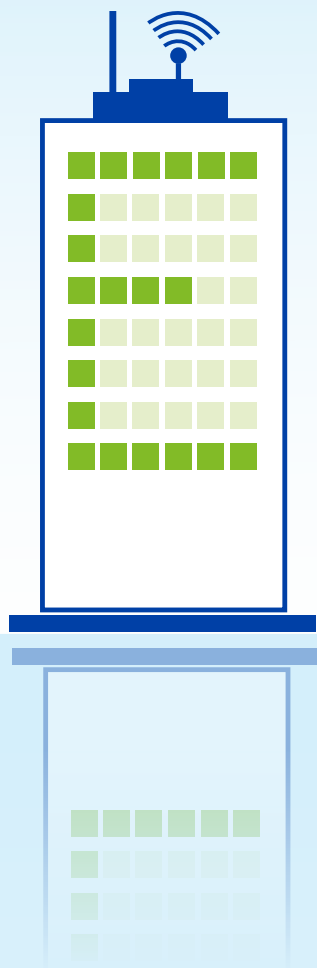




CATALOGUE 2024

ENERGY EFFICIENCY FOR BUILDINGS



ENERGY EFFICIENCY FOR BUILDINGS

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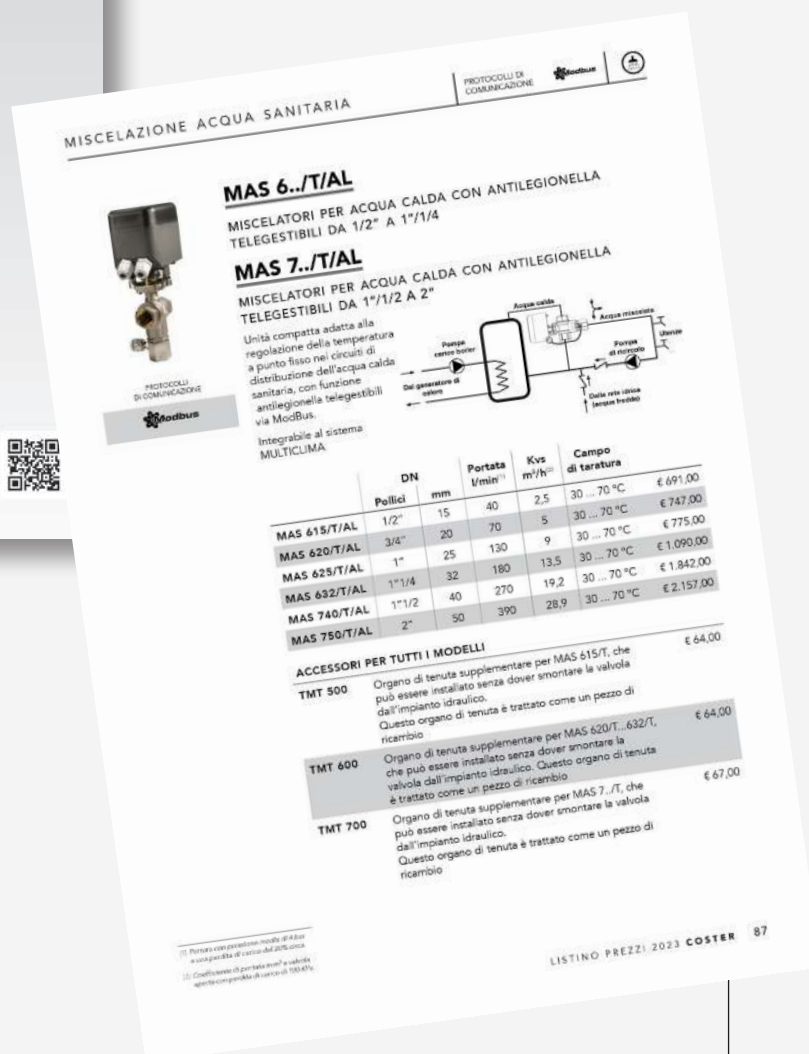
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QR-CODE

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ELECTRO HYDRAULIC DIAGRAMS

An electro-hydraulic diagram is shown next to many components in this list. It is a typical diagram and represents one of the many possible applications with the tool it is associated with.

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VONF 340	140	VYG 315-1,6	133	VYG 615-1,8-1,3	134
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VORF 3100	139	VYG 325-10	133	VYG 620 - 1 - 2,5	135
VORF 315	139	VYG 332-16	133	VYG 620 - 1 - 4	135
VORF 320	139	VYG 340-16	133	VYG 620 - 1,6 - 0,63	135
VORF 325	139	VYG 340-25	133	VYG 620 - 1,6 - 1	135
VORF 332	139	VYG 350-25	133	VYG 620 - 1,6 - 1,6	135
VORF 340	139	VYG 350-40	133	VYG 620 - 1,6 - 2,5	135
VORF 350	139	VYG 350-58	133	VYG 620 - 1,6 - 4	135
VORF 364	139	VYG 615-0,25-0,25	134	VYG 620 - 2,5 - 0,63	135
VORF 379	139	VYG 615-0,25-0,4	134	VYG 620 - 2,5 - 1	135
VSF 3100	121	VYG 615-0,25-0,63	134	VYG 620 - 2,5 - 1,6	135
VSF 3125	121	VYG 615-0,25-1	134	VYG 620 - 2,5 - 2,5	135
VSF 3150	121	VYG 615-0,25-1,3	134	VYG 620 - 2,5 - 4	135
VSF 340	121	VYG 615-0,25-1,8	134	VYG 620 - 4 - 0,63	135
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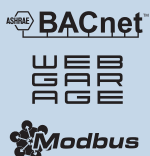
NOTES

COMMUNICATIONS PROTOCOLS





COMMUNICATION PROTOCOLS



EHC 602

EDGE DEVICE SUPPORTS BACNET AND MODBUS PROTOCOLS

Communication management device for control and monitoring systems
It is equipped with a web interface that can be reached via an Ethernet port or Wi-Fi.
Possibility of installing a webgarage licence on the device up to a maximum of 2000 points
It can work as stand-alone unit or in a network. 12Vdc power supply
In 6 DIN module enclosure.

EHC 602 Edge device supports BACnet and Modbus protocols

RELATED PRODUCTS

ALM 1210 DIN rail power supply 12V - 10 W

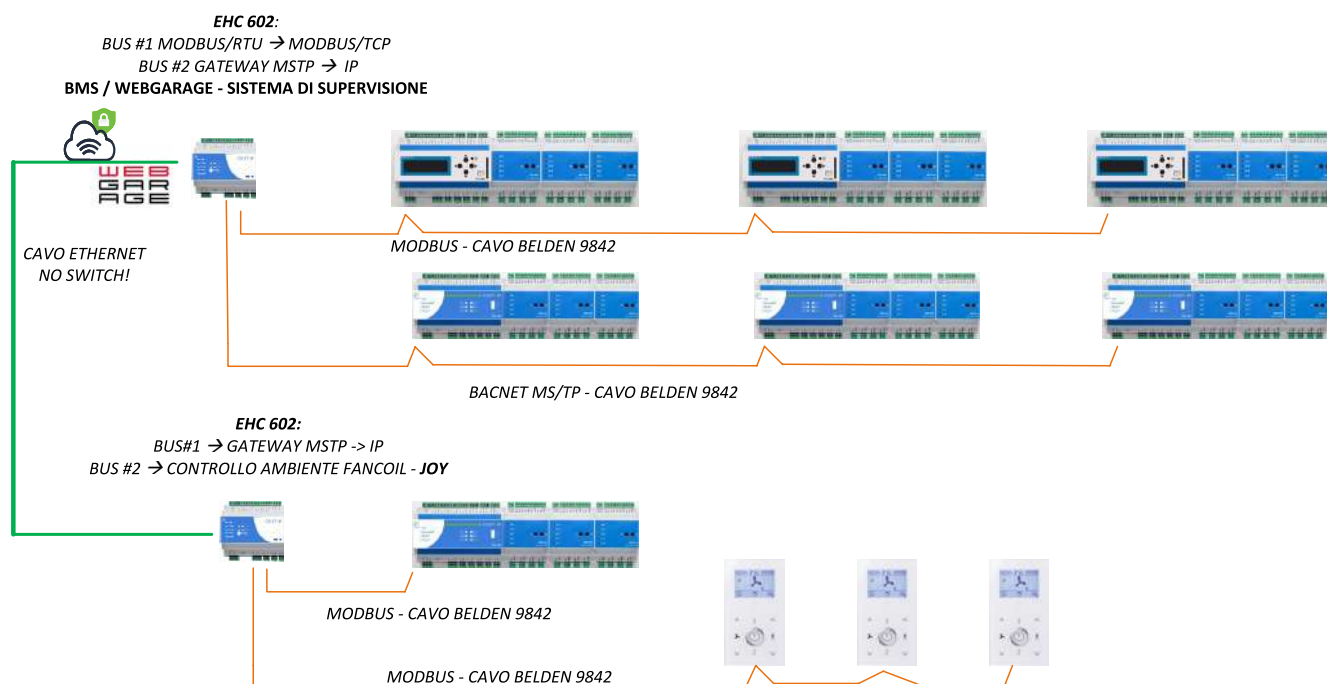
ALM 1225 DIN rail power supply 12V - 25 W

The EHC 602 Edge Device with BACnet and Modbus communication is a device that optimises the exchange of information and commands between YLC / ZBC controllers and is able to manage and monitor field devices connected to it via RS 485 bus or Ethernet port.

It manages three types of plants:

- Adjustment with YLC 880 / ZBC 862 + corresponding expanders
- Energy monitoring
- Hybrid or Mixed (control and monitoring)

Examples of system architecture

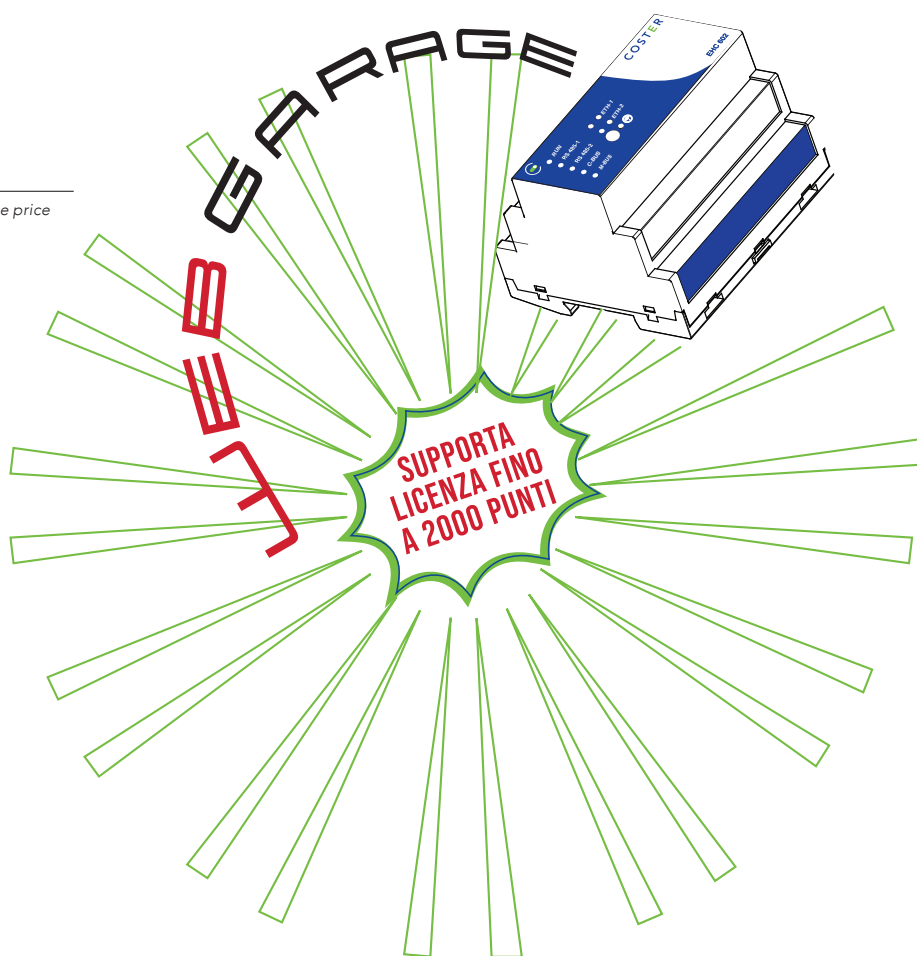


In control systems, the EHC 602 enables the management and control of the system remotely via its Ethernet port or 4G router.

The EHC 602 supports embedded webgarage licences up to 2000 points* providing the end user with a user-friendly, simple and effective interface.

The EHC 602 complements and integrates the Y- and Z-series control units by maximising system performance

(*) Licence not included in the price



COMMUNICATION
PROTOCOLS

BACnet

Y
Z
EHC

ZHC 602

NETWORK-MANAGER BACNET MS/TP

Remote accessibility to the supervision system via Ethernet cable using the BACNET/IP protocol

12Vdc power supply. 6 module DIN enclosure.

In 6 DIN rail module case.

ZHC 602 Gateway BACNET MS/TP — BACNET/IP

RELATED PRODUCTS

ALM 1210 DIN rail power supply 12V-10 W

ALM 1225 DIN rail power supply 12V-25 W

ENERGY EFFICIENCY FOR BUILDINGS

COMMUNICATION
PROTOCOLS

ZBC 862

BACNET MS/TP CONTROLLER

Controller for HVAC systems programmable via CosterCAD applications.
Download the application and firmware locally via USB port and remotely via BACnet protocol.
Possible configuration through DSP 120 external display.
12Vdc and 24Vac power supply..
In 8 DIN module enclosure.

INPUT/OUTPUT

UI ⁽¹⁾	AO	DO
8	2	6

ZBC 862 BACnet MS/TP controller

RELATED PRODUCT

DSP 120 Display for configuration ZBC 862

The ZBC 862 is a programmable logic controller capable of controlling HVAC systems from heating and cooling systems to the most complex air handling units.

It is equipped with a BACnet MS/TP port to communicate with a monitoring system and two separate RS485 ports for communication with I/O expansion modules and third-party device integration.

- FLEXIBILITY:** A single product that can be adapted to any type of plant, from the simplest thermal plant to the most complex systems;
- SCALABILITY:** The expansion modules allow to increase the number of inputs and outputs referred to the single controller. Furthermore, if a system consists of several individually controlled technical rooms, it is possible to create a communication between the various controllers;
- SIMPLICITY:** The programming menu is intuitive and it can maintain the same structure on any type of plant;
- ACCESSIBILITY:** With a network card it is possible to remotely control the system, know its status, change its settings and update the application and/or fw installed on the controller.

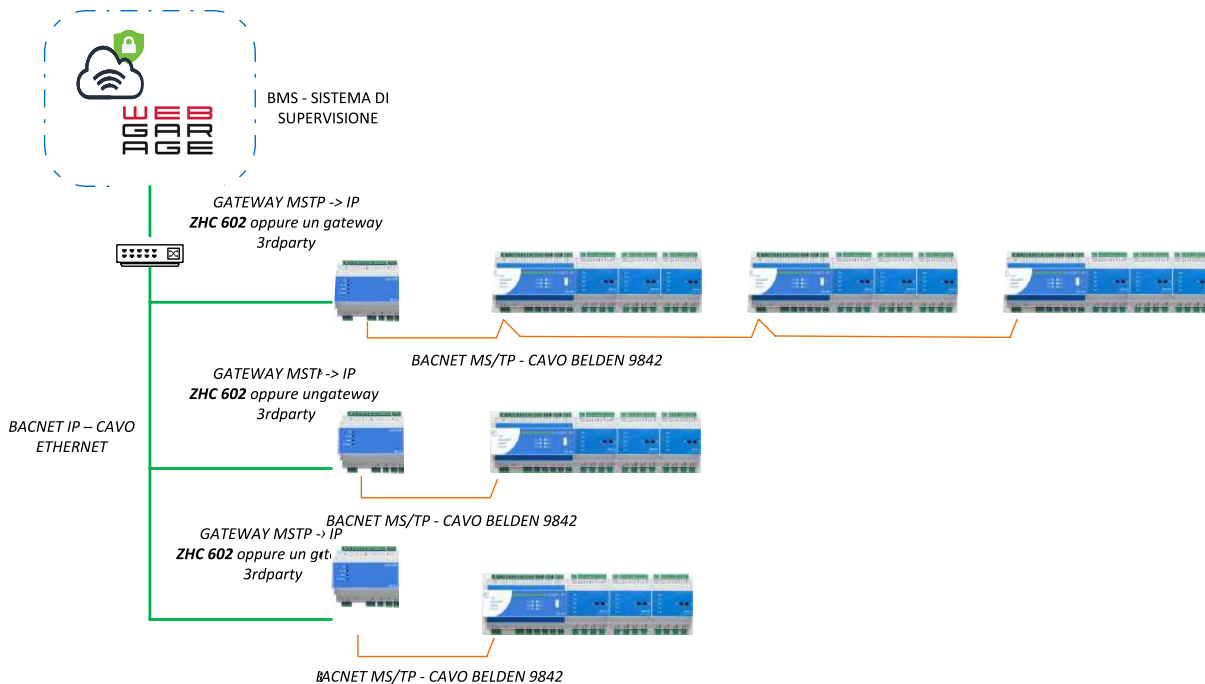
COMMUNICATION PROTOCOL:  **BACnet™**

⁽¹⁾ Universal inputs are analogue, digital and resistive probes T
The first two are also 4...20 mA

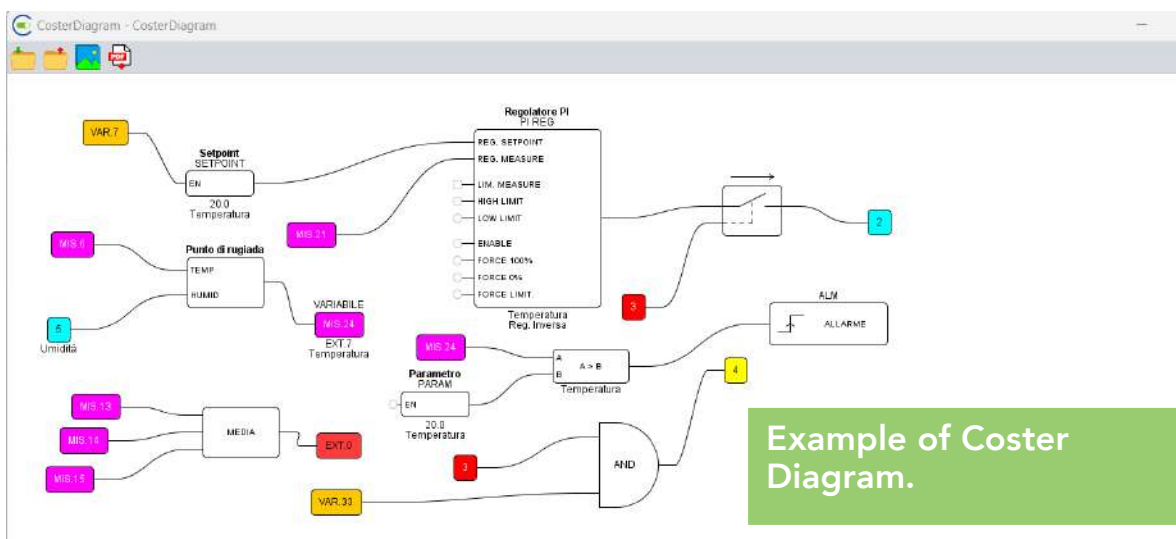
The main functionalities of the ZBC 862 are:

- Execution and control application generated with CosterCAD and/or CosterDiagram
- Communication with the monitoring system and other devices using the standard BACnet protocol..
- Optimised application execution time.
- Interoperability with any BACnet system

Example of Bacnet IP architecture with ZBC series controllers



Example of Coster Diagram





COMMUNICATION
PROTOCOLS



WEB
PAGE

YLC 880

MULTI-CONFIGURABLE CONTROLLER IN 8 DIN MODULE ENCLOSURE

Multi-configurable controller for heating, cooling, domestic hot water, air handling and automation systems in BMS environments.

12Vdc power supply. Programming is carried out using COSTER CAD software and can be imported into the control unit via SD card.

In 8 DIN module enclosure

INPUT/OUTPUT

sensor 1-wire ⁽¹⁾	UI (digital/ analogue) ⁽¹⁾	DO	AO (0-10 V)	serial port
16	8	8	2	RS232 and RS485 (Modbus RTU)

The YLC 880 is a programmable controller for heating, cooling, domestic hot water production, and automation in BMS.

The controller allows optimisation of consumption by automatically adapting to climatic variations, implementing management algorithms aimed at maximum attainable performance.

The controller also records the behaviour of the system, storing operating parameters and settings, allowing for the analysis and detection of any faults.

FLEXIBILITY: A single product that can be adapted to any type of plant, from the simplest thermal plant to the most complex systems;;

SCALABILITY: The expansion modules allow to increase the number of inputs and outputs referred to the single controller. Furthermore, if a system consists of several individually controlled technical rooms, it is possible to create a communication between the various controllers;

SIMPLICITY: The programming menu is intuitive and it can maintain the same structure on any type of plant;

ACCESSIBILITY: With a network card it is possible to remotely control the system, know its status, change its settings and update the application and/or fw installed on the controller.

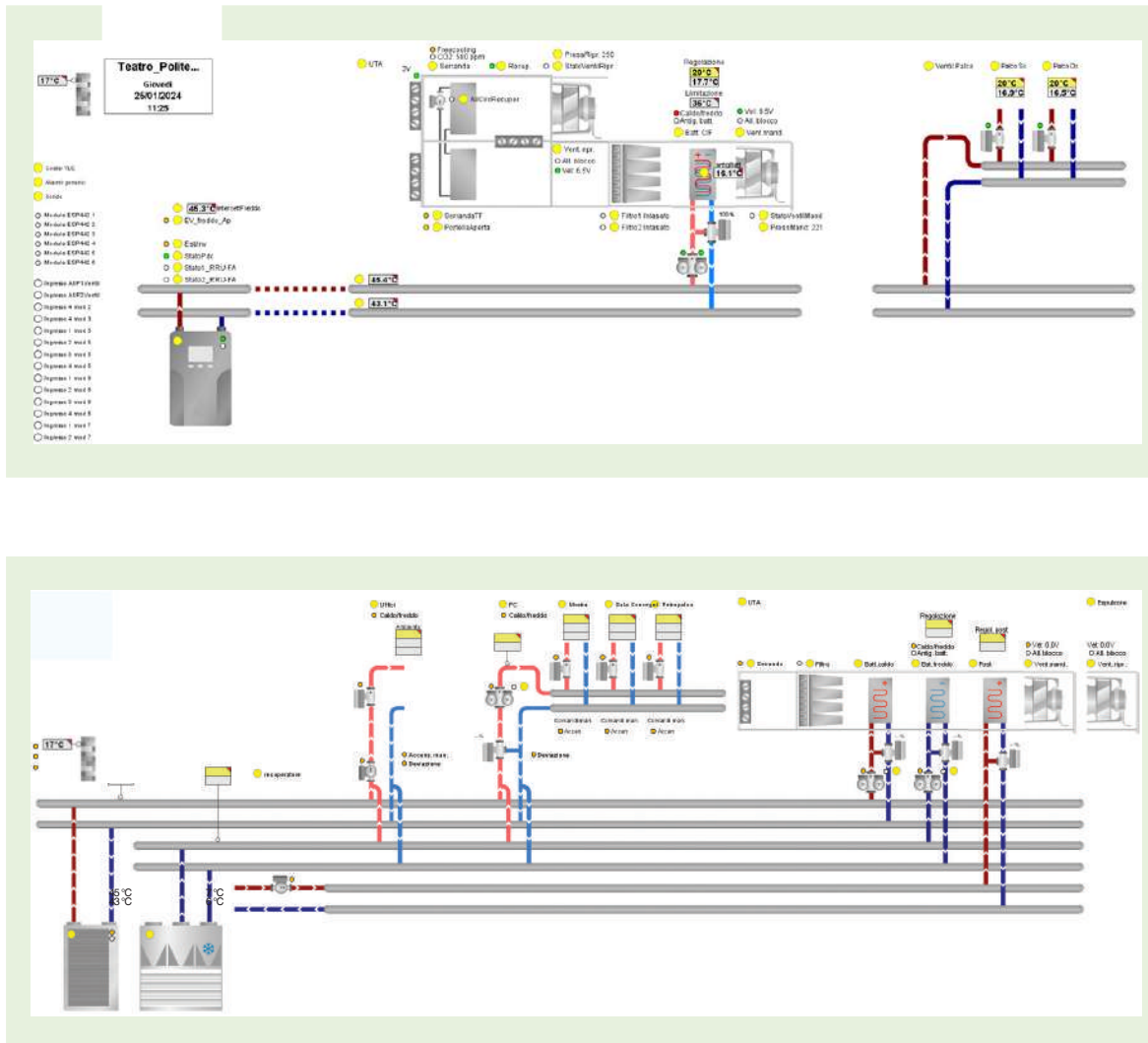
COMMUNICATION PROTOCOL:



⁽¹⁾ Universal inputs are analogue, digital and resistive probes T
The first two are also 4...20 mA

Synoptics performed with Coster Tool

for programming and remote control systems for HVAC-R systems



The main features of the YLC 880 are:

- Execution of adjustment and control application generated with CosterCAD and/or CosterDiagram.
- Communication with the monitoring system and other devices using the standard Modbus protocol.
- Possibility of system parameterisation via on-board display.

COMMUNICATION
PROTOCOLS

YHC 700

MODBUS/TCP NETWORK-MANAGER

The device is an integral part of the YLC Series system regulation and control framework, and for monitoring systems.

It allows the data exchange between YLC controllers and the alarm relay, allowing for remote accessibility to the supervision system through Ethernet cable using MODBUS/TCP protocol. It can work as stand-alone unit or in a network. 12V dc power supply.

In 6 DIN module enclosure.

YHC 700	Network-Manager Modbus
----------------	------------------------

IT CAN BE COMBINED WITH:

YLC 880	Regolatore multiconfigurabile in contenitore 8 moduli DIN
----------------	---

RUT 002	Router 4G con porta ethernet
----------------	------------------------------

The YHC 700 (Y-Help-Communicator) of Network Manager Modbus is a device that optimises the exchange of information and commands between YLC devices and is able to manage and monitor field devices connected to it via RS 485 bus or Ethernet port.

It manages three types of plants:

- Control with YLC 880
- Energy monitoring
- Hybrid or Mixed (control and monitoring)

For control systems, the YHC allows remote management of the system and remote configuration via webserver through its Ethernet port or via MDM 232 modem or RUT 302 router.

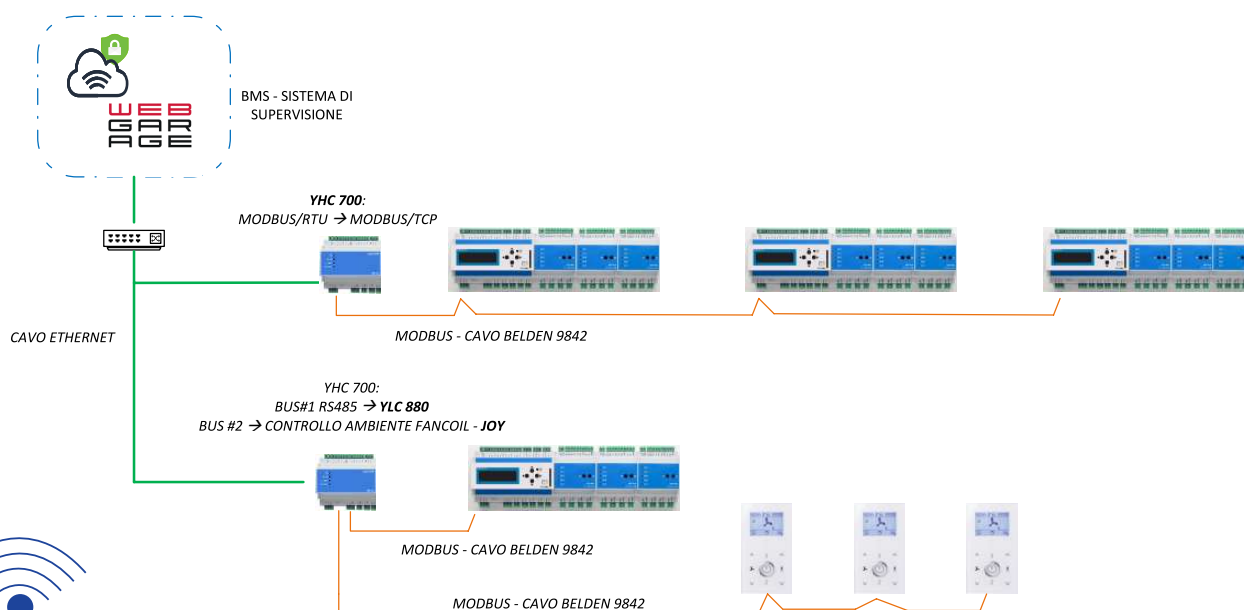
For monitoring or hybrid plants, remote management and remote configuration are possible only via Ethernet port.

YLC system architecture

Management of YLC controllers connected on the first RS485 port or via other networked YHCs.

Thanks to the second RS485 port, the YHC 700 can support devices from the Monitoring Coster range or third parties.

The example shows an architecture with JOY-type room control devices integrated directly into Webgarage.



The use of the Network Help Communicator

Facilitates the transit of system variables and communication between YLC series equipment and field devices from the Monitoring range.

COMMUNICATION
PROTOCOLS

CST 800

SENSOR CONCENTRATOR

Expansion module for Pt 1000 temperature sensors capable of communicating with YLC 880 and ZBC 862 controllers allowing expansion of the system structure.

The module is provided with RS 485 port that makes communication possible through the Modbus/RTU protocol and 8 input sensors.
12 Vdc power supply.

In 3 DIN module enclosure

CST 800	Sensor concentrator
----------------	---------------------

RELATED PRODUCTS

SAB 002	PT 1000 room temperature sensor
STA 002	PT 1000 air duct temperature sensor
SAE 002	PT 1000 outside temperature sensor
SIH 002	PT 1000 immersion temperature sensor
STH 001	Immersion temperature sensor
STF 001	Flue gases temperature sensor
SAF 002	PT 1000 cable type temperature sensor
ALM 1210	DIN rail power supply 12V - 10 W
ALM 1225	DIN rail power supply 12V - 25 W

COMMUNICATION
PROTOCOLS

ESU 402

EXPANSION MODULE (4 AO 0-10V)

I/O expansion module capable of communicating with the YLC 880 and ZBC 862 control units, allowing expansion of the plant structure.

The module is provided with RS485 port that makes communication with the main controller possible through the Modbus/RTU protocol.
12 Vdc and 24 Vac power supply.

In 4 DIN module enclosure

ESU 402	Expansion module (4/ao - 0-10V)
----------------	---------------------------------

RELATED PRODUCTS

ALM 1210	DIN rail power supply 12V - 10 W
ALM 1225	DIN rail power supply 12V - 25 W

(1) Element sensors type PT1000, NTC 10K and NTC 1K sensors can be connected (see wiring diagram)

(1) As an alternative to wired connection.



COMMUNICATION
PROTOCOLS



ESP 442

EXPANSION MODULE (DI - T° - AI - DO)

I/O expansion module capable of communicating with the YLC 880 and ZBC 862 control units, allowing expansion of the plant structure.
The module is provided with RS485 port that makes communication with the main controller possible through the Modbus/RTU protocol.
12 Vdc and 24 Vac power supply.
In 4 DIN module enclosure

INPUT/OUTPUT

Sensors ⁽¹⁾	DI / AI	DO
2	4	4

ESP 442 Expansion module (DI - T° - AI - DO)

RELATED PRODUCTS

SAB 002	PT 1000 room temperature sensor
STA 002	PT 1000 air duct temperature sensor
SAE 002	PT 1000 outside temperature sensor
SIH 002	PT 1000 immersion temperature sensor
STH 001	Immersion temperature sensor
STF 001	Flue gases temperature sensor
SAF 002	PT 1000 cable type temperature sensor
ALM 1210	DIN rail power supply 12V - 25 W
ALM 1225	DIN rail power supply 12V - 25 W



COMMUNICATION
PROTOCOLS



BRG 868

WIRELESS BRIDGE MODULE

BRG 868 Bridge Module is a tool that allows to create a radio connection ⁽¹⁾ between the BRG 868C Bridge Receiver and one or more field devices.

ANTENNA INCLUDED

In 1 DIN module enclosure

BRG 868	Wireless bridge module
----------------	------------------------

RELATED PRODUCT

APA 500	SMA antenna extension, length 5 metres
----------------	--



COMMUNICATION
PROTOCOLS



BRG 868C

WIRELESS BRIDGE CONCENTRATOR

The BRG 868 C concentrator is a device for creating a radio connection ⁽¹⁾ between a Master and one or more BRG 868s (up to 16) in turn connected to field devices through RS485 bus.

ANTENNA INCLUDED

In 1 DIN module enclosure

BRG 868	Wireless bridge concentrator
----------------	------------------------------

RELATED PRODUCTS

APA 500	SMA antenna extension, length 5 metres
----------------	--

ANT 868	Enhanced antenna for 868 receivers
----------------	------------------------------------

GENERAL ACCESSORIES (CABLES) FOR ELECTRICAL CONNECTIONS

USB 485	Required for direct connection with YLC 880, CSW 868 controllers
----------------	--

USB 232	Required for direct connection with YLC 880 and YLC 740 controllers
----------------	---

⁽¹⁾ As an alternative to wired connection



COMMUNICATION
PROTOCOLS



CSW 868

RADIO SENSOR RECEIVER

System module enabling radio connection with one or more radio sensors (up to 40) acquiring variables from THP 868, PCP 868 and COP 868. It provides two-way communication with radio field devices. It can be combined with Y series... and Z series...
12V DC power supply
ANTENNA INCLUDED.
In 1 DIN module enclosure

CSW 868	Radio sensor receiver
---------	-----------------------

RELATED PRODUCTS

APA 500	SMA antenna extension, length 5 metres
ANT 868	Enhanced antenna for 868 receivers
THP 868	Radio temperature/humidity sensor with data logger
STT 868H	Watertight radio temperature sensor
STU 868H	Watertight radio temperature-humidity sensor
COP 868	Combined temperature-humidity-Co ₂ radio sensor-
PCP 868	Radio pulse counter

COMMUNICATION
PROTOCOLSWEB
GARAGE

M-Bus

GPC 642

COMPACT CONTROLLER WITH INCORPORATED 4G MODEM

Compact controller with pre-loaded applications.

6-module DIN device, with built-in 4G communication engine.

Equipped with an RS485 and M-Bus port for the integration of devices with Modbus protocol and heat integrators respectively (IEF 276).

Control and remote management with Climaoffice and WebGarage.

12Vdc and 24Vac power supply. Up to 5 cable type M-Bus devices can be queried in 6 DIN module enclosure.

INPUT/OUTPUT

UI (0-10Vdc, DI, sensor temper. resistive)	DO	AO (0-10 V)	RS 485 port RTU, 3 RD PARTS	M-Bus port
6	4	1	1	1

The GPC 642 is a compact controller with preconfigured logic and integrated 4G connectivity; it provides a predefined set of applications, suitable for the simplest and most common cases of control and metering systems.

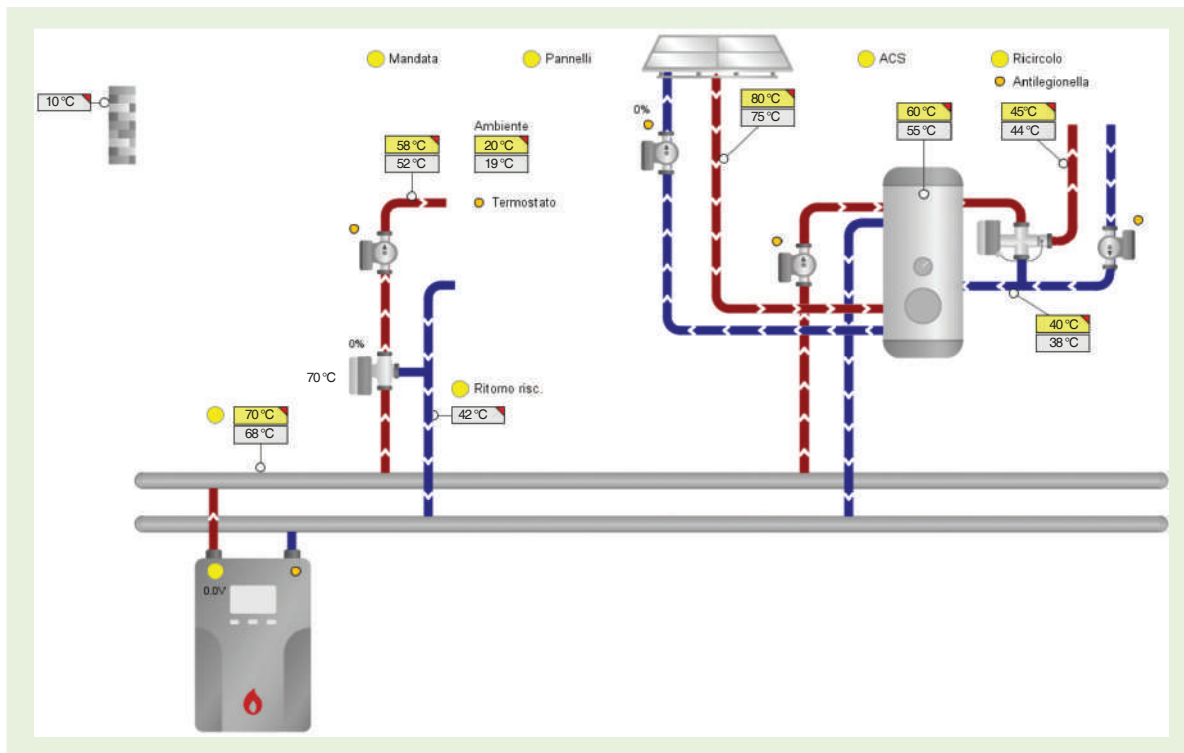
The main functionalities of the ZBC 862 are:

- Execution of preloaded adjustment and control application
- Configuration and parameterisation of the device remotely via engine 4G or locally via USB port.
- Acquisition of metering data from connected M-BUS devices
- Communication with the monitoring system via the Modbus protocol

The use of GPC 642 allows a flexible and intelligent management of resources, aimed at exploiting the potential offered by each resource in the field.

Synoptic examples for thermal power plant control

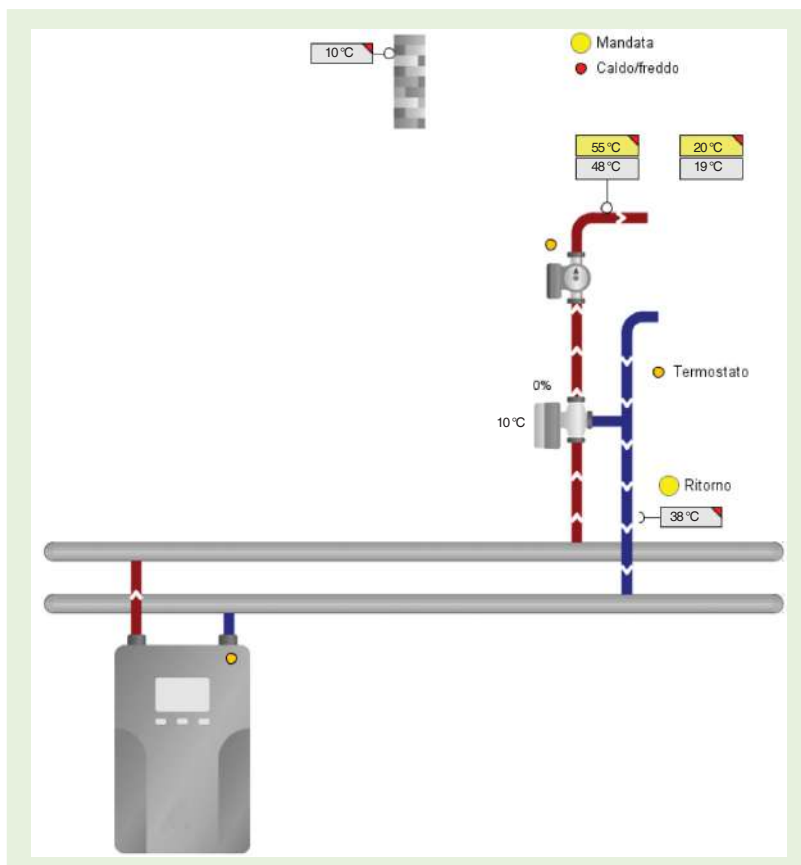
with a mixed heating circuit and a DHW circuit with solar integration.



with time-controlled generator and mixed heating circuit managed in climatic mode

It provides up to 8 selectable configurations depending on the control logic required by the system.

Synoptic for managing thermal circuits with a boiler and mixed heating circuits plus room sensors



COMPATIBLE
WITH**Q 88.****Y SERIES ELECTRICAL PANELS**

Electrical panels created specifically for Building Automation systems complete with control equipment.

Main component YLC 880 multi-configurable controller.

For other combinations contact your local retailer.

