OUMAN

BUILDING AUTOMATION PRICE LIST

2022



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PRODUCT CATEGORIES:













Heating and air handling unit controllers

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

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

With EH-800 it is 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 also possible to order the adapters for Esbe VRG, VRB and Belimo R4-series valves. The controller is easy to install and use. It has a 3 years warranty.



| EH-800 OMA0559 | Heating controller | B1 | 775 |
|---------------------------|--|----|-----|
| EH-800B OMA0558 | Heating controller without Internet option | B1 | 680 |
| SOV-ESBE2 OMA0266 | Adapter for Esbe VRG and VRB valves | B1 | 30 |

EXP-800 EXPANSION PACKAGE FOR THE FH-800 CONTROLLERS

External unit for EH-800 and EH-800B

OUMAN GSM/GPRS -modem for EH-800

Another heating circuit / for parallel control of another source of heat Product package content: Pre-connected expansion unit, connecting cable, Belimo HTC24-SR valve engine, adapter for the most common mixing valve, TMS-3M surface temperature sensor and the introduction of the necessary instructions.



| EXP-800 OMA0160 | Expansion package for the EH-800 controllers | B1 | 367 |
|---------------------------|--|----|-----|
| | | | |

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

EXU-800

GSMMOD11

OMA0161

The external unit makes it possible to have one universal input, a digital input, a digital output, and an analog output to the EH-800 heating controller

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



| OPTIONAL E | QUIPMENT | | |
|------------------------|---|----|----|
| TMR OMA0011 | Room sensor (NTC10) | A1 | 43 |
| TMR/SP OMA0310 | Room sensor with fine-tuning knob | A1 | 52 |
| TMS-4M OMA0321 | Surface sensor (NTC10), connection cable 4 m | A1 | 29 |
| C01A OMA0043 | Thermostat, surface mounting, 20 90 °C, differential range 7 °C | A2 | 67 |

80

198

B1

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 M-link (TCP/IP, optional) or other monitoring systems using a Modbus RTU.



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

| S203 OMA0253 | Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit) | A1 | 1300 *) |
|-------------------------|--|----|---------|
| RB-40 OMA0249 | External relay unit in casing, 4 pcs changeover relays (24V, 250VAC/16A), IP66 | A1 | 100 |

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 easy to use - informative display panel and GSM Control - features enable reliable use anytime, anywhere! C203 can be connected to Ounetservice via M-link (TCP/IP, optional) or other monitoring systems using a Modbus RTU.



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

| C203 OMA0044 | Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit) | A1 | 1100*) |
|------------------------|--|----|--------|
| A203 OMA0650 | Heating controller for three circuits (2 heating circuits, 1 domestic hot water circuit) with built- in ethernet and WEB user interface | A1 | 1400 |

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 M-link (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

| Heating controller for three circuits (2 heating circuits, 1 domestic hot water ci | uit) A | 1 Not available |
|--|--------|-----------------|
|--|--------|-----------------|

RU23 SCREEN UNIT FOR ROOM CONTROLLER

The Ouman RU23 room controller screen unit works with the programmable Ouflex product family. The device is intended for indoor installation.



- Capacitive 2.3" TFT touch screen
- · Built-in 10K NTC sensor
- External NTC sensor
- 0-10V analog input
- IP20 Protection class

| RU23 OMA0560 | Screen unit for room controller | A1 | 125 |
|-----------------|---------------------------------|----|-----|

GSM modems

OUMAN GSM MODEMS





| GSMMOD10 OMA0597 | OUMAN GSM/GPRS modem for EH-105 and EH-200 series controllers | C1 | 198 |
|---------------------|--|----|-----|
| GSMMOD11 OMA0598 | OUMAN GSM/GPRS modem for EH-800, Ouflex M and Ouflex C controllers | C1 | 198 |
| GSMMOD12 OMA0599 | OUMAN GSM/GPRS modem for Ouman Plus and Ouman Ouflex A | C1 | 216 |

ANT1 EXTERNAL ANTENNA

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

| ANT1 OMA0035 | External antenna for Ouman GSM-modeem | C1 | 38 |
|-----------------|---------------------------------------|----|----|
| | | | |

CASING PACKAGES

K118 CASING PACKAGE, 18 MODULES

Contents:

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

| K118 OMA189 | Casing package 18 modules (one DIN rail) | C2 | 141 |
|-----------------------|--|----|-----|
| K212 CASING | PACKAGE 24 MODULES | | |

Contents:

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

| K212 OMA0190 | Casing package 24 modules (two DIN rails) | C | 2 | 150 |
|------------------------|---|---|---|-----|
|------------------------|---|---|---|-----|

K218 CASING PACKAGE, 36 MODULES

Contents:

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

| K218 OMA0192 | Casing package 36 modules (two DIN rails) | C | C2 | 211 |
|------------------------|---|---|----|-----|
| K312 CASING | PACKAGE, 36 MODULES | | | |

Contents:

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

| K312 OMA0193 | Casing package 36 modules (three DIN rails) | C2 | 198 |
|------------------------|---|----|-----|
| | | | |

K318 CASING PACKAGE, 54 MODULES

Contents:

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

| K318 OMA0194 | Casing package 54 modules (three DIN rails) | C2 | 289 |
|------------------------|---|----|-----|
| | | | |

K412 CASING PACKAGE, 48 MODULES

Contents:

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

| K412 OMA0553 | Casing package 48 modules (four DIN rails) | C2 | 270 |
|------------------------|--|----|-----|
|------------------------|--|----|-----|

Freely programmable automation units

OUMAN OUFLEX A FREELY PROGRAMMABLE AUTOMATION UNIT

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

Dimensions: width 214 mm 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)

Data transfer connections

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

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

Operating voltage

24 VAC, 50 Hz

OUMAN Access -service enables you to make a remote connection to an Ouflex device via internet, without any extra hardware. To make use of this feature the device must have a regular internet-connected LAN with a firewall.

| OUFLEX A OMA0518 | Freely programmable automation unit | A1 | 1865 |
|-----------------------|-------------------------------------|----|------|
| OUFLEX WOD OMA0538 | Ouflex A without a display | A1 | 1765 |

OPTIONS

| GSMMOD12 OMA0599 | OUMAN GSM/GPRS -modem for Ouflex. | C1 | 216 |
|------------------------------|------------------------------------|----|-----|
| OUMAN LCD FRAME GREY OMA0519 | Wall installation frame for Ouflex | C1 | 31 |
| OUMAN LCD GREY OMA0528 | Display for Ouflex | A1 | 127 |

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



| OMA0496 | Freely programmable automation unit | A1 | 922*) |
|-------------------------------|-------------------------------------|----|-------|
| OUFLEX M LCD KIT GREY OMA0527 | Ouflex M LCD with cable and frame | A1 | 174 |

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 require 24 VAC power supply connectors for field devices.



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

Operating voltage · 24 VAC, 50 Hz

| FLEX COMBI 32 OMA0526 | 16 pcs universal inputs (UI) 6 pcs 010V analog outputs (AO) 2 pcs change-over contact relays (DO) | 4 pcs normally open contact relays (DO) 4 pcs 24 VAC Triac-outputs (TR) | A1 | 737*) |
|--------------------------|---|--|----|-------|
| FLEX COMBI 21 OMA0524 | 9 pcs universal inputs (UI) 2 pcs 010V 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 | 489*) |
| FLEX UI 16 OMA0523 | 16 pcs universal inputs (UI) | | A1 | 324*) |

^{*)} The price will be updated when the product is available

^{**)} Limited availability







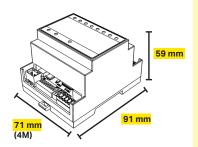


FLEX UI8 is a DIN-rail-attachable Modbus RTU input module which can be connected to RS-485 bus. It has 8 configurable universal inputs.

Supported signals and sensor types are:
Transmitters 0-10 V or 0/4-20 mA

- Supported passive sensors: NTC10, NTC1.8, NTC2.2 ja NTC20 Ni 1000 LG,
- Ni 1000 DIN 43760, Pt 1000
- Potential free digital contact
- Potential free pulse counter (min 30ms)

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

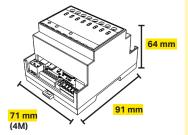


FLEX AO8 is a DIN-rail-attachable Modbus RTU output module which can be connected to RS-485 bus. It has 8 analog outputs.

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

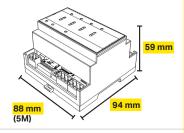
Operating voltage: 24 VAC/VDC (-10%...+20%), 50/60 Hz



FLEX DO4-R is a DIN-rail-attachable Modbus RTU relay unit which can be connected to RS-485 bus. It has 4 relay controls.

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

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

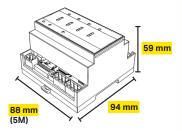


FLEX DO4-TRS is a DIN-rail-attachable Modbus RTU triac module which can be

- connected to RS-485 bus. It has 4 AC triac switches.

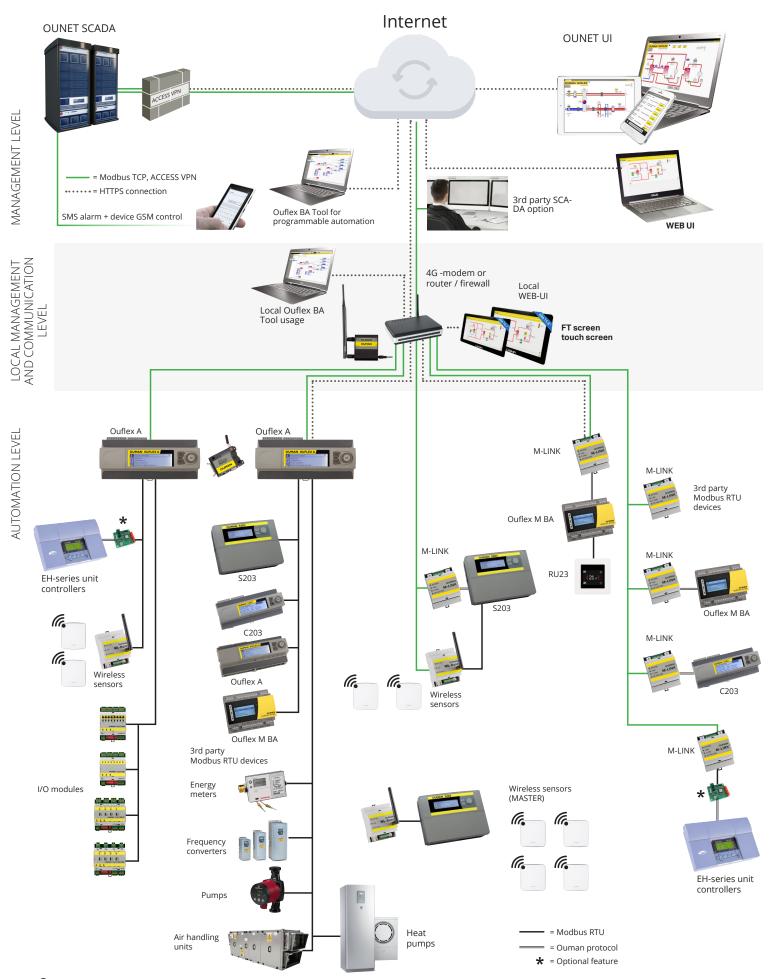
 Each triac control has 3 stage switch for selection between automatic control, forced ON or OFF (ON - AUTO - OFF).
- 24...230VAC, max 1A/output
- Potential-free AC switch
- DC controls require a supplementary relay in installation

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



| FLEX UI8 OMA0471 | Universal input module | A1 | 297 |
|-------------------------|-------------------------|----|-----|
| FLEX AO8 OMA0472 | Universal output module | A1 | 261 |
| FLEX DO4-R OMA0473 | Universal relay module | A1 | 214 |
| FLEX DO4-TRS OMA0474 | Universal triac module | A1 | 202 |

