring accuracy ±0.2 °C (the same as Ouman controllers)
- Operating temperature: 0-50 °C
- Thanks to advanced system circuit the covering range of the sensors is not impaired when the battery is low.
- 868 MHz Mesh technology
- Connector for outdoor temperature sensor (with a fixed cable connection to outside)



WL-BASE 2.1 0MA0489	Gateway unit	A1	364
WL-TEMP-RH 2.1 0MA0579	Wireless temperature and humidity sensor	A1	90
WL-SOCKET-ROUTER 2.1 OMA0582	Fixed mounting router in staircase (on top of the present electric socket)	A1	190
WL-TEMP-RH-WHIP 2.1 OMA0583	Wireless temperature and humidity sensor with 1.8m whip sensor	A1	205
WL-TEMP-RH-CO2 2.1 OMA0584	Wireless temperature and humidity sensor with CO2 measuring. Needs outer power source.	A1	279
WL-TEMP-RH-VOC 2.1 OMA0585	Wireless temperature and humidity sensor with VOC measuring. Needs outer power source.	A1	269
WL-ROUTER POWER OMA0430	Power unit for temperature sensor 5 VDC (needed when operating as a router)	A1	22
WL-BASE-POWER OMA0448	Power unit for WL-Base, 24 VDC plug	C 1	37
WL-ANT OMB0473	Antenna for WL-Base, 4m cable, magnetic fixing	C 1	37
WL-BATTERY-AA-LIT	Battery package for wireless temperature sensors. Includes 10 pcs. AA lithium		21



Energy meter and transmitters

DPT DIFFERENTIAL PRESSURE TRANSMITTER

The DPT is an electronic differential pressure transmitter used for measuring low pressures of air and non-aggressive gasses in order to monitor and control pressures in building automation, HVAC and clean room systems. Measuring range can be selected from



-100 Pa and 2500 Pa between. Transmitter has an automatic reset.

DPT 0MB0033	Differential pressure transmitter	A1	152
DPT/D OMB0035	Differential pressure transmitter with display	A1	184

PDI PRESSURE DIFFERENCE MANOMETER, IP 54

- Measuring range 0 600 Pa
- Operating temperature -40°C...+60°C

operating temper	Tattare 10 C 00 C		
PDI OMB0298	Pressure difference manometer MM 200600	A2	33

PDS PRESSURE DIFFERENCE SWITCH, IP 54

- Different measuring ranges
- Connection difference 30 Pa
- Operating temperature -20°C...+60°C

!	PDS-300 OMB0310	Pressure difference switch, 40 - 600 Pa, PS600	A2	24
	PDS-600	Pressure difference switch, 40 - 600 Pa, PS600	A2	27

PRESSURE TRANSMITTER FOR WATER



MLH+KYTKENTÄKAAPELI	Pressure transmitter for water, 0-10bar, 0-10V, Thread G1/4	Δ1	152	ĺ
OMA0618	ressare transmitter for water, o robar, o rob, rimeda ou r	,	.02	Ĺ

2-way valves for district heating

VD 2-WAY VALVES FOR DISTRICT HEATING

These valves are designed especially for flow control in hydraulic systems with high temperatures and pressures, such as district heating systems. Can be used in combination with actuators M31C150 (heating) and M41A15 (domestic hot water)

Note. Connections set must be ordered separately. Is not included in the price.

CONNECTION SETS:

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VD215-0.25 0MA0386	DN 15	Kv 0.25	External thread R ¾", flush surface with seal	L15UK-1/2" or L15HI	A3	161
VD215-0.4 OMA0387	DN 15	Kv 0.4	External thread R ¾", flush surface with seal	L15UK-1/2" or L15HI	A3	161
VD215-0.63 OMA0388	DN 15	Kv 0.63	External thread R ¾", flush surface with seal	L15UK-1/2" or L15HI	A3	161
VD215-1.0 0MA0389	DN 15	Kv 1.0	External thread R ¾", flush surface with seal	L15UK-1/2" or L15HI	A3	161
VD215-1.6 OMA0390	DN 15	Kv 1.6	External thread R ¾", flush surface with seal	L15UK-1/2" or L15HI	A3	161
VD220-2.5 OMA0391	DN 20	Kv 2.5	External thread R 1", flush surface with seal	L20UK-3/4", L20SK-1/2", L20HI	A3	230
VD220-4.0 OMA0392	DN 20	Kv 4.0	External thread R 1", flush surface with seal	L20UK-3/4", L20SK-1/2", L20HI	A3	230
VD225-6.3 OMA0393	DN 25	Kv 6.3	External thread R 11/4", flush surface with seal	L25UK-1", L25SK, L25HI	A3	307
VD232-10 OMA0394	DN 32	Kv 10	External thread R 1½", flush surface with seal	L25SK-1" or L32HI	A3	400

V5016A... 2-WAY VALVES FOR DISTRICT HEATING

Cast iron, T max 150 °C, stroke length 20 mm, PN 16,

Pressure balanced district heating valve.

Can be used in combination with actuators: ML6420..., ML6425..., ML7420..., ML7425...



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V5016A1010 HON258	DN 15	Kv 0,4	Flanged (length 130 mm)	A3	506
V5016A1028 HON259	DN 15	Kv 0,63	Flanged (length 130 mm)	A3	506
V5016A1036 HON260	DN 15	Kv 1,0	Flanged (length 130 mm)	A3	506
V5016A1044 HON261	DN 15	Kv 1,6	Flanged (length 130 mm)	A3	506
V5016A1051 HON262	DN 15	Kv 2,5	Flanged (length 130 mm)	A3	506
V5016A1069 HON263	DN 15	Kv 4,0	Flanged (length 130 mm)	A3	506
V5016A1077	DN 20	Kv 6,3	Flanged (length 150 mm)	A3	528
V5016A1085	DN 25	Kv 10	Flanged (length 160 mm)	A3	540
V5016A1093	DN 32	Kv 16	Flanged (length 180 mm)	A3	634
V5016A1101 HON267	DN 40	Kv 25	Flanged (length 200 mm)	A3	862
V5016A1119 HON268	DN 50	Kv 40	Flanged (length 230 mm)	A3	1092
V5016A1127 HON269	DN 65	Kv 63	Flanged (length 290 mm)	A3	1455
V5016A1135 HON270	DN 80	Kv 100	Flanged (length 310 mm)	A3	1722
V5016A1143	DN 100	Kv 160	Flanged (length 350 mm)	A3	1915
V5016A1150	DN 125	Kv 250	Flanged (length 400 mm)	АЗ	2924
V5016A1168	DN 150	Kv 360	Flanged (length 480 mm)	A3	3144

[!] no stock product

 $^{^{\}star}\!)$ We reserve the right to change the prices according to Honeywell.

2-way valves for district heating

V5025A... 2-WAY VALVES FOR DISTRICT HEATING

Cast iron, Pressure balanced district heating valve., PN25, T max 200 $^{\circ}$ C

Suitable actuators: ML6420..., ML6421..., ML6425..., ML7420..., ML7421..., ML7425



DN 15	Kv 0.4	Flanged (L=130 mm)	Stroke 20 mm	A3	591
DN 15	Kv 0.63	Flanged (L=130 mm)	Stroke 20 mm	A3	592
DN 15	Kv 1.0	Flanged (L=130 mm)	Stroke 20 mm	A3	546
DN 15	Kv 1.6	Flanged (L=130 mm)	Stroke 20 mm	A3	545
DN 15	Kv 2.5	Flanged (L=130 mm)	Stroke 20 mm	A3	562
DN 15	Kv 4.0	Flanged (L=130 mm)	Stroke 20 mm	A3	562
DN 20	Kv 6.3	Flanged (L=150 mm)	Stroke 20 mm	A3	585
DN 25	Kv 10	Flanged (L=160 mm)	Stroke 20 mm	A3	600
DN 32	Kv 16	Flanged (L=180 mm)	Stroke 20 mm	A3	739
DN 40	Kv 25	Flanged (L=200 mm)	Stroke 20 mm	A3	903
DN 50	Kv 40	Flanged (L=230 mm)	Stroke 20 mm	A3	993
DN 65	Kv 63	Flanged (L=290 mm)	Stroke 20 mm	A3	1242
DN 80	Kv 100	Flanged (L=310 mm)	Stroke 20 mm	A3	1689
DN 100	Kv 160	Flanged (L=350 mm)	Stroke 38 mm	A3	1995
DN 125	Kv 250	Flanged (L=400 mm)	Stroke 38 mm	АЗ	2993
DN 150	Kv 360	Flanged (L=480 mm)	Stroke 38 mm	A3	3506
	DN 15 DN 15 DN 15 DN 15 DN 15 DN 20 DN 25 DN 32 DN 40 DN 50 DN 65 DN 80 DN 100 DN 125	DN 15 Kv 0.63 DN 15 Kv 1.0 DN 15 Kv 1.6 DN 15 Kv 2.5 DN 15 Kv 4.0 DN 20 Kv 6.3 DN 25 Kv 10 DN 32 Kv 16 DN 40 Kv 25 DN 50 Kv 40 DN 65 Kv 63 DN 80 Kv 100 DN 100 Kv 160 DN 125 Kv 250	DN 15 Kv 0.63 Flanged (L=130 mm) DN 15 Kv 1.0 Flanged (L=130 mm) DN 15 Kv 1.6 Flanged (L=130 mm) DN 15 Kv 2.5 Flanged (L=130 mm) DN 15 Kv 4.0 Flanged (L=130 mm) DN 20 Kv 6.3 Flanged (L=150 mm) DN 25 Kv 10 Flanged (L=160 mm) DN 32 Kv 16 Flanged (L=180 mm) DN 40 Kv 25 Flanged (L=200 mm) DN 50 Kv 40 Flanged (L=230 mm) DN 65 Kv 63 Flanged (L=290 mm) DN 80 Kv 100 Flanged (L=310 mm) DN 100 Kv 160 Flanged (L=350 mm) DN 125 Kv 250 Flanged (L=400 mm)	DN 15 Kv 0.63 Flanged (L=130 mm) Stroke 20 mm DN 15 Kv 1.0 Flanged (L=130 mm) Stroke 20 mm DN 15 Kv 1.6 Flanged (L=130 mm) Stroke 20 mm DN 15 Kv 2.5 Flanged (L=130 mm) Stroke 20 mm DN 15 Kv 4.0 Flanged (L=130 mm) Stroke 20 mm DN 20 Kv 6.3 Flanged (L=150 mm) Stroke 20 mm DN 25 Kv 10 Flanged (L=160 mm) Stroke 20 mm DN 32 Kv 16 Flanged (L=180 mm) Stroke 20 mm DN 40 Kv 25 Flanged (L=200 mm) Stroke 20 mm DN 50 Kv 40 Flanged (L=230 mm) Stroke 20 mm DN 65 Kv 63 Flanged (L=290 mm) Stroke 20 mm DN 80 Kv 100 Flanged (L=310 mm) Stroke 20 mm DN 100 Kv 160 Flanged (L=350 mm) Stroke 38 mm DN 125 Kv 250 Flanged (L=400 mm) Stroke 38 mm	DN 15 Kv 0.63 Flanged (L=130 mm) Stroke 20 mm A3 DN 15 Kv 1.0 Flanged (L=130 mm) Stroke 20 mm A3 DN 15 Kv 1.6 Flanged (L=130 mm) Stroke 20 mm A3 DN 15 Kv 2.5 Flanged (L=130 mm) Stroke 20 mm A3 DN 15 Kv 4.0 Flanged (L=130 mm) Stroke 20 mm A3 DN 20 Kv 6.3 Flanged (L=150 mm) Stroke 20 mm A3 DN 25 Kv 10 Flanged (L=160 mm) Stroke 20 mm A3 DN 32 Kv 16 Flanged (L=180 mm) Stroke 20 mm A3 DN 40 Kv 25 Flanged (L=200 mm) Stroke 20 mm A3 DN 50 Kv 40 Flanged (L=230 mm) Stroke 20 mm A3 DN 65 Kv 63 Flanged (L=290 mm) Stroke 20 mm A3 DN 80 Kv 100 Flanged (L=310 mm) Stroke 38 mm A3 DN 100 Kv 160 Flanged (L=350 mm) Stroke 38 mm A3 DN 125 Kv 250 Flanged (L=400 mm) Stroke 38 mm A3

