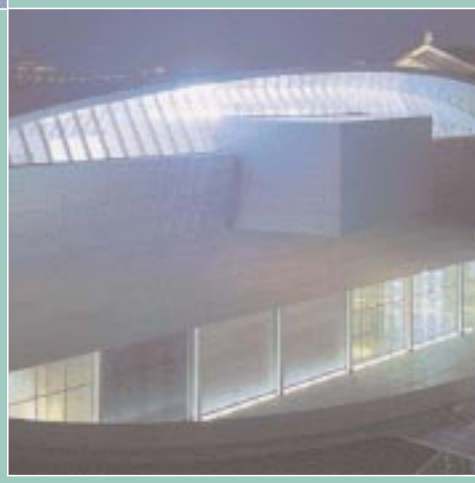
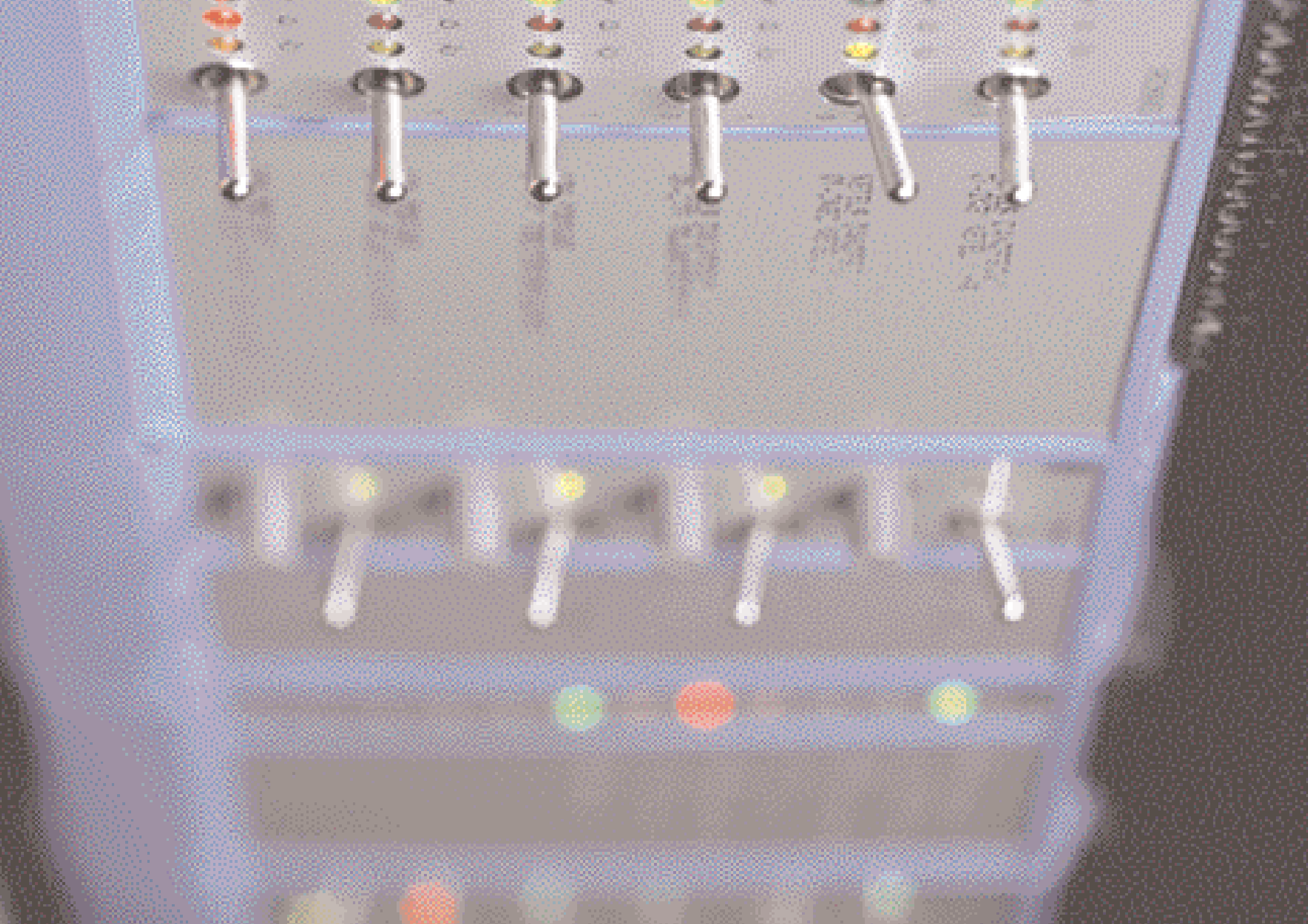
Compri HX



PRIVA Building Intelligence



Compri HX

Published: March 2003

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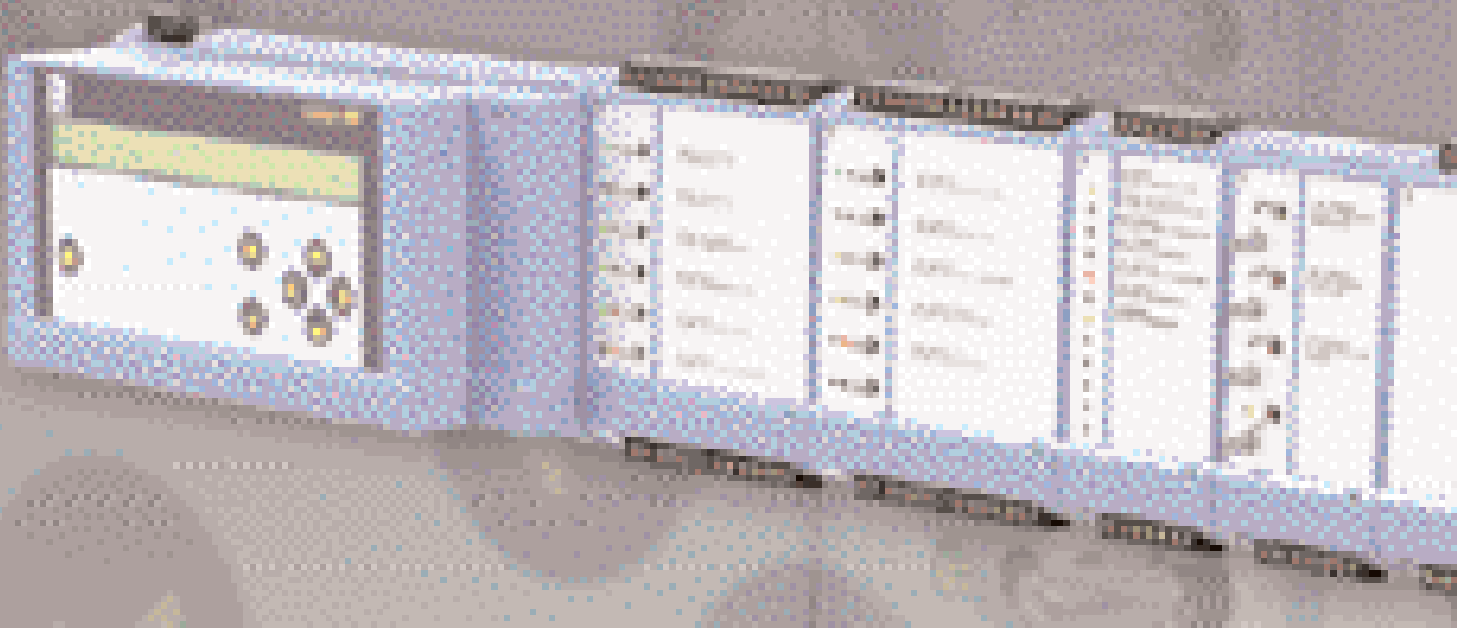
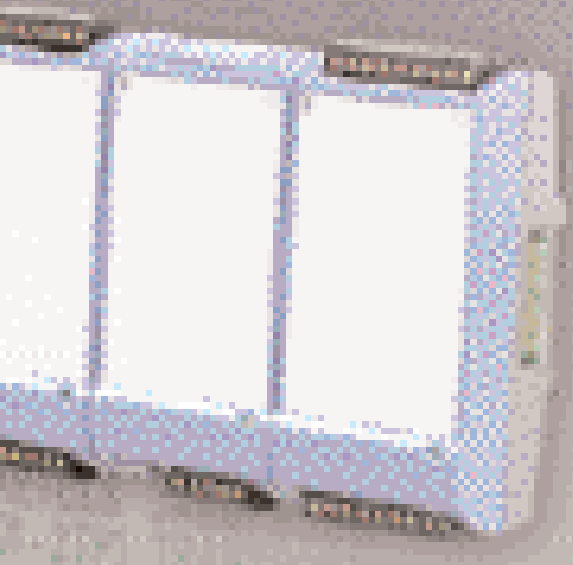
Compri HX...



Quality without compromise

- **Ultra-modern controller**
- **From no inputs and outputs to hundreds**
- **Suitable for any installation, great or small**
- **Ideal for multi-site applications**
- **Flexible modular system**
- **Clear product range**
- **Operated via display or PC**
- **Integrated override switches**
- **Lightning fast engineering, assembly and service**
- **Embedded Internet technology**
- **E-mail services and browser operation**
- **Open to many communication protocols**
- **Operational reliability guaranteed**
- **Ideally prepared for the future**
- **100% Priva Top Control compatible**

...a smart solution for efficient building control



Priva Compri HX is an ultra-modern controller for building control, process control and telemetry. This controller is suitable for managing small to extremely large automated control systems.

Custom-made for each installation

Thanks to its modular structure, the Compri HX can be easily customized to every installation. Furthermore, the system can easily be extended at a later date. The input and output modules (I/O modules) of the Compri HX are universal and multi-functional, which means they can be used in most applications. All settings can be viewed and modified on the accompanying display.

Embedded Internet technology

The Compri HX allows you to communicate with and control all the systems in a building. Modern Internet technology and the use of widely available standards play a key role in this process. All forms of Internet and Intranet applications, including wireless, can easily be combined using the Priva system. This even includes operating it via a standard browser. The Compri HX is also perfectly prepared for the future.

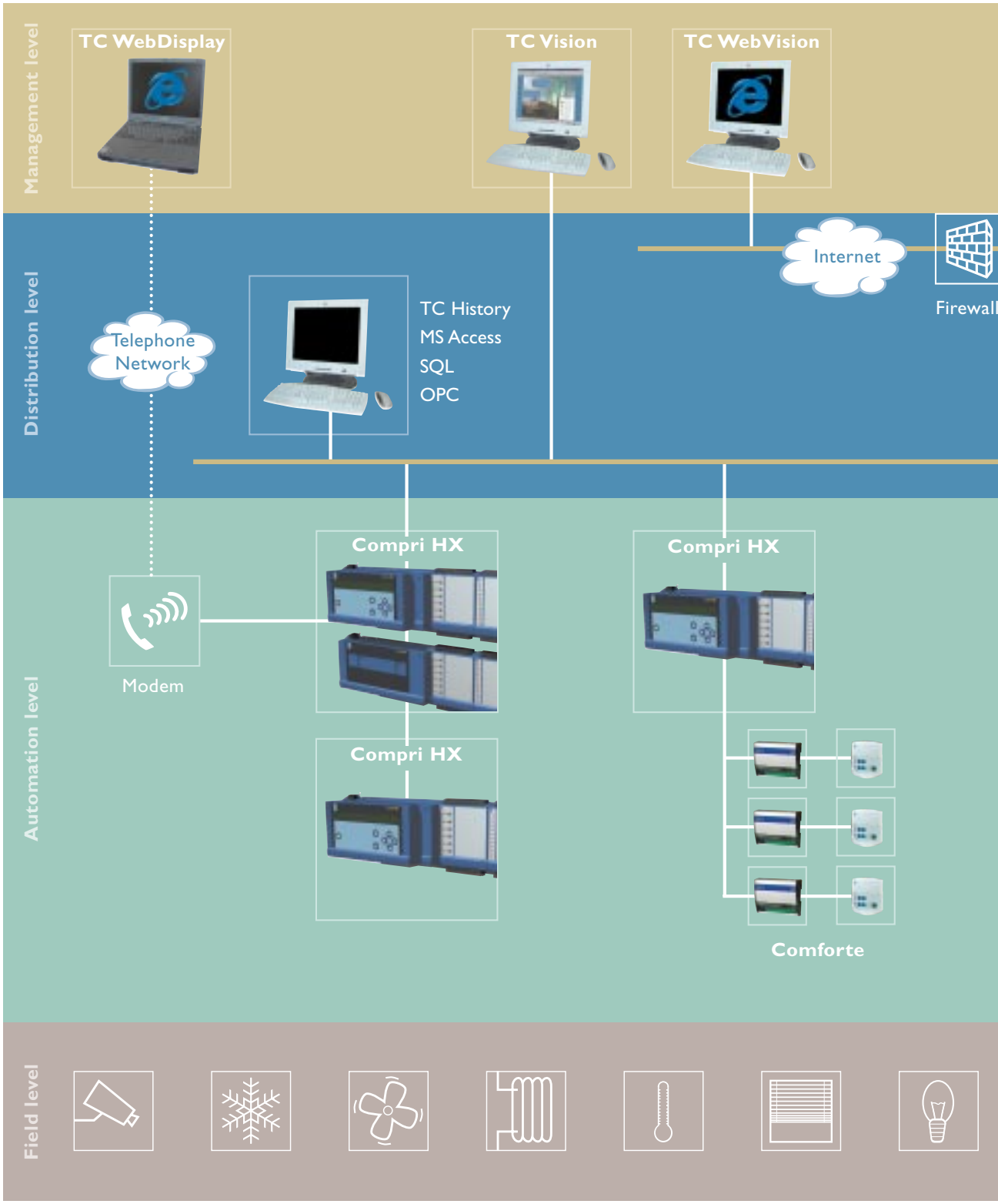
Reliable and safe

The high processing speed, the spacious memory and many built-in safety features of the Compri HX guarantee the reliability and continuity of the Priva building control system. The automated control system can be accessed at any time as required by means of integrated override switches

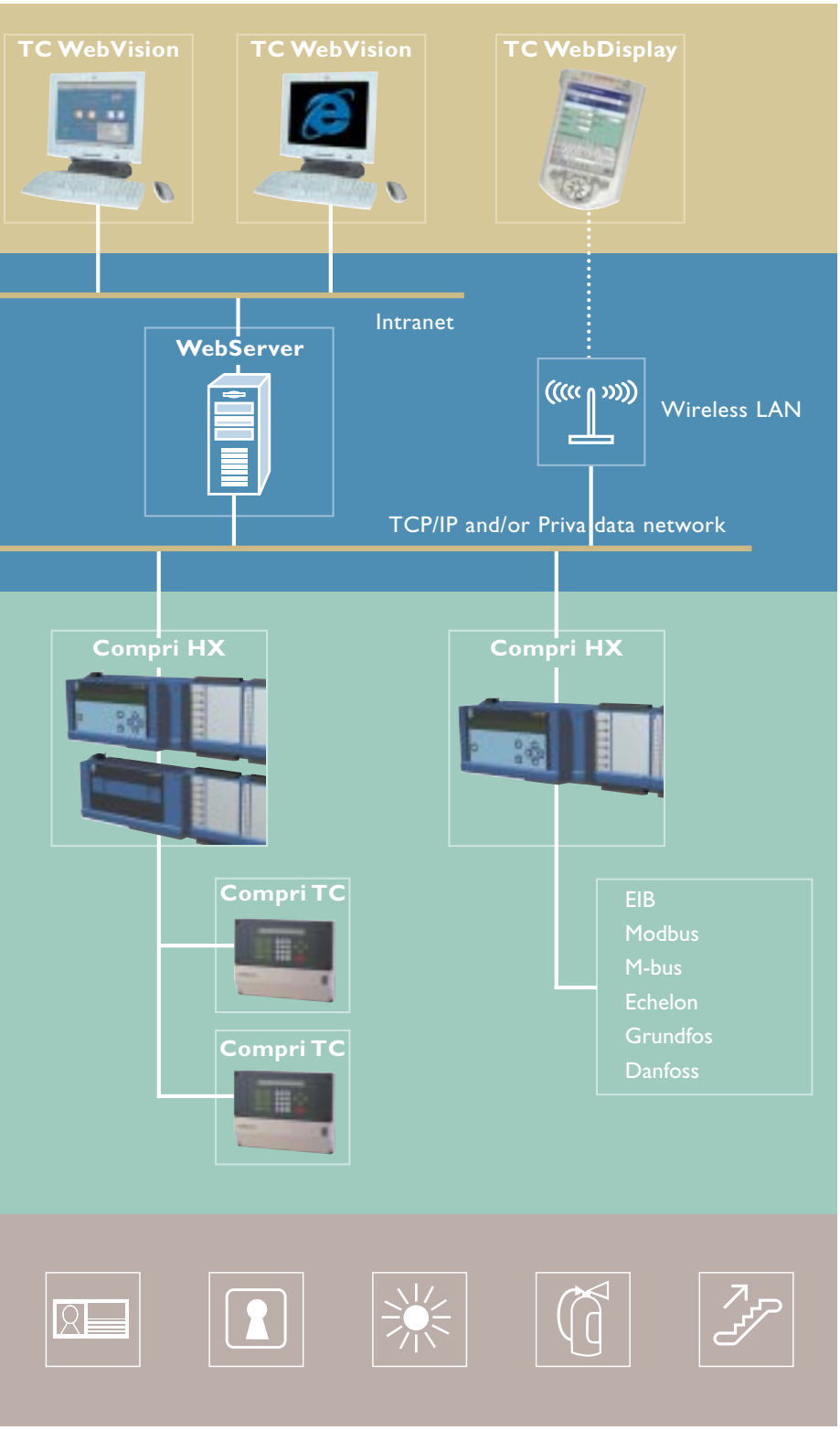
100% Priva Top Control

All information from the Compri HX can be viewed, modified and analysed using the Priva Top Control software. Various graphical packages are available for this purpose, suitable for integrated installation management, individual room control, historical storage and failure messages. Priva Top Control also manages calculations, quotations, configuring, programming, simulation and commissioning.