Building automation system topology



Ouman system components

Ouman Access server

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



Ouflex BA Tool

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



OUNET browser UI (HTML5)

OUNET in mobile or tablet (HTML5)

OUNET SCADA solution in cloud service

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

4G-MOD1

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

2G GSM SMS Modem

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

FT SCREEN touch screen

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

Ouflex A

Programmable controller platforms

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



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 work 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 M BA

Ouflex I/O modules

- These I/O modules can be used to expand controller IO capabilities
- Modules are compatible with any systems supporting Modbus RTU
- UI8 is configurable input module with resistive sensors, digital contacts, pulse counters and transmitters with voltage and mA outputs
- AO8 is analog output module with 8 pcs of 0-10V outputs. Selection between automatic and manual state with switches.
- DO4-R module includes four bistable relays.
- DO4-TRS is module with four triac switches from 24VAC up to 240VAC



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 3rd party RTU slave device
- OPC UA communication protocol







OUMAN unit controllers

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



Ouman Ounet

OUNET WEB BASED SCADA FOR BUILDING AUTOMATION

Ounet is a modern web-based SCADA for building automation. It enables seamless 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 ba

Web based SCADA for building automation

204/year/target/1500 points



Technical details

Languages: Finnish, English, Swedish, Estonian

Technology: HTML5

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

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

Customer devices

Operating systems: Windows, Android, IOS, Linux

Recommended screen size: 3,2" and larger

Screen technology: Passive screens or touchscreens

Display modes: Mobile and desktop

FT-SCREEN touch screen panels

- · Cutout installation, fits to covers and doors, IP65
- Capacitive Android touch screen
- · Can be used for browsing ounet.fi or local WEB UI



| FT-SCREEN 10 OMB0517 | iSMA-D-PA10C-B1-EU 10.1" capacitive touch screen | C2 | 907 |
|-------------------------------|--|----|------|
| FT-SCREEN 15 OMB0519 | iSMA-D-PA15C-B1-EU 15.6" capacitive touch screen | C2 | 1099 |
| FT-SCREEN 10 FRAME OMA0640 | Surface mounting frame for 10" touch screen | C2 | 28 |

M-LINK interface converter

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

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

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

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

4G-MOD1

· Modbus TCP / IP



| M-LINK OMA0443 | Interface converter with ACCESS-function | A1 | 644 |
|-------------------|--|----|-----|
| OUMAN 4G-INT | ERNET PRODUCT | | |

Wireless 4G-communication

1G-modem

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

| OMA0594 | 40-11100e111 | Ci | 303 |
|------------------------|--|----|-----|
| ADDITIONAL P | RODUCTS | | |
| ANT2 OMB0009 | Omnidirectional 3G-antena with 8 meter cable | C1 | 182 |
| ANT3 OMB0010 | Directional 3G-antenna 7 meter cable | C1 | 182 |
| ANT-C-10M OMB0012 | 10 meter extension cable for GSM- and 3G-antenna | C1 | 51 |

CHANNEL ADAPTER CARDS AND CONVERTERS

MODBUS AND EH-485 CHANNEL ADAPTER CARDS

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



| MODBUS-100 OMA0208 | Modbus adapter card for EH-105 controller | A1 | 172 |
|-----------------------|---|----|-----|
| MODBUS-200 OMA0003 | Modbus adapter card for EH-200 controller | A1 | 172 |

M-BUS/MODBUS converters

| MBUS-MODBUS-2 OMB0509 | M-Bus/Modbus converter (max. 2 devices) | C2 | 179 |
|---------------------------|--|----|-----|
| MBUS-MODBUS-8 OMB0510 | M-Bus/Modbus converter (max. 8 devices) | C2 | 256 |
| MBUS-MODBUS-80 OMB0511 | M-Bus/Modbus converter (max. 80 devices) | C2 | 508 |

Casing solutions

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

Content:

- M-LINK interface converter pre programmed for Ounet remote control and monitoring, room compensation also included
- · Space reservation for WL-Base gateway unit
- 4G modem
- Casing package with power supply
- Ounet SCADA setup



NOTE!

WL-Base and wireless sensors are sold separately Ounet contract 192€/year not included 4G-L3 subscription 12€/kk not included

| LM1-HC 4G | |
|-----------|--|
| OMA0540 | |

Remote monitoring solution for unit controllers

A1

1396

Temperature sensors and room units

TMO OUTDOOR SENSOR

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



NTC10: For Ouman controllers

Pt1000: For Danfoss and Honeywell controllers

Ni1000LG: For Siemens controllers

| | | | NTC10 | Pt1000 | Ni1000LG |
|-----------------------|----------------|----|-------|--------|----------|
| TMO OMA0015 | Outdoor sensor | A1 | 31 | 33 | 38 |

PTE-LUX PASSIVE TEMPERATURE AND ILLUMINANCE SENSOR

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

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



| | PTE-LUX/NTC10 OMB0504 | Passive temperature and illuminance sensor | A1 | 57 |
|---|--|--|----|----|
| ! | PTE-LUX/NTC20 OMB0505 Passive temperature and illuminance sensor | | A1 | 57 |
| ! | PTE-LUX/Pt1000 OMB0506 | Passive temperature and illuminance sensor | A1 | 60 |
| ! | PTE-LUX/Ni1000 OMB0507 | Passive temperature and illuminance sensor | A1 | 62 |
| ! | PTE-LUX/Ni1000LG | Passive temperature and illuminance sensor | A1 | 62 |

ROOM sensors

The room sensor can be used with Ouman air handling unit controller EH-105, EH200 and EH800 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 $^{\circ}\text{C}.$



| temperatare seep. | | | NTC10 | Pt1000 | Ni1000LG |
|-----------------------|-----------------------------------|----|-------|--------|----------|
| TMR OMA0011 | Room sensor | A1 | 45 | 47 | 49 |
| TMR/SP OMA0310 | Room sensor with fine-tuning knob | A1 | 52 | | |

TMS SURFACE SENSOR

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



| | | | NTC10 | Pt1000 | Ni1000LG |
|--------------------------|--------------------------------------|----|-------|--------|----------|
| TMS OMA0312 | Surface sensor | A1 | 25 | - | - |
| TMS-C/NTC10 OMA0497 | Surface sensor with connector, NTC10 | A1 | 24 | - | - |
| TMS-2M OMA0016 | Surface sensor, connection cable 2 m | A1 | 26 | 38 | 49 |
| TMS-3M OMA0318 | Surface sensor, connection cable 3 m | A1 | 27 | - | - |
| TMS-4M OMA0321 | Surface sensor, connection cable 4 m | A1 | 29 | 43 | 52 |

TMW-C CONNECTION CABLES

| TMW-C CONNECTION CABLE 2 M | 2m connection cable for temperature sensors with connector | A1 | 11 |
|----------------------------|--|----|----|
| TMW-C CONNECTION CABLE 3 M | 3m connection cable for temperature sensors with connector | A1 | 16 |

Sensors

TMW WATER SENSOR

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



NTC10: Pt1000: For Ouman controllers For Danfoss and

Honeywell controllers

Ni1000LG: For Siemens controllers

| PN10. | reasone class tiving and tiving social | | NTC10 | Pt1000 | Ni1000LG |
|---------------------------|---|----|-------|--------|----------|
| TMW-50 OMA0012 | Water sensor, 50 mm, thread R1/2" | A1 | 54 | 63 | 70 |
| TMW-100 OMA0013 | Water sensor, 100 mm, thread R1/2" | A1 | 55 | 64 | 71 |
| TMW-210 OMA0340 | Water sensor, 210 mm, thread R1/2" | A1 | 58 | 67 | 73 |
| TMW-300 OMA0343 | Water sensor, 300 mm (adjustable), thread R1/2" | A1 | 61 | 71 | 77 |



| TMW-50-C/NTC10 OMA0499 | Water sensor with connector, 50 mm, thread R1/2" | A1 | 43 |
|----------------------------------|---|----|----|
| TMW-100-C/NTC10 OMA0500 | Water sensor with connector, 100 mm, thread R1/2" | A1 | 45 |
| TMW-210-C/NTC10 OMA0501 | Water sensor with connector, 210 mm, thread R1/2" | A1 | 47 |

Water sensor and protection pocket 80 mm, thread R1/2"

Water sensor and protection pocket 120 mm, thread R1/2"

Water sensor and protection pocket 200 mm, thread R1/2"

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.



| | NICIO | PLIUUU | MITUUULG |
|----|-------|--------|----------|
| A1 | 82 | 93 | 100 |
| A1 | 83 | 94 | 101 |
| Δ1 | 87 | 99 | 104 |

TMI ICE FROST SENSOR

TMW-81ST

TMW-121ST

TMW-201ST

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). The sensor has 2 m long immersion pipe, which has a diameter of 4 mm.



| NTC10 | Pt1000 | Ni1000LG |
|-------|--------|----------|

| TMI oma0293 Ice frost s | ensor, R 1/4" | A1 | 55 | 63 | 70 |
|-------------------------|---------------|----|----|----|----|
|-------------------------|---------------|----|----|----|----|

TMD DUCT SENSOR

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



| NTC10 | Pt1000 | Ni1000LG |
|-------|--------|----------|
|-------|--------|----------|

| TMD OMA0014 Duct sensor | A1 | 43 | 52 | 58 |
|----------------------------|----|----|----|----|
|----------------------------|----|----|----|----|

PTL-10 WATER PRESSURE SENSOR

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

| PTL-10-V OMB0470 | Water pressure sensor |
|----------------------------|-----------------------|
| | |



| nsor A2 173 | |
|-------------|--|

Ouman wireless sensor system

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

WL-BASE GATEWAY UNIT

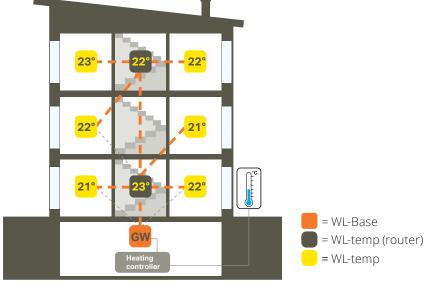
- Linux based
- Access feature
- Built-in Web server to facilitate installation
- Separate installation mode with a short 10 s. measurement interval
- Measurement interval freely adjustable (1-240 min)
- Ethernet, Modbus TCP/IP
- RS-485, Modbus

WIRELESS TEMPERATURE AND HUMIDITY SENSOR WL-TEMP-RH 2.1

- Built-in antenna
- 2 x AA batteries (does not include)
- In addition to serving as a measuring sensor, the same antenna also serves as 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



| OMA0489 | Gateway unit | A1 | 394 |
|--------------------------------|--|----|-----|
| WL-TEMP-RH 2.1 OMA0579 | Wireless temperature and humidity sensor | A1 | 125 |
| WL-SOCKET-ROUTER 2.1 OMA0582 | Fixed mounting router in staircase (on top of the present electric socket) | A1 | 215 |
| WL-TEMP-RH-WHIP 2.1 OMA0583 | Wireless temperature and humidity sensor with 1.8m whip sensor | A1 | 230 |
| WL-TEMP-RH-CO2 2.1 OMA0584 | Wireless temperature and humidity sensor with CO2 measuring. Needs power source. | A1 | 312 |
| WL-TEMP-RH-VOC 2.1 OMA0585 | Wireless temperature and humidity sensor with VOC measuring. Needs power source. | A1 | 305 |
| WL-TEMP-RH-PD OMA0587 | Wireless temperature and humidity sensor with differential pressure measurement. Needs power source. | A1 | 270 |
| WL-ROUTER POWER OMA0430 | Power unit for temperature sensor 5 VDC (needed when operating as a router) | A1 | 24 |
| WL-BASE-POWER OMA0448 | Power unit for WL-Base, 24 VDC plug | C1 | 40 |
| WL-ANT OMB0473 | Antenna for WL-Base, 4m cable, magnetic fixing | C1 | 40 |
| WL-BATTERY-AA-LIT OMB0472 | Battery package for wireless temperature sensors. Includes 10 pcs. AA lithium | | 23 |