V5049A... 2-WAY VALVES FOR DISTRICT HEATING

Cast iron, Pressure balanced district heating valve.,, PN40, T max 220 $^{\circ}$ C

Suitable actuators: ML6420..., ML6421..., ML6425..., ML7420..., ML7421..., ML7425



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V5049A2027	DN 15	Kv 0.25	Flanged (L=130 mm)	Stroke 20 mm	АЗ	1311
V5049A2035	DN 15	Kv 0.40	Flanged (L=130 mm)	Stroke 20 mm	АЗ	1360
V5049A2043	DN 15	Kv 0.63	Flanged (L=130 mm)	Stroke 20 mm	АЗ	1292
V5049A1425	DN 15	Kv 1.0	Flanged (L=130 mm)	Stroke 20 mm	АЗ	1310
V5049A1433	DN 15	Kv 1.6	Flanged (L=130 mm)	Stroke 20 mm	АЗ	1279
V5049A1441	DN 15	Kv 2.5	Flanged (L=130 mm)	Stroke 20 mm	АЗ	1293
V5049A1458	DN 15	Kv 4.0	Flanged (L=130 mm)	Stroke 20 mm	АЗ	1226
V5049A1508	DN 20	Kv 6.3	Flanged (L=150 mm)	Stroke 20 mm	АЗ	1366
V5049A1565	DN 25	Kv 10	Flanged (L=160 mm)	Stroke 20 mm	АЗ	1359
V5049A1573	DN 32	Kv 16	Flanged (L=180 mm)	Stroke 20 mm	АЗ	1541
V5049A1581	DN 40	Kv 25	Flanged (L=200 mm)	Stroke 20 mm	АЗ	1673
V5049A1599	DN 50	Kv 40	Flanged (L=230 mm)	Stroke 20 mm	АЗ	1812
V5049A1607	DN 65	Kv 63	Flanged (L=290 mm)	Stroke 20 mm	АЗ	2217
V5049A1615	DN 80	Kv 100	Flanged (L=310 mm)	Stroke 38 mm	АЗ	4016
V5049A1623	DN 100	Kv 160	Flanged (L=350 mm)	Stroke 38 mm	АЗ	4380

! no stock product

2-way valves for heating and ventilation

VSMF-2... 2-WAY VALVE

Red metal, T max 120 °C, stroke 6,5 mm, PN16

Applications: Heating and ventilation Suitable for motors: M31C150 ja M41A15

Note. Connections sets must be ordered separately. Do not include in the price.



					CONNECTION SETS:			*)
	VSMF-215-0.25 HON295	DN 15	Kv 0.25	External thread R ½"	L15UK3/8"		A3	42
	VSMF-215-0.4 HON296	DN 15	Kv 0.4	External thread R ½"	L15UK3/8"		A3	42
	VSMF-215-0.63 HON297	DN 15	Kv 0.63	External thread R ½"	L15UK3/8"		A3	42
	VSMF-215-1.0 HON298	DN 15	Kv 1.0	External thread R ½"	L15UK3/8"		A3	43
	VSMF-215-1.6 HON299	DN 15	Kv 1.6	External thread R ½"	L15UK3/8"		A3	43
!	VSMF-215-2.5 HON222	DN 15	Kv 2.5	External thread R ½"	L15UK3/8"		A3	44
	VSMF-220-2.5 HON300	DN 20	Kv 2.5	External thread R ¾"	L15UK-1/2", L15HI		A3	65
!	VSMF-220-2.5E HON225	DN 20	Kv 2.5	External thread R ¾"	L15UK-1/2", L15HI		A3	63
	VSMF-220-4.0 HON301	DN 20	Kv 4.0	External thread R ¾"	L15UK-1/2", L15HI		A3	66
	VSMF-225-6.3P HON302	DN 25	Kv 6.3	External thread R 1 1/4"	L25UK-1", L25SK-3/4", L25HI	Pressure balanced	A3	156
	VSMF-225-8.0P HON303	DN 25	Kv 8.0	External thread R 1 1/4"	L25UK-1", L25SK-3/4", L25HI	Pressure balanced	A3	158

V5822A... 2-WAY VALVE

Brass, PN16, T max 120 $^{\circ}$ C, actuators HW 6.5 or 2.5 mm stroke



				CONNECTION SETS:		*)
V5822A1006 HON130	DN 15	Kv 0.16	external thread R1/2" , stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	46
V5822A1014	DN 15	Kv 0.25	external thread R1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	46
V5822A1022 HON132	DN 15	Kv 0.40	external thread R1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	46
V5822A1030	DN 15	Kv 0.63	external thread R1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	46
V5822A1048 HON134	DN 15	Kv 1.0	external thread R1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	46
V5822A1055	DN 15	Kv 1.6	external thread R1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	46
V5822A1063	DN 20	Kv 2.5	external thread R3/4", stroke 6,5 mm	L15UK-1/2", L15HI	A3	66
V5822A1071	DN 20	Kv 4.0	external thread R3/4", stroke 6,5 mm	L15UK-1/2", L15HI	A3	66
V5822A4000	DN 15	Kv 1.6	external thread R1/2", stroke 2,5 mm, On/Off -control	L15UK-3/8" and L15UK-3/8" kartio	A3	27
V5822A4018 HON139	DN 20	Kv 2.5	external thread R3/4", stroke 2,5 mm, On/Off -control	L15UK-1/2", L15HI	АЗ	46

[!] no stock product

 $[\]ensuremath{^*}\xspace$) We reserve the right to change the prices according to Honeywell.

2-way valves for heating and ventilation

V5832A... 2-WAY VALVE

Brass, PN16, T max 120 °C, stroke 6,5 mm



CONNECTION SETS:

!	V5832A1004 HON162	DN 15	Kv 0.16	external thread R1/2"	L15UK-3/8"	A3	42
!	V5832A1012 HON163	DN 15	Kv 0.25	external thread R1/2"	L15UK-3/8"	A3	42
1	V5832A1020 H0N164	DN 15	Kv 0.40	external thread R1/2"	L15UK-3/8"	A3	42
1	V5832A1038 HON165	DN 15	Kv 0.63	external thread R1/2"	L15UK-3/8"	A3	42
1	V5832A1046 HON166	DN 15	Kv 1.0	external thread R1/2"	L15UK-3/8"	A3	42
!	V5832A1053 HON167	DN 15	Kv 1.6	external thread R1/2"	L15UK-3/8"	A3	42
1	V5832A1061 HON168	DN 20	Kv 2.5	external thread R3/4"	L15UK-1/2", L15HI	A3	63
1	V5832A1079 HON169	DN 20	Kv 4.0	external thread R3/4"	L15UK-1/2", L15HI	A3	63
!	V5832A4008 HON170	DN 15	Kv 1.6	external thread R1/2" On/Off -control	L15UK-3/8"	A3	24
!	V5832A4016 HON171	DN 20	Kv 2.5	external thread R3/4", On/Off -control	L15UK-1/2", L15HI	A3	42

