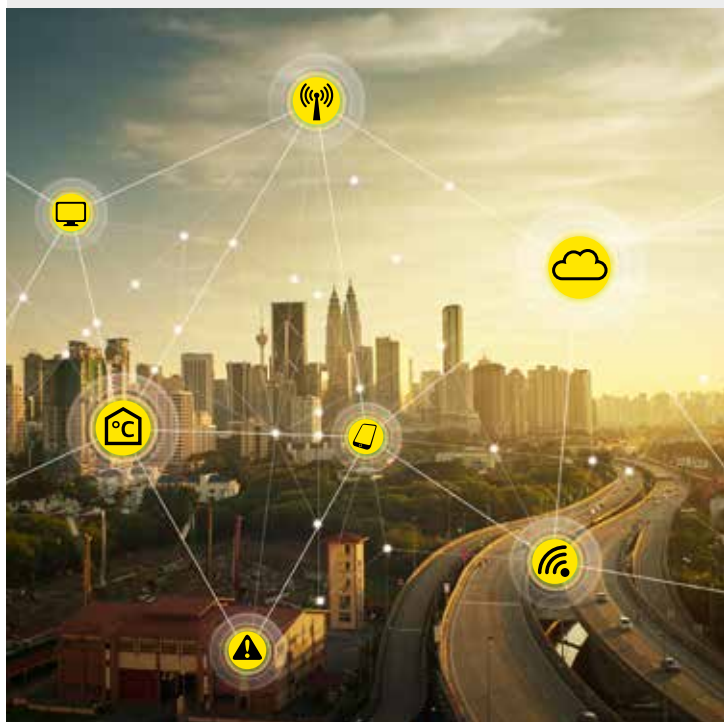


OUMAN

BUILDING AUTOMATION

Price list

2020



Saving energy
Creating comfort

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
M-LINK interface converter.....	11
Ouman 3G-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	Heating controller	B1	530
EH-800B	Heating controller without Internet option	B1	450
SOV-ESBE2	Adapter for Esbe VRG and VRB valves	B1	27

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	Expansion package for the EH-800 controllers	B1	316
----------------	--	-----------	------------

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	External unit for EH-800 and EH-800B	B1	69
----------------	--------------------------------------	-----------	-----------

OPTIONAL EQUIPMENT

TMR	Room sensor (NTC10)	A1	41
TMR/SP	Room sensor with fine-tuning knob	A1	48
TMS-4M	Surface sensor (NTC10), connection cable 4 m	A1	27
CO1A	Thermostat, surface mounting, 20 ... 90 °C, differential range 7 °C	A2	60
GSMMOD11	OUMAN GSM/GPRS -modem for EH-800	C1	176

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	Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit)	A1	870
RB-40	External relay unit in casing, 4 pcs changeover relays (24V, 250VAC/16A), IP66	A1	92

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	Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit)	A1	902
-------------	--	-----------	------------

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	Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit)	A1	881
------------	--	-----------	------------

EH-200 SERIES HEATING AND DOMESTIC HOT WATER CONTROLLERS

OUUMAN EH-200 is a heating controller whose versatility, intelligence and clarity have made it the favourite controller for water circulation heating systems. From the beginning, user friendliness has been one factor in making Ouman EH-200 a success; it has an informative display and a clear menu structure. EH-200-series controllers can be used by browser via EH-net server (an accessory). EH-201/L also have a GSM control feature (GSM modem as an accessory).



EH-201/L	1-circuit heating controller	A1	542
EH-201/V	1-circuit domestic hot water controller	A1	542

EH-105 AIR HANDLING UNIT CONTROLLER

Ouman EH-105 is an intelligent air handling unit controller that is suitable for all kinds of applications. The controller's diverse and innovative control solutions are as easy to use as the other Ouman controllers that have a reputation for user friendliness. An informative display with built-in help and intelligent solutions makes the EH-105 easy to install and commission and make changes during use. The controller can be used locally, by browser via EH-net server (an accessory) and GSM feature needs a GSM modem (an accessory).

- 5 control sequences
- Yearly clock
- Bus connection
- Controller configuration by PC
- Versatile alarm functions
- Built-in AC adapter



EH-105	Air conditioning controller	A1	817
---------------	-----------------------------	-----------	------------

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	OUMAN GSM/GPRS modem for EH-105 and EH-200 series controllers	C1	176
GSMMOD11	OUMAN GSM/GPRS modem for EH-800, Ouflex M and Ouflex C controllers	C1	176
GSMMOD12	OUMAN GSM/GPRS modem for Ouman Plus and Ouman Ouflex	C1	192

ANT1 EXTERNAL ANTENNA

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



ANT1	External antenna for Ouman GSM-modeem	C1	35
-------------	---------------------------------------	-----------	-----------

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	Casing package 18 modules (one DIN rail)	C2	126
-------------	--	-----------	------------

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	133
-------------	---	-----------	------------

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	Casing package 36 modules (two DIN rails)	C2	188
-------------	---	-----------	------------

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)	C2	176
-------------	---	-----------	------------

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	Casing package 54 modules (three DIN rails)	C2	257
-------------	---	-----------	------------

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	Casing package 48 modules (three DIN rails)	C2	233
-------------	---	-----------	------------

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 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	Freely programmable automation unit	A1	1565
-----------------	-------------------------------------	-----------	-------------

OPTIONS

GSMMOD12	OUMAN GSM/GPRS -modem for Ouflex.	C1	192
OUFLEX LCD FRAME GREY	Wall installation frame for Ouflex	C1	27
OUMAN LCD GREY	Display for Ouflex	A1	110

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	Freely programmable automation unit	A1	796
OUFLEX M LCD KIT GREY	Ouflex M LCD with cable and frame	A1	150
OUFLEX LCD FRAME GREY	Wall installation frame for Ouflex	C1	27
LCD CABLE M	RJ-12 - RJ-45 display cable	A1	22

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	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	614
FLEX COMBI 21	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	402
FLEX UI 16	16 pcs universal inputs (UI)		A1	280

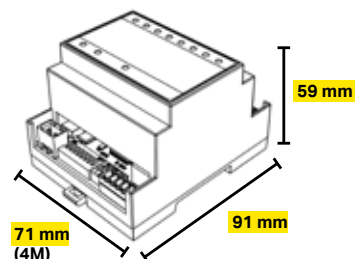


FLEX UI8 is a DIN-rail-attachable Modbus RTU input module which can be connected to RS-485 bus. It has 8 configurable universal inputs.

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 4-3760, Pt 1000
- Potential free digital contact
- Potential free pulse counter (min 30ms)

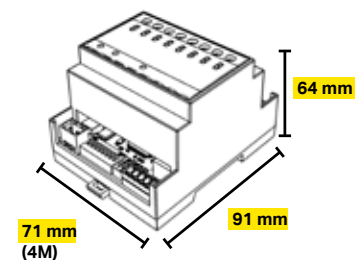
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



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

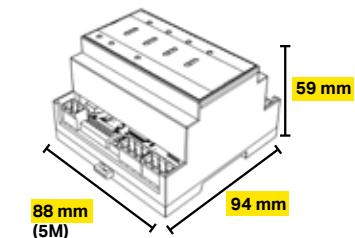
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



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

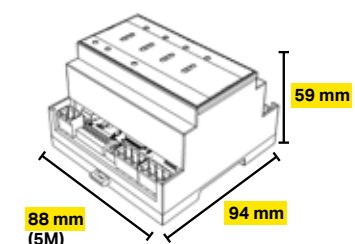
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



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.

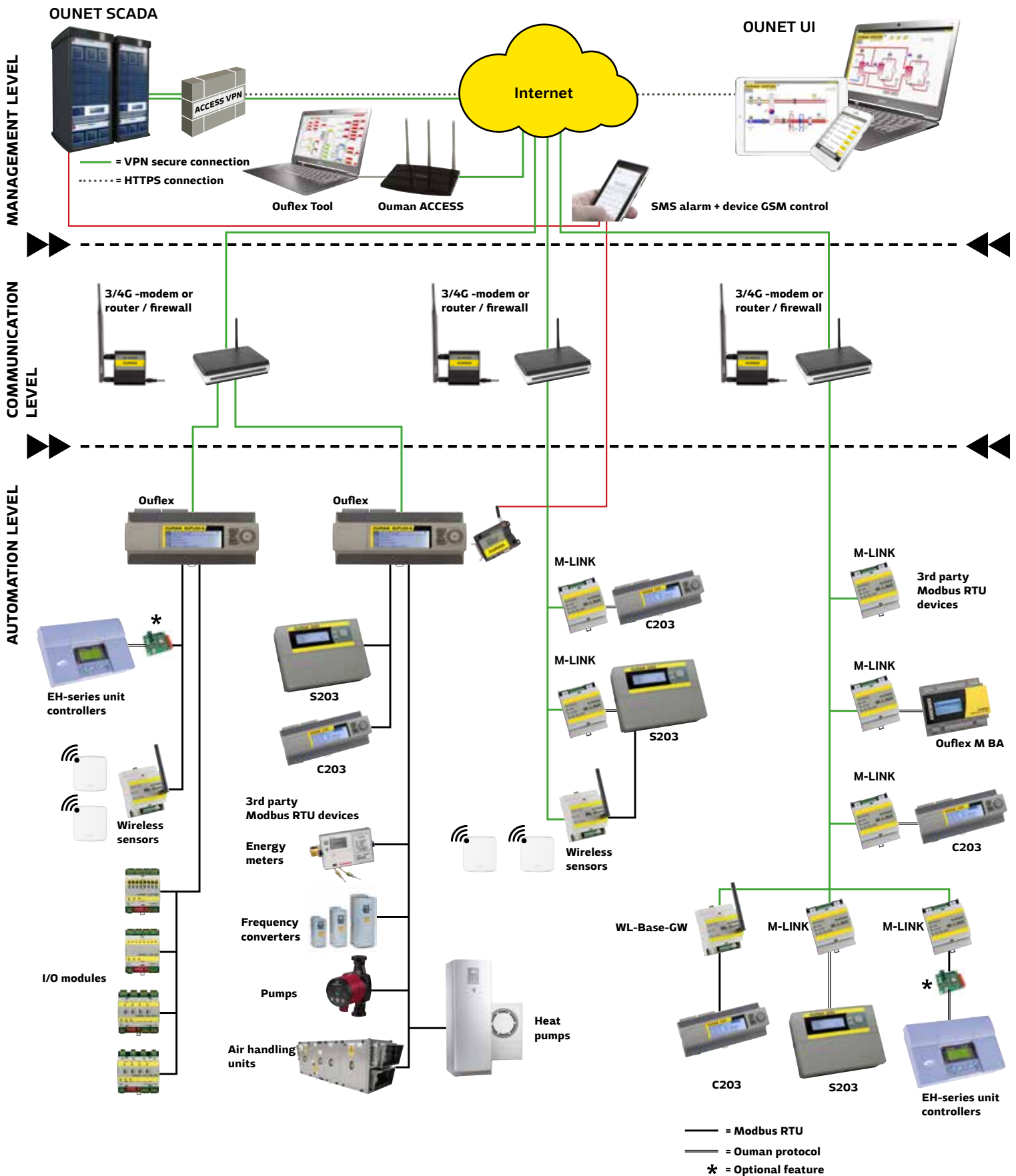
- Each triac control has 3 stage switch for selection between automatic control, forced ON or OFF (ON - AUTO - OFF).
- 24...230VAC, max 1A/output
- Potential-free AC switch
- DC controls require a supplementary relay in installation