! no stock product

Transmitters

DPT DIFFERENTIAL PRESSURE TRANSMITTER

The DPT is an electronic differential pressure transmitter used for measuring low pressures of air and non-aggressive gasses in order to monitor and control pressures in building automation, HVAC and clean room systems. Measuring range can be selected from -100 Pa and 2500 Pa between. Transmitter has an automatic reset.



| DPT OMB0033 | Differential pressure transmitter | A1 | 186 |
|-----------------------|--|----|-----|
| DPT/D OMB0035 | Differential pressure transmitter with display | A1 | 215 |

PDI PRESSURE DIFFERENCE MANOMETER, IP 54

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



| PDI ombo298 Pressure difference manometer MM 200600 | 34 |
|---|----|
|---|----|

PDS PRESSURE DIFFERENCE SWITCH, IP 54

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



| ! | PDS-300 0MB0310 | Pressure difference switch, 40 - 600 Pa, PS600 | A2 | 26 |
|---|--------------------|--|-----------|----|
| | PDS-600 0MB0301 | Pressure difference switch, 40 - 600 Pa, PS600 | A2 | 29 |

PRESSURE TRANSMITTER FOR WATER



| GW/0010 | MLH+CONNECTION CABLE OMA0618 | Pressure transmitter for water, 0-10bar, 0-10V, Thread G1/4 | A1 | 158 | |
|---------|------------------------------|---|----|-----|--|
|---------|------------------------------|---|----|-----|--|

5-CDPT 5-CHANNEL DIFFERENTIAL PRESSURE TRANSMITTER

The 5-CDPT is a differential pressure transmitter with 5 measurement channel and communicates via the Modbus RTU bus.



| 5-CDPT OMA0635 | 5-channel differential pressure transmitter | A1 | 560 |
|--------------------------|---|----|-----|
|--------------------------|---|----|-----|

2-way valves for district heating

VD 2-WAY VALVES FOR DISTRICT HEATING

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

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



*)

| VD215-0.25 OMA0386 | DN 15 | Kv 0.25 | External thread R 3/4", flush surface with seal | L15UK-1/2" or L15HI | АЗ | 192 |
|------------------------------|-------|---------|--|-------------------------------|----|-----|
| VD215-0.4 OMA0387 | DN 15 | Kv 0.4 | External thread R 3/4", flush surface with seal | L15UK-1/2" or L15HI | A3 | 192 |
| VD215-0.63 OMA0388 | DN 15 | Kv 0.63 | External thread R 3/4", flush surface with seal | L15UK-1/2" or L15Hl | АЗ | 192 |
| VD215-1.0 OMA0389 | DN 15 | Kv 1.0 | External thread R ¾", flush surface with seal | L15UK-1/2" or L15HI | АЗ | 192 |
| VD215-1.6 OMA0390 | DN 15 | Kv 1.6 | External thread R ¾", flush surface with seal | L15UK-1/2" or L15HI | АЗ | 192 |
| VD220-2.5 OMA0391 | DN 20 | Kv 2.5 | External thread R 1", flush surface with seal | L20UK-3/4", L20SK-1/2", L20HI | АЗ | 275 |
| VD220-4.0 OMA0392 | DN 20 | Kv 4.0 | External thread R 1", flush surface with seal | L20UK-3/4", L20SK-1/2", L20HI | АЗ | 275 |
| VD225-6.3 OMA0393 | DN 25 | Kv 6.3 | External thread R 11/4", flush surface with seal | L25UK-1", L25SK, L25HI | АЗ | 367 |
| VD232-10 OMA0394 | DN 32 | Kv 10 | External thread R 1½", flush surface with seal | L25SK-1" or L32Hl | АЗ | 478 |

V5016A... 2-WAY VALVES FOR DISTRICT HEATING

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

Pressure balanced district heating valve.

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



*

| V5016A1010 HON258 | DN 15 | Kv 0,4 | Flanged (length 130 mm) | A3 | 631 |
|----------------------|--------|---------|-------------------------|-----------|------|
| V5016A1028 HON259 | DN 15 | Kv 0,63 | Flanged (length 130 mm) | АЗ | 631 |
| V5016A1036 HON260 | DN 15 | Kv 1,0 | Flanged (length 130 mm) | A3 | 631 |
| V5016A1044 HON261 | DN 15 | Kv 1,6 | Flanged (length 130 mm) | АЗ | 631 |
| V5016A1051 | DN 15 | Kv 2,5 | Flanged (length 130 mm) | АЗ | 631 |
| V5016A1069 HON263 | DN 15 | Kv 4,0 | Flanged (length 130 mm) | АЗ | 631 |
| V5016A1077 HON264 | DN 20 | Kv 6,3 | Flanged (length 150 mm) | АЗ | 659 |
| V5016A1085 HON265 | DN 25 | Kv 10 | Flanged (length 160 mm) | АЗ | 674 |
| V5016A1093 HON266 | DN 32 | Kv 16 | Flanged (length 180 mm) | АЗ | 791 |
| V5016A1101 HON267 | DN 40 | Kv 25 | Flanged (length 200 mm) | АЗ | 1075 |
| V5016A1119 HON268 | DN 50 | Kv 40 | Flanged (length 230 mm) | A3 | 1363 |
| V5016A1127 HON269 | DN 65 | Kv 63 | Flanged (length 290 mm) | АЗ | 1816 |
| V5016A1135 HON270 | DN 80 | Kv 100 | Flanged (length 310 mm) | A3 | 2149 |
| V5016A1143 HON076 | DN 100 | Kv 160 | Flanged (length 350 mm) | АЗ | 2390 |
| V5016A1150 HON077 | DN 125 | Kv 250 | Flanged (length 400 mm) | АЗ | 3649 |
| V5016A1168 HON078 | DN 150 | Kv 360 | Flanged (length 480 mm) | АЗ | 3924 |

[!] no stock product

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

2-way valves for district heating

V5025A... 2-WAY VALVES FOR DISTRICT HEATING

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

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



| | | | | | | | ") |
|---|----------------------|--------|---------|--------------------|--------------|----|------|
| ! | V5025A1019 HON079 | DN 15 | Kv 0.4 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 738 |
| ! | V5025A1027 | DN 15 | Kv 0.63 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 738 |
| ! | V5025A1035 HON081 | DN 15 | Kv 1.0 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 682 |
| ! | V5025A1043 HON082 | DN 15 | Kv 1.6 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 680 |
| ! | V5025A1050 HON083 | DN 15 | Kv 2.5 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 701 |
| ! | V5025A1068 HON084 | DN 15 | Kv 4.0 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 701 |
| ! | V5025A1076 HON085 | DN 20 | Kv 6.3 | Flanged (L=150 mm) | Stroke 20 mm | АЗ | 730 |
| ! | V5025A1084 HON086 | DN 25 | Kv 10 | Flanged (L=160 mm) | Stroke 20 mm | АЗ | 749 |
| ! | V5025A1092 HON087 | DN 32 | Kv 16 | Flanged (L=180 mm) | Stroke 20 mm | АЗ | 923 |
| ! | V5025A1100 HON089 | DN 40 | Kv 25 | Flanged (L=200 mm) | Stroke 20 mm | АЗ | 1127 |
| ! | V5025A1118 HON090 | DN 50 | Kv 40 | Flanged (L=230 mm) | Stroke 20 mm | АЗ | 1240 |
| ! | V5025A1126 HON091 | DN 65 | Kv 63 | Flanged (L=290 mm) | Stroke 20 mm | АЗ | 1550 |
| ! | V5025A1134 HON092 | DN 80 | Kv 100 | Flanged (L=310 mm) | Stroke 20 mm | АЗ | 2108 |
| ! | V5025A1142 HON093 | DN 100 | Kv 160 | Flanged (L=350 mm) | Stroke 38 mm | АЗ | 2490 |
| ! | V5025A1159 HON094 | DN 125 | Kv 250 | Flanged (L=400 mm) | Stroke 38 mm | АЗ | 3736 |
| ! | V5025A1167 HON095 | DN 150 | Kv 360 | Flanged (L=480 mm) | Stroke 38 mm | АЗ | 4375 |
| | | | | | | | |

V5049A... 2-WAY VALVES FOR DISTRICT HEATING

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

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



| ! | V5049A2027 HON108 | DN 15 | Kv 0.25 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 1636 |
|---|----------------------|--------|---------|--------------------|--------------|----|------|
| ! | V5049A2035 HON109 | DN 15 | Kv 0.40 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 1697 |
| ! | V5049A2043 HON110 | DN 15 | Kv 0.63 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 1613 |
| ! | V5049A1425 HON096 | DN 15 | Kv 1.0 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 1634 |
| ! | V5049A1433 HON097 | DN 15 | Kv 1.6 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 1596 |
| ! | V5049A1441 HON098 | DN 15 | Kv 2.5 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 1614 |
| ! | V5049A1458 HON099 | DN 15 | Kv 4.0 | Flanged (L=130 mm) | Stroke 20 mm | АЗ | 1530 |
| ! | V5049A1508 HON100 | DN 20 | Kv 6.3 | Flanged (L=150 mm) | Stroke 20 mm | АЗ | 1705 |
| ! | V5049A1565 HON101 | DN 25 | Kv 10 | Flanged (L=160 mm) | Stroke 20 mm | АЗ | 1696 |
| ! | V5049A1573 HON102 | DN 32 | Kv 16 | Flanged (L=180 mm) | Stroke 20 mm | АЗ | 1924 |
| ! | V5049A1581 HON103 | DN 40 | Kv 25 | Flanged (L=200 mm) | Stroke 20 mm | АЗ | 2088 |
| ! | V5049A1599 HON104 | DN 50 | Kv 40 | Flanged (L=230 mm) | Stroke 20 mm | АЗ | 2261 |
| ! | V5049A1607 HON105 | DN 65 | Kv 63 | Flanged (L=290 mm) | Stroke 20 mm | АЗ | 2767 |
| ! | V5049A1615 HON106 | DN 80 | Kv 100 | Flanged (L=310 mm) | Stroke 38 mm | АЗ | 5012 |
| ! | V5049A1623 HON107 | DN 100 | Kv 160 | Flanged (L=350 mm) | Stroke 38 mm | АЗ | 5466 |

! no stock product

2-way valves for heating and ventilation

VSMF-2... 2-WAY VALVE

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

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

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



| | | | | | CONNECTION SETS: | | | *) |
|---|-------------------------|-------|---------|--------------------------|-----------------------------|-------------------|----|-----|
| | VSMF-215-0.25 HON295 | DN 15 | Kv 0.25 | External thread R ½" | L15UK3/8" | | АЗ | 54 |
| | VSMF-215-0.4 HON296 | DN 15 | Kv 0.4 | External thread R ½" | L15UK3/8" | | АЗ | 54 |
| | VSMF-215-0.63 HON297 | DN 15 | Kv 0.63 | External thread R ½" | L15UK3/8" | | АЗ | 54 |
| | VSMF-215-1.0 HON298 | DN 15 | Kv 1.0 | External thread R ½" | L15UK3/8" | | АЗ | 55 |
| | VSMF-215-1.6 HON299 | DN 15 | Kv 1.6 | External thread R ½" | L15UK3/8" | | АЗ | 55 |
| ! | VSMF-215-2.5 HON222 | DN 15 | Kv 2.5 | External thread R ½" | L15UK3/8" | | АЗ | 56 |
| | VSMF-220-2.5 HON300 | DN 20 | Kv 2.5 | External thread R ¾" | L15UK-1/2", L15HI | | АЗ | 84 |
| ! | VSMF-220-2.5E HON225 | DN 20 | Kv 2.5 | External thread R ¾" | L15UK-1/2", L15HI | | АЗ | 82 |
| | VSMF-220-4.0 HON301 | DN 20 | Kv 4.0 | External thread R ¾" | L15UK-1/2", L15HI | | АЗ | 85 |
| | VSMF-225-6.3P HON302 | DN 25 | Kv 6.3 | External thread R 1 1/4" | L25UK-1", L25SK-3/4", L25HI | Pressure balanced | АЗ | 200 |
| | VSMF-225-8.0P HON303 | DN 25 | Kv 8.0 | External thread R 1 1/4" | L25UK-1", L25SK-3/4", L25HI | Pressure balanced | АЗ | 203 |