V5328A... 2-WAY VALVE, FLANGED

Cast iron, PN16 For heating and ventilation



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!	V5328A1138 HON123	DN 15	Kv 0,25	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	381
!	V5328A1146 HON124	DN 15	Kv 0,4	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	383
!	V5328A1153 HON125	DN 15	Kv 0,63	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	385
1	V5328A1005 HON114	DN 15	Kv 1,0	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	387
1	V5328A1013 HON115	DN 15	Kv 1,6	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	390
1	V5328A1021 HON116	DN 15	Kv 2,5	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	АЗ	394
1	V5328A1039 HON117	DN 15	Kv 4,0	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	397
1	V5328A1047 HON118	DN 20	Kv 4,0	Flanged (L=150mm)	Stroke 20 mm	Tmax 170°C	A3	399
1	V5328A1054 HON119	DN 20	Kv 6,3	Flanged (L=150mm)	Stroke 20 mm	Tmax 170°C	A3	404
1	V5328A1062 HON120	DN 25	Kv 10	Flanged (L=160mm)	Stroke 20 mm	Tmax 170°C	A3	413
!	V5328A1070 HON121	DN 32	Kv 16	Flanged (L=180mm)	Stroke 20 mm	Tmax 170°C	A3	533
1	V5328A1088 HON122	DN 40	Kv 25	Flanged (L=200mm)	Stroke 20 mm	Tmax 170°C	A3	651
!	V5328A1096 HON271	DN 50	Kv 40	Flanged (L=230mm)	Stroke 20 mm	Tmax 170°C	A3	833
!	V5328A1104 HON272	DN 65	Kv 63	Flanged (L=290mm)	Stroke 20 mm	Tmax 170°C	АЗ	978
1	V5328A1112 HON273	DN 80	Kv 100	Flanged (L=310mm)	Stroke 20 mm	Tmax 170°C	A3	1316
!	V5328A1195 HON126	DN 100	Kv 160	Flanged (L=350mm)	Stroke 38 mm	Tmax 200°C	АЗ	1611
!	V5328A1203 HON127	DN 125	Kv 250	Flanged (L=400mm)	Stroke 38 mm	Tmax 200°C	A3	2392
!	V5328A1211 HON128	DN 150	Kv 360	Flanged (L=480mm)	Stroke 38 mm	Tmax 200°C	A3	2975

VBG2... 2-WAY CONTROL BALL VALVE

Brass, PN25, T max 120 °C, Angle of rotation 90°, Suitable actuators MNV... Valve serie available on request. See datasheet from our website.



2-way valves for heating and ventilation

V5832B... 2-WAY VALVE

For the control of hot or chilled water for fan coil units, small reheaters/recoolers in electric/electronic temperature control systems. Can be used in combination with actuators M31C150 and M41A15.

Note. Connections sets must be ordered separately. Do not include in the price.



CONNECTION SETS:

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V5832B2075 H0N286	DN 25	Kv 4.0	External thread R 1½", flush surface with seal	L25SK-1"	A3	166
V5832B2083 H0N287	DN 25	Kv 6.3	External thread R 1½″, flush surface with seal	L25SK-1"	A3	171
V5832B2091 H0N288	DN 25	Kv 10	External thread R 1½″, flush surface with seal	L25SK-1"	АЗ	171
V5832B2109 H0N289	DN 32	Kv 16	External thread R 2″, flush surface with seal	L32SK-11/4"	АЗ	226
V5832B2117 HON290	DN 40	Kv 25	External thread R 21/4", flush surface with seal	L40SK-1 1/2"	АЗ	302

V5011R 2-WAY VALVE

For heating, ventilation and domestic hot water. Can be used in combination with actuators ML6420..., ML6425..., ML7420... and ML7425...



*)

ı	V5011R1000 HON241	DN 15	Kv 0.63	Internal thread, R 1/2"	A3	174
ı	V5011R1018 HON242	DN 15	Kv 1.0	Internal thread, R 1/2"	A3	174
	V5011R1026 HON243	DN 15	Kv 1,6	Internal thread, R 1/2"	A3	202
	V5011R1034 HON244	DN 15	Kv 2,5	Internal thread, R 1/2"	A3	179
	V5011R1042 HON245	DN 15	Kv 4	Internal thread, R 1/2"	A3	179
	V5011R1059 HON246	DN 20	Kv 6,3	Internal thread, R 3/4"	A3	191
	V5011R1067 HON247	DN 25	Kv 10	Internal thread, R 1"	A3	204
	V5011R1075 HON248	DN 32	Kv 16	Internal thread, R 1 1/4"	A3	243
	V5011R1083 HON249	DN 40	Kv 25	Internal thread, R 1 1/2"	АЗ	294
	V5011R1091 HON250	DN 50	Kv 40	Internal thread, R 2"	A3	363

R20... 2-WAY BALL VALVES

For ventilation, heating systems and for the control of hot or chilled water for fan coil units. Can be used in combination with actuators HRYD24-SR, HRYD24-3 and HRC24-3.



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R2015-1-S1 0MB0325	DN 15	Kv 1,0	Internal thread 1/2", replace the valve R210	A2	72
R2015-1P6-S1 OMB0324	DN 15	Kv 1,6	Internal thread 1/2", replace the valve R211	A2	72
R2015-2P5-S1 OMB0326	DN 15	Kv 2,5	Internal thread 1/2", replace the valve R212	A2	72
R2020-4-S2 0MB0328	DN 20	Kv 4,0	Internal thread 3/4", replace the valve R217	A2	83
R2020-6P3-S2 OMB0329	DN 20	Kv 6,3	Internal thread 3/4", replace the valve R218	A2	83
R2020-8P6-S2 0MB0330	DN 20	Kv 8,6	Internal thread 3/4", replace the valve R219	A2	83
R2025-10-S2 0MB0331	DN 25	Kv 10	Internal thread 1", replace the valve R223	A2	100
R2025-16-S2 0MB0332	DN 25	Kv 16	Internal thread 1", replace the valve R224	A2	100

! no stock product

VSMF-3... 3-WAY VALVE

Red metal, T max 120 °C, stroke length 6,5 mm PN 16

Applications: For heating and ventilation

Suitable for actuators: M31C150, M31A150 and M41A15

Note. Connections sets must be ordered separately. Do not include in the price.



	Note . Connections	sets mus	t be order	ed separately. Do not include in the price.	CONNECTION SETS:		*)
1	VSMF-315-0.25 HON223	DN 15	Kv 0.25	External thread R 1/2", flush surface with seal	L15UK-3/8"	АЗ	57
	VSMF-315-0.4 HON304	DN 15	Kv 0,4	External thread R 1/2", flush surface with seal	L15UK-3/8"	АЗ	56
	VSMF-315-0.63 HON305	DN 15	Kv 0,63	External thread R 1/2", flush surface with seal	L15UK-3/8"	A3	59
	VSMF-315-1.0 HON306	DN 15	Kv 1,0	External thread R 1/2", flush surface with seal	L15UK-3/8"	АЗ	63
	VSMF-315-1.6 HON307	DN 15	Kv 1,6	External thread R 1/2", flush surface with seal	L15UK-3/8"	A3	59
!	VSMF-315-2.5 HON224	DN 15	Kv 2.5	External thread R 1/2", flush surface with seal	L15UK-3/8"	A3	63
	VSMF-320-2.5 HON308	DN 20	Kv 2.5	External thread R 3/4″, flush surface with seal	L15UK-1/2", L15HI	A3	67
	VSMF-320-4.0 HON309	DN 20	Kv 4	External thread R 3/4″, flush surface with seal	L15UK-1/2", L15HI	АЗ	68
	VSMF-325-6.3P HON310	DN 25	Kv 6.3	External thread R 1 1/4", flush surface with seal	L25UK-1", L25SK-3/4", L25HI	АЗ	174
	VSMF-325-8.0P HON311	DN 25	Kv 8.0	External thread R 1 1/4", flush surface with seal	L25UK-1", L25SK-3/4", L25HI	АЗ	176

V5833A... 3-WAY VALVE

Red metal, PN16

Applications: For heating, ventilation and domestic hot water

Suitable for motors: M31C150 and M41A15

Note. Connections sets must be ordered separately. Do not include in the price.



						•
V5833A1003 HON172	DN 15	Kv A-AB 0.25 B-AB 0.16	External thread R1/2" , Tmax 120°C, stroke 6,5 mm	L15UK-3/8"	АЗ	72
V5833A1011 HON173	DN 15	Kv A-AB 0.4 B-AB 0.25	External thread R1/2" , Tmax 120°C, stroke 6,5 mm	L15UK-3/8"	A3	72
V5833A1029 HON174	DN 15	Kv A-AB 0.63 B-AB 0.4	External thread R1/2" , Tmax 120°C, stroke 6,5 mm	L15UK-3/8"	АЗ	72
V5833A1037 HON175	DN 15	Kv A-AB 1.0 B-AB 0.63	External thread R1/2" , Tmax 120°C, stroke 6,5 mm	L15UK-3/8"	A3	72
V5833A1045 HON176	DN 15	Kv A-AB 1.6 B-AB 1.0	External thread R1/2" , Tmax 120°C, stroke 6,5 mm	L15UK-3/8"	A3	72
V5833A4007	DN 15	Kv A-AB 1.6 B-AB 1.6	External thread R1/2" , Tmax 120°C, stroke 2,5 mm, On/Off -control	L15UK-3/8"	A3	49
V5833A3009	DN 20	Kv A-AB 2.5 B-AB 2.5	External thread R3/4", Tmax 120°C, stroke 6,5 mm	L15UK-1/2", L15HI	A3	99
V5833A4015 HON181	DN 20	Kv A-AB 2.5 B-AB 2.5	External thread R3/4", Tmax 120°C, stroke 2,5 mm, On/Off -control	L15UK-1/2", L15HI	АЗ	64
V5833A3017 HON179	DN 20	Kv A-AB 4.0 B-AB 4.0	External thread R3/4", Tmax 120°C, stroke 6,5 mm	L15UK-1/2", L15HI	АЗ	115
V5833A2076 HON177	DN 25	Kv 4.0	External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	L25SK-1", L32HI	АЗ	171
V5833A2084 HON291	DN 25	Kv 6.3	External thread R1 1/2" , Tmax 130°C, stroke 6,5 mm, Pressure balanced	25SK-1", L32HI	A3	159
V5833A2092 HON292	DN 25	Kv 10	External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	25SK-1", L32HI	АЗ	159
V5833A2100 HON293	DN 32	Kv 16	External thread R2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	L32SK-1 1/4"	АЗ	196
V5833A2118 HON294	DN 40	Kv 25	External thread R2 1/4", Tmax 130°C, stroke 6,5 mm, Pressure balanced	L40UK-1 1/2", L40SK-1 1/2"	АЗ	263

[!] no stock product

^{*)} We reserve the right to change the prices according to Honeywell.