PANELS with YLC 880 + MDM 232

	switch 230V	ALM 1225	MDM 232	YLC 880	CST 800	ESP 442	ESU 402	PANEL
Q880	1	1	1	1	1			2 X 18
Q881	1	1	1	1	1		1	3 X 18
Q882	1	1	1	1	1	1	1	3 X 18
Q883	1	1	1	1	1	1	2	3 X 18
Q884	1	1	1	1	1	2	2	3 X 18

QGP.**ELECTRICAL PANELS WITH GPC 642**

For other combinations contact your local retailer

PANELS with GPC 642

	switch 230V	ALM 1225	GPC 642	ESP 442	ESU 402	CSW 868	PANEL
QGP0	1	1	1				1 X 18
QGP1	1	1	1	1			2 X 18
QGP2	1	1	1		1		2 X 18
QGP3	1	1	1	1	1		2 X 18
QGP0-1	1	1	1			1	1 X 18
QGP1-1	1	1	1	1		1	2 X 18
QGP2-1	1	1	1		1	1	2 X 18
QGP3-1	1	1	1	1	1	1	2 X 18

COMPATIBLE
WITH**Q 38.****SERIES ELECTRICAL PANELS WITH 4G CONNECTIVITY**

Electrical panels created specifically for Building Automation systems complete with control equipment.

Main component YLC 880 multi-configurable controller and RUT 302 router.

For other combinations contact your local retailer.

PANELS with YLC 880 + RUT 302

	switch 230V	ALM 1225	RUT 302	YLC 880	CST 800	ESP 442	ESU 402	PANEL
Q380	1	1	1	1	1			2 X 18
Q381	1	1	1	1	1		1	3 X 18
Q382	1	1	1	1	1	1	1	3 X 18
Q383	1	1	1	1	1	1	2	3 X 18
Q384	1	1	1	1	1	2	2	3 X 18

Electrical panels cannot be supplied without devices.

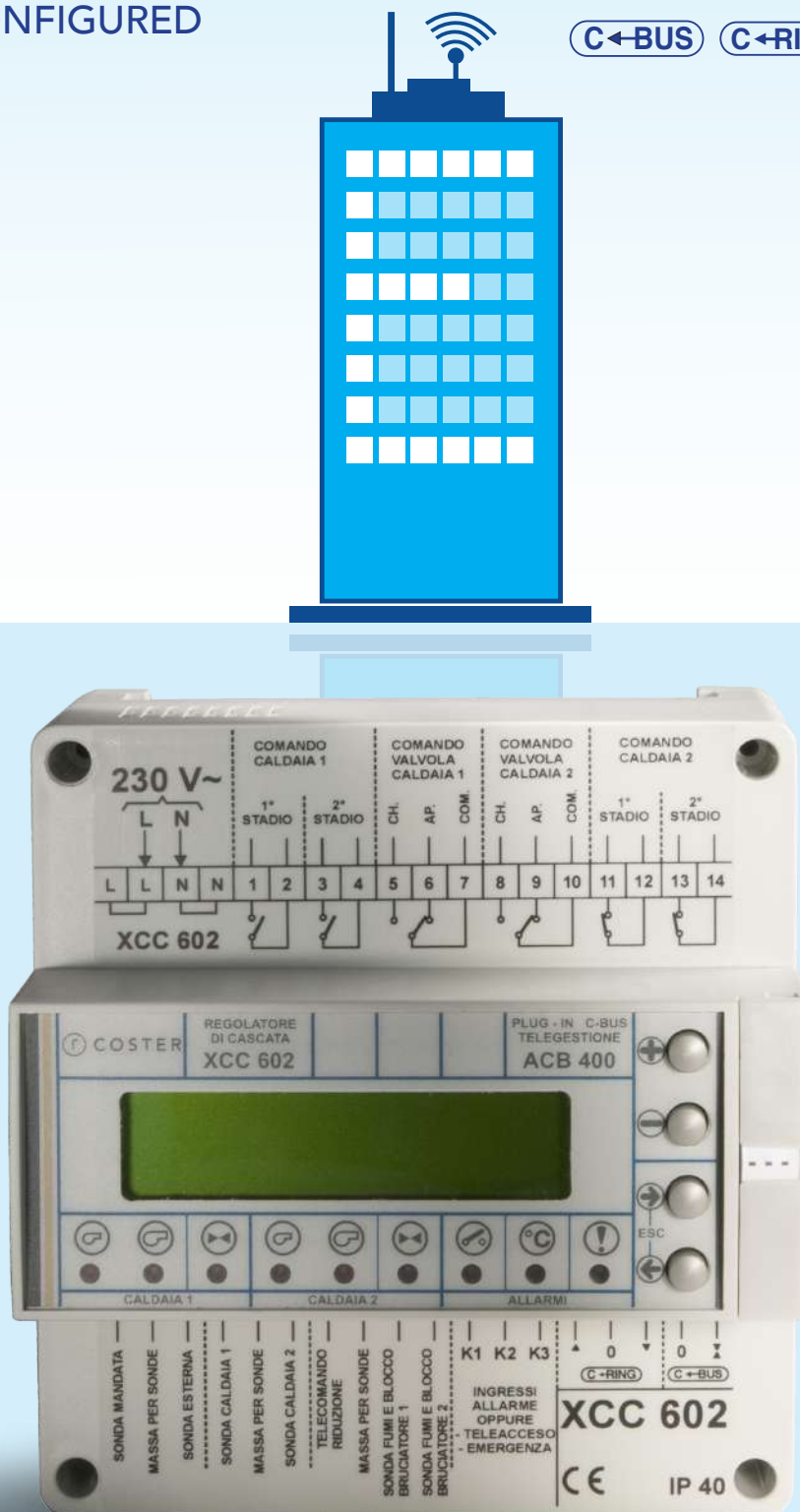
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PRECONFIGURED CONTROLLERS



COMMUNICATIONS PROTOCOLS

C←BUS **C←RING** **P←LOC** RS 232





COMMUNICATION
PROTOCOLS

OPTIONAL
C-BUS **C-RING**

AGE
G1M
M100

XCC 602

SEQUENCE CONTROLLER OF 2 BOILERS

Cascade control of 2 single-stage or two-stage boilers with or without shut-off valves.

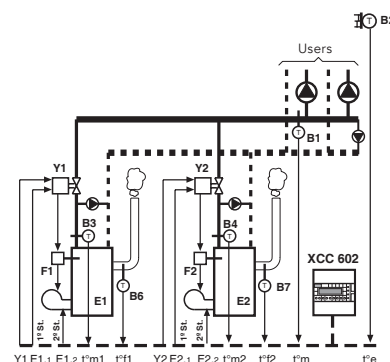
ESSENTIAL SENSORS: 1 collector temperature sensor,

or

2 boiler sensors

OPTIONAL SENSOR: 1 outside sensor

1 flue gas temperature sensor



XCC 602 Sequence controller of 2 boilers

RELATED PRODUCTS

ACB 400 Plug-in for communication via C-Bus

SAE 001 Outside temperature sensor (-40...40 °C)

SIH 010 Immersion temperature sensor (0...99 °C)

SAF 010 Cable type temperature sensor (0...100 °C)

STF 001 Flue gas temperature sensor (0...500 °C)

SCH 010 Surface temperature sensor (0...100 °C)



COMMUNICATION
PROTOCOLS

C-BUS **C-RING**

DTC 648

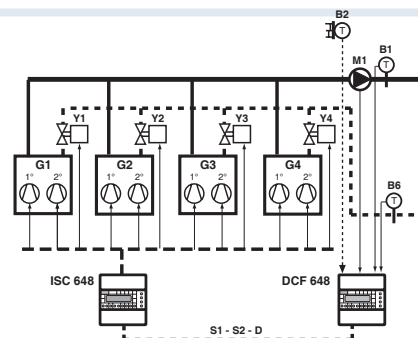
CLIMATE CONTROLLER FOR BOILERS IN SEQUENCE (UP TO 24 BOILERS)

ISC 648

RELAY COMMAND MODULE

Cascade control of several single/two stage boilers with or without shut-off valves consisting of:

- 1 climate controller for boiler cascade control;
- 1...3 relay control modules for single/two stage burners and shut-off valves.
- 1 heating collector or flow sensor
- 1 outside sensor, 1 boiler sensor



DTC 648 Climate controller for boilers in sequence

ISC 648 Relay control modules

RELATED PRODUCTS

SIH 010 Immersion temperature sensor (0...99 °C)

STH 001 High-temperature immersion sensor (0...300 °C)

SAE 001 Outside temperature sensor (-40...40 °C)

ASA 420 Accessory for connecting 4...20 mA DC active sensors.
Converts the 4...20mA signal to an analogue signal

EQUIPMENT	Boilers with 1-stage burner valves	Boilers without 1-stage burner valves	Boilers with 2-stage burner valves	Boilers without 2-stage burner valves
1 DTC 648 + 1 ISC 648	up to 4	up to 8	up to 4	up to 4
1 DTC 648 + 2 ISC 648	up to 8	up to 16	up to 8	up to 8
1 DTC 648 + 3 ISC 648	up to 12	up to 24	up to 12	up to 12



DCF 648

CLIMATE CONTROLLER FOR
CHILLER UNITS OR HEAT PUMPS
SEQUENCE



COMMUNICATION
PROTOCOLS

C←BUS

C←RING

ISC 648

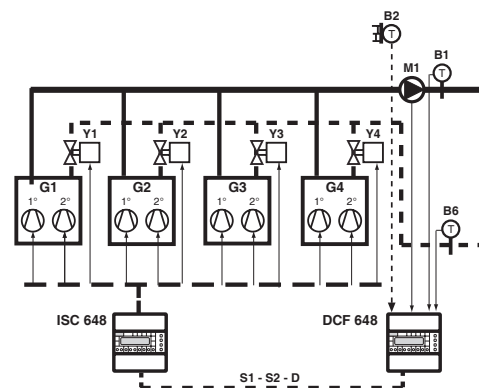
RELAY CONTROL MODULE

Cascade control of refrigeration units and heat pumps
with or without shut-off valves consisting of:

- 1 climate controller for cascade control;
- 1...3 relay control modules for single/two stage units and shut-off valves.

ESSENTIAL SENSORS: 1 collector or system flow sensor

OPTIONAL SENSORS: 1 outside sensor; 1 generic sensor



DCF 648 Climate controller for refrigeration or heat pumps sequence

ISC 648 Relay command modules

RELATED PRODUCTS

SAE 001 Outside temperature sensor (−40...40 °C)

SIH 010 Immersion temperature sensor (0...99 °C)

SIH 010 Immersion temperature sensor
(0...99 °C display unit)

SAF 010 Cable type temperature sensor

ASA 420 Accessory for connection of active sensors 4...20 mA DC
Converts the 4...20mA signal to an analogue signal

EQUIPMENT	Generators with 1-stage burner valves	Generators without 1-stage burner valves	Generators with 2-stage burner valves	Generators wi- thout 2-stage burner valves
1 DCF 648 + 1 ISC 648	up to 4	up to 8	up to 4	up to 4
1 DCF 648 + 2 ISC 648	up to 8	up to 16	up to 8	up to 8
1 DCF 648 + 3 ISC 648	up to 12	up to 24	up to 12	up to 12



COMMUNICATION
PROTOCOLS

OPTIONAL

C-BUS

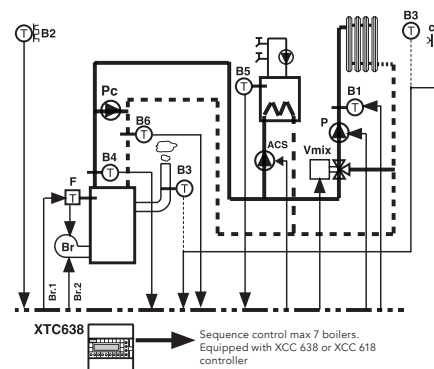
C-RING

200E
200M
200D

XTC 638

CENTRAL CLIMATIC OPTIMISER
FOR ANY TYPE OF BURNER
COMPLETE WITH A SEQUENCE FOR
MULTIPLE BOILERS

Suitable for temperature control of any type of burner.
It controls the sequence of up to 7 boilers,
all equipped with XCC 638 or XCC 618 controller.
ESSENTIAL AND OPTIONAL SENSORS:
See the data sheet, for the system type



XTC 638 Central climatic optimiser with sequence control

RELATED PRODUCTS

ACB 460	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
SAF 010	Cable type temperature sensor (0...100 °C)
STF 001	Flue gas temperature sensor (0...500 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)



COMMUNICATION
PROTOCOLS

OPTIONAL

C-BUS

C-RING

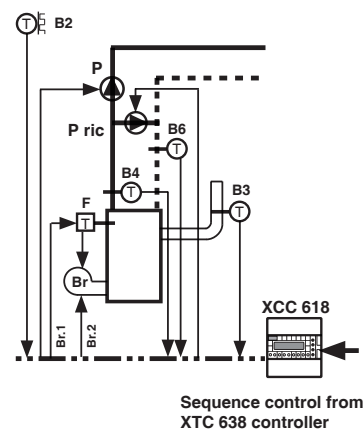
200E
200M
200D

XCC 618

CONTROLLER FOR BURNERS
1, 2 STAGE, 3 POINT MODULATING
OR 0...10 V DC INPUT

Suitable for full control of the burner for a condensing
and non-condensing boiler.
Under the control of XTC 638, it can operate a
sequence of boilers (up to 7).

ESSENTIAL SENSORS:: 1 boiler sensor
OPTIONAL SENSORS: 1 anticondensation sensor,
1 flue gases, 1 outside



XCC 618 Controller for burners that can be controlled by sequence

RELATED PRODUCTS

ACB 400	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
SAF 010	Cable type temperature sensor (0...100 °C)
STF 001	Flue gas temperature sensor (0...500 °C)
SCH 010	Surface temperature sensor (0...100 °C)

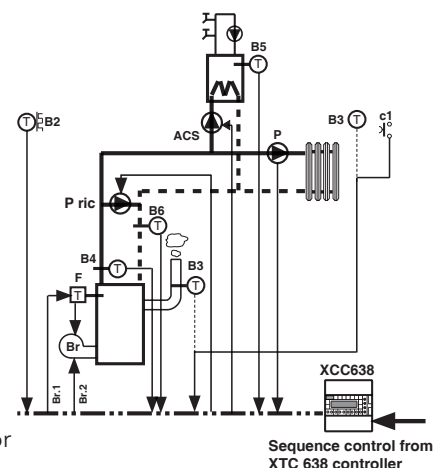
COMMUNICATION
PROTOCOLSOPTIONAL
C←BUS C←RINGAGE
GDM
MDO

XCC 638

CLIMATE OPTIMISER FOR
BURNERS 1, 2 STAGE 3 POINT MODULATING
O WITH INPUT 0...10 V DC

Suitable for total burner control for condensing
and non-condensing boilers.
Under the control of XTC 638,
it can operate a sequence of boilers (up to 7).

ESSENTIAL SENSOR: 1 boiler sensor
1 outside sensor
OPTIONAL SENSOR: 1 anticondensing sensor
1 room or flue gases sensor
1 boiler sensor



XCC 638 Climate Optimiser for burners

RELATED PRODUCTS

ACB 400	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (−40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
STF 001	Flue gas temperature sensor (0...500 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)

COMMUNICATION
PROTOCOLS

NO REMOTE MANAGEMENT

C←RING

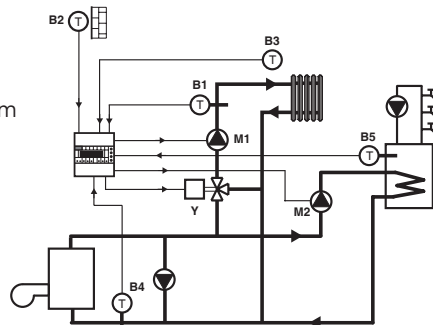
XTE 643

DIGITAL COMPENSATING CONTROLLER
FOR HEATING PLANT ROOM

Suitable for climate control of a central heating system
and control of domestic hot water.

ESSENTIAL SENSORS: 1 outside sensor
1 plant flow sensor

OPTIONAL SENSORS
AND ACCESSORIES: 1 room sensor,
1 boiler sensor,
1 anticondensing sensor,
1 remote control



XTE 643 Digital compensating controller for heating plant room and
regulator for domestic hot water (DHW) production

RELATED PRODUCTS

SAE 001	Outside temperature sensor (−40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
STF 001	Flue gas temperature sensor (0...500 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)
CDB 300	Remote control to change the program in use
ACD 655	Front panel mounting accessory to replace RTE 98.



COMMUNICATION
PROTOCOLS

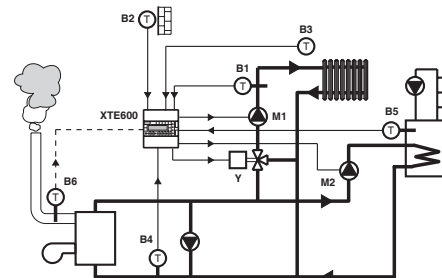
OPTIONAL
C-BUS **C-RING**

10E
10E
10E

XTE 600

OPTIMISER COMPENSATOR
FOR HEATING PLANT ROOM
OPTIONAL REMOTE MONITORING

Suitable for the climate optimisation of a central heating system and control of domestic hot water.



ESSENTIAL SENSORS: 1 outside sensor, 1 plant flow sensor
SENSORS AND ACCESSORIES: 1 room sensor, 1 flue gas sensor or 1 remote control,
OPTIONAL: 1 sensor 4...20mA DC, 1 anti-condensation sensor

XTE 600 Optimiser compensator

RELATED PRODUCTS

ACB 468	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
STF 001	Flue gas temperature sensor (0...500 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)
CDB 300	Remote control to change the program in use



COMMUNICATION
PROTOCOLS

OPTIONAL
C-BUS **C-RING**

10E
10E
10E

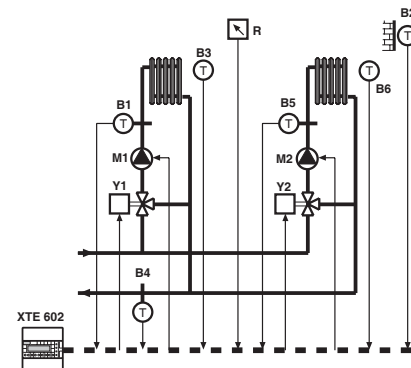
XTE 602

OPTIMISER COMPENSATOR OF
TEMPERATURE & FLOW
OPTIONAL REMOTE MONITORING

Suitable for climatic optimisation of two central heating circuits.

ESSENTIAL SENSORS : 1 outside sensor
2 plant flow sensor

SENSORS AND ACCESSORIES: 1 or 2 room sensors,
1 anticondensing sensor,
1 remote control



XTE 602 Optimiser compensator

RELATED PRODUCTS

ACB 468	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)
CDB 300	Remote control to change the program in use

COMMUNICATION
PROTOCOLSOPTIONAL
C←BUS C←RING

100
 100
 100
 100

XTE 611

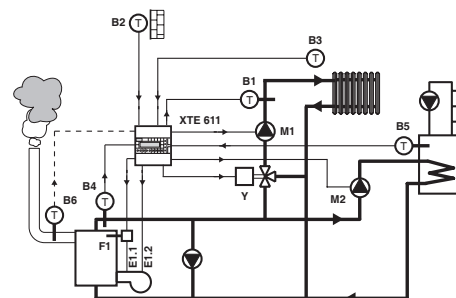
OPTIMISER COMPENSATOR
FOR HEATING PLANT ROOM
OPTIONAL REMOTE MONITORING

Suitable for:

- climate optimisation of a heating plant with:
- control of a central heating system
- control of domestic hot water
- control of two single-stage burners or one two-stage burner

ESSENTIAL SENSORS: 1 outside sensor, 1 boiler sensor, 1 plant flow sensor

OPTIONAL SENSORS AND ACCESSORIES: 1 room sensor, 1 boiler sensor
1 or 2 flue gas sensors, 1 remote control



XTE 611 Optimiser compensator

RELATED PRODUCTS

ACB 468	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
STF 001	Flue gas temperature sensor (0...500 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)
CDB 300	Remote control to change the program in use

COMMUNICATION
PROTOCOLSOPTIONAL
C←BUS C←RING

XTP 600

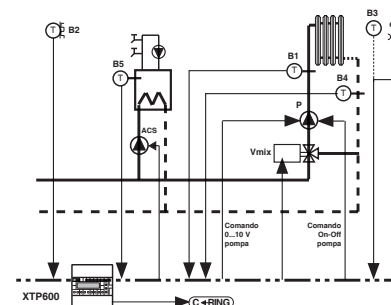
OPTIMISER COMPENSATOR OF
TEMPERATURE & FLOW
OPTIONAL REMOTE MONITORING
SUITABLE FOR CONDENSATION BOILERS

Suitable for the climate optimisation of a central heating system, optimising the flow rate through the control of a variable speed circulation pump.

It optimises the efficiency of condensing boilers.

ESSENTIAL SENSORS: 1 outside sensor, 1 return site sensor,
SENSORS AND ACCESSORIES OPTIONAL: 1 heating flow sensor

1 room sensor, 1 boiler sensor
1 flue gas sensor, 1 remote control



XTP 600 Optimiser compensator

RELATED PRODUCTS

ACB 468	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
STF 001	Flue gas temperature sensor (0...500 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)
CDB 300	Remote control to change the program in use



COMMUNICATION
PROTOCOLS

OPTIONAL
C-BUS **C-RING**

XCS 633

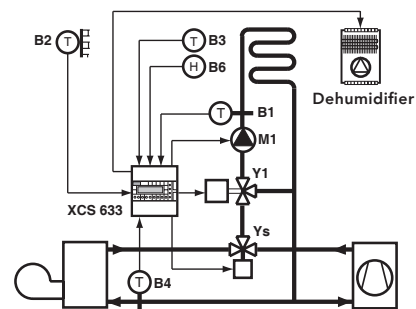
COMPENSATING CONTROLLER WITH
SEASON SWITCHING

OPTIONAL REMOTE MONITORING

Winter and summer climate control of fan coil or radiant panel plant flow temperature.

ESSENTIAL SENSORS: 1 outside sensor
1 plant flow sensor

OPTIONAL SENSORS AND ACCESSORIES: 1 room sensor,
1 temperature/humidity room sensor,
1 remote control,



XCS 633 Summer/winter climate optimiser

RELATED PRODUCTS

ACB 468	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)
SAU 914	Relative humidity and temperature sensor
CDB 333	Remote control to change the program in use



COMMUNICATION
PROTOCOLS

OPTIONAL
C-BUS **C-RING**

XSS 633

COMPENSATING CONTROLLER WITH
SEASON SWITCHING

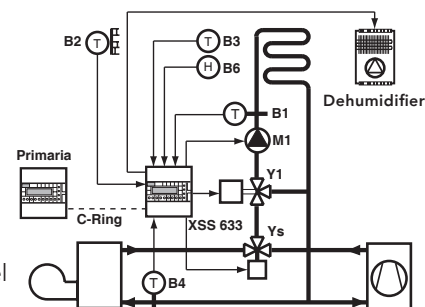
OPTIONAL REMOTE MONITORING

SLAVE UNIT FOR MULTICOSTER SYSTEM

Winter and summer control of fan coil or radiant panel plant flow temperature.

ESSENTIAL SENSORS: 1 outside sensor,
1 flow sensor

OPTIONAL SENSORS AND ACCESSORIES: 1 room sensor,
1 room temperature/humidity sensor,
1 remote control



XSS 633 Summer/winter climate optimiser

RELATED PRODUCTS

ACB 400	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)
SAU 914	Relative humidity and temperature sensor
CDB 333	Remote control to change the program in use

COMMUNICATION
PROTOCOLS

OPTIONAL

C-BUS

C-RING

AGE
GDM
M10

XSE 600*

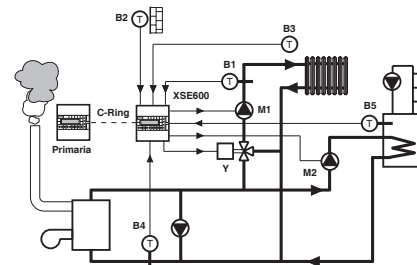
OPTIMISER COMPENSATOR "SLAVE"

FOR HEATING PLANT ROOM

OPTIONAL REMOTE MONITORING

SLAVE UNIT FOR MULTICOSTER SYSTEM

Suitable for climatic optimisation of a central heating system and to control domestic hot water.



ESSENTIAL SENSORS: 1 outside temperature sensor
(as an alternative to outside temperature value on C-Ring),
1 flow sensor

OPTIONAL SENSORS AND ACCESSORIES: 1 room sensor, 1 sensor 1 remote

XSE 600 Optimiser compensator

RELATED PRODUCTS

ACB 400	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
SCH 010	Surface temperature sensor (0...100 °C)
STF 001	Flue gas temperature sensor (0...500 °C)
SAB 010	Room temperature sensor (0...40 °C)
CDB 300	Remote control to change the program in use

COMMUNICATION
PROTOCOLS

OPTIONAL

C-BUS

C-RING

AGE
GDM
M10

XSE 602*

OPTIMISER COMPENSATOR SLAVE FOR TWO CIRCUITS

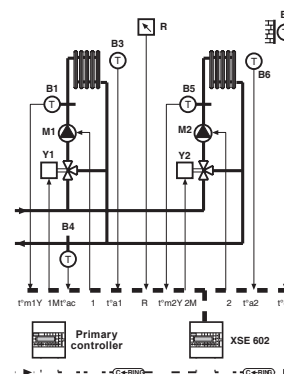
OPTIONAL REMOTE MONITORING SYSTEM

Suitable for climatic optimisation of two central heating circuits.

ESSENTIAL SENSORS: 1 outside sensor (as an alternative
to the outside temperature value on C-Ring)

OPTIONAL SENSORS

AND ACCESSORIES: 1 or 2 room sensors,
1 anti-condensation sensor,
1 remote control



XSE 602 Optimiser compensator

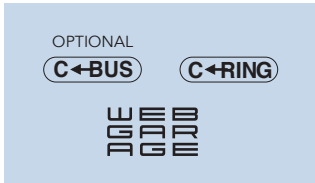
RELATED PRODUCTS

ACB 400	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
SCH 010	Surface temperature sensor (0...100 °C)
SAB 010	Room temperature sensor (0...40 °C)
CDB 300	Remote control to change the program in use

(*) In order to function, this unit needs to be connected to at least one C-RING master unit

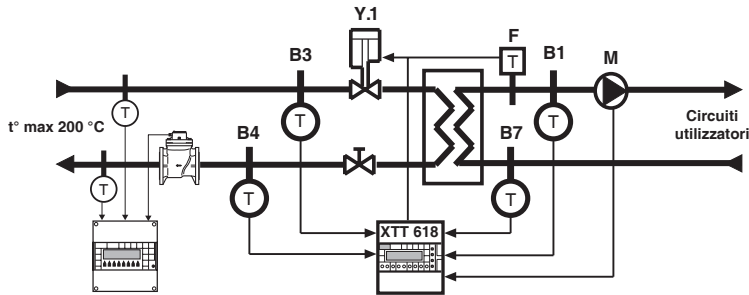


COMMUNICATION
PROTOCOLS



XTT 618

CONTROLLER FOR DISTRICT HEATING SUBSTATION
WITH A SINGLE EXCHANGER
OPTIONAL REMOTE MONITORING



Regulation of district heating substations, consisting of an exchanger with a valve and a secondary circuit pump.

ESSENTIAL SENSORS: 1 secondary flow sensor

SENSORS AND ACCESSORIES 1 outside sensor

OPTIONAL: 1 primary flow sensor,
1 primary return sensor,
1 secondary return sensor

XTT 618	Controller for district heating substations
XTT 618/S1	High-temperature secondary temperature controller

RELATED PRODUCTS

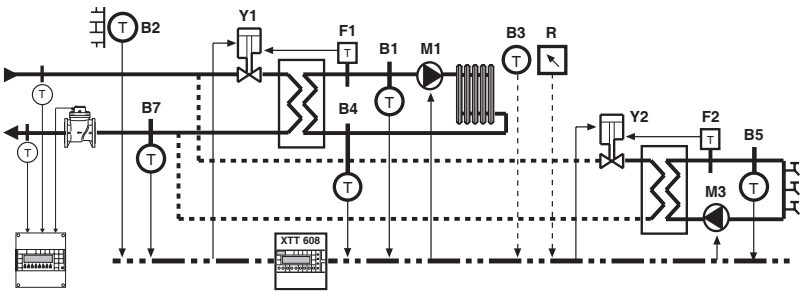
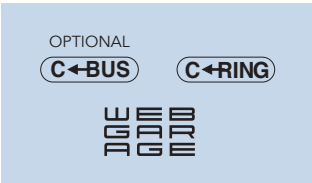
ACB 400	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (−40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
SAF 010	Cable type temperature sensor (0...99 °C)
SHF 001	Cable type temperature sensor (0...180 °C)
STH 001	Immersion temperature sensor (0...300°C) primary flow and return (XTT 608), secondary flow (XTT 618/S1)



XTT 608

CONTROLLER FOR DISTRICT HEATING SUBSTATION
WITH TWO EXCHANGERS FOR THE SYSTEM AND HOT WATER
OPTIONAL REMOTE MONITORING

COMMUNICATION
PROTOCOLS



Regulation of district heating substations, consisting of two exchangers with valves and a secondary circuit pump.
ESSENTIAL SENSORS: 1 heating flow sensor,
1 DHW distribution sensor
SENSORS AND ACCESSORIES: 1 outside sensor, 1 room sensor, 1 primary return sensor,
OPTIONAL: 1 heating return sensor,
1 DHW distribution sensor, 1 remote control

XTT 608	Controller for district heating substations
RELATED PRODUCTS	
ACB 460	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40 °C)
SIH 010	Immersion temperature sensor (0...99 °C) heating flow and return, hot water storage and distribution
SAB 010	Room temperature sensor (0...40 °C)
SHF 001	Cable type temperature sensor (0...180 °C)
CDB 300	Remote control to change the program in use



COMMUNICATION
PROTOCOLS

WEB
PAGE

DAM 675

UNIT OF 5 CONTROLS, WITH COMPLETE TIME PROGRAMMING AND
DISPLAY OF MEASUREMENTS, ALARMS AND STATUSES

5 On-Off controls with independent time programs and annual periods
7 measurement inputs or On-Off alarms
3 On-Off alarms

DAM 675 Programming unit for controls, measurements, alarms and statuses

RELATED PRODUCTS

STF 001	Flue gas temperature sensor (0...500 °C)
STH 001	Immersion temperature sensor (0...300 °C)
SIH 010	Immersion temperature sensor (0...99 °C)
SAE 001	Outside temperature sensor (-40...+40 °C)
SAB 010	Room temperature sensor (0...40 °C)
ASA 420	Accessory for connecting 4...20 mA active sensors
ASA 010	Accessory for connecting 0...10 V DC active sensors. It converts the 0...10 V signal of the sensors into an analogue signal



COMMUNICATION
PROTOCOLS

PRECONFIGURED

C-BUS

PLE 608

UNIT FOR CONTROLS
WITH PROGRAMMABLE LOGIC
FUNCTIONS

6 On-Off controls with time schedule and logic functions (PLC).

PLE 608 6 On-Off controls with time schedule and logic functions



COMMUNICATION
PROTOCOLS

OPTIONAL

C-BUS

RS 232

XCO 428

TIME PROGRAMMER WITH TWO OUTPUTS
AND TWO ALARMS PRESET FOR SMS

XCO 428 is a universal time programmer with 2 outputs, complete with alarms, already preset to be controlled via SMS.

A kit with a GSM modem is also provided, to obtain a complete mini remote control

XCO 428 Time programmer with two outputs and two alarms

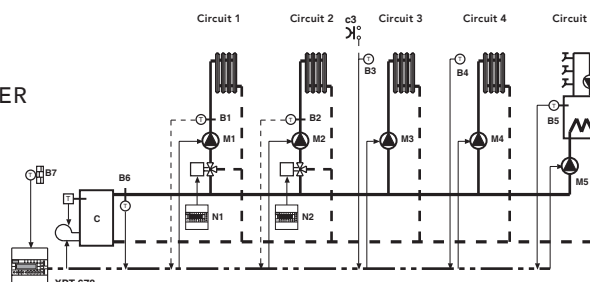
RELATED PRODUCTS

ACB 400 Plug-in for communication via C-Bus

COMMUNICATION
PROTOCOLSOPTIONAL
C←BUS C←RING

XPT 678

ROOM TEMPERATURE CONTROLLER
AND OPTIMISER FOR 5 USER
CIRCUITS USER AND BOILER



On-Off control for thermal system with time programming and/or room temperature control.
Boiler control according to system request

XPT 678 Temperature controller for user circuits and boiler

RELATED PRODUCTS

ACB 460	Plug-in for communication via C-Bus
SIH 010	Immersion temperature sensor (0...99 °C)
SAE 001	Outside temperature sensor (-40...+40 °C)
SAB 010	Room temperature sensor (0...+40 °C)

COMMUNICATION
PROTOCOLS

C←BUS C←RING

IPG 318

TWIN PUMP STEP CONTROLLER

Adapts the pump control On-Off signal of a controller to the control of twin pumps.

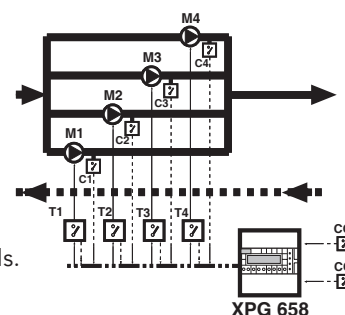
IPG 318 Twin pump step controller

COMMUNICATION
PROTOCOLSOPTIONAL
C←BUS

XPG 658

SEQUENCE CONTROLLER
OF 5 PUMP OR
OF 5 ELECTRICAL LOADS

It controls up to 5 pumps in sequence according to an On-Off control signal, or a 0...10 Volt dc signal.
It can also be used as a sequence controller of 5 electrical loads.



XPG 658 Sequence controller of up to 5 pumps or electrical loads

RELATED PRODUCTS

ACB 460	Plug-in for communication via C-Bus
----------------	-------------------------------------



IPS 328

DOUBLE UNIVERSAL

RELAY CONTROL CONVERTER

Transforms any 2 On-Off controls into 2 relay controls.
It controls the recirculation pump for condensing boilers to optimise efficiency.
It controls the circulation pump with variable speed in systems with boxes

IPS 328 Double universal relay control converter



CSA 344

TRIPLE SIGNAL SELECTOR

0...10 V DC

Selects the minimum, arithmetic mean and maximum value between 2...6 signals 0...10 V DC..

CSA 344 Triple signal selector 0...10 V DC



COMMUNICATION
PROTOCOLS

C-BUS

DRP 414

CONTROLLER FOR CIRCULATION PUMPS

WITH VARIABLE SPEED OR FIXED SPEED

Controls the flow rate of the circulation pump in a system to optimise efficiency of the condensing boilers.

- one or two variable speed pumps
- one fixed-speed pump plus one variable-speed pump
- two fixed speed pumps

24 V AC controller power supply, such as pump head sensors to be used..

DRP 414 Circulation pump controller

RELATED PRODUCTS

SDW 201	Liquid differential pressure sensor	0 ... 1 bar
SDW 202	Liquid differential pressure sensor	0 ... 25 bar
SDW 206	Liquid differential pressure sensor	0 ... 6 bar



COMMUNICATION
PROTOCOLS

C-RING

OCR 348

INSERTS VARIOUS COMMANDS

INTO THE C-RING BUS

Inserts some external inputs into the C-Ring line to be able to control the temperature of a boiler or similar.

- 1 temperature measured by a standard sensor
- 1 input 0...10 Volt DC adjustable
- 1 general use switch

OCR 348 Inserter for C-Ring of various controls: 230 Volt dc power supply

COMMUNICATION
PROTOCOLS

C←RING

LCR 348

CONVERTER FOR C-RING: CONVERSION OF C-RING
DATA TO RELAYS AND 0...10 V DC

Reader and converter of signals in the C-Ring

- reads the maximum temperature requested by the equipment connected in C-Ring
- converts this temperature into a 0...10 V DC signal to be sent to boilers with this input
- relay output when this temperature exceeds a certain value
- relay output for C-ring failure alarm

LCR 348

Auxiliary unit for C-Ring

COMMUNICATION
PROTOCOLS

C←BUS

CSV 328

CONVERTER FROM 0...10 V DC, 4...20mA
OR TEMPERATURE SIGNALS TO 2 MODULATING RELAY CONTROLS
2 STAGES ON-OFF, MINIMUM AND MAXIMUM LIMITS

Converts a 0...10 Volt DC, or 4...20 mA signal into 2 relays controls to have:

- 3-point modulating control, to convert a 3-point actuator into a 0...10 V DC input
- 2-stage On-Off control to control e.g. 2 burners in sequence
- 2 minimum and maximum limits On-Off controls

CSV 328

Converter of 0...10 V DC, 4...20 mA, or temperature signature

COMMUNICATION
PROTOCOLS

C←BUS

CSC 328

CONVERTER FROM 3 POINTS 0...10 V DC,
OR 4...20 mA TO TWO FREELY CONFIGURABLE
0...10 V DC SIGNALS

Converts a 3-point signal (e.g.: the 2 open and close relays of a controller), a 0...10 Volt or 4...20 mA output, into 2 0...10 Volt outputs, which can be freely programmed to control the sequence of 2 units (e.g.: burners) which have 0...10 V DC as input

CSC 328

Auxiliary unit for C-Ring



CAP 328

CONVERTER AND AMPLIFIER
OF ACTIVE AND PASSIVE TEMPERATURE SENSORS

Converts the temperature measurement of a standard NTC passive sensor, or a 0...10 Volt DC or 4...20mA active temperature sensor into 2 outputs compatible with the temperature sensor inputs of the various COSTER GROUP devices. It amplifies the 2 compatible outputs to be able to power up to a maximum of 35 devices, all with the same input characteristics.

TYPE OF TEMPERATURE SENSOR

GROUPS OF EQUIPMENT
WITH IDENTICAL
MEASUREMENT CHARACTERISTICS

NTC 1	Outside Kohm (-30...40 °C)	check the CAP 328 data sheet
NTC 10	Room Kohm (0...40 °C)	
NTC 10	Kohm flow air (0...60 °C)	
NTC 10	Kohm water (0...100 °C)	
CAP 328	Converter/amplifier for temperature sensors	



RTP 318

ON-OFF OR DIFFERENTIAL
TEMPERATURE CONTROLLER

Suitable for temperature control at a fixed point or to control the difference between 2 temperatures: Output = 1-stage On-Off control
ESSENTIAL SENSORS: 1 sensor for fixed point or 2 sensors per temperature difference.

RTP 318 Converter/amplifier for temperature sensors

RELATED PRODUCTS

SIH 010	Immersion temperature sensor (0...+99 °C)
SAE 001	Outside temperature sensor (-40...+40 °C)
SAB 010	Room temperature sensor (0...+40 °C)
SCH 010	Surface temperature sensor (0...+99 °C)
STA 010	Air duct temperature sensor (0...+99 °C)
SAF 010	Cable type temperature sensor (0...+99 °C)
SAF 001	Cable type temperature sensor (-40...+40 °C)

COMMUNICATION
PROTOCOLS

C-BUS

C-BUS

DDM 328

DIFFERENTIAL CONTROLLER
OF 2 TEMPERATURES
OR 2 SIGNALS 0...10 VDC

Control with 2 relay output and 0...10 Volt DC, of the difference of two temperatures or 2 values 0...10 Volt DC, with the following function:

- modulating
- 2-stage
- minimum and maximum limit

DDM 328 On-Off temperature controller

RELATED PRODUCTS

SIH 010	Immersion temperature sensor (0...+99 °C)
SAB 010	Room temperature sensor (0...+40 °C)
STA 010	Air duct temperature sensor (0...+99 °C)
SUR 704	Air duct relative humidity sensor (10...90%)
SUT 734	Air duct humidity sensor for swimming pools (10...90%)
SAU 914	Relative humidity (10...90%) and temperature sensor (0...40 °C)

COMMUNICATION
PROTOCOLS

C-BUS

DTF 31.

TEMPERATURE CONTROLLER
FOR VARIOUS USES
WITH C-BUS REMOTE MONITORING

It can be used for any temperature control needs, with following outputs::

- 3-point modulating with 2 relays
- On-Off with 1 or 2 stages
- On-Off proportional with 1-stage

ESSENTIAL SENSORS: 1 temperature sensor

OPTIONAL SENSORS

AND ACCESSORIES: 1 limit temperature sensor, 1 Temperature set point adjuster

DTF 314	Controller with C-Bus remote control, 24 Volt AC power supply
DTF 318	Controller with C-Bus remote control, 230 Volt AC power supply

RELATED PRODUCTS

SIH 010	Immersion temperature sensor (0...+99 °C)
SIR 010	Immersion (quick) water temperature sensor (0...+99 °C)
SAB 010	Room temperature sensor (0...+40 °C)
STA 010	Air duct temperature sensor (0...+99 °C)
CDB 100	Temperature Set point adjuster with incorporated sensor (-5...+5 °C)



RTF 31.

TEMPERATURE CONTROLLER FOR VARIOUS USES

WITHOUT C-BUS REMOTE MONITORING

It can be used for any temperature adjustment requirement with following outputs:

- 3-point modulating with 2 relays
- On-Off with 1 or 2 stages
- On-Off proportional with 1-stage

ESSENTIAL SENSORS: 1 temperature sensor

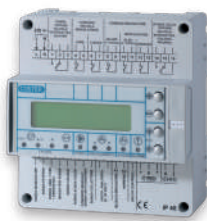
OPTIONAL SENSORS

AND ACCESSORIES: 1 limit temperature sensor, 1 Temperature set point adjuster

RTF 314	Controller with C-Bus remote control, 24 Volt AC power supply
RTF 318	Controller with C-Bus remote control, 230 Volt AC power supply

RELATED PRODUCTS

SIH 010	Immersion temperature sensor (0...+99 °C)
SIR 010	Immersion (quick) water temperature sensor (0...+99 °C)
SAB 010	Room temperature sensor (0...+40 °C)
STA 010	Air duct temperature sensor (0...+99 °C)
CDB 100	Temperature Set point adjuster with incorporated sensor (-5...+5 °C)



COMMUNICATION
PROTOCOLS

OPTIONAL
C-BUS **RS 232**
C-RING

XTR 628

TEMPERATURE CONTROLLER

WITH TIME SCHEDULE

There are 3 controllers in the same unit with these functions:

- 1 modulating 3-point or 1- or 2-stage On-Off temperature controller with own time schedule
- 2 On-Off temperature controllers with own time schedules

ESSENTIAL SENSORS: 1, 2 or 3 temperature sensors

OPTIONAL SENSORS AND ACCESSORIES: 1 flow temperature sensor, 1 Temperature Set point adjuster

XTR 628	Temperature controller
----------------	------------------------

RELATED PRODUCTS

ACB 460	Plug-in for communication via C-Bus
SIH 010	Immersion temperature sensor (0...+99 °C)
SIR 010	Immersion (quick) water temperature sensor (0...+99 °C)
SAB 010	Room temperature sensor (0...+40 °C)
STA 010	Air duct temperature sensor (0...+99 °C)
CDB 100	Temperature Set point adjuster with incorporated sensor (-5...+5 °C)

COMMUNICATION
PROTOCOLS

C←BUS

DRU 61.