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



FLEX UI8	Universal input module	A1	235
FLEX A08	Universal output module	A1	235
FLEX D04-R	Universal relay module	A1	185
FLEX D04-TRS	Universal triac module	A1	175

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 Tool



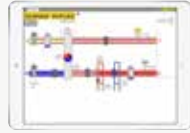
- Uses secure VPN connection to devices in the field
- Remote plug & play connection to devices
- Upload/download of applications
- Online process monitoring
- Automatic updates
- Free trial for 14 days
- Software license available on demand for certified users

OUNET 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



OUNET browser UI (HTML5)



OUNET in mobile or tablet (HTML5)



COMMUNICATION LEVEL



3G-MOD3

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

Ouman Access device

- Built-in OUMAN Access functionality
- Router can connect up to 15 OUMAN automation devices to Access service.
- ACCESS 2.4 product enables connection to devices in the field which have Access connection.
- Enables download and upload of applications to OUFLEX devices



2G GSM SMS Modem

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

AUTOMATION LEVEL

Ouflex



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 trough 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

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



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
- 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



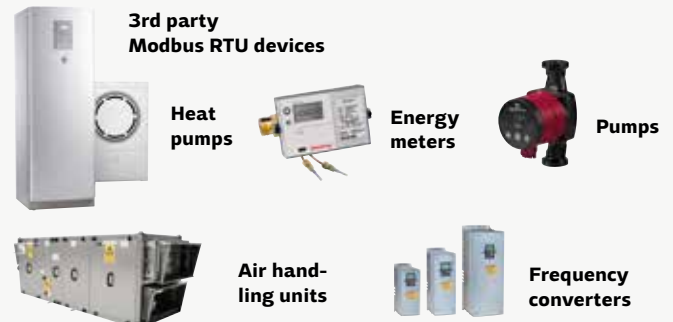
M-LINK



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



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 Ounet

Price EUR
Vat 0%

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	180/year/target/1500 points
--------------	---	------------------------------------



Technical details

Languages:	Finnish, English, Swedish, Estonian
Technology:	HTML5
Browsers:	Internet Explorer/Edge, Chrome, Firefox, Safari
Alarm forwarding: Address:	SMS and email 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

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 3G-MOD4 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	Interface converter with ACCESS-function	C1	578
---------------	--	-----------	------------

Ouman 3G-internet product

WIRELESS 3G-COMMUNICATION

3G-MOD5 is a wireless connection to Access -devices or for their verification. You can buy the subscription from your preferred operator.

3G-MOD5	3G modem	C1	212
----------------	----------	-----------	------------

3G ADDITIONAL PRODUCTS

ANT2	Omnidirectional 3G-antena with 8 meter cable	C1	162
ANT3	Directional 3G-antenna 7 meter cable	C1	162
ANT-C-10M	10 meter extension cable for GSM- and 3G-antenna	C1	45

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	Modbus adapter card for EH-105 controller	A1	148
MODBUS-200	Modbus adapter card for EH-200 controller	A1	148

M-BUS/MODBUS converters

MBUS-MODBUS-2	M-Bus/Modbus converter (max. 2 devices)	C1	159
MBUS-MODBUS-8	M-Bus/Modbus converter (max. 8 devices)	C1	228
MBUS-MODBUS-80	M-Bus/Modbus converter (max. 80 devices)	C1	451

Casing solutions

Price EUR
Vat 0%

LM1-HC 3G Remote monitoring solution for unit controllers (Ouman C203, S203, H23 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 180€/year not included
- 3G-L3 subscription 12€/kk not included

LM1-LH GSM

Automation solution for heat distribution center with SMS connection

A1 1290

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
Ni100LG: For Siemens controllers

		NTC10	Pt1000	Ni100LG
TMO	Outdoor sensor	A1	29	31

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	Passive temperature and illuminance sensor	A1	55
PTE-LUX/NTC20	Passive temperature and illuminance sensor	A1	55
PTE-LUX/Pt1000	Passive temperature and illuminance sensor	A1	58
PTE-LUX/Ni1000	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.

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	Ni100LG
TMR	Room sensor	A1	41	43
TMRSP	Room sensor with fine-tuning knob	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.



		NTC10	Pt1000	Ni100LG
TMS	Surface sensor	A1	23	-
TMS-C/NTC10	Surface sensor with connector, NTC10	A1	21	-
TMS-2M	Surface sensor, connection cable 2 m	A1	24	36
TMS-3M	Surface sensor, connection cable 3 m	A1	25	-
TMS-4M	Surface sensor, connection cable 4 m	A1	27	39

TMW-C CONNECTION CABLES

TMW-C KYTKENTÄ KAAPPELI 2 M	2m connection cable for temperature sensors with connector	A1	11
TMW-C KYTKENTÄ KAAPPELI 3 M	3m connection cable for temperature sensors with connector	A1	22

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 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
Ni100LG: For Siemens controllers

		NTC10	Pt1000	Ni100LG
TMW-50	Water sensor, 50 mm, thread R1/2"	A1	50	59
TMW-100	Water sensor, 100 mm, thread R1/2"	A1	51	60
TMW-210	Water sensor, 210 mm, thread R1/2"	A1	54	62
TMW-300	Water sensor, 300 mm (adjustable), thread R1/2"	A1	57	65

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



		NTC10	Pt1000	Ni100LG
TMW-81ST	Water sensor and protection pocket 80 mm, thread R1/2"	A1	76	86
TMW-121ST	Water sensor and protection pocket 120 mm, thread R1/2"	A1	77	87
TMW-201ST	Water sensor and protection pocket 200 mm, thread R1/2"	A1	81	91

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	Ni100LG
TMI	Ice frost sensor, R 1/4"	A1	51	59

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	Ni100LG
TMD	Duct sensor	A1	39	48

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	Water pressure sensor	A2	176
---------------	-----------------------	-----------	-----

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



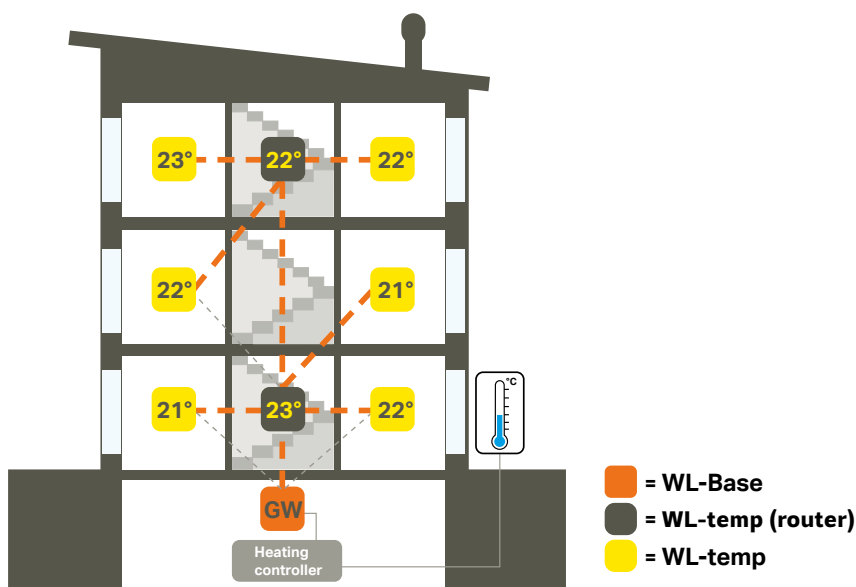
WL-BASE 2.1	Gateway unit	A1	364
--------------------	--------------	-----------	------------