V5013R... 3-WAY VALVE

Red metal, T max 170 °C, stroke length 20 mm, PN 16 Applications: For heating, domestic hot water and ventilation Suitable for actuators: ML6420... , ML6425..., ML7420... and ML7425...



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V5013R1032 H0N251	DN 15	Kv 2.5	Internal thread, R 1/2"	A3	191
V5013R1040 H0N252	DN 15	Kv 4	Internal thread, R 1/2"	A3	191
V5013R1057 H0N253	DN 20	Kv 6.3	Internal thread, R 3/4"	A3	201
V5013R1065 HON254	DN 25	Kv 10	Internal thread, R 1"	A3	215
V5013R1073 H0N255	DN 32	Kv 16	Internal thread, R 1 1/4"	A3	257
V5013R1081 H0N256	DN 40	Kv 25	Internal thread, R 1 1/2"	A3	308
V5013R1099 H0N257	DN 50	Kv 40	Internal thread, R 2"	A3	401

V5013E... 3-WAY VALVE

Red metal, PN16, T max 170 °C, stroke length 20 mm

Note. Connections sets must be ordered separately. Do not include in the price.

Suitable for actuators: ML6420..., ML6425..., ML7420..., ML7425...

CONNECTION SETS:

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					6511126116113213.		
!	V5013E1063 HON069	DN 15	Kv 2.5	External thread, R 1/2"	L15UK-3/8"	A3	176
!	V5013E1071 HONO70	DN 15	Kv 4	External thread,, R 1/2"	L15UK-3/8"	A3	176
!	V5013E1089 HONO71	DN 20	Kv 6.3	External thread,, R 3/4"	L15UK-1/2", L15HI	A3	176
!	V5013E1097 HON072	DN 25	Kv 10	External thread,, R 1"	L20UK-3/4", L20SK-1/2", L20HI	A3	182
!	V5013E1105 HONO73	DN 32	Kv 16	External thread,, R 1 1/4"	L25UK-1", L25SK-3/4", L25HI	A3	219
!	V5013E1113 HONO74	DN 40	Kv 25	External thread,, R 1 1/2"	L25SK-1", L32HI	A3	233
!	V5013E1121 HONO75	DN 50	Kv 40	External thread,, R 2"	L32SK-1 1/4"	A3	332

V5329... 3-WAY VALVE

Cast iron, T max 170 $^{\circ}$ C, stroke length 20 mm, PN 16 Applications: For heating, domestic hot water and ventilation Suitable for actuators: ML6420..., ML6425..., ML7420... and ML7425...



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V5329A1004 HON312	DN 15	Kv 2.5	Flanged	A3	498
V5329A1012 HON129	DN 15	Kv 4.0	Flanged	АЗ	513
V5329A1020 HON313	DN 20	Kv 6.3	Flanged	АЗ	469
V5329A1038 HON274	DN 25	Kv 10	Flanged	АЗ	538
V5329A1046 HON275	DN 32	Kv 16	Flanged	АЗ	584
V5329A1053 HON276	DN 40	Kv 25	Flanged	АЗ	575
V5329A1061 HON277	DN 50	Kv 40	Flanged	АЗ	662
V5329A1079 HON278	DN 65	Kv 63	Flanged	АЗ	764
V5329A1087 HON279	DN 80	Kv 100	Flanged	АЗ	1157

V5823A... 3-WAY VALVE

Brass, PN16, T max 120 °C, HW-actuators with stroke length 6.5mm or 2.5 mm Applications: heating and ventilation



*)

CONNECTION SETS:

!	V5823A2003 HON140	DN 15	Kv 0.25	External thread, R 1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	76
!	V5823A2011 HON141	DN 15	Kv 0.40	External thread, R 1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	АЗ	76
!	V5823A2029 HON142	DN 15	Kv 0.63	External thread, R 1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	76
1	V5823A2037 HON143	DN 15	Kv 1.0	External thread, R 1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	АЗ	76
1	V5823A2045 HON144	DN 15	Kv 1.6	External thread, R 1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	76
1	V5823A2052 HON145	DN 20	Kv 2.5	External thread, R 3/4", stroke 6,5 mm	L15UK1/2", L15HI	АЗ	88
1	V5823A2060 HON146	DN 20	Kv 4.0	External thread, R 3/4", stroke 6,5 mm	L15UK1/2", L15HI	АЗ	88
1	V5823A2151 HON147	DN 20	Kv 2.5	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa/ -kPa	L15UK1/2", L15HI	АЗ	108
!	V5823A2169 HON148	DN 20	Kv 4.0	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa/ -kPa	L15UK1/2", L15HI	АЗ	108
!	V5823A4009 HON149	DN 15	Kv 1.6	External thread, R 1/2", stroke 2,5 mm, On/Off -control	L15UK-3/8" and L15UK-3/8" kartio	АЗ	47
!	V5823A4017 HON150	DN 20	Kv 2.5	External thread, R 3/4", stroke 2,5 mm, On/Off -control	L15UK1/2", L15HI	АЗ	63

V5823C... 3-WAY VALVE

Brass, PN16, T max 120 °C, three-way with bypass HW-actuators with stroke length 6.5mm or 2.5 mm Applications: heating and ventilation



*)

CONNECTION SETS:

!	V5823C2009 HON151	DN 15	Kv A-AB 0.25 B-AB 0.16	External thread, R 1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	83
!	V5823C2017 HON152	DN 15	Kv A-AB 0.4 B-AB 0.25	External thread, R 1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	83
!	V5823C2025 HON153	DN 15	Kv A-AB 0.63 B-AB 0.4	External thread, R 1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	83
!	V5823C2033 HON154	DN 15	Kv A-AB 1.0 B-AB 0.63	External thread, R 1/2", stroke 6,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	83
!	V5823C2041 HON155	DN 15	Kv A-AB 1.6 B-AB 1.0	External thread, R 1/2", stroke 6,5 mm	L15UK1/2", L15HI	A3	83
!	V5823C2058 HON156	DN 20	Kv A-AB 2.5 B-AB 1.6	External thread, R 3/4", stroke 6,5 mm	L15UK1/2", L15HI	A3	107
!	V5823C2066 HON157	DN 20	Kv A-AB 4.0 B-AB 2.5	External thread, R 3/4", stroke 6,5 mm	L15UK1/2", L15HI	A3	107
!	V5823C2157 HON158	DN 20	Kv A-AB 2.5 B-AB 1.6	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa	L15UK1/2", L15HI	A3	107
!	V5823C2165 HON159	DN 20	Kv A-AB 4.0 B-AB 2.5	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa	L15UK1/2", L15HI	A3	107
!	V5823C4005 HON160	DN 15	Kv 1.6	External thread, R 1/2", stroke 2,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	53
!	V5823C4013 HON161	DN 20	Kv 2.5	External thread, R 3/4", stroke 2,5 mm	L15UK-3/8" and L15UK-3/8" kartio	A3	65

V5050A... 3-WAY VALVE

Cast iron, PN16, Tmax 220 °C, stroke 38 mm Applications: heating and ventilation Actuators 38 mm ML6421... or ML7421...

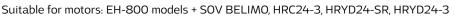


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!	V5050A1090 HON111	DN 100	Kv 160	Flanged	A3	2150
!	V5050A1108 HON112	DN 125	Kv 250	Flanged	АЗ	2843
1	V5050A1116 HON113	DN 150	Kv 360	Flanged	АЗ	3110

R30... 3-WAY BALL VALVE

Nickel-plated brass, T max 100 ° C, PN 16 Applications: For heating and ventilation





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DN 15	Kv 0.63	Internal threaded connect, thread ½", replace the valve R309	A2	126
DN 15	Kv 1.0	Internal threaded connect, thread ½", replace the valve R310	A2	126
DN 15	Kv 1.6	Internal threaded connect, thread ½", replace the valve R311	A2	126
DN 15	Kv 2.5	Internal threaded connect, thread ½", replace the valve R312	A2	126
DN 20	Kv 4.0	Internal threaded connect, thread ¾", replace the valve R317	A2	141
DN 20	Kv 6.3	Internal threaded connect, thread ¾", replace the valve R318	A2	141
DN 25	Kv 10	Internal threaded connect, thread 1″, replace the valve R323	A2	177
DN 32	Kv 16	Internal threaded connect, thread 1 ¼", replace the valve R331	A2	250
	DN 15 DN 15 DN 15 DN 20 DN 20 DN 25	DN 15 Kv 1.0 DN 15 Kv 1.6 DN 15 Kv 2.5 DN 20 Kv 4.0 DN 20 Kv 6.3 DN 25 Kv 10	DN 15 Kv 1.0 Internal threaded connect, thread ½", replace the valve R310 DN 15 Kv 1.6 Internal threaded connect, thread ½", replace the valve R311 DN 15 Kv 2.5 Internal threaded connect, thread ½", replace the valve R312 DN 20 Kv 4.0 Internal threaded connect, thread ¾", replace the valve R317 DN 20 Kv 6.3 Internal threaded connect, thread ¾", replace the valve R318 DN 25 Kv 10 Internal threaded connect, thread 1", replace the valve R323	DN 15 Kv 1.0 Internal threaded connect, thread ½", replace the valve R310 A2 DN 15 Kv 1.6 Internal threaded connect, thread ½", replace the valve R311 A2 DN 15 Kv 2.5 Internal threaded connect, thread ½", replace the valve R312 A2 DN 20 Kv 4.0 Internal threaded connect, thread ¾", replace the valve R317 A2 DN 20 Kv 6.3 Internal threaded connect, thread ¾", replace the valve R318 A2 DN 25 Kv 10 Internal threaded connect, thread 1", replace the valve R323 A2

VBG3... 3-WAY CONTROL BALL VALVE

Brass, PN25, Tmax 120 $^{\circ}$ C, angle of rotation 90 $^{\circ}$ C, Suitable actuators MVN... Applications: heating and ventilation

Valve serie available on request. See datasheet from our website.