V5822A... 2-WAY VALVE

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



| | | | | CONNECTION SETS: | | *) |
|----------------------|-------|---------|--|------------------|----|----|
| V5822A1006 HON130 | DN 15 | Kv 0.16 | external thread R1/2" , stroke 6,5 mm | ACN-15C/S/T | АЗ | 59 |
| V5822A1014 HON131 | DN 15 | Kv 0.25 | external thread R1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 59 |
| V5822A1022 HON132 | DN 15 | Kv 0.40 | external thread R1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 59 |
| V5822A1030 HON133 | DN 15 | Kv 0.63 | external thread R1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 59 |
| V5822A1048 HON134 | DN 15 | Kv 1.0 | external thread R1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 59 |
| V5822A1055 HON135 | DN 15 | Kv 1.6 | external thread R1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 59 |
| V5822A1063 HON136 | DN 20 | Kv 2.5 | external thread R3/4", stroke 6,5 mm | ACN-20C/S/T | АЗ | 84 |
| V5822A1071 HON137 | DN 20 | Kv 4.0 | external thread R3/4", stroke 6,5 mm | ACN-20C/S/T | АЗ | 84 |
| V5822A4000 HON138 | DN 15 | Kv 1.6 | external thread R1/2" , stroke 2,5 mm, On/Off -control | ACN-15C/S/T | АЗ | 34 |
| V5822A4018 HON139 | DN 20 | Kv 2.5 | external thread R3/4", stroke 2,5 mm, On/Off -control | ACN-20C/S/T | АЗ | 59 |

[!] no stock product

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

*)

2-way valves for heating and ventilation

V5832A... 2-WAY VALVE

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



|--|

| ! | V5832A1004 HON162 | DN 15 | Kv 0.16 | external thread R1/2" | L15UK-3/8" | АЗ | 53 |
|---|----------------------|-------|---------|--|-------------------|----|----|
| ! | V5832A1012 HON163 | DN 15 | Kv 0.25 | external thread R1/2" | L15UK-3/8" | АЗ | 53 |
| ! | V5832A1020 HON164 | DN 15 | Kv 0.40 | external thread R1/2" | L15UK-3/8" | АЗ | 53 |
| ! | V5832A1038 HON165 | DN 15 | Kv 0.63 | external thread R1/2" | L15UK-3/8" | АЗ | 53 |
| ! | V5832A1046 HON166 | DN 15 | Kv 1.0 | external thread R1/2" | L15UK-3/8" | АЗ | 53 |
| ! | V5832A1053 HON167 | DN 15 | Kv 1.6 | external thread R1/2" | L15UK-3/8" | АЗ | 53 |
| ! | V5832A1061 HON168 | DN 20 | Kv 2.5 | external thread R3/4" | L15UK-1/2", L15HI | АЗ | 79 |
| ! | V5832A1079 HON169 | DN 20 | Kv 4.0 | external thread R3/4" | L15UK-1/2", L15HI | АЗ | 79 |
| ! | V5832A4008 HON170 | DN 15 | Kv 1.6 | external thread R1/2" On/Off -control | L15UK-3/8" | АЗ | 30 |
| ! | V5832A4016 HON171 | DN 20 | Kv 2.5 | external thread R3/4", On/Off -control | L15UK-1/2", L15HI | АЗ | 53 |

V5328A... 2-WAY VALVE, FLANGED

Cast iron, PN16 For heating and ventilation



*)

| 1 | V5328A1138 HON123 | DN 15 | Kv 0,25 | Flanged (L=130mm) | Stroke 20 mm | Tmax 170°C | АЗ | 475 |
|---|-----------------------------|--------|---------|-------------------|--------------|------------|----|------|
| ! | V5328A1146 HON124 | DN 15 | Kv 0,4 | Flanged (L=130mm) | Stroke 20 mm | Tmax 170°C | АЗ | 478 |
| ! | V5328A1153 HON125 | DN 15 | Kv 0,63 | Flanged (L=130mm) | Stroke 20 mm | Tmax 170°C | АЗ | 480 |
| ! | V5328A1005 HON114 | DN 15 | Kv 1,0 | Flanged (L=130mm) | Stroke 20 mm | Tmax 170°C | АЗ | 482 |
| ! | V5328A1013 HON115 | DN 15 | Kv 1,6 | Flanged (L=130mm) | Stroke 20 mm | Tmax 170°C | АЗ | 487 |
| ! | V5328A1021 HON116 | DN 15 | Kv 2,5 | Flanged (L=130mm) | Stroke 20 mm | Tmax 170°C | АЗ | 492 |
| 1 | V5328A1039 HON117 | DN 15 | Kv 4,0 | Flanged (L=130mm) | Stroke 20 mm | Tmax 170°C | АЗ | 496 |
| ! | V5328A1047 HON118 | DN 20 | Kv 4,0 | Flanged (L=150mm) | Stroke 20 mm | Tmax 170°C | АЗ | 498 |
| 1 | V5328A1054 HON119 | DN 20 | Kv 6,3 | Flanged (L=150mm) | Stroke 20 mm | Tmax 170°C | АЗ | 504 |
| ! | V5328A1062 HON120 | DN 25 | Kv 10 | Flanged (L=160mm) | Stroke 20 mm | Tmax 170°C | A3 | 516 |
| ! | V5328A1070 HON121 | DN 32 | Kv 16 | Flanged (L=180mm) | Stroke 20 mm | Tmax 170°C | АЗ | 665 |
| ! | V5328A1088 HON122 | DN 40 | Kv 25 | Flanged (L=200mm) | Stroke 20 mm | Tmax 170°C | A3 | 812 |
| ! | V5328A1096 HON271 | DN 50 | Kv 40 | Flanged (L=230mm) | Stroke 20 mm | Tmax 170°C | АЗ | 1039 |
| 1 | V5328A1104 HON272 | DN 65 | Kv 63 | Flanged (L=290mm) | Stroke 20 mm | Tmax 170°C | АЗ | 1220 |
| ! | V5328A1112 HON273 | DN 80 | Kv 100 | Flanged (L=310mm) | Stroke 20 mm | Tmax 170°C | АЗ | 1643 |
| ! | V5328A1195 HON126 | DN 100 | Kv 160 | Flanged (L=350mm) | Stroke 38 mm | Tmax 200°C | АЗ | 1988 |
| ! | V5328A1203 HON127 | DN 125 | Kv 250 | Flanged (L=400mm) | Stroke 38 mm | Tmax 200°C | АЗ | 2986 |
| ! | V5328A1211 HON128 | DN 150 | Kv 360 | Flanged (L=480mm) | Stroke 38 mm | Tmax 200°C | АЗ | 3713 |

VBG2... 2-WAY CONTROL BALL VALVE

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



2-way valves for heating and ventilation

V5832B... 2-WAY VALVE

For the control of hot or chilled water for fan coil units, small reheaters/recoolers in electric/ electronic temperature control systems. Can be used in combination with actuators M31C150 and M31A150.

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



CONNECTION SETS:

*)

| V5832B2075 HON286 | DN 25 | Kv 4.0 | External thread R 11/2", flush surface with seal | L25SK-1" | A3 | 208 |
|----------------------|-------|--------|--|--------------|----|-----|
| V5832B2083 HON287 | DN 25 | Kv 6.3 | External thread R 1½", flush surface with seal | L25SK-1" | A3 | 214 |
| V5832B2091 HON288 | DN 25 | Kv 10 | External thread R 1½", flush surface with seal | L25SK-1" | A3 | 214 |
| V5832B2109 HON289 | DN 32 | Kv 16 | External thread R 2", flush surface with seal | L32SK-1 1/4" | A3 | 282 |
| V5832B2117 HON290 | DN 40 | Kv 25 | External thread R 2¼", flush surface with seal | L40SK-1 1/2" | A3 | 377 |

V5011R 2-WAY VALVE

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



*)

| ! | V5011R1000 HON241 | DN 15 | Kv 0.63 | Internal thread, R 1/2" | АЗ | 217 |
|---|----------------------|-------|---------|---------------------------|----|-----|
| ! | V5011R1018 HON242 | DN 15 | Kv 1.0 | Internal thread, R 1/2" | A3 | 217 |
| | V5011R1026 HON243 | DN 15 | Kv 1,6 | Internal thread, R 1/2" | АЗ | 252 |
| | V5011R1034 HON244 | DN 15 | Kv 2,5 | Internal thread, R 1/2" | A3 | 223 |
| | V5011R1042 HON245 | DN 15 | Kv 4 | Internal thread, R 1/2" | АЗ | 223 |
| | V5011R1059 HON246 | DN 20 | Kv 6,3 | Internal thread, R 3/4" | АЗ | 239 |
| | V5011R1067 HON247 | DN 25 | Kv 10 | Internal thread, R 1" | АЗ | 254 |
| | V5011R1075 HON248 | DN 32 | Kv 16 | Internal thread, R 1 1/4" | АЗ | 304 |
| | V5011R1083 HON249 | DN 40 | Kv 25 | Internal thread, R 1 1/2" | АЗ | 367 |
| | V5011R1091 HON250 | DN 50 | Kv 40 | Internal thread, R 2" | АЗ | 454 |

R20... 2-WAY BALL VALVES

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



*)

| R2015-1-S1 OMB0325 | DN 15 | Kv 1,0 | Internal thread 1/2", replace the valve R210 | A2 | 79 |
|--------------------------------|-------|--------|--|----|-----|
| R2015-1P6-S1 OMB0324 | DN 15 | Kv 1,6 | Internal thread 1/2", replace the valve R211 | A2 | 79 |
| R2015-2P5-S1 OMB0326 | DN 15 | Kv 2,5 | Internal thread 1/2", replace the valve R212 | A2 | 79 |
| R2020-4-S2 OMB0328 | DN 20 | Kv 4,0 | Internal thread 3/4", replace the valve R217 | A2 | 90 |
| R2020-6P3-S2 OMB0329 | DN 20 | Kv 6,3 | Internal thread 3/4", replace the valve R218 | A2 | 90 |
| R2020-8P6-S2 OMB0330 | DN 20 | Kv 8,6 | Internal thread 3/4", replace the valve R219 | A2 | 90 |
| R2025-10-S2 OMB0331 | DN 25 | Kv 10 | Internal thread 1", replace the valve R223 | A2 | 109 |
| R2025-16-S2 OMB0332 | DN 25 | Kv 16 | Internal thread 1", replace the valve R224 | A2 | 109 |