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-TEMP-RH 2.1	Wireless temperature and humidity sensor	A1	90
WIRELESS - SOCKET - ROUTER 2.1	Fixed mounting router in staircase (on top of the present electric socket)	A1	290
WL-TEMP-RH-WHIP 2.1	Wireless temperature and humidity sensor with 1.8m whip sensor	A1	205
WL-TEMP-RH-CO2 2.1	Wireless temperature and humidity sensor with CO2 measuring. Needs outer power source.	A1	279
WL-TEMP-RH-VOC 2.1	Wireless temperature and humidity sensor with VOC measuring. Needs outer power source.	A1	269
WL-ROUTER POWER	Power unit for temperature sensor 5 VDC (needed when operating as a router)	A1	22
WL-BASE-POWER	Power unit for WL-Base, 24 VDC plug	C1	37
WL-ANT	Antenna for WL-Base, 4m cable, magnetic fixing	C1	37
WL-BATTERY-AA-LIT	Battery package for wireless temperature sensors. Includes 10 pcs. AA lithium batteries		21



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	Differential pressure transmitter	A1	146
DPT/D	Differential pressure transmitter with display	A1	177

PDI PRESSURE DIFFERENCE MANOMETER, IP 54

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



PDI	Pressure difference manometer MM 200600	A2	32
------------	---	-----------	-----------

PDS PRESSURE DIFFERENCE SWITCH, IP 54

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



PDS-200	Pressure difference switch, 20 - 200 Pa, PS200	A2	26
PDS-300	Pressure difference switch, 30 - 300 Pa, PS300	A2	26
PDS-600	Pressure difference switch, 40 - 600 Pa, PS600	A2	26

PRESSURE TRANSMITTER FOR WATER



MLH+KYTKENTÄKAAPELI	Pressure transmitter for water, 0-10bar, 0-10V, Thread G1/4	A1	146
----------------------------	---	-----------	------------

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	DN 15	Kv 0.25	External thread R 3/4", flush surface with seal	ACS-15T/W or L15UK/HI	A3	158
VD215-0.4	DN 15	Kv 0.4	External thread R 3/4", flush surface with seal	ACS-15T/W or L15UK/HI	A3	158
VD215-0.63	DN 15	Kv 0.63	External thread R 3/4", flush surface with seal	ACS-15T/W or L15UK/HI	A3	158
VD215-1.0	DN 15	Kv 1.0	External thread R 3/4", flush surface with seal	ACS-15T/W or L15UK/HI	A3	158
VD215-1.6	DN 15	Kv 1.6	External thread R 3/4", flush surface with seal	ACS-15T/W or L15UK/HI	A3	158
VD220-2.5	DN 20	Kv 2.5	External thread R 1", flush surface with seal	ACS-20T/W or L20SK/HI	A3	226
VD220-4.0	DN 20	Kv 4.0	External thread R 1", flush surface with seal	ACS-20T/W or L20SK/HI	A3	226
VD225-6.3	DN 25	Kv 6.3	External thread R 1 1/4", flush surface with seal	ACS-25T/W or L25SK/HI	A3	302
VD232-10	DN 32	Kv 10	External thread R 1 1/2", flush surface with seal	ACS-32T/W or AC25-TF or L32HI	A3	393

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	DN 15	Kv 0,4	Flanged (length 130 mm)	A3	497
V5016A1028	DN 15	Kv 0.63	Flanged (length 130 mm)	A3	497
V5016A1036	DN 15	Kv 1.0	Flanged (length 130 mm)	A3	497
V5016A1044	DN 15	Kv 1.6	Flanged (length 130 mm)	A3	497
V5016A1051	DN 15	Kv 2.5	Flanged (length 130 mm)	A3	497
V5016A1069	DN 15	Kv 4.0	Flanged (length 130 mm)	A3	497
V5016A1007	DN 20	Kv 6.3	Flanged (length 150 mm)	A3	519
V5016A1085	DN 25	Kv 10	Flanged (length 160 mm)	A3	530
V5016A1093	DN 32	Kv 16	Flanged (length 180 mm)	A3	623
V5016A1101	DN 40	Kv 25	Flanged (length 200 mm)	A3	847
V5016A1119	DN 50	Kv 40	Flanged (length 230 mm)	A3	1073
V5016A1127	DN 65	Kv 63	Flanged (length 290 mm)	A3	1429
! V5016A1135	DN 80	Kv 100	Flanged (length 310 mm)	A3	1692
! V5016A1143	DN 100	Kv 160	Flanged (length 350 mm)	A3	1881
! V5016A1150	DN 125	Kv 250	Flanged (length 400 mm)	A3	2872
! V5016A1168	DN 150	Kv 360	Flanged (length 480 mm)	A3	3088

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	DN 15	Kv 0.4	Flanged (L=130 mm)	Stroke 20 mm	A3	581
! V5025A1027	DN 15	Kv 0.63	Flanged (L=130 mm)	Stroke 20 mm	A3	582
! V5025A1035	DN 15	Kv 1.0	Flanged (L=130 mm)	Stroke 20 mm	A3	536
! V5025A1045	DN 15	Kv 1.6	Flanged (L=130 mm)	Stroke 20 mm	A3	535
! V5025A1050	DN 15	Kv 2.5	Flanged (L=130 mm)	Stroke 20 mm	A3	552
! V5025A1068	DN 15	Kv 4.0	Flanged (L=130 mm)	Stroke 20 mm	A3	552
! V5025A1076	DN 20	Kv 6.3	Flanged (L=150 mm)	Stroke 20 mm	A3	575
! V5025A1084	DN 25	Kv 10	Flanged (L=160 mm)	Stroke 20 mm	A3	589
! V5025A1092	DN 32	Kv 16	Flanged (L=180 mm)	Stroke 20 mm	A3	726
! V5025A1100	DN 40	Kv 25	Flanged (L=200 mm)	Stroke 20 mm	A3	887
! V5025A1118	DN 50	Kv 40	Flanged (L=230 mm)	Stroke 20 mm	A3	975
! V5025A1126	DN 65	Kv 63	Flanged (L=290 mm)	Stroke 20 mm	A3	1220
! V5025A1134	DN 80	Kv 100	Flanged (L=310 mm)	Stroke 20 mm	A3	1659
! V5025A1142	DN 100	Kv 160	Flanged (L=350 mm)	Stroke 38 mm	A3	1960
! V5025A1159	DN 125	Kv 250	Flanged (L=400 mm)	Stroke 38 mm	A3	2940
! V5025A1167	DN 150	Kv 360	Flanged (L=480 mm)	Stroke 38 mm	A3	3444

! no stock product

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

2-way valves for district heating

Price EUR
Vat 0%

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	DN 15	Kv 0.25	Flanged (L=130 mm)	Stroke 20 mm	A3	1288
!	V5049A2035	DN 15	Kv 0.40	Flanged (L=130 mm)	Stroke 20 mm	A3	1336
!	V5049A2043	DN 15	Kv 0.63	Flanged (L=130 mm)	Stroke 20 mm	A3	1269
!	V5049A1425	DN 15	Kv 1.0	Flanged (L=130 mm)	Stroke 20 mm	A3	1287
!	V5049A1433	DN 15	Kv 1.6	Flanged (L=130 mm)	Stroke 20 mm	A3	1256
!	V5049A1441	DN 15	Kv 2.5	Flanged (L=130 mm)	Stroke 20 mm	A3	1270
!	V5049A1458	DN 15	Kv 4.0	Flanged (L=130 mm)	Stroke 20 mm	A3	1204
!	V5049A1508	DN 20	Kv 6.3	Flanged (L=150 mm)	Stroke 20 mm	A3	1342
!	V5049A1565	DN 25	Kv 10	Flanged (L=160 mm)	Stroke 20 mm	A3	1335
!	V5049A1573	DN 32	Kv 16	Flanged (L=180 mm)	Stroke 20 mm	A3	1514
!	V5049A1581	DN 40	Kv 25	Flanged (L=200 mm)	Stroke 20 mm	A3	1643
!	V5049A1599	DN 50	Kv 40	Flanged (L=230 mm)	Stroke 20 mm	A3	1780
!	V5049A1607	DN 65	Kv 63	Flanged (L=290 mm)	Stroke 20 mm	A3	2178
!	V5049A1615	DN 80	Kv 100	Flanged (L=310 mm)	Stroke 38 mm	A3	3945
!	V5049A1623	DN 100	Kv 160	Flanged (L=350 mm)	Stroke 38 mm	A3	4303

! 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	DN 15	Kv 0.25	External thread R 1/2"	AC-15FS/FT		A3	41
VSMF-215-0.4	DN 15	Kv 0.4	External thread R 1/2"	AC-15FS/FT		A3	41
VSMF-215-0.63	DN 15	Kv 0.63	External thread R 1/2"	AC-15FS/FT		A3	41
VSMF-215-1.0	DN 15	Kv 1.0	External thread R 1/2"	AC-15FS/FT		A3	42
VSMF-215-1.6	DN 15	Kv 1.6	External thread R 1/2"	AC-15FS/FT		A3	42
VSMF-215-2.5	DN 15	Kv 2.5	External thread R 1/2"	AC-15FS/FT		A3	43
VSMF-220-2.5	DN 20	Kv 2.5	External thread R 3/4"	AC-20FS/FT		A3	64
VSMF-220-2.5E	DN 20	Kv 2.5	External thread R 3/4"	AC-20FS/FT		A3	62
VSMF-220-4.0	DN 20	Kv 4.0	External thread R 3/4"	AC-20FS/FT		A3	65
VSMF-225-6.3	DN 25	Kv 6.3	External thread R 1 1/4"	ACS-25T	Pressure balanced	A3	153
VSMF-225-8.0	DN 25	Kv 8.0	External thread R 1 1/4"	ACS-25T	Pressure balanced	A3	155