EXTERNAL THREADED CONNECTIONS

All connection sets made of zinc covering durability brass.



L15UK-3/8" OMB0183	DN 15	External threaded R 3/8", Internal thread to valve R $\frac{1}{2}$ "	A1	8
L15UK-1/2" OMB0120	DN 15	External threaded R $\frac{1}{2}$, Internal thread to valve R $\frac{3}{4}$	A1	5
L15-3/8" kartio OMB0190	DN 15	External threaded R 3/8", tapered	A1	6
L20UK-3/4" 0MB0121	DN 20	External threaded R $\frac{3}{4}$, Internal thread to valve R 1"	A1	15
L25UK-1" 0MB0122	DN 25	External threaded R 1", Internal thread to valve R 11/4"	A1	24
L40UK-11/2" OMB188	DN 40	External threaded R 1½", Internal thread to valve R 2¼"	A1	51

INTERNAL THREADED CONNECTIONS





L20SK-1/2"-1/2" OMA0198	DN 20	Internal thread R $\frac{1}{2}$ ", Internal thread to valve R 1"	A1	16
L25SK-1" 0MB0185	DN 25	Internal thread R 1", Internal thread to valve R $1\frac{1}{2}$ "	A1	17
L25SK-3/4" OMA0200	DN 25	Internal thread R1", Internal thread to valve R11/4"	A1	16
L325K-1 1/4" 0MB0187	DN 32	Internal thread R $1\frac{1}{4}$, Internal thread to valve R 2	A1	26
L40SK-1 1/2" 0MB0189	DN 40	Internal thread R $1\frac{1}{2}$, Internal thread to valve R $2\frac{1}{4}$	A1	34

WELDINGS

The nut made of zinc covering durability brass, the welded part made of steel.



L15HI 0MA0196	DN 15	Welding $\frac{1}{2}$, Internal thread to valve R $\frac{3}{4}$ "	A1	9
L20HI 0MA0197	DN 20	Welding ¾", Internal thread to valve R 1"	A1	16
L25HI 0MA0199	DN 25	Welding 1", Internal thread to valve R 11/4"	A1	18
L32HI 0MA0201	DN 32	Welding 1¼", Internal thread to valve R 1½"	A1	20

SPARE INSERTS OF VD VALVES

VDP-0.25 0MA0395	VD-0,25 spare inserts	C2	63
VDP-0.4 OMA0396	VD-0,4 spare inserts	C2	63
VDP-0.63 OMA0397	VD-0,63 spare inserts	C2	63
VDP-1.0 0MA0398	VD-1,0 spare inserts	C2	63
VDP-1.6 OMAO399	VD-1,6 spare inserts	C2	63
VDP-2.5 0MA0401	VD-12,5 spare inserts	C2	63
VDP-4.0 0MA0402	VD-4,0 spare inserts	C2	72
VDP-6.3 0MA0403	VD-6,3 spare inserts	C2	88
VDP-10 0MA0400	VD-10 spare inserts	C2	109

STEM SEALS

BOKSIT HW10MM HON227	Set of stem seals for V5011/13 valves	C2	133
BOKSITIIV/SIEM OMBO025	Set of stem seals for Siemens 428488060: 10 mm stem	C2	67
BOKSITIIV/V OMBO026	Set of stem seals for V-valves OMB0026	C2	60

ADAPTER FOR VD-VALVES



JATKE EXTENSION The VD-valve with the adapter JATKE replaces the VS-valve of Satakunnan Valu.

JATKE 215/215 OMB0083	Pair of flange VD215 / SV 215, total length 75 mm	A1	49
JATKE 220/215 OMB0084	Pair of flange VD220 / SV 215, total length 75 mm	A1	49
JATKE 220/220 OMB0085	Pair of flange VD220 / SV 220, total length 100 mm	A1	61
JATKE 225/220 OMB0086	Pair of flange VD225 / SV 220, total length 100 mm	A1	61
JATKE 225/225 OMB0087	Pair of flange VD225 / SV 225, total length 115 mm	A1	61
JATKE 232/225 OMB0088	Pair of flange VD232 / SV 225, total length 115 mm	A1	85



JATKE VD EXTENSION JATKE VD replaces the Osby 2SB valves or tai Siemens VVF valve

JATKE VD15-130 OMB0099	Pair of flange for Osby 2SB and Siemens VVF valves, total length 130 mm	A1	85
JATKE VD20-130 OMB0100	Pair of flange for Osby 2SB and Siemens VVF valves, total length 130 mm	A1	89
JATKE VD20-140 OMB0101	Pair of flange for Osby 2SB valves, total length 140 mm	A1	89
JATKE VD20-160 OMB0102	Pair of flange for Siemens VVF valves, total length 160 mm	A1	89
JATKE VD25-140 OMB0103	Pair of flange for Osby 2SB valves, total length 140 mm	A1	89
JATKE VD25-150 OMA0187	Pair of flange for Osby 2SB valves, total length 150 mm	A1	89
JATKE VD25-160 OMB0104	Pair of flange for Siemens VVF valves, total length 160 mm	A1	89
JATKE VD32-150 OMB0105	Pair of flange for Osby 2SB valves, total length 150 mm	A1	103
JATKE VD32-160 OMB0106	Pair of flange for Siemens VVF valves, total length 160 mm	A1	103

JATKE RV EXTENSION

JATKE PARI RV 3/4"SK-1"UK OMA0186	Extension 3/4" -> 1" 2 pcs + seals	A1	53
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AK... ADAPTERS FOR VALVES

AK15-15 OMB0003	Adapter set for VD15/Salina 15	A1	29
AK20-15 OMB0004	Adapter set for VD20/Salina 15	A1	42
AK20-25 OMB0005	Adapter set for VD20/Salina 25	A1	47
AK25-25 OMB0006	Adapter set for VD25/Salina 25	A1	47

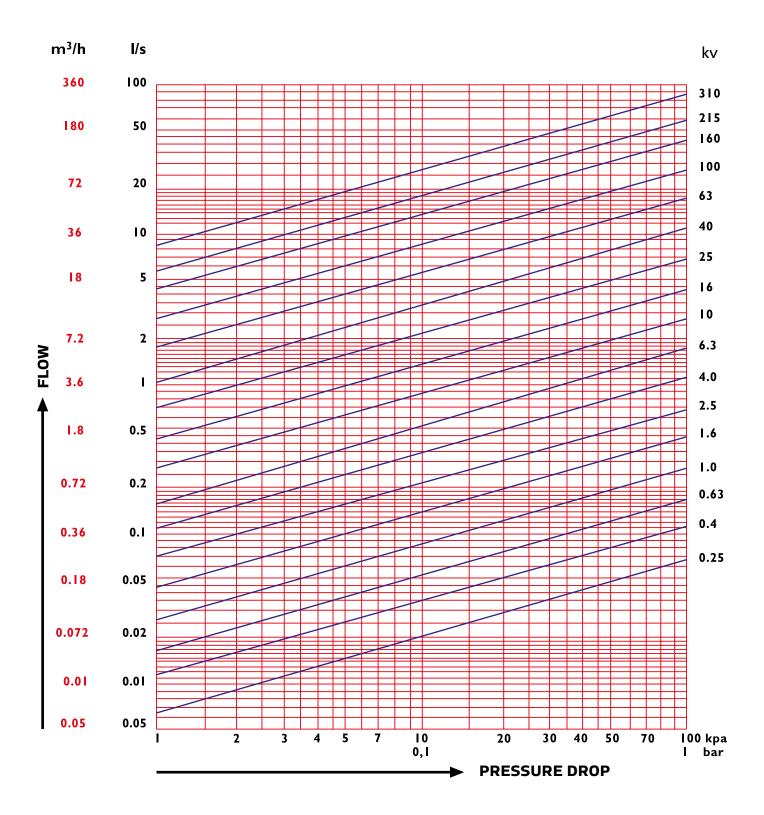
FITTINGS

For actuators ML6420-, ML6425-, ML7420- ja ML7425, with stroke length of 20 mm $\,$

SOV-L&G-HON OMA0268	Fittings for L&G VVG41-, VXG41- and VVF52 valves	A1	53
SOV-TAC-HON OMA0270	Fittings for TAC V241-, V282-, V292-, V293-, V294-, V298-, V384-, V386-, V392- and V394 valves	A1	53
SW-SOV-HON OMA0276	Fittings between Satchwell-Honeywell	A1	32

Note! Combinations of all variations and sizes of valves has not been tested.