Prepared...


Management level
TC WebDisplay
TC Vision
TC WebVision
Distribution level
Internet
Firewall
Telephone Network
TC History
MS Access
SQL
OPC
Automation level
Compri HX
Compri HX
Modem
Compri HX
Comforte
Field level

...for any network environment



Integrating systems

The Compri HX can handle the communications and exchange of information with all the installations and systems relevant for a building manager. To this end, the Priva system supports many popular standards such as M-bus, Modbus, Echelon/LonMark, EIB and OPC. Links are possible with virtually all controllers and control systems that use these standards. The RS232, RS485 and the TCP/IP Ethernet connections of the Compri HX are used for this purpose. All information from calorimeters, CHP units, chillers, frequency controllers, pumps and lighting, for example, can easily be incorporated into the Priva system.

The fact that the Compri HX supports so many types of field equipment provides huge benefits particularly for upgrades and overhauls of existing building control systems. Virtually all field equipment in previously installed systems can continue to be used. Existing controls in other wings of the building can also be handled and integrated into the Priva system.

Individual room control

Priva even provides a suitable solution for integrating a system for individual room control: the Comforte. This multi-functional room controller can be deployed as a stand-alone unit, or can also be incorporated into a network controlled by the Compri HX.

Combining with previous generations

Priva products are nearly always backward compatible. This also applies in respect of the Compri HX, which interfaces easily to earlier generation controllers (Compri TC and older). It's plain to see: Priva develops its products above all to be investment-conscious!

Smart system structure

Customized controller

The Compri HX is modular in structure, allowing you to assemble an optimally customized controller for any building control project. If in time the automatic control installation for the building is upgraded, the Compri HX can 'grow with it' without difficulty.

A clear range of products

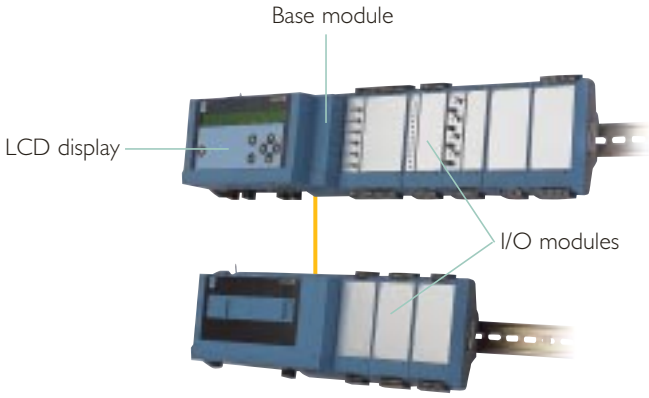
The Compri HX is made up of the following modules:

- Base module
- Input and output modules (I/O modules)
- Display

These modules represent a well-organized and unique range allowing you to assemble controllers with none or hundreds of inputs and outputs. When all the room in a Compri HX has been used up, which means that it is no longer possible to further expand the system with modules, the building control system can simply be expanded with another Compri HX. The controllers can be linked to each other by a variety of (network) connection options.

User-friendly updating

One important benefit of the modular structure is that when updating the Compri HX or upgrading to a new system configuration, all the hardware does not have to be replaced at the same time. In such instances, it is possible to choose to replace only the central component of the controller (the base module) ensuring that the whole system is once again up-to-date with a relatively low investment overhead.



Straightforward assembly

Just click together and…

The Compri HX has a functional design so that the amount of room required in the control panel is always kept within limits. Door assembly is also an option thanks to its shallow installation depth. All modules can easily be attached to a DIN rail. The modules are designed to snap together on the DIN rail to make the necessary connections. Vertical assembly is also possible as well as horizontal assembly. No jumpers or dipswitches are needed to address the input and output modules, which means costly mistakes are avoided.

Lightning fast to maintain

In the event of a possible fault in the Compri HX, the defective component can be quickly replaced without the need for tools. The modules have plug-in, coded terminals, which can easily be interchanged and allow you to work with preassembled technologies. Resulting in fast service, extremely short down-times and a far smaller chance of faults.

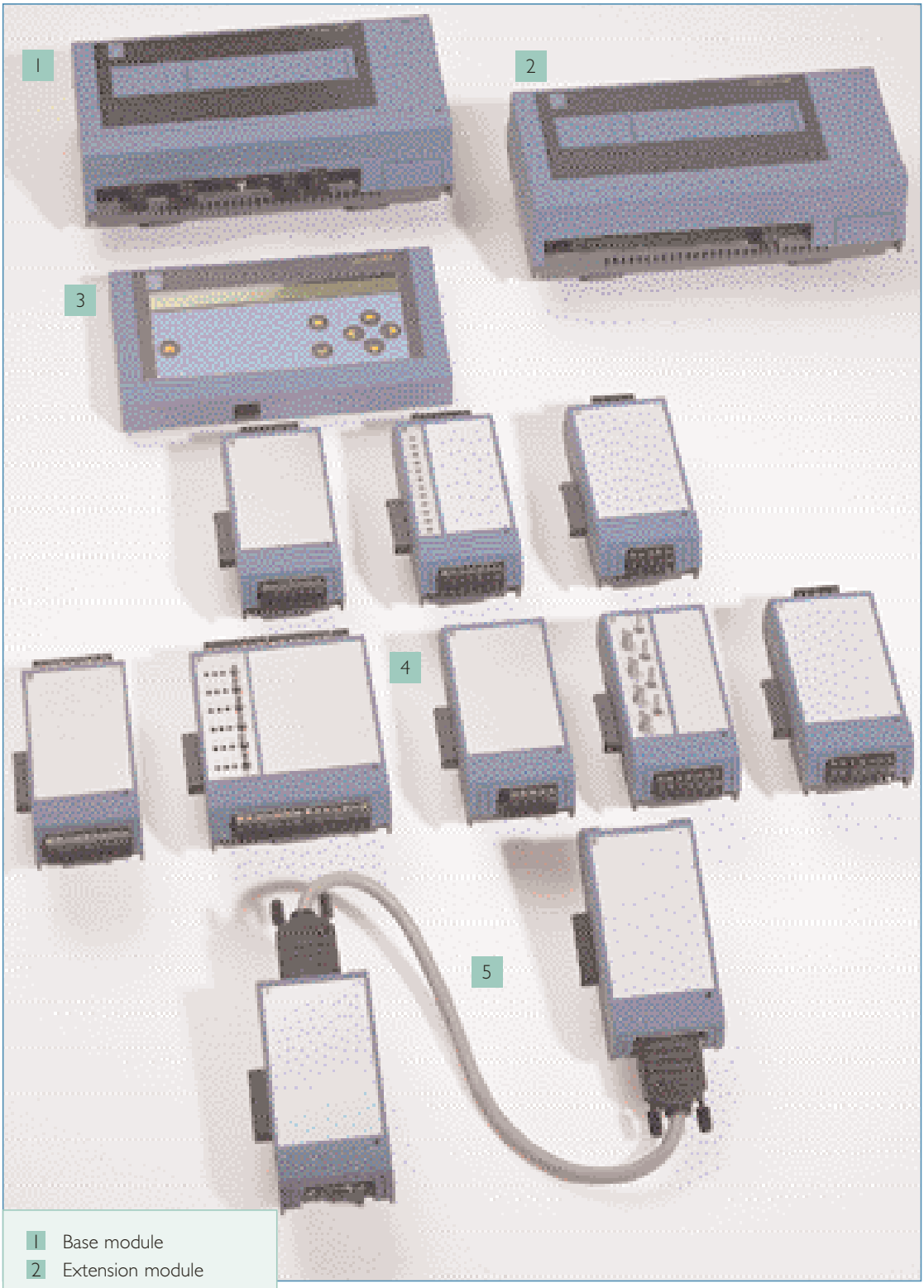
No shielded cabling necessary

Because of the use of filtering programming and the high degree of accuracy of the analog inputs, shielded cabling does not have to be used. When carrying out a renovation, this provides considerable benefits given that the existing cabling can then be used.

Supply

All voltages for the Compri HX are standardized to 24 VAC. This means that a standard 24 VAC trans-former is sufficient for the power supply to the controller and the override switches, as well as controls and measurements.

One product range



1 Base module
2 Extension module
3 LCD display
4 Input and output modules
5 Bus splitter module

Easy to select

The abbreviations for the modules have the following meanings: The modules that make up the Compri HX represent a well-organized range. Above all, this represents a considerable time saving. Just think about rapid selection, short learning times, straightforward configuration and limited searching time when faults occur.

The Compri HX range

Base module	
Base module Compri HX 3	Module with micro processor and I/OS onboard
Base module Compri HX 4	Extension module with micro processor and I/OS onboard
Base module Compri HX 8E	Extension module with micro processor and Ethernet port
Extension module XMI	Module to connect additional I/O modules to the Compri HX 8E

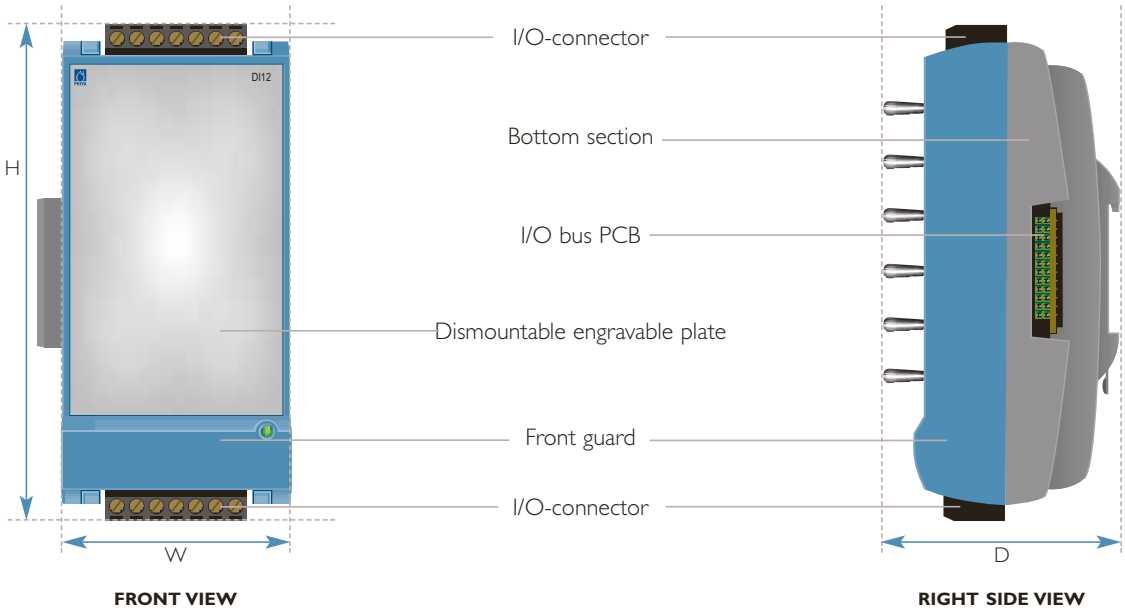
Input and output modules	
Digital input module DI12	I/O module with 12 digital inputs
Digital input module with signaling DI12S / DI6S	I/O module with 12 / 6 digital inputs and LED signalling
Universal input module UI8	I/O module with 8 universal (Analog or digital) inputs
Relay output module RO8 / RO4	I/O module with 8 / 4 relay outputs
Relay output module with manual override RO6MS	I/O module with 6 relay outputs with intervention, 6 x 2 freely applicable digital inputs and LED signalling
Relay output module with manual override RO6MOS / RO3MOS	I/O module with 6 / 3 relay outputs with intervention, 6 / 3 x 2 digital inputs and LED signalling
Triac output module SO8	I/O module with 8 solid state triac outputs
Analog output module AO4	I/O module with 4 Analog outputs
Analog output module with manual override AO4M / AO2M	I/O module with 4 / 2 Analog outputs with intervention
Bus splitter module BS1	Module to split the internal I/O bus

Display	
Compri control terminal	Local LCD display for operating the Compri HX

The Compri HX range is as follows:

AO	Analog output	OS	Only signalling
BS	Bus split	RO	Relay output
DI	Digital input	S	Signalling (LED)
E	Ethernet	SO	Solid-state output (triac)
HX	Highly expandable	UI	Universal input
LCD	Liquid Crystal Display	XM	Extension module
M	Manual (intervention)		

General data



The Compri HX complies with the European directives governing safety, immunity and radiation for domestic and industrial environments. The table set out below provides an overview of the European standards (EN), which apply in relation to the Compri HX. The picture above shows out of which general components the Compri HX modules are (can be) made up of. The picture also shows how the dimensions of modules (W, H, D) are designated in this catalogue. The tables below show the general specifications of the Compri HX.