V5822A... 2-WAY VALVE

Brass, PN16, T max 120 °C, actuators HW 6.5 or 2.5 mm stroke



V5822A1006	DN 15	Kv 0.16	external thread R1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	46
V5822A1014	DN 15	Kv 0.25	external thread R1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	46
V5822A1022	DN 15	Kv 0.40	external thread R1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	46
V5822A1030	DN 15	Kv 0.63	external thread R1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	46
V5822A1048	DN 15	Kv 1.0	external thread R1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	46
V5822A1055	DN 15	Kv 1.6	external thread R1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	46
V5822A1063	DN 20	Kv 2.5	external thread R3/4", stroke 6,5 mm	Connection set: ACN-20C/S/T	A3	66
V5822A1071	DN 20	Kv 4.0	external thread R3/4", stroke 6,5 mm	Connection set: ACN-20C/S/T	A3	66
V5822A4000	DN 15	Kv 1.6	external thread R1/2", stroke 2,5 mm, On/Off -control	Connection set: ACN-15C/S/T	A3	27
V5822A4018	DN 20	Kv 2.5	external thread R3/4", stroke 2,5 mm, On/Off -control	Connection set: ACN-20C/S/T	A3	46

V5832A... 2-WAY VALVE

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



V5832A1004	DN 15	Kv 0.16	external thread R1/2"	Connection set: AC-15FS/FT	A3	41
V5832A1012	DN 15	Kv 0.25	external thread R1/2"	Connection set: AC-15FS/FT	A3	41
V5832A1020	DN 15	Kv 0.40	external thread R1/2"	Connection set: AC-15FS/FT	A3	41
V5832A1038	DN 15	Kv 0.63	external thread R1/2"	Connection set: AC-15FS/FT	A3	41
V5832A1046	DN 15	Kv 1.0	external thread R1/2"	Connection set: AC-15FS/FT	A3	41
V5832A1053	DN 15	Kv 1.6	external thread R1/2"	Connection set: AC-15FS/FT	A3	41
V5832A1061	DN 20	Kv 2.5	external thread R3/4"	Connection set: AC-20FS/FT	A3	62
V5832A1079	DN 20	Kv 4.0	external thread R3/4"	Connection set: AC-20FS/FT	A3	62
V5832A4008	DN 15	Kv 1.6	external thread R1/2" On/Off -control	Connection set: AC-15FS/FT	A3	24
V5832A4016	DN 20	Kv 2.5	external thread R3/4", On/Off -control	Connection set: AC-20FS/FT	A3	41

! 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%

V5328A... 2-WAY VALVE, FLANGED

Cast iron, PN16

For heating and ventilation



*)

!	V5328A1138	DN 15	Kv 0,25	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	374
!	V5328A1146	DN 15	Kv 0,4	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	376
!	V5328A1153	DN 15	Kv 0,63	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	378
!	V5328A1005	DN 15	Kv 1,0	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	380
!	V5328A1013	DN 15	Kv 1,6	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	383
!	V5328A1021	DN 15	Kv 2,5	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	387
!	V5328A1039	DN 15	Kv 4,0	Flanged (L=130mm)	Stroke 20 mm	Tmax 170°C	A3	390
!	V5328A1047	DN 20	Kv 4,0	Flanged (L=150mm)	Stroke 20 mm	Tmax 170°C	A3	392
!	V5328A1054	DN 20	Kv 6,3	Flanged (L=150mm)	Stroke 20 mm	Tmax 170°C	A3	397
!	V5328A1062	DN 25	Kv 10	Flanged (L=160mm)	Stroke 20 mm	Tmax 170°C	A3	406
!	V5328A1070	DN 32	Kv 16	Flanged (L=180mm)	Stroke 20 mm	Tmax 170°C	A3	524
!	V5328A1088	DN 40	Kv 25	Flanged (L=200mm)	Stroke 20 mm	Tmax 170°C	A3	639
!	V5328A1096	DN 50	Kv 40	Flanged (L=230mm)	Stroke 20 mm	Tmax 170°C	A3	818
!	V5328A1104	DN 65	Kv 63	Flanged (L=290mm)	Stroke 20 mm	Tmax 170°C	A3	961
!	V5328A1112	DN 80	Kv 100	Flanged (L=310mm)	Stroke 20 mm	Tmax 170°C	A3	1293
!	V5328A1195	DN 100	Kv 160	Flanged (L=350mm)	Stroke 38 mm	Tmax 200°C	A3	1583
!	V5328A1203	DN 125	Kv 250	Flanged (L=400mm)	Stroke 38 mm	Tmax 200°C	A3	2350
!	V5328A1211	DN 150	Kv 360	Flanged (L=480mm)	Stroke 38 mm	Tmax 200°C	A3	2922

VBG2... 2-WAY CONTROL BALL VALVE

Brass, PN25, T max 120 °C, Angle of rotation 90°, Suitable actuators MNV...



*)

!	VBG2-15-0.25	DN 15	Kv 0.25	external thread R1"	Connection sets: AC-15TF-1	A3	89
!	VBG2-15-0.4	DN 15	Kv 0.4	external thread R1"	Connection sets: AC-15TF-1	A3	89
!	VBG2-15-0.63	DN 15	Kv 0.63	external thread R1"	Connection sets: AC-15TF-1	A3	86
!	VBG2-15-1	DN 15	Kv 1.0	external thread R1"	Connection sets: AC-15TF-1	A3	86
!	VBG2-15-1.6	DN 15	Kv 1.6	external thread R1"	Connection sets: AC-15TF-1	A3	86
!	VBG2-15-2.5	DN 15	Kv 2.5	external thread R1"	Connection sets: AC-15TF-1	A3	86
!	VBG2-15-4	DN 15	Kv 4.0	external thread R1"	Connection sets: AC-15TF-1	A3	86
!	VBG2-15-6.3	DN 15	Kv 6.3	external thread R1"	Connection sets: AC-15TF-1	A3	86
!	VBG2-20-4	DN 20	Kv 4.0	external thread R1 1/4"	Connection sets: AC-20TF	A3	109
!	VBG2-20-6.3	DN 20	Kv 6.3	external thread R1 1/4"	Connection sets: AC-20TF	A3	109
!	VBG2-20-8.6	DN 20	Kv 8.6	external thread R1 1/4"	Connection sets: AC-20TF	A3	109
!	VBG2-25-6.3	DN 25	Kv 6.3	external thread R1 1/2"	Connection sets: AC-25TF	A3	131
!	VBG2-25-10	DN 25	Kv 10	external thread R1 1/2"	Connection sets: AC-25TF	A3	131
!	VBG2-25-16	DN 25	Kv 16	external thread R1 1/2"	Connection sets: AC-25TF	A3	131
!	VBG2-25-25	DN 25	Kv 25	external thread R1 1/2"	Connection sets: AC-25TF	A3	131
!	VBG2-32-16	DN 32	Kv 16	external thread R2"	Connection sets: AC-32TF	A3	207
!	VBG2-32-25	DN 32	Kv 25	external thread R2"	Connection sets: AC-32TF	A3	207
!	VBG2-40-25	DN 40	Kv 25	external thread R2 1/2"	Connection sets: AC-40TF	A3	342
!	VBG2-40-40	DN 40	Kv 40	external thread R2 1/4"	Connection sets: AC-40TF	A3	327
!	VBG2-50-40	DN 50	Kv 40	external thread R2 3/4"	Connection sets: AC-50TF	A3	444
!	VBG2-50-63	DN 50	Kv 63	external thread R2 3/4"	Connection sets: AC-50TF	A3	478

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.



*)

V5832B2075	DN 25	Kv 4,0	External thread R 1½", flush surface with seal	Connection set AC-25TF	A3	163
V5832B2083	DN 25	Kv 6,3	External thread R 1½", flush surface with seal	Connection set AC-25TF	A3	168
V5832B2091	DN 25	Kv 10	External thread R 1½", flush surface with seal	Connection set AC-25TF	A3	168
V5832B2109	DN 32	Kv 16	External thread R 2", flush surface with seal	Connection set AC-32T / ...TF	A3	222
V5832B2117	DN 40	Kv 25	External thread R 2¼", flush surface with seal	Connection set AC-40T / ...TF	A3	297

V5011R 2-WAY VALVE

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



*)

!	V5011R1000	DN 15	Kv 0,63	Internal thread, R 1/2"	A3	171
!	V5011R1018	DN 15	Kv 1,0	Internal thread, R 1/2"	A3	171
	V5011R1026	DN 15	Kv 1,6	Internal thread, R 1/2"	A3	176
	V5011R1034	DN 15	Kv 2,5	Internal thread, R 1/2"	A3	176
	V5011R1042	DN 15	Kv 4	Internal thread, R 1/2"	A3	176
	V5011R1059	DN 20	Kv 6,3	Internal thread, R 3/4"	A3	188
	V5011R1067	DN 25	Kv 10	Internal thread, R 1"	A3	200
	V5011R1075	DN 32	Kv 16	Internal thread, R 1 1/4"	A3	239
	V5011R1083	DN 40	Kv 25	Internal thread, R 1 1/2"	A3	289
	V5011R1091	DN 50	Kv 40	Internal thread, R 2"	A3	357

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	DN 15	Kv 1,0	Internal thread 1/2", replace the valve R210	A2	71
	R2015-1P6-S1	DN 15	Kv 1,6	Internal thread 1/2", replace the valve R211	A2	71
	R2015-2P5-S1	DN 15	Kv 2,5	Internal thread 1/2", replace the valve R212	A2	71
	R2020-4-S2	DN 20	Kv 4,0	Internal thread 3/4", replace the valve R217	A2	84
	R2020-6P3-S2	DN 20	Kv 6,3	Internal thread 3/4", replace the valve R218	A2	84
	R2020-8P6-S2	DN 20	Kv 8,6	Internal thread 3/4", replace the valve R219	A2	84
	R2025-10-S2	DN 25	Kv 10	Internal thread 1", replace the valve R223	A2	101
	R2025-16-S2	DN 25	Kv 16	Internal thread 1", replace the valve R224	A2	101