Valve dimensioning table



Actuators for valves, 3-point control

M31C150, M6410... VALVE ACTUATORS

Applications: For heating regulation in district heating exchangers and boiler plants, for cooling circuit regulation.

- Speed 150s/6,5mm
- Connection cable 1,5 m



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	M31C150 OMA0206	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43.	АЗ	139
!	M6410C2023 HON004	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43.	АЗ	115
1	M6410L2023 HON008	Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, Power 180 Nm. IP40.	АЗ	139
	M6410C4037 HON007	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43. + 2 micro switch	A3	213
	M6410L2031 HON009	Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, Power 300 Nm. IP40.	АЗ	184
ļ	M6410C4029 HON006	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43. + 2 micro switch	A3	159
!	M6410L4029 HON010	Valve actuator, 3-point control, 230 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43. + 2 micro switch	A3	165
!	M6410L4037 HON011	Valve actuator, 3-point control, 230 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43. + 2 micro switch	A3	228

ML6420A... VALVE ACTUATORS, IP54

Applications: For heating, domestic hot water and ventilation

- Suitable for valves with 20 mm stroke length.
- Power 600 Nm
- 2 pcs micro switches ready for serial control

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ML6420A3007 HON020	Valve actuator, 3-point control, 24 V, 50 Hz, 4 VA, speed 60s/20mm.	АЗ	466
ML6420A3023 HON022	Valve actuator, 3-point control, 24 V, 50 Hz, 6 VA, speed 30s/20mm.	A3	466
ML6420A3015 HON021	Valve actuator, 3-point control, 230 V, 50 Hz, 6,5 VA, speed 60s/20mm.	A3	529
ML6420A3031 HON023	Valve actuator, 3-point control, 230 V, 50 Hz, 6,5 VA, speed 30s/20mm.	АЗ	472

ML6421... VALVE ACTUATORS, IP54

Applications: Heating systems

- Power 1800 Nm
- 2 pcs micro switches ready for serial control



*)

	ML6421A3005 HON024	Valve actuator, 3-point control, 24 V, 50 Hz, 13 VA, speed 114s/20mm.	АЗ	854
!	ML6421A3013 HON025	Valve actuator, 3-point control, 230 V, 50 Hz, 11 VA, speed 114s/20mm.	АЗ	642
	ML6421B3004 HON026	Valve actuator, 3-point control, 24 V, 50 Hz, 13 VA, speed 210s/38mm.	АЗ	913
!	ML6421B3012 HON027	Valve actuator, 3-point control, 230 V, 50 Hz, 11 VA, speed 210s/38mm.	A3	464

M6422L1003 VALVE ACTUATOR, IP54

Rotary actuator for butterfly valve

Power 40 Nm



*)

1	M6422L1003 HON012	Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, speed 150s/90°.	A3	1531	
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! no stock product

^{*)} We reserve the right to change the prices according to Honeywell.

Actuators for valves, 3-point control

ML6425... VALVE ACTUATORS, IP54

Applications: For heating, domestic hot water and ventilation

- Suitable for valves with 20 mm stroke length.
- Power 600 Nm
- 2 pcs micro switches ready for serial control



*)

!	ML6425A3006 HON028	Valve actuator, 3-point control, 24 V, 50 Hz, 11 VA, speed 108s/20mm. 12s spring. Spring return out.	АЗ	584
!	ML6425A3014 HON029	Valve actuator, 3-point control, 230 V, 50 Hz, 12 VA, speed 108s/20mm. 12s jousi. Spring return out.	АЗ	626
!	ML6425B3005 HON030	Valve actuator, 3-point control, 24 V, 50 Hz, 11 VA, speed 108s/20mm. 12s spring. Spring return in.	АЗ	546
1	ML6425B3021 HON031	Valve actuator, 3-point control, 230 V, 50 Hz, 12 VA, speed 108s/20mm. 12s spring. Spring return in.	АЗ	627

M7410A... AND M7410C... VALVE ACTUATORS, IP43

• Suitable for valves with 2,5 mm stroke length.



*)

	M7410A1001 HON013	Valve actuator, no manual use, 3-point control, 24 V, 50 Hz, 0,7 VA, Speed 60 s/2,5 mm. Power 90 Nm. Connection cable 0,8 m. Used with control ball valve (VSOx).	АЗ	114
	M7410C1007 HON014	Valve actuator, no manual use, 3-point control, 24 V, 50 Hz, 0,7 VA, Speed 2,5 min/6,5 mm. Power 180 Nm.	АЗ	112
!	M7410C1015 HON015	Valve actuator, no manual use, 3-point control, 24 V, 50 Hz, 0,7 VA, Speed 2,5 min/6,5 mm. Power 300 Nm.	АЗ	119

MVN... VALVE ACTUATORS, IP40

- Used with control ball valve (VBGx)
- Power 3 Nm
- Speed 108s/90°.



*)

1	MVN613A1500 HON038	Valve actuator, 3-point control, 24 V, 50 Hz, 1,5 VA	A3	137
1	MVN663A1500 HON039	Valve actuator, 3-point control, 230 V, 50 Hz, 4,5 VA	A3	157

NR-SI AND NR-HW ACTUATOR FOR RENOVATION, SIEMENS- AND HONEYWELL -VALVES

Suitable for Siemens and Honeywell valves with 5,5 mm stroke length.

Applications: For heating, domestic hot water and ventilation



*

NRYD230-3-SI OMB0168	Power: 500 N	Speed: 35 s	Stroke length: 5,5 mm	Consumption: 2,5 VA 230 VAC	A2	169
NRYD24-3-SI OMB0169	Power: 500 N	Speed: 35 s	Stroke length: 5,5 mm	Consumption: 1,5 VA 24 VAC	A2	169
NRD24-3-SI OMB0165	Power: 500 N	Speed: 140 s	Stroke length: 5,5 mm	Consumption: 1,5 VA 24 VAC	A2	151
NRD230-3-SI OMB0164	Power: 500 N	Speed: 140 s	Stroke length: 5,5 mm	Consumption: 2,5 VA 230 VAC	A2	151
NRYD230-3-HW OMA0219	Power: 500 N	Speed: 35 s	Stroke length: 6,5 mm	Consumption: 2,5 VA 230 VAC	A2	169
NRYD24-3-HW OMA0220	Power: 500 N	Speed: 35 s	Stroke length: 6,5 mm	Consumption: 1,5 VA 24 VAC	A2	169

HT AND HR... VALVE ACTUATORS

Suitable for R2-, R3- and R4..D(K) ball valves

Applications: For heating, domestic hot water and ventilation



*

!	HTC24-3 OMB0071	Power: 5 Nm	Speed: 70 s	Consumption: 1.5 VA 24 VAC / DC	A2	160
!	HTC230-3 OMB0074	Power: 5 Nm	Speed: 70 s	Consumption: 2.5 VA 230 VAC	A2	160
	HTD24-3 OMB0075	Power: 5 Nm	Speed: 140 s	Consumption: 1.5 VA 24 VAC / DC	A2	156
	HTYD24-3 OMB0078	Power: 5 Nm	Speed: 35 s	Consumption: 1.5 VA 24 VAC / DC	A2	156

M41A15 VALVE ACTUATOR, IP54

Suitable for valves with 6,5 mm stroke length.

Applications: For heating regulation in district heating exchangers and boiler plants, for cooling circuit regulation.



M41A15 OMA0207	Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 5 VA. Speed 15 s/6,5 mm. Power 400 Nm.	АЗ	251
	1 000er 400 mm.		

M31A150 VALVE ACTUATOR, IP42

Suitable for valves with 6,5 mm stroke length.

Applications: For heating and ventilation.



*)

M31A150	Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 1,7 VA, Speed 150s/6,5 mm. Power 300 Nm.	٧3	170
OMA0205	Connection cable 1,5 m.	73	170

M7410E... VALVE ACTUATORS, IP43

Applications: Heating- and ventilation systems

- Suitable for valves with 6,5 mm stroke length.
- Connection cable 1,5 m



	M7410E1002 HON016	Valve actuator, no manual use, 0(2)10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 180 Nm.	A3	197
!	M7410E1028 HON017	Valve actuator, no manual use, 0(2)10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 300 Nm.	АЗ	220
!	M7410E2026 HON018	Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 180 Nm.	A3	222
!	M7410E2034 HON019	Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 300 Nm.	A3	286

ML7420A... VALVE ACTUATORS, IP54

Suitable for valves with 20 mm stroke length.

Power 600 Nm

Applications: For heating, domestic hot water and ventilation



ML7420A6009 HON032	Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 5 VA, speed 60s/20mm. Analog output of 2-10 VDC.	АЗ	500
ML7420A6017 HON237	Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 7 VA, speed 30s/20mm. Analog output of 2-10 VDC.	АЗ	497

ML7421... VALVE ACTUATORS, IP54

Applications: For heating

Power 1800 Nm



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!	ML7421A3004 HON034	Valve actuator, 0(2)10 VDC controlled. , 24 V, 50 Hz, 14 VA, speed 114s/20mm. Analog output of 2-10 VDC.	АЗ	773
1	ML7421B3003 HON035	Valve actuator, 0(2)10 VDC controlled., 24 V, 50 Hz, 14 VA, speed 210s/38mm. Analog output of 2-10 VDC.	A3	761



^{*)} We reserve the right to change the prices according to Honeywell.