CE marking

Low voltage directive 73/23/EEC	
EN 61010-1	Safety requirements for electrical equipment for measurement, control and laboratory use - General requirements
EMC directive 89/336/EEC	
EN 61000-6-2	Generic standards - Immunity for industrial environments
EN 55024	Information technology equipment - Immunity characteristics - Limits and methods of measurement
EN 50081-1	Generic emission standard - Residential, commercial and light industries
EN 55022 (class B)	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
EN 61000-4-2	Testing and measurement techniques - Electrostatic discharge immunity test
EN 61000-4-3	Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test
EN 61000-4-4	Testing and measurement techniques - Electrical fast transient/burst immunity test
EN 61000-4-5	Testing and measurement techniques - Surge immunity test
EN 61000-4-6	Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
EN 61000-4-11	Testing and measuring techniques - Voltage dips, short interruptions and voltage variations immunity tests

Housing

Structure (For the structure of the Compri LCD display see the relevant section)	Bottom section Dismountable front guard Engraved plate (only I/O modules)
Installation (For installation of the Compri LCD display see the relevant section)	Can be snapped on DIN rail
Housing material	Blend of ABS and polycarbonate
Bottom section colour	Grey (PMS 432)
Front guard colour	Blue (PMS 646)
Engraved plate material	ABS (Formatour II, colour combination 2086)
Engraved plate thickness	0.8 mm
Engraved plate colour (top coat/bottom coat)	Silver/glossy black
Alternative engraved plate (option)	Transparent cover for changeable installation code
Protection class	IP20
Fire resistance	HB
Recycle code	7

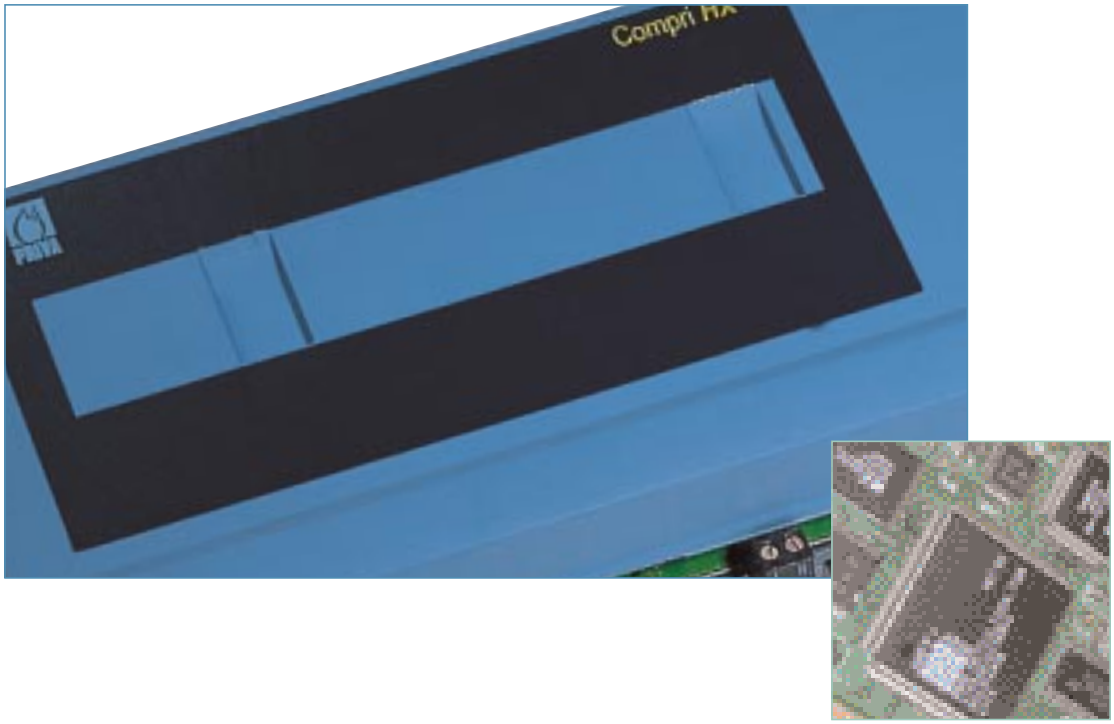
Connections

Connector type for power supply and I/O	Plug-in screw connection
Maximum core diameter of I/O	Cabling 2.5 mm^2 (solid or flexible)
Core diameter of power supply and earth cabling	0.75 to 2.5 mm^2 (solid or flexible)
Connector designation	An explanatory abbreviation is printed on all connectors.

Installation and ambient requirements

Required location	Control panel, only accessible for skilled personnel
Installation	On DIN rail in control panel: • Horizontally • Vertically (note alternative specification for triac output module SO8)
Allowed ambient temperature in normal operation	0 to 50°C
Allowed transfer/storage temperature	-20 to 70°C
Allowed relative ambient humidity	<90 % at 30°C (not condensing)
Installation category	INSTALLATION CATEGORY (OVERVOLTAGE CATEGORY) II
Allowed ambient pollution	POLLUTION DEGREE 2

The base module...



The base module represents the heart of the Compri HX controller. This module executes controls and communicates with PCs, data networks and other systems.

32-bit microprocessor

The base module contains a powerful 32-bit microprocessor, which guarantees high performance. The unprecedented processing speed and computing power seamlessly fulfill the requirements, which modern, integrated installations demand of a controller.

RAM memory and backup

Large quantities of data, such as settings, setting changes, (failure) messages, operating hours, energy consumption and trend logs, can be stored in the large RAM memory in the base module. This provides a sound basis for (subsequent) data analyses. Thanks to the backup battery, all of this data continues to be safeguarded for extended periods of time even in the event of a power failure.

Real Time Operating System

The base module operates using a standard Real Time Operating System (RTOS). This ensures not only quality and reliability, but also good integration with common ICT infrastructures. An RTOS also guarantees that you have a reliable system - insensitive to viruses - for time-critical processes such as control and communication.

Flash memory

When the voltage fails, the program code continues to be safeguarded in the base module thanks to the flash memory in which it is stored. This advanced memory architecture also makes it possible to install new control software in a system remotely without having to shut the system down. This saves time and (service) costs. If the program code or control strategy is modified, then the new data always go first into the free memory bank. There it is tested thoroughly before the system switches over to it.

...a powerful communication centre

The base module comes in three models, each with their own application area:

Compri HX 3	Compri HX 4	Compri HX 8E
• For smaller installations	• for smaller and medium-sized installations	• for large and medium-sized installations
• 3 serial ports onboard I/OS	• 3 serial ports	• 4 serial ports
• onboard I/OS	• integrated I/O	• Ethernet port
	• Connection for 4 I/O modules	• Connection for 40 I/O modules

In order to connect the Compri HX 8E to more than 10 I/O modules, one has to use extension module XM1. Via one extension module 10 I/O additional modules can be connected to Compri HX 8E.
The maximum number of I/O modules per Compri HX 8E is 40.

Serial communication

PCs, modems, links, network connections to other Compris, the Compri LCD display, etc. can be connected to the serial ports (RS232 and RS485) of the base module.

TCP/IP

The base module supports TCP/IP, a network protocol, which forms the basis of practically all modern networks. This effectively allows you to create a range of links both now and in the future. If a network has been created between different buildings or production units, then a multi-site building control system is within reach. The Ethernet port on the Compri HX 8E also provides rapid access to the network.

Browser control

The base module is supplied as standard with TC WebDisplay browser controls. TC WebDisplay creates web pages using the controller and (any) other connected controller settings. Using a PC or a PDA with a browser (Internet Explorer 5.5 and higher), these web pages can be viewed and the settings modified. Because a standard browser is used, which is used throughout the world, no project-dependent files are required. This means that the building control system can be accessed anywhere and at any time.

Wireless

The base module also supports a GSM modem ensuring that wireless communication is a possibility. This is useful when there is a mobile or temporary installation, but also when a fixed telephone line is unavailable or may not even be wanted - take for example an industrial environment.

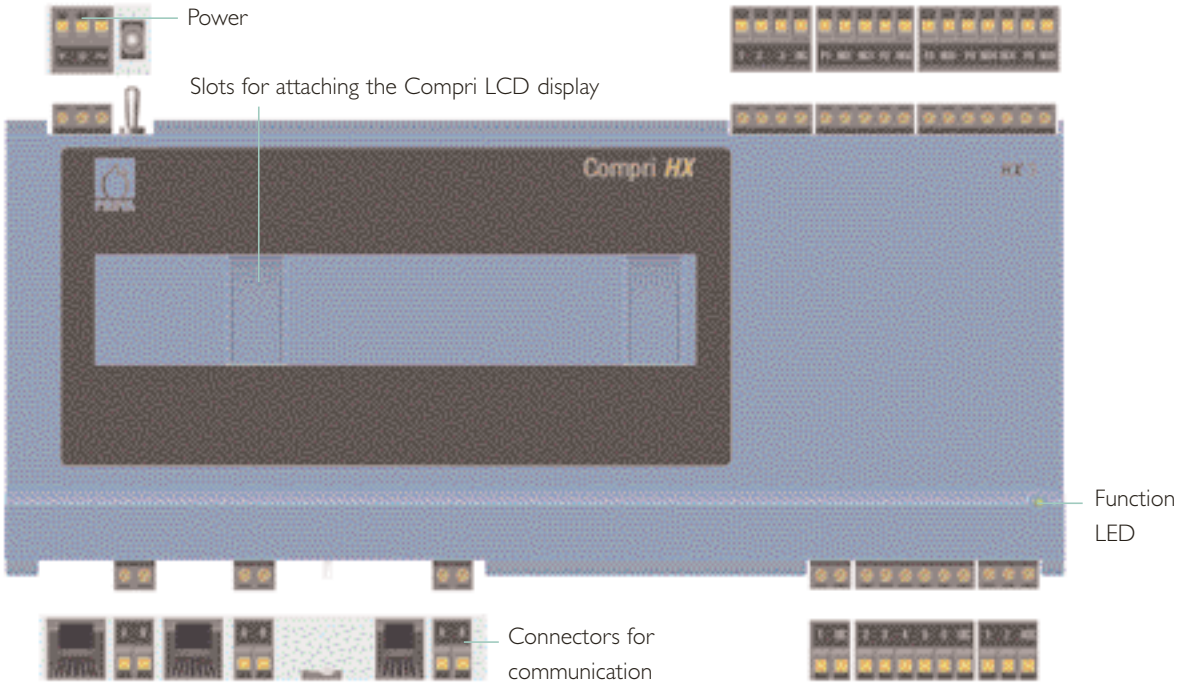
Information via Internet technology

Various messages, such as alarms, are sent to the required person via e-mail, SMS or semascript. By connecting the Priva system to a web server, the information can be made available via an Intranet or via the Internet. In the case of the Internet, the system can be secured with a wide range of standard security techniques, such as firewalls and Virtual Private Networks (VPNs).

XML

XML (eXtensible Markup Language) is the future standard for the transfer of information between systems, often over the Internet or Intranet. The browser control of the Compri HX is XML-based. One important advantage of XML is that besides the data itself, also its significance is sent. This prevents any interpretation-related problems and ensures that the information can be viewed directly via the browser. The way in which the data is sent is also determined.

Compri HX 3 base module



The Compri HX 3 was developed to manage smaller stand alone building installations and decentralised parts of bigger installations. All inputs and outputs have been added to the base module.

General	
Article number	400016
Dimensions	268 x 132 x 90 (WxHxD in mm)
Weight	710 grams

Electrical data	
Supply voltage	24 Vac (20 to 30 Vac)
Required mains frequency	50 Hz / 60 Hz
Required external fuse	2.5 AT
Max. power consumption	40 VA
Maximum power consumption (with maximum number LCD display)	1.2 A
Battery minimum back-up time	3 years
Expected battery service life	5 years
Hot-swappable battery	Yes

Serial communication

	COM1	COM2	COM3
RS232 connection option	√	√	
RS485 connection option	√	√	√
Compri LCD display connection option			√
Additional		Configuration switch for service PC	Autodetect Compri LCD

RS232 connection

Maximum baudrate	38k4 bps
Connector type	RJ45 according to EIA-561
Protection	Protection from overvoltage connection up to a maximum of 30 Vac

RS485 connection

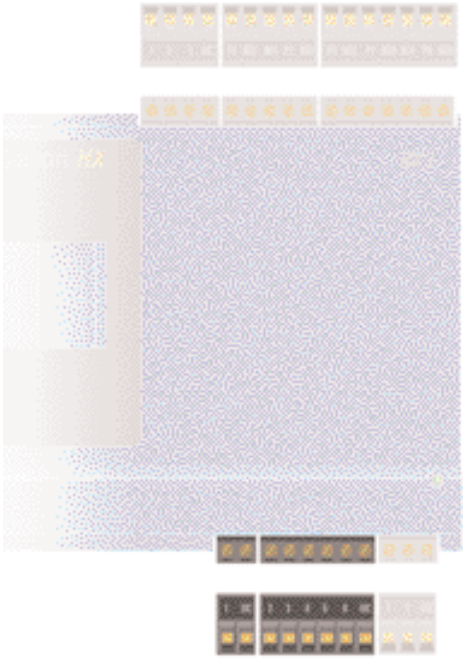
Maximum baudrate	38k4 bps
Connector type	Plug-in screw connector, bipolar with AB designation
Required cable type	Twisted pair
Maximum cable length	500 m
Protection	Protection from overvoltage connection up to a maximum of 30 Vac
dc-isolated	No

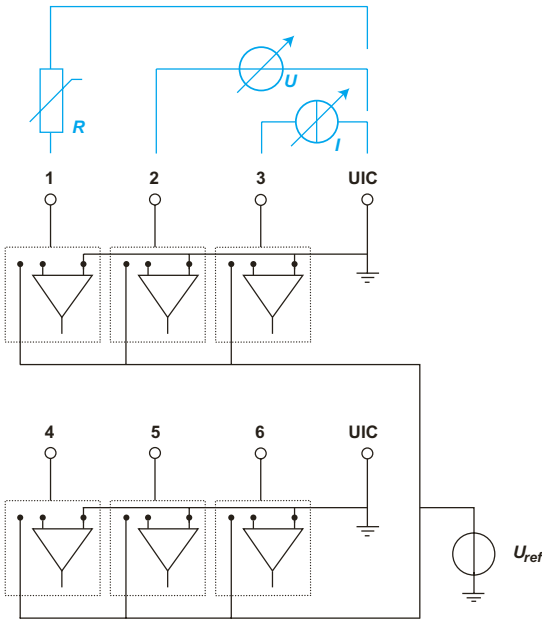
Compri control LCD connection

Connector type	RJ11
Autodetect	When connecting the Compri LCD display, the port automatically switches from RS485 to display
Maximum cable length	100 m
Connecting with Compri HX switched on	Allowed

A description of the various inputs and outputs on the Compri HX 3 can be found on the next four pages.

Base module Compri HX 3





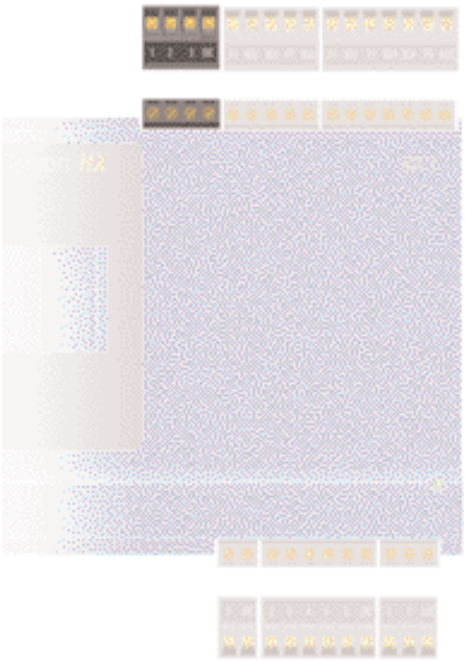
The Compri HX 3 base module has 6 universal inputs, which are used independently of one another for both analog and digital signals. For Analog use, the accurate inputs are suitable for virtually any type of sensor, including DC power measurement, current and resistance measurement using removable pull-up and input resistors. For digital use, the inputs are suitable for low voltage DC, as well as AC signals.

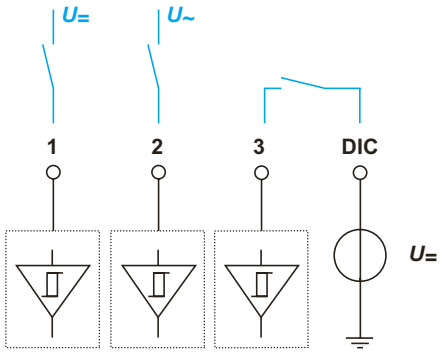
Universal inputs used as analog inputs

Number of universal inputs	A maximum of 6, for each input select from analog or digital
Type of measurement to be set per input	Voltage, current or resistance
Maximum input leakage current	± 30 nA
Measuring range	0 to 10 Vdc
Absolute maximum input range	-25 to 35 Vdc (the basis module may become defective beyond range)
Resolution	250 mV
Accuracy of voltage/current measurement	(0 to 5 V) ± (1 mV + 0.4% of the measurement)
Accuracy of voltage/current measurement	(5 to 10 V) ± (2 mV + 0.4% of the measurement)
Accuracy of resistance measurement	(0 to 5 V) ± 1 mV
Required input resistance for current measurement	250Ω ± 0,1%
Maximum current for current measurement	20 mA

Universal inputs used as digital inputs

Number of universal inputs	A maximum of 6, for each input select from analog or digital	
Use as pulse counter	Yes	
Type of measurement to be set per input	AC or DC measurement	
Required input resistance	10 kΩ	
	AC measurement	DC measurement
Required input voltage with open contact	0 to 4 Vac	-25 to 35 Vdc
Required input voltage with closed contact	12 to 30 Vac	6 to 35 Vdc
Rated sample time	20 ms	8 ms
Required pulse duration (both when open and closed contact)	50 ms	10 ms
Maximum permitted pulse frequency (with ideal symmetric pulse)	10 Hz	50 Hz





The Compri HX 3 base module has 3 digital inputs suitable for low voltage DC, as well as AC signals. For a dry contact, the DC voltage from the terminals can be used. The inputs can also be used as pulse counters.