! 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 motors: M31C150, M31A150 ja M41A15

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



*)

!	VSMF-315-0.25	DN 15	Kv 0.25	External thread R 1/2", flush surface with seal	Connection set: AC-15FS/FT	A3	56
	VSMF-315-0.4	DN 15	Kv 0,4	External thread R 1/2", flush surface with seal	Connection set: AC-15FS/FT	A3	55
	VSMF-315-0.63	DN 15	Kv 0,63	External thread R 1/2", flush surface with seal	Connection set: AC-15FS/FT	A3	58
	VSMF-315-1.0	DN 15	Kv 1,0	External thread R 1/2", flush surface with seal	Connection set: AC-15FS/FT	A3	62
	VSMF-315-1.6	DN 15	Kv 1,6	External thread R 1/2", flush surface with seal	Connection set: AC-15FS/FT	A3	58
!	VSMF-315-2.5	DN 15	Kv 2.5	External thread R 1/2", flush surface with seal	Connection set: AC-15FS/FT	A3	62
	VSMF-320-2.5	DN 20	Kv 2.5	External thread R 3/4", flush surface with seal	Connection set: AC-20FS/FT	A3	66
	VSMF-320-4.0	DN 20	Kv 4	External thread R 3/4", flush surface with seal	Connection set: AC-20FS/FT	A3	67
	VSMF-325-6.3P	DN 25	Kv 6.3	External thread R 1 1/4", flush surface with seal	Connection set: ACS-25T	A3	171
	VSMF-325-8.0P	DN 25	Kv 8.0	External thread R 1 1/4", flush surface with seal	Connection set: ACS-25T	A3	173

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	DN 15	Kv A-AB 0.25 B-AB 0.16	External thread R1/2", Tmax 120°C, stroke 6,5 mm	Connection set: AC-15FS/FT	A3	71
!	V5833A1011	DN 15	Kv A-AB 0.4 B-AB 0.25	External thread R1/2", Tmax 120°C, stroke 6,5 mm	Connection set: AC-15FS/FT	A3	71
!	V5833A1029	DN 15	Kv A-AB 0.63 B-AB 0.4	External thread R1/2", Tmax 120°C, stroke 6,5 mm	Connection set: AC-15FS/FT	A3	71
!	V5833A1037	DN 15	Kv A-AB 1.0 B-AB 0.63	External thread R1/2", Tmax 120°C, stroke 6,5 mm	Connection set: AC-15FS/FT	A3	71
!	V5833A1045	DN 15	Kv A-AB 1.6 B-AB 1.0	External thread R1/2", Tmax 120°C, stroke 6,5 mm	Connection set: AC-15FS/FT	A3	71
!	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	Connection set: AC-15FS/FT	A3	48
!	V5833A3009	DN 20	Kv A-AB 2.5 B-AB 1.6	External thread R3/4", Tmax 120°C, stroke 6,5 mm	Connection set: AC-20FS/FT	A3	97
!	V5833A4015	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	Connection set: AC-20FS/FT	A3	63
!	V5833A3017	DN 20	Kv A-AB 4.0 B-AB 2.5	External thread R3/4", Tmax 120°C, stroke 6,5 mm	Connection set: AC-20FS/FT	A3	113
!	V5833A2076	DN 25	Kv 4.0	External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	Connection set: AC-25T/TF	A3	149
	V5833A2084	DN 25	Kv 6.3	External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	Connection set AC-25T/TF	A3	156
	V5833A2092	DN 25	Kv 10	External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	Connection set AC-25T/TF	A3	156
	V5833A2100	DN 32	Kv 16	External thread R2", Tmax 130°C, stroke 6,5 mm, Pressure balanced	Connection set AC-32T/TF	A3	193
	V5833A2118	DN 40	Kv 25	External thread R2 1/4", Tmax 130°C, stroke 6,5 mm, Pressure balanced	Connection set AC-40T/TF	A3	258

! 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	DN 15	Kv 2.5	Internal thread, R 1/2"	A3	188
V5013R1040	DN 15	Kv 4	Internal thread, R 1/2"	A3	188
V5013R1057	DN 20	Kv 6.3	Internal thread, R 3/4"	A3	197
V5013R1065	DN 25	Kv 10	Internal thread, R 1"	A3	211
V5013R1073	DN 32	Kv 16	Internal thread, R 1 1/4"	A3	252
V5013R1081	DN 40	Kv 25	Internal thread, R 1 1/2"	A3	303
V5013R1099	DN 50	Kv 40	Internal thread, R 2"	A3	394

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...

!	V5013E1063	DN 15	Kv 2.5	External thread, R 1/2"	Connection set: AC-15TF	A3	173
!	V5013E1071	DN 15	Kv 4	External thread, R 1/2"	Connection set: AC-15TF	A3	173
!	V5013E1089	DN 20	Kv 6.3	External thread, R 3/4"	Connection set: AC-20TF	A3	173
!	V5013E1097	DN 25	Kv 10	External thread, R 1"	Connection set: AC-25TF	A3	179
!	V5013E1105	DN 32	Kv 16	External thread, R 1 1/4"	Connection set: AC-32TF	A3	215
!	V5013E1113	DN 40	Kv 25	External thread, R 1 1/2"	Connection set: AC-40TF	A3	229
!	V5013E1121	DN 50	Kv 40	External thread, R 2"	Connection set: AC-50TF	A3	326

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	DN 15	Kv 2.5	Flanged	A3	433
!	V5329A1012	DN 15	Kv 4.0	Flanged	A3	504
!	V5329A1020	DN 20	Kv 6.3	Flanged	A3	461
!	V5329A1038	DN 25	Kv 10	Flanged	A3	528
!	V5329A1046	DN 32	Kv 16	Flanged	A3	508
!	V5329A1053	DN 40	Kv 25	Flanged	A3	565
	V5329A1061	DN 50	Kv 40	Flanged	A3	650
	V5329A1079	DN 65	Kv 63	Flanged	A3	750
	V5329A1087	DN 80	Kv 100	Flanged	A3	1137

! 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



*)

!	V5823A2003	DN 15	Kv 0.25	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	75
!	V5823A2011	DN 15	Kv 0.40	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	75
!	V5823A2029	DN 15	Kv 0.63	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	75
!	V5823A2037	DN 15	Kv 1.0	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	75
!	V5823A2045	DN 15	Kv 1.6	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	75
!	V5823A2052	DN 20	Kv 2.5	External thread, R 3/4", stroke 6,5 mm	Connection set: ACN-20C/S/T	A3	86
!	V5823A2060	DN 20	Kv 4.0	External thread, R 3/4", stroke 6,5 mm	Connection set: ACN-20C/S/T	A3	86
!	V5823A2151	DN 20	Kv 2.5	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa/ -kPa	Connection set: ACN-20C/S/T	A3	106
!	V5823A2169	DN 20	Kv 4.0	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa/ -kPa	Connection set: ACN-20C/S/T	A3	106
!	V5823A4009	DN 15	Kv 1.6	External thread, R 1/2", stroke 2,5 mm, On/Off -control	Connection set: ACN-15C/S/T	A3	46
!	V5823A4017	DN 20	Kv 2.5	External thread, R 3/4", stroke 2,5 mm, On/Off -control	Connection set: ACN-20C/S/T	A3	62

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



*)

!	V5823C2009	DN 15	Kv A-AB 0.25 B-AB 0.16	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	82
!	V5823C2017	DN 15	Kv A-AB 0.4 B-AB 0.25	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	82
!	V5823C2025	DN 15	Kv A-AB 0.63 B-AB 0.4	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	82
!	V5823C2033	DN 15	Kv A-AB 1.0 B-AB 0.63	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-15C/S/T	A3	82
!	V5823C2041	DN 15	Kv A-AB 1.6 B-AB 1.0	External thread, R 1/2", stroke 6,5 mm	Connection set: ACN-20C/S/T	A3	82
!	V5823C2058	DN 20	Kv A-AB 2.5 B-AB 1.6	External thread, R 3/4", stroke 6,5 mm	Connection set: ACN-20C/S/T	A3	105
!	V5823C2066	DN 20	Kv A-AB 4.0 B-AB 2.5	External thread, R 3/4", stroke 6,5 mm	Connection set: ACN-20C/S/T	A3	105
!	V5823C2157	DN 20	Kv A-AB 2.5 B-AB 1.6	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa	Connection set: ACN-20C/S/T	A3	105
!	V5823C2165	DN 20	Kv A-AB 4.0 B-AB 2.5	External thread, R 3/4", stroke 6,5 mm, sp 240 kPa	Connection set: ACN-20C/S/T	A3	105
!	V5823C4005	DN 15	Kv 1.6	External thread, R 1/2", stroke 2,5 mm	Connection set: ACN-15C/S/T	A3	52
!	V5823C4013	DN 20	Kv 2.5	External thread, R 3/4", stroke 2,5 mm	Connection set: ACN-20C/S/T	A3	64

! 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	DN 100	Kv 160	Flanged	A3	2112
!	V5050A1108	DN 125	Kv 250	Flanged	A3	2793
!	V5050A1116	DN 150	Kv 360	Flanged	A3	3055

VBG3... 3-WAY CONTROL BALL VALVE

Brass, PN25, Tmax 120 °C, angle of rotation 90°C, Suitable actuators MVN...
Applications: heating and ventilation



*)

