

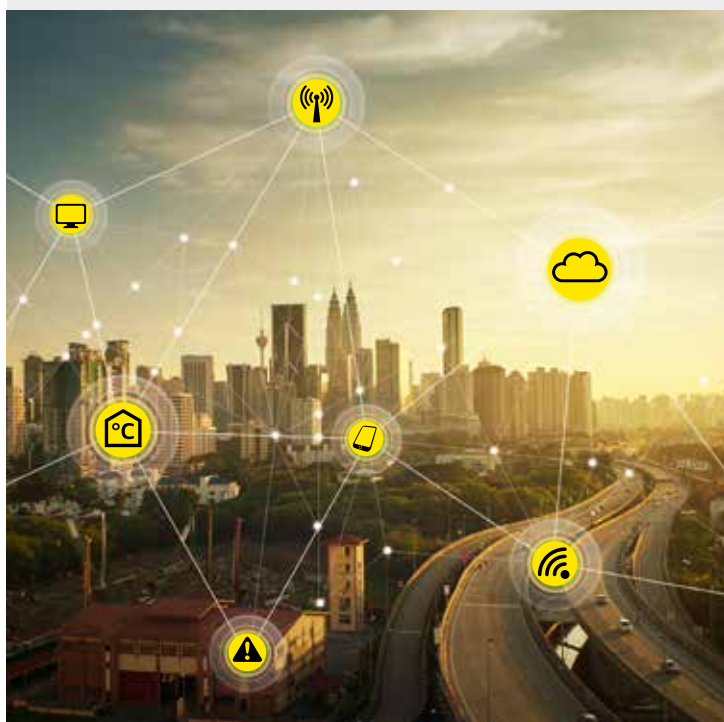
OUMAN

BUILDING AUTOMATION

Price list

2021

Valid from 1.10.2021



<https://ouman.fi>

Table of contents

Unit prices

Heating and air handling unit controllers	3
GSM modems	5
Casing packages	5
Freely programmable automation units	6
I/O Extension units.....	6
Building automation system topology	8
Ouman Ounet	10
FT-Screen touch screen panels	10
M-LINK interface converter	11
Ouman 4G-internet product	11
Channel adapter cards	11
Casing solutions.....	12
Temperature sensors and room units	13
Ouman wireless sensor system	15
Energy meter and transmitters	16
2-way valves	17
3-way valves	22
Connection sets	26
Valve adapters.....	27
Valve dimensioning table.....	28
Valves actuators, 3-point control	29
Valve actuators, 0-10 V control	31
Damper actuators.....	33
Other field devices.....	36
General Terms of Delivery and Warranty.....	38
Contact details	40

PRODUCT CATEGORIES:



Heating and air handling unit controllers

Price EUR
Vat 0%

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 delivered 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 OMA0559	Heating controller	B1	591
EH-800B OMA0558	Heating controller without Internet option	B1	501
SOV-ESBE2 OMA0266	Adapter for Esbe VRG and VRB valves	B1	29

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	353
---------------------------	--	----	-----

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	77
---------------------------	--------------------------------------	----	----

OPTIONAL EQUIPMENT

TMR OMA0011	Room sensor (NTC10)	A1	43
TMR/SP OMA0310	Room sensor with fine-tuning knob	A1	50
TMS-4M OMA0321	Surface sensor (NTC10), connection cable 4 m	A1	28
CO1A OMA0043	Thermostat, surface mounting, 20 ... 90 °C, differential range 7 °C	A2	67
GSMMOD11 OMA0598	OUMAN GSM/GPRS -modem for EH-800	C1	190

Heating and air handling unit controllers

Price EUR
Vat 0%

OUUMAN 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	969
RB-40 OMA0249	External relay unit in casing, 4 pcs changeover relays (24V, 250VAC/16A), IP66	A1	96

OUUMAN 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	1005
------------------------	--	----	------

OUUMAN 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 OMA0180	Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit)	A1	981
-----------------------	--	----	-----

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	109
------------------------	---------------------------------	----	-----

GSM modems

Price EUR
Vat 0%

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	190
GSMMOD11 OMA0598	OUMAN GSM/GPRS modem for EH-800, Ouflex M and Ouflex C controllers	C1	190
GSMMOD12 OMA0599	OUMAN GSM/GPRS modem for Ouman Plus and Ouman Ouflex	C1	208

ANT1 EXTERNAL ANTENNA

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



ANT1 OMA0035	External antenna for Ouman GSM-modeem	C1	37
------------------------	---------------------------------------	----	----

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	136
-----------------------	--	----	-----

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 OMA0190	Casing package 24 modules (two DIN rails)	C2	144
------------------------	---	----	-----

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	203
------------------------	---	----	-----

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 OMA0193	Casing package 36 modules (three DIN rails)	C2	190
------------------------	---	----	-----

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	278
------------------------	---	----	-----

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

K412 OMA0553	Casing package 48 modules (three DIN rails)	C2	260
------------------------	---	----	-----

Freely programmable automation units

Price EUR
Vat 0%

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.



Dimensions: width 214 mm (13M),
height 90 mm, depth 94 mm

Ouflex A I/O-points

- 16 pcs universal measurements (UI)
- 2 pcs digital inputs (DI)
- 6 pcs 0...10V analog outputs (AO)
- 2 pcs change-over contact relays (DO)
- 4 pcs normally open contact relays (DO)
- 4 pcs 24 VAC Triac-outputs (TR)

Data transfer connections

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

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 connection 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 OMA0518	Freely programmable automation unit	A1	1744
----------------------------	-------------------------------------	-----------	------

OPTIONS

GSMMOD12 OMA0599	OUMAN GSM/GPRS -modem for Ouflex.	C1	208
OUMAN LCD FRAME GREY OMA0519	Wall installation frame for Ouflex	C1	30
OUMAN LCD GREY OMA0528	Display for Ouflex	A1	122

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
- 1 PWM output (heating control)

Data transfer connections

- 2 pcs. RS-485 bus
- 2 pcs. RS-232 bus
- 1 USB device
- Ethernet with M-LINK



OUFLEX M BA OMA0496	Freely programmable automation unit	A1	887
OUFLEX M LCD KIT GREY OMA0527	Ouflex M LCD with cable and frame	A1	167

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.

Operating voltage

- 24 VAC, 50 Hz



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

FLEX COMBI 32 OMA0526	16 pcs universal inputs (UI) 6 pcs 0...10V analog outputs (AO)	2 pcs change-over contact relays (DO) 4 pcs normally open contact relays (DO) 4 pcs 24 VAC Triac-outputs (TR)	A1	684
FLEX COMBI 21 OMA0524	9 pcs universal inputs (UI) 2 pcs 0...10V analog outputs (AO)	2 pcs change-over contact relays (DO) 4 pcs normally open contact relays (DO) 4 pcs 24 VAC Triac-outputs (TR)	A1	448
FLEX UI 16 OMA0523	16 pcs universal inputs (UI)		A1	312

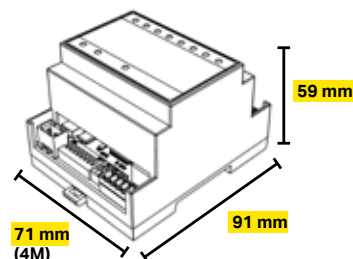


FLEX UI8 is a DIN-rail-attachable Modbus RTU input module which can be connected to RS-485 bus. It has 8 configurable universal inputs.

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)

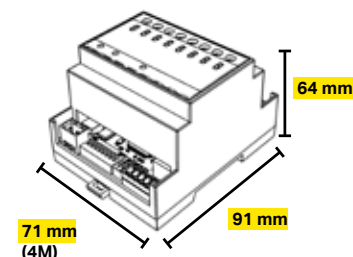
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



FLEX A08 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

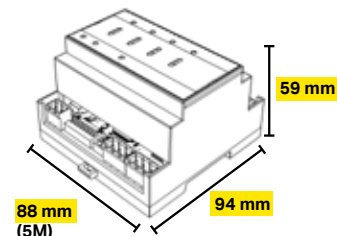
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



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 forced ON or OFF control (ON - AUTO- OFF).
- Change-over contact relay 230 VAC/ 4A or 24 VDC/4A
- Easy to install in electrical cabinet

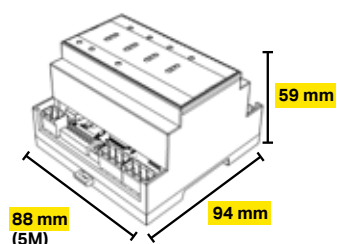
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



FLEX D04-TRS is a DIN-rail-attachable Modbus RTU triac module which can be connected to RS-485 bus. It has 4 AC triac switches.