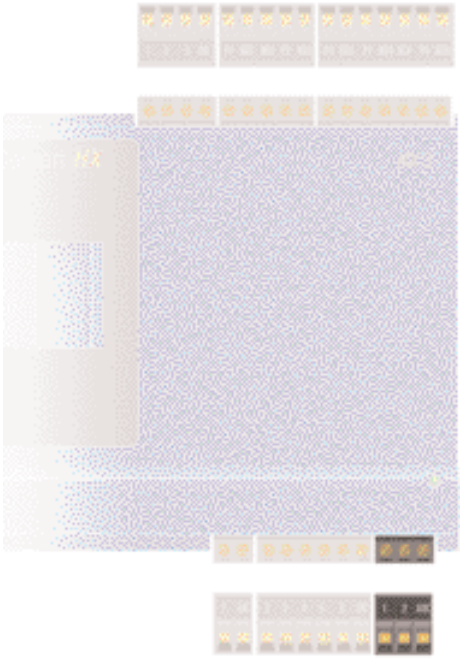
DC power supply for digital inputs (DIC)

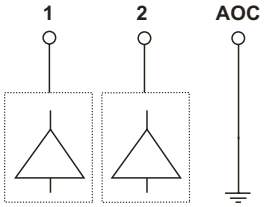
Output voltage (load-dependent)	6 to 16 Vdc
DIC maximum load	5.3 mA or 1550 Ω
DIC protection	Short-circuit protected Protected against overvoltage connection up to 30 Vac

Digital inputs

Number of digital inputs	3	
Use as pulse counter	Yes	
Type of measurement to be set per input	AC or DC measurement	
Input impedance	19.6 kΩ ±5%	
	AC measurement	DC measurement
Rated sample time	20 ms	8 ms
Required input voltage with open contact	0 to 4 Vac	-60 to 3 Vdc
Required input voltage with closed contact	12 to 30 Vac	6 to 60 Vdc
Required pulse duration (both when open and closed contact)	50 ms	10 ms
Maximum permitted pulse frequency (with ideal symmetric pulse)	10 Hz	50 Hz
Minimum resistance of the connected contact (including connecting wires) with open contact when DIC is used (DC power supply for digital inputs)	-	90 kΩ
Maximum resistance of the connected contact (including connecting wires) with closed contact when DIC is used (DC power supply for digital inputs)	-	5 kΩ

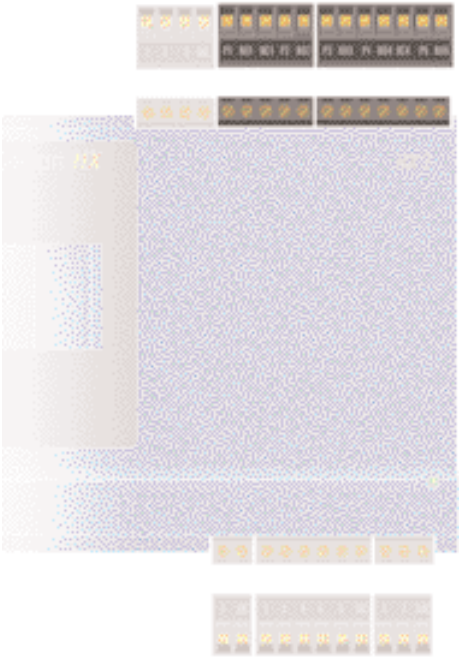
Base module Compri HX 3

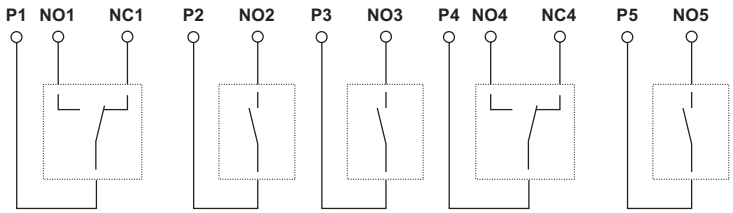




The Compri HX 3 base module has 2 analog voltage outputs. The actual output voltage can be read using the Compri LCD display and using the Priva Top Control software.

Analog outputs	
Number of analog outputs	2
Control range	0 to 10 Vdc
Maximum load current	10 mA
Minimum load resistance to be used	1 kΩ
Maximum load resistance to be used	∞
Protection	• Protection Short-circuit protection (self-restoring) • Protection from overvoltage connection up to a maximum of 30 Vac
Resolution	1 mV
Accuracy	Control range 0-200 mV: -5 / +50 mV Control range 200-10,000 mV: ± (5 mV + 0.5% of the control)
Feedback accuracy	± 100 mV



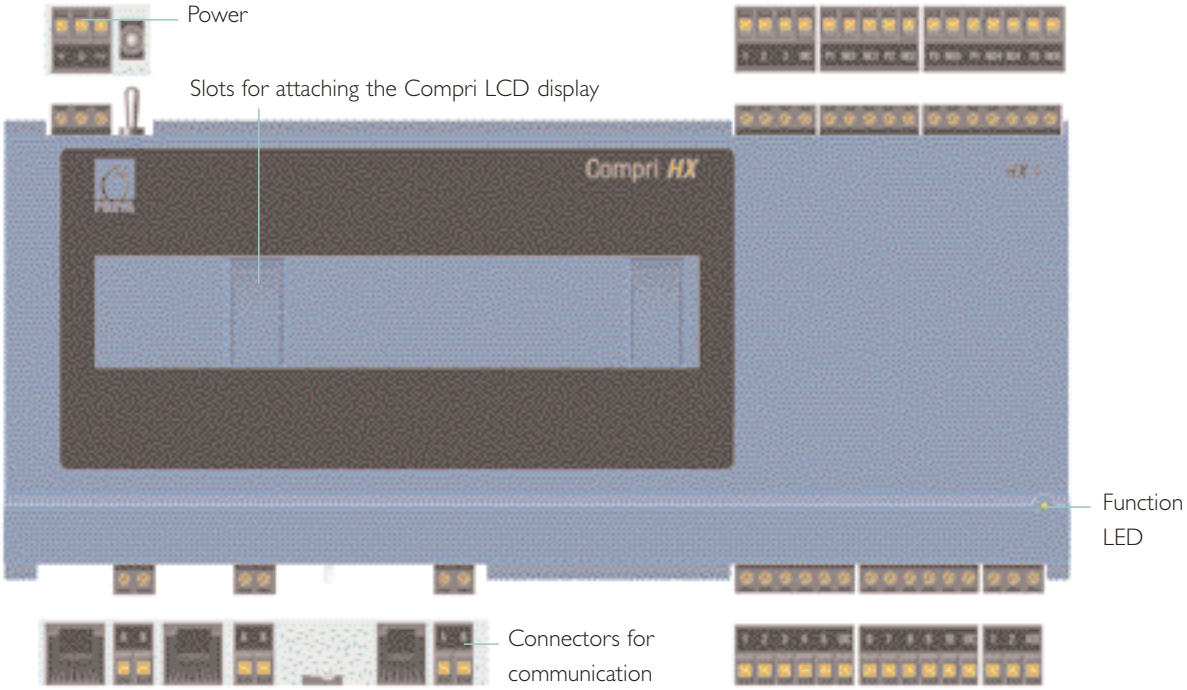


The Compri HX 3 base module has 5 relay outputs, which can switch both low voltage DC as well as AC signals. Two of these relays are designed to be a changeover contact. Each relay has its own common, so that relay modules can switch different voltages.

Relay outputs

Number of relay outputs with a normally open contact	3
Number of relay outputs with a changeover contact	2
Maximum switching voltage	250 VAC
External fuse Max.	16 AT
Maximum switching current	8 A (cos φ = 1)
Dielectric strength (contact ◄► other circuit)	> 2300 Vac
Expected service life of relay (cos φ = 1)	Mechanical: 10,000,000 switching operations Electrical: 800,000 switching operations at 2A switching current 250,000 switching operations at 4A switching current 100,000 switching operations at 8A switching current

Compri HX 4 base module



The Compri HX 4 was developed to manage small and medium sized building installations. This base module has three serial ports, which can be flexibly deployed to integrate other systems. What is more, the module is fitted with inputs and outputs on the onboard inputs and outputs.

A maximum of 4 I/O modules can be connected to the Compri HX 4.

General	
Article number	400001
Dimensions	268 x 132 x 90 (WxHxD in mm)
Weight	710 grams

Electrical data	
Supply voltage	24 Vac (20 to 30 Vac)
Required mains frequency	50 Hz / 60 Hz
Required external fuse	2.5 AT
Max. power consumption	40 VA
Maximum power consumption (with maximum number of I/O modules and Compri LCD display)	1.6 A
Battery minimum back-up time	3 years
Expected battery service life	5 years
Hot-swappable battery	Yes

Serial communication

	COM1	COM2	COM3
RS232 connection option	√	√	
RS485 connection option	√	√	√
Compri LCD display connection option			√
Additional		Configuration switch or service PC	Autodetect Compri LCD

RS232 connection

Maximum baudrate	38k4 bps
Connector type	RJ45 according to EIA-561
Protection	Protection from overvoltage connection up to a maximum of 30 Vac

RS485 connection

Maximum baudrate	38k4 bps
Connector type	Plug-in screw connector, bipolar with AB designation
Required cable type	Twisted pair
Maximum cable length	500 m
Protection	Protection from overvoltage connection up to a maximum of 30 Vac
dc-isolated	No

Compri control LCD connection

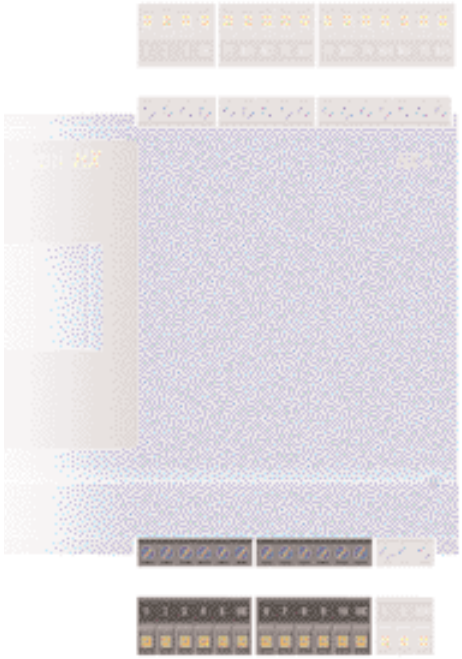
Connector type	RJ11
Autodetect	When connecting the Compri LCD display, the port automatically switches from RS485 to display
Maximum cable length	100 m
Connecting with Compri HX switched on	Allowed

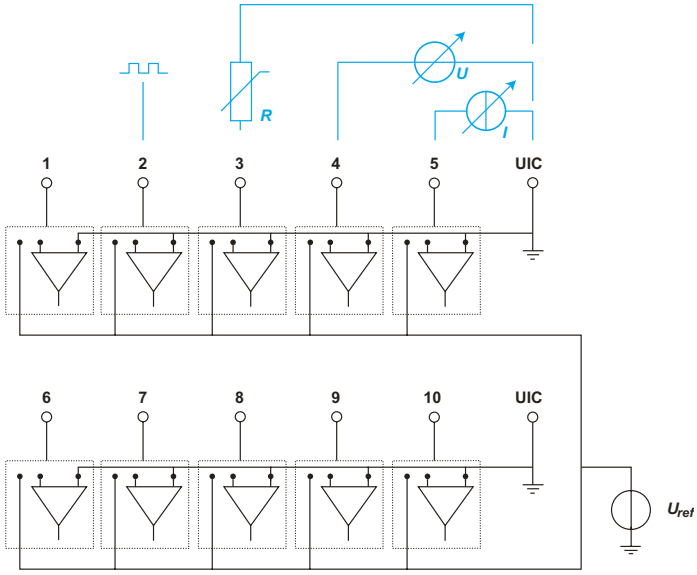
I/O modules connection

Connecting I/O modules with Compri HX 4 switched on	Not allowed
Maximum bus power supply	800 mA
Number of I/O modules directly connected to the Compri HX 4	• Maximum 4 • The sum of the bus power supply used from the connected I/O modules may not exceed the maximum bus power supply
Maximum number of BS1 bus splitter modules	1

A description of the various inputs and outputs on the Compri HX 4 can be found on the next four pages.

Compri HX 4 base module





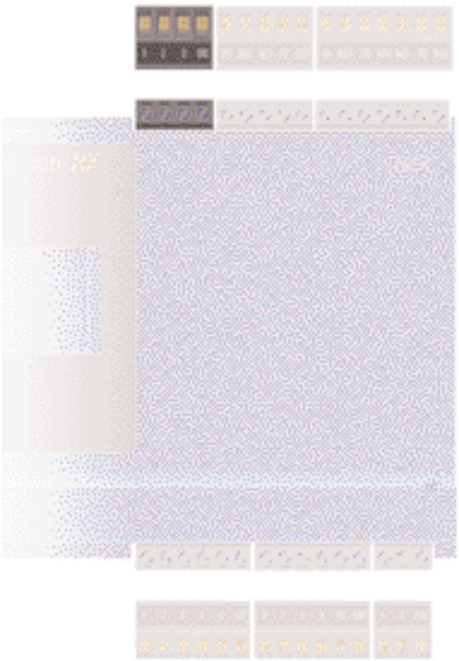
The Compri HX 4 base module has 10 universal inputs, which are used independently of one another for both analog and digital signals. For analog use, the accurate inputs are suitable for virtually any type of sensor, including DC power measurement, current and resistance measurement using removable pull-up and input resistors. For digital use, the inputs are suitable for low voltage DC, as well as AC signals.

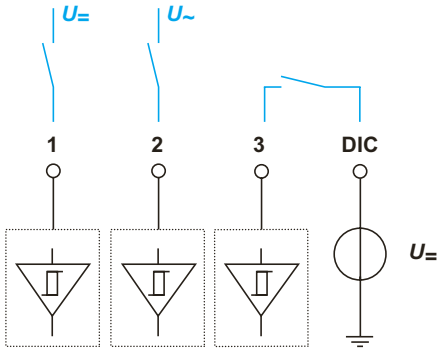
Universal inputs used as analog inputs

Number of universal inputs	A maximum of 10, for each input select from analog or digital
Type of measurement to be set per input	Voltage, current or resistance
Maximum input leakage current	± 30 nA
Measuring range	0 to 10 Vdc
Absolute maximum input range	-25 to 35 Vdc (the basis module may become defective beyond range)
Resolution	250 µV
Accuracy of voltage/current measurement (0 to 5 V)	± (1 mV + 0.4% of the measurement)
Accuracy of voltage/current measurement (5 to 10 V)	± (2 mV + 0.4% of the measurement)
Accuracy of resistance measurement (0 to 5 V)	± 1 mV
Required input resistance for current measurement	250 Ω ± 0,1%
Maximum current for current measurement	20 mA

Universal inputs used as digital inputs

Number of universal inputs	A maximum of 10, for each input select from analog or digital	
Use as pulse counter	Yes	
Type of measurement to be set per input	AC or DC measurement	
Required input resistance	10 kΩ	
	AC measurement	DC measurement
Required input voltage with open contact	0 to 4 Vac	-25 to 3 Vdc
Required input voltage with closed contact	12 to 30 Vac	6 to 35 Vdc
Rated sample time	20 ms	8 ms
Required pulse duration (both when open and closed contact)	50 ms	10 ms
Maximum permitted pulse frequency (with ideal symmetric pulse)	10 Hz	50 Hz





The Compri HX 4 base module has 3 digital inputs suitable for low voltage DC, as well as AC signals. For a dry contact, the DC voltage from the terminals can be used. The inputs can also be used as a pulse counter.