!	VBG3-15-0.63	DN 15	Kv 0.63	External thread R1"	Connection set: AC-15TF-1	A3	155
!	VBG3-15-1	DN 15	Kv 1.0	External thread R1"	Connection set: AC-15TF-1	A3	160
!	VBG3-15-1.6	DN 15	Kv 1.6	External thread R1"	Connection set: AC-15TF-1	A3	160
!	VBG3-15-2.5	DN 15	Kv 2.5	External thread R1"	Connection set: AC-15TF-1	A3	160
!	VBG3-15-4	DN 15	Kv 4.0	External thread R1"	Connection set: AC-15TF-1	A3	160
!	VBG3-15-6.3	DN 15	Kv 6.3	External thread R1"	Connection set: AC-15TF-1	A3	150
!	VBG3-20-4	DN 20	Kv 4.0	External thread R1 1/4"	Connection set: AC-20TF	A3	179
!	VBG3-20-6.3	DN 20	Kv 6.3	External thread R1 1/4"	Connection set: AC-20TF	A3	170
!	VBG3-20-8.6	DN 20	Kv 8.6	External thread R1 1/4"	Connection set: AC-20TF	A3	166
!	VBG3-25-10	DN 25	Kv 10	External thread R1 1/2"	Connection set: AC-25TF	A3	238
!	VBG3-25-16	DN 25	Kv 16	External thread R1 1/2"	Connection set: AC-25TF	A3	238
!	VBG3-25-6.3	DN 25	Kv 6.3	External thread R1 1/2"	Connection set: AC-25TF	A3	238
!	VBG3-32-16	DN 32	Kv 16	External thread R2"	Connection set: AC-32TF	A3	322
!	VBG3-32-25	DN 32	Kv 25	External thread R2"	Connection set: AC-32TF	A3	315
!	VBG3-40-25	DN 40	Kv 25	External thread R2 1/2"	Connection set: AC-40TF	A3	410
!	VBG3-40-40	DN 40	Kv 40	External thread R2 1/4"	Connection set: AC-40TF	A3	410
!	VBG3-50-40	DN 50	Kv 40	External thread R2 3/4"	Connection set: AC-50TF	A3	650
!	VBG3-50-63	DN 50	Kv 63	External thread R2 3/4"	Connection set: AC-50TF	A3	650

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



*)

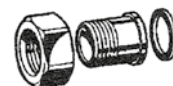
R3015-P63-S1	DN 15	Kv 0.63	Internal threaded connect, thread 1/2", replace the valve R309	A2	125
R3015-1-S1	DN 15	Kv 1.0	Internal threaded connect, thread 1/2", replace the valve R310	A2	125
R3015-1P6-S1	DN 15	Kv 1.6	Internal threaded connect, thread 1/2", replace the valve R311	A2	125
R3015-2P5-S1	DN 15	Kv 2.5	Internal threaded connect, thread 1/2", replace the valve R312	A2	125
R3020-4-S2	DN 20	Kv 4.0	Internal threaded connect, thread 3/4", replace the valve R317	A2	141
R3020-6P3-S2	DN 20	Kv 6.3	Internal threaded connect, thread 3/4", replace the valve R318	A2	141
R3025-10-S2	DN 25	Kv 10	Internal threaded connect, thread 1", replace the valve R323	A2	179
R3032-16-S3	DN 32	Kv 16	Internal threaded connect, thread 1 1/4", replace the valve R331	A2	252

! no stock product

Connection sets

EXTERNAL THREADED CONNECTIONS

All connection sets made of zinc covering durability brass.



OUAC-15FT	DN 15	External threaded R 3/8", Internal thread to valve R 1/2"	A1	8
OUACS-15T / L15UK	DN 15	External threaded R 1/2", Internal thread to valve R 3/4"	A1	5
OUACN-15T	DN 15	External threaded R 3/8", tapered	A1	6
OUACS-20T / L20UK	DN 20	External threaded R 3/4", Internal thread to valve R 1"	A1	14
OUACS-25T / L25UK	DN 25	External threaded R 1", Internal thread to valve R 1 1/4"	A1	23
OUAC-40T	DN 40	External threaded R 1 1/2", Internal thread to valve R 2 1/4"	A1	49

INTERNAL THREADED CONNECTIONS

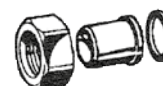
All connection sets made of zinc covering durability brass.



L20SK	DN 20	Internal thread R 1/2", Internal thread to valve R 1"	A1	15
OUAC-25TF	DN 25	Internal thread R 1", Internal thread to valve R 1 1/2"	A1	16
L25SK	DN 25	Internal thread R 1", Internal thread to valve R 1 1/4"	A1	15
OUAC-32TF	DN 32	Internal thread R 1 1/4", Internal thread to valve R 2"	A1	25
OUAC-40TF	DN 40	Internal thread R 1 1/2", Internal thread to valve R 2 1/4"	A1	33

WELDINGS

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



L15HI	DN 15	Welding 1/2", Internal thread to valve R 3/4"	A1	9
L20HI	DN 20	Welding 3/4", Internal thread to valve R 1"	A1	15
L25HI	DN 25	Welding 1", Internal thread to valve R 1 1/4"	A1	17
L32HI	DN 32	Welding 1 1/4", Internal thread to valve R 1 1/2"	A1	19

SPARE INSERTS OF VD VALVES

VDP-0.25	VD-0,25 spare inserts	C2	61
VDP-0.4	VD-0,4 spare inserts	C2	61
VDP-0.63	VD-0,63 spare inserts	C2	61
VDP-1.0	VD-1,0 spare inserts	C2	61
VDP-1.6	VD-1,6 spare inserts	C2	61
VDP-2.5	VD-12,5 spare inserts	C2	61
VDP-4.0	VD-4,0 spare inserts	C2	69
VDP-6.3	VD-6,3 spare inserts	C2	85
VDP-10	VD-10 spare inserts	C2	105

STEM SEALS

BOKSIT HW10MM	Set of stem seals for V5011/13 valves	A1	118
BOKSITIIV/SIEM	Set of stem seals for Siemens 428488060: 10 mm stem	A1	64
BOKSITIIV/V	Set of stem seals for V-valves OMB0026	A1	58

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	Pair of flange VD215 / SV 215, total length 75 mm	A1	47
JATKE 220/215	Pair of flange VD220 / SV 215, total length 75 mm	A1	47
JATKE 220/220	Pair of flange VD220 / SV 220, total length 100 mm	A1	59
JATKE 225/220	Pair of flange VD225 / SV 220, total length 100 mm	A1	59
JATKE 225/225	Pair of flange VD225 / SV 225, total length 115 mm	A1	59
JATKE 232/225	Pair of flange VD232 / SV 225, total length 115 mm	A1	82



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

JATKE VD15-130	Pair of flange for Osby 2SB and Siemens VVF valves, total length 130 mm	A1	82
JATKE VD20-130	Pair of flange for Osby 2SB and Siemens VVF valves, total length 130 mm	A1	86
JATKE VD20-140	Pair of flange for Osby 2SB valves, total length 140 mm	A1	86
JATKE VD20-160	Pair of flange for Siemens VVF valves, total length 160 mm	A1	86
JATKE VD25-140	Pair of flange for Osby 2SB valves, total length 140 mm	A1	86
JATKE VD25-150	Pair of flange for Osby 2SB valves, total length 150 mm	A1	86
JATKE VD25-160	Pair of flange for Siemens VVF valves, total length 160 mm	A1	86
JATKE VD32-150	Pair of flange for Osby 2SB valves, total length 150 mm	A1	99
JATKE VD32-160	Pair of flange for Siemens VVF valves, total length 160 mm	A1	99

JATKE RV EXTENSION

JATKE RV	Extension 3/4" -> 1" 2 pcs	A1	51
-----------------	----------------------------	-----------	----

AK... ADAPTERS FOR VALVES

AK15-15	Adapter set for VD15/Salina 15	A1	28
AK20-15	Adapter set for VD20/Salina 15	A1	40
AK20-25	Adapter set for VD20/Salina 25	A1	45
AK25-25	Adapter set for VD25/Salina 25	A1	45