0 - 10 V controlled actuators

ML7425... VALVE ACTUATORS, IP54

Applications: Heating systems

- Suitable for valves with 20 mm stroke length.
- Power 600 Nm



*)

!	ML7425A6008 HON036	Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 12 VA, speed 108s/20mm. 12s spring. Spring return out. Analog output of 2-10 VDC.	АЗ	871
!	ML7425B6007 HON037	Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 12 VA, speed 108s/20mm. 12s spring. Spring return in. Analog output of 2-10 VDC.	АЗ	555

MVN... VALVE ACTUATOR, IP40

Used with control ball valve (VBGx)



*)

!	MVN713A1500 HON040	Valve actuator, 0(2)10 VDC controlled, 24 V, 50 Hz, 5 VA, Speed 90s/90°. Power 3 Nm.	A3	197
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HTC24-SR VALVE ACTUATOR

Connection cable 1 m. The control voltage 0 (2) -10 V. Suitable with WNR-adapter for R-series ball valves and with MS-NRE6-adapter for Esben VRG and VRB valves.

Applications: For heating



*)

HTC24-SR					
OMB0072	Power: 5 Nm	Speed: 70 s	Consumption: 3 VA 24 VAC / DC	A2	191
HTD24-SR OMB0076	Power: 5 Nm	Speed: 140 s	Consumption: 3 VA 24 VAC / DC	A2	191
HTYD24-SR OMB0079	Power: 5 Nm	Speed: 35 s	Consumption: 3 VA 24 VAC / DC	A2	207

NR... VALVE ACTUATOR

Applications: For heating, domestic hot water and ventilation



*

NRYD24-SR-SI OMB0170	Power: 500 N	Speed: 35 s	Stroke length 5,5 mm	Consumption: 3 VA 24 VAC / DC	A2	246
NRYD24-SR-HW OMA0221	Power: 500 N	Speed: 35 s	Stroke length 6,5 mm	Consumption: 3 VA 24 VAC / DC	A2	246

ADAPTERS FOR VALVE ACTUATORS

MS-NRE OMB0142	Adapter for the valves Esbe and Termomix	A2	11
MS-NRE6 OMB0144	Adapter for the valves: VRG, VRB	A2	11
WNR OMC0180	Adapter between NR-actuator and ball valve	A2	22

Damper actuators

Honeywell damper actuators

- · Suitable for all sizes of shafts
- Very easy to install and connect
- Does not require separate casing for power supply

N05... ja N10... DAMPER ACTUATORS, IP54

- 5 Nm for 1 m² dampers
- 10 Nm for 2 m² dampers



*

	N05010 H0N228	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 5 VA, speed 90/110s. Power 5 Nm. Analog output of 2-10 VDC.	АЗ	157
į	N05010-SW2 H0N041	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 5 VA, speed 90/110s. Power 5 Nm. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control.	АЗ	181
į	N05230-2POS HON042	Damper actuator, 2-point control, 230 VAC, 50 Hz, 22 VA, speed 110s. Power 5 Nm.	АЗ	137
į	N0524 HON314	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 5 Nm.	АЗ	113
į	N0524-SW2 HON043	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 5 Nm. 2 pcs micro switches ready for serial control.	АЗ	181
į	N10010 HON315	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 5 VA, speed 90/110s. Power 10 Nm. Analog output of 2-10 VDC.	АЗ	185
į	N10010-SW2 HON044	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 5 VA, speed 90/110s. Power 10 Nm. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control.	АЗ	256
į	N10230-2POS HON045	Damper actuator, 2-point control, 230 VAC, 50 Hz, 22 VA, speed 140s. Power 10 Nm.	АЗ	167
į	N1024 HON316	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 10 Nm.	АЗ	191
!	N1024-SW2 HON046	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 10 Nm. 2 pcs micro switches ready for serial control.	АЗ	210

N20... DAMPER ACTUATORS, IP54

- For 4 m² dampers
- Power 20 Nm



*)

	N20010 HON317	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 6 VA, speed 95/110s. Analog output of 2-10 VDC.	АЗ	276
!	N20010-SW2 HON047	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 6 VA, speed 95/110s. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control.	АЗ	342
1	N20230 HON048	Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 8 VA, speed 110s.	АЗ	250
!	N20230-SW2 HON049	Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 8 VA, speed 110s. 2 pcs micro switches ready for serial control.	АЗ	269
	N2024 HON318	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 6 VA, speed 110s. Voima 20 Nm.	АЗ	263
!	N2024-SW2 HON050	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 6 VA, speed 110s. 2 pcs micro switches ready for serial control.	АЗ	273

N34... DAMPER ACTUATORS, IP54

- For 6 m² dampers
- Power 34 Nm



*)

!	N34010 HON051	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 6 VA, speed 95/110s. Analog output of 2-10 VDC.	АЗ	342
!	N34230 HON052	Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 13 VA, speed 110s.	A3	309
!	N3424 HON053	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 9 VA, speed 110s.	A3	305

Damper actuators

S03 / S05... DAMPER ACTUATORS, IP54

- Spring return 25 s
- 3 Nm for 0,6 m² dampers
- 5 Nm for 1m² dampers



*)

	S03010 HON319	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 7 VA, speed 90s. Power 3 Nm. Analog output of 2-10 VDC.	A3	263
!	S03010-SW1 HON054	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 7 VA, speed 90s. Power 3 Nm. Analog output of 2-10 VDC. 1 pcs adjustable micro switch.	A3	240
!	S03230-2POS-SW1 HON055	Damper actuator, 2-point control, 230 VAC, 50 Hz, 13 VA, speed 45s. Power 3 Nm. 1 pcs adjustable micro switch.	A3	246
1	S0324-2POS HON056	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 7 VA, speed 45s. Power 3 Nm.	A3	182
!	S0324-2POS-SW1 HON057	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 7 VA, speed 45s. Power 3 Nm. 1 pcs adjustable micro switch.	A3	229
	S0524-2POS HON321	Damper actuator, 2-point control,24 VDC/ac, 50 Hz, 8 VA, speed 45s. Power 5 Nm.	A3	203
!	S0524-2POS-SW1 HON062	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 8 VA, speed 45s. Power 5 Nm. 1 pcs adjustable micro switch.	АЗ	249
į	S05010 HON058	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 8 VA, speed 90s. Power 5 Nm. Analog output of 2-10 VDC.	АЗ	243
!	S05010-SW1 HON059	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 8 VA, speed 90s. Power 5 Nm. Analog output of 2-10 VDC. 1 pcs adjustable micro switch.	АЗ	261
!	S05230-2POS HON060	Damper actuator, 2-point control, 230 VAC, 50 Hz, 14 VA, speed 45s. Power 5 Nm.	A3	176
!	S05230-2POS-SW1 HON061	Damper actuator, 2-point control, 230 VAC, 50 Hz, 14 VA, speed 45s. Power 5 Nm. 1 pcs adjustable micro switch.	A3	267

\$10... ja \$20... DAMPER ACTUATORS, IP54

- Spring return 20 s
- 10 Nm for 1,5 m² dampers
- 20 Nm for 4,6 m² dampers



*)

	S10010 HON322	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 14 VA, speed 90s. Power 10 Nm. Analog output of 2-10 VDC.	A3	292
!	S10010-SW2 HON063	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 14 VA, speed 90s. Power 10 Nm. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control.	АЗ	376
	S1024-2POS HON324	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 30 VA, speed 45s. Power 10 Nm.	АЗ	236
!	\$1024-2POS-SW2 HON065	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 30 VA, speed 45s. Power 10 Nm. 2 pcs micro switches ready for serial control.	АЗ	320
	S10230-2POS HON323	Damper actuator, 2-point control, 230 VAC, 50 Hz, 45 VA, speed 45s. Power 10 Nm.	АЗ	276
!	\$10230-2POS-SW2 HON067	Damper actuator, 2-point control, 230 VAC, 50 Hz, 45 VA, speed 45s. Power 10 Nm. 2 pcs micro switches ready for serial control.	АЗ	409
	S20010 HON325	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 16VA, speed 90s. Power 20 Nm. Analog output of 2-10 VDC.	АЗ	331
!	S20010-SW2 HON066	Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 16VA, speed 90s. Power 20 Nm. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control.	АЗ	414
	S2024-2POS HON327	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 45 VA, speed 45s. Power 20 Nm.	АЗ	287
!	S2024-2POS-SW2 HON068	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 45 VA, speed 45s. Power 20 Nm. 2 pcs micro switches ready for serial control.	АЗ	349
	S20230-2POS HON326	Damper actuator, 2-point control, 230 VAC, 50 Hz, 60 VA, speed 45s. Power 20 Nm.	АЗ	320
!	S20230-2POS-SW2 HON067	Damper actuator, 2-point control, 230 VAC, 50 Hz, 60 VA, speed 45s. Power 20 Nm. 2 pcs micro switches ready for serial control.	АЗ	409

Damper actuators

NM..A DAMPER ACTUATOR, IP 54

- 10 Nm
- For 2 m2 dampers
- The drive time 150 s



*)

!	NM24A OMB0158	3-point control / open-closed	Power: 10 Nm	Consumption: 4 VA 24 VAC / DC	A2	159
1	NM230A OMB0157	3-point control / open-closed	Power: 10 Nm	Consumption: 6 VA 230 VAC	A2	164
!	NM24A-SR OMB0159	2-10 V-control	Power: 10 Nm	Consumption: 4 VA 24 VAC / DC	A2	228

SM..A DAMPER ACTUATOR, IP 54

- 20 Nm
- For 4 m2 dampers
- The drive time 150 s



*)

!	SM24A OMB0385	3-point control / open-closed	Power: 20 Nm	Consumption: 4 VA 24 VAC / DC	A2	183
!	SM230A OMB0384	3-point control / open-closed	Power: 20 Nm	Consumption: 6 VA 230 VAC	A2	187
!	SM24A-SR OMB0386	2-10 V-control	Power: 20 Nm	Consumption: 4 VA 24 VAC / DC	A2	259

NF... DAMPER ACTUATOR

- 10 Nm
- For 2 m2 dampers
- \bullet The drive time 75 s, NF24A-SR 150 s
- Spring return 20 s



*)