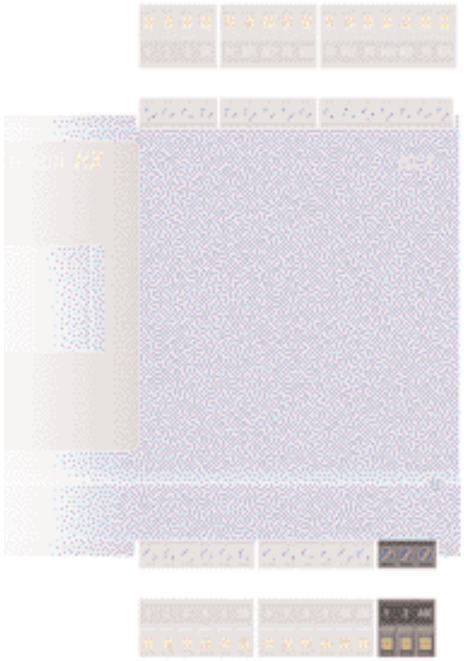
DC power supply for digital inputs (DIC)

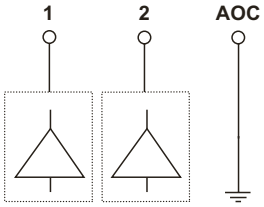
Output voltage (load-dependent)	6 to 16 Vdc
DIC maximum load	5,3 mA or 1550 Ω
DIC protection	Short-circuit protected Protected against overvoltage connection up to 30 Vac

Digital inputs

Number of digital inputs	3	
Use as pulse counter	Yes	
Type of measurement to be set per input	AC-meting or DC-meting	
Input impedance	19,6 kΩ ±5%	
	AC-meting	DC-meting
Rated sample time	20 ms	8 ms
Required input voltage with open contact	0 to 4 Vac	-60 to 3 Vdc
Required input voltage with closed contact	12 to 30 Vac	6 to 60 Vdc
Required pulse duration (both when open and closed contact)	50 ms	10 ms
Maximum permitted pulse frequency (with ideal symmetric pulse)	10 Hz	50 Hz
Minimum resistance of the connected contact (including connecting wires) with open contact when DIC is used (DC power supply for digital inputs)	-	90 k Ω
Maximum resistance of the connected contact including connecting wires) with closed contact when DIC is used (DC power supply for digital inputs)	-	5 kΩ

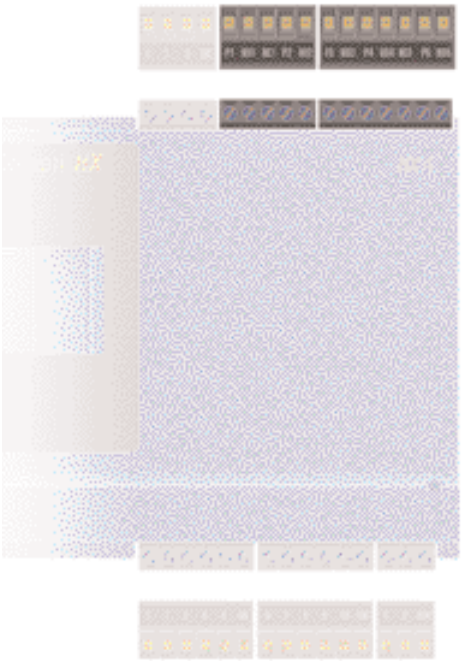
Compri HX 4 base module

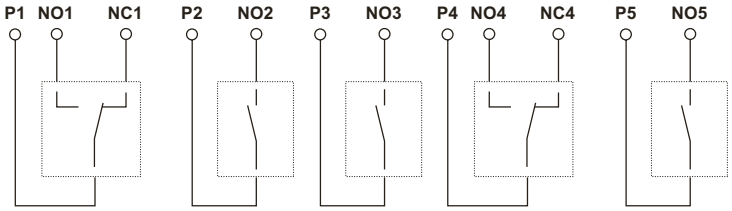




The Compri HX 4 base module has 2 analog voltage outputs. The actual output voltage can be read using the Compri LCD display and using the Priva Top Control software.

Analog outputs	
Number of analog outputs	2
Control range	0 to 10 Vdc
Maximum load current	10 mA
Minimum load resistance to be used	1 kΩ
Maximum load resistance to be used	∞
Protection	• Protection Short-circuit protection (self-restoring) • Protection from overvoltage connection up to a maximum of 30 Vac
Resolution	1 mV
Accuracy	Control range 0-200 mV: -5 / +50 mV Control range 200-10.000 mV: ± (5 mV + 0,5% of the control)
Feedback accuracy	± 100 mV



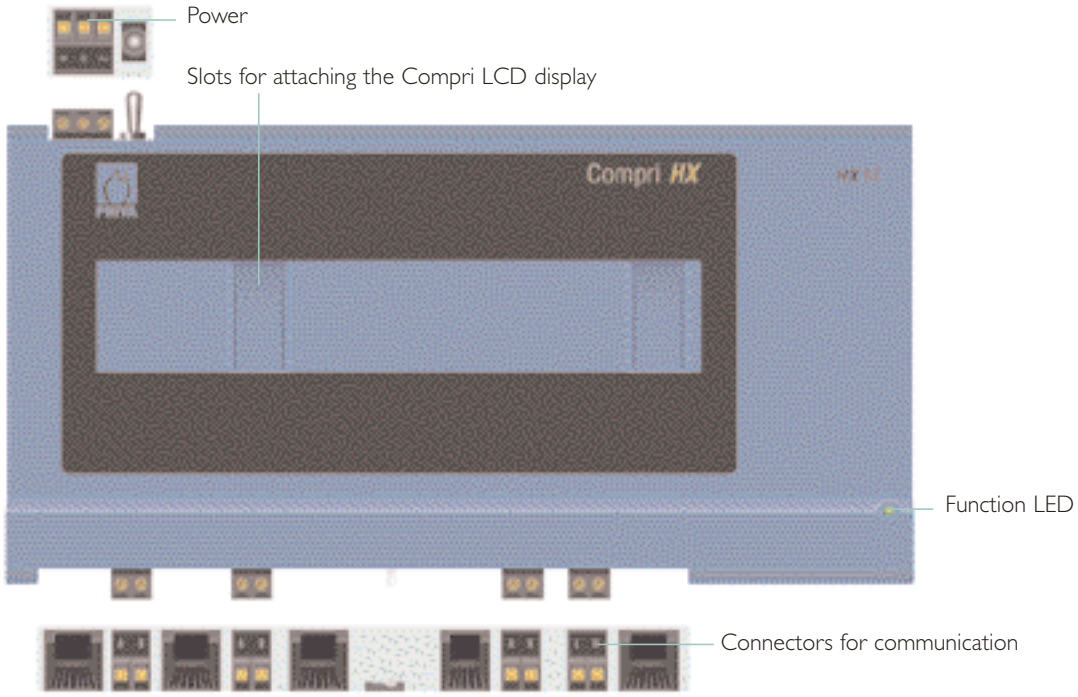


The Compri HX 4 base module has 5 relay outputs, which can switch both low voltage DC as well as AC signals. Two of these relays are designed to be changeover contact. Each relay has its own common, so that relay modules can switch different voltages.

Relay outputs

Number of relay outputs with a normally open contact	3
Number of relay outputs with a changeover contact	2
Maximum switching voltage	250 Vac
External fuse	Max. 16 AT
Maximum switching current	8 A ($\cos \varphi = 1$)
Dielectric strength (contact ◄► other circuit)	> 2300 Vac
Expected life time of relay ($\cos \varphi = 1$)	Mechanical: 10,000,000 switching operations Electrical: 800,000 switching operations at 2A switching current 250,000 switching operations at 4A switching current 100,000 switching operations at 8A switching current

Compri HX 8E base module



The Compri HX 8E is ideally suited for managing (moderately) large to highly complex automatic control installations. This base module has four serial ports, which can be flexibly deployed to integrate other systems. What is more, the Compri HX 8E is fitted with an Ethernet port for PCs, modems, displays and integration links. No additional interface is therefore required for Ethernet communication. This port also guarantees extremely direct interaction with the building control system thanks to its lightning fast response times.

The Compri HX 8E has a direct connection facility for 10 I/O modules. Using the XM1 extension module, 10 I/O modules can be added to it. 3 versions of this extension module fit on one Compri HX 8E, which means that the maximum number of I/O modules per Compri HX 8E comes to 40.

General	
Article number	400000
Dimensions	228 x 132 x 90 (WxHxD in mm)
Weight	520 grams

Electrical data	
Supply voltage	24 Vac (20 to 30 Vac)
Required mains frequency	50 Hz / 60 Hz
Required external fuse	2,5AT
Max. power consumption	40 VA
Maximum power consumption (with maximum number of I/O modules and Compri LCD display)	1,6 A
Battery minimum back-up time	3 years
Expected battery service life	5 years
Hot-swappable battery	Yes

Serial communication

	COM1	COM2	COM3	COM4
RS232 connection option	√	√	√	
RS485 connection option	√	√		√
Compri LCD display connection option				√
Additional			Configuration switch for service PC	Autodetect Compri LCD

RS232 connection

Maximum baudrate	38k4 bps
Connector type	RJ45 according to EIA-561
Protection	Protection from overvoltage connection up to a maximum of 30 Vac

RS485 connection

Maximum baudrate	38k4 bps
Connector type	Plug-in screw connector, bipolar with AB designation
Required cable type	Twisted pair
Maximum cable length	500 m
Protection	Protection from overvoltage connection up to a maximum of 30 Vac
dc-isolated	No

Compri control LCD connection

Connector type	RJ11
Autodetect	When connecting the Compri LCD display, the port automatically switches from RS485 to display
Maximum cable length	100 m
Connecting with Compri HX switched on	Allowed

Ethernet connection

Baudrate	10 Mbit/sec
Network type	10BASE-T according to IEEE 802.3 standard
NE2000 compatible	Yes
Connectortype	RJ45 MDI (Media dependant interface)
Cable type	Unshielded twisted pair Cat.5 (UTP)
Maximum cable length	100 m
Connecting with Compri HX switched on	Allowed

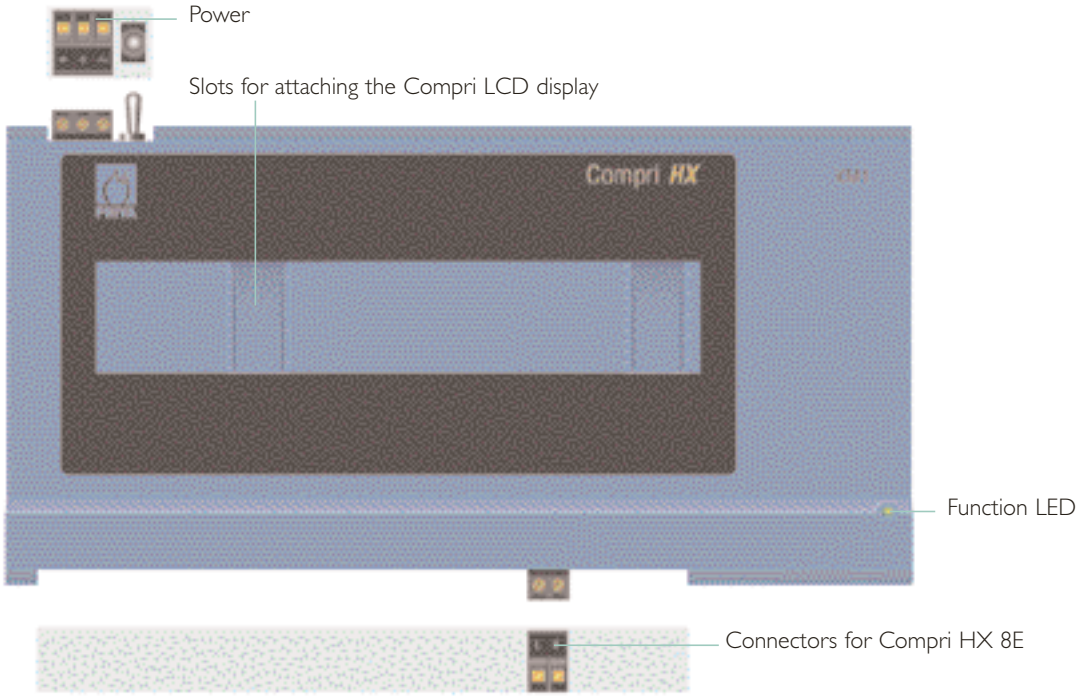
XM1 extension module connection

Connector type	Plug-in screw connector, bipolar with designations L and H
Cable type	Twisted pair
Total maximum bus length	15 m within the control panel
Maximum number of XM1 extension modules per Compri HX 8E	3
Connecting with Compri HX switched on	Not allowed

I/O modules connection

Connecting I/O modules with Compri HX switched on	Not allowed
Maximum bus power supply	1200 mA
Number of I/O modules directly connected to the Compri HX 8E	• A maximum of 10, including a maximum of 5 UI8 universal input modules • The sum of the bus power supply used from the connected I/O modules may not exceed the maximum bus power supply
Maximum number of BS1 bus splitter modules	1

Extension module XM1

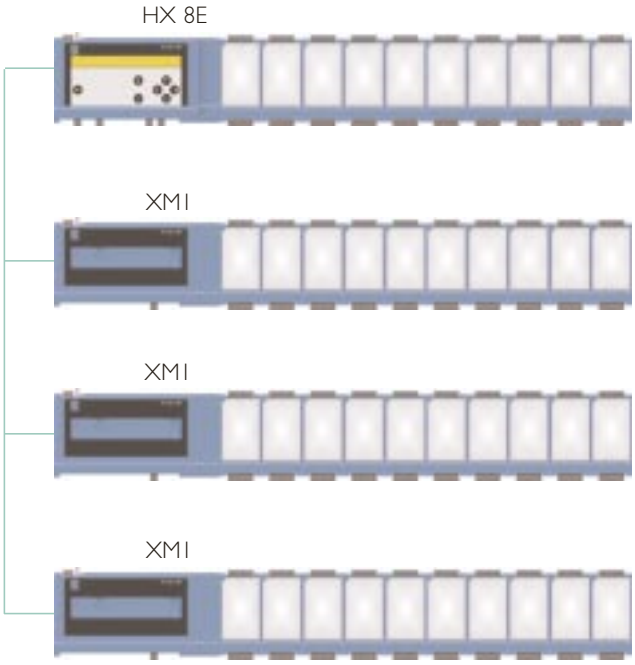


The XM1 extension module makes it possible to connect additional I/O modules to the Compri HX 8E. For the Compri HX 8E, the extension module is fitted in the control panel and it communicates with the Compri HX 8E via the high-speed expansion bus over a maximum distance of 15 meters. A maximum of 3 extension modules can be connected to the Compri HX 8E, whereas a maximum of 10 I/O modules can be connected to one extension module. The maximum number of I/O modules per Compri HX thus comes to 40.

The XM1 extension module can also be used for distributing the I/O modules in the control panel. Thanks to the dedicated power supply of the XM1, heat build-up inside the module is minimized and thereby maximizing the operational reliability of the Compri HX.

General	
Article number	400002
Dimensions	228 x 132 x 90 (WxHxD in mm)
Weight	500 grams

Electrical data	
Supply voltage	24 Vac (20 to 30 Vac)
Required mains frequency	50 Hz / 60 Hz
Required external fuse	2,5AT
Max. power consumption	40 VA
Maximum current consumption (for the max. number of I/O modules)	1,6 A

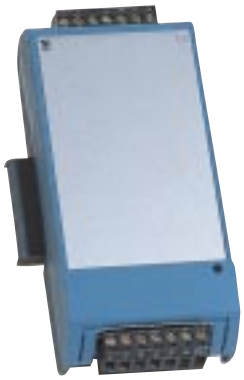


Individual configuration examples

Connection to the Compri HX 8E base module	
Connector type	Plug-in screw connector, bipolar with designations L and H
Cable type	Twisted pair
Total maximum bus length	15 m within the control panel
Maximum number of XM1 extension modules per Compri HX 8E	3
Connecting with Compri HX switched on	Not allowed

I/O modules connection	
Connecting I/O modules with XM1 switched on	Not allowed
Maximum bus power supply	1200 mA
Permitted number of I/O modules directly connected to the XM1	• A maximum of 10, including a maximum of 5 UI8 universal input modules • The sum of the bus power supply used from the connected I/O modules may not exceed the maximum bus power supply
Maximum number of BS1 bus splitter modules	1

I/O-modulen...