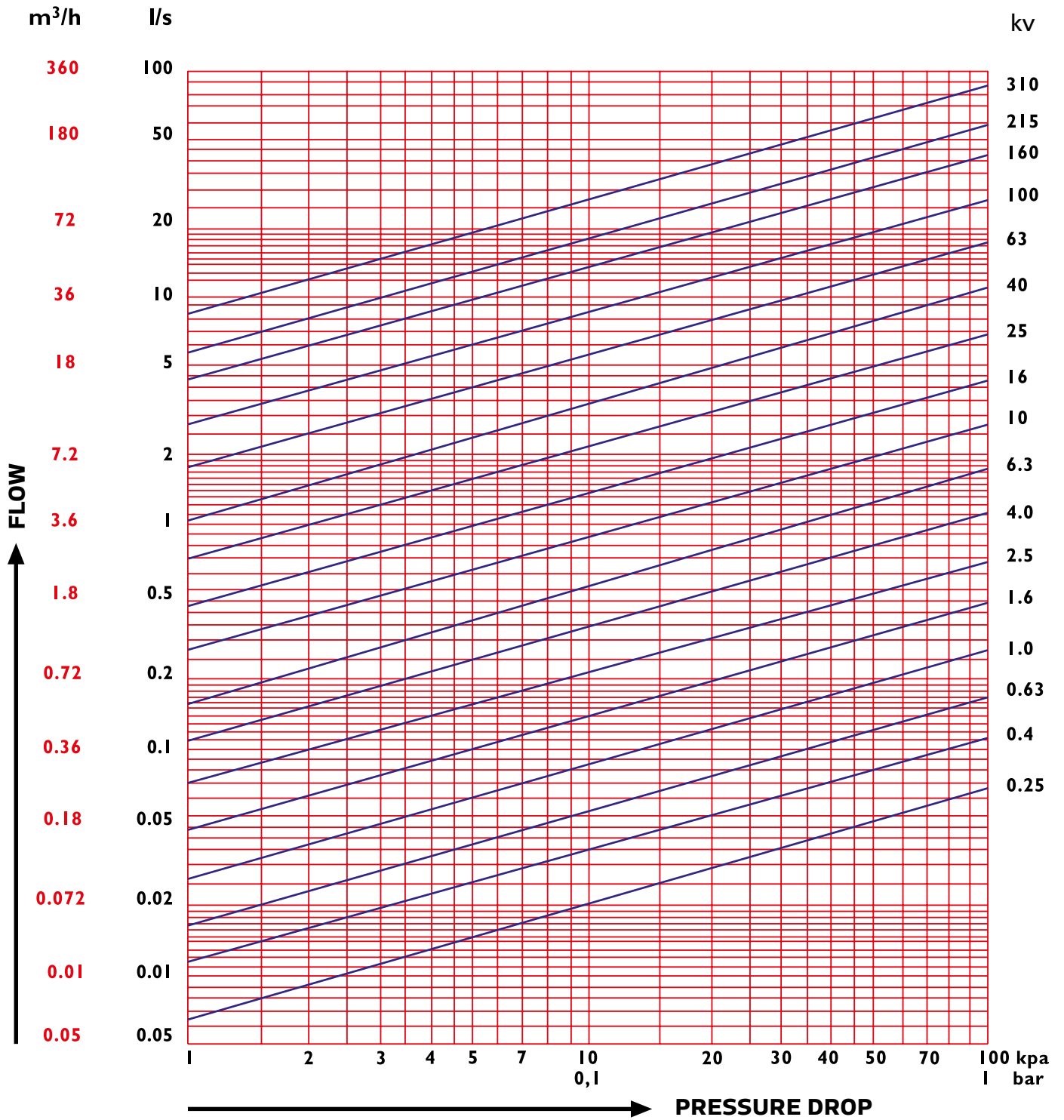
FITTINGS

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

SOV-L&G-HON	Fittings for L&G VVG41-, VXG41- and VVF52 valves	A1	51
SOV-TAC-HON	Fittings for TAC V241-, V282-, V292-, V293-, V294-, V298-, V384-, V386-, V392- and V394 valves	A1	51
SW-SOV-HON	Fittings between Satchwell-Honeywell	A1	31

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	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43.	A3	137
!	M6410C2023	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43.	A3	113
!	M6410L2023	Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, Power 180 Nm. IP40.	A3	126
	M6410C4037	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43. + 2 micro switch	A3	209
	M6410L2031	Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, Power 300 Nm. IP40.	A3	181
!	M6410C4029	Valve actuator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43. + 2 micro switch	A3	156
!	M6410L4029	Valve actuator, 3-point control, 230 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43. + 2 micro switch	A3	162
!	M6410L4037	Valve actuator, 3-point control, 230 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43. + 2 micro switch	A3	198

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	Valve actuator, 3-point control, 24 V, 50 Hz, 4 VA, speed 60s/20mm.	A3	458
	ML6420A3023	Valve actuator, 3-point control, 24 V, 50 Hz, 6 VA, speed 30s/20mm.	A3	458
!	ML6420A3015	Valve actuator, 3-point control, 230 V, 50 Hz, 6,5 VA, speed 60s/20mm.	A3	520
!	ML6420A3031	Valve actuator, 3-point control, 230 V, 50 Hz, 6,5 VA, speed 30s/20mm.	A3	464

ML6421... VALVE ACTUATORS, IP54

Applications: Heating systems

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



*)

	ML6421A3005	Valve actuator, 3-point control, 24 V, 50 Hz, 13 VA, speed 114s/20mm.	A3	843
!	ML6421A3013	Valve actuator, 3-point control, 230 V, 50 Hz, 11 VA, speed 114s/20mm.	A3	631
	ML6421B3004	Valve actuator, 3-point control, 24 V, 50 Hz, 13 VA, speed 210s/38mm.	A3	897
!	ML6421B3012	Valve actuator, 3-point control, 230 V, 50 Hz, 11 VA, speed 210s/38mm.	A3	456

M6422L1003 VALVE ACTUATOR, IP54

Rotary actuator for butterfly valve

- Power 40 Nm



*)

!	M6422L1003	Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, speed 150s/90°.	A3	1331
---	-------------------	--	-----------	-------------

! 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	Valve actuator, 3-point control, 24 V, 50 Hz, 11 VA, speed 108s/20mm. 12s spring. Spring return out.	A3	574
!	ML6425A3014	Valve actuator, 3-point control, 230 V, 50 Hz, 12 VA, speed 108s/20mm. 12s jousi. Spring return out.	A3	615
!	ML6425B3005	Valve actuator, 3-point control, 24 V, 50 Hz, 11 VA, speed 108s/20mm. 12s spring. Spring return in.	A3	536
!	ML6425B3021	Valve actuator, 3-point control, 230 V, 50 Hz, 12 VA, speed 108s/20mm. 12s spring. Spring return in.	A3	616

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

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



*)

	M7410A1001	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	112
	M7410C1007	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	110
!	M7410C1015	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	117

MVN... VALVE ACTUATORS, IP40

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



*)

!	MVN613A1500	Valve actuator, 3-point control, 24 V, 50 Hz, 1,5 VA	A3	135
!	MVN663A1500	Valve actuator, 3-point control, 230 V, 50 Hz, 4,5 VA	A3	154

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



*)

	NRD24-3-SI	Power: 500 N	Speed: 35 s	Stroke length: 5,5 mm	Consumption: 2,5 VA 230 VAC	A2	164
	NRD24-3-SI	Power: 500 N	Speed: 35 s	Stroke length: 5,5 mm	Consumption: 1,5 VA 24 VAC	A2	164
	NRD24-3-SI	Power: 500 N	Speed: 140 s	Stroke length: 5,5 mm	Consumption: 1,5 VA 24 VAC	A2	152
	NRD230-3-SI	Power: 500 N	Speed: 140 s	Stroke length: 5,5 mm	Consumption: 2,5 VA 230 VAC	A2	152
	NRD24-3-HW	Power: 500 N	Speed: 35 s	Stroke length: 6,5 mm	Consumption: 2,5 VA 230 VAC	A2	167
	NRD24-3-HW	Power: 500 N	Speed: 35 s	Stroke length: 6,5 mm	Consumption: 1,5 VA 24 VAC	A2	167

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	Power: 5 Nm	Speed: 70 s	Consumption: 1,5 VA 24 VAC / DC	A2	157
!	HTC230-3	Power: 5 Nm	Speed: 70 s	Consumption: 2,5 VA 230 VAC	A2	155
	HTD24-3	Power: 5 Nm	Speed: 140 s	Consumption: 1,5 VA 24 VAC / DC	A2	153
	HTD24-3	Power: 5 Nm	Speed: 35 s	Consumption: 1,5 VA 24 VAC / DC	A2	153

! 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	Valve actuator, 0(2)...10 VDC controlled. 24 V, 50 Hz, 5 VA. Speed 15 s/6,5 mm. Power 400 Nm.	A3	247
---------------	---	-----------	------------

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. Connection cable 1,5 m.	A3	167
----------------	---	-----------	------------

M7410E... VALVE ACTUATORS, IP43

Applications: Heating- and ventilation systems

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



*)

M7410E1002	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	194
! M7410E1028	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	216
! M7410E2026	Valve actuator, 0(2)...10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 180 Nm.	A3	218
! M7410E2034	Valve actuator, 0(2)...10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 300 Nm.	A3	281

ML7420A... VALVE ACTUATORS, IP54

Suitable for valves with 20 mm stroke length.

Power 600 Nm

Applications: For heating, domestic hot water and ventilation



*)

ML7420A6009	Valve actuator, 0(2)...10 VDC controlled. 24 V, 50 Hz, 5 VA, speed 60s/20mm. Analog output of 2-10 VDC.	A3	491
ML7420A6017	Valve actuator, 0(2)...10 VDC controlled. 24 V, 50 Hz, 7 VA, speed 30s/20mm. Analog output of 2-10 VDC.	A3	488

ML7421... VALVE ACTUATORS, IP54

Applications: For heating

Power 1800 Nm



*)

! ML7421A3004	Valve actuator, 0(2)...10 VDC controlled. , 24 V, 50 Hz, 14 VA, speed 114s/20mm. Analog output of 2-10 VDC.	A3	759
! ML7421B3003	Valve actuator, 0(2)...10 VDC controlled. , 24 V, 50 Hz, 14 VA, speed 210s/38mm. Analog output of 2-10 VDC.	A3	748

! 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	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	856
!	ML7425B6007	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	545

MVN... VALVE ACTUATOR, IP40

- Used with control ball valve (VBGx)



*)

!	MVN713A1500	Valve actuator, 0(2)...10 VDC controlled, 24 V, 50 Hz, 5 VA, Speed 90s/90°. Power 3 Nm.	A3	194
---	--------------------	---	-----------	------------

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	Power: 5 Nm	Speed: 70 s		Consumption: 3 VA 24 VAC / DC	A2	187
	HTYD24-SR	Power: 5 Nm	Nopeus: 35 s		Consumption: 3 VA 24 VAC / DC	A2	203

NR... VALVE ACTUATOR

Applications: For heating, domestic hot water and ventilation



*)

	NRD24-SR-SI	Power: 500 N	Speed: 35 s	Stroke length 5,5 mm	Consumption: 3 VA 24 VAC / DC	A2	240
	NRD24-SR-HW	Power: 500 N	Speed: 35 s	Stroke length 6,5 mm	Consumption: 3 VA 24 VAC / DC	A2	245

ADAPTERS FOR VALVE ACTUATORS

	MS-NRE	Adapter for the valves Esbe and Termomix	A2	11
	MS-NRE6	Adapter for the valves: VRG, VRB	A2	11
	WNR	Adapter between NR-actuator and ball valve	A2	21