UNIVERSAL CONTROLLER WITH RELAY OUTPUT

It controls temperature or other physical variables such as pressure, level, ecc.

- passive temperature sensor input or 0...10 Volt DC or 4...20 mA, from other active sensors.
- outputs: 3-point modulating control or 2...4 step sequencing.

ESSENTIAL SENSORS: 1 passive or active sensor

OPTIONAL SENSORS AND ACCESSORIES: 1 Temperature Set point adjuster

DRU 614 Universal controller, 24 Volt AC power supply

DRU 618 Universal controller, 230 Volt AC power supply

RELATED PRODUCTS

SIH 010	Immersion temperature sensor (Normal) (0...99 °C)
SAF 001	Cable type temperature sensor (-40...40 °C)
STH 001	Immersion temperature sensor (0...300 °C)
SAB 010	Room temperature sensor (0...40 °C)
SUR 704	Relative humidity sensor (10...90 %)
SUT 734	Air duct humidity sensor for swimming pools (10...90%)
SAU 914	Relative humidity (10...90%) and temperature sensor (0...40 °C)
SPW 204	Pressure sensor for liquids (0...4 bar)
SPW 210	Pressure sensor for liquids (0...10 bar)
SPW 216	Pressure sensor for liquids (0...16 bar)
SDW 201	Differential pressure sensor for liquids (0...1 bar)
SDW 202	Differential pressure sensor for liquids (0...2,5 bar)
SDW 206	Differential pressure sensor for liquids (0...6 bar)
SDA 700	Differential pressure sensor for air (0...26 mbar settable)
CDB 100	Temperature Set point adjuster with incorporated sensor (-5...5 °C)



DRU 41.

UNIVERSAL CONTROLLER WITH

WITH RELAY OUTPUT 0...10 VOLT DC

It controls temperature or other physical properties such as pressure, level, etc.

- passive temperature sensor input or 0...10 Volt DC, from other active sensors
- outputs: 3-point modulating command, 2-stage On-Off or 0...10 Volt dc.

ESSENTIAL SENSORS: 1 passive or active sensor

OPTIONAL SENSORS AND ACCESSORIES: 1 Temperature Set point adjuster

DRU 414 Universal controller, 24 Volt AC power supply

DRU 418 Universal controller, 230 Volt AC power supply

RELATED PRODUCTS

SIH 010	Immersion temperature sensor (Normal) (0...99 °C)
SAB 010	Room temperature sensor (0...40 °C)
SUR 704	Relative humidity sensor (10...90 %)
SUT 734	Air duct humidity sensor for swimming pools (10...90%)
SAU 914	Relative humidity (10...90%) and temperature sensor (0...40 °C)
SPW 204	Pressure sensor for liquids (0...4 bar)
SPW 210	Pressure sensor for liquids (0...10 bar)
SPW 216	Pressure sensor for liquids (0...10 bar)
SDW 201	Differential pressure sensor for liquids (0...1 bar)
SDW 202	Differential pressure sensor for liquids (0...2,5 bar)
SDW 206	Differential pressure sensor for liquids (0...6 bar)
SDA 700	Differential pressure sensor for air (0...26 mbar settable)
CDB 100	Temperature Set point adjuster with incorporated sensor (-5...5 °C)



COMMUNICATION
PROTOCOLS

C-BUS

C-RING

DPS 638

CONTROLLER FOR SOLAR PANELS

INSTALLATIONS WITH

C-BUS REMOTE MONITORING

Automation of solar panel systems with up to 3 storage tanks

- On-Off setting of the thermal integration circuit
- Modulating control of the domestic hot water distribution temperature

ESSENTIAL SENSORS: 1 passive or active sensor

OPTIONAL SENSORS AND ACCESSORIES: 1 Temperature Set point adjuster

DPS 638 Controller for solar panel systems with remote control

RELATED PRODUCTS

SIH 010	Immersion temperature sensor with brass thermowell (0...99 °C)
SAF 010	Cable type temperature sensor (0...99 °C)
SHF 001	Cable type temperature sensor with 3 metre cable (0...180 °C)
GIS 090	Cable type sensor pocket (1/2" x 80 mm)
GIS 160	Cable type sensor pocket (1/2" x 160 mm)
GIS 500	Cable type sensor pocket (1/2" x 500 mm)

COMMUNICATION
PROTOCOLSOPTIONAL
C-BUS

XTU 618

TEMPERATURE AND HUMIDITY CONTROLLER
FOR FAN COILS

OPTIONAL REMOTE MONITORING

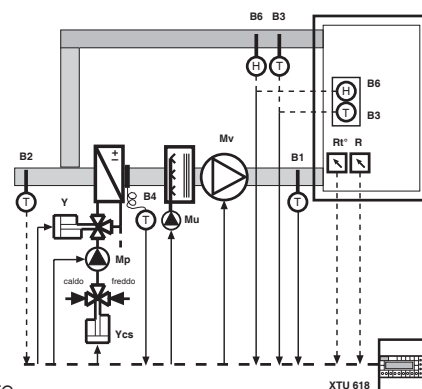
Suitable for winter and summer control of room temperature and humidity and/or delivery air in thermoventilation (fan coils) systems consisting of:

- 1 heating/cooling battery
- 1 humidifier

ESSENTIAL SENSOR: 1 room or Air duct temperature sensor

OPTIONAL SENSORS
AND ACCESSORIES:

- 1 flow temperature sensor
- 1 outside sensor
- 1 room/Air duct relative humidity sensor
- 1 battery frost protection sensor
- 1 Temperature Set point adjuster
- 1 remote control



XTU 618 Temperature and relative humidity controller

RELATED PRODUCTS

ACB 460	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (−40...40)
STA 010	Air duct temperature sensor (intake, flow, condensation) (0...60 °C)
SAB 010	Room temperature sensor (0...40 °C)
STA 001	Air duct temperature sensor (external (−40...40 °C)
SAF 010	Cable type temperature sensor (antifreeze) (0...40 °C)
SUR 704	Air duct relative humidity sensor
SAU 914	Relative humidity (10...90%) and temperature sensor (0...50 °C)
CDB 100	Temperature Set point adjuster with incorporated sensor (−5...5 °C)
CDB 333	Remote control for modifying the current program



COMMUNICATION
PROTOCOLS

OPTIONAL
C-BUS

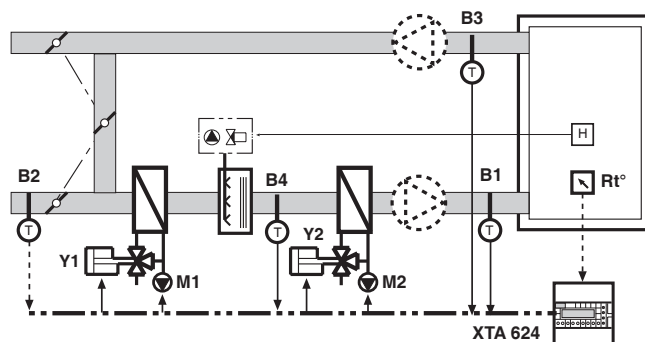
10E
10M
10D
10S

XTA 624

TEMPERATURE CONTROLLER FOR
AIR HANDLING UNIT WITH 2 BATTERIES
OPTIONAL REMOTE CONTROL

Suitable for ambient and/or air flow temperature control in Air Handling Units consisting of:

- 1 or 2 heating and/or cooling batteries
- 1 air mixing unit (dampers) or 1 heat recovery unit



ESSENTIAL SENSOR: 1 room or Air duct temperature sensor
OPTIONAL SENSORS: 1 flow sensor,
AND ACCESSORIES 1 outside sensor,
1 preheating sensor
1 temperature set point adjuster

XTA 624 Programming unit for commands, measurements, alarms and statuses

RELATED PRODUCTS

ACB 400 Plug-in for communication via C-Bus

SAE 001 Outside temperature sensor (-40...40)

STA 001 Air duct temperature sensor (external)(-40...40 °C)

STA 010 Air duct temperature sensor (intake, flow, condensation (0...60 °C)

SAB 010 Room temperature sensor (0..40 °C)

CDB 100 Temperature Set point adjuster with incorporated sensor (-5...5 °C)

COMMUNICATION
PROTOCOLSOPTIONAL
C-BUS

XTU 614

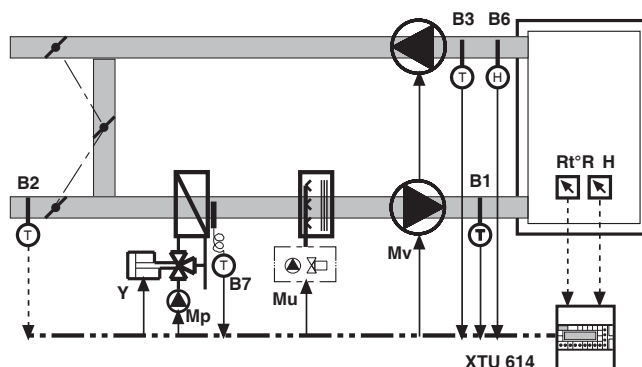
TEMPERATURE AND HUMIDITY CONTROLLER

FOR AIR HANDLING UNIT WITH 1 BATTERY

OPTIONAL REMOTE MONITORING

Suitable for winter and summer control of room temperature and humidity and/or flow air in air handling systems consisting of :

- 1 heating and/or cooling or preheating battery
- 1 On-Off humidification unit
- 1 air mixing unit (dampers) or 1 heat recovery unit
- 1 heat recuperator



ESSENTIAL SENSOR:	1 room or Air duct temperature sensor
OPTIONAL SENSORS	1 flow or pre-heating sensor
AND ACCESSORIES:	1 outside sensor
	1 room/Air duct relative humidity sensor
	1 battery frost protection sensor
	1 temperature set point adjuster
	1 humidity set point adjuster

XTU 614 Temperature and relative humidity controller

RELATED PRODUCTS

ACB 460	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (-40...40)
STA 010	Air duct temperature sensor (intake, flow, condensation) (0...60 °C)
SAB 010	Room temperature sensor (0..40 °C)
STA 001	Air duct temperature sensor (external) (-40...40 °C)
SAF 010	Cable type temperature sensor (antifreeze) (0...40 °C)
SUR 704	Air duct relative humidity sensor
SUT 734	Air duct humidity and temperature sensor (for swimming pools) (10...90%)
SAU 914	Relative humidity (10...90%) and temperature sensor (0...50 °C)
CDB 100	Temperature Set point adjuster with incorporated sensor (-5... 5 °C)
CDB 200	Relative humidity set point adjuster



COMMUNICATION
PROTOCOLS

OPTIONAL
C-BUS



XTU 644

TEMPERATURE AND HUMIDITY CONTROLLER

FOR AIR HANDLING UNIT

WITH 2 BATTERIES

OPTIONAL REMOTE MONITORING

Suitable for winter and summer control of room temperature and humidity and/or flow air in air handling systems consisting of:

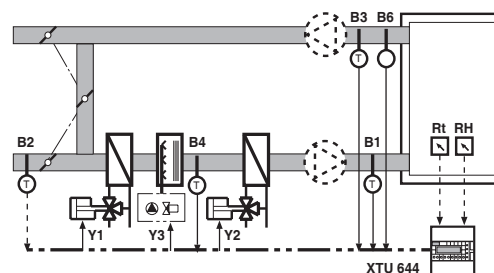
- 2 heating and/or cooling or preheating batteries
- 1 On-Off humidification unit
- 1 air mixing unit (dampers) or 1 heat recuperator

ESSENTIAL SENSOR: 1 room or air duct temperature sensor

OPTIONAL SENSORS 1 flow temperature sensor

AND ACCESSORIES

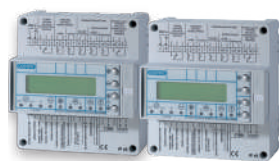
- 1 outside sensor
- 1 air duct ambient relative humidity sensor
- 1 outside relative humidity sensor
- 1 window sensor, 1 temperature set point adjuster
- 1 relative humidity set point adjuster



XTU 644 Temperature and relative humidity controller

RELATED PRODUCTS

ACB 460	Plug-in for communication via C-Bus
SAE 001	Outside temperature sensor (−40...40)
STA 010	Air duct temperature sensor (intake, flow, condensation) (0...60 °C)
SAB 010	Room temperature sensor (0...40 °C)
STA 001	Air duct temperature sensor (external) (−40...40 °C)
SUR 704	Air duct relative humidity sensor
SUT 734	Air duct humidity and temperature sensor (for swimming pools) (10...90%)
SAU 914	Relative humidity (10...90%) and temperature sensor (0...50 °C) (0...50 °C)
CDB 100	Temperature Set point adjuster with incorporated sensor (−5...5 °C)
CDB 200	Relative humidity set point adjuster

COMMUNICATION
PROTOCOLSOPTIONAL
C←BUST0E
T0M
T0B

XTU 614/644

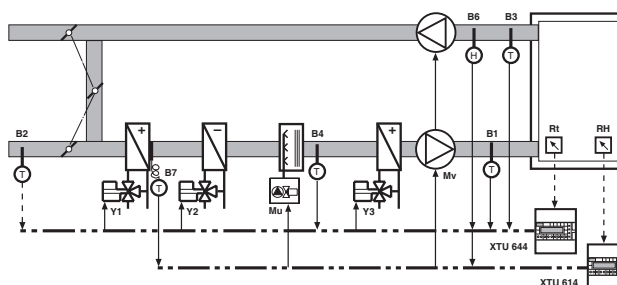
TEMPERATURE AND HUMIDITY CONTROLLER

FOR AIR HANDLING UNIT WITH 3 BATTERIES

OPTIONAL REMOTE MONITORING

These are 2 coupled standard 3-battery controllers for Air Handling Unit, consisting of:

- 3 heating/pre-heating, cooling and post-heating batteries
- 1 On-Off humidification unit
or 1 heat recovery unit in a single package



ESSENTIAL SENSORS: see

XTU 614 and XTU 644 controllers

SENSORS AND ACCESSORIES: see

XTU 614 and XTU 644 controllers

XTU 614/644 Pair of controllers for Air Handling Unit (single package)

RELATED PRODUCTS

ACB 460 Plug-in for communication via C-Bus



COMMUNICATION
PROTOCOLS

OPTIONAL
C-BUS

OPTIONAL
RT RH

XTU 664

TEMPERATURE AND HUMIDITY CONTROLLER

FOR AIR HANDLING UNIT

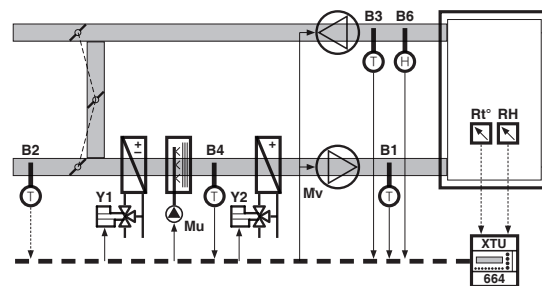
WITH 2 BATTERIES WITH TIME PROGRAMMING

OPTIONAL REMOTE MONITORING

Suitable for adjustment the ambient and/or air flow temperature in Air Handling Units consisting of:

- 1 or 2 heating and/or cooling batteries
- 1 modulating or On-Off humidification unit
- 1 air mixing unit (dampers) or 1 heat recovery unit
- 1 ventilation unit

IT IS A UNIT SIMILAR TO XTU 644, BUT WITH FULL TIME PROGRAMMING.



ESSENTIAL SENSORS: 1 room or Air duct temperature sensor

OPTIONAL SENSORS AND ACCESSORIES: 1 flow temperature sensor

1 pre-heating sensor, 1 outside sensor

1 room/Air duct relative humidity sensor

1 outside relative humidity sensor

1 window sensor, 1 temperature variator

1 relative humidity variator

XTU 664 Temperature and relative humidity controller

RELATED PRODUCTS

ACB 460 Plug-in for communication via C-Bus

SAE 001 Outside temperature sensor (–40...40)

STA 010 Air duct temperature sensor (intake, flow, condensation) (0...60 °C)

SAB 010 Room temperature sensor (0..40 °C)

STA 001 Air duct temperature sensor (external) (–40...40 °C)

SUR 704 Air duct relative humidity sensor

SUT 734 Air duct humidity and temperature sensor (for swimming pools) (10...90%)

SAU 914 Relative humidity (10...90%) and temperature sensor (0...50 °C) (0...50 °C)

CDB 100 Temperature Set point adjuster with incorporated sensor (–5...5 °C)

CDB 200 Relative humidity set point adjuster

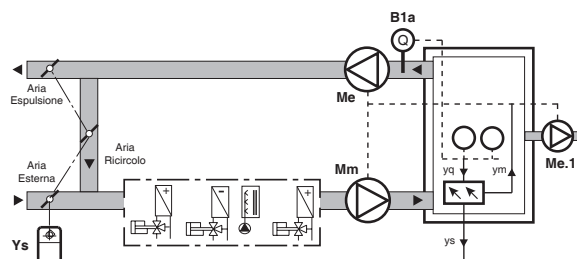


RQA 410

AIR QUALITY CONTROLLER

Adjusts the percentage of outside air introduced into the room according to the air quality measured by 1 or more sensors.

CANNOT BE USED FOR FIRE PROTECTION SYSTEMS, GAS LEAK DETECTION OR SIMILAR



ESSENTIAL SENSOR: 1 or more sensors
room or air duct quality sensor

RQA 410 Room air quality controller

RELATED PRODUCTS

SQC 954 Room air quality sensor

SQS 954 Air quality for air duct

"MULTIZONE" room temperature control and distribution system



COMMUNICATION
PROTOCOLS

OPTIONAL

C-BUS

C-RING

AGE
GME
ME

MRL 608

CENTRAL CONTROL UNIT

DISPLAY AND MANAGEMENT

Communication master with peripheral units.

MRL 608

System central control unit

RELATED PRODUCTS

ACB 400

Plug-in for communication via C-Bus



ALD 018

AUXILIARY POWER SUPPLY FOR 50 ZONES

(25 WITH RTL 120-520 CONTROLLERS)

Necessary when there are more than 20 zones, as this is the maximum number of zones the MRL 608 master can supply.

Without galvanic separation on P-Loc

ALD 018

Auxiliary power supply



COMMUNICATION
PROTOCOLS

AGE
GME
ME

RTL 110

LOCAL (SLAVE) UNIT WITH RELAY OUTPUT,
FLUSH MOUNTING

Room temperature controller via an On-Off switch.

RTL 110

Flush-mounting room controller with relay output



COMMUNICATION
PROTOCOLS

P-LOC

AGE
GME
ME

RTL 510

LOCAL (SLAVE) UNIT WITH RELAY OUTPUT,
WALL MOUNTING

Wall-mounting room controller with relay output, colour white.

RTL 510

Wall-mounting room controller with relay output

COMMUNICATION
PROTOCOLS

RTL 120

LOCAL (SLAVE) UNIT WITH RELAY OUTPUT,
AND 0...10V DC,
FLUSH MOUNTING

Flush-mounting room controller with relay output or 0...10 V DC.

RTL 120 Flush-mounting room controller with relay output or 0...10 V DC

COMMUNICATION
PROTOCOLS

RTL 520

LOCAL (SLAVE) UNIT WITH RELAY OUTPUT,
AND 0...10V DC,
WALL MOUNTING

Wall-mounting room controller with relay output or 0...10 V DC.
White colour.

RTL 520 Wall-mounting room controller with relay output or 0...10 VDC

COMMUNICATION
PROTOCOLS

RTL 111

FLUSH-MOUNTED ROOM CONTROLLER FOR 2 PIPEE FAN COILS
WITH EXPANSION UNIT DEP 658

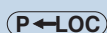
Room temperature controller via:

- fan coil with On-Off valve and fan with up to 3 speeds
- fan coil with modulating valve and fan up to 3 speeds
- single battery air handling unit and fan.

RTL 111 Flush-mounting room controller for expansion units

EXPANDER

DEP 658 Output expander for RTL 111 - 511 room controllers

COMMUNICATION
PROTOCOLS

RTL 511

WALL MOUNTED ROOM CONTROLLER FOR 2 PIPEE FAN COILS
WITH EXPANSION UNIT DEP 658

Wall-mounting room controller for expansion units, colour white

Room temperature controller via:

- fan coil with On-Off valve and fan with up to 3 speeds
- fan coil with modulating valve and fan up to 3 speeds
- single battery air handling unit and fan.

RTL 511 Wall-mounting room controller for expansion units

EXPANDER

DEP 658 Output expander for RTL 111 - 511 room controllers



COMMUNICATION
PROTOCOLS

P←LOC

DEP
658

DEP 658

OUTPUT EXPANSION UNIT FOR RTL 111-511

Output expander for RTL 111 - 511 room controllers RTL 111 - 511

DEP 658 Output expansion unit for RTL 111 - 511

RELATED PRODUCT

ALD 110 Accessory to control up to 10 DEP 658 with a single RTL 111-511



COMMUNICATION
PROTOCOLS

OPTIONAL
C←BUS

P←LOC

UPM 678

CONTROL UNIT FOR PUMPS, BURNERS, CHILLERS OR OTHER EQUIPMENT

Control unit for pumps, burners, chillers or other equipment according to the thermal and/or cooling load of the zones

UPM 678 Control units for pumps or other equipment, MULTIZONE system

RELATED PRODUCT

ACB 400 Plug-in for communication via C-Bus



COMMUNICATION
PROTOCOLS

RTL
141

RTL 141

FLUSH-MOUNTED ROOM CONTROLLER FOR 4-PIPE FAN COIL WITH EXPANSION UNIT

Room temperature controller via:

- fan coil with On-Off valve and fan with up to 3 speeds
- fan coil with modulating valve and fan up to 3 speeds
- air handling unit with 2 batteries and fan.

RTL 141 Flush-mounting room controller for expansion units

EXPANDERS

DEP 648 Output expander for RTL 141 - 541 room controllers

DEP 678 Output expander for RTL 141 - 541 room controllers

COMMUNICATION
PROTOCOLS

P←LOC

AGE
GME
RND

RTL 541

WALL-MOUNTED ROOM CONTROLLER
FOR 4-PIPE FAN COIL
WITH EXPANSION UNIT

Wall-mounting room controller for expansion units.

Colour white

Room temperature controller via :

- fan coil with On-Off valve and fan with up to 3 speeds
- fan coil with modulating valve and fan up to 3 speeds
- air handling unit with 2 batteries and fan.

RTL 541 Wall-mounting room controller for expansion units

EXPANDERS

DEP 648 Output expander for RTL 141 - 541 room controllers

DEP 678 Output expander for RTL 141 - 541 room controllers

COMMUNICATION
PROTOCOLS

P←LOC

DEP 648

EXPANSION UNIT WITH:

- 1 ANALOGUE INPUT
- 4 TRIAC OUTPUTS,
- 3 INTELOCKED RELAY OUTPUTS

Output expander for RTL 141 - 541

With triac outputs for heating and cooling actuators and relay outputs for on-off fan with 1 to 3 speeds

DEP 648 Output expander for RTL 141 - 541 room controllers

COMMUNICATION
PROTOCOLS

P←LOC

DEP 678

EXPANSION UNIT WITH:

- 1 ANALOGUE INPUT
- 4 TRIAC OUTPUTS
- 3 INTELOCKED RELAY OUTPUTS

Output expander for RTL 141 - 541

With relay outputs for heating, cooling and on-off fan with 1 to 3 speeds

DEP 678 Output expander for RTL 141 - 541 room controllers



WTD 911

WEEKLY DIGITAL CHRONOTHERMOSTAT

Weekly digital chronothermostat for controlling the room temperature on three levels (Comfort - Reduced - Off/Frost protection).

On-Off command, for activating loads (e.g. boilers, heat pumps, valves, circulators or other) in heating/cooling systems for domestic or office environment.

WTD 911 Weekly digital chronothermostat



WTW 900

WIRELESS DIGITAL WEEKLY CHRONOTHERMOSTAT

It consists of:

WTB 900 Battery-powered radio-controlled weekly chronothermostat for room temperature control on three levels: Comfort, Reduced or Off/Frost protection.

WTR 900 One-channel radio receiver with On-Off control, for activating loads (e.g. boilers, heat pumps, valves, circulators, etc.) in heating/cooling systems for homes or offices.

WTW 900 Weekly Digital Wireless Chronothermostat

COMMUNICATION
PROTOCOLS

Note: Black version available upon request

JOY ...

ROOM CONTROLLER / TERMINAL

Multi-purpose room terminal with universal power supply 85...260V AC. The module is provided with RS485 port that makes communication possible through the Modbus RTU485 protocol..

MODELS

- | | |
|-----------------|--|
| JOY 879W | White hot/cold room terminal for 6-way valves with two relay outputs, one 0-10Vdc EC output ModBus RS485 port |
| JOY 771W | Hot/cold room terminal for fan coils with 5 relay outputs (2 for on/off valve control, 3 for 3-speed fan control), ModBus RS485 port, colour white |
| JOY 363W | Hot/cold room terminal for 2-pipe or 4-pipe fan coils with two relay outputs for on/off valve control, one 0-10Vdc EC output for modulating fan control, ModBus RS485 port, colour white |

COMMUNICATION
PROTOCOLS

LCF ...

ROOM CONTROLLER / TERMINAL

Room terminal for various types of use with universal 24V ac power supply. The module is provided with RS485 port that makes communication possible through the Modbus RTU485 protocol.

MODELS

- | | |
|-----------------|---|
| LCF 363W | White hot/cold room terminal for 2- or 4-pipe fan coils with 3 analogue outputs 0...10 V DC (EC fan, heating valve and cooling valve), 2 digital outputs for E/I switching, ModBus RS485 port |
| LCF 364W | White hot/cold room terminal for 2- or 4-pipe fan coils with 2 analogue outputs 0...10 V DC (heating and cooling) and 3 relay outputs for controlling a 3-stage fan, ModBus RS485 port |
| LCF 771W | Hot/cold room terminal for fan coils with 5 relay outputs (2 for on/off valve control, 3 for 3-speed fan control), ModBus RS485 port, colour white |

NOTES

MONITORING SYSTEM



MONITORING

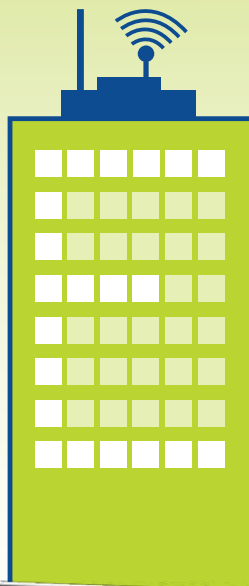
COMMUNICATION PROTOCOLS

ASIRIAC BACnet™

Modbus

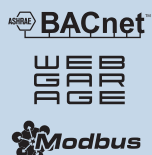
M-Bus

C←BUS





COMMUNICATION
PROTOCOLS



EHC 602

EDGE DEVICE SUPPORTS BACNET AND MODBUS PROTOCOLS

Communication management device for control and monitoring systems
It is equipped with a web interface that can be reached via an Ethernet port or Wi-Fi.
Possibility of installing a webgarage licence on the device up to a maximum of 2000 points
It can work as stand-alone unit or in a network. 12Vdc power supply.
In 6 module DIN enclosure.

EHC 602 Edge device supports BACnet and Modbus protocols

RELATED PRODUCTS

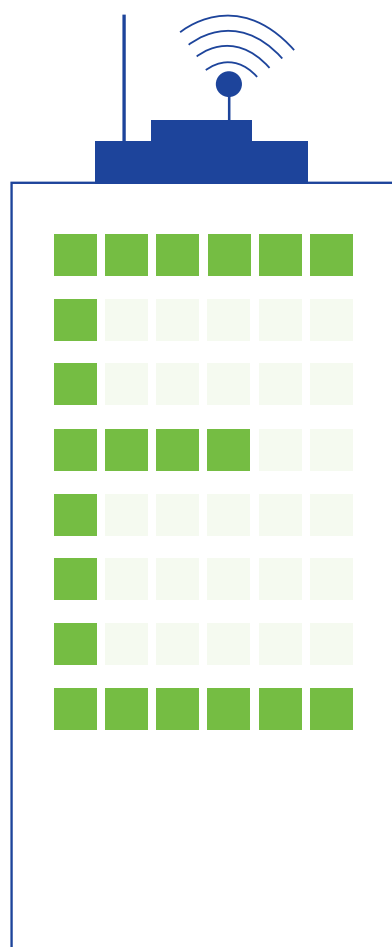
ALM 1210 DIN rail power supply unit 12V - 10W

ALM 1225 DIN rail power supply unit 12V - 25 W

The EHC 602 Edge Device with BACnet and Modbus communication is a device that optimises the exchange of information and commands between YLC / ZBC controllers and is able to manage and monitor field devices connected to it via RS 485 bus or Ethernet port.

It manages three types of plants:

- Adjustment with YLC 880 / ZBC 862 + corresponding expanders
- Energy monitoring
- Hybrid or Mixed (control and monitoring)





In monitoring systems,

The EHC 602 allows the acquisition of Modbus and BACnet devices, with the possibility of exploiting a flexible and cost-effective architecture with wireless devices such as CSW 868, BRG 868C and BRG 868.

The EHC 602 supports embedded webgarage licences of up to 2000 points*, providing the end user with a user-friendly, simple and effective interface.



(*) Licence not included in the price



COMMUNICATION
PROTOCOLS



ESP 442

EXPANSION MODULE (DI - T° - AI - DO)

I/O expansion module capable of communicating with the YLC 880 and ZBC 862 control units, allowing expansion of the plant structure.

The module is provided with RS485 port that makes communication with the main controller possible through the Modbus RTU 485 protocol.

Power supply 12 Volt DC and 24 Volt AC.

In 4 DIN rail module case

Sensors ⁽²⁾	DI / AI	DO
2	4	not used

ESP 442 Expansion module (DI - T° - AI - DO)

RELATED PRODUCTS

SAB 002	PT 1000 room temperature sensor
STA 002	PT 1000 air duct temperature sensor
SAE 002	PT 1000 outside temperature sensor
SIH 002	PT 1000 immersion temperature sensor
STH 001	Immersion temperature sensor
STF 001	Flue gas temperature sensor
SAF 002	PT 1000 Cable type temperature sensor
ALM 1210	DIN rail power supply unit 12V - 10W
ALM 1225	DIN rail power supply unit 12V - 25W



COMMUNICATION
PROTOCOLS



BRG 868

WIRELESS BRIDGE MODULE

BRG 868 Bridge Module is a tool that allows to create a radio connection* between the BRG 868C Bridge Receiver and one or more field devices.

In 2 DIN rail module case

ANTENNA INCLUDED.

BRG 868 Wireless bridge module

RELATED PRODUCTS

APA 500	SMA antenna extension, length 5 meters
----------------	--

⁽²⁾ PT1000 sensors are passive elements that must be connected to the specific terminals of the ESP 442 module. NTC 10K and PT 1000 sensors can be connected. (see wiring diagram)

COMMUNICATION
PROTOCOLS

BRG 868C

WIRELESS BRIDGE CONCENTRATOR

The BRG 868 C concentrator is a device for creating a radio connection between a Master and one or more BRG 868 modules (up to 16) also connected to field devices via RS485 bus.

In 2 DIN rail module case

ANTENNA INCLUDED.

BRG 868C Concentrator bridge wireless

RELATED PRODUCTS

APA 500 SMA antenna extension, length 5 meters

ANT 868 Upgraded antenna for 868 concentrators

COMMUNICATION
PROTOCOLS

CSW 868

WIRELESS SENSORS CONCENTRATOR

System module that allows a radio connection to be established with one or more radio sensors (up to 40) by acquiring variables from THP 868, PCP 868 and COP 868.

It provides two-way communication with radio field devices.

It can be combined with Y... series and Z... series.

12V DC power supply

In 2 DIN rail module case

ANTENNA INCLUDED.

CSW 868 Radio sensor concentrator

RELATED PRODUCTS

APA 500 SMA antenna extension, length 5 meters

ANT 868 Upgraded antenna for 868 concentrators

THP 868 Radio temperature/humidity sensor with data logger

STT 868H Watertight radio temperature sensor

STU 868H Watertight radio temperature-humidity sensor

COP 868 Combined temperature-humidity-Co₂ radio sensor

PCP 868 Radio pulse counter

(*) As an alternative to wired connection



PCP 868

RADIO PULSE COUNTER

PCP 868 can acquire and transmit to the CSW 868 concentrator the values of two pulse inputs acquired from the environment in which they are installed.

PCP 868 Radio pulse counter



GSP 485

RS 485 MULTI-PROTOCOL CONVERTER

Device for reading meters with pulse output.

The device, with three DIN modules, allows the user to query the tools connected to it, using the RS485 interface.

12 V DC power supply. In 3 DIN rail module enclosure.

GSP 485 Converter with RS485 interface RS485

RELATED PRODUCTS

ACB 232/S1 RS 232 / C-Bus conversion cable powered by COSTER devices with 12 VDC auxiliary power supply

PCB 332 Medium power C-Bus amplifier and converter



COMMUNICATION
PROTOCOLS

CMC 328

"NON TRANSPARENT" CONVERTER FROM M-BUS TO C-BUS

Connection of devices equipped with M-Bus (e.g.: heat counter) to the C-Bus line

CMC 328 Non-transparent converter from M-Bus to C-Bus

C-BUS M-Bus



COMMUNICATION
PROTOCOLS

CMC 422 - 428

M-BUS/MODBUS - M-BUS/C-BUS PROTOCOL CONVERTER

M-Bus/ModBus or M-Bus/C-Bus protocol converter for acquiring thermal energy meter data. In 4 DIN rail module enclosure.

		Power supply
CMC 422	Wirebus / MBus converter for up to 5 device	12...24 Vac/Vdc
CMC 428	MBus / ModBus converter for up to 5 devices	230 Vac

RELATED PRODUCTS

MWM 000 M-Bus/Wireless M-Bus converter



C-BUS

M-Bus



MFD 4..

ELECTRICAL NETWORK ANALYSER

MFD 448	Multifunctional network analyser. Possibility of direct TA connection with secondary 1-5A Power supply 80...265V AC 100...300V DC Modbus RS485 communication protocol
MFD 438	Multifunctional network analyser. Power supply 80...265V AC 100...300V DC Bacnet MS/TP communication protocol
MFD 548	Multifunctional network analyser. Possibility of direct TA connection with secondary 1-5A Power supply 80...265V AC 100...300V DC Communication protocol Modbus RS485 MID certified version

AMPEROMETRIC TRANSFORMER ACCESSORIES

	Amperometric transformer type	Window dimensions	Primary current/secondary current
TBM 061 ÷ TBM 401	openable	20x30 mm	60/1A to 400/1A
TBM 065 ÷ TBM 405	openable	20x30 mm	60/5A to 400/5A
TAN 051 ÷ TAN 601	pass-through	32,5x10,5 mm	50/1A to 600/1A
TAN 055 ÷ TAN 605	pass-through	32,5x10,5 mm	50/5A to 600/5A
TAO 101 ÷ TAO 1001	pass-through	40,5x10,5 mm	100/1A to 1000/1A
TAO 105 ÷ TAO 1005	pass-through	40,5x10,5 mm	100/5A to 1000/5A

Other windows on request::

- pass-through 16 x 12.5 mm up to 200A,
- pass-through 50.5 x 12.5 mm up to 1200A
- openable 50 x 80 mm up to 1000A
- openable 80 x 120 mm up to 1500A
- openable 80 x 160 mm up to 5000A

Version with Rogowski current transformer also available upon request

Transcoding

Txy jkh where:

x = A if secondary pass-through, B if secondary openable

y = M if window 20x30mm, N if window 32.5x10.5, O if window 40.5x10.5, P if window 16x12.5mm, Q if window 50.5x12.5, R if window 50x80mm, S if window 80x120mm, T if window 80x160mm)

jk = primary current/10, e.g: 60A=06, 500A=50

h = 1 if secondary 1A, 5 if secondary 5A.

Example: TAO 101 = Pass-through amperometric transformer

Window dimensions 40.5x10.5 mm

Primary current/secondary current: 100/1A

INNOVATIONS

Network analysers are available for reading electrical data in conjunction with control systems with YLC... control units.



MHN ...

COMPACT MECHANICAL THERMAL ENERGY METERS (3...90 °C)

Suitable for measuring thermal energy in heating and air conditioning systems. They can be installed indifferently on the supply or on the return.

Energy meters with: - hot/cold

CERTIFICATION: MID DE-07-MI004-PTB 025

ACCURACY CLASS: EN 1434-1:2007, class 3

	DN inches	Connections inches	Tmax. °C	Qp m³/h	Qs m³/h	Qstart lt/h	Qi lt/h horiz. Vert.	Kws m³/h	Δp Qp kPa
MHN 15-1,5	1/2"	3/4"	90	1.5	3	7	7 7	3.5	19.6
MHN 20-2,5	3/4"	1"	90	2.5	5	10	10 10	6.3	16.5



COMMUNICATION
PROTOCOLS

M-Bus

MHF ...

COMPACT MECHANICAL THERMAL ENERGY METERS (3...90 °C)

Suitable for measuring thermal energy in heating and air conditioning systems. They can be installed indifferently on the supply or the return.

Energy meters with:

- Data transmission via M-Bus cable

- hot/cold

CERTIFICATION: MID DE-07-MI004-PTB 025

ACCURACY CLASS: EN 1434-1:2007, class 3

The unit is equipped with M-Bus, which can be converted to C-Bus with CMC 328 converter.

	DN inches	Connections inches	Tmax. °C	Qp m³/h	Qs m³/h	Qstart lt/h	Qi lt/h Horiz. Vert.	Kws m³/h	Δp Qp kPa
MHF 15-1,5	1/2"	3/4"	90	1.5	3	7	7 7	3.5	19.6
MHF 20-2,5	3/4"	1"	90	2.5	5	10	10 10	6.3	16.5

RELATED PRODUCTS

CMC 328 M-Bus - C-Bus converter

3 IMP Addition of 3 pulse inputs

KEY

(1): Flange to flange length

2): MI-001.certified

Qp: Nominal flow rate:
Maximum continuous flow
rate measurable by counter

Qs: Maximum temporary
flow rate supported by the
counter

Qt: Transition flow rate:
minimum limit with error
less than +2%

Qi: Minimum limit flow rate:
minimum limit with error
less than +5%

Kws: Flow rate coefficient:
Flow rate in m³/h at 1 bar
pressure drop

Δp Qp: Pressure drop at
nominal flow rate Qp

COMMUNICATION
PROTOCOLSWIRELESS **M-Bus**

MHR ...

WIRELESS THERMAL ENERGY METERS

It is a tool for metering the thermal energy supplied to utilities using water as the energy transport element. It can be used in a wide range of plants: heating, air conditioning and typical domestic systems. They can be installed on the supply or return, after appropriate configuration by means of an infrared optical head.

MID MI004 CERTIFICATION Energy meters with:

- Data transmission via wireless M-Bus
- Hot/cold

	DN inches	Connections inches	Tmax. °C	Qp m³/h	Qs m³/h	Qi lt/h Horiz. Vert.	Kws m³/h	Δp Qp kPa
MHR 15-1,5	1/2"	3/4"	90	1.5	3	7 7	3.5	19.6
MHR 20-2,5	3/4"	1"	90	2.5	5	10 10	6.3	16.5

RELATED PRODUCT

3 IMP Addition of 3 pulse inputs



UHN ...

ULTRASONIC COMPACT THERMAL ENERGY METERS (3...90 °C)

Suitable for measuring thermal energy in heating and air conditioning systems. They can be installed indifferently on the flow line or on the return line.

Energy meters with:

- hot/cold

CERTIFICATION: MID DE-07-MI004-PTB 025

ACCURACY CLASS: EN 1434-1:2007, class 3

	DN mm	Connections inches	T max °C	Qp m³/h	Qs m³/h	Qi lt/h	Δp Qp kPa
UHN 15-1,5	15	G3/4"	90	1.5	3	12	21,0
UHN 20-2,5	20	G1"	90	2.5	5	25	12.0
UHN 20-3,5	20	G1"	90	3.5	7	28	21.0
UHN 25-3,5	25	G1" 1/4	90	3.5	7	28	21.0
UHN 25-6	25	G1" 1/4	90	6	12	60	20.0
UHN 40-10	40	G2"	90	10	20	100	11.0

KEY

(1): Flange to flange length

2): MI-001.certified

Qp: Nominal flow rate:
Maximum continuous flow
rate measurable by counter

Qs: Maximum temporary
flow rate supported by the
counter

Qt: Transition flow rate:
minimum limit with error
less than +2%

Q2: Minimum limit flow rate:
minimum limit with error
less than +5%

Kws: Flow rate coefficient:
Flow rate in m³/h at 1 bar
pressure drop

Δp Qp: Pressure drop at
nominal flow rate Qp



COMMUNICATION
PROTOCOLS

M-Bus

UHF ...