NF24A OMB0155	Open-closed control	Power: 10 Nm	Consumption: 5,5 VA 24 VAC / DC	A2	259
NF24A-SR OMB0156	Control 210 V	Power: 10 Nm	Consumption: 5,5 VA 24 VAC / DC	A2	308

SF... DAMPER ACTUATOR, IP 54

- 15 Nm
- For 4 m2 dampers
- \bullet The drive time 75 s, SF24A-SR 150 s
- Spring return 20 s



*

SF24A OMB0377	Open-closed	Power: 20 Nm	Consumption: 7,5 VA 24 VAC / DC	A2	315
SFA OMB0376	Open-closed	Power: 20 Nm	Consumption: 18 VA 24-240 VAC/ 24-125 VDC	A2	363
SF24A-SR OMB0378	2-10 V-control	Power: 20 Nm	Consumption: 7 VA 24 VAC / DC	A2	364



 $^{^{\}ast})$ We reserve the right to change the prices according to Belimo

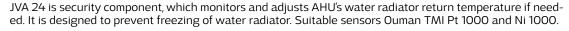
Other field devices

CO1A THERMOSTAT



C01A	Thermostat, surface mounting 2090 °C, differential range 7 °C	A2	64
OMA0043	Thermostat, surface mounting 2090°C, differential range 7°C	72	04

JVA24 FROST PROTECTION THERMOSTAT





JVA24 OMB0107	Anticipating frost protection thermostat	A2	139

Other field devices

ETT6 INDULGE BUTTON

• 1...6 hours extra running time for the device by pressing the button.

Indulge button



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ETT6 OMB0516

PWR POWER UNITS

Four different outputs power source.



PWR 10 OMB0489	Power unit 24 VAC / 10 VA, width 35,5 mm (2M)	C2	22
PWR 24 OMB0488	Power unit 24 VAC / 24 VA, width 54 mm (3M)	C2	24
PWR 40 OMB0486	Power unit 24 VAC / 40 VA, width 54 mm (3M)	C2	34
PWR 63 OMB0487	Power unit 24 VAC / 63 VA, width 106 mm (6M)	C2	49
PWR 24V/1A OMB0522	Power unit 24VDC/1A, width 35 mm (2M)	C2	24

VAK-POWER UNITS



PWR130 OMB0425	Protective voltage transformer with thermal prot.230VAC / 24 VAC, 130 VA. DIN-rail mounting W90,L84,H110	C2	40
PWR180 OMB0426	Protective voltage transformer with thermal prot. 230VAC / 24 VAC, 180 VA. W105,L89,H115	C2	55
PWR250 OMB0427	Protective voltage transformer with thermal prot.230VAC / 24 VAC, 250 VA. W130, L115, H119	C2	69

Ouman Oy - General Terms of Delivery and Warranty

SCOPE OF APPLICATION

These Terms of Delivery shall apply to any retail of components and equipment between Ouman Oy and the customer, unless other agreements are signed (excluding deliveries involving customised products or deliveries that involve a significant amount of installation).

PRICING

Pricing is based on Ouman Oy's pricelist valid on the day the order is placed. All prices are indicated without value added tax. The taxes are calculated according to the prevailing legislation. In the event that any changes take place in payments related to customs, freight, VAT or other general payments before the date of delivery, the seller shall have the right to adjust the pricing of the articles in the same proportion as the changed pricing or payments have impacted the price of the articles.

OFFER

The price indicated in the offer is a net price for a given unit (excluding VAT) for the indicated quantity located in the seller's warehouse. Any offer provided by the seller is binding and valid for 30 days, unless otherwise indicated. If the seller's offer is subject to goods still remaining unsold at the time of buyer's order, the goods can be sold to a third party during the period of the offer and the seller does not guarantee that there is stock.

AGREEMENT

An agreement is formed between the seller and the buyer once the parties to the agreement have signed a written agreement (Procurement Agreement); the buyer has, in writing or verbally, agreed a binding agreement (order), or the seller has, in writing or verbally, confirmed an order, which is not based on an offer or differs from an offer, per se (order confirmation).

DIAGRAMS AND DESCRIPTIONS

Any price, measurement, weight and performance-related information indicated in descriptions, figures, diagrams, lists and pricelists are provided without guarantees, unless the offer specifically refers to such information. Any drawings and technical documents required for the manufacturing of the goods or their components, delivered, prior to or after entering into an agreement, from one party to another party to an agreement, shall remain in the possession of the supplier. The recipient shall not have the right to use, duplicate, deliver or otherwise provide any related information to a third party.

TERMS OF DELIVERY

The terms of delivery is FCA (Incoterms 2010), unless other agreements are signed.

PACKAGE

Any prices indicated in the pricelists and catalogues refer to unpacked goods.

DELIVERY TIME

The seller shall deliver the goods as agreed. In the event that no delivery time is agreed upon, the seller shall deliver the ordered products immediately, or as soon as stock is available. In the event that the seller has receivables due from the buyer, the seller, after informing the buyer, shall have the right to delay agreed deliveries until due payments are remitted. In such event it is considered that the agreed delivery time is delayed accordingly, and the buyer shall not have the right to make claims related to such delay. The goods are considered to be delivered once they are dispatched or reported as ready for delivery and the buyer is contractually obligated to retrieve the goods from the seller or from a location indicated by the seller.

DELAY NOTIFICATIONS

The buyer and the seller must immediately inform one another in the even that a delivery or reception of delivery may be delayed. Once either party receives notification of a delay, they must immediately inform the other party, stating the reason for the delay and the estimated new delivery date.

DELIVERY AND INSPECTION OF GOODS

Liability for risk is transferred to the buyer upon delivery of the goods. The goods must be equipped with a delivery note. Upon receiving the delivery, the buyer must confirm that the delivery is in accordance with the order and the delivery note and free of external damages. The goods must be appropriately inspected by the buyer once more before commissioning, mounting or installation. Any reclamation related to quantities or type of goods shall be done in writing within 8 business days of receipt of goods. Failure to do so will void the buyer's right to claims related to deficiencies or inadequacies.

Ouman Oy - General Terms of Delivery and Warranty

FORCE MAJEURE

The seller is not obligated to fulfil their contractual obligations in the event of a force majeure, or if the fulfilment of the contractual obligations would require sacrifices that are disproportionate in terms of the resulting benefit to the buyer. In the event that the force majeure ceases within a reasonable timeframe, the buyer shall have the right to demand the seller to meet their contractual obligations. In the event that the manufacturer or supplier, who the seller has procured the goods from, neglects their contractual obligations, resulting in a delay in a delivery by the seller, the seller shall not be liable for damages incurred by the buyer in such event. If the seller is affected by a force majeure described herein, the buyer shall not have the right to demand a new delivery to replace defective goods. In the event that the fulfilment of contractual obligations within a reasonable timetable is impossible due to a force majeure, both parties to the agreement shall have the right, without incurred liability, to terminate the agreement by notifying the other party in writing.

PAYMENT

Payment term begins from the date of the invoice. In the event that a payment is delayed, the buyer shall be liable to pay interest on overdue payments according to the current interest rates applied by the seller, as well as any costs resulting from the recovery of overdue payments.

WARRANTY

The seller provides a 24-month warranty for the quality of the materials and workmanship of all delivered goods. The warranty period begins on the date of purchase. In the event that material or workmanship defects are detected and the goods are sent, without delay or no later than by the end of the warranty period, back to the seller, the seller agrees to address the defect at their own discretion either by repairing the damaged goods or by delivering a new, defect-free goods, free of charge, to the buyer. The buyer is responsible for the costs resulting from delivering the goods to the seller for warranty repairs, while the seller is responsible for the costs resulting from returning the goods to the buyer. The warranty shall not cover damages resulting from accidents, lightning, floods or other natural events, normal wear and tear, inappropriate, negligent or unusual use of the goods, overloading, incorrect maintenance, or reconstruction, alteration and installation work which is not carried out by the seller (or their authorised representative. The buyer shall be responsible for selecting material of equipment susceptible to corrosion, unless other agreements are signed. In the event that the seller alters the structure of their equipment, they shall not be obligated to make similar changes to previously procured equipment. The validity of the warranty requires that the buyer has fulfilled their contractual obligations related to the delivery. The seller shall provide a new warranty for goods replaced or repaired under the original warranty. However, the new warranty shall only be valid until the expiration of the warranty period of the original goods. For any repairs not covered by the warranty shall be subject to a 3-month maintenance warranty covering the material and workmanship.

INDIRECT DAMAGES

The seller shall not be liable for any indirect damages incurred by the buyer as a result of delays or inadequacies related to the delivery. Furthermore, the seller shall not be liable for indirect damages resulting from a defective product in the event that the defect is caused by damages indicated in the warranty section as not covered by the warranty. Subject to the terms of the product liability insurance, the seller's insurance company shall reimburse any indirect material damages or physical injuries resulting from a defective product, provided that the defect could not be discovered at the factory under normal testing conditions.

RETURNS

The transaction is binding and irreversible, and the seller shall not be obligated to accept any product returns. In the event, however, that the seller as explicitly agreed to a return, any goods delivered under this agreement shall be received and reimbursed up to 70% of the retail price. Such goods can only be received and reimbursed in the event that they are returned in the original packing and condition.

NOTIFICATIONS

The sender is responsible for ensuring that notifications sent to the other party are delivered.

OWNERSHIP

The ownership of the goods is transferred to the buyer upon remittance of the entire purchase price.

DISAGREEMENTS

Any disagreements resulting from the agreements and their terms should be primarily resolved through bilateral negotiations. In the event that the disagreement cannot be resolved, the disagreement shall be resolved through arbitration in Finland according to current legislation. The arbitration court consists of one (1) member.

The factory and sales office



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We reserve the right to make changes and corrections in prices, products, and specifications without notice.