DI12

DI12S

UI8

RO8

RO6MS

SO8

AO4

AO4M

BS1

...for all types of I/Os

The input and output modules (I/O modules) are connected to the base module and extension module via the internal I/O bus. There are modules with different types of I/O: analog outputs, digital inputs, relay outputs, solid state outputs (triac) and universal inputs. The universal inputs can measure current, voltages and resistance and can also be used as digital inputs. A number of output modules are fitted with integrated override switches and signalling LEDs. The internal I/O bus signals the positions of the I/O modules, without the requirement for dipswitches or jumpers.

A number of I/O modules is also available with less inputs and outputs. As a result, the number and type of I/O can easily be optized for every project.

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Use the tables below to determine which I/O module(s) you need in your specific situation. In addition to these I/O modules, there is also the BS1 bus splitter module. This module allows the internal I/O bus to be split into 2 rows if, for example, there is not enough room in the control panel to put the I/O modules on one row.

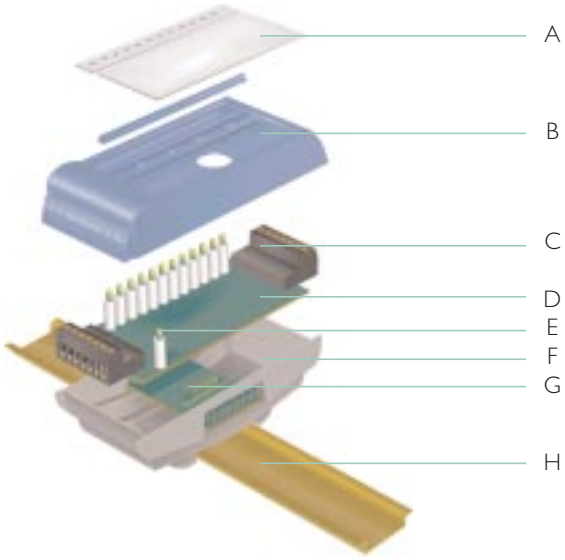
Inputs

		0-10 V	0-30 V	0-60 V
Digital	Without signalling		UI8	DI12
	With signalling			DI12S / DI6S RO6MS / RO6MOS RO3MOS
Analog		UI8		

Outputs

		0-10 V	0-24 V	0-250 V
Digital	Without override switches		SO8	RO8 / RO4
	With override switches			RO6MS / RO6MOS RO3MOS
Analog	Without override switches	AO4		
	With override switches	AO4M / AO2M		

A well-organised design...



A Engravable plate
Each I/O module has an interchangeable engravable plate on which the function of the various inputs and outputs can be engraved. In place of the engravable plate, it is also possible to fit an I/O module text card behind transparent plastic. This can then be printed out using Priva's TC Select engineering program.

B Front guard
The front guard is dismountable, which means the engravable plate and the I/O PCB can easily be removed.

C Connector
The high quality connectors are fitted with screw connections for rigid and flexible wire. The connectors have clear, self-explanatory terminal codes. As the connectors are plug-in, the I/O PCB can be removed quickly.

D I/O PCB
The I/O PCB can be replaced without removing the complete I/O module. The I/O PCB has been connected to the internal I/O bus PCB by a connector to make this possible. There are no components on the I/O PCB (with the exception of the UI8 universal input module), which can be replaced.

E Function LED
The I/O module function LED indicates whether the module is functioning correctly.

F Bottom section
The bottom section has ventilation openings.

G Internal I/O bus PCB
The internal I/O bus provides for communication between I/O modules and the base module, on the one hand, and addressing, on the other.

H DIN rail
Just like the other Compri HX components, the I/O modules are also clicked onto a DIN rail.

...and built-in safety

Quality and safety go hand in hand with the Compri HX. This is evident from the built-in safety features on the I/O modules. The operational reliability and continuity of the Priva system are guaranteed.

Watchdog and failsafe

The outputs on the output modules are protected based on the watchdog and failsafe principle. This means that the outputs always have a defined state.

Signalling LEDs

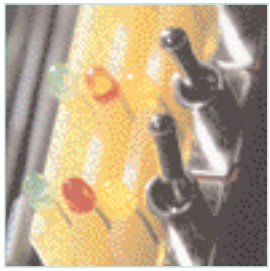
The input modules on the Compri HX can be supplied with LEDs for operating and failure signalling, for example. This provides a direct insight into the processes, which are taking place in the installation.

Integrated override switches for emergency operation

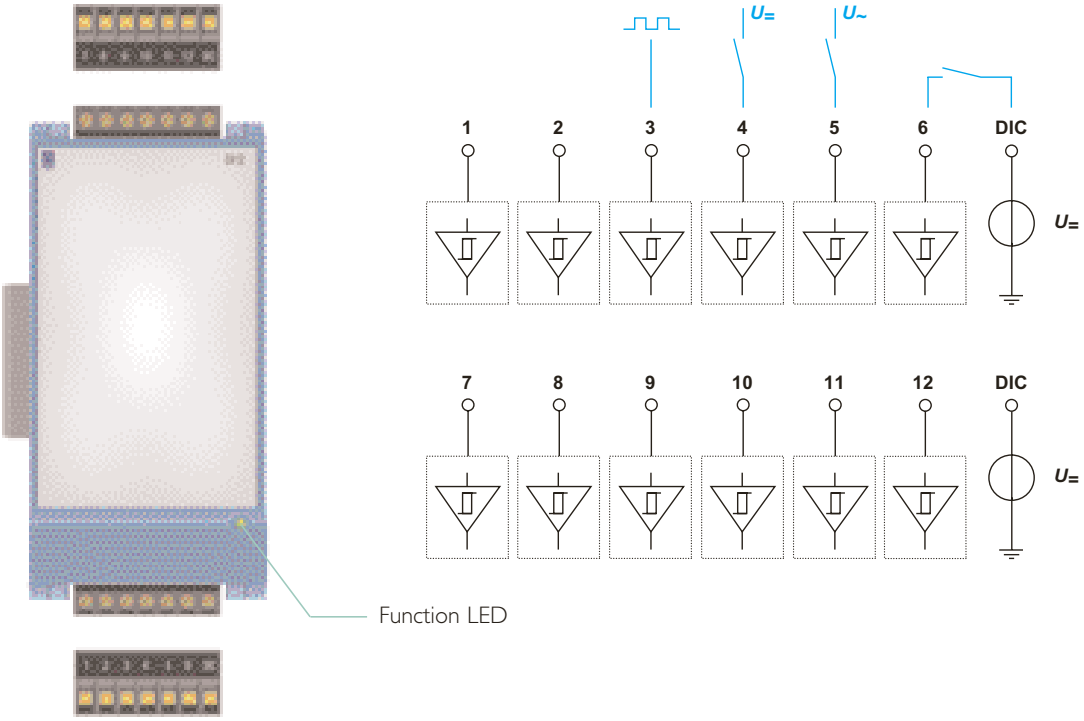
A variety of I/O modules are fitted with integrated override switches to be able to make interventions. This means that the state of all switches on the modules can be supervised at a glance minimizing the possibility for errors. The Compri LCD display and the Priva Top Control software also provide information about the status of the switches. Compared with conventional, external override switches, integrated override switches offer important benefits. The integrated switches actually take up less space in the control panel and no installation hours are incurred. If the I/O modules are installed on the inside of the control panel door using a special installation kit, then it is possible to operate the override switches and read off the signalling LEDs on the outside of the door. I/O modules with override switches operate independently of the base module and the control software if there is an intervention. These I/O modules have a dedicated power supply connection for this, which can be connected to the emergency voltage supply, for example.

Clarity from the outset

Descriptions can be placed right next to the signalling LEDs and the override switches indicating their function. Integral engravable plates are available for this purpose, which are fastened to the module using a click-fit system and are easy to remove in case of any subsequent changes. Because the engravable plates are resistant to humidity, dirt and ageing, the texts that have been applied can still be read clearly even after many years. Instead of click-fitting a engravable plate onto the module, it is also possible to position an I/O module text card under a transparant cover. Such a card can be printed at no additional effort using Priva's engineering program TC Select.



DI12 digital input module



The DI12 digital input module has 12 digital inputs suitable for weak currents, as well as direct and alternating voltages. For a dry contact, the DC voltage from the terminals can be used. The inputs can also be used as a pulse counter.

General

Article number	400005
Dimensions (when installed)	58 x 131 x 60 (WxHxD in mm)
Dimensions of dismountable engravable plate	52.8 x 88.6 (WxH in mm)
Weight	135 grams
Bus power supply used	25 mA

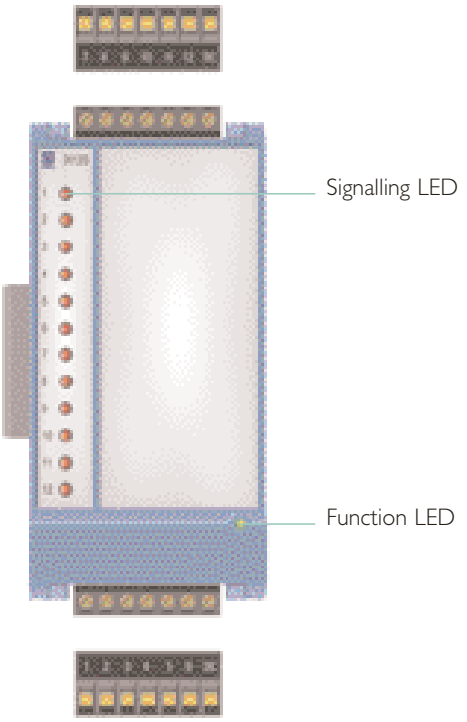
DC power supply for digital inputs (DIC)

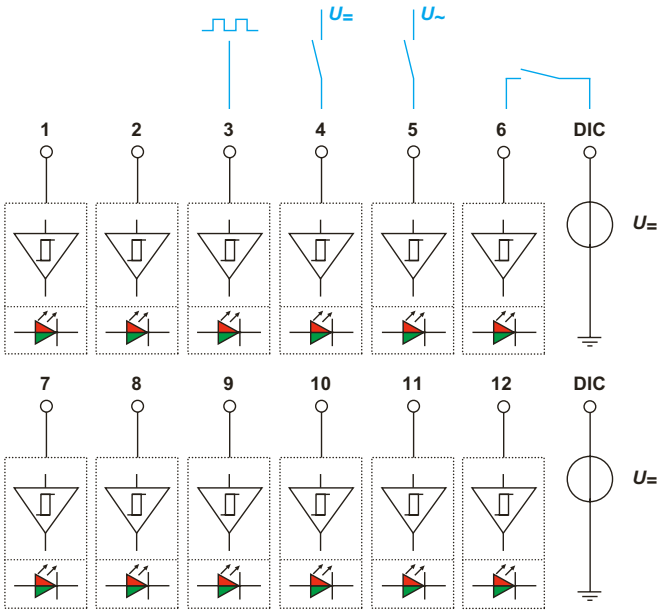
Output voltage (load-dependent)	6 to 16 Vdc
DIC maximum load	5,3 mA or 1550 Ω
DIC protection	Short-circuit protected Protected against overvoltage connection up to 30 Vac

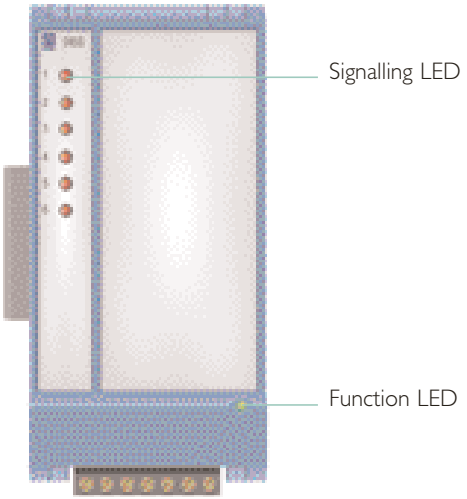
Digital inputs

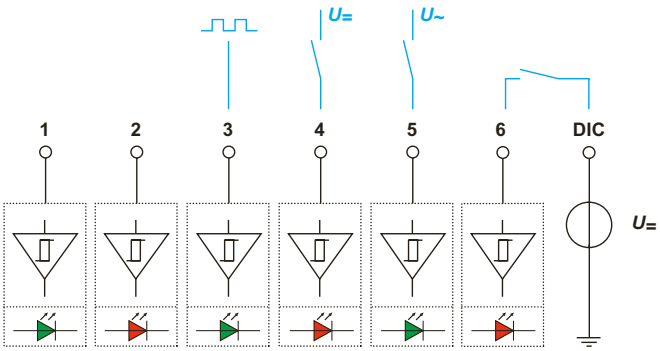
Number of digital inputs	12	
Use as pulse counter	Yes	
Type of measurement to be set per input	AC or DC measurement	
Input impedance	19,6 kΩ ±5%	
	AC measurement	DC measurement
Rated sample time	20 ms	8 ms
Required input voltage with open contact	0 to 4 Vac	-60 to 3 Vdc
Required input voltage with closed contact	12 to 30 Vac	6 to 60 Vdc
Required pulse duration (both at open and closed contact)	50 ms	10 ms
Maximum permitted pulse frequency (with ideal symmetric pulse)	10 Hz	50 Hz
Minimum resistance of the connected contact (including connecting wires) with open contact when DIC is used (DC power supply for digital inputs)	-	90 kΩ
Maximum resistance of the connected contact (including connecting wires) with closed contact when DIC is used (DC power supply for digital inputs)	-	5 kΩ

Digital input modules DI12S and DI6S









The 12 digital inputs on the DI12S digital input module are fitted with input signalling: each input has a bi-colour LED (green/red). The LED displays the logical value of the input. The properties are saved in the module even if there is no connection with the Compri HX and if the voltage has been switched off.
The DI6S is identical to the DII2S, but has only 6 digital inputs, but has only 6 digital inputs. The signalling can also be used if it is not implemented.