ULTRASONIC COMPACT M-BUS THERMAL ENERGY METERS M-BUS (3...90 °C)

Suitable for measuring thermal energy in heating and air conditioning systems.

They can be installed indifferently on the supply and return.

Energy meters with: Hot/cold; Data transmission via M-Bus via cable.

CERTIFICATION: MID DE-07-MI004-PTB 025;

ACCURACY CLASS : EN 1434-1:2007, class 3.

The unit is equipped with M-Bus, which can be converted to C-Bus with CMC 328 converter.

	DN mm	Connections inches	T max °C	Qp m³/h	Qs m³/h	Qi lt/h	Δp Qp kPa
UHF 15-1,5	15	G3/4"	90	1.5	3	12	21.0
UHF 20-2,5	20	G1"	90	2.5	5	25	12.0
UHF 20-3,5	20	G1"	90	3.5	7	28	21.0
UHF 25-3,5	25	G1" 1/4	90	3.5	7	28	21.0
UHF 25-6	25	G1" 1/4	90	6	7	60	20.0
UHF 40-10	40	G2"	90	10	20	100	11.0

RELATED PRODUCTS

CMC 328 M-Bus - C-Bus converter

3 IMP Addition of 3 pulse inputs



COMMUNICATION
PROTOCOLS

M-Bus

UHR ...

WIRELESS ULTRASONIC COMPACT THERMAL ENERGY METERS (3...90 °C)

Suitable for measuring thermal energy in heating and air conditioning systems. They can be installed on the supply or return side, after appropriate configuration by means of an infrared optical head.

Energy meters with: Hot/cold; Data transmission via wireless M-Bus

CERTIFICATION: MID DE-07-MI004-PTB 025; ACCURACY CLASS: EN 14341:2007, class 3

	DN mm	Connections inches	T max °C	Qp m³/h	Qs m³/h	Qi l/h	Δp Qp kPa
UHR 15-1,5	15	G3/4"	90	1.5	3	12	21.0
UHR 20-2,5	20	G1"	90	2.5	5	25	12.0
UHR 20-3,5	20	G1"	90	3.5	7	28	21.0
UHR 25-3,5	25	G1" 1/4	90	3.5	7	28	21.0
UHR 25-6	25	G1" 1/4	90	6	12	60	20.0
UHR 40-10	40	G2"	90	10	20	100	11.0

PRODOTTI CORRELATI

3 IMP Addition of 3 pulse inputs

KEY

Qp: Nominal flow rate: Maximum continuous flow rate measurable by counter

Qs: Maximum temporary flow rate supported by the counter

Qt: Transition flow rate: minimum limit with error less than +2%

Qi: Minimum limit flow rate: minimum limit with error less than +5%

Kws: Flow rate coefficient: Flow rate in m³/h at 1 bar pressure drop

Δp Qp: Pressure drop at nominal flow rate Qp



LEGENDA

Q1: The minimum flow rate at which the counter must operate while respecting the defined errors

Q2: The minimum flow rate at which the counter must operate while respecting the defined errors with respect to the upper flow rate range

Q3: Permanent flow rate: continuous flow rate measurable by the counter

Q4: Overload flow rate: maximum supported by the counter Δp

Q3: Permanent flow rate pressure drop

Kws: Flow rate coefficient: Flow rate in m³/h at 1 bar pressure drop

(*) Depending on installation location (further information on data sheet) at costergroup.eu

KUF-KUC

SINGLE-JET TURBINE VOLUMETRIC METER WITH "REED" CONTACT PULSE TRANSMITTER FOR HOT AND COLD DOMESTIC HOT WATER

Turbine volumetric counters for metering domestic hot and cold water .

Output with "reed" contact emitter.

KUF/KUC 15 -20 Compliance: (B) TCM 142/20 -5700 (D) 0119-SJ-A010-08

KUF 25 Compliance: (B) TCM142/08-4627 (D) 0119-SJ-A010-08

MID MI001 CERTIFICATION

DO NOT USE THESE METERS FOR COLD OR HOT WATER CIRCULATION IN HEATING/ AIR CONDITIONING SYSTEMS. THE WATER IN THESE SYSTEMS CONTAINS MANY IMPURITIES THAT DO NOT ALLOW A CORRECT COUNTING.

Tmax 30 °C	DN inches	length mm	R Q1/Q3	Q3 m ³ /h	Q4 m ³ /h	Q2 l/h	Q1 l/h	Δp Q3 bar	Kws m ³ /h	Pulse emitter litres/pulse
KUF 15D	1/2"	110	100	2.5(*)	3.13(*)	40(*)	25(*)	0.63	3	10
KUF 20D	3/4"	130	100	4(*)	5(*)	64(*)	40(*)	0.63	5	10
KUF 25C	1"	160	160	6.3	7.88(*)	63.01(*)	39.38(*)	0.63	8	100
Tmax 90 °C										
KUC 15D	1/2"	110	100	2.5(*)	3.13(*)	40(*)	25(*)	0.63	3	10
KUC 20D	3/4"	130	100	4(*)	5(*)	64(*)	40(*)	0.63	5	10



COMMUNICATION
PROTOCOLS

M-Bus

KUF ..W-N - KUC ..W-N

WIRELESS METERS

Single-jet dry dial meter with superdry magnetic transmission for cold or hot water.

KUF/KUC 15 -20 Compliance: (B) TCM 142/20 -5700 (D) 0119-SJ-A010-08

MID MI-001 CERTIFICATION

Tmax 30 °C	DN inches	length. mm	R Q1/Q3	Q3 m ³ /h	Q4 m ³ /h	Q2 lt/h	Q1 lt/h	Δp Q3 kPa	Kws m ³ /h
KUF 15W-N	1/2"	110	100	2.5(*)	3.13(*)	40(*)	25(*)	0.63	3
KUF 20W-N	3/4"	130	100	4(*)	5(*)	64(*)	40(*)	0.63	5
Tmax 90 °C									
KUC 15W-N	1/2"	110	100	2.5(*)	3.13(*)	40(*)	25(*)	0.63	3
KUC 20W-N	3/4"	130	100	4(*)	5(*)	64(*)	40(*)	0.63	5



COMMUNICATION
PROTOCOLS

M-Bus

IEF 276

ELECTRONIC HOT COLD DI ENERGY INTEGRATOR

Metering of thermal energy in heating and cooling systems.

CERTIFICATION: MID MI 004

With additional inputs

ESSENTIAL SENSORS AND ACCESSORIES: 1 pair of sensors + 1 immersion kit, or

1 pair of sensors + 1 pair of pockets, or

1 pair of sensors + 1 direct immersion kit + 1 pair of "T" fittings

Sensors and accessories comply with MID Directive 2004/22/EC

IEF 276-10	Electronic energy integrator litres/pulse 10
IEF 276-100	Electronic energy integrator litres/pulse 100
IEF 276-1000	Electronic energy integrator litres/pulse 1000

RELATED PRODUCTS

SPT 106	Pair of sensors with 10 metre cable diameter 6 mm
SPT 006	Pair of sensors with 3 metre cable diameter 6 mm
GIS 062	Pair of brass pockets for sensors (1/4") 62 + 18 mm
GIS 112	Pair of brass pockets for sensors (1/4") 112 + 18 mm
CMC 328	M-Bus/C-Bus converter
3 IMP	Addition of 3 pulses inputs

COMMUNICATION
PROTOCOLS

IEM 277

ELECTRONIC MODBUS/RTU HOT/COLD ENERGY INTEGRATOR

Metering of heating and cooling energy.

The device requires an additional 12 V dc power supply.

CERTIFICATION: MID MI 004

With additional inputs

ESSENTIAL SENSORS AND ACCESSORIES:

1 pair of sensors + 1 immersion kit, or

1 pair of sensors + 1 pair of pockets, or

1 pair of sensors + 1 direct immersion kit + 1 pair of "T" fittings

Sensors and accessories comply with MID Directive 2004/22/EC

IEM 277-10	Modbus/RTU electronic energy integrator litres/pulse 10
IEM 277-100	Modbus/RTU electronic energy integrator litres/pulse 100
IEM 277-1000	Modbus/RTU electronic energy integrator litres/pulse 1000

RELATED PRODUCTS

SPT 106	Pair of sensors with 10 metre cable diameter 6 mm
SPT 006	Pair of sensors with 3 metre cable diameter 6 mm
GIS 062	Pair of brass pockets for sensors (1/4") 62 + 18 mm
GIS 112	Pair of brass pockets for sensors (1/4") 112 + 18 mm

COMMUNICATION
PROTOCOLS

M-Bus

IEW 278

WIRELESS HOT/COLD ELECTRONIC ENERGY INTEGRATOR

Metering of heating and cooling energy.

CERTIFICATION: MID MI 004

With additional inputs

ESSENTIAL SENSORS AND ACCESSORIES:

1 pair of sensors + 1 immersion kit, or

1 pair of sensors + 1 pair of thermowells, or

1 pair of sensors + 1 direct immersion kit + 1 pair of "T" fittings

Sensors and accessories comply with MID Directive 2004/22/EC

IEW 278-10	Modbus/RTU electronic energy integrator litres/pulse 10
IEW 278-100	Modbus/RTU electronic energy integrator litres/pulse 100
IEW 278-1000	Modbus/RTU electronic energy integrator litres/pulse 1000

RELATED PRODUCTS

SPT 106	Pair of sensors with 10 metre cable diameter 6 mm
SPT 006	Pair of sensors with 3 metre cable diameter 6 mm
GIS 062	Pair of brass pockets for sensors (1/4") 62 + 18 mm
GIS 112	Pair of brass pockets for sensors (1/4") 112 + 18 mm
CMC 328	M-Bus/C-Bus converter
3 IMP	Addition of 3 pulse inputs



KMF ...

MULTI JET METER TURBINE VOLUMETRIC METER WITH "REED" CONTACT PULSE TRANSMITTER

Multiple jet turbine volumetric meters to measure the domestic cold water.
Output with "reed" contact pulse transmitter compatible with all meters with a pulse input.

CERTIFICATION KMF ...: MID MI-001

Tmax 50 °C horizontal	DN inches	length mm	Q3 m³/h	Q4 m³/h	Q1 lt/h	Q2 lt/h	Kws m³/h	Pulse emitter litres/pulse
KMF 15D ⁽³⁾	1/2"	165	2.5	3.13	15.63	25	3.0	10
KMF 20D ⁽³⁾	3/4"	190	4.0	5.0	25	40	5.0	10
KMF 25C ⁽³⁾	1"	260	6.3	7.9	40	63	6.8	100
KMF 32C ⁽³⁾	1" 1/4	260	10	12.5	62.50	100	9.5	100
KMF 40C ⁽³⁾	1" 1/2	300	16	20.0	100	160	20	100
KMF 50C ⁽³⁾	2"	300	25	31.0	156	250	30	100

KEY

Q1: The minimum flow rate at which the meter must operate while respecting the defined errors

Q2: The minimum flow rate at which the meter must operate while respecting the defined errors with respect to the upper flow rate range

Q3: Permanent flow rate: continuous flow rate measurable by the meter

Q4: Overload flow rate: maximum supported by the counter

Kws: Flow rate coefficient: Flow rate in m³/h at 1 bar pressure drop

Δp Q3: Pressure drop at permanent flow

^(*) Depending on installation location
(further information on data sheet) at
costergroup.eu

COMMUNICATION
PROTOCOLS

M-Bus

KWP-KWM

WOLTMAN TURBINE VOLUMETRIC METERS WITH "REED"

CONTACT PULSE EMITTER

Woltman turbine volumetric counters for measuring domestic hot and cold water and water circulating in heating/air conditioning systems. COOLING?

Output with "reed" contact pulse emitter compatible with all meters with pulse input, IEF and IEW integrators.

KWP CERTIFICATION: MI-001

KWM CERTIFICATION: MI-004

Although KWM... meters are approved up to 130 °C, for application in heating systems, the use of static-type volumetric meters, such as the ultrasonic KMHG and KMHF models, is recommended.

For length see data sheet at www.costergroup.eu

Cold water	DN mm	Tmax °C	Q3 m³/h	Q4 m³/h	Q2 m³/h		Pulse emitter l/pulse
					vert.	horiz.	
KWP 50C	50	50	40	50	0.64	–	100
KWP 65C	65	50	63	78.8	1.01	–	100
KWP 80C	80	50	100	125	1.6	–	100
KWP 100C	100	50	160	200	2.56	–	100
KWP 125C	125	50	160	200	2.56	–	1000
KWP 150M	150	50	250	312.5	4.0	–	1000
KWP 200M	200	50	250	500	6.4	–	1000
Hot water	DN mm	Tmax °C	Qp m³/h	Qs m³/h	Qi m³/h		
					vert.	horiz.	
KWM 50/C1	50	130	15	30	1.5	0.6	100
KWM 65/C1	65	130	25	50	2.5	1	100
KWM 80/C1	80	130	40	80	4	1.6	100
KWM 100/C1	100	130	60	120	6	2.4	100
KWM 125/C1	125	130	100	200	10	4	100
KWM 150/C1	150	130	150	300	15	6	1000

KEY Certification MI001

Q1: The minimum flow rate at which the counter must operate while respecting the defined errors

Q2: The minimum flow rate at which the counter must operate while respecting the defined errors with respect to the upper flow rate range

Q3: Permanent flow rate: continuous flow rate measurable by the meter

Q4: Overload flow rate: maximum supported by the counter

Kws: Flow rate coefficient: Flow rate in m³/h at 1 bar pressure drop

Δp Q3: Pressure drop at permanent flow

LEGENDA Certification MI004

Qp: Nominal flow rate: Maximum continuous flow rate measurable by the meter

Qs: Maximum temporary flow rate supported by the meter

Qt: Transition flow rate: minimum limit with error less than ±2%

Qi: Minimum limit flow rate: minimum limit with error less than ±5%

Kws: Flow rate coefficient: Flow rate in m³/h at 1 bar pressure drop

Δp Qp: Pressure drop at nominal flow rate Qp



KMHG - KMHF

ULTRASONIC VOLUMETRIC METERS (5...130 °C)
WITH ELECTRONIC PULSE EMITTER FOR WATER CIRCULATION IN
HEATING SYSTEM HOT/COLD VERSION
(REPLACE THE KSHG-KSHF RANGE)

Ultrasonic volumetric meters for measuring circulating water in heating and air conditioning systems, installable on the return. Not compatible with glycol. Output with electronic pulse emitter compatible with thermal energy integrators IEF ... and IEW ...

MID CERTIFICATION DE-07-MI004-OJC218 accuracy class EN 1434 class 2.

These ultrasonic counters are intended for use with fluid temperatures ranging 10 to 130 °C for heating applications and 5 to 50 °C for air conditioning applications.

For dimensions see data sheet at www.costergroup.eu

THREADED	DN mm	Connections inches	PN	Qp m³/h	Qs m³/h	Qi lt/h	Qstart lt/h	Kws m³/h	Δp Qp kPa	litres/ pulse
KMHG 25-3,5	25	1"1/4	16	3.5	7	35	14	15	5.5	10
KMHG 25-6	25	1"1/4	16	6	12	60	12	16	14	10
KMHG 40-10	40	2"	16	10	20	100	28	30	11	10
FLANGED										
KMHF 25-3,5	25	—	25	3.5	7	35	7	15	5.5	10
KMHF 25-6	25	—	25	6	12	60	7	16	14	10
KMHF 40-10	40	—	25	10	20	100	15	28	13	10
KMHF 50-15	50	—	25	15	30	150	40	45	11	100
KMHF 65-25	65	—	25	25	50	250	50	77	10.5	100
KMHF 80-40	80	—	25	40	80	400	80	100	16	100
KMHF 100-60	100	—	25	60	120	600	120	177	11.5	100

COMMUNICATION
PROTOCOLS

C-BUS

XGG 618

"DAY DEGREES" COUNTING AND STORAGE UNITS

It counts and records the trend of conventional winter day degrees.

ESSENTIAL SENSORS: 1 outside sensor for day degrees counting; model SGG 001.

XGG 618 Day degrees metering and storage unit

RELATED PRODUCTS

ACB 460 Plug-in for communication via C-Bus

SGG 001 Outside temperature sensor for day degrees measurement

COMMUNICATION
PROTOCOLS

C-BUS

UCI 328

COUNT UNIT OF TWO PULSE INPUTS (CONTACT CLOSURES)

It counts and records the trend of conventional winter day degrees.

ESSENTIAL SENSORS: 1 outside sensor for day degrees counting; model SGG 001.

UCI 328 Pulse count unit



COMMUNICATION
PROTOCOLS

M-Bus

EQX 424

DATA LOGGER WITH M-BUS PROTOCOL

M-Bus/ModBus protocol converter for thermal energy counter data acquisition
In 4 DIN rail module case

EQX 424 Data logger with cable and radio M-Bus protocol

RELATED PRODUCTS

GTW 208 M-Bus/Modbus converter specifically for EQX 424



GTW 208

M-Bus/MODBUS CONVERTER (SPECIFICALLY FOR EQX 424)

GTW 208 M-Bus/Modbus converter



COMMUNICATION
PROTOCOLS

M-Bus

EQL ...

M-BUS LEVEL CONVERTER

To manage 60 or 250 devices. Data reading from M-Bus wired counters.
In 4 DIN rail module case

EQL 060 M-Bus converter to manage up to 60 devices on the same M-Bus line. Power supply unit included

EQL 250 M-Bus converter to manage up to 250 devices on the same M-Bus line. Power supply unit included



COMMUNICATION
PROTOCOLS

M-Bus

RPT 001

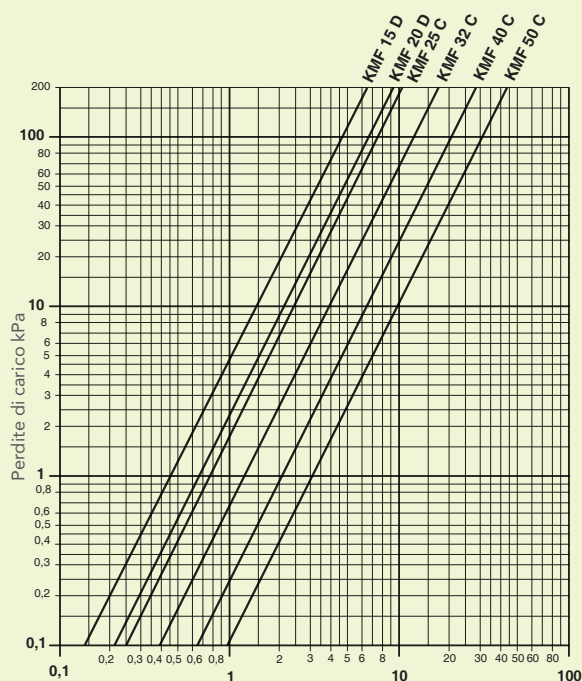
WIRELESS M-BUS REPEATER/RECEIVER

For meters with wireless M-Bus protocol
The repeater makes it possible to extend the network by increasing the radio range, collecting the data of the relevant distribution units, and then transmitting them to the Receiver.

RPT 001 Signal repeater for distribution system

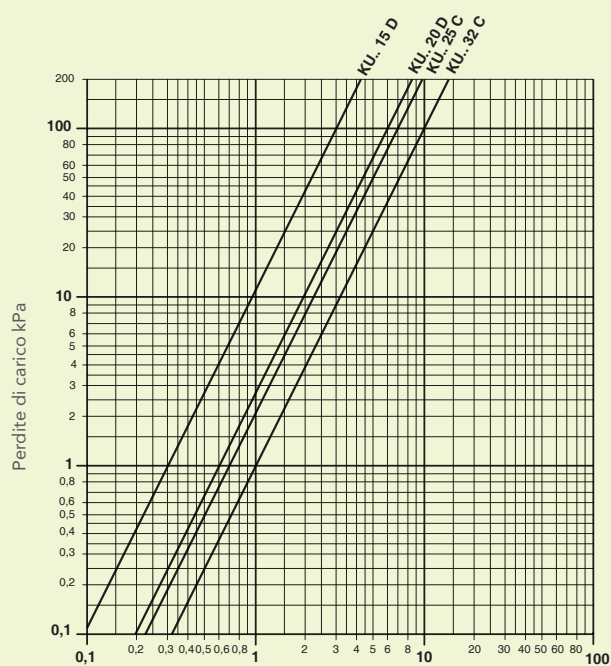


KMF ...

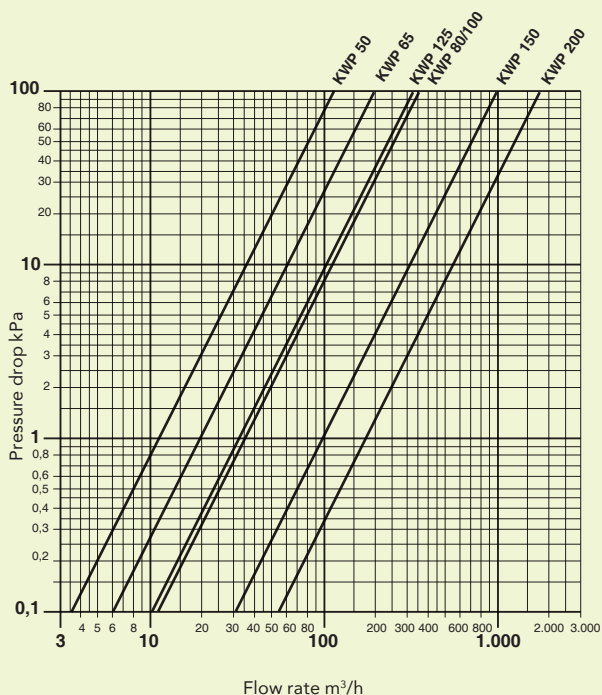


Pressure drop

KU ...

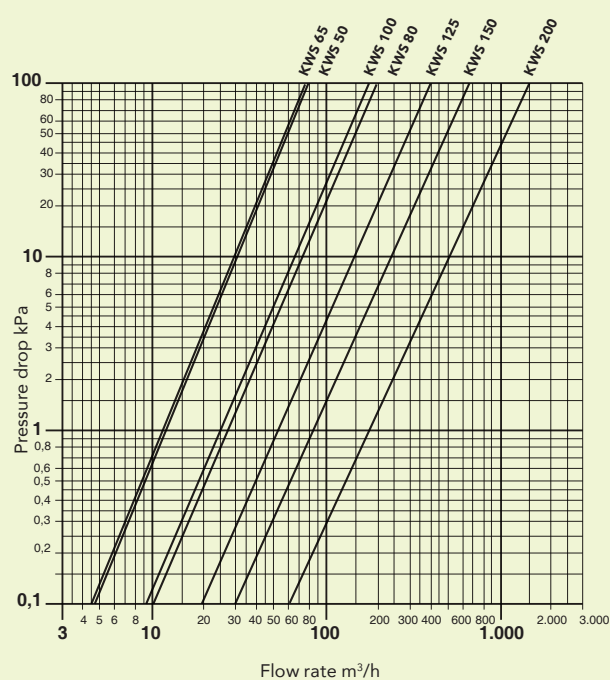


KWP ...



Pressure drop

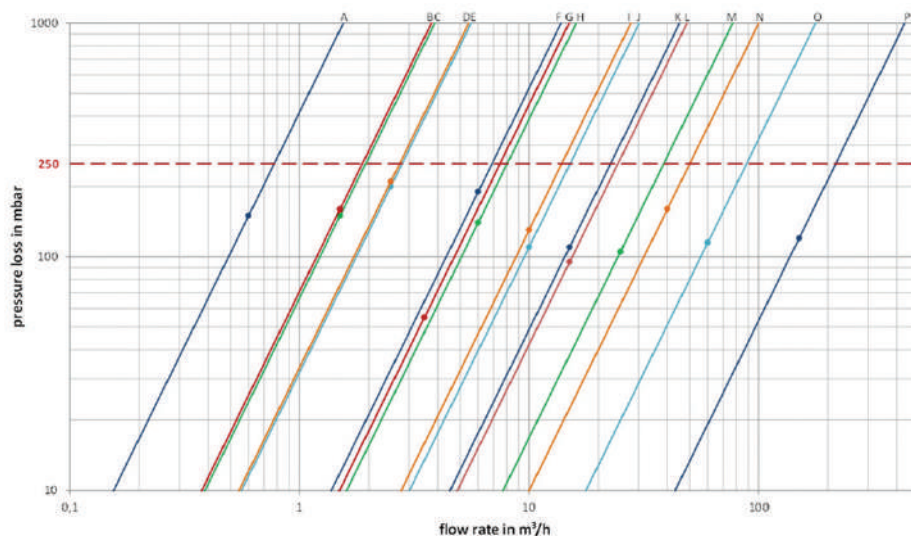
KWM ...



100 mbar=10kPa=1.000 mmWG

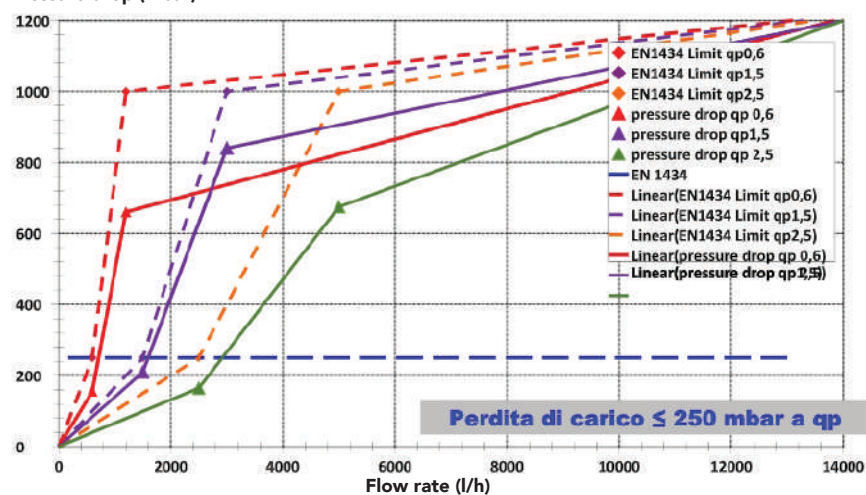
KMHG - KMHF ..

Pressure drop



MHR-MHF-MHN ...

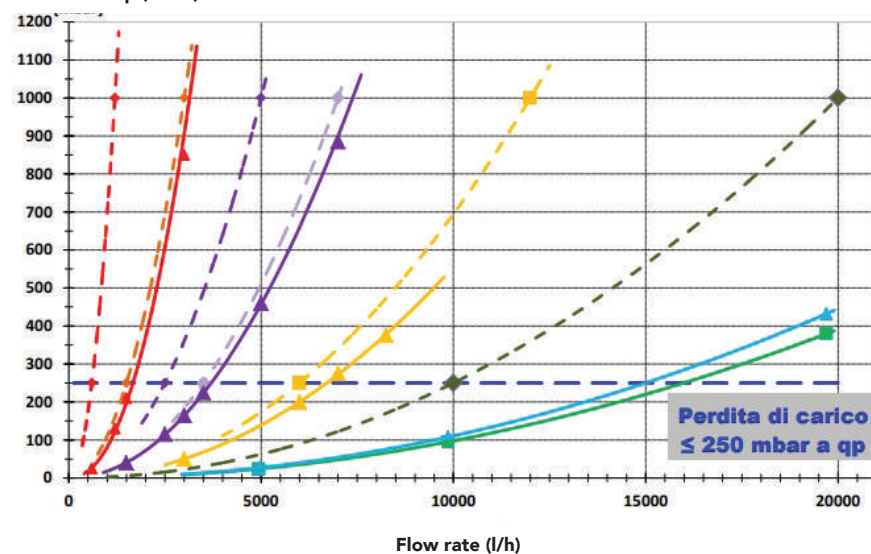
Pressure drop (mbar)



UHR-UHF-UHN ...

Pressure drop (mbar)

- ◆ EN1434 Limit qp0,6
- ◆ EN1434 Limit qp1,5
- ◆ EN1434 Limit qp2,5
- ◆ EN1434 Limit qp3,5
- ◆ EN1434 Limit qp6,0
- ◆ EN 1434 Limit qp10
- ▲ pressure drop qp 0,6 / 1,5
- ▲ pressure drop qp 2,5 / 3,5 / 1,5 (DN20)
- ▲ pressure drop qp 6,0
- ▲ pressure drop qp 10 200 mm
- ▲ pressure drop qp 10 300 mm
- EN 1434



Configuration module for metering

To create the most suited I
box for your system

All units are equipped with M-Bus or Wireless M-Bus communication protocol for centralised reading of consumption data.

Energy metering measures heating and air conditioning consumption.

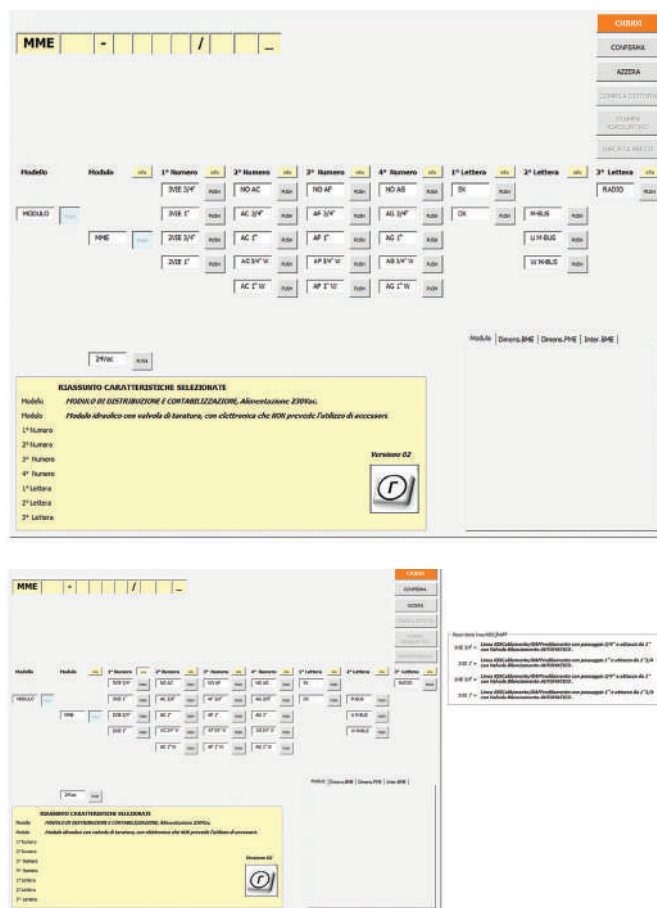
Meters can be mechanical or ultrasonic. Hydraulic modules can be configured with 2-way shut-off valve and electronic balancing or with 3-way on/off valve.

Hydraulic module insulation is included

The installation mode can be selected between flush (BME box) or wall flush-mounting (PME plate)

Distribution and metering boxes can have two basic variants:

- horizontal boxes with connections to the primary circuit from the left
- horizontal boxes with connections to the primary circuit from the right



MME 500 - S 1 1 0 / S M		PREZZI DI LISTINO	TOTALE	CHIEDI
Box relativo al Modulo selezionato...	BME500-5110	€ 1110	€ 2160	CONFERMA
Accessorio distanziale per Box...	AMD001	€ 560		AZZERA
Piastra relativa al Modulo selezionato...	PME500-5110	€ 70		COMPILA DISTINTA
		€ 420		STAMPA RIASSUNTIVO
				IMPORTA PREZZI

Modello	Modulo	1° Numero	2° Numero	3° Numero	4° Numero	1° Lettera	2° Lettera	3° Lettera
MODULO		AC 3/4"	AP 3/4"			MD AG	SK	
		200 3/4"						

Modulo | Dinens.BME | Dinens.PME | Inter.BME

24vac

RIASSUNTO CARATTERISTICHE SELEZIONATE

Modello: **MODULO DI DISTRIBUZIONE E CONTABILIZZAZIONE, Alimentazione 230Vac.**

Modulo: **Modulo idraulico con valvola di taratura, con elettronica che NON prevede l'utilizzo di accessori.**

1° Numero: **MANDATA 2 VIE DA 3/4" (0,9 m3), con valvola bilanciamento AUTOMATICA.**

2° Numero: **CON CONTATORE ACQUA CALDA SANITARIA 2,5m3 3/4".**

3° Numero: **CON CONTATORE ACQUA FREDDA SANITARIA 2,5m3 3/4".**

4° Numero: **SENZA CONTATORE ACQUA CALDA SANITARIA.**

1° Lettera: **INGRESSO MANDATA CALDAIA DA SINISTRA.**

2° Lettera: **RITORNO CON CONTATORE A TURBINA E INTEGRATORE M-BUS FILARE.**

3° Lettera:

Versione 02

CONFIRMATION

confirming will generate prices and accessories to complete the form

PRINT-SUMMARY

print summary in pdf format

PUSH BUTTONS

to select the type that reflects the needs

INFO BUTTONS

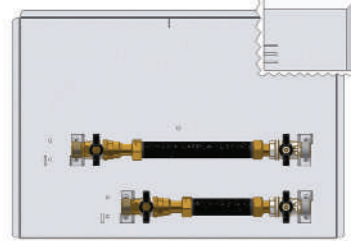
brief description of possible options

IMAGES

after CONFIRMATION it display images and dimensions

KEY

all the features of the box being configured are summarised



COMMUNICATION PROTOCOLS

M-Bus

M-Bus

M	M	E	3	5	0	-	x	0	0	0	/	x	x	x
PME wall mounting plate			1 m3-way module with 3/4" automatic balancing valve (0.9 m ³)						O without water grey			S left		
MME module			2 3-way module with 1" automatic balancing valve (1.7 m ³)									D right		
BME flush mounting box			5 2-way module with 3/4" automatic balancing valve (0.9 m ³)						O without domestic cold water			MUW M-Bus turbine counter M-Bus ultrasonic room counter wireless M-Bus counter		
			6 2-way module with 1" automatic balancing valve (1.7 m ³)						O without domestic hot water			R room thermostat radio status receiver		

Example

mandatory fields *optional fields*

MME 350-5 0 0 0 / D M R — radio receiver

module

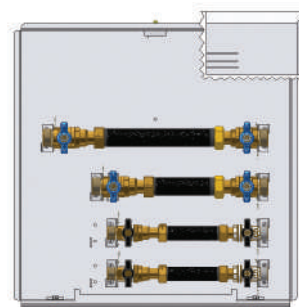
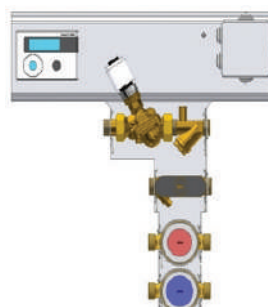
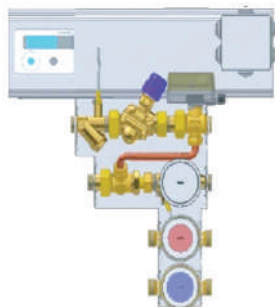
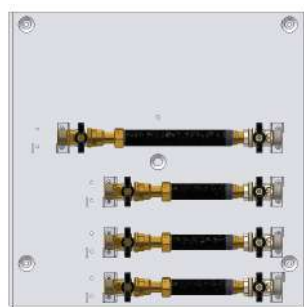
right

without grey water

without domestic cold water

without domestic hot water

2-way module"



FOR MODEL SELECTION AND QUOTATIONS CONTACT YOUR LOCAL RETAILER

BME 500 Pre-installation metal box for MME 500 module

PME 500 Pre-installation metal plate for MME 500 module

MME 500 Single zone distribution and metering module with 2-way or 3-way zone valve

COMMUNICATION
PROTOCOLS

M-Bus

Heating/cooling line possible:

- 1/2" routing; and 3/4" connection; (MME 500-5xx0)
- 3/4" routing; and 1" connection; male (MME 500 6xx0)

Possibility of domestic hot and/or cold water lines:

- Domestic hot and/or cold water lines 1/2" routing; and 3/4" connection; male, 2.5 m³/h volumetric counters (MME 500-x110)
- Domestic hot and/or cold water lines 3/4" routing; and 1" connection; male, 4 m³/h volumetric counters (MME 500-x220)

Consumption metering:

- No. 1 thermal and cooling energy meter
- No. 2 cm³ domestic water meter

Power supply: 230 Volt~ (MME 500...); 24 Volt~ (MME 500.../24V)

Bus for centralised reading and C-Bus or M-Bus remote control

NOTE: Ensure a head of at least 2.5 metres of water column at the box inlet, generated by the primary circuit pump (boiler/cooler circuit).

NOTE: With a simple gesture, in all models, it is possible to change the side of the fluid inlet (from LH to RH and vice versa).

M	M	E	5	0	0	-	x	x	x	0	/	x	x	x
BME														
flush mounting box														
MME														
module														
PME														
wall mounting plate														
			1											
			3-way module											
			with 3/4" (0.9 m³)											
			automatic balancing valve											
			5											
			2-way module with											
			3/4" (0.9 m³) auto-											
			automatic balancing valve											
			2											
			3-way module											
			with 1" (1.7 m³)											
			automatic balancing valve											
			6											
			2-way module with											
			1" (1.7 m³) automa-											
			tic balancing valve											
			0											
			without domestic											
			hot water											
			1											
			with domestic hot											
			water 2.5 m³ 3/4"											
			2											
			with domestic hot											
			water 4m³ 1"											
			0											
			without domestic											
			cold water											
			1											
			with domestic cold											
			water 2.5 m³ 3/4"											
			2											
			with domestic cold											
			water 4 m³ 1"											
			S											
			left											
			D											
			right											
			M											
			M-Bus turbine counter											
			U											
			M-Bus ultrasonic room											
			counter											
			W											
			wireless M-Bus											
			counter											
			R											
			room thermostat radio											
			status receiver											

Example

mandatory fields	optional fields
MME 500-5 0 0 0	/ D M R
module	radio receiver
	M-Bus meter
	right
	without grey water
	without domestic cold water
	without domestic hot water
	2-way module

PRODUCTS

DEVICES:

**DHW, GAS SAFETY, ACTUATORS AND VALVES,
SENSORS AND REMOTE CONTROLS,
REMOTE MONITORING**



DOMESTIC HOT WATER MIXING VALVES

COMMUNICATION PROTOCOLS





COMMUNICATION
PROTOCOLS



MAS 6../T

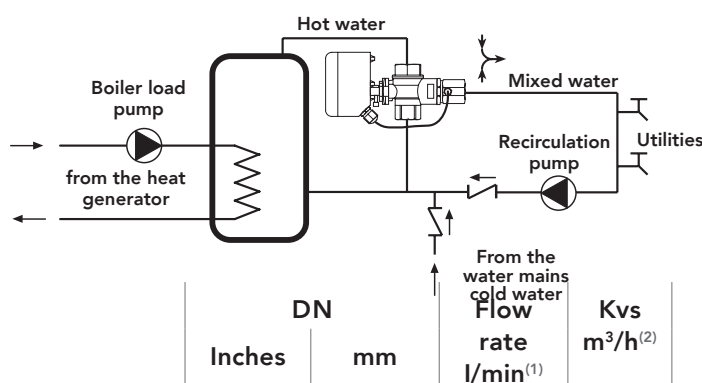
ELECTRONIC MIXING VALVES FOR DHW WITH
REMOTE MONITORING OPTION

FROM 1/2" TO 1"1/4

MAS 7../T

ELECTRONIC MIXING VALVES FOR DHW WITH REMOTE
METERING OPTION FROM 1"1/2 TO 2"

Compact unit suitable for fixed-point temperature control in domestic hot water
distribution circuits remote control option via ModBus.



	DN		Flow rate l/min ⁽¹⁾	Kvs m ³ /h ⁽²⁾	Setting range
	Inches	mm			
MAS 615/T	1/2"	15	40	2.5	30 ... 70 °C
MAS 620/T	3/4"	20	70	5	30 ... 70 °C
MAS 625/T	1"	25	130	9	30 ... 70 °C
MAS 632/T	1"1/4	32	180	13.5	30 ... 70 °C
MAS 740/T	1"1/2	40	270	19.2	30 ... 70 °C
MAS 750/T	2"	50	390	28.9	30 ... 70 °C

ACCESSORIES FOR ALL MODELS

TMT 500 Additional sealing component for MAS 615/T, which
can be installed without removing the valve from the
hydraulic system.
This sealing component is treated as a spare part

TMT 600 Additional sealing component for MAS 620/T...632/T,
which can be installed without removing the valve from
the hydraulic system. This sealing component is treated
as a spare part

TMT 700 Additional sealing component for MAS 7../T, which
can be installed without removing the valve from the
hydraulic system.
This sealing component is treated as a spare part

(1) Flow rate at an average pressure of
4 bar and a pressure drop of approx.
20%.

(2) Flow coefficient in m³ with valve open
with a pressure drop of 100 KPa.