! no stock product

VSMF-3... 3-WAY VALVE

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

Applications: For heating and ventilation

Suitable for actuators: M31C150, M31A150 and M41A15

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



CONNECTION SETS:

| | | | | | | |) |
|---|--------------------------------|-------|---------|---|-----------------------------|----|-----|
| ! | VSMF-315-0.25 HON223 | DN 15 | Kv 0.25 | External thread R 1/2", flush surface with seal | L15UK-3/8" | АЗ | 73 |
| | VSMF-315-0.4 HON304 | DN 15 | Kv 0,4 | External thread R 1/2", flush surface with seal | L15UK-3/8" | АЗ | 72 |
| | VSMF-315-0.63 HON305 | DN 15 | Kv 0,63 | External thread R 1/2", flush surface with seal | L15UK-3/8" | АЗ | 76 |
| | VSMF-315-1.0 HON306 | DN 15 | Kv 1,0 | External thread R 1/2", flush surface with seal | L15UK-3/8" | АЗ | 80 |
| | VSMF-315-1.6 HON307 | DN 15 | Kv 1,6 | External thread R 1/2", flush surface with seal | L15UK-3/8" | АЗ | 76 |
| ! | VSMF-315-2.5 HON224 | DN 15 | Kv 2.5 | External thread R 1/2", flush surface with seal | L15UK-3/8" | АЗ | 82 |
| | VSMF-320-2.5 HON308 | DN 20 | Kv 2.5 | External thread R 3/4", flush surface with seal | L15UK-1/2", L15HI | АЗ | 86 |
| | VSMF-320-4.0 HON309 | DN 20 | Kv 4 | External thread R 3/4", flush surface with seal | L15UK-1/2", L15HI | АЗ | 88 |
| | VSMF-325-6.3P HON310 | DN 25 | Kv 6.3 | External thread R 1 1/4", flush surface with seal | L25UK-1", L25SK-3/4", L25HI | АЗ | 224 |
| | VSMF-325-8.0P | DN 25 | Kv 8.0 | External thread R 1 1/4", flush surface with | L25UK-1", L25SK-3/4", L25HI | АЗ | 226 |

V5833A... 3-WAY VALVE

Red metal, PN16

Applications: For heating, ventilation and domestic hot water

Suitable for motors: M7410C1007 and M7410E1002 (DN15, DN20), and M31C150 and M31A150

(DNZ5+)

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



CONNECTION SETS: *

| ! | V5833A1003 HON172 | DN 15 | Kv A-AB 0.25 B-AB 0.16 | External thread R1/2" , Tmax 120°C, stroke 6,5 mm | L15UK-3/8" | АЗ | 90 |
|---|----------------------|-------|------------------------|---|-------------------------------|----|-----|
| ! | V5833A1011 HON173 | DN 15 | Kv A-AB 0.4 B-AB 0.25 | External thread R1/2" , Tmax 120°C, stroke 6,5 mm | L15UK-3/8" | АЗ | 90 |
| ! | V5833A1029 HON174 | DN 15 | Kv A-AB 0.63 B-AB 0.4 | External thread R1/2" , Tmax 120°C, stroke 6,5 mm | L15UK-3/8" | АЗ | 90 |
| ! | V5833A1037 HON175 | DN 15 | Kv A-AB 1.0 B-AB 0.63 | External thread R1/2" , Tmax 120°C, stroke 6,5 mm | L15UK-3/8" | АЗ | 90 |
| ! | V5833A1045 HON176 | DN 15 | Kv A-AB 1.6 B-AB 1.0 | External thread R1/2" , Tmax 120°C, stroke 6,5 mm | L15UK-3/8" | АЗ | 90 |
| ! | V5833A4007 | DN 15 | Kv A-AB 1.6 B-AB 1.6 | External thread R1/2", Tmax 120°C, stroke 2,5 mm, On/Off -control | L15UK-3/8" | АЗ | 61 |
| ! | V5833A3009 HON178 | DN 20 | Kv A-AB 2.5 B-AB 2.5 | External thread R3/4" , Tmax 120°C, stroke 6,5 mm | L15UK-1/2", L15HI | АЗ | 124 |
| ! | V5833A4015 HON181 | DN 20 | Kv A-AB 2.5 B-AB 2.5 | External thread R3/4", Tmax 120°C, stroke 2,5 mm, On/Off -control | L15UK-1/2", L15HI | АЗ | 80 |
| ! | V5833A3017 HON179 | DN 20 | Kv A-AB 4.0 B-AB 4.0 | External thread R3/4" , Tmax 120°C, stroke 6,5 mm | L15UK-1/2", L15HI | АЗ | 144 |
| ! | V5833A2076 HON177 | DN 25 | Kv 4.0 | External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced | L25SK-1", L32HI | АЗ | 214 |
| | V5833A2084 HON291 | DN 25 | Kv 6.3 | External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced | 25SK-1", L32HI | АЗ | 198 |
| | V5833A2092 HON292 | DN 25 | Kv 10 | External thread R1 1/2", Tmax 130°C, stroke 6,5 mm, Pressure balanced | 25SK-1", L32HI | АЗ | 198 |
| | V5833A2100 HON293 | DN 32 | Kv 16 | External thread R2" , Tmax 130°C, stroke 6,5 mm, Pressure balanced | L32SK-1 1/4" | АЗ | 245 |
| | V5833A2118 HON294 | DN 40 | Kv 25 | External thread R2 1/4", Tmax 130°C, stroke 6,5 mm, Pressure balanced | L40UK-1 1/2", L40SK-1 1/2" | АЗ | 329 |
| | | | | | | | |

[!] no stock product

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

V5013R... 3-WAY VALVE

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



| V5013R1032 HON251 | DN 15 | Kv 2.5 | Internal thread, R 1/2" | АЗ | 239 |
|----------------------|-------|--------|---------------------------|----|-----|
| V5013R1040 HON252 | DN 15 | Kv 4 | Internal thread, R 1/2" | АЗ | 239 |
| V5013R1057 HON253 | DN 20 | Kv 6.3 | Internal thread, R 3/4" | АЗ | 251 |
| V5013R1065 HON254 | DN 25 | Kv 10 | Internal thread, R 1" | АЗ | 269 |
| V5013R1073 HON255 | DN 32 | Kv 16 | Internal thread, R 1 1/4" | АЗ | 320 |
| V5013R1081 HON256 | DN 40 | Kv 25 | Internal thread, R 1 1/2" | АЗ | 384 |
| V5013R1099 HON257 | DN 50 | Kv 40 | Internal thread, R 2" | АЗ | 500 |

V5013E... 3-WAY VALVE

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

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

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



| | | | | | CONNECTION SETS: | | ^) |
|---|----------------------|-------|--------|---------------------------|------------------------------|----|-----|
| ! | V5013E1063 HON069 | DN 15 | Kv 2.5 | External thread, G1-1/8" | - | АЗ | 220 |
| ! | V5013E1071 HON070 | DN 15 | Kv 4 | External thread,, G1-1/8" | - | АЗ | 220 |
| ! | V5013E1089 HON071 | DN 20 | Kv 6.3 | External thread,, G1-1/4" | L25UK-1", L25SK-3/4", LI25HI | АЗ | 220 |
| ! | V5013E1097 HON072 | DN 25 | Kv 10 | External thread,, G1-1/2" | L25SK-1" | АЗ | 227 |
| ! | V5013E1105 HON073 | DN 32 | Kv 16 | External thread,, G2" | L32SK-1/4" | АЗ | 274 |
| ! | V5013E1113 HON074 | DN 40 | Kv 25 | External thread,, G2-1/4" | L40UK-1 1/2", L40SK-1 1/2" | АЗ | 290 |
| ! | V5013E1121 | DN 50 | Kv 40 | External thread,, G2-3/4" | - | АЗ | 414 |

V5329... 3-WAY VALVE

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



| ! | V5329A1004 HON312 | DN 15 | Kv 2.5 | Flanged | A3 | 622 |
|---|----------------------|-------|--------|---------|----|------|
| ! | V5329A1012 HON129 | DN 15 | Kv 4.0 | Flanged | АЗ | 641 |
| ! | V5329A1020 HON313 | DN 20 | Kv 6.3 | Flanged | A3 | 586 |
| ! | V5329A1038 HON274 | DN 25 | Kv 10 | Flanged | АЗ | 672 |
| ! | V5329A1046 HON275 | DN 32 | Kv 16 | Flanged | A3 | 728 |
| ! | V5329A1053 HON276 | DN 40 | Kv 25 | Flanged | A3 | 718 |
| | V5329A1061 HON277 | DN 50 | Kv 40 | Flanged | A3 | 826 |
| | V5329A1079 HON278 | DN 65 | Kv 63 | Flanged | АЗ | 954 |
| | V5329A1087 HON279 | DN 80 | Kv 100 | Flanged | A3 | 1444 |

V5823A... 3-WAY VALVE

Brass, PN16, T max 120 $^{\circ}$ C, HW-actuators with stroke length 6.5mm or 2.5 mm Applications: heating and ventilation



*)

CONNECTION SETS:

| ! | V5823A2003 HON140 | DN 15 | Kv 0.25 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 95 |
|---|----------------------|-------|---------|--|-------------|----|-----|
| ! | V5823A2011 HON141 | DN 15 | Kv 0.40 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 95 |
| ! | V5823A2029 HON142 | DN 15 | Kv 0.63 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 95 |
| ! | V5823A2037 HON143 | DN 15 | Kv 1.0 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | A3 | 95 |
| ! | V5823A2045 HON144 | DN 15 | Kv 1.6 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 95 |
| ! | V5823A2052 HON145 | DN 20 | Kv 2.5 | External thread, R 3/4", stroke 6,5 mm | ACN-20C/S/T | A3 | 110 |
| ! | V5823A2060 HON146 | DN 20 | Kv 4.0 | External thread, R 3/4", stroke 6,5 mm | ACN-20C/S/T | АЗ | 110 |
| ! | V5823A2151 HON147 | DN 20 | Kv 2.5 | External thread, R 3/4", stroke 6,5 mm, sp 240 kPa/ -kPa | ACN-20C/S/T | АЗ | 134 |
| ! | V5823A2169 HON148 | DN 20 | Kv 4.0 | External thread, R 3/4", stroke 6,5 mm, sp 240 kPa/ -kPa | ACN-20C/S/T | АЗ | 134 |
| ! | V5823A4009 HON149 | DN 15 | Kv 1.6 | External thread, R 1/2", stroke 2,5 mm, On/Off -control | ACN-15C/S/T | АЗ | 59 |
| ! | V5823A4017 HON150 | DN 20 | Kv 2.5 | External thread, R 3/4", stroke 2,5 mm, On/Off -control | ACN-20C/S/T | АЗ | 79 |

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



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CONNECTION SETS:

| ! | V5823C2009 HON151 | DN 15 | Kv A-AB 0.25 B-AB 0.16 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 103 |
|---|----------------------|-------|------------------------|--|-------------|----|-----|
| ! | V5823C2017 HON152 | DN 15 | Kv A-AB 0.4 B-AB 0.25 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 103 |
| ! | V5823C2025 HON153 | DN 15 | Kv A-AB 0.63 B-AB 0.4 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 103 |
| ! | V5823C2033 HON154 | DN 15 | Kv A-AB 1.0 B-AB 0.63 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 103 |
| ! | V5823C2041 HON155 | DN 15 | Kv A-AB 1.6 B-AB 1.0 | External thread, R 1/2", stroke 6,5 mm | ACN-15C/S/T | АЗ | 103 |
| ! | V5823C2058 HON156 | DN 20 | Kv A-AB 2.5 B-AB 1.6 | External thread, R 3/4", stroke 6,5 mm | ACN-20C/S/T | АЗ | 133 |
| ! | V5823C2066 HON157 | DN 20 | Kv A-AB 4.0 B-AB 2.5 | External thread, R 3/4", stroke 6,5 mm | ACN-20C/S/T | АЗ | 133 |
| ! | V5823C2157 HON158 | DN 20 | Kv A-AB 2.5 B-AB 1.6 | External thread, R 3/4", stroke 6,5 mm, sp 240 kPa | ACN-20C/S/T | АЗ | 133 |
| ! | V5823C2165 HON159 | DN 20 | Kv A-AB 4.0 B-AB 2.5 | External thread, R 3/4", stroke 6,5 mm, sp 240 kPa | ACN-20C/S/T | АЗ | 133 |
| ! | V5823C4005 HON160 | DN 15 | Kv 1.6 | External thread, R 1/2", stroke 2,5 mm | ACN-15C/S/T | АЗ | 67 |
| ! | V5823C4013 HON161 | DN 20 | Kv 2.5 | External thread, R 3/4", stroke 2,5 mm | ACN-20C/S/T | АЗ | 82 |