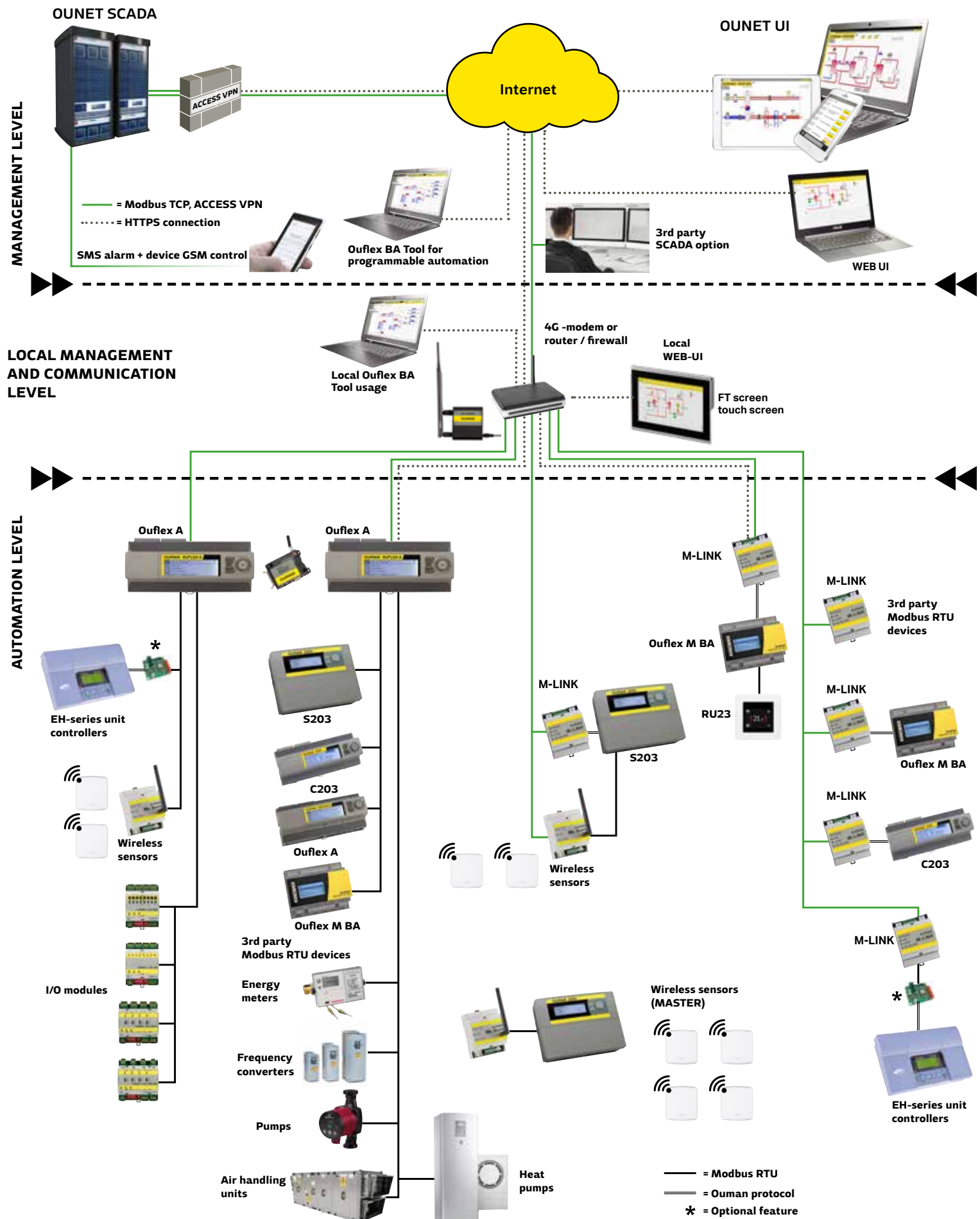
- Each triac control has 3 stage switch for selection between automatic control, forced ON or OFF (ON - AUTO - OFF).
- 24...230VAC, max 1A/output
- Potential-free AC switch
- DC controls require a supplementary relay in installation

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



FLEX UI8 OMAO471	Universal input module	A1	261
FLEX A08 OMAO472	Universal output module	A1	251
FLEX D04-R OMAO473	Universal relay module	A1	206
FLEX D04-TRS OMAO474	Universal triac module	A1	194

Building automation system topology



Ouman system components

MANAGEMENT LEVEL



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 service

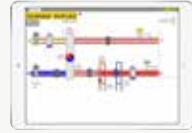


Ouflex BA Tool

- 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 users



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 available.
- 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

LOCAL MANAGEMENT AND COMMUNICATION LEVEL



4G-MOD1

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



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"

AUTOMATION LEVEL

Ouflex A



Programmable controller platforms

- Three device platforms available (A,C and M)
- Platform specific template available in Ouflex Tool library
- 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 through controller gateway
- Easy to connect new Modbus devices (TCP/IP and RTU)
- External display available for C & M platforms – A platform comes with detachable display



Ouflex M BA

Ouflex I/O modules

- These I/O modules can be used to expand controller IO 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
- AO8 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



S203



C203



OUMAN unit controllers

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

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
- Sensors are providing temperature, humidity and additional auxiliary measurement
- Sensors are powered with standard AA batteries
- Modbus TCP/IP and RTU communication
- Intelligent calculation of collected data in base station
- Automated average calculation of measurements e.g. for heating curve optimization



M-LINK



M-LINK – new model with more functions

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

3rd party Modbus RTU devices



Heat pumps



Energy meters



Pumps



Air handling units



Frequency converters

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, Chromium 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	1139
FT-SCREEN 12 OMB0518	12" capacitive touch screen	C2	1354
FT-SCREEN 15 OMB0519	15" capacitive touch screen	C2	1609
FT-SCREEN 18 OMB0520	18" capacitive touch screen	C2	1722
FT-SCREEN 10 FRAME OMA0640	Surface mounting frame for 10" touch screen	C2	27

M-LINK interface converter

Price EUR
Vat 0%

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	A1	619
--------------------------	--	-----------	-----

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 OMA0594	4G-modem	C1	281
---------------------------	----------	-----------	-----

ADDITIONAL PRODUCTS

ANT2 OMB0009	Omnidirectional 3G-antenna with 8 meter cable	C1	175
ANT3 OMB0010	Directional 3G-antenna 7 meter cable	C1	175
ANT-C-10M OMB0012	10 meter extension cable for GSM- and 3G-antenna	C1	49

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	165
MODBUS-200 OMA0003	Modbus adapter card for EH-200 controller	A1	165

M-BUS/MODBUS converters

MBUS-MODBUS-2 OMB0509	M-Bus/Modbus converter (max. 2 devices)	C2	172
MBUS-MODBUS-8 OMB0510	M-Bus/Modbus converter (max. 8 devices)	C2	246
MBUS-MODBUS-80 OMB0511	M-Bus/Modbus converter (max. 80 devices)	C2	488

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
- 4G 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 <small>OMA0540</small>	Remote monitoring solution for unit controllers	A1 1342
--	---	----------------

Temperature sensors and room units

Price EUR
Vat 0%

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	Pt1000	Ni1000LG
TMO OMA0015	Outdoor sensor	A1	30	32	37

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	57		
PTE-LUX/NTC20 OMB0505	Passive temperature and illuminance sensor	A1	57		
PTE-LUX/Pt1000 OMB0506	Passive temperature and illuminance sensor	A1	60		
PTE-LUX/Ni1000 OMB0507	Passive temperature and illuminance sensor	A1	62		
PTE-LUX/Ni1000LG OMB0508	Passive temperature and illuminance sensor	A1	62		

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.

TMR/SP is equipped with temperature measurements and fine-tuning knob. It can change the EH-105 and EH-800 equipment room temperature setpoint -5 ... 4 °C.



			NTC10	Pt1000	Ni1000LG
TMR OMA0011	Room sensor	A1	43	45	47
TMR/SP OMA0310	Huonelämpötila-anturi kaukoasetuspotentiometrillä	A1	50		

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.



			NTC10	Pt1000	Ni1000LG
TMS OMA0312	Surface sensor	A1	24	-	-
TMS-C/NTC10 OMA0497	Surface sensor with connector, NTC10	A1	23	-	-
TMS-2M OMA0016	Surface sensor, connection cable 2 m	A1	25	37	47
TMS-3M OMA0318	Surface sensor, connection cable 3 m	A1	26	-	-
TMS-4M OMA0321	Surface sensor, connection cable 4 m	A1	28	41	50

TMW-C CONNECTION CABLES

TMW-C KYTKENTÄ KAAPELI 2 M OMA0516	2m connection cable for temperature sensors with connector	A1	11		
TMW-C KYTKENTÄ KAAPELI 3 M OMA0626	3m connection cable for temperature sensors with connector	A1	15		

Temperature sensors

Price EUR
Vat 0%

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 sensor's thread nipple is made of brass. Sensors come with immersion tube of different lengths 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

			NTC10	Pt1000	Ni1000LG
TMW-50 OMA0012	Water sensor, 50 mm, thread R1/2"	A1	52	61	67
TMW-100 OMA0013	Water sensor, 100 mm, thread R1/2"	A1	53	62	68
TMW-210 OMA0340	Water sensor, 210 mm, thread R1/2"	A1	56	64	70
TMW-300 OMA0343	Water sensor, 300 mm (adjustable), thread R1/2"	A1	59	68	74



TMW-50-C/NTC10 OMA0499	Water sensor with connector, 50 mm, thread R1/2"	A1	41
TMW-100-C/NTC10 OMA0500	Water sensor with connector, 100 mm, thread R1/2"	A1	43
TMW-210-C/NTC10 OMA0501	Water sensor with connector, 210 mm, thread R1/2"	A1	45

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.