COMMUNICATION
PROTOCOLS

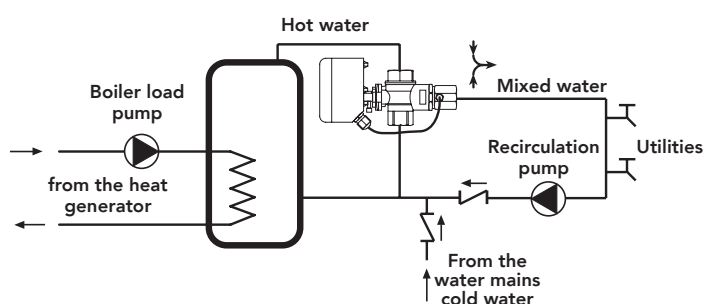
MAS 6../T/AL

ELECTRONIC MIXING VALVES FOR DHW WITH
ANTILEGIONELLA FUNCTION
AND REMOTE MONITORING OPTION
FROM 1/2" TO 1"1/4

MAS 7../T/AL

ELECTRONIC MIXING VALVES FOR DHW WITH
ANTILEGIONELLA FUNCTION AND
REMOTE MONITORING OPTION
FROM 1"1/2 TO 2"

Compact unit suitable for adjusting the fixed-point temperature in domestic hot water distribution circuits with antilegionella function and remote control option via ModBus. It can be integrated into the system



	DN		Flow rate	Kvs	Setting range
	Inches	mm	l/min ⁽¹⁾	m ³ /h ⁽²⁾	
MAS 615/T/AL	1/2"	15	40	2.5	30 ... 70 °C
MAS 620/T/AL	3/4"	20	70	5	30 ... 70 °C
MAS 625/T/AL	1"	25	130	9	30 ... 70 °C
MAS 632/T/AL	1"1/4	32	180	13.5	30 ... 70 °C
MAS 740/T/AL	1"1/2	40	270	19.2	30 ... 70 °C
MAS 750/T/AL	2"	50	390	28.9	30 ... 70 °C

ACCESSORIES FOR ALL MODELS

TMT 500 Additional sealing component for MAS 615/T, which can be installed without removing the valve from the hydraulic system. This sealing component is treated as a spare part

TMT 600 Additional sealing component for MAS 620/T...632/T, which can be installed without removing the valve from the hydraulic system. This sealing component is treated as a spare part

TMT 700 Additional sealing component for MAS 7../T, which can be installed without removing the valve from the hydraulic system. This sealing component is treated as a spare part

(1) Flow rate at an average pressure of 4 bar and a pressure drop of approx. 20%.

(2) Flow coefficient in m³ with valve open with a pressure drop of 100 KPa.



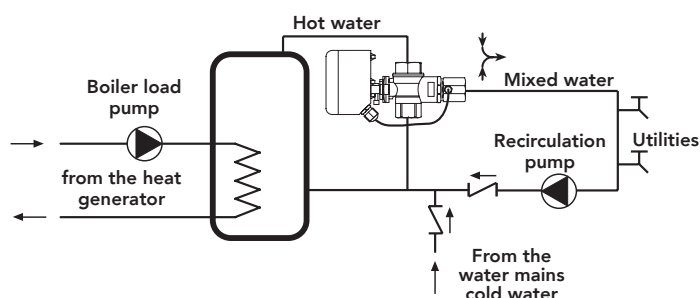
MAS 6..

ELECTRONIC MIXING VALVES FOR DHW
FROM 1/2" TO 1"1/4

MAS 7..

ELECTRONIC MIXING VALVES FOR DHW
FROM 1"1/2 TO 2"

Compact unit suitable for fixed-point temperature control in domestic hot water distribution circuits.



	DN		Flow rate	Kvs	Setting range
	inches	mm	l/min ⁽¹⁾	m ³ /h ⁽²⁾	
MAS 615	1/2"	15	40	2.5	30 ... 70 °C
MAS 620	3/4"	20	70	5	30 ... 70 °C
MAS 625	1"	25	130	9	30 ... 70 °C
MAS 632	1"1/4	32	180	13.5	30 ... 70 °C
MAS 740	1"1/2	40	270	19.2	30 ... 70 °C
MAS 750	2"	50	390	28.9	30 ... 70 °C

ACCESSORIES FOR ALL MODELS

- TMS 500** Additional sealing component for MAS 615, which can be installed without removing the valve from the hydraulic system. This sealing component is treated as a spare part
- TMS 600** Additional sealing component for MAS 620...632, which can be installed without removing the valve from the hydraulic system. This sealing component is treated as a spare part
- TMS 700** Additional sealing component for MAS 7.., which can be installed without removing the valve from the hydraulic system. This sealing component is treated as a spare part

(1) Flow rate with an average pressure of 4 bar and a pressure drop of approx. 20%

(2) Flow coefficient in m3 with open valve with pressure drop of 100 KPa



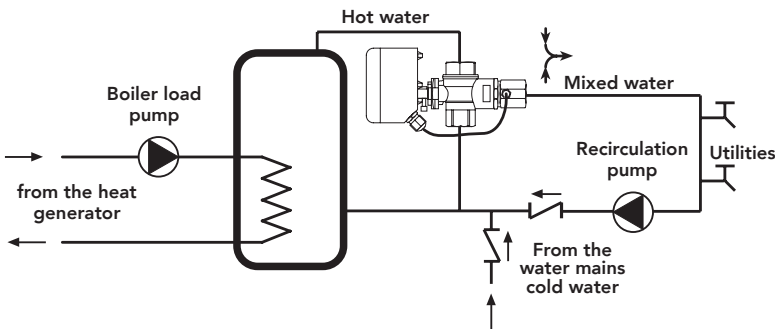
MAS 6..AL

ELECTRONIC MIXING VALVES FOR DHW
WITH ANTILEGIONELLA FUNCTION
FROM 1/2" TO 1"1/4

MAS 7..AL

ELECTRONIC MIXING VALVES FOR DHW
WITH ANTILEGIONELLA FUNCTION
FROM 1"1/2 TO 2"

Compact unit suitable for fixed-point temperature control in domestic hot water distribution circuits, with anti-legionella function and open manifold output.



	DN		Flow	Kvs	Setting
	inches	mm	rate	m ³ /h ⁽²⁾	range
			l/min ⁽¹⁾		
MAS 615/AL	1/2"	15	40	2.5	30 ... 70 °C
MAS 620/AL	3/4"	20	70	5	30 ... 70 °C
MAS 625/AL	1"	25	130	9	30 ... 70 °C
MAS 632/AL	1"1/4	32	180	13.5	30 ... 70 °C
MAS 740/AL	1"1/2	40	270	19.2	30 ... 70 °C
MAS 750/AL	2"	50	390	28.9	30 ... 70 °C

ACCESSORIES FOR ALL MODELS

IPS 328	Device for generating 2 alarms through open manifold contact
TMS 500	Additional sealing component for MAS 615, which can be installed without removing the valve from the hydraulic system. This sealing component is treated as a spare part
TMS 600	Additional sealing component for MAS 620...632, which can be installed without removing the valve from the hydraulic system. This sealing component is treated as a spare part
TMS 700	Additional sealing component for MAS 7.., which can be installed without removing the valve from the hydraulic system. This sealing component is treated as a spare part

(1) Flow rate with an average pressure of 4 bar and a pressure drop of approx. 20%
(2) Flow coefficient in m3 with open valve with pressure drop of 100 KPa

[illegible]

GAS SAFETY

COMMUNICATION PROTOCOLS





COMMUNICATION
PROTOCOLS



RFG 442 - 448

GAS LEAK DETECTOR WITH UP TO 3 REMOTE SENSORS FOR CENTRAL HEATING PLANT OR SIMILAR

Suitable for detecting methane, LPG or CO leaks.
Capable of serving up to 3 external methane, LPG or CO sensors.
4 relay outputs for controlling gas shut-off valves and/or alarms.
In 4 DIN rail module case

ESSENTIAL SENSORS: 1 sensor for methane, LPG or carbon monoxide CO.

RFG 442	Gas leak detector for up to 3 remote sensors	12V...24V AC
RFG 448	Gas leak detector for up to 3 remote sensors	230V AC

RELATED PRODUCTS

SRD 150	Civil wall-mounting methane gas sensor
SRD 250	Civil wall-mounting LPG gas sensor
SRS 150	Wall-mounting methane gas sensor for Central heating plant
SRS 250	Wall-mounting LPG gas sensor for Central heating plant
SRS 350	Wall-mounting CO gas sensor for Central heating plant



RFG 361

GAS LEAK DETECTOR FOR ONE REMOTE SENSOR

Suitable for detecting methane, LPG or CO leaks.
1 relay output for controlling N.O. or N.C. gas shut-off valves.
In 2 DIN rail module case

ESSENTIAL SENSORS: 1 sensor for methane, LPG or carbon monoxide CO.

RFG 361	Gas leak detector for one remote sensor
----------------	---

RELATED PRODUCTS

SRD 150	Civil wall-mounting methane gas sensor
SRD 250	Civil wall-mounting LPG gas sensor
SRS 150	Wall-mounting methane gas sensor for Central heating plant
SRS 250	Wall-mounting LPG gas sensor for Central heating plant
SRS 350	Wall-mounting CO gas sensor for Central heating plant



"DOMOGAS" gas leak detectors for domestic use



DGD 1..2..

DOMESTIC GAS LEAK DETECTORS WITH RELAY OUTPUT

Suitable for detecting methane or LPG gas leaks with the possibility of controlling a solenoid valve (N.C. or N.O.).

Interchangeable pre-calibrated sensor..

The detectors comply with CEI EN 50194-1 standards and carry the IMQ quality mark.

DGD 118 Methane gas leak detector

DGD 218 LPG gas leak detector



DGD 14.-24.

DOMESTIC GAS LEAK DETECTORS COMPLETE WITH N.O. (NORMALLY OPEN) VALVE WITH MANUAL RESET

These are gas leak detectors, for methane or LPG, complete with gas valve, NORMALLY OPEN, with manual reset at 230 V AC.

Interchangeable pre-calibrated sensor.

The detectors comply with CEI EN 50194-1 standards and carry the IMQ quality mark.

DGD 148.15 Methane gas leak detector with 1/2" valve (GARO 815)

DGD 148.20 Methane gas leak detector with 3/4" valve (GARO 820)

DGD 148.25 Methane gas leak detector with 1" valve
(GARO 825)

DGD 248.15 LPG gas leak sensor with 1/2" valve
(GARO 815)

DGD 248.20 LPG gas leak sensor with 3/4" valve (GARO 820)

DGD 248.25 LPG gas leak sensor with 1" valve (GARO 825)



DGD 318

DOMESTIC CO (CARBON MONOXIDE) WITH STORAGE AND RELAY OUTPUT

Carbon monoxide detector, with the ability to directly control solenoid valves, valves and other 230 V AC actuators.

The detector complies with CEI EN 50291-1.

DGD 318 CO (carbon monoxide) detector with relay output



RFG 65

GAS LEAK DETECTOR UP TO 3 REMOTE SENSOR FOR CENTRAL HEATING PLANT OR SIMILAR

Suitable for detecting methane, LPG or CO leaks.

Capable of serving up to 3 outside sensors for methane, LPG or CO.

2 relay outputs for controlling N.O. or N.C. gas shut-off valves and/or alarms.

ESSENTIAL SENSORS: 1 sensor for methane, LPG or carbon monoxide CO.

RFG 651	Gas detector for 1 remote sensor
RFG 652	Gas detector for 2 remote sensors
RFG 653	Gas detector for 3 remote sensors

RELATED PRODUCTS

SRD 150	Civil wall-mounting methane gas sensor
SRD 250	Civil wall-mounting LPG gas sensor
SRS 150	Wall-mounting methane gas sensor for central heating plant
SRS 250	Wall-mounting LPG gas sensor
SRS 350	Wall-mounting CO sensor for heating plant



ACC ...

BATTERIES

Long-life sealed rechargeable batteries.

They withstand heavy operating conditions such as overcharging and very low discharge.

They are maintenance-free.

	Power VA	Voltage V DC	Ampere capacity per hour	Dimensions LxPxH	Weight Kg
ACC 019	25	12	2.3	178x34x65	0.9
ACC 060	77	12	7.0	151x64.5x97.5	2.5
ACC 150	180	12	17	181x76x167	6
ACC 240	260	12	24	175x166x125	8.1
ACC 400	480	12	40	197x165x170	14

Method of choosing power supply according to the system to be energised

- Calculate the total power absorbed P_t in VA in the system to be powered by adding up all the consumption values of the individual system components: detectors P_r , sensors P_s (SRS only ...), valves P_v , external alarms P_a .

The absorption values of the SGC, SGR sensors do not have to be taken into account as they are already calculated in the detectors powering them.

$P_t = P_r + P_s + P_v + P_a$. The power supply must be greater than or equal to P_t .

- Multiply the power absorbed P_t by the number of hours h you want to keep the system running without mains supply, and the effective power P_e required is obtained.

$P_e = P_t \times h$. The power of the battery must not be less than P_e .

If a single battery is not sufficient, use two or more batteries in parallel.



AL.

BACK UP POWER UNIT FOR GAS SAFETY SYSTEM

Used to supply 12 V DC power to gas safety systems even in the event of a mains power failure. Composed of:

- 1 stabilised back-up power supply unit.
- 1 Watertight accumulator.

STABILISED POWER BACK UP UNITS

Stabilised back-up units for keeping batteries charged

	Power VA	Input V AC	Output V DC	ampere	Dimensions LxPxH	Weight Kg
ALI 310	30	230	13.8	2.25	130x100x38	0.5
ALP 114	90	230	13.8	6.75	200x260x110	6.7
ALP 120	120	230	13.8	9	185x290x130	8



GENERAL ACCESSORIES FOR GAS DETECTION SYSTEM

SAS 880	Remote audible alarm
SAL 881	Remote visual alarm
CSL 882	Remote visual and audible alarm



GCAO ...

NORMALLY CLOSED GAS SOLENOID VALVE WITH BRASS BODY

Without power supply they are closed, with power supply they are open.
Class A Group 2 approval.

	DN	Power supply V	VA	P max ⁽¹⁾ mbar	Flow rate m ³ /h ⁽²⁾ 0.5 m ³ /h	1 mbar
GCAO 210	3/8"	12 VDC	8.5	200	0.92	1.4
GCAO 410	3/8"	24 VAC	7	200	0.92	1.4
GCAO 810	3/8"	230 VAC	9	200	0.92	1.4
GCAO 215	1/2"	12 VDC	8.5	200	0.92	1.4
GCAO 415	1/2"	24 VAC	7	200	0.92	1.4
GCAO 815	1/2"	230 VAC	9	200	0.92	1.4
GCAO 220	3/4"	12 VDC	8.5	200	0.92	1.4
GCAO 820	3/4"	230 VAC	9	200	0.92	1.4
GCAO 420	3/4"	24 VAC	7	200	0.92	1.4

⁽¹⁾ Maximum operating pressure

⁽²⁾ Natural gas flow rates with 0.5 mbar pressure drop (5 mm CA) and 1 mbar (10 mm WG) 100 mbar=10kPa=1,000 mmWG



GCRO ...

NORMALLY CLOSED GAS SOLENOID VALVES WITH MANUAL RESET AND BRASS BODY

With no power supply they are closed, they are open with manual reset and remain open only when powered.

Class A Group 2 approval.

	DN	Power supply V	VA	P max ⁽¹⁾ mbar	Flow rate m ³ /h ⁽²⁾	
					0.5 m ³ /h	1 mbar
GCRO 215	1/2"	12 VDC	8	500	1.8	2.6
GCRO 415	1/2"	24 VAC	8	500	1.8	2.6
GCRO 815	1/2"	230 VAC	9	500	1.8	2.6
GCRO 220	3/4"	12 VDC	8	500	3	4.5
GCRO 420	3/4"	24 VAC	8	500	3	4.5
GCRO 820	3/4"	230 VAC	9	500	3	4.5
GCRO 225	1"	12 VDC	8	500	4.5	6.6
GCRO 425	1"	24 VAC	8	500	4.5	6.6
GCRO 825	1"	230 VAC	9	500	4.5	6.6



GARO ...

NORMALLY OPEN GAS SOLENOID VALVES WITH MANUAL RESET AND BRASS BODY

With no power supply they are open, with power supply they are closed
They open with a manual reset and remain open only if there is no power supply.

	DN	Power supply V	VA	P max ⁽¹⁾ mbar	Flow rate m ³ /h ⁽²⁾	
					0.5 m ³ /h	1 mbar
GARO 215	1/2"	12 VDC	6	500	1.8	2.6
GARO 415	1/2"	24 VAC	4	500	1.8	2.6
GARO 815	1/2"	230 VAC	7	500	1.8	2.6
GARO 220	3/4"	12 VDC	6	500	3	4.5
GARO 420	3/4"	24 VAC	4	500	3	4.5
GARO 820	3/4"	230 VAC	7	500	3	4.5
GARO 225	1"	12 VDC	8	500	4.5	6.6
GARO 425	1"	24 VAC	22	500	4.5	6.6
GARO 825	1"	230 VAC	8	500	4.5	6.6

(1) Maximum operating pressure

(2) Natural gas flow rates with 0.5 mbar pressure drop (5 mm CA) and 1 mbar (10 mm WG)
100 mbar=10kPa=1,000 mmWG



GCR ...

NORMALLY CLOSED GAS SOLENOID VALVE WITH MANUAL RESET AND ALUMINUM BODY

With no power supply they are closed, they are open with manual reset and remain open only when powered. Class A Group 2 approval



THREADED	DN	Power supply		P max ⁽¹⁾ mbar	flow rate m ³ /h ⁽²⁾	
		V	VA		0.5 m ³ /h	1 mbar
GCR 215	1/2"	12 VDC	8	500	6.6	8.7
GCR 415	1/2"	24 VAC	8	500	6.6	8.7
GCR 815	1/2"	230 VAC	9	500	6.6	8.7
GCR 220	3/4"	12 VDC	8	500	9.8	14
GCR 420	3/4"	24 VAC	8	500	9.8	14
GCR 820	3/4"	230 VAC	9	500	9.8	14
GCR 225	1"	12 VDC	8	500	15	19
GCR 425	1"	24 VAC	8	500	15	19
GCR 825	1"	230 VAC	9	500	15	19
GCR 232	1 1/4"	12 VDC	8	500	18	27
GCR 432	1 1/4"	24 VAC	8	500	18	27
GCR 832	1 1/4"	230 VAC	9	500	18	27
GCR 240	1 1/2"	12 VDC	8	500	20	30
GCR 440	1 1/2"	24 VAC	8	500	20	30
GCR 840	1 1/2"	230 VAC	9	500	20	30
GCR 250	2"	12 VDC	8	500	25	37
GCR 450	2"	24 VAC	8	500	25	37
GCR 850	2"	230 VAC	9	500	25	37

(1) Maximum operating pressure

(2) Natural gas flow rates with 0.5 mbar pressure drop (5 mm CA) and 1 mbar (10 mm WG)
100 mbar=10kPa=1,000 mmWG



GCR ...

NORMALLY CLOSED

GAS SOLENOID VALVES

WITH MANUAL RESET

With no power supply they are closed, they are open with manual reset and remain open only when powered. Class A Group 2 approval

(1) Maximum operating pressure

(2) Natural gas flow rates with 0.5 mbar pressure drop (5 mm CA) and 1 mbar (10 mm WG)
100 mbar=10kPA=1,000 mmWG

FLANGED	DN	Power supply		P max ⁽¹⁾ mbar	Flow rate m ³ /h ⁽²⁾	
		V	VA		0. m ³ /h	1 mbar
GCR 265	65	12 VDC	18	500	53	78
GCR 465	65	24 VAC	20	500	53	78
GCR 865	65	230 VAC	18	500	53	78
GCR 280	80	12 VDC	18	500	53	78
GCR 480	80	24 VAC	20	500	53	78
GCR 880	80	230 VAC	18	500	53	78
GCR 2100	100	12 VDC	18	500	83	130
GCR 4100	100	24 VAC	20	500	83	130
GCR 8100	100	230 VAC	18	500	83	130
GCR 2125	125	12 VDC	18	500	230	335
GCR 4125	125	24 VAC	20	500	230	335
GCR 8125	125	230 VAC	18	500	230	335
GCR 2150	150	12 VDC	18	500	230	335
GCR 4150	150	24 VAC	20	500	230	335
GCR 8150	150	230 VAC	18	500	230	335
GCR 2200	200	12 VDC	18	500	360	525
GCR 4200	200	24 VAC	20	500	360	525
GCR 8200	200	230 VAC	18	500	360	525
GCR 2300	300	12 VDC	18	500	800	1,200
GCR 4300	300	24 VAC	20	500	800	1,200
GCR 8300	300	230 VAC	18	500	800	1,200

SPECIAL VERSION

GCR .../C Complete with closing indicator microswitch kit

ACCESSORIES

FCR 65-80 Closing indicator microswitch kit for GCR solenoid valves GCR DN 65-80

FCR 100-125-150 Closing indicator microswitch kit for GCR DN 100-125-150 solenoid valve

FCR 200 Closing indicator microswitch kit for GCR solenoid valves GCR DN 200



GAR ...

NORMALLY OPEN

GAS SOLENOID VALVES

WITH MANUAL RESET

With no power supply they are open, with power supply they are closed.
They open with a manual reset and remain open only if there is no power supply.



THREADED	DN	Power supply		P max ⁽¹⁾ mbar	Flow rate m ³ /h ⁽²⁾	
		V	VA		0.5 m ³ /h	1 mbar
GAR 232	1 1/4"	12 VDC	20	500	20	29
GAR 432	1 1/4"	24 VAC	22	500	20	29
GAR 832	1 1/4"	230 VAC	23	500	20	29
GAR 240	1 1/2"	12 VDC	20	500	20	29
GAR 440	1 1/2"	24 VAC	22	500	20	29
GAR 840	1 1/2"	230 VAC	23	500	20	29
GAR 250	2"	12 VDC	20	500	25	37
GAR 450	2"	24 VAC	22	500	25	37
GAR 850	2"	230 VAC	23	500	25	37

⁽¹⁾ Maximum operating pressure

⁽²⁾ Natural gas flow rates with 0.5 mbar
pressure drop (5 mm WG) and 1 mbar
(10 mm WG)
100 mbar=10kPa=1,000 mmWG



GAR ...

NORMALLY OPEN

GAS SOLENOID VALVES

WITH MANUAL RESET

With no power supply they are open, with power supply they are closed.

They open with a manual reset and remain open only if there is no power supply.

FLANGED	DN	Power supply		P max ⁽¹⁾ mbar	Flow rate m ³ /h ⁽²⁾	
		V	VA		0.5 m ³ /h	1 mbar
GAR 265	65	12 VDC	20	500	63	92
GAR 465	65	24 VAC	22	500	63	92
GAR 865	65	230 VAC	23	500	63	92
GAR 280	80	12 VDC	20	500	76	115
GAR 480	80	24 VAC	22	500	76	115
GAR 880	80	230 VAC	23	500	76	115
GAR 2100	100	12 VDC	20	500	92	140
GAR 4100	100	24 VAC	22	500	92	140
GAR 8100	100	230 VAC	23	500	92	140
GAR 2125	125	12 VDC	20	500	275	400
GAR 4125	125	24 VAC	22	500	275	400
GAR 8125	125	230 VAC	23	500	275	400
GAR 2150	150	12 VDC	20	500	275	400
GAR 4150	150	24 VAC	22	500	275	400
GAR 8150	150	230 VAC	23	500	275	400
GAR 2200	200	12 VDC	40	500	360	525
GAR 4200	200	24 VAC	45	500	360	525
GAR 8200	200	230 VAC	57	500	360	525
GAR 2300	300	12 VDC	40	500	790	1,200
GAR 4300	300	24 VAC	45	500	790	1,200
GAR 8300	300	230 VAC	57	500	790	1,200

⁽¹⁾ Maximum operating pressure

⁽²⁾ Natural gas flow rates with 0.5 mbar pressure drop (5 mm WG) and 1 mbar (10 mm WG)
100 mbar=10kPA=1,000 mmWG

**OPTIONS:**

The following versions are also available: **DN 250 / DN 300**

(1) Maximum operating pressure

(2) Natural gas flow rates with 0.5 mbar pressure drop (5 mm WG) and 1 mbar (10 mm WG)
100 mbar=10kPa=1,000 mmWG

(3) Starting power consumption

(4) Complete with closing indicator microswitch

GCA ...**AUTOMATIC NORMALLY CLOSED GAS SOLENOID VALVES AND ALUMINUM BODY**

With no power supply they are closed, with power supply they are open.

Class A Group 2 approval.

DN 250 and 300 Class B Group 2 approval.

THREADED	DN	Power supply		P max ⁽¹⁾ mbar	Flow rate m ³ /h ⁽²⁾	
		V	VA		0.5 m ³ /h	1 mbar
GCA 215	1/2"	12 VDC	16	200	3.5	5
GCA 415	1/2"	24 VAC	14	200	3.5	5
GCA 815	1/2"	230 VAC	18	200	3.5	5
GCA 220	3/4"	12 VDC	16	200	4.8	7
GCA 420	3/4"	24 VAC	14	200	4.8	7
GCA 820	3/4"	230 VAC	18	200	4.8	7
GCA 225	1"	12 VDC	6/23 ⁽³⁾	200	6	8.8
GCA 425	1"	24 VAC	7/24 ⁽³⁾	200	6	8.8
GCA 825	1"	230 VAC	9/30 ⁽³⁾	200	6	8.8
GCA 432	1 1/4"	24 VAC	18/68 ⁽³⁾	200	19	27
GCA 832	1 1/4"	230 VAC	25/89 ⁽³⁾	200	19	27
GCA 440	1 1/2"	24 VAC	18/68 ⁽³⁾	200	20	29
GCA 840	1 1/2"	230 VAC	25/89 ⁽³⁾	200	20	29
GCA 450	2"	24 VAC	18/68 ⁽³⁾	200	30	43
GCA 850	2"	230 VAC	25/89 ⁽³⁾	200	30	43
FLANGED						
GCA 465	65	24 VAC	50/185 ⁽³⁾	360	50	71
GCA 865	65	230 VAC	75/290 ⁽³⁾	360	50	71
GCA 480	80	24 VAC	50/185 ⁽³⁾	360	56	80
GCA 880	80	230 VAC	75/290 ⁽³⁾	360	56	80
GCA 4100	100	24 VAC	35/120 ⁽³⁾	360	90	137
GCA 8100	100	230 VAC	70/270 ⁽³⁾	360	90	137
GCA 4125	125	24 VAC	35/120 ⁽³⁾	360	180	255
GCA 8125	125	230 VAC	70/270 ⁽³⁾	360	180	255
GCA 4150	150	24VAC	35/120 ⁽³⁾	360	180	255
GCA 8150	150	230 VAC	70/270 ⁽³⁾	360	180	255
GCA 4200C ⁽⁴⁾	200	24 VAC	16/75 ⁽³⁾	360	380	550
GCA 8200C ⁽⁴⁾	200	230 VAC	19/66 ⁽³⁾	360	380	550
GCA 4250C ⁽⁴⁾	250	24 VAC	16/75 ⁽³⁾	360	570	950
GCA 8250C ⁽⁴⁾	250	230 VAC	19/66 ⁽³⁾	360	570	950
GCA 4300C ⁽⁴⁾	300	24 VAC	33/96 ⁽³⁾	360	900	1400
GCA 8300C ⁽⁴⁾	300	230 VAC	38/84 ⁽³⁾	360	900	1400

ACCESSORIES

FCM 15-20-25 Closure indicator microswitch kit for GCA DN 15-20-25

FCM 32-40 Closure indicator microswitch kit for GCA DN 32-40

FCM 50 Closure indicator microswitch kit for GCA DN 50

FCM 65-80 Closure indicator microswitch kit for GCA DN 65-80

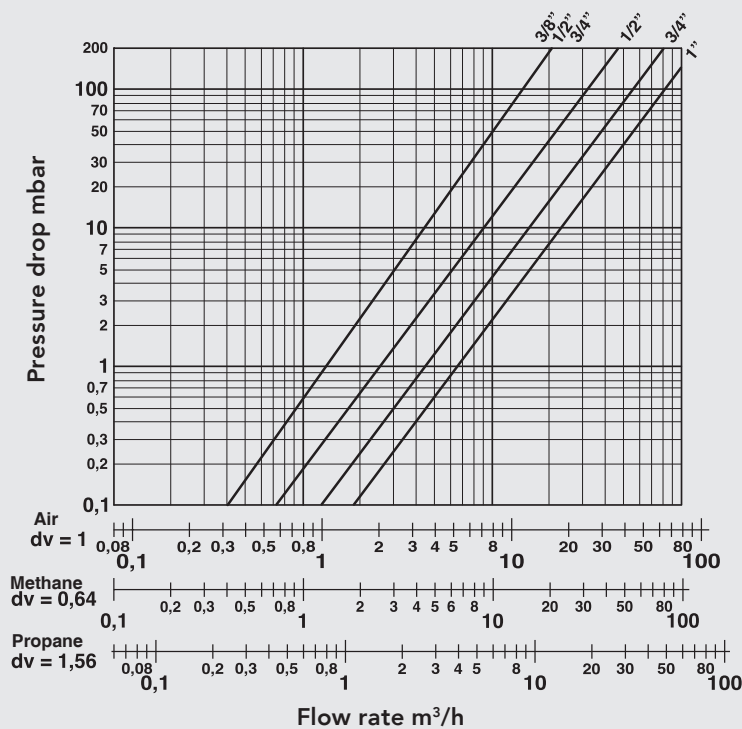
FCM 100 Closure indicator microswitch kit for GCA DN 100

FCM 125-150 Closure indicator microswitch kit for GCA DN 125-150

FUNCTIONAL CHARACTERISTICS OF GAS SOLENOID VALVES

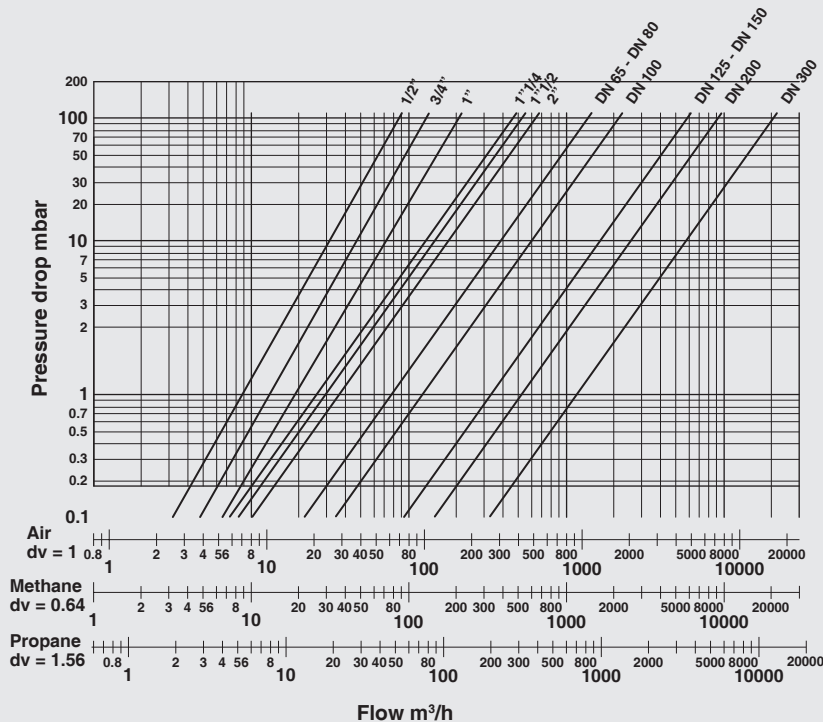
Type	Operation	Advantages	Disadvantages
Normally closed GCAO... GCA...	Without power supply it closes. With power supply it opens.	Ideal for heating plants. In the event of a gas leak, the detector cuts off the power supply to the valve. Power is only restored by manually resetting the detector. In the event of a power failure, the valve closes; when it resumes, the valve automatically reopens.	Not recommended in kitchens without a thermocouple. In the event of a power failure, the valve closes and the flame goes out; when power resumes, the valve reopens and the gas escapes, causing a dangerous situation.
Normally closed with manual reset GCRO... GCR...	Without power supply it closes. With power supply it opens only with manual action	Maximum safety in every use	Each time the power supply is interrupted, the valve closes. When power is restored, it must be reopened manually. Not suitable for kitchens because, in the event of a power failure, the user tends to reopen the valve by mechanical means. When power is resumed, the security system is no longer operational
Normally open with manual reset GARO ... GAR ...	With power supply it closes. Without power it opens only with manual action	In the kitchen, it allows gas to be used even in the event of a power supply failure. In the heating plant, in the event of a power failure, the valve remains open and the burner safety systems enter into operation. When power is restored, no manual intervention is required to restart the plant.	In the event of a power supply failure, the valve remains open and the gas safety system remains active only when powered by the buffer battery. They are not currently approved.

GCAO - GCRO - GARO VALVES



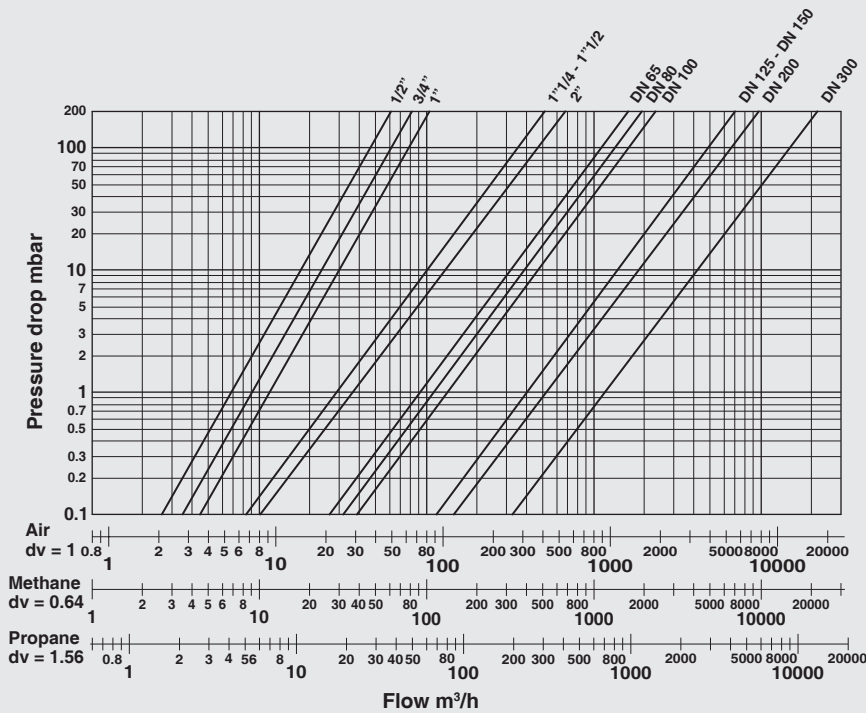


GCR



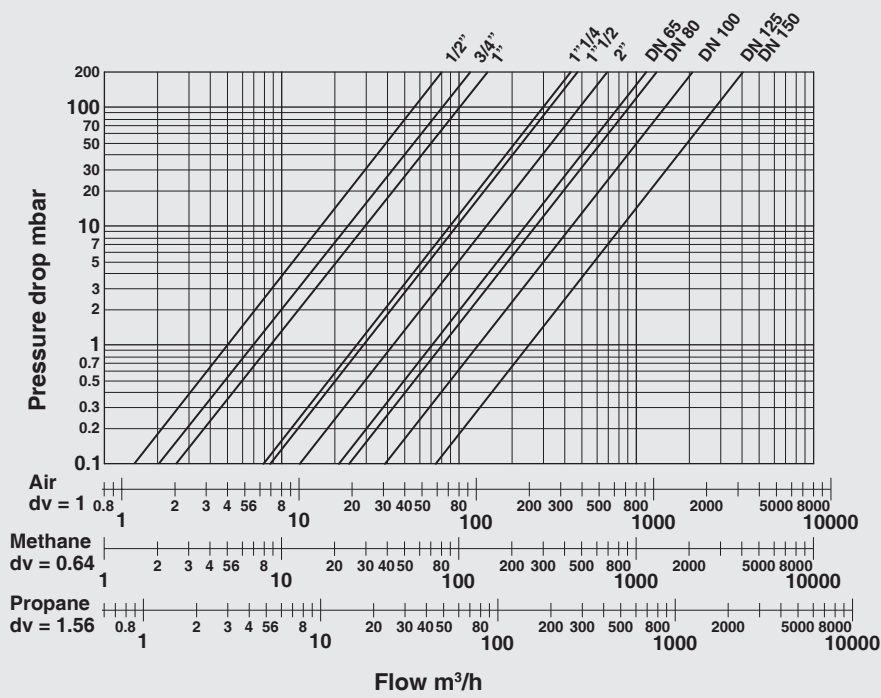
Pressure drop

GAR



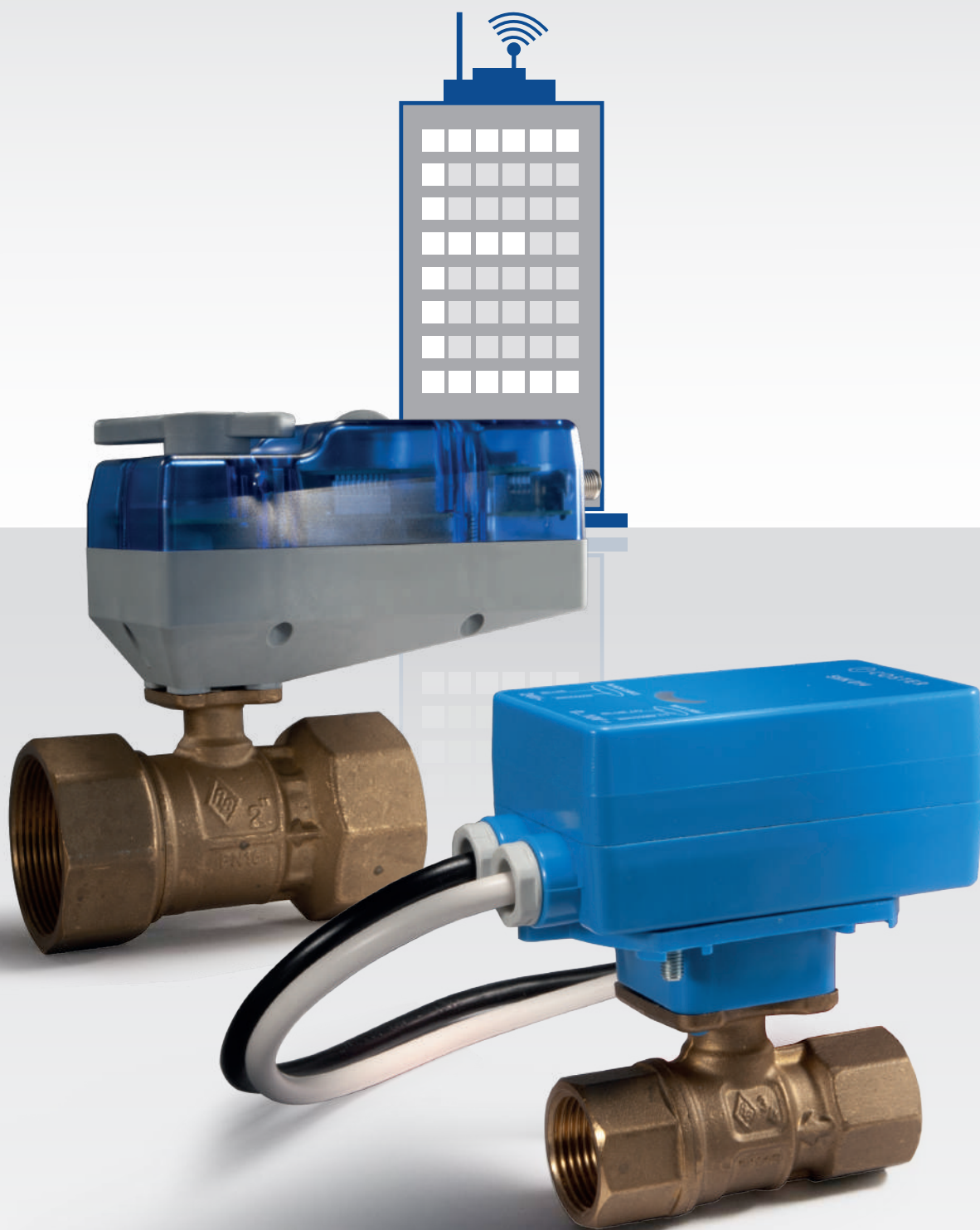
Pressure drop

100 mbar=10kPA=1.000 mmWG



Pressure drop

VALVES ACTUATORS





VFC ...

SHUTTER VALVES FOR 2, 3, 4 WAY FAN COILS
TO 3/4" MALE THREADED PN 16 (2...95 °C)

	DN body mm	DN male connections	Kvs ⁽¹⁾ m³/h direct	Suitable actuator ATC bar ⁽²⁾
2 WAY				
VFC 212	15	1/2"	0.63	1
VFC 213	15	1/2"	1.0	1
VFC 214	15	1/2"	1.6	1
VFC 235	20	3/4"	2.5	1
VFC 237	20	3/4"	3.5	1
VFC 238	25	1"	4.5	1
3 WAY				
VFC 312	15	1/2"	0.63	1
VFC 314	15	1/2"	1.6	1
VFC 335	20	3/4"	2.5	1
VFC 338	25	1"	4.5	1
4 WAY				
VFC 412	15	1/2"	0.63	1
VFC 413	15	1/2"	1.0	1
VFC 414	15	1/2"	1.6	1
VFC 435	20	3/4"	2.5	1
VFC 437	20	3/4"	3.5	1
VFC 438	25	1"	4.5	1

Unions are available upon request



ATC ...

ELECTRO-THERMAL LINEAR ACTUATORS FOR VFC VALVES

These are the motors used to automation of VFC-type valves.

Motor valve coupling adapter included (VA80)

The actuators are of the electro-thermal type and therefore they are released when the supply voltage fails. VFC valves are normally open. They close when the motor is mounted and there is no power supply.

(1) Kvs: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop. 100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator

	Power supply. 50/60Hz (W)	Control	Force N	Run time	Auxiliary end of run	valves VVFC DN
ATC 220	230 V (1W)	On-Off	100	5 min.	–	15-25
ATC 24	24 V (1W)	On-Off	100	5 min.	–	15-25
ATC 220S	2300 V (1W)	On-Off	100	5 min.	5 (230V 1A)	15-25
ATC 24S	24 V (1W)	On-Off	100	5 min.	3 (24V 1A)	15-25
ATC M24	24 V (1,4 W)	0÷10V cc	100	5 min.	–	15-25



HGM - HMM ...