! no stock product

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	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	154
!	N05010-SW2	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	178
!	N05230-2POS	Damper actuator, 2-point control, 230 VAC, 50 Hz, 22 VA, speed 110s. Power 5 Nm.	A3	108
	N0524	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 5 Nm.	A3	111
!	N0524-SW2	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	143
	N10010	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	182
!	N10010-SW2	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	203
!	N10230-2POS	Damper actuator, 2-point control, 230 VAC, 50 Hz, 22 VA, speed 140s. Power 10 Nm.	A3	132
	N1024	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 10 Nm.	A3	188
!	N1024-SW2	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	166

N20... DAMPER ACTUATORS, IP54

- For 4 m² dampers
- Power 20 Nm



*)

	N20010	Damper actuator, 0(2)...10 VDC controlled, 24 VDC/ac, 50 Hz, 6 VA, speed 95/110s. Analog output of 2-10 VDC.	A3	271
!	N20010-SW2	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	270
!	N20230	Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 8 VA, speed 110s.	A3	217
!	N20230-SW2	Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 8 VA, speed 110s. 2 pcs micro switches ready for serial control.	A3	234
	N2024	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 6 VA, speed 110s. Voima 20 Nm.	A3	258
!	N2024-SW2	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	237

N34... DAMPER ACTUATORS, IP54

- For 6 m² dampers
- Power 34 Nm



*)

!	N34010	Damper actuator, 0(2)...10 VDC controlled, 24 VDC/ac, 50 Hz, 6 VA, speed 95/110s. Analog output of 2-10 VDC.	A3	297
!	N34230	Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 13 VA, speed 110s.	A3	269
!	N3424	Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 9 VA, speed 110s.	A3	265

! 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	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	258
!	S03010-SW1	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	209
	S03230-2POS	Damper actuator, 2-point control, 230 VAC, 50 Hz, 13 VA, speed 45s. Power 3 Nm.	A3	182
!	S03230-2POS-SW1	Damper actuator, 2-point control, 230 VAC, 50 Hz, 13 VA, speed 45s. Power 3 Nm. 1 pcs adjustable micro switch.	A3	214
!	S0324-2POS	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 7 VA, speed 45s. Power 3 Nm.	A3	158
!	S0324-2POS-SW1	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 7 VA, speed 45s. Power 3 Nm. 1 pcs adjustable micro switch.	A3	199
	S0524-2POS	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 8 VA, speed 45s. Power 5 Nm.	A3	199
!	S0524-2POS-SW1	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 8 VA, speed 45s. Power 5 Nm. 1 pcs adjustable micro switch.	A3	216
!	S05010	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	213
!	S05010-SW1	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	227
!	S05230-2POS	Damper actuator, 2-point control, 230 VAC, 50 Hz, 14 VA, speed 45s. Power 5 Nm.	A3	153
!	S05230-2POS-SW1	Damper actuator, 2-point control, 230 VAC, 50 Hz, 14 VA, speed 45s. Power 5 Nm. 1 pcs adjustable micro switch.	A3	232

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	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	287
!	S10010-SW2	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	327
	S1024-2POS	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 30 VA, speed 45s. Power 10 Nm.	A3	232
!	S1024-2POS-SW2	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	278
	S10230-2POS	Damper actuator, 2-point control, 230 VAC, 50 Hz, 45 VA, speed 45s. Power 10 Nm.	A3	271
!	S10230-2POS-SW2	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	340
	S20010	Damper actuator, 0(2)...10 VDC controlled, 24 VDC/ac, 50 Hz, 16 VA, speed 90s. Power 20 Nm. Analog output of 2-10 VDC.	A3	325
!	S20010-SW2	Damper actuator, 0(2)...10 VDC controlled, 24 VDC/ac, 50 Hz, 16 VA, speed 90s. Power 20 Nm. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control.	A3	360
	S2024-2POS	Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 45 VA, speed 45s. Power 20 Nm.	A3	282
!	S2024-2POS-SW2	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	343
	S20230-2POS	Damper actuator, 2-point control, 230 VAC, 50 Hz, 60 VA, speed 45s. Power 20 Nm.	A3	314
!	S20230-2POS-SW2	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	356

! 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	3-point control / open-closed	Power: 10 Nm	Consumption: 4 VA 24 VAC / DC	A2	156
!	NM230A	3-point control / open-closed	Power: 10 Nm	Consumption: 6 VA 230 VAC	A2	161
!	NM24A-SR	2-10 V-control	Power: 10 Nm	Consumption: 4 VA 24 VAC / DC	A2	226

SM..A DAMPER ACTUATOR, IP 54

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



*)

!	SM24A	3-point control / open-closed	Power: 20 Nm	Consumption: 4 VA 24 VAC / DC	A2	180
!	SM230A	3-point control / open-closed	Power: 20 Nm	Consumption: 6 VA 230 VAC	A2	183
!	SM24A-SR	2-10 V-control	Power: 20 Nm	Consumption: 4 VA 24 VAC / DC	A2	256

LF... DAMPER ACTUATOR, IP 54

- 4 Nm
- For 0,8 m2 dampers
- The drive time 75 - 150 s
- Spring return 20 s



*)

!	LF24	Open-closed	Power: 4 Nm	Consumption: 7 VA 24 VAC / DC	A2	203
!	LF230	Open-closed	Power: 4 Nm	Consumption: 7 VA 230 VAC	A2	220
!	LF24-SR	2-10 V-control	Power: 4 Nm	Consumption: 7 VA 24 VAC / DC	A2	275

NF... DAMPER ACTUATOR

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



*)

	NF24A	Open-closed control	Power: 10 Nm	Consumption: 5,5 VA 24 VAC / DC	A2	253
	NFA	Open-closed control	Power: 10 Nm	Consumption: 9,5 VA 24-240 VAC / 24-125 VDC	A2	301
	NF24A-SR	Control 2...10 V	Power: 10 Nm	Consumption: 5,5 VA 24 VAC / DC	A2	304

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	Open-closed	Power: 20 Nm	Consumption: 7,5 VA 24 VAC / DC	A2	312
	SFA	Open-closed	Power: 20 Nm	Consumption: 18 VA 24-240 VAC / 24-125 VDC	A2	359
	SF24A-SR	2-10 V-control	Power: 20 Nm	Consumption: 7 VA 24 VAC / DC	A2	361

! no stock product

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

Other field devices

Price EUR
Vat 0%

EXU-800 EXPANSION 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	External unit for EH-800 and EH-800B	B1	66
----------------	--------------------------------------	-----------	-----------

C01A THERMOSTAT



C01A	Thermostat, surface mounting 20...90 °C, differential range 7 °C	A2	60
-------------	--	-----------	-----------

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	Anticipating frost protection thermostat	A2	152
--------------	--	-----------	------------

EHC VOLTAGE DIVIDER

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



EHC	Voltage divider	A1	71
------------	-----------------	-----------	-----------

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	Voltage-controlled relay	A1	77
------------	--------------------------	-----------	-----------

TI DUCT THERMOMETER Ø 100 MM

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



TI	Duct thermometer	A2	20
-----------	------------------	-----------	-----------

Other field devices

Price EUR
Vat 0%

LAP 5 INDULGE BUTTON

- 1...5 hours extra running time for the fan by pressing the button.



LAP 5	Indulge button	A2	101
--------------	----------------	-----------	------------

PWR POWER UNITS

- Four different outputs power source.



PWR 10	Power unit 24 VAC / 10 VA, width 35,5 mm (2M)	C2	21
PWR 24	Power unit 24 VAC / 24 VA, width 54 mm (3M)	C2	23
PWR 40	Power unit 24 VAC / 40 VA, width 54 mm (3M)	C2	39
PWR 63	Power unit 24 VAC / 63 VA, width 106 mm (6M)	C2	47

VAK-POWER UNITS



PWR130	Protective voltage transformer with thermal prot. 230VAC / 24 VAC, 130 VA. DIN-rail mounting W90,L84,H110	C2	40
PWR180	Protective voltage transformer with thermal prot. 230VAC / 24 VAC, 180 VA. W105,L89,H115	C2	53
PWR250	Protective voltage transformer with thermal prot. 230VAC / 24 VAC, 250 VA. W130, L115, H119	C2	64

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.

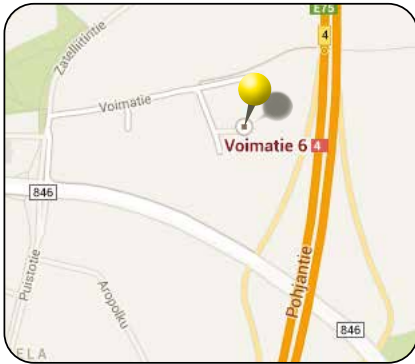
OWNERSHIP

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

DISAGREEMENTS

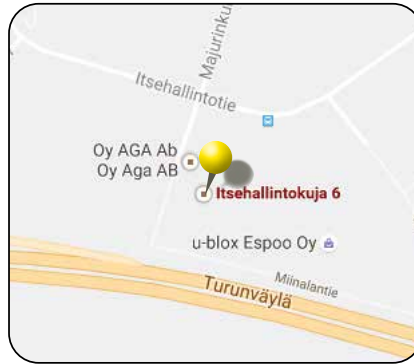
Any disagreements resulting from the agreements and their terms should be primarily resolved through bilateral negotiations. In the event that the disagreement cannot be resolved, the disagreement shall be resolved through arbitration in Finland according to current legislation. The arbitration court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

MIKKO MERTALA

Export Manager
Building Automation
Tel. +358 40 545 9688
mikko.mertala@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.grannsjoe@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.