			NTC10	Pt1000	Ni1000LG
TMW-81ST OMA0352	Water sensor and protection pocket 80 mm, thread R1/2"	A1	79	89	96
TMW-121ST OMA0330	Water sensor and protection pocket 120 mm, thread R1/2"	A1	80	90	97
TMW-201ST OMA0337	Water sensor and protection pocket 200 mm, thread R1/2"	A1	84	95	100

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
TMI OMA0293	Ice frost sensor, R 1/4"	A1	53	61	67

TMD DUCT SENSOR

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



			NTC10	Pt1000	Ni1000LG
TMD OMA0014	Duct sensor	A1	41	50	56

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



PTL-10-V OMBO470	Water pressure sensor	A2	190
----------------------------	-----------------------	----	-----

Ouman wireless sensor system

Price EUR
Vat 0%

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

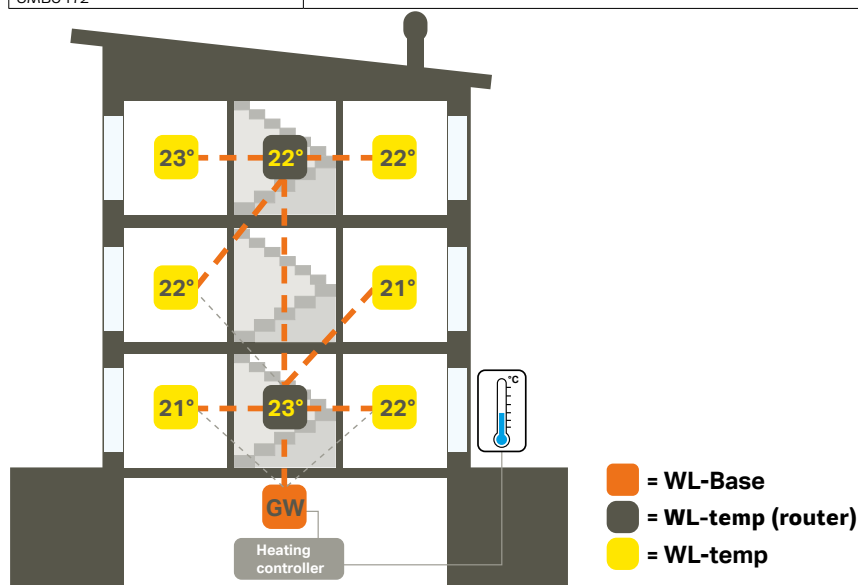


WL-TEMP-RH 2.1 WIRELESS TEMPERATURE AND HUMIDITY SENSOR

- 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 OMA0489	Gateway unit	A1	379
WL-TEMP-RH 2.1 OMA0579	Wireless temperature and humidity sensor	A1	94
WL-SOCKET-ROUTER 2.1 OMA0582	Fixed mounting router in staircase (on top of the present electric socket)	A1	198
WL-TEMP-RH-WHIP 2.1 OMA0583	Wireless temperature and humidity sensor with 1.8m whip sensor	A1	213
WL-TEMP-RH-CO2 2.1 OMA0584	Wireless temperature and humidity sensor with CO2 measuring. Needs outer power source.	A1	290
WL-TEMP-RH-VOC 2.1 OMA0585	Wireless temperature and humidity sensor with VOC measuring. Needs outer power source.	A1	280
WL-ROUTER POWER OMA0430	Power unit for temperature sensor 5 VDC (needed when operating as a router)	A1	23
WL-BASE-POWER OMA0448	Power unit for WL-Base, 24 VDC plug	C1	38
WL-ANT OMB0473	Antenna for WL-Base, 4m cable, magnetic fixing	C1	37
WL-BATTERY-AA-LIT OMB0472	Battery package for wireless temperature sensors. Includes 10 pcs. AA lithium		22



! no stock product

Energy meter and transmitters

Price EUR
Vat 0%

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 OMB0033	Differential pressure transmitter	A1	158
DPT/D OMB0035	Differential pressure transmitter with display	A1	191

PDI PRESSURE DIFFERENCE MANOMETER, IP 54

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



PDI OMB0298	Pressure difference manometer MM 200600	A2	34
-----------------------	---	----	----

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	25
PDS-600 OMB0301	Pressure difference switch, 40 - 600 Pa, PS600	A2	28

PRESSURE TRANSMITTER FOR WATER



MLH+KYTKENTÄKAAPELI OMAO618	Pressure transmitter for water, 0-10bar, 0-10V, Thread G1/4	A1	158
---------------------------------------	---	----	-----

! no stock product

2-way valves for district heating

Price EUR
Vat 0%

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:

*)

VD215-0.25 OMA0386	DN 15	Kv 0.25	External thread R 3/4", flush surface with seal	L15UK-1/2" or L15HI	A3	167
VD215-0.4 OMA0387	DN 15	Kv 0.4	External thread R 3/4", flush surface with seal	L15UK-1/2" or L15HI	A3	167
VD215-0.63 OMA0388	DN 15	Kv 0.63	External thread R 3/4", flush surface with seal	L15UK-1/2" or L15HI	A3	167
VD215-1.0 OMA0389	DN 15	Kv 1.0	External thread R 3/4", flush surface with seal	L15UK-1/2" or L15HI	A3	167
VD215-1.6 OMA0390	DN 15	Kv 1.6	External thread R 3/4", flush surface with seal	L15UK-1/2" or L15HI	A3	167
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	239
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	239
VD225-6.3 OMA0393	DN 25	Kv 6.3	External thread R 1 1/4", flush surface with seal	L25UK-1", L25SK, L25HI	A3	319
VD232-10 OMA0394	DN 32	Kv 10	External thread R 1 1/2", flush surface with seal	L25SK-1" or L32HI	A3	416

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...



*)

V5016A1010 HON258	DN 15	Kv 0,4	Flanged (length 130 mm)	A3	526
V5016A1028 HON259	DN 15	Kv 0,63	Flanged (length 130 mm)	A3	526
V5016A1036 HON260	DN 15	Kv 1,0	Flanged (length 130 mm)	A3	526
V5016A1044 HON261	DN 15	Kv 1,6	Flanged (length 130 mm)	A3	526
V5016A1051 HON262	DN 15	Kv 2,5	Flanged (length 130 mm)	A3	526
V5016A1069 HON263	DN 15	Kv 4,0	Flanged (length 130 mm)	A3	526
V5016A1077 HON264	DN 20	Kv 6,3	Flanged (length 150 mm)	A3	549
V5016A1085 HON265	DN 25	Kv 10	Flanged (length 160 mm)	A3	562
V5016A1093 HON266	DN 32	Kv 16	Flanged (length 180 mm)	A3	659
V5016A1101 HON267	DN 40	Kv 25	Flanged (length 200 mm)	A3	896
V5016A1119 HON268	DN 50	Kv 40	Flanged (length 230 mm)	A3	1136
V5016A1127 HON269	DN 65	Kv 63	Flanged (length 290 mm)	A3	1513
V5016A1135 HON270	DN 80	Kv 100	Flanged (length 310 mm)	A3	1791
V5016A1143 HON076	DN 100	Kv 160	Flanged (length 350 mm)	A3	1992
V5016A1150 HON077	DN 125	Kv 250	Flanged (length 400 mm)	A3	3041
V5016A1168 HON078	DN 150	Kv 360	Flanged (length 480 mm)	A3	3270

! no stock product

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

2-way valves for district heating

Price EUR
Vat 0%

V5025A... 2-WAY VALVES FOR DISTRICT HEATING

Cast iron, Pressure balanced district heating valve., PN25, T max 200 °C

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



*)

! V5025A1019 HON079	DN 15	Kv 0.4	Flanged (L=130 mm)	Stroke 20 mm	A3	615
! V5025A1027 HON080	DN 15	Kv 0.63	Flanged (L=130 mm)	Stroke 20 mm	A3	616
! V5025A1035 HON081	DN 15	Kv 1.0	Flanged (L=130 mm)	Stroke 20 mm	A3	568
! V5025A1043 HON082	DN 15	Kv 1.6	Flanged (L=130 mm)	Stroke 20 mm	A3	567
! V5025A1050 HON083	DN 15	Kv 2.5	Flanged (L=130 mm)	Stroke 20 mm	A3	584
! V5025A1068 HON084	DN 15	Kv 4.0	Flanged (L=130 mm)	Stroke 20 mm	A3	584
! V5025A1076 HON085	DN 20	Kv 6.3	Flanged (L=150 mm)	Stroke 20 mm	A3	608
! V5025A1084 HON086	DN 25	Kv 10	Flanged (L=160 mm)	Stroke 20 mm	A3	624
! V5025A1092 HON087	DN 32	Kv 16	Flanged (L=180 mm)	Stroke 20 mm	A3	769
! V5025A1100 HON089	DN 40	Kv 25	Flanged (L=200 mm)	Stroke 20 mm	A3	939
! V5025A1118 HON090	DN 50	Kv 40	Flanged (L=230 mm)	Stroke 20 mm	A3	1033
! V5025A1126 HON091	DN 65	Kv 63	Flanged (L=290 mm)	Stroke 20 mm	A3	1292
! V5025A1134 HON092	DN 80	Kv 100	Flanged (L=310 mm)	Stroke 20 mm	A3	1757
! V5025A1142 HON093	DN 100	Kv 160	Flanged (L=350 mm)	Stroke 38 mm	A3	2075
! V5025A1159 HON094	DN 125	Kv 250	Flanged (L=400 mm)	Stroke 38 mm	A3	3113
! V5025A1167 HON095	DN 150	Kv 360	Flanged (L=480 mm)	Stroke 38 mm	A3	3646