General

	DI12S	DI6S
Article number	400006	400017
Dimensions (when installed)	58 x 131 x 60 (WxHxD in mm)	58 x 128 x 60 (WxHxD in mm)
Dimensions of dismountable engravable plate	37,8 x 88,6 (WxHxD in mm)	
Weight	140 grams	
Bus power supply used	50 mA	38 mA

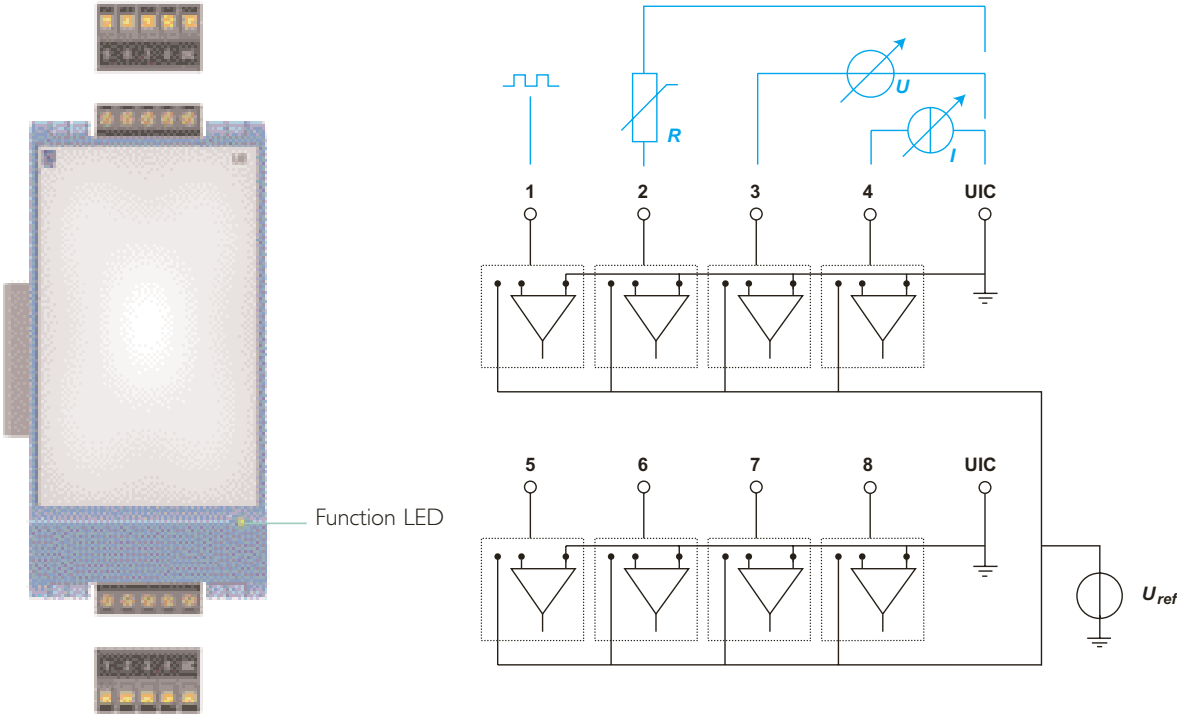
DC power supply for digital inputs (DIC)

Output voltage (load-dependent)	6 to 16 Vdc
DIC maximum load	5,3 mA or 1550 Ω
DIC protection	Short-circuit protected Protected against overvoltage connection up to 30 Vac

Digital inputs

	DI12S	DI6S
Number of digital inputs	12	6
Use as pulse counter	Yes	
Signalling	A signalling LED per input (red (default) or green, depending on the configuration) The signal can be inverted in relation to the input signal depending on the configuration.	
Type of measurement to be set per input	AC or DC measurement	
Input impedance	19,6 kΩ ±5%	
	AC measurement	DC measurement
Rated sample time	20 ms	8 ms
Required input voltage with open contact	0 to 4 Vac	-60 to 3 Vdc
Required input voltage with closed contact	12 to 30 Vac	6 to 60 Vdc
Required pulse duration (both when open and closed contact)	50 ms	10 ms
Maximum permitted pulse frequency (with ideal symmetric pulse)	10 Hz	50 Hz
Minimum resistance of the connected contact (including connecting wires) with open contact when DIC is used (DC power supply for digital inputs)	-	90 kΩ
Maximum resistance of the connected contact (including connecting wires) with closed contact when DIC is used (DC power supply for digital inputs)	-	5 kΩ

UI8 universal input module



The universal UI8 input module has 8 universal inputs, which are used independently of one another for both analog and digital connections. For analog use, the accurate inputs are suitable for virtually any type of sensor, including DC power measurement, current and resistance measurement using removable pull-up and input resistors. For digital use, the inputs are suitable for low voltage, both AC and DC voltage and pulse counters.

General

Article number	400004
Dimensions (when installed)	58 x 131 x 60 (WxHxD in mm)
Dimensions of dismountable engravable plate	52.8 x 88.6 (WxH in mm)
Weight	135 grams
Bus power supply used	52 mA

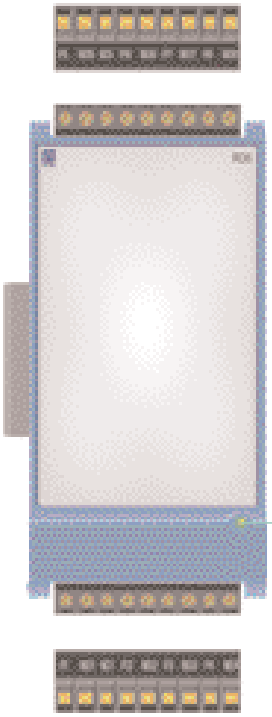
Universal inputs used as analog inputs

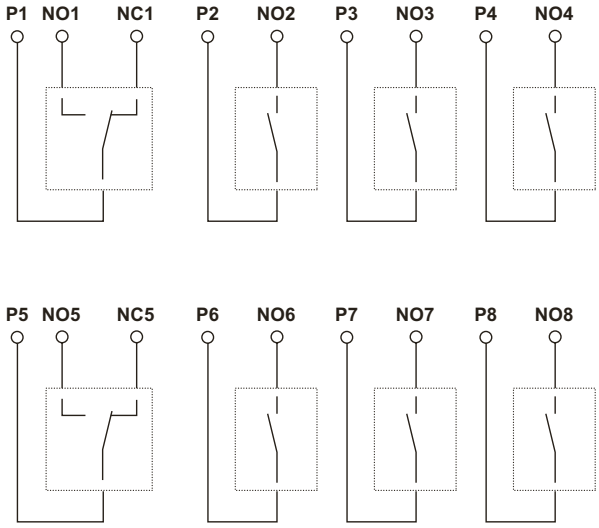
Number of universal inputs	A maximum of 8, for each input select from analog or digital
Type of measurement to be set per input	Voltage, current or resistance
Maximum input leakage current	± 30 nA
Measuring range	0 to 10 Vdc
Absolute maximum input range	-25 to 35 Vdc (I/O module may become defective beyond this range)
Resolution	250 µV
Accuracy of voltage/current measurement (0 to 5 V)	± (1 mV + 0.4% of the measurement)
Accuracy of voltage/current measurement (5 to 10 V)	± (2 mV + 0.4% of the measurement)
Accuracy of resistance measurement (0 to 5 V)	± 1 mV
Required input resistance for current measurement	250 Ω ± 0,1%
Maximum current for current measurement	20 mA

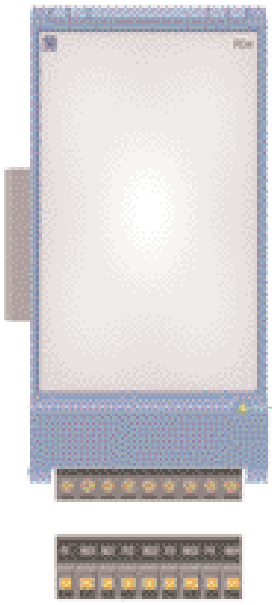
Universal inputs used as digital inputs

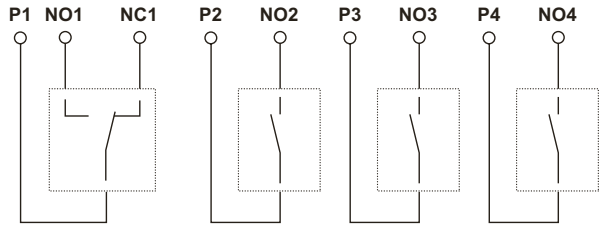
Number of universal inputs	A maximum of 8, for each input select from analog or digital	
Use as pulse counter	Yes	
Type of measurement to be set per input	AC or DC measurement	
Required input resistance	10 kΩ	
	AC measurement	DC measurement
Required input voltage with open contact	0 to 4 Vac	-25 to 3 Vdc
Required input voltage with closed contact	12 to 30 Vac	6 to 35 Vdc
Rated sample time	20 ms	8 ms
Required pulse duration (both at open and closed contact)	50 ms	10 ms
Maximum permitted pulse frequency (with ideal symmetric pulse)	10 Hz	50 Hz

Relay output modules RO8 and RO4









The RO8 relay output module has 8 relay outputs suitable for weak currents, as well as direct and alternating voltages. Two of the relays are designed to be a changeover contact. Each relay has its own common, so that relay modules can switch different voltages. The outputs are failsafe: if communication with the base module or extension module fails, the RO8 puts all outputs into a defined state. Using internal delay timers, a graduated switching on is realised, which works independent from the base, extension or (other) I/O modules.
The RO4 is identical to the RO8, but has 4 relay outputs: 1 x changeover contact and 3 x normally open contacts.

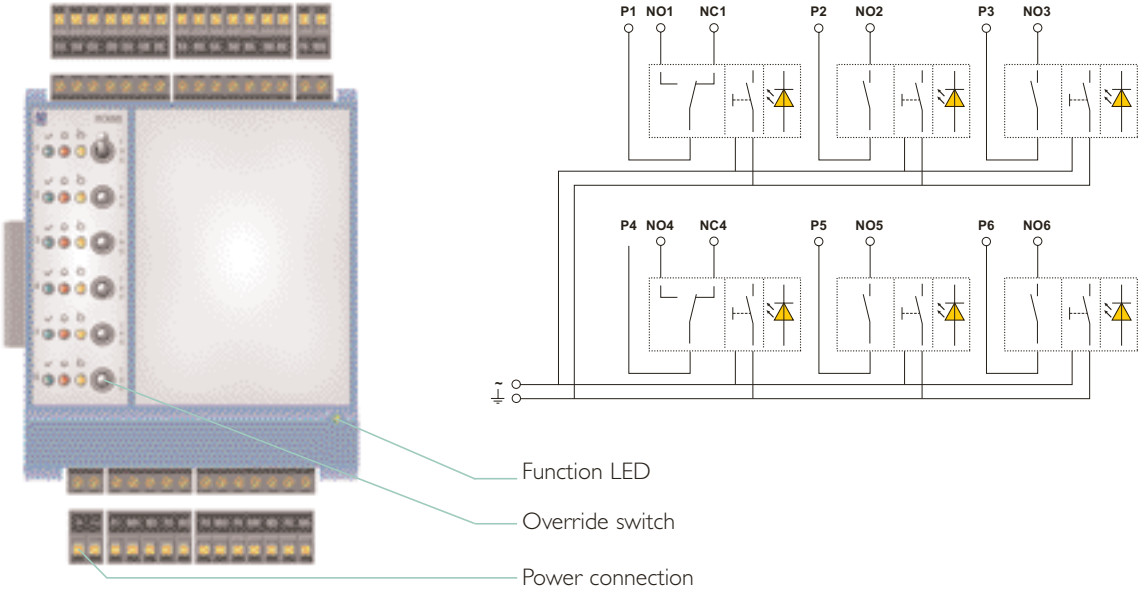
General

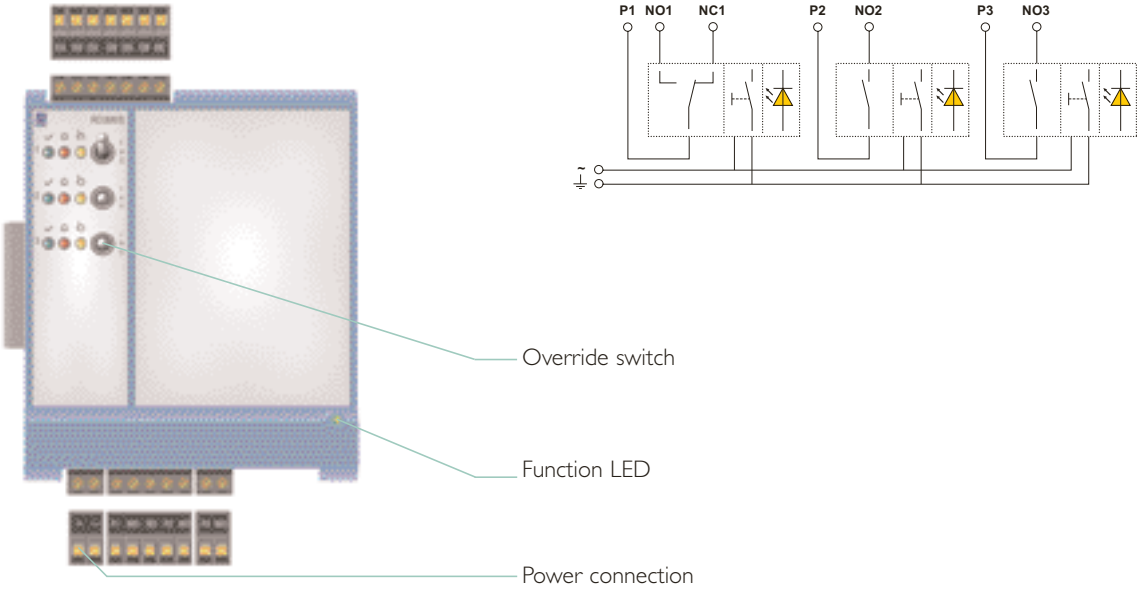
	RO8	RO4
Article number	400010	400018
Dimensions (when installed)	58 x 131 x 60 (WxHxD in mm)	58 x 128 x 60 (WxHxD in mm)
Dimensions of dismountable engravable plate	52,8 x 88,6 (WxH in mm)	
Weight	210 grams	
Bus power supply used	110 mA	66 mA

Relay outputs

	RO8	RO4
Number of relay outputs with a normally open contact	6	3
Number of relay outputs with a changeover contact	2	1
Maximum switching voltage	250 Vac	
External fuse	Max. 16 AT	
Maximum switching current	8 A ($\cos \varphi = 1$)	
Dielectric strength (contact ◄► other circuit)	> 2300 Vac	
Expected life time of relay ($\cos \varphi = 1$)	Mechanical: 10,000,000 switching operations Electrical: 800,000 switching operations at 2A switching current 250,000 switching operations at 4A switching current 100,000 switching operations at 8A switching current	
Watchdog	The watchdog circuit starts up the failsafe procedure when: • communication fails • the base/extension module stops operating	
Failsafe-procedure	The outputs are: • set to 0 (default) • set to a configured failsafe value	

Relay output modules RO6MS, RO6MOS and RO3MOS





The RO6MS and RO6MOS relay output modules have 6 relay override switches and 6 x 2 digital inputs. Each relay output has an override switch with the options Auto (automatic control), On (1) and Off (0). A yellow LED indicates for each switch whether it is switched on for manual operation.
The outputs are failsafe: if communication with the base module or extension module fails, the RO6MS or the RO6MOS sets all outputs to a defined state. Using internal delay timers, a graduated switching on is realised, which works depending from the base, extension or (other) I/O modules.
The RO6MS and de RO6MOS have their own power connection, which means the module is able to operate independent of the base module. The RO3MOS is identical to the RO6MOS, but has 3 relay outputs and 3x2 digital inputs.