V5050A... 3-WAY VALVE

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



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| ! | V5050A1090 HON111 | DN 100 | Kv 160 | Flanged | АЗ | 2683 |
|---|----------------------|--------|--------|---------|----|------|
| ! | V5050A1108 HON112 | DN 125 | Kv 250 | Flanged | АЗ | 3548 |
| ! | V5050A1116 HON113 | DN 150 | Kv 360 | Flanged | АЗ | 3881 |

R30... 3-WAY BALL VALVE

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





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| A2 A2 | 138 |
|----------|-----|
| A2 | |
| | 138 |
| A2 | 138 |
| A2 | 138 |
| A2 | 153 |
| A2 | 153 |
| A2 | 193 |
| A2 | 272 |
| | A2 |

VBG3... 3-WAY CONTROL BALL VALVE

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

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



Connection sets

EXTERNAL THREADED CONNECTIONS

All connection sets made of zinc covering durability brass.



| L15UK-3/8" OMB0183 | DN 15 | External threaded R 3/8", Internal thread to valve R ½" | A1 | 14 |
|-------------------------------|-------|--|----|----|
| L15UK-1/2" OMB0120 | DN 15 | External threaded R ½", Internal thread to valve R ¾" | A1 | 34 |
| ACN-15T OMB0190 | DN 15 | External threaded R 3/8", tapered | A1 | 18 |
| L20UK-3/4" OMB0121 | DN 20 | External threaded R ¾", Internal thread to valve R 1" | A1 | 38 |
| L25UK-1" OMB0122 | DN 25 | External threaded R 1", Internal thread to valve R 11/4" | A1 | 27 |
| L40UK-1 1/2" OMB188 | DN 40 | External threaded R 1½", Internal thread to valve R 2½" | A1 | 56 |

INTERNAL THREADED CONNECTIONS

All connection sets made of zinc covering durability brass.



| L20SK-1/2"-1/2" OMA0198 | DN 20 | Internal thread R ½", Internal thread to valve R 1" | A1 | 24 |
|-----------------------------------|-------|---|----|----|
| L25SK-1" OMB0185 | DN 25 | Internal thread R 1", Internal thread to valve R 1½" | A1 | 28 |
| L25SK-3/4" OMA0200 | DN 25 | Internal thread R 1", Internal thread to valve R 1 1/4" | A1 | 60 |
| L32SK-1 1/4" OMB0187 | DN 32 | Internal thread R 1¼", Internal thread to valve R 2" | A1 | 48 |
| L40SK-1 1/2" OMB0189 | DN 40 | Internal thread R 1½", Internal thread to valve R 2½" | A1 | 59 |

WELDINGS

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



| L15HI OMA0196 | DN 15 | Welding ½", Internal thread to valve R ¾" | A1 | 50 |
|-------------------------|-------|--|----|----|
| L20HI OMA0197 | DN 20 | Welding ¾", Internal thread to valve R 1" | A1 | 60 |
| L25HI OMA0199 | DN 25 | Welding 1", Internal thread to valve R 1¼" | A1 | 65 |

SPARE INSERTS OF VD VALVES

| VDP-0.25 OMA0395 | VD-0,25 spare inserts | C2 | 170 |
|----------------------------|-----------------------|----|-----|
| VDP-0.4 OMA0396 | VD-0,4 spare inserts | C2 | 170 |
| VDP-0.63 OMA0397 | VD-0,63 spare inserts | C2 | 170 |
| VDP-1.0 OMA0398 | VD-1,0 spare inserts | C2 | 170 |
| VDP-1.6 OMA0399 | VD-1,6 spare inserts | C2 | 170 |
| VDP-2.5 OMA0401 | VD-12,5 spare inserts | C2 | 170 |
| VDP-4.0 OMA0402 | VD-4,0 spare inserts | C2 | 180 |
| VDP-6.3 OMA0403 | VD-6,3 spare inserts | C2 | 210 |
| VDP-10 OMA0400 | VD-10 spare inserts | C2 | 340 |

STEM SEALS

| BOKSIT HW10MM HON227 | Set of stem seals for V5011/13 valves | C2 | 166 |
|---------------------------|---|----|-----|
| BOKSITIIV/SIEM OMB0025 | Set of stem seals for Siemens 428488060: 10 mm stem | C2 | 73 |
| BOKSITIIV/V OMB0026 | Set of stem seals for V-valves OMB0026 | C2 | 64 |

ADAPTER FOR VD-VALVES



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

| JATKE 215/215 OMB0083 | Pair of flange VD215 / SV 215, total length 75 mm | A1 | 53 |
|--------------------------|--|----|----|
| JATKE 220/215 OMB0084 | Pair of flange VD220 / SV 215, total length 75 mm | A1 | 53 |
| JATKE 220/220 OMB0085 | Pair of flange VD220 / SV 220, total length 100 mm | A1 | 66 |
| JATKE 225/220 OMB0086 | Pair of flange VD225 / SV 220, total length 100 mm | A1 | 66 |
| JATKE 225/225 OMB0087 | Pair of flange VD225 / SV 225, total length 115 mm | A1 | 66 |
| JATKE 232/225 OMB0088 | Pair of flange VD232 / SV 225, total length 115 mm | A1 | 92 |



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

| JATKE VD15-130 омвоо99 | Pair of flange for Osby 2SB and Siemens VVF valves, total length 130 mm | A1 | 92 |
|---------------------------|---|----|-----|
| JATKE VD20-130 OMB0100 | Pair of flange for Osby 2SB and Siemens VVF valves, total length 130 mm | A1 | 97 |
| JATKE VD20-140 OMB0101 | Pair of flange for Osby 2SB valves, total length 140 mm | A1 | 97 |
| JATKE VD20-160 OMB0102 | Pair of flange for Siemens VVF valves, total length 160 mm | A1 | 97 |
| JATKE VD25-140 OMB0103 | Pair of flange for Osby 2SB valves, total length 140 mm | A1 | 97 |
| JATKE VD25-150 OMA0187 | Pair of flange for Osby 2SB valves, total length 150 mm | A1 | 97 |
| JATKE VD25-160 OMB0104 | Pair of flange for Siemens VVF valves, total length 160 mm | A1 | 97 |
| JATKE VD32-150 OMB0105 | Pair of flange for Osby 2SB valves, total length 150 mm | A1 | 111 |
| JATKE VD32-160 OMB0106 | Pair of flange for Siemens WF valves, total length 160 mm | A1 | 111 |

JATKE RV EXTENSION

| JATKE PARI RV 3/4"SK-1"UK OMA0186 | Extension 3/4" -> 1" 2 pcs + seals | A1 | 57 |
|--------------------------------------|------------------------------------|----|----|
|--------------------------------------|------------------------------------|----|----|

AK... ADAPTERS FOR VALVES

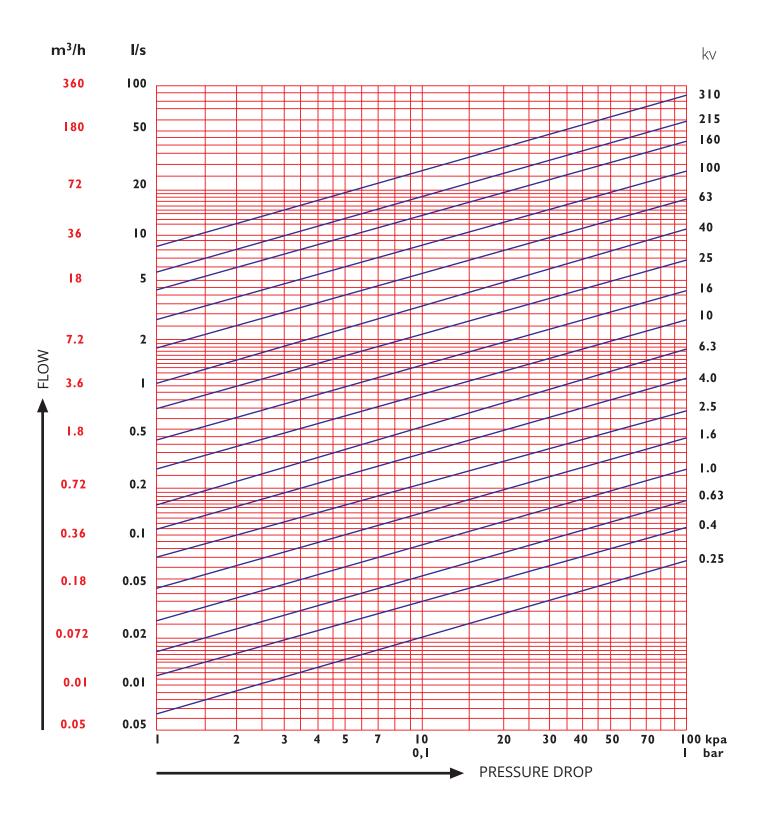
| AK15-15 OMB0003 | Adapter set for VD15/Salina 15 | A1 | 99 |
|--------------------|--------------------------------|----|-----|
| AK20-15 OMB0004 | Adapter set for VD20/Salina 15 | A1 | 134 |
| AK20-25 OMB0005 | Adapter set for VD20/Salina 25 | A1 | 178 |
| AK25-25 OMB0006 | Adapter set for VD25/Salina 25 | A1 | 148 |

FITTINGS

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

| SOV-L&G-HON OMA0268 | Fittings for L&G VVG41-, VXG41- and VVF52 valves | A1 | 55 |
|------------------------|--|----|----|
| SOV-TAC-HON OMA0270 | Fittings for TAC V241-, V282-, V292-, V293-, V294-, V298-, V384-, V386-, V392- and V394 valves | A1 | 57 |
| SW-SOV-HON OMA0276 | Fittings between Satchwell-Honeywell | A1 | 34 |

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



Actuators for valves, 3-point control

M31C150, M6410... VALVE ACTUATORS

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

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



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| M31C 0MA020 | I Valve active | ator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 300 Nm. IP43. | A3 | 167 |
|------------------|----------------|--|----|-----|
| ! M641 | Valve actua | ator, 3-point control, 24 V, 50 Hz, 0,7 VA, Power 180 Nm. IP43. | A3 | 144 |
| ! M641 | Valve actua | ator, 3-point control, 230 V, 50 Hz, 7 VA, Power 180 Nm. IP40. | A3 | 174 |
| M641 HON007 | | ntor, 3-point control, 24 V, 50 Hz, 0,7 VA, Nm. IP43. + 2 micro switch | A3 | 266 |
| M641 HON009 | Valve actua | ator, 3-point control, 230 V, 50 Hz, 7 VA, Power 300 Nm. IP40. | A3 | 229 |
| ! M641 номооб | 30.023 | ator, 3-point control, 24 V, 50 Hz, 0,7 VA, Nm. IP43. + 2 micro switch | A3 | 198 |
| ! M641 номото | | ator, 3-point control, 230 V, 50 Hz, 0,7 VA, Nm. IP43. + 2 micro switch | A3 | 206 |
| ! M641 HON011 | 22.007 | ator, 3-point control, 230 V, 50 Hz, 0,7 VA, Nm. IP43. + 2 micro switch | A3 | 284 |