V5049A... 2-WAY VALVES FOR DISTRICT HEATING

Cast iron, Pressure balanced district heating valve., PN40, T max 220 °C

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



*)

! V5049A2027 HON108	DN 15	Kv 0.25	Flanged (L=130 mm)	Stroke 20 mm	A3	1363
! V5049A2035 HON109	DN 15	Kv 0.40	Flanged (L=130 mm)	Stroke 20 mm	A3	1414
! V5049A2043 HON110	DN 15	Kv 0.63	Flanged (L=130 mm)	Stroke 20 mm	A3	1344
! V5049A1425 HON096	DN 15	Kv 1.0	Flanged (L=130 mm)	Stroke 20 mm	A3	1362
! V5049A1433 HON097	DN 15	Kv 1.6	Flanged (L=130 mm)	Stroke 20 mm	A3	1330
! V5049A1441 HON098	DN 15	Kv 2.5	Flanged (L=130 mm)	Stroke 20 mm	A3	1345
! V5049A1458 HON099	DN 15	Kv 4.0	Flanged (L=130 mm)	Stroke 20 mm	A3	1275
! V5049A1508 HON100	DN 20	Kv 6.3	Flanged (L=150 mm)	Stroke 20 mm	A3	1421
! V5049A1565 HON101	DN 25	Kv 10	Flanged (L=160 mm)	Stroke 20 mm	A3	1413
! V5049A1573 HON102	DN 32	Kv 16	Flanged (L=180 mm)	Stroke 20 mm	A3	1603
! V5049A1581 HON103	DN 40	Kv 25	Flanged (L=200 mm)	Stroke 20 mm	A3	1740
! V5049A1599 HON104	DN 50	Kv 40	Flanged (L=230 mm)	Stroke 20 mm	A3	1884
! V5049A1607 HON105	DN 65	Kv 63	Flanged (L=290 mm)	Stroke 20 mm	A3	2306
! V5049A1615 HON106	DN 80	Kv 100	Flanged (L=310 mm)	Stroke 38 mm	A3	4177
! V5049A1623 HON107	DN 100	Kv 160	Flanged (L=350 mm)	Stroke 38 mm	A3	4555

! no stock product

2-way valves for heating and ventilation

Price EUR
Vat 0%

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 1/2"	L15UK3/8"		A3	45
VSMF-215-0.4 HON296	DN 15	Kv 0.4	External thread R 1/2"	L15UK3/8"		A3	45
VSMF-215-0.63 HON297	DN 15	Kv 0.63	External thread R 1/2"	L15UK3/8"		A3	45
VSMF-215-1.0 HON298	DN 15	Kv 1.0	External thread R 1/2"	L15UK3/8"		A3	46
VSMF-215-1.6 HON299	DN 15	Kv 1.6	External thread R 1/2"	L15UK3/8"		A3	46
VSMF-215-2.5 HON222	DN 15	Kv 2.5	External thread R 1/2"	L15UK3/8"		A3	47
VSMF-220-2.5 HON300	DN 20	Kv 2.5	External thread R 3/4"	L15UK-1/2", L15HI		A3	70
VSMF-220-2.5E HON225	DN 20	Kv 2.5	External thread R 3/4"	L15UK-1/2", L15HI		A3	68
VSMF-220-4.0 HON301	DN 20	Kv 4.0	External thread R 3/4"	L15UK-1/2", L15HI		A3	71
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	167
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	169

V5822A... 2-WAY VALVE

Brass, PN16, T max 120 °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	ACN-15C/S/T		A3	49
V5822A1014 HON131	DN 15	Kv 0.25	external thread R1/2", stroke 6,5 mm	ACN-15C/S/T		A3	49
V5822A1022 HON132	DN 15	Kv 0.40	external thread R1/2", stroke 6,5 mm	ACN-15C/S/T		A3	49
V5822A1030 HON133	DN 15	Kv 0.63	external thread R1/2", stroke 6,5 mm	ACN-15C/S/T		A3	49
V5822A1048 HON134	DN 15	Kv 1.0	external thread R1/2", stroke 6,5 mm	ACN-15C/S/T		A3	49
V5822A1055 HON135	DN 15	Kv 1.6	external thread R1/2", stroke 6,5 mm	ACN-15C/S/T		A3	49
V5822A1063 HON136	DN 20	Kv 2.5	external thread R3/4", stroke 6,5 mm	ACN-20C/S/T		A3	70
V5822A1071 HON137	DN 20	Kv 4.0	external thread R3/4", stroke 6,5 mm	ACN-20C/S/T		A3	70
V5822A4000 HON138	DN 15	Kv 1.6	external thread R1/2", stroke 2,5 mm, On/Off -control	ACN-15C/S/T		A3	28
V5822A4018 HON139	DN 20	Kv 2.5	external thread R3/4", stroke 2,5 mm, On/Off -control	ACN-20C/S/T		A3	49

! no stock product

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

2-way valves for heating and ventilation

Price EUR
Vat 0%

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	44
! V5832A1012 HON163	DN 15	Kv 0.25	external thread R1/2"	L15UK-3/8"	A3	44
! V5832A1020 HON164	DN 15	Kv 0.40	external thread R1/2"	L15UK-3/8"	A3	44
! V5832A1038 HON165	DN 15	Kv 0.63	external thread R1/2"	L15UK-3/8"	A3	44
! V5832A1046 HON166	DN 15	Kv 1.0	external thread R1/2"	L15UK-3/8"	A3	44
! V5832A1053 HON167	DN 15	Kv 1.6	external thread R1/2"	L15UK-3/8"	A3	44
! V5832A1061 HON168	DN 20	Kv 2.5	external thread R3/4"	L15UK-1/2", L15HI	A3	66
! V5832A1079 HON169	DN 20	Kv 4.0	external thread R3/4"	L15UK-1/2", L15HI	A3	66
! V5832A4008 HON170	DN 15	Kv 1.6	external thread R1/2" On/Off -control	L15UK-3/8"	A3	25
! V5832A4016 HON171	DN 20	Kv 2.5	external thread R3/4", On/Off -control	L15UK-1/2", L15HI	A3	44

V5328A... 2-WAY VALVE, FLANGED

Cast iron, PN16

For heating and ventilation



*)

! V5328A1138 HON123	DN 15	Kv 0,25	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	396
! V5328A1146 HON124	DN 15	Kv 0,4	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	398
! V5328A1153 HON125	DN 15	Kv 0,63	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	400
! V5328A1005 HON114	DN 15	Kv 1,0	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	402
! V5328A1013 HON115	DN 15	Kv 1,6	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	406
! V5328A1021 HON116	DN 15	Kv 2,5	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	410
! V5328A1039 HON117	DN 15	Kv 4,0	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	413
! V5328A1047 HON118	DN 20	Kv 4,0	Flanged (L=150mm)	Stroke 20 mm	Tmax 170°C	A3	415
! V5328A1054 HON119	DN 20	Kv 6,3	Flanged (L=150mm)	Stroke 20 mm	Tmax 170°C	A3	420
! V5328A1062 HON120	DN 25	Kv 10	Flanged (L=160mm)	Stroke 20 mm	Tmax 170°C	A3	430
! V5328A1070 HON121	DN 32	Kv 16	Flanged (L=180mm)	Stroke 20 mm	Tmax 170°C	A3	554
! V5328A1088 HON122	DN 40	Kv 25	Flanged (L=200mm)	Stroke 20 mm	Tmax 170°C	A3	677
! V5328A1096 HON271	DN 50	Kv 40	Flanged (L=230mm)	Stroke 20 mm	Tmax 170°C	A3	866
! V5328A1104 HON272	DN 65	Kv 63	Flanged (L=290mm)	Stroke 20 mm	Tmax 170°C	A3	1017
! V5328A1112 HON273	DN 80	Kv 100	Flanged (L=310mm)	Stroke 20 mm	Tmax 170°C	A3	1369
! V5328A1195 HON126	DN 100	Kv 160	Flanged (L=350mm)	Stroke 38 mm	Tmax 200°C	A3	1675
! V5328A1203 HON127	DN 125	Kv 250	Flanged (L=400mm)	Stroke 38 mm	Tmax 200°C	A3	2488
! V5328A1211 HON128	DN 150	Kv 360	Flanged (L=480mm)	Stroke 38 mm	Tmax 200°C	A3	3094

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

Price EUR
Vat 0%

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:

V5832B2075 HON286	DN 25	Kv 4.0	External thread R 1½", flush surface with seal	L25SK-1"	A3	173
V5832B2083 HON287	DN 25	Kv 6.3	External thread R 1½", flush surface with seal	L25SK-1"	A3	178
V5832B2091 HON288	DN 25	Kv 10	External thread R 1½", flush surface with seal	L25SK-1"	A3	178
V5832B2109 HON289	DN 32	Kv 16	External thread R 2", flush surface with seal	L32SK-1 1/4"	A3	235
V5832B2117 HON290	DN 40	Kv 25	External thread R 2¼", flush surface with seal	L40SK-1 1/2"	A3	314

V5011R 2-WAY VALVE

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



V5011R1000 HON241	DN 15	Kv 0.63	Internal thread, R 1/2"	A3	181
V5011R1018 HON242	DN 15	Kv 1.0	Internal thread, R 1/2"	A3	181
V5011R1026 HON243	DN 15	Kv 1,6	Internal thread, R 1/2"	A3	210
V5011R1034 HON244	DN 15	Kv 2,5	Internal thread, R 1/2"	A3	186
V5011R1042 HON245	DN 15	Kv 4	Internal thread, R 1/2"	A3	186
V5011R1059 HON246	DN 20	Kv 6,3	Internal thread, R 3/4"	A3	199
V5011R1067 HON247	DN 25	Kv 10	Internal thread, R 1"	A3	212
V5011R1075 HON248	DN 32	Kv 16	Internal thread, R 1 1/4"	A3	253
V5011R1083 HON249	DN 40	Kv 25	Internal thread, R 1 1/2"	A3	306
V5011R1091 HON250	DN 50	Kv 40	Internal thread, R 2"	A3	378

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.