2, 3, 4 WAY ZONE BALL VALVES

PN 10 (5...90°C) UP TO 1"

	DN Body	Kvs ⁽¹⁾ - m³/h		Pipe connections		Suitable actuators			
		direct	angle			CDK 06.		SVK 014	
2 WAY		m³/h	m³/h	female	male	bar ⁽²⁾	sec ⁽³⁾	bar ⁽²⁾	sec ⁽³⁾
HGM 210	3/8"	5,4	–	3/8"	3/8"	6	60	–	–
HGM 215	1/2"	6	–	1/2"	1/2"	6	60	–	–
HGM 220	3/4"	11	–	3/4"	3/4"	6	60	–	–
HGM 225	1"	25,7	–	1"	1"	6	60	–	–
2 WAY		m³/h	m³/h	male	male	bar ⁽²⁾	sec ⁽³⁾	bar ⁽²⁾	sec ⁽³⁾
HMM 210	3/8"	5,4	–	3/8"	3/8"	6	60	6	60
HMM 215	1/2"	6	–	1/2"	1/2"	6	60	6	60
HMM 220	3/4"	11	–	3/4"	3/4"	6	60	6	60
HMM 225	1"	25,7	–	1"	1"	6	60	6	60
3 WAY				3 male		bar ⁽²⁾	sec ⁽³⁾	bar ⁽²⁾	sec ⁽³⁾
HMM 320	3/4"	11	3	3/4"		6	60	6	60
HMM 325	1"	25,7	6,5	1"		6	60	6	60
4 WAY				4 male		bar ⁽²⁾	sec ⁽³⁾	bar ⁽²⁾	sec ⁽³⁾
HMM 410	3/8"	5,4	1,3	3/8"		6	60	6	60
HMM 415	1/2"	6	1,5	1/2"		6	60	6	60
HMM 420	3/4"	11	3	3/4"		6	60	6	60

(1) Kvs: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop. 100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator

(3) sec: time required for the actuator to make the valve perform its full stroke



CDK ...

ACTUATORS FOR HGM..., HMM..., HGT VALVES

(1...95°C)

Power supply 230, 24, 12 V AC, 3-point electrical control.

These actuators are provided with auxiliary limit switches and removable terminal block connection.

	Power supply V (VA)	Control	Run time sec.	Nominal Torque Kg/cm (Nm)	Starting Torque Kg/cm (Nm)
CDK 032	12 AC (4)	3 points	30	10 (1)	20 (2)
CDK 034	24 AC (1)	3 points	30	10 (1)	20 (2)
CDK 038	230 AC (4)	3 points	30	10 (1)	20 (2)
CDK 062	12 AC (4)	3 points	60	15 (1.5)	30 (3)
CDK 064	24 AC (1)	3 points	60	15 (1.5)	30 (3)
CDK 068	230 AC (4)	3 points	60	15 (1.5)	30 (3)



SVK 014/C

ACTUATOR WITH COSTER LINKAGE FOR HMM VALVES

Power supply 24V AC, electric control at 0 - 10 VDC.

These actuators are supplied with 1 metre long connection cables

	Power supply V (VA)	Control	Run time sec.	Nominal Torque Nm	Starting Torque Nm
SVK 014/C	24V AC	0...10 VDC	60	2.5	5



ATR 330

WIRELESS CONTROLLER AND ACTUATOR
FOR RADIATORS

One unit per radiator, powered by 2 x 1.5 V (AA) batteries.

Suitable for controlling VGT valves ... for radiators.

Including anti-tamper device (ANM 330)

ATR 330	Actuator/controller for radiators (battery-powered)
ATR 330/S1	Actuator/controller for radiators without local retractor (battery-powered)



DGT ...

RADIATOR LOCKSHIELD VALVE PN 10 (5...90 °C)

It is the valve that is installed at the bottom of the radiator, as a lockshield, which cannot be motorized.

STRAIGHT

DGT 110	Radiator lockshield valve DN 3/8"
DGT 115	Radiator lockshield valve DN 1/2"
DGT 120	Radiator lockshield valve DN 3/4"
DGT 110/R	Radiator lockshield valve DN 3/8" for copper pipe connection
DGT 115/R	Radiator lockshield valve DN 1/2" for copper pipe connection

ANGLED

DGT 210	Radiator lockshield valve DN 3/8"
DGT 215	Radiator lockshield valve DN 1/2"
DGT 220	Radiator lockshield valve DN 3/4"
DGT 210/R	Radiator lockshield valve DN 3/8" for copper pipe connection
DGT 215/R	Radiator lockshield valve DN 1/2" for copper pipe connection

ACCESSORIES

AGT 10	Nut with rubber dual-cone for copper pipe connection (10 mm)
AGT 12	Nut with rubber dual-cone for copper pipe connection (12 mm)
AGT 14	Nut with rubber dual-cone for copper pipe connection (14 mm)
AGT 15	Nut with rubber dual-cone for copper pipe connection (15 mm)
AGT 16	Nut with rubber dual-cone for copper pipe connection (16 mm)



VGT ...

RADIATOR CONTROL VALVE PN 10 (5...90 °C)

Standard connection for standardized thermostatic heads, motor-driven.

STRAIGHT

VGT 110	Radiator control valve DN 3/8"
VGT 115	Radiator control valve DN 1/2"
VGT 120	Radiator control valve DN 3/4"
VGT 110/R	Radiator control valve DN 3/8" for copper pipe connection
VGT 115/R	Radiator control valve DN 1/2" for copper pipe connection

ANGLED

VGT 210	Radiator control valve DN 3/8"
VGT 215	Radiator control valve DN 1/2"
VGT 220	Radiator control valve DN 3/4"
VGT 210/R	Radiator control valve DN 3/8" for copper pipe connection
VGT 215/R	Radiator control valve DN 1/2" for copper pipe connection

PRODOTTI CORRELATI

AGT 10	Nut with rubber dual-cone for copper pipe connection (10 mm)
AGT 12	Nut with rubber dual-cone for copper pipe connection (12 mm)
AGT 14	Nut with rubber dual-cone for copper pipe connection (14 mm)
AGT 15	Nut with rubber dual-cone for copper pipe connection (15 mm)
AGT 16	Nut with rubber dual-cone for copper pipe connection (16 mm)



YDG 2..

2 WAY BALL VALVES (-15...120 °C)
UP TO 4" SLA COSTER CONNECTIONS,
EUROPEAN SLA SQUARE FLANGE SYSTEM

General purpose ball shut-off valves.
Threaded valves DN 1/2"...4".

Suitable actuators

	DN	PN	Kvs ⁽¹⁾ m³/h	CRB ... CVC ... bar ⁽²⁾	CVH ... bar ⁽²⁾	CVF ... bar ⁽²⁾
YDG 215	1/2"	40	16.3	10	10	–
YDG 220	3/4"	40	29.5	10	10	–
YDG 225	1"	40	43	10	10	–
YDG 232	1"1/4	40	89	10	10	–
YDG 240	1"1/2	40	230	–	10	–
YDG 250	2"	40	265	–	10	–
YDG 265	2"1/2	25	540	–	10	–
YDG 280	3"	16	873	–	–	10
YDG 2100	4"	16	1,390	–	–	10

(1) Kvs: flow coefficient: flow rate in m³/h
with open valve and 100 kPa pressure
drop.
100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp
max. permitted by the actuator



YDG 2../A

2 WAY BALL VALVES (-15...120 °C)
UP TO 4" SLA COSTER CONNECTIONS,
EUROPEAN SLA SQUARE FLANGE SYSTEM

FOR ACE 008P ACTUATOR

General purpose ball shut-off valves.
Threaded valves DN 1/2"...4".

Suitable actuator

	DN	PN	Kvs ⁽¹⁾ m³/h	ACE 008P bar ⁽²⁾
YDG 215/A	1/2"	40	16.3	10
YDG 220/A	3/4"	40	29.5	10
YDG 225/A	1"	40	43	10
YDG 232/A	1"1/4	40	89	10
YDG 240/A	1"1/2	40	230	10
YDG 250/A	2"	40	265	10



YDG 2 .../stainless

STAINLESS STEEL BALL VALVES

2 WAY PN 64 (-20...160 °C) UP TO 2"

Stainless steel valves for high pressure, and for liquids that require it.
Threaded valves DN 1/2"...2"..

	DN	Kvs ⁽¹⁾ m ³ /h	Suitable actuators	
			CRB ... CVC ... bar ⁽²⁾	CVH ... bar ⁽²⁾
YDG 215/Inox	1/2"	16.3	10	10
YDG 220 /Inox	3/4"	29.5	10	10
YDG 225 /Inox	1"	43	10	10
YDG 232 /Inox	1"1/4	89	10	10
YDG 240 /Inox	1"1/2	230	–	10
YDG 250 /Inox	2"	265	–	10



YDG 2../A/Inox

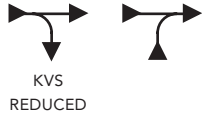
STAINLESS STEEL BALL VALVES

2 WAY PN 64 (-20...160 °C) UP TO 2"

FOR ACE 008P ACTUATOR

Stainless steel valves for high pressure, and for liquids that require it.
Threaded valves DN 1/2"...2"..

	DN	Kvs ⁽¹⁾ m ³ /h	Suitable actuator
			ACE 008P bar ⁽²⁾
YDG 215/A/Inox	1/2"	16.3	10
YDG 220/A/Inox	3/4"	29.5	10
YDG 225/A/Inox	1"	43	10
YDG 232/A/Inox	1"1/4	89	10
YDG 240/A/Inox	1"1/2	230	10
YDG 250/A/Inox	2"	265	10

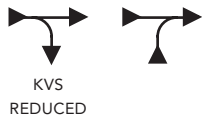


XLG 3 ..

BALL ZONE VALVES
3 WAY PN 6 (–15...120°C)
WITH REDUCED KVS ON THIRD WAYS

XLG 3.. valves are used for diverting water flow in heating or cooling systems.

	DN	Kvs ⁽¹⁾ m³/h		Suitable actuators		
		direct	angle	CRB ... CVC ... bar ⁽²⁾	CVH 11. bar ⁽²⁾	CVH 63./21./05 bar ⁽²⁾
XLG 315	1/2"	16.3	1.5	6	6	6
XLG 320	3/4"	29.5	2.7	6	6	6
XLG 325	1"	43	3.9	6	6	6
XLG 332	1"1/4	89	7.9	6	6	6
XLG 341	1"1/2	160	14.8	-	6	6
XLG 351	2"	265	24.5	-	-	6



XLG 3../A

BALL ZONE VALVES
3 WAY PN 6 (–15...120°C)
WITH REDUCED KVS ON THIRD WAYS
FOR ACE 008P ACTUATOR

XLG 3.. valves are used for diverting water flow in heating or cooling systems.

	DN	Kvs ⁽¹⁾ m³/h		Suitable actuator
		direct	angle	ACE 008P bar ⁽²⁾
XLG 315/A	1/2"	16.3	1.5	6
XLG 320/A	3/4"	29.5	2.7	6
XLG 325/A	1"	43	3.9	6
XLG 332/A	1"1/4	89	7.9	6
XLG 341/A	1"1/2	160	14.8	6
XLG 351/A	2"	265	24.5	6

(1) Kvs: flow coefficient: flow rate in m³/h
with open valve and 100 kPa pressure
drop. 100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp
max. permitted by the actuator



XDG 3 ..

3 WAY SCREWED FEMALE BALL PN 6 (–15...120°C)
IN DEVIATION AT KVS CONSTANT KVS ON BOTH WAYS

These are general-purpose 3-way valves used for diversion with straight inputs or outputs.

Diverter valves, threaded DN 1/2" ...2".

Suitable actuators

	DN inches	Kvs ⁽¹⁾ m³/h	CRB ... CVC ... bar ⁽²⁾	CVH 11. bar ⁽²⁾	CVH 63./21./05 bar ⁽²⁾
XDG 310	3/8"	1.8	6	6	6
XDG 315	1/2"	3.9	6	6	6
XDG 320	3/4"	7.9	6	6	6
XDG 325	1"	13	6	6	6
XDG 332	1"1/4	20.7	6	6	6
XDG 340	1"1/2	38.7	-	6	6
XDG 350	2"	54	-	-	6



XDG 3../A

3 WAY SCREWED FEMALE BALL PN 6 (–15...120°C)
IN DEVIATION AT KVS CONSTANT KVS ON BOTH WAYS
FOR ACE 008P ACTUATOR

These are general-purpose 3-way valves used for diversion with straight inputs or outputs.

Diverter valves, threaded DN 1/2" ...2".

Suitable actuator

	DN inches	Kvs ⁽¹⁾ m³/h	ACE 008P bar ⁽²⁾
XDG 310/A	3/8"	1.8	6
XDG 315/A	1/2"	3.9	6
XDG 320/A	3/4"	7.9	6
XDG 325/A	1"	13	6
XDG 332/A	1"1/4	20.7	6
XDG 340/A	1"1/2	38.7	6
XDG 350/A	2"	54	6

(1) Kvs: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop. 100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator



2S

2 WAY BALL VALVES FLANGED PN 16 (-15...120 °C)

Ball valves, sealed, for shut-off in installations: boilers and other general purposes, DN 40...200.

	DN mm	Kvs ⁽¹⁾ m³/h	Suitable actuators		
			CVH 63./21. bar ⁽²⁾	CVF ... bar ⁽²⁾	CVS 808 bar ⁽²⁾
2S DN 40	40	230	6	-	-
2S DN 50	50	265	6	-	-
2S DN 65	65	540	6	-	-
2S DN 80	80	873	-	6	-
2S DN 100	100	1,390	-	6	-
2S DN 100S	100	1,390	-	-	10
2S DN 125	125	1,707	-	-	10
2S DN 150	150	2,024	-	-	10
2S DN 200	200	2,720	-	-	10



CVS 808

ACTUATOR FOR 2S DN 100S - 200 VALVES

	Power supply V (VA)	Run time sec.	Nominal Torque Kg/cm (Nm)	Starting Torque Kg/cm (Nm)	2S DN valves
CVS 808	230 AC (120)	55	8,000 (800)	8,000 (800)	100S-200

(1) Kvs: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop. 100 kPa = 10 mWG = 1 bar

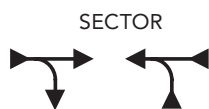
(2) bar: maximum differential pressure Δp max. permitted by the actuator



VSG ... - VSF ...

3 WAY SLIPPER VALVES
PN 6 (10...110°C)

Control valves for circulating water temperature in heating systems, DN 15...150.



3 WAY THREADED	DN inches	Kvs ⁽¹⁾ m³/h	Rotor ⁽³⁾	Length ⁽⁴⁾ mm	Suitable actuator		
					CVC ... bar ⁽²⁾	CVH... bar ⁽²⁾	CVF ... bar ⁽²⁾
VSG 320	3/4"	13	sector	130	0.3	0.5	-
VSG 325	1"	13	sector	130	0.3	0.5	-
VSG 332	1"1/4	19	sector	142	0.2	0.5	-
VSG 340	1"1/2	29	sector	160	0.2	0.5	-
VSG 350	2"	57	sector	190	0.2	0.5	-
3 WAY FLANGED							
	mm						
VSF 340	40	29	sector	180	0.2	0.5	-
VSF 350	50	57	sector	200	0.2	0.5	-
VSF 365	65	81	sector	230	-	0.4	-
VSF 380	80	170	sector	250	-	0.4	-
VSF 3100	100	240	sector	280	-	0.3	0.5 ⁽⁵⁾
VSF 3125	125	470	sector	300	-	-	0.5
VSF 3150	150	700	sector	350	-	-	0.5

(1) Kvs: : flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop.
100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator

(3) Rotor type: for 3-way valves: sector = left or right side way always open; butterfly = central way always open

(4) Length: flange to flange

(5) With CVF: coupling only possible with AVF 171 connection
With CVH: direct coupling



BUTTERFLY



VFG ... - VFF ...

3 OR 4 WAY BUTTERFLY VALVES

PN 6 (10...110 °C)

Control valves for circulating water temperature in heating systems, DN 15...150.
IN THE 4-WAY THE ROTARY ELEMENT IS ONLY BUTTERFLY

					Suitable actuators		
					CVC ...	CVH...	CVF ...
					bar ⁽²⁾	bar ⁽²⁾	bar ⁽²⁾
3 WAY THREADED	DN inches	Kvs⁽¹⁾ m³/h	Rotor⁽³⁾	Length⁽⁴⁾ mm			
VFG 320	3/4"	13	butterfly	130	0.3	0.5	-
VFG 325	1"	13	butterfly	130	0.3	0.5	-
VFG 332	1"1/4	19	butterfly	142	0.2	0.5	-
VFG 340	1"1/2	29	butterfly	160	0.2	0.5	-
VFG 350	2"	57	butterfly	190	0.2	0.5	-
3 WAY FLANGED	mm						
VFF 340	40	29	butterfly	180	0.2	0.5	-
VFF 350	50	57	butterfly	200	0.2	0.5	-
VFF 365	65	81	butterfly	230	-	0.4	-
VFF 380	80	170	butterfly	250	-	0.4	-
VFF 3100	100	240	butterfly	280	-	0.3	0.5 ⁽⁵⁾
VFF 3125	125	470	butterfly	300	-	-	0.5
VFF 3150	150	700	butterfly	350	-	-	0.5
4 WAY THREADED	inches						
VFG 420	3/4"	13	butterfly	130	0.3	0.5	-
VFG 425	1"	13	butterfly	130	0.3	0.5	-
VFG 432	1"1/4	19	butterfly	142	0.2	0.5	-
VFG 440	1"1/2	29	butterfly	160	0.2	0.5	-
VFG 450	2"	57	butterfly	190	0.2	0.5	-
4 VIE FLANGED	mm						
VFF 440	40	29	butterfly	180	0.2	0.5	-
VFF 450	50	57	butterfly	200	0.2	0.5	-
VFF 465	65	81	butterfly	230	-	0.4	-
VFF 480	80	170	butterfly	250	-	0.4	-
VFF 4100	100	240	butterfly	280	-	0.3	0.5 ⁽⁵⁾
VFF 4125	125	470	butterfly	300	-	-	0.5
VFF 4150	150	700	butterfly	350	-	-	0.5

(1) Kvs: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop. 100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator

(3) Rotor type: for 3-way valves: sector = left or right side way always open; butterfly = central way always open

(4) Length: flange to flange

(5) With CVF: coupling only possible with AVF 171 connection
With CVH: direct coupling



2F

2 WAY BUTTERFLY VALVES SINGLE FLANGE PN 6 (10...110°C)

Single-flange valves for boiler shut-off, DN 50...200.

	DN mm	Kvs ⁽¹⁾ m³/h	Suitable actuators	
			CVC ... bar ⁽²⁾	CVH ... bar ⁽²⁾
2F DN 50	50	100	1.5	3
2F DN 65	65	160	1.5	3
2F DN 80	80	280	–	3
2F DN 100	100	450	–	3
2F DN 125	125	700	–	2
2F DN 150	150	1,200	–	2
2F DN 175	175	1,800	–	2
2F DN 200	200	2,300	–	2



AFC

NECK FLANGES FOR PN 6 FLANGED VALVES (UNI 2280)

Pack of 1 flange complete with seals, bolts, nuts and washers:

	Gasket		Bolts (2 way)		Bolts (3 / 4 way)		Nuts		Washers	
	n	mm	n	mm	n	mm	n	mm	n	mm
AFC 040	1	85 x 45 x 2	0	–	4	12 M x 55	4	12 M	8	ø 12
AFC 050	1	95 x 57 x 2	2	12 M x 80	4	12 M x 55	4	12 M	8	ø 12
AFC 065	1	115 x 76 x 2	2	12 M x 80	4	12 M x 55	4	12 M	8	ø 12
AFC 080	1	132 x 89 x 2	2	16 M x 100	4	16 M x 60	4	16 M	8	ø 16
AFC 100	1	152x108x2	2	16 M x 100	4	16 M x 60	4	16 M	8	ø 16
AFC 125	1	182x133x2	4	16 M x 120	8	16 M x 60	8	16 M	16	ø 16
AFC 150	1	207x159x2	4	16 M x 120	8	16 M x 60	8	16 M	16	ø 16
AFC 175	1	230 x 185 x 3	8	16 M x 140	–	–	8	16 M	16	ø 16
AFC 200	1	255 x 210 x 3	8	16 M x 140	–	–	8	16 M	16	ø 16

⁽¹⁾ Kvs: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop. 100 kPa = 10 mWG = 1 bar

⁽²⁾ bar: maximum differential pressure Δp max. permitted by the actuator



CRB ...

ROTARY ACTUATOR WITH ELECTRIC CABLE

230-24 V AC power supply, 3-point electrical control, 6 Nm torque.

	Power Supply V (VA)	Run time	Nominal Torque Kg/cm (Nm)	Starting Torque Kg/cm (Nm)	Valves 2S XDG/ XLG/YDG
CRB 098	230 AC (4.5)	90	60 (6)	90 (9)	1"1/4
CRB 094	24 AC (4.5)	90	60 (6)	90 (9)	1"1/4

SPECIAL VERSION

CRB 098/S2 Pack of 1 flange complete with seals, bolts, nuts and washers



CVC ...

ROTARY ACTUATOR WITH ELECTRIC TERMINAL BOX

230-24 V AC power supply, 3-point electrical control, 6 Nm torque..

	Power Supply V (VA)	Run time sec.	Nominal Torque Kg/cm (Nm)	Starting Torque Kg/cm (Nm)	Valves (up to DN)		
					VSG/VFG VSF/VFF mixing	butterfly 2F	XDG/ XLG/YLG ball
CVC 188	230 AC (2.5)	180	60 (6)	90 (9)	50	65	1"1/4
CVC 184	24 AC (2.5)	180	60 (6)	90 (9)	50	65	1"1/4
CVC 098	230 AC (4.5)	90	60 (6)	90 (9)	50	65	1"1/4
CVC 094	24 AC (4.5)	90	60 (6)	90 (9)	50	65	1"1/4
CVC 038	230 AC (5)	30	60 (6)	90 (9)	50	65	1"1/4
CVC 034	24 AC (5)	30	60 (6)	90 (9)	50	65	1"1/4
CVC 018	230 AC (7)	15	60 (6)	90 (9)	50	–	1"1/4
CVC 014	24 AC (7)	15	60 (6)	90 (9)	50	–	1"1/4

SPECIAL VERSIONS AT EXTRA CHARGE

CVC .../T With 6 W heater for fluid applications down to - 15 °C (without auxiliary micro)

ACCESSORIES FOR CRB AND CVC

SMP 750 Manual release for VSG/VFG/VSF/VFF mixing valves, 2F butterfly valve and XDG/XLG ball valves

SMP 760 Manual release for ball YDG 2 valves.. up to 1"1/4

AVA 101 Linkage for: Honeywell-Mut 2 (Controlli, Caleffi, Sara); Zentra; Buche (Cazzaniga, Sauter, Ari-Fasoli, Chibro-Muller, Vilb up to 2", Mastermann); Landis & Gyr (Lazzari, Tonon, Casem); Stark (Besser, Errevi, Intermes, Ari - Fasoli)

AVS 103 Linkage for: Honeywell-Mut 3 threaded old model (Controlli, Caleffi, Sara)

AVS 104 Linkage for: Landis & Gyr SN3-SN4



CVH ...

ROTARY ACTUATOR WITH MANUAL RELEASE

230-24 VAC power supply, 3-point electrical control, torque 15 Nm.

	Power supply V (VA)	Run time sec.	Nominal Torque Kg/cm (Nm)	Starting Torque Kg/cm (Nm)	Valves (up to DN)				
					VSG/VFG VSF/VFF mixing	Butterfly 2F	Ball XDG/ XLG/	Ball YDG 2	Ball 2S
CVH 054	24 (4.5)	52	150 (15)	200 (20)	100	200	2"	2"1/2	–
CVH 058	230 (5)	52	150 (15)	200 (20)	100	200	2"	2"1/2	–
CVH 114	24 (4.5)	105	150 (15)	200 (20)	100	200	1"1/2	2"1/2	–
CVH 118	230 (4.5)	105	150 (15)	200 (20)	100	200	1"1/2	2"1/2	–
CVH 214	24 (4.5)	210	150 (15)	200 (20)	100	200	2"	2"1/2	65
CVH 218	230 (4.5)	210	150 (15)	200 (20)	100	200	2"	2"1/2	65
CVH 634	24 (4.5)	630	150 (15)	200 (20)	100	200	2"	2"1/2	65
CVH 638	230 (4.5)	630	150 (15)	200 (20)	100	200	2"	2"1/2	65

SPECIAL VERSIONS AT EXTRA CHARGE

CVH .../T Complete with 2 W internal heater for applications with fluid down to -15 °C

RELATED PRODUCTS

AVA 101 Linkage for:
Honeywell-Mut 2 (Controlli, Caleffi, Sara); Zentra; Buche (Cazzaniga, Sauter, Ari-Fasoli, Chibro-Muller, Vilb up to 2", Mastermann); Landis & Gyr (Lazzari, Tonon, Casem); Stark (Besser, Errevi, Intermes, Ari - Fasoli)

AVS 103 Linkage for:
Honeywell-Mut 3 threaded old model (Controlli, Caleffi, Sara)

AVS 104 Linkage for: Landis & Gyr SN3-SN4



CVF ...

ROTARY ACTUATOR FOR DN 100...150

230-24 V AC power supply, 3-point electrical control, 1 Nm torque.
Standardised connection for Coster valves, except VFF 3100 and VFF 4100.
See accessories table for these valves.

	Power supply V (VA)	Run time sec.	Nominal Torque Kg/cm (Nm)	Starting Torque Kg/cm (Nm)	Valves (up to DN)		
					Mixing VSF/VFF	Butterfly 2S	Ball YDG 2
CVF 154	24 (7)	150	1,000 (100)	1,000 (100)	100...150	80 / 100	3" / 4"
CVF 158	230 (7)	150	1,000 (100)	1,000 (100)	100...150	80 / 100	3" / 4"
CVF 454	24 (6)	450	1,200 (120)	1,200 (120)	100...150	80 / 100	3" / 4"
CVF 458	230 (6)	450	1,200 (120)	1,200 (120)	100...150	80 / 100	3" / 4"

PRODOTTI CORRELATI

AVF 171 CVF Linkage for: Coster VFF 3100, VFF 4100 and VSF 3100

AVF 172 CVF linkage for:
Honeywell-Mut 2 flanged (Controlli, Caleffi, Sara); Jucker; Zentra;
Landis & Gyr (Lazzari, Tonon, Casem);
Stark (Besser, Errevi, Intermes, Ari-Fasoli);
Buche (Cazzaniga, Sauter, Ari-Fasoli, Chibro-Muller, Vilb up to 2", Mastermann)

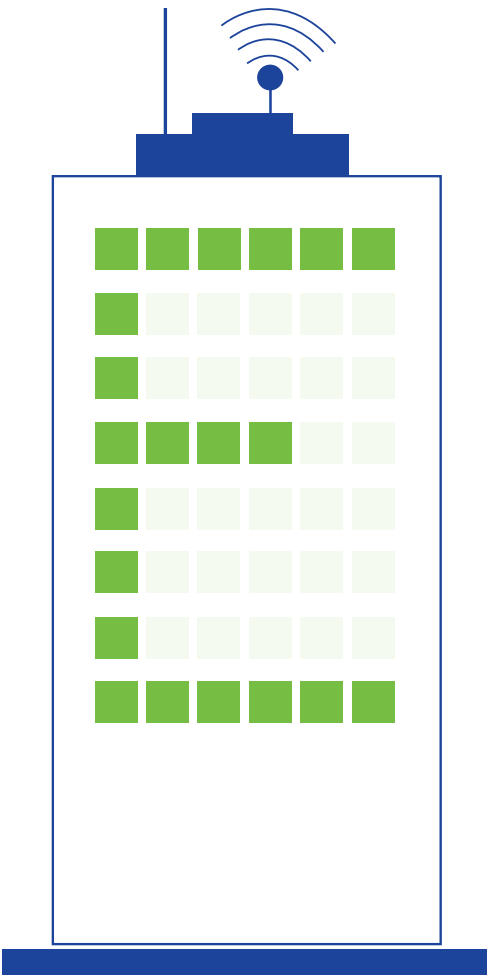


SVK 014

ACTUATOR WITH ISO CONNECTIONS FOR V-BALL
FROM DN 15 TO DN 25

Power supply 24V AC, electrical control at 0 - 10 VDC.
These actuators are supplied with 1 metre long connection cables

	Power supply V (VA)	Control	Run time sec.	Nominal Torque Nm	Starting Torque Nm
SVK 014	24 V AC	0...10 V DC	60	2.5	5





COMMUNICATION
PROTOCOL



ACE 008/P

INTELLIGENT ACTUATOR FOR V-BALL CONTROL VALVES

Intelligent actuator with 230 V power supply for coupling with two-way or three-way equipercentual ball valves with ISO 5211:2017 - F03 connection
Driving and control via Modbus protocol or with 0-10V DC or three-point signal. Possible connection in BUS with Modbus/ RTU protocol;
Actuator release knob to allow manual movement of the valve and quick re-engagement of the kinematic chain.

Actuator limit switch auxiliary contacts (total open/close position)

ACE 008/P	Intelligent actuator
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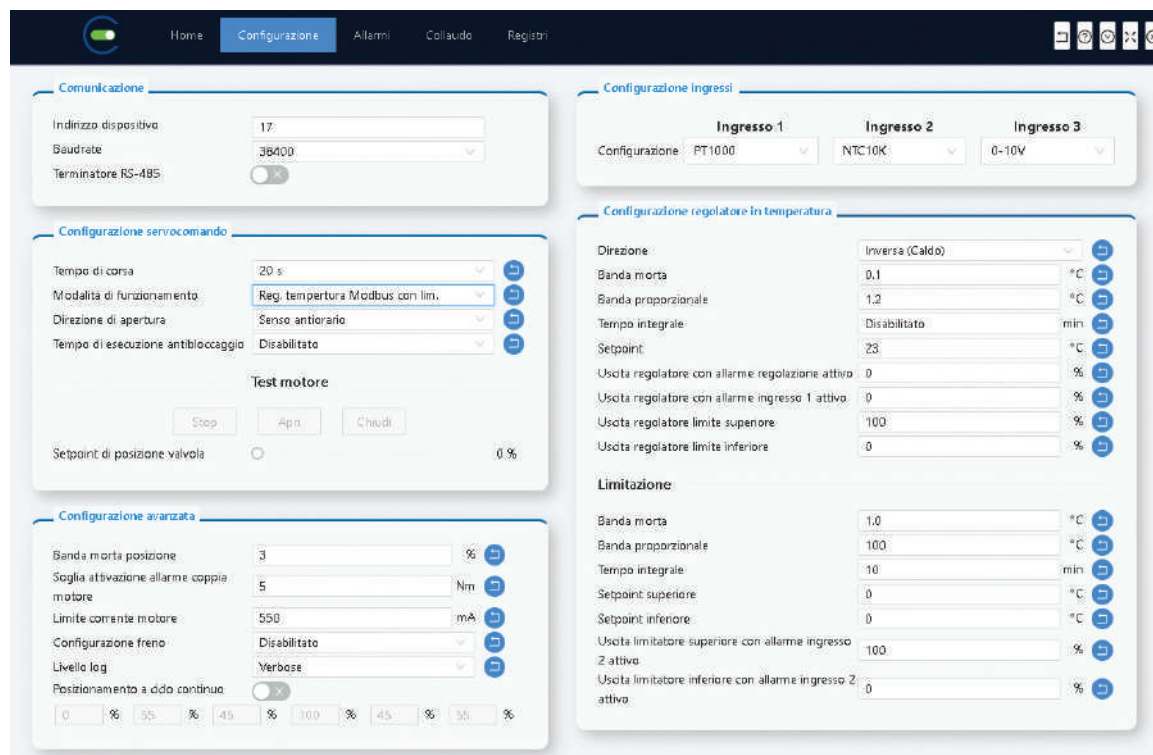
RELATED PRODUCTS

ALM M12	Power supply cable with 220 V AC socket
AUX M12	Auxiliary cable for ACE 008
USB M12	Specific USB cable for ACE 008P programming AUX

Operation mode

ACE 008/p can operate in different modes:

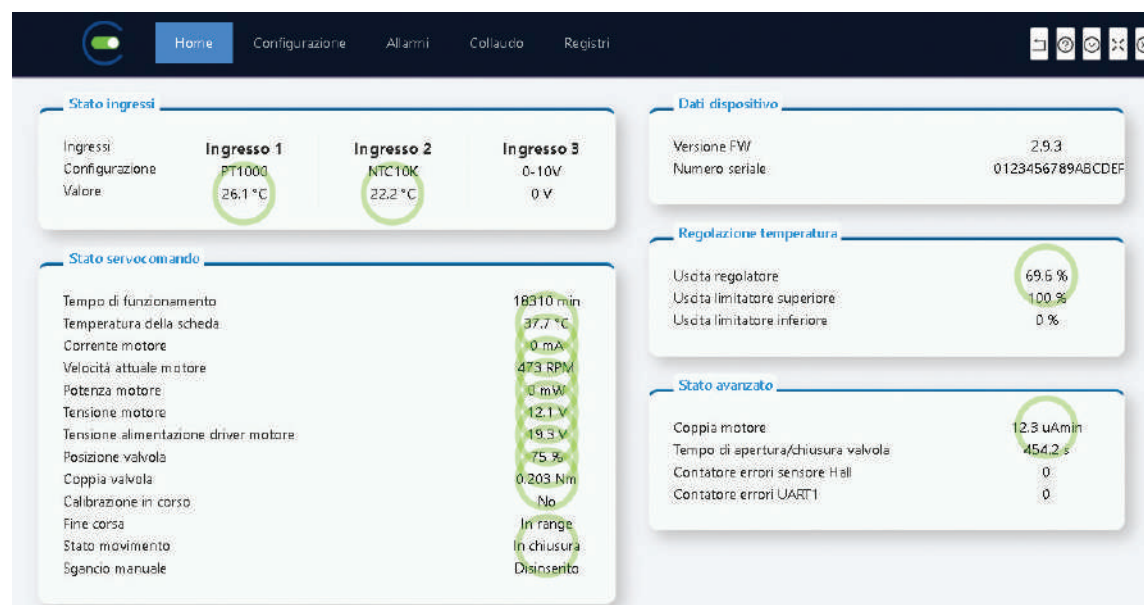
- **0..10 Vdc positioner:** the actuator operates as a simple positioner driven by a 0..10Vdc signal on the first universal input.
- **3 point positioner:** again, the function is a simple positioner with a 3-point control signal. The opening or closing movement depends on the closure of the first two universal inputs set as digital.
- **Modbus positioner:** the actuator control is via Modbus/RTU protocol. A special register is used to set its position from 0% to 100%.
- **Modbus temperature controller:** in this case a temperature setpoint is delivered via the Modbus/RTU protocol. ACE 008/p will calculate its position based on an internal controller comparing the setpoint with the temperature measurement taken by the first universal input.
- **Modbus temperature controller with limitation:** this is quite similar to the previous case with a setpoint transferred through a Modbus register and the actuator adjusting its opening/closing based on the temperature detected. In this scenario, however, a temperature limit sensor is also added, which can also be set via Modbus/RTU protocol.
- **ACS Modbus controller:** ACE 008/p in this case performs the control of a Domestic Hot Water circuit based on the storage and recirculation sensors. Also in this case, the control setpoint is set via Modbus/RTU.

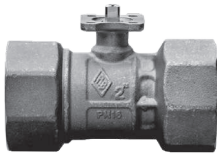


ACE 008/p can be configured via a special commissioning & maintenance tool within the CosterTools suite.

Through the configuration software, it is also possible to display some general information about the device:

- Inputs status and configuration
- The operating time, the controller output
- Card temperature
- Absorbed current, power and voltage
- The position of the valve, the insertion of the manual release
- Whether or not calibration is taking place
- The status of limit switches and movement





VBR 2..

V-BALL 2 WAY PN16 BALL CONTROL VALVES DN 15 - 20 - 25 - 32 - 40 - 50

Devices that allow, as the characterisation disc inserted varies, to obtain a certain thermal output with an opening/flow rate curve with an equipcentage trend.

	DN mm	Kvs ⁽¹⁾ m³/h	Suitable actuators	
			ACE 008P bar ⁽²⁾	SVK 014 bar ⁽²⁾
VBR 215-0,25	15	0.25	2.5	2.5
VBR 215-0,4	15	0.4	2.5	2.5
VBR 215-0,63	15	0.63	2.5	2.5
VBR 215-1	15	1	2.5	2.5
VBR 215-1,6	15	1.6	2.5	2.5
VBR 215-2,5	15	2.5	2.5	2.5
VBR 215-4	15	4	2.5	2.5
VBR 215-6,3	15	6.3	2.5	2.5
VBR 220-4	20	4	2.5	2.5
VBR 220-6,3	20	6.3	2.5	2.5
VBR 220-8,6	20	8,6	2.5	2.5
VBR 220-10	20	10	2.5	2.5
VBR 225-6,3	25	6,3	2.5	–
VBR 225-10	25	10	2.5	–
VBR 225-16	25	16	2.5	–
VBR 232-10	32	10	2.5	–
VBR 232-16	32	16	2.5	–
VBR 232-25	32	25	2.5	–
VBR 240-16	40	16	2.5	–
VBR 240-25	40	25	2.5	–
VBR 250-25	50	25	2.5	–
VBR 250-40	50	40	2.5	–

(1) Kvs: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop. 100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator



VBR 3..

V-BALL 3 WAY PN16 BALL CONTROL VALVES DN 15 - 20 - 25 - 32 - 40 - 50

Devices that allow, as the characterisation disc inserted varies, to obtain a certain thermal output with an opening/flow rate curve with an equipercentage trend.

	DN mm	Kvs ⁽¹⁾ m³/h	Suitable actuators	
			ACE 008P bar ⁽²⁾	SVK 014 bar ⁽²⁾
VBR 315-0,25	15	0.25	2.5	2.5
VBR 315-0,4	15	0.4	2.5	2.5
VBR 315-0,63	15	0.63	2.5	2.5
VBR 315-1	15	1	2.5	2.5
VBR 315-1,6	15	1.6	2.5	2.5
VBR 315-2,5	15	2.5	2.5	2.5
VBR 315-4	15	4	2.5	2.5
VBR 315-6,3	15	6.3	2.5	2.5
VBR 320-4	20	6.3	2.5	2.5
VBR 320-6,3	20	6.3	2.5	2.5
VBR 320-10	20	10	2.5	1
VBR 325-6,3	25	6.3	2.5	–
VBR 325-10	25	10	2.5	–
VBR 325-16	25	16	2.5	–
VBR 332-10	32	10	2.5	–
VBR 332-16	32	16	2.5	–
VBR 332-25	32	25	2.5	–
VBR 340-16	40	16	2.5	–
VBR 340-25	40	25	2.5	–
VBR 350-25	50	25	2.5	–
VBR 350-40	50	40	2.5	–

(1) Kvs: flow coefficient: flow rate in m³/h
with open valve and 100 kPa pressure
drop. 100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp
max. permitted by the actuator



VYG 2..

2 WAY PN 16 BALL CONTROL VALVES INTERNAL THREAD / DN 15 - 50

Fluid temperature: -10...120 °C

	DN		Kvs ⁽¹⁾ m³/h	n (gl)	Sv min.	Suitable actuators			
	Body mm	Connection inches				CVTR 100 s ⁽³⁾ bar ⁽²⁾	CVLR 90 s ⁽³⁾ bar ⁽²⁾	CVNR 90 s ⁽³⁾ bar ⁽²⁾	CVSR 90 s ⁽³⁾ bar ⁽²⁾
VYG 215 - 0,63	15	1/2	0.63	3.2	50	3.5	3.5	3.5	3.5
VYG 215 - 1,6	15	1/2	1.6	3.2	50	3.5	3.5	3.5	3.5
VYG 215 - 2,5	15	1/2	2.5	3.2	50	3.5	3.5	3.5	3.5
VYG 215 - 4	15	1/2	4	3.2	100	3.5	3.5	3.5	3.5
VYG 215 - 6,3	15	1/2	6.3	3.2	100	3.5	3.5	3.5	3.5
VYG 220 - 4	20	3/4	4	3.2	100	–	3.5	3.5	3.5
VYG 220 - 6,3	20	3/4	6.3	3.2	100	–	3.5	3.5	3.5
VYG 220 - 8,6	20	3/4	8.6	3.2	100	–	3.5	3.5	3.5
VYG 225 - 6,3	25	1	6.3	3.2	100	–	3.5	3.5	3.5
VYG 225 - 10	25	1	10	3.2	100	–	3.5	3.5	3.5
VYG 225 - 16	25	1	16	3.2	100	–	3.5	3.5	3.5
VYG 232 - 16	32	1 1/4	16	3.2	100	–	–	3.5	3.5
VYG 240 - 16	40	1 1/2	16	3.2	100	–	–	3.5	3.5
VYG 240 - 25	40	1 1/2	25	3.2	100	–	–	3.5	3.5
VYG 250 - 25	50	2	25	3.2	100	–	–	–	3.5
VYG 250 - 40	50	2	40	3.2	100	–	–	–	3.5

(1) Kvs: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop. 100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator

(3) s: time required for the actuator to make the valve perform its full stroke



VYG 3..

3 WAY PN 16 EQUIPERCENTAGE

BALL CONTROL VALVES (-10...120°C)

Ball control valves with self-cleaning action.

Sealing control port A-B.