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

| TH. | |
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| ML6420A3007 HON020 | Valve actuator, 3-point control, 24 V, 50 Hz, 4 VA, speed 60s/20mm. | АЗ | 582 |
|-----------------------|--|----|-----|
| ML6420A3023 HON022 | Valve actuator, 3-point control, 24 V, 50 Hz, 6 VA, speed 30s/20mm. | АЗ | 582 |
| ML6420A3015 HON021 | Valve actuator, 3-point control, 230 V, 50 Hz, 6,5 VA, speed 60s/20mm. | АЗ | 660 |
| ML6420A3031 HON023 | Valve actuator, 3-point control, 230 V, 50 Hz, 6,5 VA, speed 30s/20mm. | АЗ | 589 |

ML6421... VALVE ACTUATORS, IP54

Applications: Heating systems

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



*)

| | ML6421A3005 HON024 | Valve actuator, 3-point control, 24 V, 50 Hz, 13 VA, speed 114s/20mm. | АЗ | 1070 |
|---|-----------------------|--|----|------|
| ! | ML6421A3013 HON025 | Valve actuator, 3-point control, 230 V, 50 Hz, 11 VA, speed 114s/20mm. | АЗ | 802 |
| | ML6421B3004 HON026 | Valve actuator, 3-point control, 24 V, 50 Hz, 13 VA, speed 210s/38mm. | АЗ | 1140 |
| ! | ML6421B3012 | Valve actuator, 3-point control, 230 V, 50 Hz, 11 VA, speed 210s/38mm. | АЗ | 580 |

M6422L1003 VALVE ACTUATOR, IP54

Rotary actuator for butterfly valve

Power 40 Nm



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| 1 | M6422L1003 | Valve actuator, 3-point control, 230 V, 50 Hz, 7 VA, speed 150s/90°. | Δ3 | 1910 |
|---|------------|--|----|------|
| | HON012 | valve actuator, 5 point control, 250 v, 50 Hz, 7 vv, speca 1503/50. | 70 | 1310 |

! no stock product

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

Actuators for valves, 3-point control

ML6425... VALVE ACTUATORS, IP54

Applications: For heating, domestic hot water and ventilation

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



*)

| ! | ML6425A3006 HON028 | Valve actuator, 3-point control, 24 V, 50 Hz, 11 VA, speed 108s/20mm. 12s spring. Spring return out. | АЗ | 728 |
|---|-----------------------|--|----|-----|
| ! | ML6425A3014 HON029 | Valve actuator, 3-point control, 230 V, 50 Hz, 12 VA, speed 108s/20mm. 12s jousi. Spring return out. | АЗ | 781 |
| ! | ML6425B3005 HON030 | Valve actuator, 3-point control, 24 V, 50 Hz, 11 VA, speed 108s/20mm. 12s spring. Spring return in. | АЗ | 682 |
| ! | ML6425B3021 HON031 | Valve actuator, 3-point control, 230 V, 50 Hz, 12 VA, speed 108s/20mm. 12s spring. Spring return in. | АЗ | 782 |

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

Suitable for valves with 2,5 mm stroke length.



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| | M7410A1001 HON013 | Valve actuator, no manual use, 3-point control, 24 V, 50 Hz, 0,7 VA, Speed 60 s/2,5 mm. Power 90 Nm. Connection cable 0,8 m. Used with control ball valve (VSOx). | АЗ | 143 |
|---|----------------------|---|----|-----|
| | M7410C1007 HON014 | Valve actuator, no manual use, 3-point control, 24 V, 50 Hz, 0,7 VA, Speed 2,5 min/6,5 mm. Power 180 Nm. | АЗ | 139 |
| ! | M7410C1015 HON015 | Valve actuator, no manual use, 3-point control, 24 V, 50 Hz, 0,7 VA, Speed 2,5 min/6,5 mm. Power 300 Nm. | АЗ | 149 |

MVN... VALVE ACTUATORS, IP40

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

*

| ! | MVN613A1500 HON038 | Valve actuator, 3-point control, 24 V, 50 Hz, 1,5 VA | A3 | 170 |
|---|-----------------------|---|----|-----|
| ! | MVN663A1500 | Valve actuator, 3-point control, 230 V, 50 Hz, 4,5 VA | АЗ | 196 |

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

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| NRYD230-3-SI OMB0168 | Power: 500 N | Speed: 35 s | Stroke length: 5,5 mm | Consumption: 2,5 VA 230 VAC | A2 | 175 |
|-------------------------|--------------|--------------|-----------------------|-----------------------------|-----------|-----|
| NRYD24-3-SI OMB0169 | Power: 500 N | Speed: 35 s | Stroke length: 5,5 mm | Consumption: 1,5 VA 24 VAC | A2 | 175 |
| NRD24-3-SI OMB0165 | Power: 500 N | Speed: 140 s | Stroke length: 5,5 mm | Consumption: 1,5 VA 24 VAC | A2 | 157 |
| NRD230-3-SI OMB0164 | Power: 500 N | Speed: 140 s | Stroke length: 5,5 mm | Consumption: 2,5 VA 230 VAC | A2 | 157 |
| NRYD230-3-HW OMA0219 | Power: 500 N | Speed: 35 s | Stroke length: 6,5 mm | Consumption: 2,5 VA 230 VAC | A2 | 176 |
| NRYD24-3-HW OMA0220 | Power: 500 N | Speed: 35 s | Stroke length: 6,5 mm | Consumption: 1,5 VA 24 VAC | A2 | 176 |

HT AND HR... VALVE ACTUATORS

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

Applications: For heating, domestic hot water and ventilation



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| ! | HTC24-3 OMB0071 | Power: 5 Nm | Speed: 70 s | Consumption: 1.5 VA 24 VAC / DC | A2 | 173 |
|---|---------------------|-------------|--------------|---------------------------------|----|-----|
| ! | HTC230-3 OMB0074 | Power: 5 Nm | Speed: 70 s | Consumption: 2.5 VA 230 VAC | A2 | 173 |
| | HTD24-3 омвоот5 | Power: 5 Nm | Speed: 140 s | Consumption: 1.5 VA 24 VAC / DC | A2 | 168 |
| | HTYD24-3 омвоот8 | Power: 5 Nm | Speed: 35 s | Consumption: 1.5 VA 24 VAC / DC | A2 | 168 |



M41A15 VALVE ACTUATOR, IP54

Suitable for valves with 6,5 mm stroke length.

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



*)

| M41A15 oma0207 | Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 5 VA. Speed 15 s/6,5 mm. Power 400 Nm. | АЗ | 300 |
|-------------------|--|----|-----|
|-------------------|--|----|-----|

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. | ۸3 | 204 |
|---------|--|----|-----|
| OMA0205 | Connection cable 1,5 m. | 73 | 204 |

M7410E... VALVE ACTUATORS, IP43

Applications: Heating- and ventilation systems

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



*)

| | M7410E1002 HON016 | Valve actuator, no manual use, 0(2)10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 180 Nm. | АЗ | 246 |
|---|----------------------|--|----|-----|
| ! | M7410E1028 HON017 | Valve actuator, no manual use, 0(2)10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 300 Nm. | АЗ | 275 |
| ! | M7410E2026 HON018 | Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 180 Nm. | АЗ | 277 |
| ! | M7410E2034 HON019 | Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 1,7 VA. Speed 150 s/6,5 mm. Power 300 Nm. | АЗ | 356 |

ML7420A... VALVE ACTUATORS, IP54

Suitable for valves with 20 mm stroke length.

Power 600 Nm

Applications: For heating, domestic hot water and ventilation



*)

| ML7420A6009 HON032 | Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 5 VA, speed 60s/20mm. Analog output of 2-10 VDC. | АЗ | 624 |
|-----------------------|---|----|-----|
| ML7420A6017 HON237 | Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 7 VA, speed 30s/20mm. Analog output of 2-10 VDC. | АЗ | 620 |

ML7421... VALVE ACTUATORS, IP54

Applications: For heating

Power 1800 Nm



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|-----|-----------------------|---|----|-----|
| : 1 | /L7421A3004 on034 | Valve actuator, 0(2)10 VDC controlled., 24 V, 50 Hz, 14 VA, speed 114s/20mm. Analog output of 2-10 VDC. | АЗ | 965 |
| ' ' | /IL7421B3003 0N035 | Valve actuator, 0(2)10 VDC controlled. , 24 V, 50 Hz, 14 VA, speed 210s/38mm. Analog output of 2-10 VDC. | АЗ | 949 |

[!] no stock product

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

0 - 10 V controlled actuators

ML7425... VALVE ACTUATORS, IP54

Applications: Heating systems

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



*)

| ! | ML7425A6008 HON036 | Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 12 VA, speed 108s/20mm. 12s spring. Spring return out. Analog output of 2-10 VDC. | АЗ | 1087 |
|---|-----------------------|---|----|------|
| ! | ML7425B6007 HON037 | Valve actuator, 0(2)10 VDC controlled. 24 V, 50 Hz, 12 VA, speed 108s/20mm. 12s spring. Spring return in. Analog output of 2-10 VDC. | А3 | 692 |

MVN... VALVE ACTUATOR, IP40

Used with control ball valve (VBGx)



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| ! | MVN713A1500 HON040 | Valve actuator, 0(2)10 VDC controlled, 24 V, 50 Hz, 5 VA, Speed 90s/90°. Power 3 Nm. | A3 | 246 |
|---|-----------------------|--|-----------|-----|
|---|-----------------------|--|-----------|-----|

HTC24-SR VALVE ACTUATOR

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

Applications: For heating



*)

| HTC24-SR OMB0072 | Power: 5 Nm | Speed: 70 s | Consumption: 3 VA 24 VAC / DC | A2 | 207 |
|----------------------|-------------|--------------|-------------------------------|-----------|-----|
| HTD24-SR OMB0076 | Power: 5 Nm | Speed: 140 s | Consumption: 3 VA 24 VAC / DC | A2 | 207 |
| HTYD24-SR omboo79 | Power: 5 Nm | Speed: 35 s | Consumption: 3 VA 24 VAC / DC | A2 | 224 |

NR... VALVE ACTUATOR

Applications: For heating, domestic hot water and ventilation



*)

| NRYD24-SR-SI OMB0170 | Power: 500 N | Speed: 35 s | Stroke length 5,5 mm | Consumption: 3 VA 24 VAC / DC | A2 | 255 |
|-------------------------|--------------|-------------|----------------------|-------------------------------|----|-----|
| NRYD24-SR-HW | Power: 500 N | Speed: 35 s | Stroke length 6,5 mm | Consumption: 3 VA 24 VAC / DC | A2 | 255 |

ADAPTERS FOR VALVE ACTUATORS

| MS-NRE OMB0142 | Adapter for the valves Esbe and Termomix | A2 | 12 |
|--------------------|--|----|----|
| MS-NRE6 OMB0144 | Adapter for the valves: VRG, VRB | A2 | 11 |
| WNR OMC0180 | Adapter between NR-actuator and ball valve | A2 | 22 |

Damper actuators

Honeywell damper actuators

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

N05... JA N10... DAMPER ACTUATORS, IP54

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



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| | N05010 H0N228 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 5 VA, speed 90/110s. Power 5 Nm. Analog output of 2-10 VDC. | АЗ | 196 |
|---|-----------------------|--|----|-----|
| ! | N05010-SW2 H0N041 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 5 VA, speed 90/110s. Power 5 Nm. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control. | АЗ | 226 |
| ! | N05230-2POS HON042 | Damper actuator, 2-point control, 230 VAC, 50 Hz, 22 VA, speed 110s. Power 5 Nm. | АЗ | 170 |
| ! | N0524 H0N314 | Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 5 Nm. | АЗ | 142 |
| ! | N0524-SW2 HON043 | Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 5 Nm. 2 pcs micro switches ready for serial control. | АЗ | 226 |
| ! | N10010 HON315 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 5 VA, speed 90/110s. Power 10 Nm. Analog output of 2-10 VDC. | АЗ | 230 |
| ! | N10010-SW2 HON044 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 5 VA, speed 90/110s. Power 10 Nm. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control. | АЗ | 319 |
| ! | N10230-2POS HON045 | Damper actuator, 2-point control, 230 VAC, 50 Hz, 22 VA, speed 140s. Power 10 Nm. | АЗ | 209 |
| ! | N1024 HON316 | Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 10 Nm. | АЗ | 239 |
| ! | N1024-SW2 HON046 | Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 5 VA, speed 110s. Power 10 Nm. 2 pcs micro switches ready for serial control. | АЗ | 262 |