R2015-1-S1 OMB0325	DN 15	Kv 1,0	Internal thread 1/2", replace the valve R210	A2	75
R2015-1P6-S1 OMB0324	DN 15	Kv 1,6	Internal thread 1/2", replace the valve R211	A2	75
R2015-2P5-S1 OMB0326	DN 15	Kv 2,5	Internal thread 1/2", replace the valve R212	A2	75
R2020-4-S2 OMB0328	DN 20	Kv 4,0	Internal thread 3/4", replace the valve R217	A2	86
R2020-6P3-S2 OMB0329	DN 20	Kv 6,3	Internal thread 3/4", replace the valve R218	A2	86
R2020-8P6-S2 OMB0330	DN 20	Kv 8,6	Internal thread 3/4", replace the valve R219	A2	86
R2025-10-S2 OMB0331	DN 25	Kv 10	Internal thread 1", replace the valve R223	A2	104
R2025-16-S2 OMB0332	DN 25	Kv 16	Internal thread 1", replace the valve R224	A2	104

! no stock product

3-way valves

Price EUR
Vat 0%

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.



CONNECTION SETS:

*)

VSMF-315-0.25 HON223	DN 15	Kv 0.25	External thread R 1/2", flush surface with seal	L15UK-3/8"	A3	61
VSMF-315-0.4 HON304	DN 15	Kv 0,4	External thread R 1/2", flush surface with seal	L15UK-3/8"	A3	60
VSMF-315-0.63 HON305	DN 15	Kv 0,63	External thread R 1/2", flush surface with seal	L15UK-3/8"	A3	63
VSMF-315-1.0 HON306	DN 15	Kv 1,0	External thread R 1/2", flush surface with seal	L15UK-3/8"	A3	67
VSMF-315-1.6 HON307	DN 15	Kv 1,6	External thread R 1/2", flush surface with seal	L15UK-3/8"	A3	63
VSMF-315-2.5 HON224	DN 15	Kv 2.5	External thread R 1/2", flush surface with seal	L15UK-3/8"	A3	68
VSMF-320-2.5 HON308	DN 20	Kv 2.5	External thread R 3/4", flush surface with seal	L15UK-1/2", L15HI	A3	72
VSMF-320-4.0 HON309	DN 20	Kv 4	External thread R 3/4", flush surface with seal	L15UK-1/2", L15HI	A3	73
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	A3	187
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	A3	188

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.



CONNECTION SETS:

*)

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"	A3	75
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	75
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"	A3	75
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	75
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	75
V5833A4007 HON180	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	51
V5833A3009 HON178	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	103
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	A3	67
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	A3	120
V5833A2076 HON177	DN 25	Kv 4.0	External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	L25SK-1", L32HI	A3	178
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	165
V5833A2092 HON292	DN 25	Kv 10	External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	25SK-1", L32HI	A3	165
V5833A2100 HON293	DN 32	Kv 16	External thread R2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	L32SK-1 1/4"	A3	204
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"	A3	274

! no stock product

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

3-way valves

Price EUR
Vat 0%

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...



*)

V5013R1032 HON251	DN 15	Kv 2.5	Internal thread, R 1/2"	A3	199
V5013R1040 HON252	DN 15	Kv 4	Internal thread, R 1/2"	A3	199
V5013R1057 HON253	DN 20	Kv 6.3	Internal thread, R 3/4"	A3	209
V5013R1065 HON254	DN 25	Kv 10	Internal thread, R 1"	A3	224
V5013R1073 HON255	DN 32	Kv 16	Internal thread, R 1 1/4"	A3	267
V5013R1081 HON256	DN 40	Kv 25	Internal thread, R 1 1/2"	A3	320
V5013R1099 HON257	DN 50	Kv 40	Internal thread, R 2"	A3	417

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:

*)

V5013E1063 HON069	DN 15	Kv 2.5	External thread, R 1/2"	L15UK-3/8"	A3	183
V5013E1071 HON070	DN 15	Kv 4	External thread, R 1/2"	L15UK-3/8"	A3	183
V5013E1089 HON071	DN 20	Kv 6.3	External thread, R 3/4"	L15UK-1/2", L15HI	A3	183
V5013E1097 HON072	DN 25	Kv 10	External thread, R 1"	L20UK-3/4", L20SK-1/2", L20HI	A3	189
V5013E1105 HON073	DN 32	Kv 16	External thread, R 1 1/4"	L25UK-1", L25SK-3/4", L25HI	A3	228
V5013E1113 HON074	DN 40	Kv 25	External thread, R 1 1/2"	L25SK-1", L32HI	A3	242
V5013E1121 HON075	DN 50	Kv 40	External thread, R 2"	L32SK-1 1/4"	A3	345

V5329... 3-WAY VALVE

Cast iron, 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...



*)

V5329A1004 HON312	DN 15	Kv 2.5	Flanged	A3	518
V5329A1012 HON129	DN 15	Kv 4.0	Flanged	A3	534
V5329A1020 HON313	DN 20	Kv 6.3	Flanged	A3	488
V5329A1038 HON274	DN 25	Kv 10	Flanged	A3	560
V5329A1046 HON275	DN 32	Kv 16	Flanged	A3	607
V5329A1053 HON276	DN 40	Kv 25	Flanged	A3	598
V5329A1061 HON277	DN 50	Kv 40	Flanged	A3	688
V5329A1079 HON278	DN 65	Kv 63	Flanged	A3	795
V5329A1087 HON279	DN 80	Kv 100	Flanged	A3	1203

! no stock product

3-way valves

Price EUR
Vat 0%

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	ACN-15C/S/T	A3	79
!	V5823A2011 HON141	DN 15	Kv 0.40	External thread, R 1/2", stroke 6,5 mm	ACN-15C/S/T	A3	79
!	V5823A2029 HON142	DN 15	Kv 0.63	External thread, R 1/2", stroke 6,5 mm	ACN-15C/S/T	A3	79
!	V5823A2037 HON143	DN 15	Kv 1.0	External thread, R 1/2", stroke 6,5 mm	ACN-15C/S/T	A3	79
!	V5823A2045 HON144	DN 15	Kv 1.6	External thread, R 1/2", stroke 6,5 mm	ACN-15C/S/T	A3	79
!	V5823A2052 HON145	DN 20	Kv 2.5	External thread, R 3/4", stroke 6,5 mm	ACN-20C/S/T	A3	92
!	V5823A2060 HON146	DN 20	Kv 4.0	External thread, R 3/4", stroke 6,5 mm	ACN-20C/S/T	A3	92
!	V5823A2151 HON147	DN 20	Kv 2.5	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa/ -kPa	ACN-20C/S/T	A3	112
!	V5823A2169 HON148	DN 20	Kv 4.0	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa/ -kPa	ACN-20C/S/T	A3	112
!	V5823A4009 HON149	DN 15	Kv 1.6	External thread, R 1/2", stroke 2,5 mm, On/Off -control	ACN-15C/S/T	A3	49
!	V5823A4017 HON150	DN 20	Kv 2.5	External thread, R 3/4", stroke 2,5 mm, On/Off -control	ACN-20C/S/T	A3	66

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	ACN-15C/S/T	A3	86
!	V5823C2017 HON152	DN 15	Kv A-AB 0.4 B-AB 0.25	External thread, R 1/2", stroke 6,5 mm	ACN-15C/S/T	A3	86
!	V5823C2025 HON153	DN 15	Kv A-AB 0.63 B-AB 0.4	External thread, R 1/2", stroke 6,5 mm	ACN-15C/S/T	A3	86
!	V5823C2033 HON154	DN 15	Kv A-AB 1.0 B-AB 0.63	External thread, R 1/2", stroke 6,5 mm	ACN-15C/S/T	A3	86
!	V5823C2041 HON155	DN 15	Kv A-AB 1.6 B-AB 1.0	External thread, R 1/2", stroke 6,5 mm	ACN-15C/S/T	A3	86
!	V5823C2058 HON156	DN 20	Kv A-AB 2.5 B-AB 1.6	External thread, R 3/4", stroke 6,5 mm	ACN-20C/S/T	A3	111
!	V5823C2066 HON157	DN 20	Kv A-AB 4.0 B-AB 2.5	External thread, R 3/4", stroke 6,5 mm	ACN-20C/S/T	A3	111
!	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	ACN-20C/S/T	A3	111
!	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	ACN-20C/S/T	A3	111
!	V5823C4005 HON160	DN 15	Kv 1.6	External thread, R 1/2", stroke 2,5 mm	ACN-15C/S/T	A3	55
!	V5823C4013 HON161	DN 20	Kv 2.5	External thread, R 3/4", stroke 2,5 mm	ACN-20C/S/T	A3	68