Bypass B - AB approx. 1 ...2% of kvs relative to the largest relative DN value

	DN body mm	DN female connection	Kvs ⁽¹⁾ m ³ /h	Actuator connections	Suitable actuators			
					CVTR 100 sec ⁽³⁾ bar ⁽²⁾	CVLR 90 s ⁽³⁾ bar ⁽²⁾	CVNR 90 s ⁽³⁾ bar ⁽²⁾	CVSR 90 s ⁽³⁾ bar ⁽²⁾
VYG 315-0,25	15	1/2"	0,25	F 04	3.5	3.5	3.5	3.5
VYG 315-0,4	15	1/2"	0,4	F 04	3.5	3.5	3.5	3.5
VYG 315-0,63	15	1/2"	0,63	F04	3.5	3.5	3.5	3.5
VYG 315-1	15	1/2"	1,0	F04	3.5	3.5	3.5	3.5
VYG 315-1,6	15	1/2"	1,6	F04	3.5	3.5	3.5	3.5
VYG 315-2,5	15	1/2"	2,5	F04	3.5	3.5	3.5	3.5
VYG 315-4	15	1/2"	4,0	F04	3.5	3.5	3.5	3.5
VYG 320-4	20	1/2"	4,0	F04	–	3.5	3.5	3.5
VYG 320-6,3	20	3/4"	6,3	F04	–	3.5	3.5	3.5
VYG 325-6,3	25	1"	6,3	F04	–	3.5	3.5	3.5
VYG 325-10	25	1"	10	F04	–	3.5	3.5	3.5
VYG 332-16	32	1"1/4	16	F04	–	–	3.5	3.5
VYG 340-16	40	1"1/2	16	F04	–	–	3.5	3.5
VYG 340-25	40	1"1/2	25	F04	–	–	–	3.5
VYG 350-25	50	2"	25	F04	–	–	–	3.5
VYG 350-40	50	2"	40	F04	–	–	–	3.5
VYG 350-58	50	2"	58	F04	–	–	–	3.5

(1) Kvs: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop.
100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator

(3) Rotor type: for 3-way valves: sector = left or right side way always open; butterfly = central way always open



VYG 615

6-WAY CONTROL VALVES

INTERNAL THREADED / PN 16 / DN 15

Fluid temperature: 6...80 °C

(1) Kvs: : flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop.
100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator

(3) Rotor type: for 3-way valves: sector = left or right side way always open; butterfly = central way always open

	DN		Suitable actuator CVLR 90 sec ⁽³⁾ bar ⁽²⁾	Kvs (Seq. I) m ³ /h	Kvs (Seq. II) m ³ /h
	mm	inches			
VYG 615 - 0,25 - 0,25	15	1/2	3.5	0.25	0.25
VYG 615 - 0,25 - 0,4	15	1/2	3.5	0.25	0.4
VYG 615 - 0,25 - 0,63	15	1/2	3.5	0.25	0.63
VYG 615 - 0,25 - 1	15	1/2	3.5	0.25	1
VYG 615 - 0,25 - 1,3	15	1/2	3.5	0.25	1.3
VYG 615 - 0,25 - 1,8	15	1/2	3.5	0.25	1.8
VYG 615 - 0,4 - 0,25	15	1/2	3.5	0.4	0.25
VYG 615 - 0,4 - 0,4	15	1/2	3.5	0.4	0.4
VYG 615 - 0,4 - 0,63	15	1/2	3.5	0.4	0.63
VYG 615 - 0,4 - 1	15	1/2	3.5	0.4	1
VYG 615 - 0,4 - 1,3	15	1/2	3.5	0.4	1.3
VYG 615 - 0,4 - 1,8	15	1/2	3.5	0.4	1.8
VYG 615 - 0,63 - 0,25	15	1/2	3.5	0.63	0.25
VYG 615 - 0,63 - 0,4	15	1/2	3.5	0.63	0.4
VYG 615 - 0,63 - 0,63	15	1/2	3.5	0.63	0.63
VYG 615 - 0,63 - 1	15	1/2	3.5	0.63	1
VYG 615 - 0,63 - 1,3	15	1/2	3.5	0.63	1.3
VYG 615 - 0,63 - 1,8	15	1/2	3.5	0.63	1.8
VYG 615 - 1 - 0,25	15	1/2	3.5	1	0.25
VYG 615 - 1 - 0,4	15	1/2	3.5	1	0.4
VYG 615 - 1 - 0,63	15	1/2	3.5	1	0.63
VYG 615 - 1 - 1	15	1/2	3.5	1	1
VYG 615 - 1 - 1,3	15	1/2	3.5	1	1.3
VYG 615 - 1 - 1,8	15	1/2	3.5	1	1.8
VYG 615 - 1,3 - 0,25	15	1/2	3.5	1.3	0.25
VYG 615 - 1,3 - 0,4	15	1/2	3.5	1.3	0.4
VYG 615 - 1,3 - 0,63	15	1/2	3.5	1.3	0.63
VYG 615 - 1,3 - 1	15	1/2	3.5	1.3	1
VYG 615 - 1,3 - 1,3	15	1/2	3.5	1.3	1.3
VYG 615 - 1,3 - 1,8	15	1/2	3.5	1.3	1.8
VYG 615 - 1,8 - 0,25	15	1/2	3.5	1.8	0.25
VYG 615 - 1,8 - 0,4	15	1/2	3.5	1.8	0.4
VYG 615 - 1,8 - 0,63	15	1/2	3.5	1,8	0,63
VYG 615 - 1,8 - 1	15	1/2	3.5	1,8	1
VYG 615 - 1,8 - 1,3	15	1/2	3.5	1,8	1,3
VYG 615 - 1,8 - 1,8	15	1/2	3.5	1,8	1,8

RELATED PRODUCTS

ZR 2315 Connectors DN 15

ZR 2320 Connectors DN 20



VYG 620

6-WAY CONTROL VALVES

INTERNAL THREAD / PN 16 / DN 20

Fluid temperature: 6...80 °C

	DN		Suitable actuator CVLR ... 90 sec ³⁾ bar ²⁾	Kvs (Sequence I) m ³ /h	Kvs (Sequence II) m ³ /h
	mm	inches			
VYG 620 - 0,63 - 1,6	20	3/4	3.5	0.63	1.6
VYG 620 - 0,63 - 2,5	20	3/4	3.5	0.63	2.5
VYG 620 - 0,63 - 4	20	3/4	3.5	0.63	4
VYG 620 - 1 - 1,6	20	3/4	3.5	1	1.6
VYG 620 - 1 - 2,5	20	3/4	3.5	1	2.5
VYG 620 - 1 - 4	20	3/4	3.5	1	4
VYG 620 - 1,6 - 0,63	20	3/4	3.5	1.6	0.63
VYG 620 - 1,6 - 1	20	3/4	3.5	1.6	1
VYG 620 - 1,6 - 1,6	20	3/4	3.5	1.6	1.6
VYG 620 - 1,6 - 2,5	20	3/4	3.5	1.6	2.5
VYG 620 - 1,6 - 4	20	3/4	3.5	1.6	4
VYG 620 - 2,5 - 0,63	20	3/4	3.5	2.5	0.63
VYG 620 - 2,5 - 1	20	3/4	3.5	2.5	1
VYG 620 - 2,5 - 1,6	20	3/4	3.5	2.5	1.6
VYG 620 - 2,5 - 2,5	20	3/4	3.5	2.5	2.5
VYG 620 - 2,5 - 4	20	3/4	3.5	2.5	4
VYG 620 - 4 - 0,63	20	3/4	3.5	4	0.63
VYG 620 - 4 - 1	20	3/4	3.5	4	1
VYG 620 - 4 - 1,6	20	3/4	3.5	4	1.6
VYG 620 - 4 - 2,5	20	3/4	3.5	4	2.5
VYG 620 - 4 - 4	20	3/4	3.5	4	4

PRODOTTI CORRELATI

ZR 2315	Connectors
ZR 2320	Connectors DN 20

(1) Kvs: : flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop.
100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp max. permitted by the actuator

(3) Rotor type: for 3-way valves: sector = left or right side way always open; butterfly = central way always open



CVTR..

ROTARY ACTUATOR
FOR MANUAL OVERRIDE
2 NM TORQUE

For VYG valves

	Power supply. V (VA)	Control	Run time sec.	Nominal Torque (Nm)	Auxiliary limit switch (accessory)	Valve connections	Valves DN VYG 3.. only DN 15 - 1/2"
CVTR 104	24 VAC (1)	3 points	105	2	No	F04	1/2"
CVTR 104-0	24 VAC/DC (1)	2...10 V	105	2	No	F04	1/2"
CVTR 108	230 VAC (1)	3 points	105	2	No	F04	1/2"



CVLR..

ROTARY ACTUATOR
FOR MANUAL OVERRIDE
5 NM TORQUE

For VYG valves

COMMUNICATION
PROTOCOLS



	Power supply V (VA)	Control	Run time sec.	Nominal Torque (Nm)	Auxiliary limit switch (accessory)	Valves connections	Valves DN VYG 2.. VYG 3.. VYG 6..
CVLR 095	24 V AC/DC (2)	3 points	90	5	1 or 2	F04	1/2"÷1"
CVLR 095-0	24 V AC/DC (2)	0...10 V	90	5	1 or 2	F04	1/2"÷1"
CVLR 095-MOD	24 V AC/DC (2)	Modbus	90	5	1 or 2	F04	1/2"÷1"
CVLR 097	100÷240 V AC (4)	3 points	90	5	1 or 2	F04	1/2"÷1"

RELATED PRODUCTS

FCS 123	Auxiliary limit switch with one 3 (0.5) A changeover contact, 250 VAC adjustable 0-100 %
FCS 223	Auxiliary limit switch with one 3 (0.5) A changeover contact, 250 VAC adjustable 0-100 %



COMMUNICATION
CONTROL



CVNR..

ROTARY ACTUATOR
FOR MANUAL OVERRIDE
10 NM TORQUE

For VYG

Excluding VYG 340-25 DN 40

	Power supply V (VA)	Control	Run time sec	Nominal Torque (Nm)	Auxiliary limit switch (accessory)	Valves connection	Valves DN VYG 2.. VYG 3..
CVNR 144	24 V AC/DC (5)	3 points	90	10	Yes	F04	1/2"÷1"1/2
CVNR 144-0	24 V AC/DC (5)	0...10 V	90	10	Yes	F04	1/2"÷1"1/2
CVNR 144-MOD	24 V AC/DC (6)	Modbus	90	10	Yes	F04	1/2"÷1"1/2
CVNR 148	230 V AC (7)	3 points	90	10	Yes	F04	1/2"÷1"1/2



COMMUNICATION
CONTROL



CVSR..

ROTARY ACTUATOR
FOR MANUAL OVERRIDE
20 NM TORQUE

For VYG ... valves

For proper functioning they require a control that is either 2-point (On-Off), 3-point (common, open and close), or progressive (0-10 V-).

	Power supply V (VA)	Controls	Run time sec.	Nominal Torque (Nm)	Auxiliary limit switch (accessory)	Valves connection	Valves DN VYG 2.. VYG 3..
CVSR 095	24 V AC/DC (4)	3 points	90	20	1 or 2	F04	1/2"÷2"
CVSR 095-0	24 V AC/DC (4)	0...10 V	90	20	1 or 2	F04	1/2"÷2"
CVSR 095-MOD	24 V AC/DC (4)	Modbus	90	20	1 or 2	F04	1/2"÷2"
CVSR 097	100÷240 V AC (6)	3 points	90	20	1 or 2	F04	1/2"÷2"

RELATED PRODUCTS

FCS 123	Auxiliary limit switch with one 3 (0.5) A changeover contact, 250 VAC adjustable 0-100 %
FCS 223	Auxiliary limit switch with one 3 (0.5) A changeover contact, 250 VAC adjustable 0-100 %



VOBG 3..

3 WAY MALE THREADED SEAT VALVES

PN 16 (-10 ... 120 °C)

BRONZE BODY

DN 1/2"...2", convertible from 3 to 2 ways.

	DN body	DN valve connection	DN pipe connection	Kvs (1) m³/h	run mm	Suitable actuators			
						CLNV ... 3.75/7.5 s/mm		CLNF U ⁽⁴⁾ 7.5 s/mm	
						bar ⁽²⁾	s. ⁽³⁾	bar ⁽²⁾	s. ⁽³⁾
VOBG 311	15	1"1/8	1/2"	0.63	15	4	56/112	4	112
VOBG 312	15	1"1/8	1/2"	1.0	15	4	56/112	4	112
VOBG 313	15	1"1/8	1/2"	1.6	15	4	56/112	4	112
VOBG 314	15	1"1/8	1/2"	2.5	15	4	56/112	4	112
VOBG 315	15	1"1/8	1/2"	4.0	15	4	56/112	4	112
VOBG 320	20	1"1/4	3/4"	6.3	15	4	56/112	4	112
VOBG 325	25	1"1/2	1"	10	15	4	56/112	4	112
VOBG 332	32	2"	1"1/4	16	15	4	56/112	4	112
VOBG 340	40	2"1/4	1"1/2	25	15	4	56/112	4	112
VOBG 350	50	2"3/4	2"	40	15	3.5	56/112	2.8	112

RELATED PRODUCTS

	Description	Features
ARS 454	Stem heaters for fluid temperatures down to -10°C. 24 V AC power supply (45W) for valves DN 15:...50	
TVG G16	1"1/8 female cap complete with gasket	311 ... 315 (15)
TVG G20	1"1/4 female plug complete with gasket	320 (20)
TVG G25	1"1/2 female plug complete with gasket	325 (25)
TVG G32	2" female plug complete with gasket	332 (32)
TVG G40	2"1/4 female plug complete with gasket	340 (40)
TVG G50	2"3/4 female plug complete with gasket	350 (50)

(1) **Kvs**: flow coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop.
100 kPa = 10 mWG = 1 bar

(2) **bar**: maximum differential pressure Δp max. permitted by the actuator

(3) **sec**: time required for the actuator to make the valve perform its full stroke

(4) Actuator with emergency closure

(5) Female couplings with fittings



VORF 3..

3 WAY FLANGED SEAT VALVES FLANGIATE
PN 6 (–10 ... 120 °C) CAST IRON BODY

Suitable actuators

	DN body	Kvs ⁽¹⁾ m³/h	Run mm	CLNV... 2.75/7.5 s/mm		CLNF U... ⁽⁴⁾ 7.5 s/mm		CLAV... 3.75/7.5 s/mm	
				bar ⁽²⁾	s. ⁽³⁾	bar ⁽²⁾	s. ⁽³⁾	bar ⁽²⁾	s. ⁽³⁾
VORF 315	15	4.0	15	4	56/112	4	112	–	–
VORF 320	20	6.3	15	4	56/112	4	112	–	–
VORF 325	25	10	15	4	56/112	4	112	–	–
VORF 332	32	16	15	4	56/112	4	112	–	–
VORF 340	40	25	15	4	56/112	4	112	–	–
VORF 350	50	40	15	3.5	56/112	2.8	112	–	–
VORF 364	65	58	18	2.0	67/135	1.6	135	–	–
VORF 379	80	90	18	1.35	67/135	1.0	135	–	–
VORF 3100	100	145	30	–	–	–	–	1.6	112/225

ATTENTION:

VORF 364 and VORF 379 models must be coupled with CLNV 318 or CLNV 314 actuators



VONF 3..

3 WAY FLANGED SEAT VALVES

PN 16 (-10 ... 120°C) CAST IRON BODY

Suitable actuators

	DN body mm	Kvs ⁽¹⁾ m³/h	Run mm	CLNV ... 3.75/7.5 s/mm		CLNF U ⁽⁴⁾ 7.5 s/mm		CLAV ⁽⁴⁾ 3.75/7.5 s/mm	
				bar ⁽²⁾	s. ⁽³⁾	bar ⁽²⁾	s. ⁽³⁾	bar ⁽²⁾	s. ⁽³⁾
VONF 315	15	4,0	15	4	56 / 112	4	112	–	–
VONF 320	20	6,3	15	4	56 / 112	4	112	–	–
VONF 325	25	10	15	4	56 / 112	4	112	–	–
VONF 332	32	16	15	4	56 / 112	4	112	–	–
VONF 340	40	25	15	4	56 / 112	4	112	–	–
VONF 350	50	40	15	3.5	56 / 112	2.8	112	–	–
VONF 364	65	58	18	2.0	67 / 135	1.6	135	–	–
VONF 365	65	63	30	–	–	–	–	4.0	112/225
VONF 379	80	90	18	1.35	67 / 135	1.0	135	–	–
VONF 380	80	100	30	–	–	–	–	2.7	112/225
VONF 3100	100	145	30	–	–	–	–	1.6	112/225
VONF 3125	125	220	40	–	–	–	–	0.9	150/300
VONF 3150	150	320	40	–	–	–	–	0.6	150/300

RELATED PRODUCTS

ARS 454 Stem heaters for fluid temperatures down to a -10°C.
Power supply 24 V AC (45W) for valve DN 15:...50

ARS 604B Stem heater for fluid temperatures down to -10°C.
Power supply 24 V AC (60W) per valvole DN 65:...250

ATTENTION:

VONF364 and **VONF379** models must be coupled with **CLNV 318** or **CLNV 314** actuators

(1) Kvs: low coefficient: flow rate in m³/h
with open valve and 100 kPa pressure
drop. .
100 kPa = 10 mWG = 1 bar

(2) bar: maximum differential pressure Δp
max. permitted by the actuator

(3) sec: time required for the actuator to
make the valve perform its full stroke

(4) Actuator with emergency closure



CLNV ...

LINEAR ACTUATORS

FOR VALVES VOBG .., VORF .., VONF ..

	Power supply V (VA)	Control	Position signal	Auxiliary limit switch ⁽¹⁾	Maximum run mm	Force N	Speed sec./mm
CLNV 214	24 V AC (1)	3 points	No	Yes	15	500	150 - 15
CLNV 218	230 V AC (4)	3 points	No	Yes	15	500	150 - 15
CLNV 254-0	24 V AC (2)	0 ÷ 10 V	0 ÷ 10 V	Yes	15	500	150 - 15
CLNV 318	230 V AC (4,5)	3 points	No	Yes	20	1,000	150 - 20
CLNV 318-R	230 V AC (4,5)	3 points	No	Yes	20	1,000	150 - 20
CLNV 314	24 V AC (3)	3 points	No	Yes	20	1,000	150 - 20
CLNV 314-R	24 V AC (3)	3 points	No	Yes	20	1,000	150 - 20
CLNV 354-0	24 V AC (3)	0 ÷ 10 V	0 ÷ 10 V	Yes	20	1,000	150 - 20
CLNV 354R-0	24 V AC (4,5)	0 ÷ 10 V	0 ÷ 10 V	Yes	20	1,000	150 - 20

ACCESSORY FOR AUXILIARY CONTACTS

FCS 2A Auxiliary contacts for globe valve actuators



CLAV ...

LINEAR ACTUATORS

FOR VALVES VORF .., VONF ..

	Power supply V (VA)	Control	Position signal	Auxiliary limit switch ⁽¹⁾	Maximum run mm	Force N	Speed sec./mm
CLAV 214	24 V AC (4,5)	3 points	No	Yes	40	2,500	150 - 40
CLAV 218	230 V AC (9,5)	3 points	No	Yes	40	2,500	150 - 40
CLAV 254-0	24 V AC (6)	0 ÷ 10 V	0 ÷ 10 V	Yes	40	2,500	150 - 40

ACCESSORY FOR AUXILIARY CONTACTS

FCS 2A Auxiliary contacts for globe valve actuators

Available version
CLAV .../R only upon
order

⁽¹⁾ using FCS2A accessory



CLNF ...

LINEAR ACTUATORS
FOR VALVES VOBG .., VORF .., VONF ..
WITH EMERGENCY CLOSURE

	Power supply V (VA)	Control	Position signal	Auxiliary limit switch ⁽¹⁾	Maximum run mm	Force N	Speed sec./mm	Speed emerg. sec./mm
CLNF U254	24 V AC (6)	3 points	No	Yes	20	1000	150-20	35-20
CLNF U254-0	24 V AC (6)	0 ÷ 10 V	0 ÷ 10 V	Yes	20	1000	150-20	35-20
CLNF U254R-0	24 V AC (6)	0 ÷ 10 V	0 ÷ 10 V	Yes	20	1000	150-20	35-20
CLNF U258-R	230 V AC (4,5)	3 points	No	Yes	20	1000	150-20	35-20

ACCESSORY FOR AUXILIARY CONTACTS

FCS 2A Auxiliary contacts for globe valve actuators

⁽¹⁾ using FCS2A accessory



ACTUATOR	Valves (brand and type)	DN
upon request	Coster VL - VF (2000÷2010)	65 ÷ 100
CLNV3..R ÷ CLNF U..R	Coster VRG - VRB - VL - VF - VE - VS (2000÷2009)	15 ÷ 50
	Coster VRGN - VRBN - VLN - VFN (2010)	15 ÷ 50
	Coster VLN - VFN (2010)	65 ÷ 80
CLNV...R-0 ÷ CLNF U...R-0	Controlli VSB - VMB - VSB..F - VMB..F	15 ÷ 50
CLNV...R-0 ÷ CLNF U...R-0	Honeywell V5011R - V5013R	15 ÷ 50
	Honeywell V5015	25 ÷ 80
	Honeywell V5049A - V5050A	15 ÷ 65
	Honeywell V5095A	20 ÷ 80
	Honeywell V5328A - V5329A - V5329C	15 ÷ 80
upon request	Honeywell V5015A	100 ÷ 150
	Honeywell V5049A - V5050A	80 ÷ 150
CLNV...R-0 ÷ CLNF U...R-0	Siemens VVF61 - VXF61	15 ÷ 25
	Siemens VPF52E/F - VVF52 - VXF41	15 ÷ 40
	Siemens VVG41 - VVG41	15 ÷ 50
	Siemens VVF21 - VVF40	15 ÷ 80
	Siemens VXF21 - VVF31 - VXF31	25 ÷ 80
upon request	Siemens VVF21 - VXF21	100
	Siemens VVF31 - VXF31 - VVF40 - VXF40	100 ÷ 150
	Siemens VVF41 - VVF45	50 ÷ 150
	Siemens VVF61	40 ÷ 150
	Siemens VXF41	65 ÷ 150
	Siemens VXF61	32 ÷ 150
CLNV...R-0 ÷ CLNF U...R-0	Johnson BM-2xx 2 - BM-2xx 8	15 ÷ 50
	Johnson VB7216	15 ÷ 50
	Johnson VG7201 - VG7401 - VG7804	15 ÷ 50
	Johnson VG7203 - VG7403 - VG7802	15 ÷ 50
	Johnson VB7816	15 ÷ 50
	Johnson VBD-4xx 4 - VBD-4xx 8 - VG82/84/88/89	15 ÷ 40
	Johnson VBF-0xx 4 - VBF-0xx 8 - VBF-2xx 4 - VBF-2xx 8	15 ÷ 50
upon request	Johnson VBD-4xx 8 - VBD-4xx 8 - VG82/84/88/89	50 ÷ 150
	Johnson VBF-0xx 4 - VBF-0xx 8 - VBF-2xx 4 - VBF-2xx 8	65 ÷ 100

PRODUCTS

ACTUATOR	Valves (brand and type)	DN
CLNV...R-0 ÷ CLNF U...R-0	Sauter B6F..F - B6G..F - B6R..F - B6S..F - BXD..F - BXE..F	15 ÷ 50
	Sauter V6F..F - V6G..F - V6R..F - V6S..F - VXD..F - VXE..F	15 ÷ 50
	Sauter VXN.. - BXN	15 ÷ 50
	Sauter B4F..F	20 ÷ 32
	Sauter BT43B	15 ÷ 40
	Sauter V1T	15
	Sauter V4F	15 ÷ 32
	Sauter BUE.. - BUG.. - VUE.. - VUG	15 ÷ 50
upon request	Sauter B6F..F - B6S..F - BXD..F - BXE..F	65 ÷ 150
	Sauter V6F..F - V6S..F - VXD..F - VXE..F	65 ÷ 150
	Sauter BUE.. - BUG.. - VUE.. - VUG	65 ÷ 150
	Sauter V4F	40 ÷ 100
CLNV...R-0 ÷ CLNF U...R-0	Satchwell MJF - VSF	15 ÷ 25
	Satchwell VZ - MZ	15 ÷ 50
upon request	Satchwell VSF	32 ÷ 50
	Satchwell MZF - VZF (pin thread 3/8")	65 ÷ 150
	Satchwell MZF - VZF(pin thread 1/4")	65 ÷ 150
	Satchwell MJF (pin thread 1/4")	50
CLNV...R-0 ÷ CLNF U...R-0	V221	65 ÷ 150
	V294	15 ÷ 32
	V241 - V341 - V348	15 ÷ 50
upon request	V265 - V295	40 ÷ 65
	V395-1	40 ÷ 100



VYQ 2 ...

2 WAY BALL ZONE VALVES (SBV) / INTERNAL THREAD / PN 16

Cold and hot water with max. 50% volume of glycol.

Fluid temperature 2...90°C. Brass body

Suitable actuators: CVQ 095 - 097. Versions with change over available

(1) **Kvs**: low coefficient: flow rate in m³/h with open valve and 100 kPa pressure drop. .
100 kPa = 10 mWG = 1 bar
V_{max low-n}: V_{max} for low-noise operation

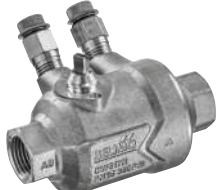
	DN body	Rp connections	Kvs ⁽¹⁾ m ³ /h	PN
VYQ 215 - 1,2	15	1/2	1.2	25
VYQ 215 - 4,8	15	1/2	4.8	25
VYQ 220 - 8	20	3/4	8	25



VZC 2 ...

PRESSURE INDEPENDENT CONTROL BALL VALVES (PIQCV) / FEMALE THREAD / DN 15 - 25

Cold and hot water. Brass body. Suitable actuators CVQ 095 - 097



	DN body	Rp connections	Vnom l/h	PN	Sv min.
VZC 215-P-B	15	1/2	210	25	100
VZC 215-P-D	15	1/2	420	25	100
VZC 215-PT-B	15	1/2	210	25	100
VZC 215-PT-D	15	1/2	420	25	100
VZC 220-P-F	20	3/4	980	25	100
VZC 220-PT-F	20	3/4	980	25	100
VZC 225-PT-G	25	1	2100	25	100

ACCESSORIES

ZR 2315	DN 15 connectors
ZR 2320	DN 20 connectors
ZR 2325	DN 25 connectors



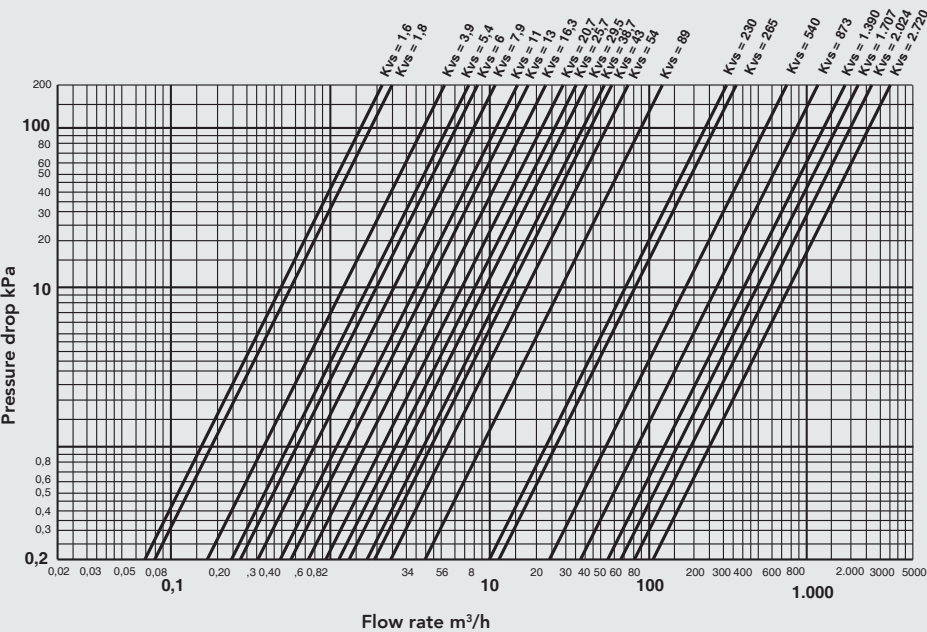
CVQ 0...

ROTARY ACTUATOR FOR ZONE VALVES AND PIQCV

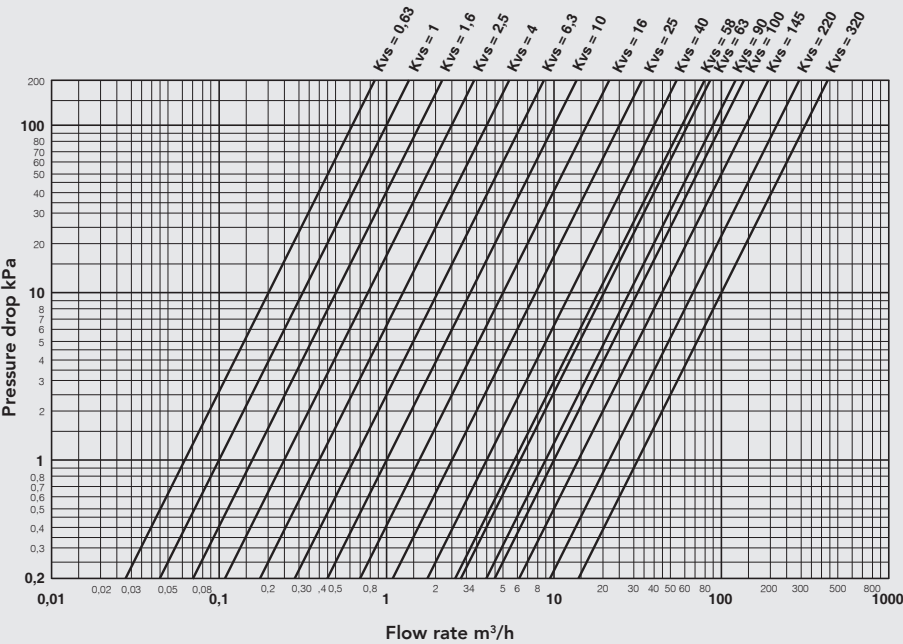
Quick-mounting actuator For VZC 2.. valves.

	Power supply V (VA)	Control	Run time sec.	Torque (Nm)	Limit switch (accessory)
CVQ 095	24 VAC/DC (0.6)	3 points	75	1	No
CVQ 095-0	24 VAC/DC (0.6)	0...10V	75	1	No
CVQ 097	230 VAC (2)	3 points	75	1	No

Ball valves

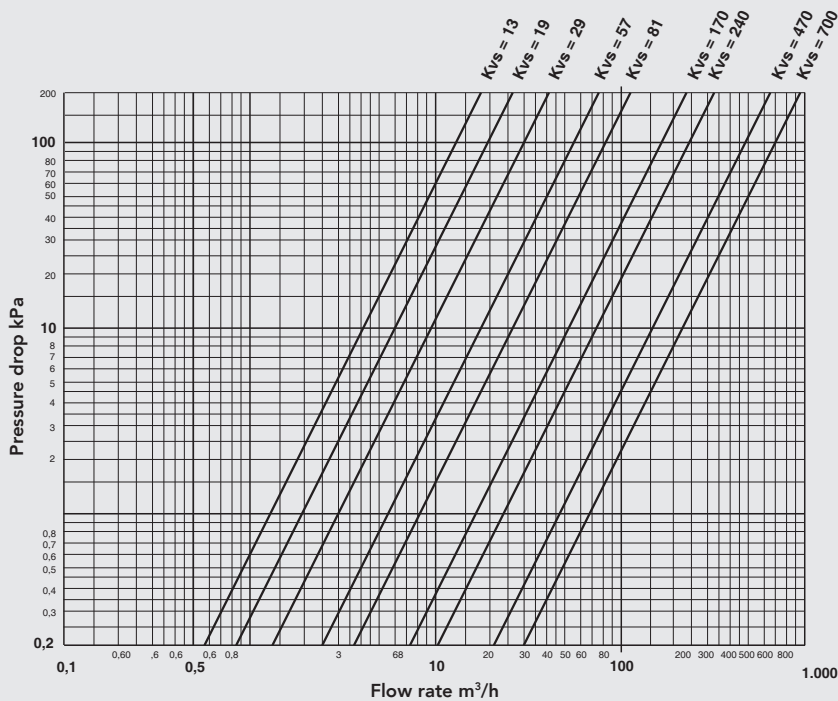


Seat Valves



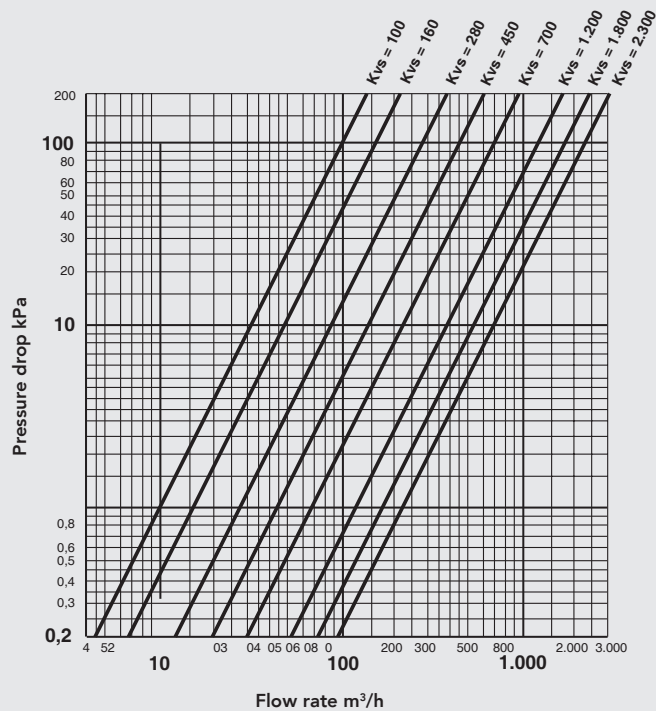


3 - 4 Way slipper and butterfly valves



Kvs = Flow rate coefficient : Flow rate in m³/h with open valve and 100 kPa pressure drop.
100 kPa = 10 mWG = 1 bar

2 Way butterfly valves





CSL ..., CSN ..., CSS ..., CSG ...

DAMPER ACTUATORS

Actuators suitable for operating dampers in air handling units.



	Power supply V (VA)	Control	Auxiliary controls	Dampers m ²	Torque N/m	Run sec.
CSL 138	230V AC (4)	2 or 3 points	No	1	5	150
CSL 138/C	230V AC (4)	2 or 3 points	1	1	5	150
CSL 134	24V AC/DC (2)	2 or 3 points	No	1	5	150
CSL 134/C	24V AC/DC (2)	2 or 3 points	1	1	5	150
CSL 104	24V AC/DC (2)	2 ...10V-	No	1	5	150
CSN 238	230V AC (6)	2 or 3 points	No	2	10	150
CSN 238/C	230V AC (6)	2 or 3 points	1	2	10	150
CSN 234	24V AC/DC (4)	2 or 3 points	No	2	10	150
CSN 234/C	24V AC/DC (4)	2 or 3 points	1	2	10	150
CSN 204	24V AC/DC (4)	2 ...10V-	No	2	10	150
CSS 438	230V AC (6)	2 or 3 points	No	4	20	150
CSS 438/C	230V AC (6)	2 or 3 points	1	4	20	150
CSS 434	24V AC/DC (4)	2 or 3 points	No	4	20	150
CSS 434/C	24V AC/DC (4)	2 or 3 points	1	4	20	150
CSS 404	24V AC/DC (4)	2 ...10V-	No	4	20	150
CSG 838	230V AC (8)	2 or 3 points	No	8	40	150
CSG 838/C	230V AC (8)	2 or 3 points	1	8	40	150
CSG 834	24V AC/DC (7)	2 or 3 points	No	8	40	150
CSG 834/C	24V AC/DC (7)	2 or 3 points	1	8	40	150
CSG 804	24V AC/DC (7)	2 ...10V-	No	8	40	150

CFT ..., CFL ..., CFS ...

DAMPER ACTUATORS WITH EMERGENCY CLOSURE

Actuators suitable for operating dampers in air handling units. Automatic closure of the damper in the event of power failure.



	Power supply V (VA)	Control	Auxiliary controls	Dampers m ²	Torque N/m	Run sec.	Emergency sec.
CFT 028	230V ~ (5)	2 points	No	0,4	2	75	25
CFT 028/C	230V ~ (5)	2 points	1	0,4	2	75	25
CFT 024	24V ~/- (5)	2 points	No	0,4	2	75	25
CFT 024/C	24V ~/- (5)	2 points	1	0,4	2	75	25
CFT 004	24V ~/- (5)	2...10V-	No	0,4	2	75	25
CFL 128	230V ~ (7)	2 points	No	0,8	4	75	20
CFL 128/C	230V ~ (7)	2 points	1	0,8	4	75	20
CFL 124	24V ~/- (7)	2 points	No	0,8	4	75	20
CFL 124/C	24V ~/- (7)	2 points	1	0,8	4	75	20
CFL 134	24V ~/- (5)	3 points	No	0,8	4	150	20
CFL 104	24V ~/- (5)	2...10V-	No	0,8	4	150	20
CFS 428	230V ~ (18)	2 points	No	4	20	75	20
CFS 428/C	230V ~ (18)	2 points	2	4	20	75	20
CFS 424	24V ~/- (7,5)	2 points	No	4	20	75	20
CFS 424/C	24V ~/- (7,5)	2 points	2	4	20	75	20
CFS 404	24V ~/- (7)	2...10V-	No	4	20	150	20
CFS 404/C	24V ~/- (7)	2...10V-	2	4	20	150	20



FCS ...

LIMIT SWITCH CONTACT FOR DAMPER ACTUATORS

FCF 223	Auxiliary limit switch contact with 2 changeover contacts 3 (0,5)A, 250 V AC for CFS... actuators
FCS 123	Auxiliary limit switch contact with 1 changeover contact 3 (0,5)A, 250 V AC for CS... actuators
FCS 223	Auxiliary limit switch contact with 2 changeover contacts 3 (0,5)A, 250 V AC for CS... actuators
PCS 104	Positioner 0...100% actuator dampers 0...10V DC (max 10 actuators)

KH ..., AH ..., KG ..., ZG ...

ACCESSORIES REQUIRED TO COUPLE ACTUATORS TO THE DAMPERS

AH-20	Lever for CSS... actuators
AH-25	Lever for CSN... actuators
AH-TF	Lever for CFT... actuators
AH-GMA	Lever for CSG... actuators
KH 8	Universal lever for damper pins (Ø10 ... 18 mm.; $\varnothing$ 10 ... 14 mm.)
KG 10	Ball joint connection (use rods with Ø max. 10 mm.)
KH-AFB	Lever for CFS.. actuators
KH-LF	Lever for CFL... actuators
ZG-GMA	Kit for mounting actuator on the flat for CSG... actuators
ZG-NMA	Kit for mounting actuator on the flat for CSN... actuators
ZG-SMA	Kit for mounting actuator on the flat for CSS... actuators
ZG-AFB	Kit for mounting actuator on the flat for CFS... actuators
ZG-LF1	Kit for mounting actuator on the flat for CFL... actuators
ZG-TF1	Kit for mounting actuator on the flat for CFT...

ACCESSORIES REQUIRED TO COUPLE ACTUATORS TO THE DAMPERS



- 1 actuator for 1 damper:
 - direct mounting on the damper pin, no accessory is required;
 - remote mounting No. 1 AH..., No. 1 KH8, No. 2 KG 10 and No. 1 rod⁽¹⁾.
- 1 actuator for 2 dampers:
 - direct mounting on pin of damper No. 1 AH..., No. 1 KH8, No. 2 KG 10 and No. 1 rod⁽¹⁾;
 - remote mounting No. 1 AH..., No. 2 KH8, No. 3 KG 10 and No. 2 rods⁽¹⁾.
- 1 actuators for 3 dampers:
 - direct mounting on pin of damper No. 1 AH..., No. 2 KH8, No. 3 KG 10 and No. 2 rods⁽¹⁾;
 - remote mounting No. 1 AH..., No. 3 KH8, No. 4 KG 10 and No. 3 rods⁽¹⁾.

⁽¹⁾ Universal joint connecting rods: 8/10 mm round rod (available from any hardware store)

SENSORS, REMOTE CONTROLS AND ACCESSORIES

COMMUNICATION PROTOCOL



Wireless system with room and outside temperature sensors



COMMUNICATION
PROTOCOL



SWB 912

T/H WIRELESS SENSOR READING

The SWB 912 KIT allows the acquisition of THP 868 radio sensors through X-series devices... without changing the hardware in the field.
The acquired variables are temperature and humidity.
It consists of CPX 912, CSW 868 S1, ALM 1210 power supply and ANT 250 antenna.

SWB 912 Radio sensor reading kit



COMMUNICATION
PROTOCOL



CSW 868

WIRELESS SENSOR CONCENTRATOR

System module enabling radio connection with one or more radio sensors (up to 40) acquiring variables from THP 868, PCP 868 and COP 868. It provides two-way communication with radio field devices.
It can be combined with Y ... series and Z ... series
12V DC power supply
ANTENNA INCLUDED.

CSW 868 Radio sensor receiver

RELATED PRODUCTS

APA 500	SMA antenna extension, length 5 metres
ANT 868	Enhanced antenna for 868 receivers
THP 868	Radio temperature/humidity sensor with data logger
STT 868H	Watertight radio temperature sensor
STU 868H	Watertight radio temperature-humidity sensor
COP 868	Combined temperature-humidity-Co ₂ radio sensor
PCP 868	Radio pulse counter



THP 868

WIRELESS TEMPERATURE/HUMIDITY SENSOR

Temperature and relative humidity sensors in 80 x 80 x 25 mm container. It can be combined with CSW 868 concentrator.