N20... DAMPER ACTUATORS, IP54

- For 4 m² dampers
- · Power 20 Nm



*)

| | N20010 HON317 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 6 VA, speed 95/110s. Analog output of 2-10 VDC. | АЗ | 344 |
|---|----------------------|---|----|-----|
| ! | N20010-SW2 HON047 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 6 VA, speed 95/110s. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control. | АЗ | 427 |
| ! | N20230 HON048 | Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 8 VA, speed 110s. | АЗ | 312 |
| ! | N20230-SW2 HON049 | Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 8 VA, speed 110s. 2 pcs micro switches ready for serial control. | АЗ | 336 |
| | N2024 HON318 | Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 6 VA, speed 110s. Voima 20 Nm. | АЗ | 329 |
| ! | N2024-SW2 HON050 | Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 6 VA, speed 110s. 2 pcs micro switches ready for serial control. | АЗ | 341 |

N34... DAMPER ACTUATORS, IP54

- For 6 m² dampers
- Power 34 Nm



*)

| ! | N34010 HON051 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 6 VA, speed 95/110s. Analog output of 2-10 VDC. | АЗ | 427 |
|---|------------------|---|----|-----|
| ! | N34230 HON052 | Damper actuator, 2- and 3-point control, 230 VAC, 50 Hz, 13 VA, speed 110s. | АЗ | 385 |
| ! | N3424 HON053 | Damper actuator, 2- and 3-point control, 24 VDC/ac, 50 Hz, 9 VA, speed 110s. | АЗ | 380 |

! no stock product

Damper actuators

S03 / S05... DAMPER ACTUATORS, IP54

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



*)

| | S03010 HON319 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 7 VA, speed 90s. Power 3 Nm. Analog output of 2-10 VDC. | АЗ | 329 |
|---|---|--|----|-----|
| ! | S03010-SW1 HON054 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 7 VA, speed 90s. Power 3 Nm. Analog output of 2-10 VDC. 1 pcs adjustable micro switch. | АЗ | 300 |
| ! | S03230-2POS-SW1 Damper actuator, 2-point control, 230 VAC, 50 Hz, 13 VA, speed 45s. Power 3 Nm. 1 pcs adjustable micro switch. | | АЗ | 307 |
| ! | S0324-2POS Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 7 VA, speed 45s. Power 3 Nm. | | | 227 |
| ! | 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. | | АЗ | 286 |
| | S0524-2POS HON321 | Damper actuator, 2-point control,24 VDC/ac, 50 Hz, 8 VA, speed 45s. Power 5 Nm. | A3 | 253 |
| ! | S0524-2POS-SW1 HON062 | Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 8 VA, speed 45s. Power 5 Nm. 1 pcs adjustable micro switch. | АЗ | 311 |
| ! | S05010 HON058 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 8 VA, speed 90s. Power 5 Nm. Analog output of 2-10 VDC. | АЗ | 304 |
| ! | S05010-SW1 HON059 Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 8 VA, speed 90s. Power 5 Nm. Analog output of 2-10 VDC. 1 pcs adjustable micro switch. | | АЗ | 325 |
| ! | S05230-2POS HON060 | Damper actuator, 2-point control, 230 VAC, 50 Hz, 14 VA, speed 45s. Power 5 Nm. | A3 | 220 |
| ! | S05230-2POS-SW1 HON061 | Damper actuator, 2-point control, 230 VAC, 50 Hz, 14 VA, speed 45s. Power 5 Nm. 1 pcs adjustable micro switch. | АЗ | 334 |

S10... JA S20... DAMPER ACTUATORS, IP54

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



| | S10010 HON322 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 14 VA, speed 90s. Power 10 Nm. Analog output of 2-10 VDC. | АЗ | 365 |
|---|---------------------------|--|----|-----|
| ! | S10010-SW2 HON063 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 14 VA, speed 90s. Power 10 Nm. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control. | АЗ | 469 |
| | S1024-2POS HON324 | Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 30 VA, speed 45s. Power 10 Nm. | А3 | 294 |
| ! | S1024-2POS-SW2 HON065 | Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 30 VA, speed 45s. Power 10 Nm. 2 pcs micro switches ready for serial control. | АЗ | 400 |
| | S10230-2POS HON323 | Damper actuator, 2-point control, 230 VAC, 50 Hz, 45 VA, speed 45s. Power 10 Nm. | A3 | 344 |
| ! | S10230-2POS-SW2 HON067 | Damper actuator, 2-point control, 230 VAC, 50 Hz, 45 VA, speed 45s. Power 10 Nm. 2 pcs micro switches ready for serial control. | АЗ | 512 |
| | S20010 HON325 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 16VA, speed 90s. Power 20 Nm. Analog output of 2-10 VDC. | АЗ | 413 |
| ! | S20010-SW2 HON066 | Damper actuator, 0(2)10 VDC controlled, 24 VDC/ac, 50 Hz, 16VA, speed 90s. Power 20 Nm. Analog output of 2-10 VDC. 2 pcs micro switches ready for serial control. | АЗ | 517 |
| | S2024-2POS HON327 | Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 45 VA, speed 45s. Power 20 Nm. | АЗ | 358 |
| ! | S2024-2POS-SW2 HON068 | Damper actuator, 2-point control, 24 VDC/ac, 50 Hz, 45 VA, speed 45s. Power 20 Nm. 2 pcs micro switches ready for serial control. | АЗ | 436 |
| | S20230-2POS HON326 | Damper actuator, 2-point control, 230 VAC, 50 Hz, 60 VA, speed 45s. Power 20 Nm. | АЗ | 400 |
| ! | S20230-2POS-SW2 HON067 | Damper actuator, 2-point control, 230 VAC, 50 Hz, 60 VA, speed 45s. Power 20 Nm. 2 pcs micro switches ready for serial control. | АЗ | 512 |

Damper actuators

NM..A DAMPER ACTUATOR, IP 54

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



*)

| ! | NM24A 0MB0158 | 3-point control / open-closed | Power: 10 Nm | Consumption: 4 VA 24 VAC / DC | A2 | 165 |
|---|---------------------|-------------------------------|--------------|-------------------------------|----|-----|
| ! | NM230A 0MB0157 | 3-point control / open-closed | Power: 10 Nm | Consumption: 6 VA 230 VAC | A2 | 170 |
| ! | NM24A-SR OMB0159 | 2-10 V-control | Power: 10 Nm | Consumption: 4 VA 24 VAC / DC | A2 | 236 |

SM..A DAMPER ACTUATOR, IP 54

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



*)

| SM24A OMB0385 | 3-point control / open-closed | Power: 20 Nm | Consumption: 4 VA 24 VAC / DC | A2 | 190 |
|------------------------------|-------------------------------|--------------|-------------------------------|-----------|-----|
| SM230A _{OMB0384} | 3-point control / open-closed | Power: 20 Nm | Consumption: 6 VA 230 VAC | A2 | 194 |
| SM24A-SR OMB0386 | 2-10 V-control | Power: 20 Nm | Consumption: 4 VA 24 VAC / DC | A2 | 268 |

NF... DAMPER ACTUATOR

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



*)

| NF24A OMB0155 | Open-closed control | Power: 10 Nm | Consumption: 5,5 VA 24 VAC / DC | A2 | 268 |
|---------------------|---------------------|--------------|---------------------------------|----|-----|
| NF24A-SR OMB0156 | Control 210 V | Power: 10 Nm | Consumption: 5,5 VA 24 VAC / DC | A2 | 319 |

SF... DAMPER ACTUATOR, IP 54

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



*

| SF24A OMB0377 | Open-closed | Power: 20 Nm | Consumption: 7,5 VA 24 VAC / DC | A2 | 327 |
|---------------------|----------------|--------------|---|-----------|-----|
| SFA 0MB0376 | Open-closed | Power: 20 Nm | Consumption: 18 VA 24-240 VAC/ 24-125 VDC | A2 | 375 |
| SF24A-SR OMB0378 | 2-10 V-control | Power: 20 Nm | Consumption: 7 VA 24 VAC / DC | A2 | 378 |



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

Other field devices

C01A THERMOSTAT



| C01A | Thermostat, surface mounting 2090 °C, differential range 7 ° |) |
|---------|--|---|
| OMA0043 | Thermostat, surface mounting 2050 °C, differential range 7 | _ |

Anticipating frost protection thermostat

A2

A2

148

70

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.



EHC VOLTAGE DIVIDER

Operating voltage 24 VAC Input 0-10 VDC

JVA24 0MB0107

Output 0-10 V /10-0 V



EHC **A1** 82 Voltage divider OMA0148

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** 88 OMA0154

TI DUCT THERMOMETER Ø 100 MM

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



TI 0MB0399 Duct thermometer **A2**

Other field devices

ETT6 INDULGE BUTTON

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



*)

| ETT6 | Indulge button | A2 | 84 |
|---------|----------------|----|----|
| OMB0516 | Indulge button | 72 | 04 |

PWR POWER UNITS

Four different outputs power source.





| PWR 10 OMB0489 | Power unit 24 VAC / 10 VA, width 35,5 mm (2M) | C2 | 23 |
|-----------------------|---|----|----|
| PWR 24 OMB0488 | Power unit 24 VAC / 24 VA, width 54 mm (3M) | C2 | 25 |
| PWR 40 OMB0486 | Power unit 24 VAC / 40 VA, width 54 mm (3M) | C2 | 35 |
| PWR 63 0MB0487 | Power unit 24 VAC / 63 VA, width 106 mm (6M) | C2 | 53 |
| PWR 24V/1A OMB0522 | Power unit 24VDC/1A, width 35 mm (2M) | C2 | 25 |

VAK-POWER UNITS



| PWR130 0MB0425 | Protective voltage transformer with thermal prot.230VAC / 24 VAC, 130 VA. DIN-rail mounting W90,L84,H110 | C2 | 42 |
|-------------------|--|----|----|
| PWR180 OMB0426 | Protective voltage transformer with thermal prot. 230VAC / 24 VAC, 180 VA. W105,L89,H115 | C2 | 57 |
| PWR250 OMB0427 | Protective voltage transformer with thermal prot.230VAC / 24 VAC, 250 VA. W130, L115, H119 | C2 | 72 |

Ouman Oy - General Terms of Delivery and Warranty

SCOPE OF APPLICATION

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

PRICING

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

OFFER

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

AGREEMENT

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

DIAGRAMS AND DESCRIPTIONS

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

TERMS OF DELIVERY

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

PACKAGE

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

DELIVERY TIME

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

DELAY NOTIFICATIONS

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

DELIVERY AND INSPECTION OF GOODS

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

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,

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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 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 goods. For any repairs not covered by the warranty shall only be valid until the expiration of the warranty period of the original goods. For any repairs not covered by the warranty shall be subject to a 3-month maintenance warranty covering the material and workmanship.

INDIRECT DAMAGES

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

RETURNS

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

NOTIFICATIONS

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

OWNERSHIP

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

DISAGREEMENTS

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

THE FACTORY AND SALES OFFICE



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

SOUTHERN FINLAND SALES OFFICE



Itsehallintokuja 6, 02600 ESPOO

General web addresses

www.ouman.fi

sales@ouman.fi

EXPORT

KARI HEIKKILÄ

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



JILSON UKKAN

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



ALEKSANDER LIIN

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



SWEDEN

ROBERT BAGGE

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



J MARTIN GRÄNNSJÖ

Senior Technician

Tel. +46 31 939 176 jmartin.grannsjo@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.