! no stock product

3-way valves

Price EUR
Vat 0%

V5050A... 3-WAY VALVE

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



*)

!	V5050A1090 HON111	DN 100	Kv 160	Flanged	A3	2236
!	V5050A1108 HON112	DN 125	Kv 250	Flanged	A3	2957
!	V5050A1116 HON113	DN 150	Kv 360	Flanged	A3	3234

R30... 3-WAY BALL VALVE

Nickel-plated brass, T max 100 ° C, PN 16
Applications: For heating and ventilation
Suitable for motors: EH-800 models + SOV BELIMO, HRC24-3, HRYD24-SR, HRYD24-3



*)

R3015-P63-S1 OMB0340	DN 15	Kv 0.63	Internal threaded connect, thread 1/2", replace the valve R309	A2	131
R3015-1-S1 OMB0338	DN 15	Kv 1.0	Internal threaded connect, thread 1/2", replace the valve R310	A2	131
R3015-1P6-S1 OMB0337	DN 15	Kv 1.6	Internal threaded connect, thread 1/2", replace the valve R311	A2	131
R3015-2P5-S1 OMB0339	DN 15	Kv 2.5	Internal threaded connect, thread 1/2", replace the valve R312	A2	131
R3020-4-S2 OMB0341	DN 20	Kv 4.0	Internal threaded connect, thread 3/4", replace the valve R317	A2	147
R3020-6P3-S2 OMB0342	DN 20	Kv 6.3	Internal threaded connect, thread 3/4", replace the valve R318	A2	147
R3025-10-S2 OMB0343	DN 25	Kv 10	Internal threaded connect, thread 1", replace the valve R323	A2	184
R3032-16-S3 OMB0344	DN 32	Kv 16	Internal threaded connect, thread 1 1/4", replace the valve R331	A2	260

VBG3... 3-WAY CONTROL BALL VALVE

Brass, PN25, Tmax 120 °C, angle of rotation 90°C, Suitable actuators MVN...

Applications: heating and ventilation

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

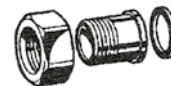


! no stock product

Connection sets

Price EUR
Vat 0%

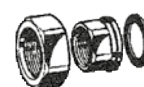
EXTERNAL THREADED CONNECTIONS



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 1/2"	A1	9
L15UK-1/2" OMB0120	DN 15	External threaded R 1/2", Internal thread to valve R 3/4"	A1	6
ACN-15T OMB0190	DN 15	External threaded R 3/8", tapered	A1	7
L20UK-3/4" OMB0121	DN 20	External threaded R 3/4", Internal thread to valve R 1"	A1	17
L25UK-1" OMB0122	DN 25	External threaded R 1", Internal thread to valve R 1 1/4"	A1	26
L40UK-1 1/2" OMB188	DN 40	External threaded R 1 1/2", Internal thread to valve R 2 1/4"	A1	56

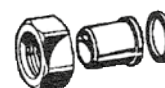
INTERNAL THREADED CONNECTIONS



All connection sets made of zinc covering durability brass.

L20SK-1/2"-1/2" OMA0198	DN 20	Internal thread R 1/2", Internal thread to valve R 1"	A1	18
L25SK-1" OMB0185	DN 25	Internal thread R 1", Internal thread to valve R 1 1/2"	A1	19
L25SK-3/4" OMA0200	DN 25	Internal thread R 1", Internal thread to valve R 1 1/4"	A1	18
L32SK-1 1/4" OMB0187	DN 32	Internal thread R 1 1/4", Internal thread to valve R 2"	A1	29
L40SK-1 1/2" OMB0189	DN 40	Internal thread R 1 1/2", Internal thread to valve R 2 1/4"	A1	37

WELDINGS



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

L15HI OMA0196	DN 15	Welding 1/2", Internal thread to valve R 3/4"	A1	10
L20HI OMA0197	DN 20	Welding 3/4", Internal thread to valve R 1"	A1	18
L25HI OMA0199	DN 25	Welding 1", Internal thread to valve R 1 1/4"	A1	20

SPARE INSERTS OF VD VALVES

VDP-0.25 OMA0395	VD-0,25 spare inserts	C2	69
VDP-0.4 OMA0396	VD-0,4 spare inserts	C2	69
VDP-0.63 OMA0397	VD-0,63 spare inserts	C2	69
VDP-1.0 OMA0398	VD-1,0 spare inserts	C2	69
VDP-1.6 OMA0399	VD-1,6 spare inserts	C2	69
VDP-2.5 OMA0401	VD-12,5 spare inserts	C2	69
VDP-4.0 OMA0402	VD-4,0 spare inserts	C2	79
VDP-6.3 OMA0403	VD-6,3 spare inserts	C2	97
VDP-10 OMA0400	VD-10 spare inserts	C2	120

STEM SEALS

BOKSIT HW10MM HON227	Set of stem seals for V5011/13 valves	C2	138
BOKSITIIV/SIEM OMB0025	Set of stem seals for Siemens 428488060: 10 mm stem	C2	70
BOKSITIIV/V OMB0026	Set of stem seals for V-valves OMB0026	C2	62

Valve adapters

Price EUR
Vat 0%

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	51
JATKE 220/215 OMB0084	Pair of flange VD220 / SV 215, total length 75 mm	A1	51
JATKE 220/220 OMB0085	Pair of flange VD220 / SV 220, total length 100 mm	A1	63
JATKE 225/220 OMB0086	Pair of flange VD225 / SV 220, total length 100 mm	A1	63
JATKE 225/225 OMB0087	Pair of flange VD225 / SV 225, total length 115 mm	A1	63
JATKE 232/225 OMB0088	Pair of flange VD232 / SV 225, total length 115 mm	A1	88



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	88
JATKE VD20-130 OMB0100	Pair of flange for Osby 2SB and Siemens VVF valves, total length 130 mm	A1	93
JATKE VD20-140 OMB0101	Pair of flange for Osby 2SB valves, total length 140 mm	A1	93
JATKE VD20-160 OMB0102	Pair of flange for Siemens VVF valves, total length 160 mm	A1	93
JATKE VD25-140 OMB0103	Pair of flange for Osby 2SB valves, total length 140 mm	A1	93
JATKE VD25-150 OMA0187	Pair of flange for Osby 2SB valves, total length 150 mm	A1	93
JATKE VD25-160 OMB0104	Pair of flange for Siemens VVF valves, total length 160 mm	A1	93
JATKE VD32-150 OMB0105	Pair of flange for Osby 2SB valves, total length 150 mm	A1	107
JATKE VD32-160 OMB0106	Pair of flange for Siemens VVF valves, total length 160 mm	A1	107

JATKE RV EXTENSION

JATKE PARI RV 3/4"SK-1"UK OMA0186	Extension 3/4" -> 1" 2 pcs + seals	A1	55
---	------------------------------------	----	----

AK... ADAPTERS FOR VALVES

AK15-15 OMB0003	Adapter set for VD15/Salina 15	A1	32
AK20-15 OMB0004	Adapter set for VD20/Salina 15	A1	46
AK20-25 OMB0005	Adapter set for VD20/Salina 25	A1	52
AK25-25 OMB0006	Adapter set for VD25/Salina 25	A1	52