THP 868 Wireless temperature/humidity sensor with data logger



STT-STU..H

WIRELESS WATERTIGHT RADIO SENSOR

Watertight temperature sensors in 105 x 105 x 55 mm container.
They can be combined with CSW 868 concentrator.

STT 868H	Watertight temperature sensors in 105 x 105 x 55 mm container
STU 868H	Wireless watertight temperature-humidity sensor



COP 868

WIRELESS TEMPERATURE HUMIDITY/CO₂ SENSOR

Combined sensor in 80 x 120 x 25 mm container..
It can be combined with CSW 868 radio concentrator.

Available from JUNE 2023

COP 868	Wireless Temperature/ humidity/ CO ₂ sensor
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SAB 002

PT 1000 ROOM SENSOR

SAB 002	PT 1000 room sensor
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STA 00..

AIR DUCT TEMPERATURE SENSOR

The 1W version can acquire and transmit temperature values.
Only for YLC control units

STA 001W	Air duct temperature sensor 1W
STA 002	PT 1000 air duct temperature sensor



SAE 002

OUTSIDE TEMPERATURE SENSOR

Detects outside temperature for YLC control units only

SAE 002	Outside temperature sensor PT 1000
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SIH 00..

IMMERSION SENSOR

The 1W version can acquire and transmit temperature values.
For YLC control units only.

SIH 001W	Immersion sensor 1W
SIH 002	PT 1000 immersion sensor



SAF 00..

CABLE TYPE TEMPERATURE SENSOR

The 1W version can acquire and transmit temperature values.
Only for YLC control units

SAF 001W	Immersion sensor 1W
SAF 002	PT 1000 immersion sensor

RELATED PRODUCTS

GIS 090	Brass pocket 1/2" x 90 mm complete with grommet; PN16
GIS 090/Inox	Brass pocket 1/2" x 160 mm complete with grommet; PN10
GIS 160	Stainless steel sheath 1/2" x 160 mm complete with grommet; PN16
GIS 160/Inox	Brass pocket 1/2" x 500 mm complete with grommet; PN10
GIS 500	Inox pocket 1/2" x 500 mm complete with grommet; PN16
GIS 500/Inox	Inox pocket 1/2" x 500 mm. complete with grommet; PN16
ACM 103	Connection box with terminal block and adapter for old COSTER sheaths



SAE 420

DIGITAL OUTSIDE TEMPERATURE MODULATION IN CURRENT

Only for YLC control units (it can be connected to YLC analogue input)

SAE 420 Digital outside temperature sensor



SCH 00..

SURFACE TEMPERATURE SENSOR

They are suitable for detecting the temperature of a fluid flowing within a pipe. The 1W version can acquire and transmit temperature values. For YLC control units only.

SCH 001W Surface temperature sensor 1W

SCH 002 PT 1000 surface temperature sensor



SAA ...

WATERTIGHT ROOM SENSOR

Measurement of room temperature in very humid rooms (e.g. greenhouses). Measurement of very high and humid room temperatures (80...90 °C).

SAA 001 Watertight room sensor (- 30...+40 °C), NTC 1 K Ω

SAA 010 Watertight room sensor (0...+100 °C), NTC 10 K Ω



SAB ... SAI ...

ROOM TEMPERATURE SENSOR WITH OR WITHOUT SET POINT ADJUSTER

These are NTC 10 K Ω type sensors for measuring room temperature (measuring range 0...40 °C).

Some sensors are equipped with a local set point adjuster to change the desired room temperature.



SAB 002/SF Without specific insert PT 1000

SAB 010 In wall container 80 x 80 x 32 NTC 10 k Ω

SAB 010/SF Without specific insert NTC 10 k Ω

SAB 020 Double sensor in wall container 80 x 80 x 32 NTC 20 k Ω

SAI 010 Radiation sensor, in wall container 80 x 80 x 26 NTC 10 k Ω

The exact compatibility of the sensors with the devices is indicated in the devices manuals, which can be found at www.costergroup.eu



SAE 001

OUTSIDE TEMPERATURE SENSOR (−40...+40 °C)

Measurement of outside temperature in standard applications.

SAE 001 Outside temperature sensor (−40 ... +40 °C), NTC 1 KΩ



SGG - SGE ...

OUTSIDE TEMPERATURE SENSOR FOR "DAY DEGREES" MEASUREMENT

Specific outside temperature sensors for day degrees measurement.

The sensor is provided with mechanics capable of being unaffected by radiated heat, as established by the standards of the day degrees measurement.

SGG 001 High-precision outside temperature sensor specifically for the standardised day degrees meter XGG 618

SGE 001 Outside temperature sensor compatible with all climate controllers, for measuring day degrees included in these controllers



SIH 010

IMMERSION TEMPERATURE SENSOR (0...100 °C)

They are NTC 10 KΩ type sensors

SIH 010 Immersion sensor with brass pocket (0...100 °C)

SIH 010/Inox Immersion sensor with inox pocket (0...100 °C)

PRODOTTO CORRELATO

APV 100 Accessory for adapting to old COSTER sheaths



STH 001

IMMERSION TEMPERATURE SENSOR (0...300 °C)

Sensors type NTC 1 KΩ

STH 001 Immersion temperature sensor (0...300 °C)



SIR 010

DIRECT IMMERSION TEMPERATURE SENSOR (0...100 °C)

The sensor is in direct contact with water to increase the response speed. Indispensable, for example, for the instantaneous domestic hot water mixing.

Sensor type NTC 10 KΩ

SIR 010 Direct immersion temperature sensor (0...100 °C)



SCH 010

SURFACE TEMPERATURE SENSOR (0...100 °C)

Sensor type NTC 10 K Ω

SCH 010 Surface temperature sensor (0...100 °C)



STT 010

**TEMPERATURE SENSOR FOR
HEATING/COOLING COILS (0...40 °C)**

Sensor type NTC 10 K Ω

STT 010 Temperature sensor for heating/cooling coils



STA ...

AIR DUCT TEMPERATURE SENSOR

STA 010 Air duct temperature sensor (0...100 °C), NTC 10 K Ω

STA 001 Air ductTemperature sensor (-30...+40 °C) NTC 1 K Ω



STF 001

FLUE GASES TEMPERATURE SENSOR (0...500 °C)

Sensor type NTC 1 K Ω

STF 001 Flue gas temperature sensor (0...500 °C)



SAF ...

CABLE TYPE TEMPERATURE SENSORS (0...100 °C)

They are NTC 10 K Ω type sensors

SAF 010 Cable type temperature sensor (0...100 °C)

SAF 110 Cable type temperature sensor with 2 sensors and 4 wires (0...100 °C)



SAF 001

CABLE TYPE TEMPERATURE SENSORS (-40...+40 °C)

Sensor type NTC 1 K Ω

SAF 001 Cable type temperature sensor (-40...+40 °C)



SHF 001

CABLE TYPE TEMPERATURE SENSORS (0...180 °C)
POCKETS AND ACCESSORIES

SHF 001 Cable type temperature sensors (0...180 °C), NTC 1 KΩ

PRODOTTI CORRELATI

GIS 090 Brass pocket 1/2" x 90 mm complete with grommet; PN16

GIS 090/Inox Brass pocket 1/2" x 160 mm complete with grommet; PN10

GIS 160 Stainless steel sheath 1/2" x 160 mm complete with grommet; PN16

GIS 160/Inox Brass pocket 1/2" x 500 mm complete with grommet; PN10

GIS 500 Inox pocket 1/2" x 500 mm complete with grommet; PN16

GIS 500/Inox Inox pocket 1/2" x 500 mm. complete with grommet; PN16

ACM 103 Connection box with terminal block and adapter for old COSTER sheaths



SUR 704

RELATIVE HUMIDITY SENSOR FOR AIR DUCT

24 Volt AC power supply, or 12 V – from COSTER, devices, if equipped with 12 Volt – auxiliary power supply.
Output signal active: 0...5 V– or 0...10 V–.

SUR 704 Relative humidity sensors for air air ducts



SUT 734

HUMIDITY AND TEMPERATURE SENSOR FOR AIR DUCT

Power supply: 15..24 V = (±10%) or 24 V ~ (±10%) SELV.
Output voltage: 2x 0..10 V or 0..5 V, configurable via jumper, min. load 10 kΩ NTC
passive output 10k.

SUT 734 Humidity and temperature sensors for air ducts



SAU 914

ROOM RELATIVE HUMIDITY AND TEMPERATURE SENSOR (0...50 °C)

A24 Volt AC power supply, or 12 V - from COSTER devices, if equipped with 12 Volt auxiliary power supply.

Humidity output signal: active 0...5 V- or 0...10 V-.

SAU 914 Room relative humidity and temperature sensor (0...50 °C)



SAU 734

ROOM RELATIVE HUMIDITY AND TEMPERATURE SENSOR

Power supply 15..24 V = ($\pm 10\%$) o 24 V ~ ($\pm 10\%$) SELV,

output voltage: 2x 0..10 V (carico min. 10 k Ω) + spassive sensor

Humidity accuracy $\pm 2\%$ between 10..90% relative humidity (type at 21 °C)

SAU 734 Room relative humidity and temperature sensor



COMMUNICATION
PROTOCOL



SAC 020

ROOM CO₂ TEMPERATURE
AND HUMIDITY SENSOR (0...10V) MODBUS

Room sensor for wall installation for CO₂ temperature and humidity detection in MODBUS protocol.

Power supply 24 Volt AC

SAC 020 Room CO₂ temperature and humidity



PROTOCOLLI
DI COMUNICAZIONE



SAC 002

ROOM CO₂ TEMPERATURE
AND HUMIDITY SENSOR (0...10V) MODBUS

Room sensor for wall installation for CO₂ temperature and humidity detection in MODBUS protocol.

24 Volt AC power supply

AVAILABLE FROM JULY 2024 (replacing SAC 020)

SAC 002 Room CO₂ temperature amd humidity



SPW 2..

ABSOLUTE PRESSURE SENSOR FOR LIQUIDS

Power supply 24 Volt AC/DC.

Output signal: 0 - 10 V-

SPW 204 Absolute pressure sensor for liquids (0...4 bar)

SPW 210 Absolute pressure sensor for liquids (0...10 bar)

SPW 216 Absolute pressure sensor for liquids (0...16 bar)



SDW 2..

DIFFERENTIAL PRESSURE SENSOR FOR LIQUIDS

Power supply 24 Volt AC/DC.

Output signal 0 - 10 V-

SDW 201 Differential pressure sensor for liquids (0...1 bar)

SDW 202 Differential pressure sensor for liquids (0...2,5 bar)

SDW 206 Differential pressure sensor for liquids (0...6 bar)



SDA 700

DIFFERENTIAL PRESSURE TRANSDUCER (0...26 MBAR SETTABLE)

Differential pressure transducer with 8 selectable measurement ranges and adjustable output signal (0...10V or 4...20mA) or Modbus.

Power supply: 15...24 V = ($\pm 10\%$); 24 Volt AC ($\pm 10\%$)

SDA 700 Differential pressure transducer for air (0...26 mbar settable)



LGP ...

LIQUID LEVEL PRESSURE SENSORS

Water, diesel or other liquids tank level measurement by detecting the hydrostatic pressure of the liquid.

12 Volt power supply - from COSTER devices (UML 318).

Output signal active: 0 - 5 V-

LGP 250 Liquid level pressure sensor (water 0...2.5 m)

LGP 500 Liquid level pressure sensor (water 0...5 m)

PRODOTTI CORRELATI

UML 318 Unit of measurement, alarm and storage for various signals



SAL 500

ANTI-FLOODING SENSOR

UAL 358

CONTROL AND ALARM UNIT

FOR UP TO 3 ANTI-FLOODING SENSORS

Alarm system to detect flooding caused by plumbing leaks.



SAL 500 Anti-flooding sensor

UAL 358 Control unit for up to 3 anti-flooding sensors



SQC 954

ROOM AIR QUALITY SENSOR

Room air quality sensor.

SQC 954 Room air quality sensor



SQS 954

AIR QUALITY SENSOR FOR AIR DUCT

Air quality sensor for air duct.

SQS 954 Air quality sensor for air duct



UPA 798

ELECTROMECHANICAL ROOM HUMIDOSTAT

On-Off switching of humidification or dehumidification units.
Wall mounting.

UPA 798 Room humidostat



UPC 799

AIR DUCT ELECTROMECHANICAL HUMIDOSTAT

On-Off switching of humidification or dehumidification units.
Mounted in air duct.

UPC 799 Room humidostat



TAG 797

ELECTROMECHANICAL FROST PROTECTION THERMOSTAT

Suitable for frost protection of water battery heater units.

TAG 797 Electromechanical frost protection thermostat



PDF 795

DIFFERENTIAL PRESSURE SWITCH

Signals of the cleanliness status of the filter unit or fan operation.

- Setting range: 50 ... 500 Pa
- Triggering differential: 20 Pa +/- 15% (100 kPa = 1 bar)
- Maximum pressure: 5 kPa

PDF 795 Differential pressure switch



CDB ...

REMOTE CONTROLS FOR VARIOUS CONTROLLERS

They are desired room temperature set point adjusters or other equipment, with or without sensors.

	Description	Compatible Controllers
CDB 100	Temperature set point adjuster with room sensor (0...40 °C)	DRU 414/418, DTF/RTF 31, DTT 318; XTU 614/618, XTU 644, XTU 664, XTA 624, XTR 628
CDB 200	Humidity Temperature set point adjuster with room sensor (0...40 °C)	XTU 614, XTU 644, XTU 664
CDB 300	Programs change for climate controllers	XTP 600, XTT 608, XTE 611, XTE 600/602, XSE 600/602
CDB 300/S1	Programs change for climate controllers with room sensor (0...40 °C)	XTP 600, XTT 608, XTE 611, XTE 600/602, XSE 600/602
CDB 301	Programs change for climate controllers on DIN 3 box unit	XTP 600, XTT 608, XTE 611, XTE 600/602, XSE 600/602
CDB 333	Programs change	XCS 633, XSS 633, XTU 618



ACD 655

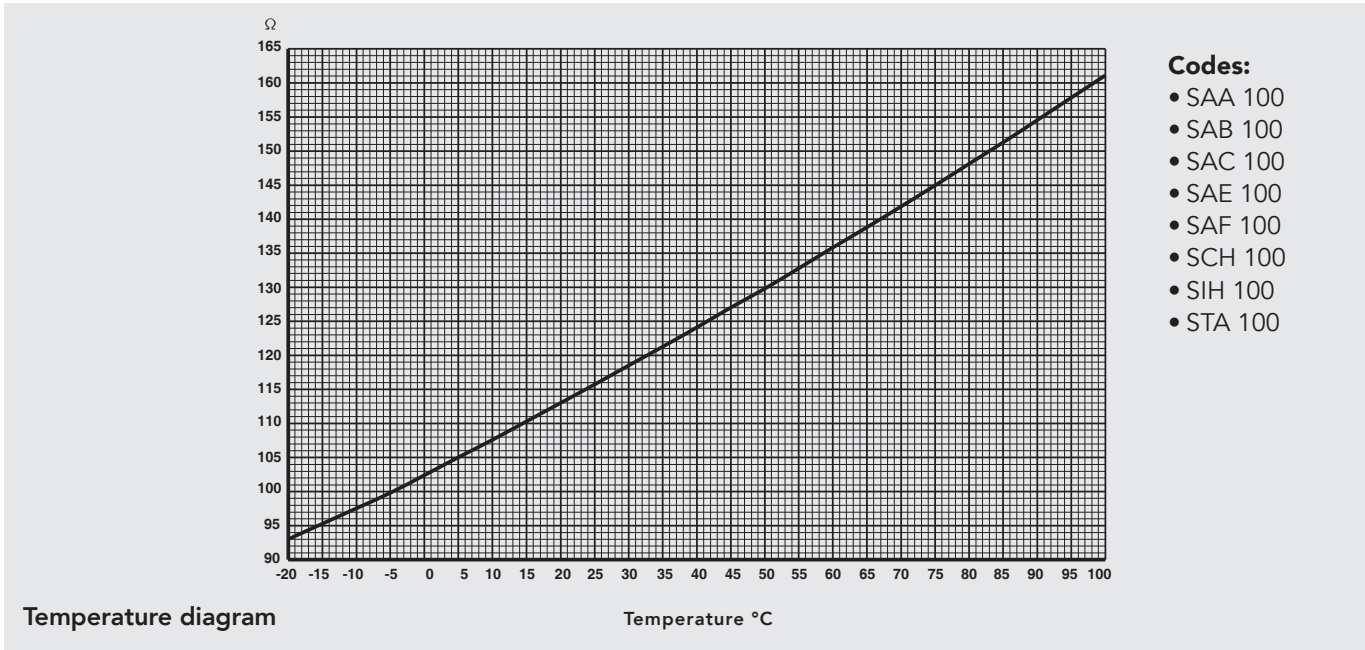
FRONT PANEL MOUNTING FOR 6 DIN DEVICE

Enables 144 x 144 flush mounting of 6-DIN devices.

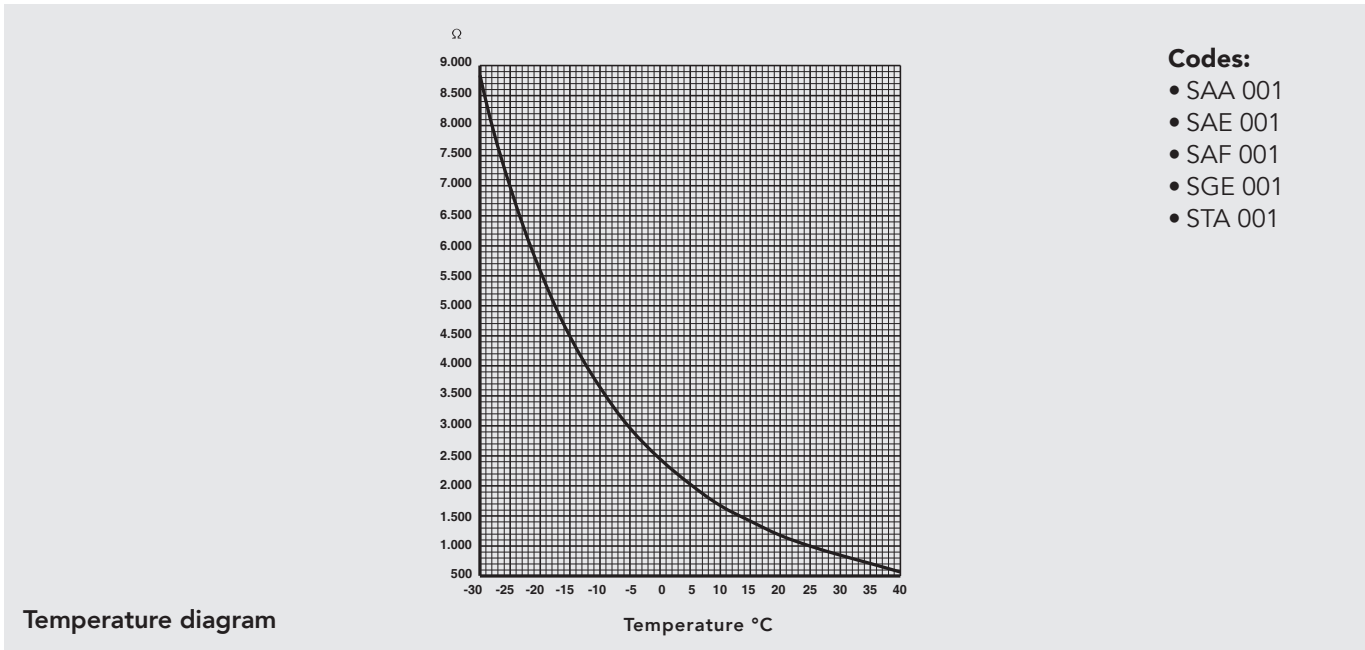
ACD 655 Front panel mounting accessory

Ni 100 Ω sensor resistance

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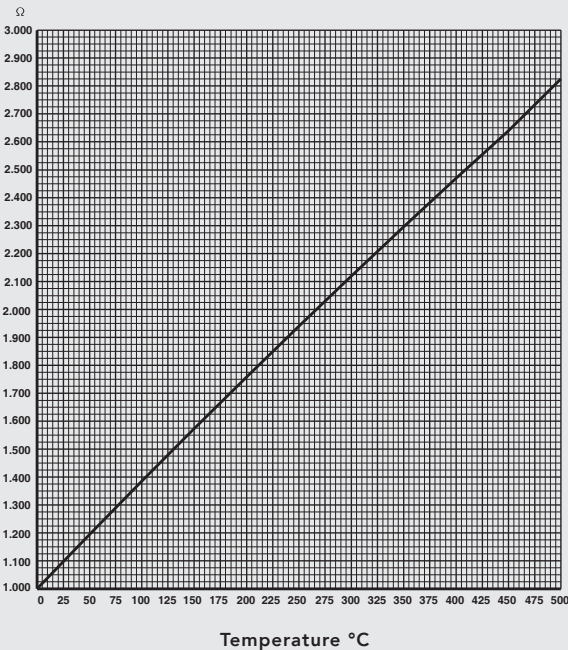


NTC 1 KΩ sensor resistance





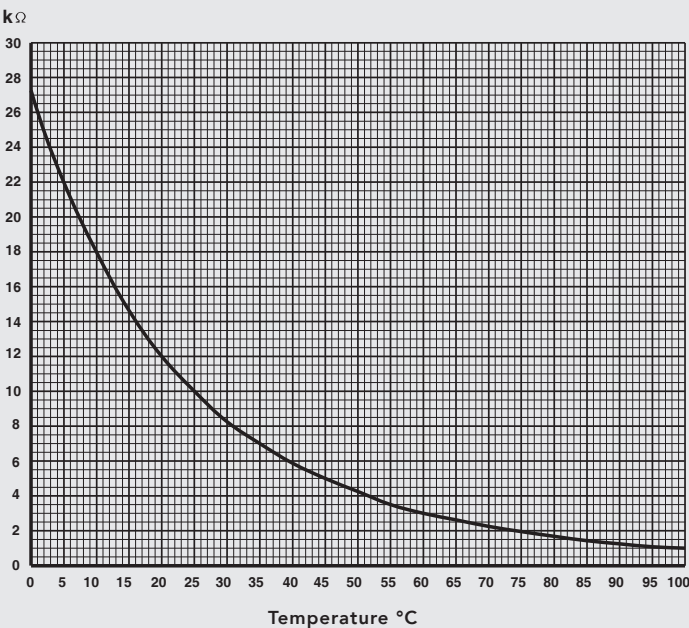
Pt1 kΩ sensor resistance



Temperature diagram

- Codes:**
- SGG 001
 - SHF 001
 - STF 001
 - STH 001
 - STA 002
 - SAB 002
 - SAE 002
 - SIH 002
 - SAF 002
 - SCH 002

NTC 10 KΩ sensor resistance



Temperature diagram

- Codes:**
- SAA 010
 - SAB 010
 - SAB 011
 - SAB 210
 - SAF 010
 - SAF 110
 - SCB 110
 - SCB 210
 - SCH 010
 - SIH 010
 - SIR 010
 - STA 010
 - STT 010
 - STV 010

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REMOTE MONITORING, TELECOSTER SYSTEMS

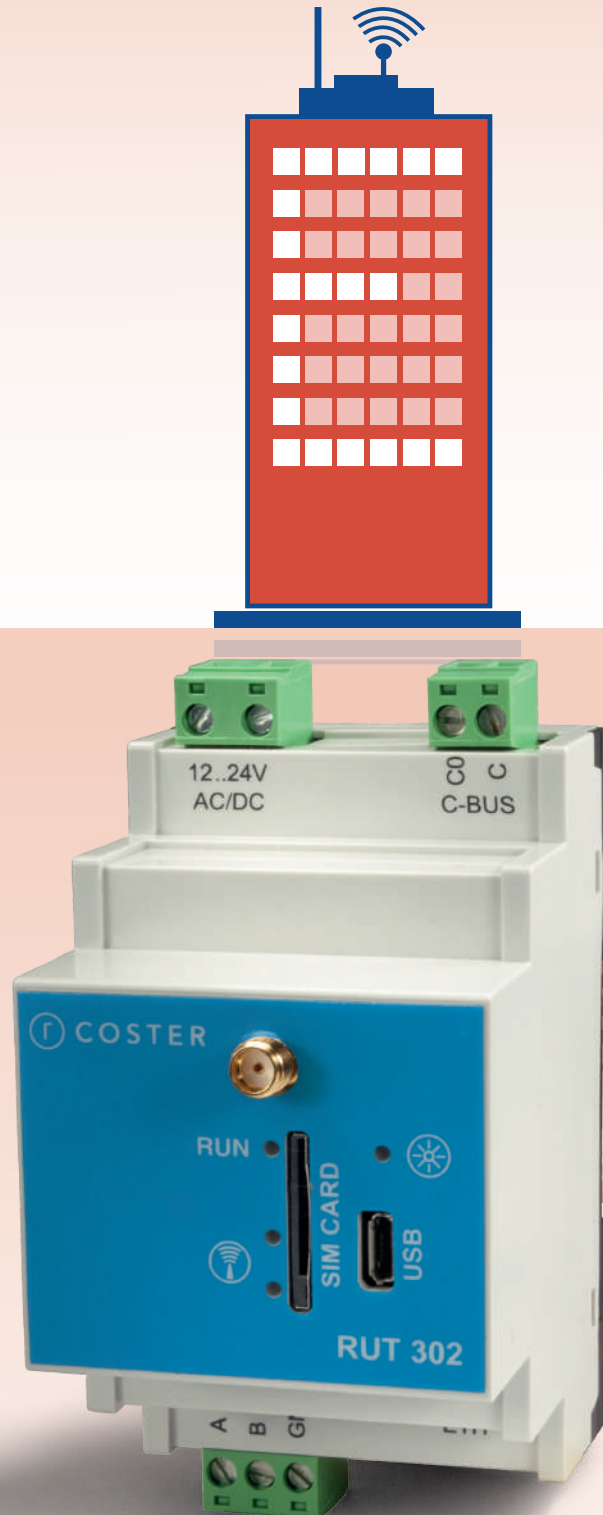
COMMUNICATION PROTOCOLS



M-Bus



BACnet™





CW...

WEB GARAGE LICENSES

Licence for BMS based on a number of points.
The purchase is a "one-off" and does not require periodic subscriptions.
Provides maximum flexibility in the management of integrated points in terms of protocol and configuration of their properties (historicisation, visualisation, alarms, etc.)

CWS 200	Server License Version 200 controlled points (of which up to 40 points historicized)
CWS 500	Server License Version 500 controlled points (of which up to 100 points historicized)
CWS 01K	Server License Version 1000 controlled points (of which up to 200 points historicized)
CWS 02K	Server License Version 2000 controlled points (of which up to 400 points historicized)
CWS 05K	Server License Version 5000 controlled points (of which up to 1000 points historicized)
CWS 10K	Server License Version 10000 controlled points (of which up to 2000 points historicized)
CWS 50K	Server License Version 50000 controlled points (of which up to 10000 points historicized)
CWS 1HK	Server License Version 100000 controlled points (of which up to 20000 points historicized)
CWC 100	Add-On License for Server Version. Increase by 100 points the number of historicized points of the basic license (Server Version only)
CWC 01K	Add-On License for Server Version. Increase by 1000 points the number of historicized points of the basic license (Server Version only)

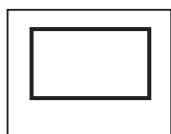


CW..._MAINT

WEB GARAGE LICENSE RENEVAL

Annual licence renewal for access to updates, weather application or connection via Edge2Cloud to the Coster Connect service

CWS 200_MAINT	Version Maintenance Server Licence 200 controlled points
CWS 500_MAINT	Version Maintenance Server Licence 500 controlled points
CWS 01K_MAINT	Version Maintenance Server Licence 1000 controlled points
CWS 02K_MAINT	Version Maintenance Server Licence 2000 controlled points
CWS 05K_MAINT	Version Maintenance Server Licence 5000 controlled points
CWS 10K_MAINT	Version Maintenance Server Licence 10000 controlled points
CWS 50K_MAINT	Version Maintenance Server Licence 50000 controlled points
CWS 1HK_MAINT	Version Maintenance Server Licence 100000 controlled points



PPC 102

PANEL PC TOUCH SCREEN

Panel PC with touch screen for panel or wall installation complete with Win 10 64 bit operating system.

Note: For system solutions with a higher number of license points than those indicated, ask the sales office for a quotation

PPC 102 Panel PC with 10" capacitive touch screen for Web Garage licence up to 2000 points



EHC 602

EDGE DEVICE, SUPPORTS BACNET AND MODBUS PROTOCOLS

Device used to install the Webgarage licence inside the switchboard.

For further details, see page 14

EHC 602 Web Garage licence up to 2000 points excluded



SWC 701

FREE REMOTE CONTROL SOFTWARE DOWNLOADABLE FROM THE INTERNET

Application software for managing communications between central computer and peripheral units (central heating systems, plants). Downloadable from the website www.costergroup.eu after registration.

MANUAL AND INFORMATION ON THE WEBSITE: www.costergroup.eu, product menus, remote control documentation.

SWC 701 Remote control software via RS232 and C-Bus protocol. free download



CosterTools

YLC SYSTEM REMOTE CONTROL SOFTWARE

Remote control of monitoring and control for devices of the Building Controls line YLC System:

- via telephone line (landline, GSM)
- ETHERNET network

Downloadable from the website www.costergroup.eu after registration

CosterTools Remote control program for Multiclima system. free download


COMMUNICATION
PROTOCOLS


RUT 302

ROUTER 4G

4G router with RS 485 and C-BUS serial communication ports and Ethernet port for communication with YHC and ARE. Configurable via integrated webserver. 12..24 Vdc and Vac power supply
In 3 DIN rail module enclosure.

RUT 302 Router 4G

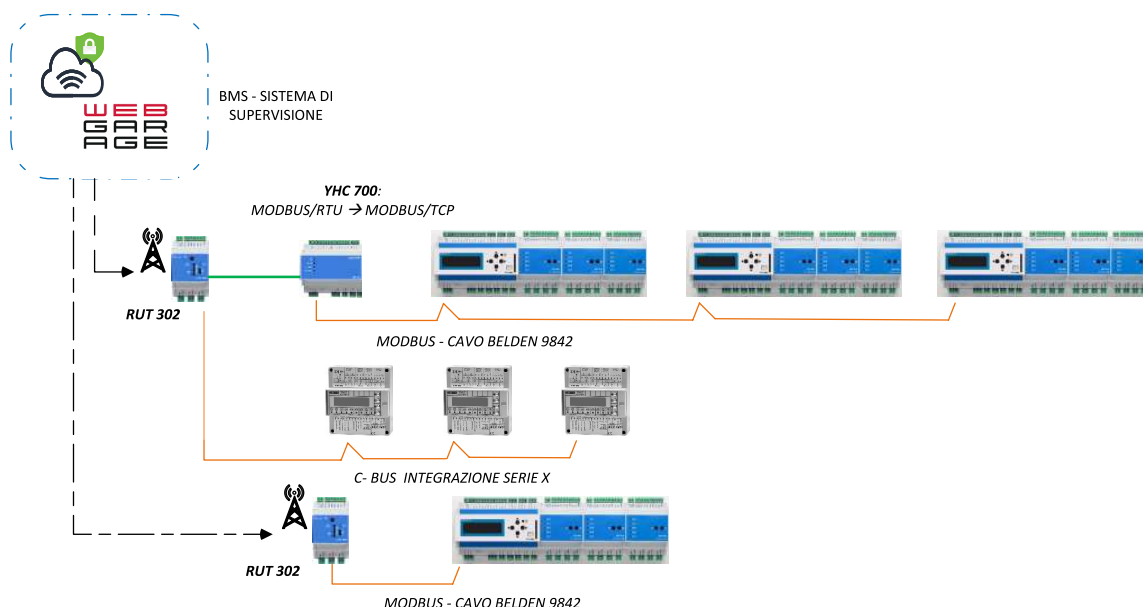
RELATED PRODUCTS

ETH 338 Ethernet cross-over cable for RUT 302 and ARE 338 direct connection

APA 500 SMA antenna extension, length 5 metres

ANT 500D Directional antenna

Examples of system architecture


COMMUNICATION
PROTOCOLS


ARE 338

ETHERNET/C-BUS CONVERTER

Connection of devices equipped with C-Bus to the Ethernet. Only for X-series control units.

ARE 338 Ethernet / C-Bus converter

RELATED PRODUCT

TCB 908 Tester for testing and commissioning of remote connections



COMMUNICATION
PROTOCOLS



NB: replaced GSM 668

KIT 668

KIT AS AN ALTERNATIVE TO GSM 668

Modem GSM/GPRS complete with 12 V power supply unit and C-Bus/ModBus converter.

KIT 668 RS 232 - RS 485 converter

RELATED PRODUCTS

APA 500 SMA antenna extension, length 5 metres

ANT 500D Directional Antenna



MDM 001

DESKTOP MODEM

Desktop modem for Clima Office and SWC 701

MDM 001 Desktop modem

RELATED PRODUCT

ADA 232 RS232 9 pin/USB adapter



COMMUNICATION
PROTOCOLS



MDM 232

GSM MODEM

The MDM 232 modem ensures two-way communication between the control units YLC 880, YHC 700 and the supervisory system via an M2M SIM CARD with 2G connectivity.

Antenna included

MDM 232 Modem GSM / 3G modem

RELATED PRODUCTS

APA 500 SMA antenna extension, length 5 metres

ANT 500D Directional antenna



SWH 005

5 PORT ETHERNET SWITCH

SWH 005 5 Port Ethernet Switch


COMMUNICATION
PROTOCOLS


GTW 232485

RS 232 - RS 485 CONVERTER

Device enabling conversion between RS232 and 485 serial.
It ensures bidirectional communication between the units connected to it.
It can only be used with YLC 740 and YLC 780 controllers.

GTW 232485 RS 232 - RS 485 converter



RUT 002

COMPACT 4G ROUTER

With high-speed wireless and Ethernet connections.
The external connectors allow to connect the desired antennas and easily find the best signal strength

RUT 002 4G router with Ethernet port


COMMUNICATION
PROTOCOLS


RS 232

ACB 332

LOW POWER C-BUS AMPLIFIER AND CONVERTER

It amplifies the C-Bus line, with speeds from 1200 to 9600 bps.
It converts C-Bus to RS 232 for connection to PC or modem with RS 232,
but without C-Bus. Only for X-series controllers.

ACB 332 Low power c-bus amplifier and converter


COMMUNICATION
PROTOCOLS


RS 232

PCB 332

MEDIUM POWER C-BUS AMPLIFIER AND CONVERTER

It amplifies the C-Bus line, with speeds from 1200 to 9600 bps.
It converts C-Bus to RS 232 for connection to PC or modem with RS 232,
but without C-Bus. Only for X-series controllers

PCB 332 Medium power C-bus amplifier and converter



COMMUNICATION
PROTOCOLS

C←BUS RS 232

PCB 432

HIGH POWER C-BUS AMPLIFIER AND CONVERTER

Alt amplifies the C-Bus line, with speeds from 1200 to 9600 bps.
Converts C-Bus to RS 232 for connection with PC or modem with RS 232, but no C-Bus.
Extensive connection possibilities with devices, local or remote PC, and modem.
Only for X-series controllers.

PCB 432 High-power c-bus amplifier and converter

RELATED PRODUCT

ACX 232 Plug-in test for devices reprogramming



COMMUNICATION
PROTOCOLS

C←BUS RS 232

GVC 348

C-BUS SPEED CONVERTER BETWEEN 1200...9600 BPS AND VICE VERSA

It amplifies and realigns the C-Bus, with speeds from 1200 to 9600 bps.
It allows the connection of devices with different C-Bus speeds to the same line.
Only for X-series controllers.

GVC 348 C-bus speed converter between 1200...9600 bps and vice versa



COMMUNICATION
PROTOCOLS

C←BUS

UCO 318

ON-OFF ONE CHANNEL TIME PROGRAMMER

Allows an On-Off contact to be programmed with any time schedules.

Only for X control units

UCO 318 ON-OFF one channel time programmer



COMMUNICATION
PROTOCOLS

C←BUS

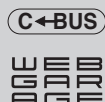
UCO 638

ON-OFF THREE CHANNEL TIME PROGRAMMER

Allows 3 On-Off 3-contacts to be programmed with any time schedules:

Only for X control units

UCO 638 ON-OFF three channel time programmer


COMMUNICATION
PROTOCOLS


UAC 32.

UNIT FOR ACQUISITION AND LOGGIN ALARM, STATUS AND COUNTS, WITH 8 ON-OFF INPUTS

It can collect 8 On-Off signals of alarm, status, time counts and number of pulses.
Only for X control units

UAC 328 Unit for acquisition and loggin alarm, status and counts 230 V AC

UAC 324 Unit for acquisition and loggin alarm, status and counts 24 V AC


COMMUNICATION
PROTOCOLS


ULT 3..

TEMPERATURE RECORDING UNIT

It allows 4 temperature measurements/alarms to be collected and recorded.
Programmable minimum and maximum alarms.

Sensor that can be connected

		NTC 10 kΩ 0...99 °C	NTC 10 kΩ 0...40 °C	NTC 1 kΩ -40...40 °C
ULT 328	Temperate recording unit.	2	1	1
ULT 348	Temperate recording unit	4	–	–
ULT 348/S1	Temperature recording unit for 4 room sensors used for air handling units	–	4	–

RELATED PRODUCTS

SAA 010	Watertight ambient temperature sensor (0...99 °C)
SAA 001	Watertight ambient temperature sensor (-40...40 °C)
SAE 001	Outside temperature sensor (-40...40 °C)
SCH 010	Surface temperature sensor (0...99 °C)
SIH 010	Immersion temperature sensor with brass thermowell (0...99 °C)
SIH 010 Inox	Immersion temperature sensor with stainless steel thermowell (0...99 °C)
SIR 010	Direct immersion quick sensor (0...99 °C)
SAF 010	Cable type temperature sensor (0...99 °C)
STA 010	Temperature sensor for air channels (0...99 °C)
STA 001	Temperature sensor for air channels (-40...40 °C)
SAB 010	Room temperature sensor (0...40 °C)
STT 010	Temperature sensor for terminal units (0...40 °C)



COMMUNICATION
PROTOCOLS

C-BUS

UML 318

UNIT FOR MEASURING & RECORDING 0...5 VOLT
OR 0...10 VOLT OR 4...20 mA SIGNAL AND ALARMS

It transforms an analogue 0...5 Volt, or 0...10 Volt, or 4...20 mA signal into the measurement of a physical variable.

It includes: measurement, alarms and recording the value of the physical quantity.

Suitable for processing the signal of the:

- LGP ... pressure level sensor
- SDA ... differential pressure sensor for air
- other sensors with analogue output of any kind.

UML 318 Measuring and recording units for analogue signals

RELATED PRODUCTS

LGP 250 Pressure level sensor (0...0.25 bar)

LGP 500 Pressure level sensor (0...0.50 bar)

SDA 700 Differential pressure sensor for air

..... Any sensor with 0...5 Volt DC, 0...10 Volt DC, 4...20 mA output



COMMUNICATION
PROTOCOLS

C-BUS

ACX 232

PLUG IN TEST FOR DIN DEVICES TYPE X ...

It allows a local PC to be connected to a COSTER device equipped with a "SLOT" (slot). It allows, where applicable, to update the devices software with the software tool.

ACX 232 Plug in test for TYPE X ... DIN devices



COMMUNICATION
PROTOCOLS

C-BUS

ACB 4..

PLUG IN FOR COMMUNICATION
VIA C-BUS FOR X SERIES CONTROLLER

They allow remote control via C-Bus of "C-Bus ready" devices.

The documentation and front panel of each device indicate the required model of ACB 4... plug-in.

ACB 400 Plug-in for communication via C-Bus

ACB 460 Plug-in for communication via C-Bus

ACB 468 Plug-in for communication via C-Bus


COMMUNICATION
PROTOCOLS

C-BUS M-BUS

CMC 422 - 428

M-BUS/MODBUS - M-BUS/C-BUS PROTOCOL CONVERTER

M-Bus/ModBus or M-Bus/C-Bus protocol converter for acquiring thermal energy meter data.

In 4 DIN rail module enclosure.

Power supply

CMC 422 Wirebus / MBus converter for up to 5 devices 12...24 VAC/VDC

CMC 428 MBus / ModBus converter for up to 5 devices 230 VAC

RELATED PRODUCT

MWM 000 M-Bus/Wireless M-Bus converter

COMMUNICATION
PROTOCOLS

RS 232

ACS 232

RS 232 CABLES WITH DB 9 MALE (FOR MODEM OR SIMILAR)

It is a 0.5 metre cable for connecting 3 RS 232 output terminals, to a PC or modem.

ACS 232 RS 232 cable with DB 9 male (for modem or similar)

COMMUNICATION
PROTOCOLS

C-BUS RS 232

ACB 232

C-BUS TO RS 232 CONVERSION CABLE OF A PC NO MODEM

It is used to connect up to 5 COSTER devices equipped with C-Bus to the PC. Not to the modem, since the power supply is missing.

ACB 232 C-bus to RS 232 connection cable of a PC
NO MODEM

COMMUNICATION
PROTOCOLS

C-BUS RS 232

ACB 232/S1

C-BUS TO RS 232 CONVERSION CABLE OF A PC OR MODEM POWERED BY COSTER DEVICES

It is used to connect up to 5 COSTER devices equipped with C-Bus to the PC, or to a modem, as it can be directly powered by a device with a 12 V auxiliary power supply -. (e.g.: UCO 318 and UCO 638).

ACB 232/S1 C-bus to RS 232 connection cable of a PC or modem
powered by Coster devices

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COSTER

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EDOLO - NOVI LIGURE
DOSSON DI CASIER - DERBY - UK