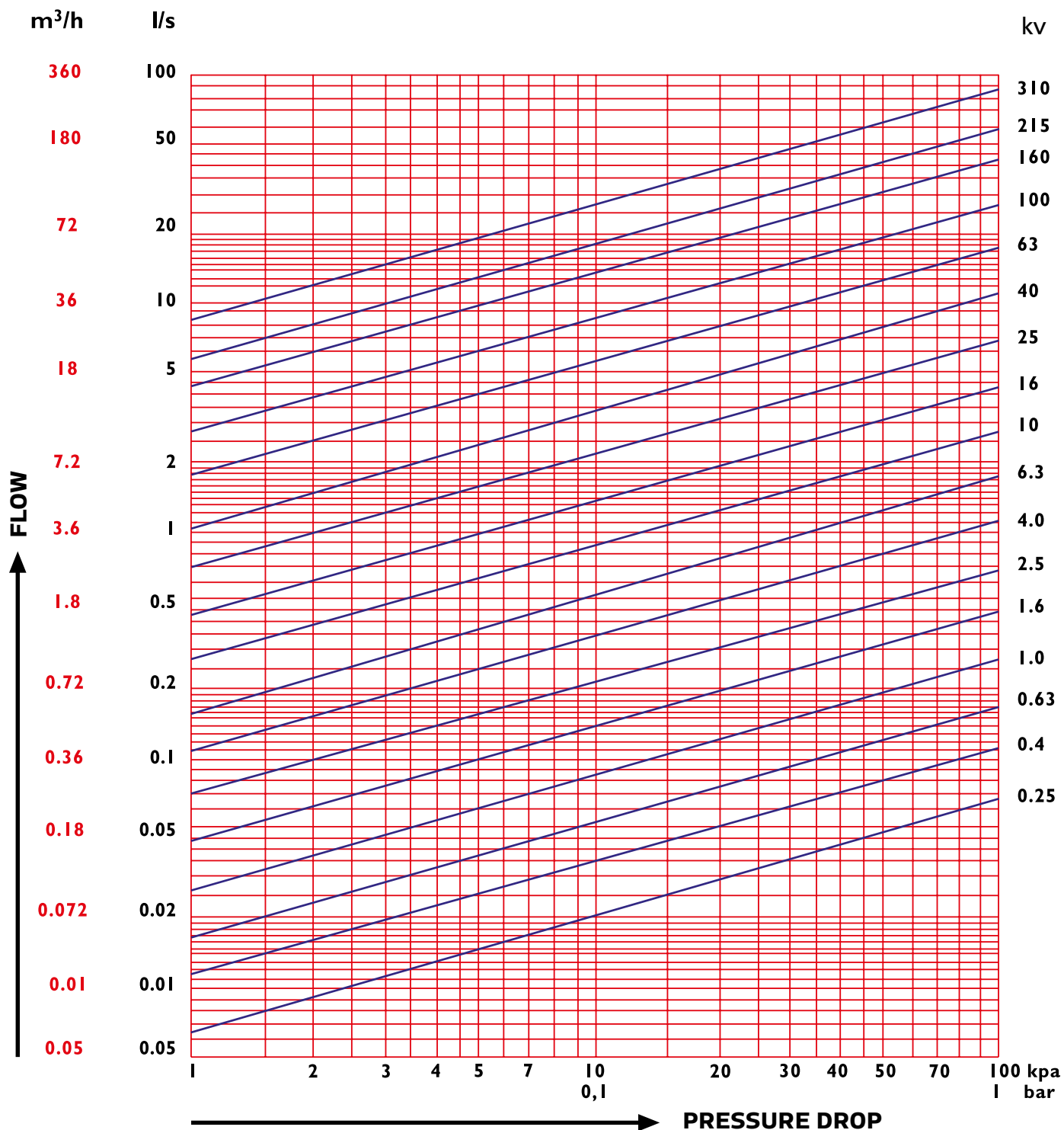
FITTINGS

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	55
SOV-TAC-HON OMA0270	Fittings for TAC V241-, V282-, V292-, V293-, V294-, V298-, V384-, V386-, V392- and V394 valves	A1	55
SW-SOV-HON OMA0276	Fittings between Satchwell-Honeywell	A1	33

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

Valve dimensioning table



Actuators for valves, 3-point control

Price EUR
Vat 0%

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



*)

M31C150 OMA0206	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43.	A3	145
M6410C2023 HON004	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43.	A3	120
M6410L2023 HON008	Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, Power 180 Nm. IP40.	A3	145
M6410C4037 HON007	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43. + 2 micro switch	A3	222
M6410L2031 HON009	Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, Power 300 Nm. IP40.	A3	191
M6410C4029 HON006	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43. + 2 micro switch	A3	165
M6410L4029 HON010	Valve actuator, 3-point control, 230 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43. + 2 micro switch	A3	172
M6410L4037 HON011	Valve actuator, 3-point control, 230 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43. + 2 micro switch	A3	237

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



*)

ML6420A3007 HON020	Valve actuator, 3-point control, 24 V, 50 Hz, 4 VA, speed 60s/20mm.	A3	485
ML6420A3023 HON022	Valve actuator, 3-point control, 24 V, 50 Hz, 6 VA, speed 30s/20mm.	A3	485
ML6420A3015 HON021	Valve actuator, 3-point control, 230 V, 50 Hz, 6,5 VA, speed 60s/20mm.	A3	550
ML6420A3031 HON023	Valve actuator, 3-point control, 230 V, 50 Hz, 6,5 VA, speed 30s/20mm.	A3	491

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.	A3	892
ML6421A3013 HON025	Valve actuator, 3-point control, 230 V, 50 Hz, 11 VA, speed 114s/20mm.	A3	668
ML6421B3004 HON026	Valve actuator, 3-point control, 24 V, 50 Hz, 13 VA, speed 210s/38mm.	A3	950
ML6421B3012 HON027	Valve actuator, 3-point control, 230 V, 50 Hz, 11 VA, speed 210s/38mm.	A3	483

M6422L1003 VALVE ACTUATOR, IP54

Rotary actuator for butterfly valve

- Power 40 Nm



*)

M6422L1003 HON012	Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, speed 150s/90°.	A3	1592
-----------------------------	--	-----------	-------------

! no stock product

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

Actuators for valves, 3-point control

Price EUR
Vat 0%

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.	A3	607
!	ML6425A3014 HON029	Valve actuator, 3-point control, 230 V, 50 Hz, 12 VA, speed 108s/20mm. 12s jousi. Spring return out.	A3	651
!	ML6425B3005 HON030	Valve actuator, 3-point control, 24 V, 50 Hz, 11 VA, speed 108s/20mm. 12s spring. Spring return in.	A3	568
!	ML6425B3021 HON031	Valve actuator, 3-point control, 230 V, 50 Hz, 12 VA, speed 108s/20mm. 12s spring. Spring return in.	A3	652

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).	A3	119
	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.	A3	116
!	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.	A3	124

MVN... VALVE ACTUATORS, IP40

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



*)

!	MVN613A1500 HON038	Valve actuator, 3-point control, 24 V, 50 Hz, 1,5 VA	A3	142
!	MVN663A1500 HON039	Valve actuator, 3-point control, 230 V, 50 Hz, 4,5 VA	A3	163

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



*)

	NRD230-3-SI OMB0168	Power: 500 N	Speed: 35 s	Stroke length: 5,5 mm	Consumption: 2,5 VA 230 VAC	A2	176
	NRD24-3-SI OMB0169	Power: 500 N	Speed: 35 s	Stroke length: 5,5 mm	Consumption: 1,5 VA 24 VAC	A2	176
	NRD24-3-SI OMB0165	Power: 500 N	Speed: 140 s	Stroke length: 5,5 mm	Consumption: 1,5 VA 24 VAC	A2	157
	NRD230-3-SI OMB0164	Power: 500 N	Speed: 140 s	Stroke length: 5,5 mm	Consumption: 2,5 VA 230 VAC	A2	157
	NRD230-3-HW OMA0219	Power: 500 N	Speed: 35 s	Stroke length: 6,5 mm	Consumption: 2,5 VA 230 VAC	A2	176
	NRD24-3-HW OMA0220	Power: 500 N	Speed: 35 s	Stroke length: 6,5 mm	Consumption: 1,5 VA 24 VAC	A2	176

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	166
!	HTC230-3 OMB0074	Power: 5 Nm	Speed: 70 s	Consumption: 2,5 VA 230 VAC	A2	166
	HTD24-3 OMB0075	Power: 5 Nm	Speed: 140 s	Consumption: 1,5 VA 24 VAC / DC	A2	162
	HTD24-3 OMB0078	Power: 5 Nm	Speed: 35 s	Consumption: 1,5 VA 24 VAC / DC	A2	162

! no stock product

0 - 10 V controlled actuators

Price EUR
Vat 0%

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.	A3	261
--------------------------	---	-----------	------------

M31A150 VALVE ACTUATOR, IP42

Suitable for valves with 6,5 mm stroke length.

Applications: For heating and ventilation.



*)

M31A150 OMA0205	Valve actuator, 0(2)...10 VDC controlled. 24 V, 50 Hz, 1,7 VA, Speed 150s/6,5 mm. Power 300 Nm. Connection cable 1,5 m.	A3	177
---------------------------	---	-----------	------------

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	205
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.	A3	229
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	231
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	297

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.	A3	520
ML7420A6017 HON237	Valve actuator, 0(2)...10 VDC controlled. 24 V, 50 Hz, 7 VA, speed 30s/20mm. Analog output of 2-10 VDC.	A3	517

ML7421... VALVE ACTUATORS, IP54

Applications: For heating

Power 1800 Nm



*)

ML7421A3004 HON034	Valve actuator, 0(2)...10 VDC controlled. , 24 V, 50 Hz, 14 VA, speed 114s/20mm. Analog output of 2-10 VDC.	A3	804
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	791

! no stock product

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

0 - 10 V controlled actuators

Price EUR
Vat 0%

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.	A3	906
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.	A3	577

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	205
------------------------------	---	-----------	------------

HTC24-SR VALVE ACTUATOR

Connection cable 1 m. The control voltage 0 (2) -10 V. Suitable with WNR-adaptor for R-series ball valves and with MS-NRE6-adaptor 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	199
HTD24-SR OMB0076	Power: 5 Nm	Speed: 140 s		Consumption: 3 VA 24 VAC / DC	A2	199
HTYD24-SR OMB0079	Power: 5 Nm	Speed: 35 s		Consumption: 3 VA 24 VAC / DC	A2	215

NR... VALVE ACTUATOR

Applications: For heating, domestic hot water and ventilation



*)

NRD24-SR-SI OMB0170	Power: 500 N	Speed: 35 s	Stroke length 5,5 mm	Consumption: 3 VA 24 VAC / DC	A2	256
NRD24-SR-HW OMA0221	Power: 500 N	Speed: 35 s	Stroke length 6,5 mm	Consumption: 3 VA 24 VAC / DC	A2	256

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	23

! no stock product

Damper actuators

Price EUR
Vat 0%

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 HON228	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.	A3	163
N05010-SW2 HON041	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.	A3	188
N05230-2POS HON042	Damper actuator, 2-point control, 230 VAC, 50 Hz, 22 VA, speed 110s. Power 5 Nm.	A3	142
N0524 HON314	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 5 Nm.	A3	118
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.	A3	192
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.	A3	185
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.	A3	266
N10230-2POS HON045	Damper actuator, 2-point control, 230 VAC, 50 Hz, 22 VA, speed 140s. Power 10 Nm.	A3	174
N1024 HON316	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 10 Nm.	A3	199
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.	A3	218

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.	A3	287
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.	A3	356
N20230 HON048	Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 8 VA, speed 110s.	A3	260
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.	A3	269
N2024 HON318	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 6 VA, speed 110s. Voima 20 Nm.	A3	274
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.	A3	284

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.	A3	356
N34230 HON052	Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 13 VA, speed 110s.	A3	321
N3424 HON053	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 9 VA, speed 110s.	A3	317

! no stock product

Damper actuators

Price EUR
Vat 0%

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	274
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	250
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	256
S0324-2POS HON056	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 7 VA, speed 45s. Power 3 Nm.	A3	189
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	238
S0524-2POS HON321	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 8 VA, speed 45s. Power 5 Nm.	A3	211
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.	A3	259
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.	A3	253
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.	A3	271
S05230-2POS HON060	Damper actuator, 2-point control, 230 VAC, 50 Hz, 14 VA, speed 45s. Power 5 Nm.	A3	183
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	278

S10... ja S20... 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	304
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.	A3	391
S1024-2POS HON324	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 30 VA, speed 45s. Power 10 Nm.	A3	245
S1024-2POS-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.	A3	333
S10230-2POS HON323	Damper actuator, 2-point control, 230 VAC, 50 Hz, 45 VA, speed 45s. Power 10 Nm.	A3	287
S10230-2POS-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.	A3	425
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.	A3	344
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.	A3	431
S2024-2POS HON327	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 45 VA, speed 45s. Power 20 Nm.	A3	298
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.	A3	363
S20230-2POS HON326	Damper actuator, 2-point control, 230 VAC, 50 Hz, 60 VA, speed 45s. Power 20 Nm.	A3	333
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.	A3	425

! no stock product

Damper actuators

Price EUR
Vat 0%

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	165
!	NM230A OMB0157	3-point control / open-closed	Power: 10 Nm	Consumption: 6 VA 230 VAC	A2	171
!	NM24A-SR OMB0159	2-10 V-control	Power: 10 Nm	Consumption: 4 VA 24 VAC / DC	A2	237

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	190
!	SM230A OMB0384	3-point control / open-closed	Power: 20 Nm	Consumption: 6 VA 230 VAC	A2	194
!	SM24A-SR OMB0386	2-10 V-control	Power: 20 Nm	Consumption: 4 VA 24 VAC / DC	A2	269

NF... DAMPER ACTUATOR

- 10 Nm
- For 2 m2 dampers
- 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	269
	NF24A-SR OMB0156	Control 2...10 V	Power: 10 Nm	Consumption: 5,5 VA 24 VAC / DC	A2	320

SF... DAMPER ACTUATOR, IP 54

- 15 Nm
- For 4 m2 dampers
- 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	328
	SFA OMB0376	Open-closed	Power: 20 Nm	Consumption: 18 VA 24-240 VAC/ 24-125 VDC	A2	378
	SF24A-SR OMB0378	2-10 V-control	Power: 20 Nm	Consumption: 7 VA 24 VAC / DC	A2	379

! no stock product

*) We reserve the right to change the prices according to Belimo

Other field devices

Price EUR
Vat 0%

C01A THERMOSTAT



C01A OMA0043	Thermostat, surface mounting 20...90 °C, differential range 7 °C	A2	67
------------------------	--	-----------	-----------

JVA24 FROST PROTECTION THERMOSTAT

JVA 24 is security component, which monitors and adjusts AHU's water radiator return temperature if needed. It is designed to prevent freezing of water radiator. Suitable sensors Ouman TMI Pt 1000 and Ni 1000.



JVA24 OMB0107	Anticipating frost protection thermostat	A2	148
-------------------------	--	-----------	------------

EHC VOLTAGE DIVIDER

- Operating voltage 24 VAC
- Input 0-10 VDC
- Output 0-10 V / 10-0 V



EHC OMA0148	Voltage divider	A1	79
-----------------------	-----------------	-----------	-----------

EHR VOLTAGE-CONTROLLED RELAY, IP 55

- Operating voltage 24 VAC
- Input 0 - 10 V
- 2 pcs output, exchange contact 8 (1) A / 230 VAC



EHR OMA0154	Voltage-controlled relay	A1	85
-----------------------	--------------------------	-----------	-----------

TI DUCT THERMOMETER Ø 100 MM

- Length 200 mm
- Temperature range -40 °C ... +60 °C



TI OMB0399	Duct thermometer	A2	22
----------------------	------------------	-----------	-----------

Other field devices

Price EUR
Vat 0%

ETT6 INDULGE BUTTON

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



ETT6 OMB0516	Indulge button	A2	84
------------------------	----------------	-----------	-----------

*)

PWR POWER UNITS

- Four different outputs power source.



PWR 10 OMB0489	Power unit 24 VAC / 10 VA, width 35,5 mm (2M)	C2	23
PWR 24 OMB0488	Power unit 24 VAC / 24 VA, width 54 mm (3M)	C2	25
PWR 40 OMB0486	Power unit 24 VAC / 40 VA, width 54 mm (3M)	C2	35
PWR 63 OMB0487	Power unit 24 VAC / 63 VA, width 106 mm (6M)	C2	51
PWR 24V/1A OMB0522	Power unit 24VDC/1A, width 35 mm (2M)	C2	25

VAK-POWER UNITS



PWR130 OMB0425	Protective voltage transformer with thermal prot. 230VAC / 24 VAC, 130 VA. DIN-rail mounting W90,L84,H110	C2	42
PWR180 OMB0426	Protective voltage transformer with thermal prot. 230VAC / 24 VAC, 180 VA. W105,L89,H115	C2	57
PWR250 OMB0427	Protective voltage transformer with thermal prot. 230VAC / 24 VAC, 250 VA. W130, L115, H119	C2	72

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 event 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.

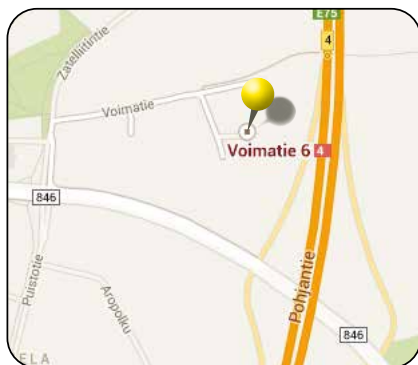
OWNERSHIP

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

DISAGREEMENTS

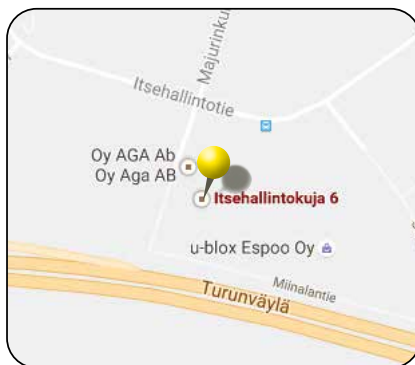
Any disagreements resulting from the agreements and their terms should be primarily resolved through bilateral negotiations. In the event that the disagreement cannot be resolved, the disagreement shall be resolved through arbitration in Finland according to current legislation. The arbitration court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

The factory and sales office



Voimatie 6 A, 90440 KEMPELE
Tel. +358 424 840 1

Southern Finland sales office



Itsehallintokuja 6, 02600 ESPOO

General web addresses

www.ouman.fi

sales@ouman.fi

Export

KARI HEIKKILÄ

Export Manager
Building Automation
Tel. +358 40 840 2312
kari.heikkila@ouman.fi



JILSON UKKAN

Technical Support Specialist
Building Automation
Tel. +372 5391 2558
jilson.ukkan@ouman.ee



ALEKSANDER LIIN

Area Sales Manager - Baltics
Building Automation
Tel. +372 5349 4605
aleksander.liin@ouman.ee



Sweden

ROBERT BAGGE

Account Manager
Building Automation
Tel. +46 31 939 174
robert.bagge@ouman.se



J MARTIN GRÄNNSJÖ

Senior Technician
Tel. +46 31 939 176
jmartin.grannsjö@ouman.se



Russia

ul. Krasnogo Kursanta 25 lit. H,
tso 407, 197110,
ST. PETERSBURG, Russia
Tel. +7 812 385 2099



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