General

	RO6MS	RO6MOS	RO3MOS
Article numbers	400011	400019	400020
Dimensions (when installed)	98 x 131 x 69 (WxHxD in mm)		
Dimensions of dismountable engravable plate	63.3 x 88.6 (WxH in mm)		
Weight	325 grams		
Bus power supply used	135 mA	135 mA	87 mA

Power connection

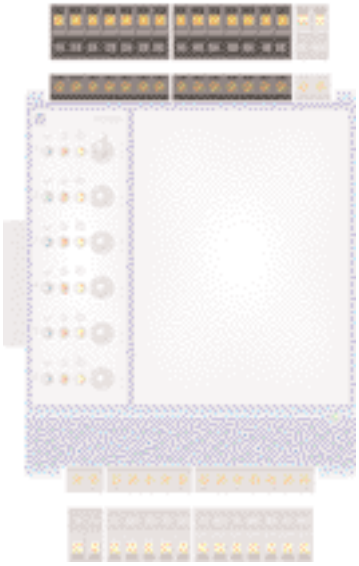
Required input voltage for power supply	24 Vac (20 to 30 Vac)
Required mains frequency	50 Hz / 60 Hz
Maximum power consumption for power supply	400 mA
Required fuse per 8 modules	2,5AT

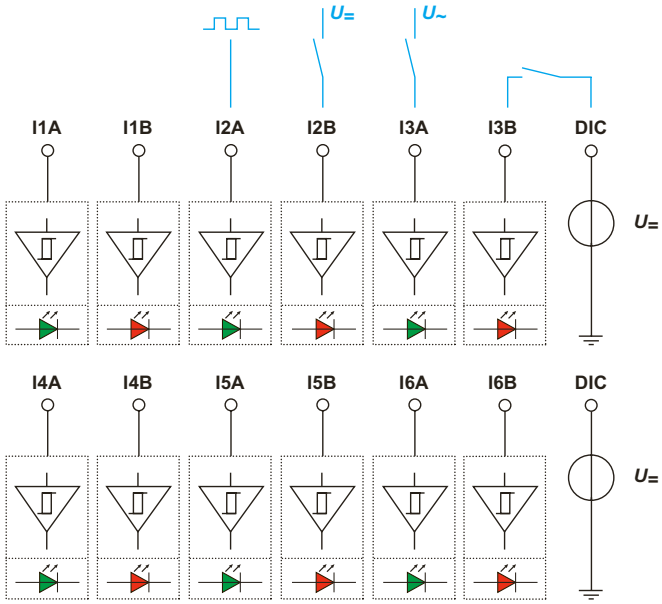
Relay outputs

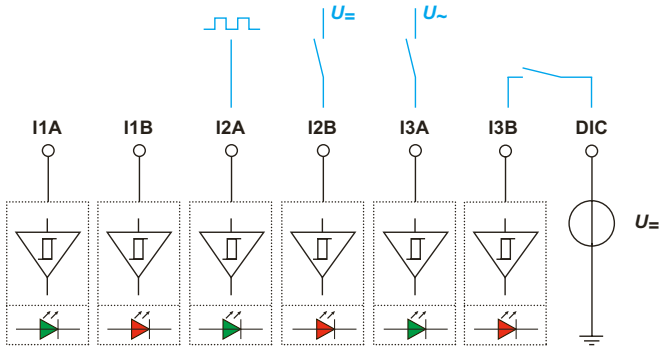
	RO6MS	RO6MOS	RO3MOS
Number of relay outputs with a normally open contact	4	4	2
Number of relay outputs with a changeover contact	2	2	1
Maximum switching voltage	250 Vac		
Maximum switching current	8 A ($\cos \varphi = 1$)		
Dielectric strength (contact ◄► other circuit)	> 2300 Vac		
Expected life time of relay ($\cos \varphi = 1$)	Mechanical: 10,000,000 switching operations Electrical: 800,000 switching operations at 2A switching current 250,000 switching operations at 4A switching current 100,000 switching operations at 8A switching current		
Watchdog	The watchdog circuit starts up the failsafe procedure when: • communication fails • the base/extension module stops operating		
Failsafe-procedure	The outputs are: • set to 0 (default) • set to a configured failsafe value		
Override	Tumbler switch (On/Auto/Off) per output		
Signalling	Yellow signalling LED (override active)		

A description of the digital inputs on the RO6MS, RO6MOS and RO3MOS can be found on the next two pages.

Relay output modules RO6MS, RO6MOS and RO3MOS







The RO6MS, RO6MOS and RO3MOS relay output modules have 2 digital inputs per relay output for operating and failure signalling, which means they are perfectly suited for motor controls. The green LED indicates 'operating' and the red LED indicates 'failure'.

Unlike the RO6MOS and the RO3MOS, the RO6MS digital inputs, in case they are not used for the motor group, can be used freely. If in this situation the input has no relationship with the associated output, the LED is switched off.

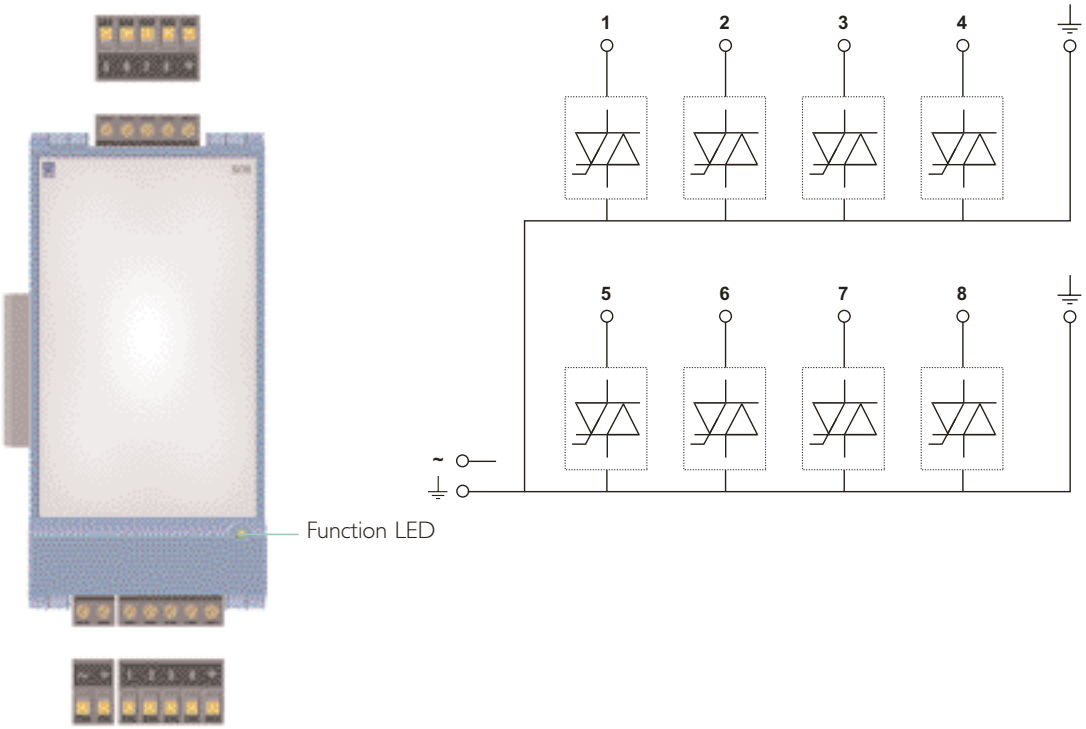
DC power supply for digital inputs (DIC)

Output voltage (load-dependent)	6 to 16 Vdc
Maximum load	5,3 mA or 1550 Ω
Protection	Short-circuit protected Protected against overvoltage connection up to 30 Vac

Digital inputs

	RO6MS	RO6MOS	RO3MOS
Number of digital inputs	12	12	6
Use as pulse counter	Yes	No	No
Signalling	3 / 6 green LEDs for A inputs (operating messages, configurable) 3/ 6 red LEDs for B inputs (failure messages, configurable) Signalling can be inverted in relation to the input signal depending on the configuration		
Type of measurement to be set per input	AC or DC measurement		
Input impedance	19,6 kΩ ±5%		
	AC measurement	AC measurement	
Required input voltage with open contact	0 to 4 Vac	-60 to 3 Vdc	
Required input voltage with closed contact	12 to 30 Vac	6 to 60 Vdc	
Rated sample time	20 ms	8 ms	
Required pulse duration (both when open and closed contact)	50 ms	10 ms	
Maximum permitted pulse frequency (with ideal symmetric pulse)	10 Hz	50 Hz	
Minimum resistance of the connected contact (including connecting wires) with open contact when DIC is used (DC power supply for digital inputs)	-	90 kΩ	
Maximum resistance of the connected contact (including connecting wires) with closed contact when DIC is used (DC Power supply for digital inputs)	-	5 kΩ	

SO8 Triac output module



The SO8 triac output module has 8 solid-state triac outputs. The outputs are failsafe: if communication with the base module or extension module fails, the SO8 sets all outputs to a defined state. Using internal delay timers, a graduated switching on is realised, which works independent from the base, extension or (other) I/O modules.

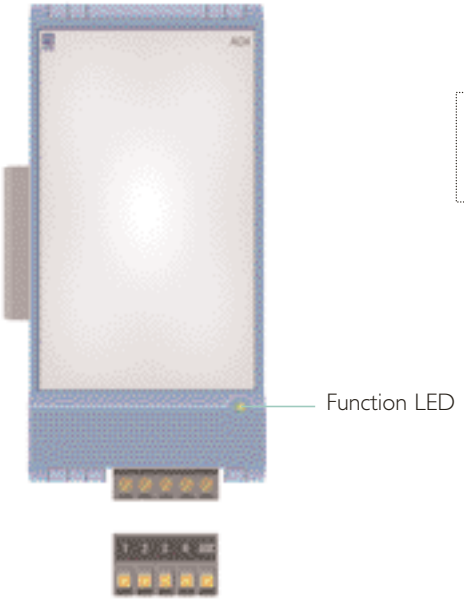
General

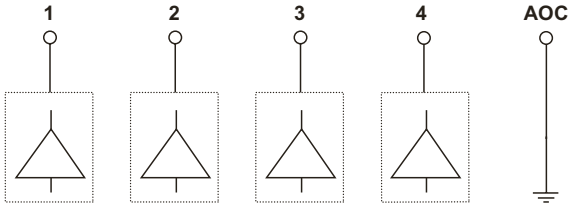
Article number	400009
Dimensions (when installed)	58 x 131 x 60 (WxHxD in mm)
Dimensions of dismountable engravable plate	52,8 x 88,6 (WxH in mm)
Weight	150 grams
Bus power supply used	127 mA

Triac outputs

Number of triac outputs	8
Switching voltage	20 to 30 Vac
Required mains frequency	50 Hz / 60 Hz
Maximum permitted current per output (continuously, when fitted horizontally)	0,5 A
Maximum permitted current per output (continuously, when fitted vertically)	0,35 A
Maximum allowed current per output (for 2 minutes)	1 A
Maximum allowed current per 4 output (1 to 4 and 5 to 8, for 2 minutes)	3.5 A
Testing without load	Possible
Protection	Protection against overload (locking)
Maximum fuse value	4 AT
Watchdog	The watchdog circuit starts up the failsafe procedure when: • communication fails • the base/extension module stops operating
Failsafe-procedure	The outputs are: • set to 0 (default) • set to a configured failsafe value

AO4 analog output module





The AO4 analog output module has 4 analog voltage outputs. The outputs are failsafe: if communication with the base module or extension module fails, the AO4 sets all outputs to a defined state. The actual output voltage can be read using the Compri LCD display and using the Priva Top Control software.

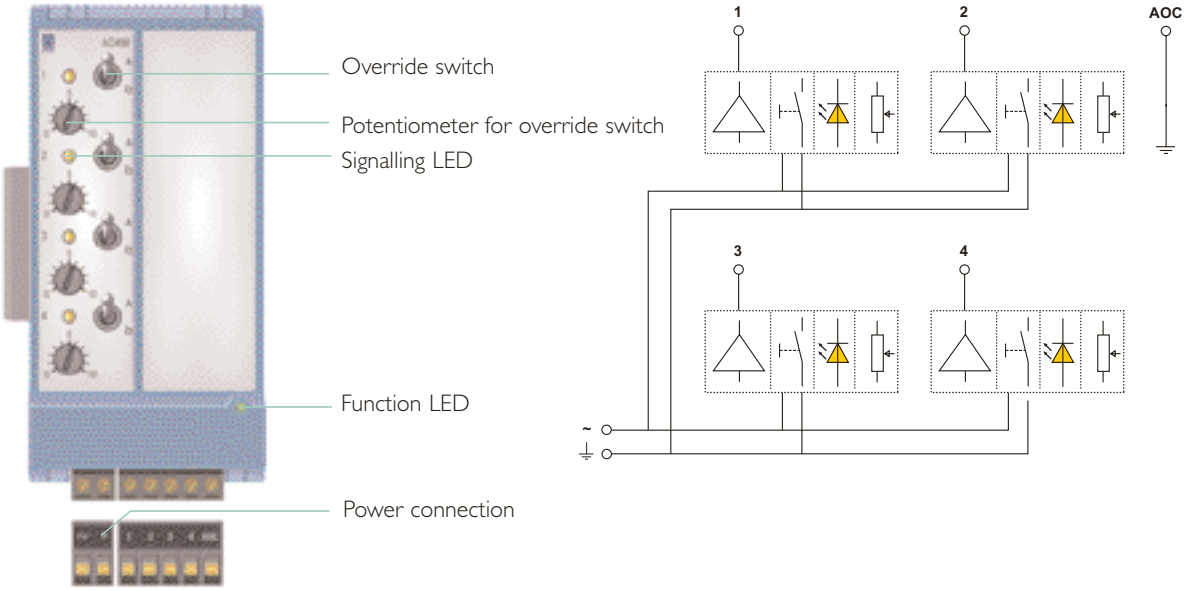
General

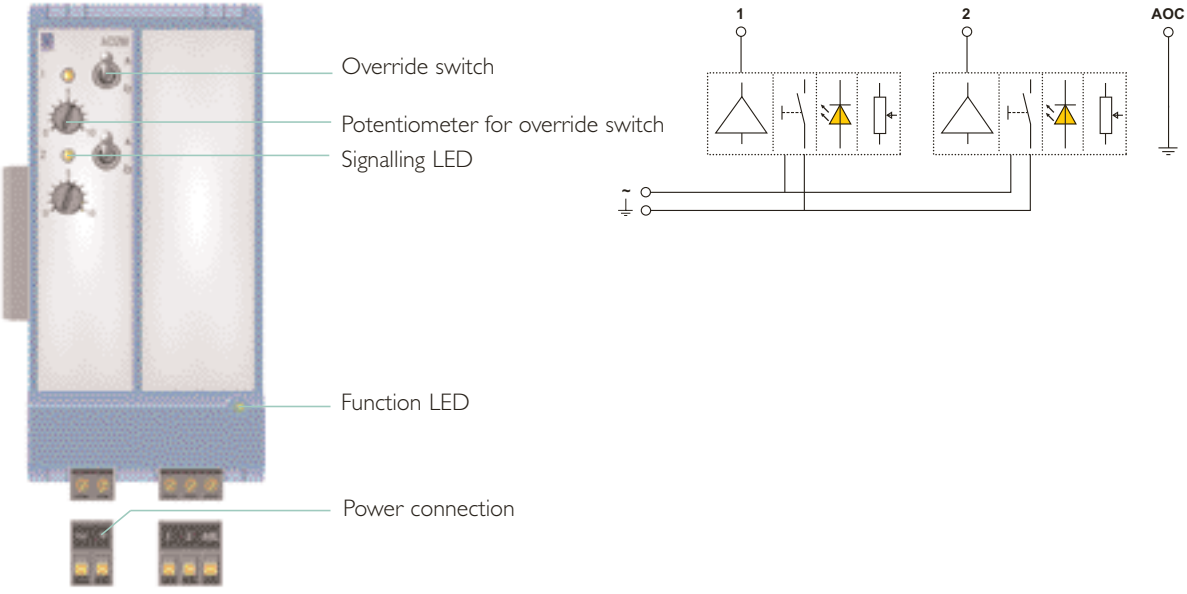
Article number	400007
Dimensions (when installed)	58 x 128 x 60 (WxHxD in mm)
Dimensions of dismountable engravable plate	52.8 x 88.6 (WxH in mm)
Weight	125 grams
Bus power supply used	84 mA

Analog outputs

Number of analog outputs	4
Control range	0 to 10 Vdc
Maximum load current	10 mA
Minimum load resistance to be used	1 kΩ
Maximum load resistance to be used	∞
Protection	• Short-circuit protection (self-restoring). • Protection from overvoltage connection up to a maximum of 30 Vac
Resolution	1 mV
Accuracy	Control range 0-200 mV: -5 / +50 mV Control range 200-10.000 mV: ± (5 mV + 0.5% of the control)
Feedback accuracy	± 100 mV
Watchdog	The watchdog circuit starts up the failsafe procedure when: • communication fails • the base/extension module stops operating
Failsafe-procedure	The outputs are: • set to 0 (default) • set to a configured failsafe value

Analog output modules AO4M and AO2M





The 4 analog outputs on the AO4M analog output module are each fitted with an integrated override switch. Each switch has the options Auto (automatic control) and Manual (depending on the potentiometer setting). A yellow LED displays for each output whether the override switch is in the Manual state. The outputs are failsafe: if communication with the base module or extension module fails, the AO4M sets all outputs to a defined state. The status of the potentiometer and the actual output voltage can be read using the Compri LCD display and the Priva Top Control software. The module is able to operate independently of the base module thanks to its own power connection. The AO2M is identical to the AO4M, although it has 2 analog outputs.

General

	AO4M	AO2M
Article numbers	400008	400021
Dimension (when installed)	58 x 128 x 69 (WxHxD in mm)	
Dimensions of dismountable engravable plate	27,8 x 88,6 (WxH in mm)	
Weight	160 grams	
Bus power supply used	95 mA	69 mA

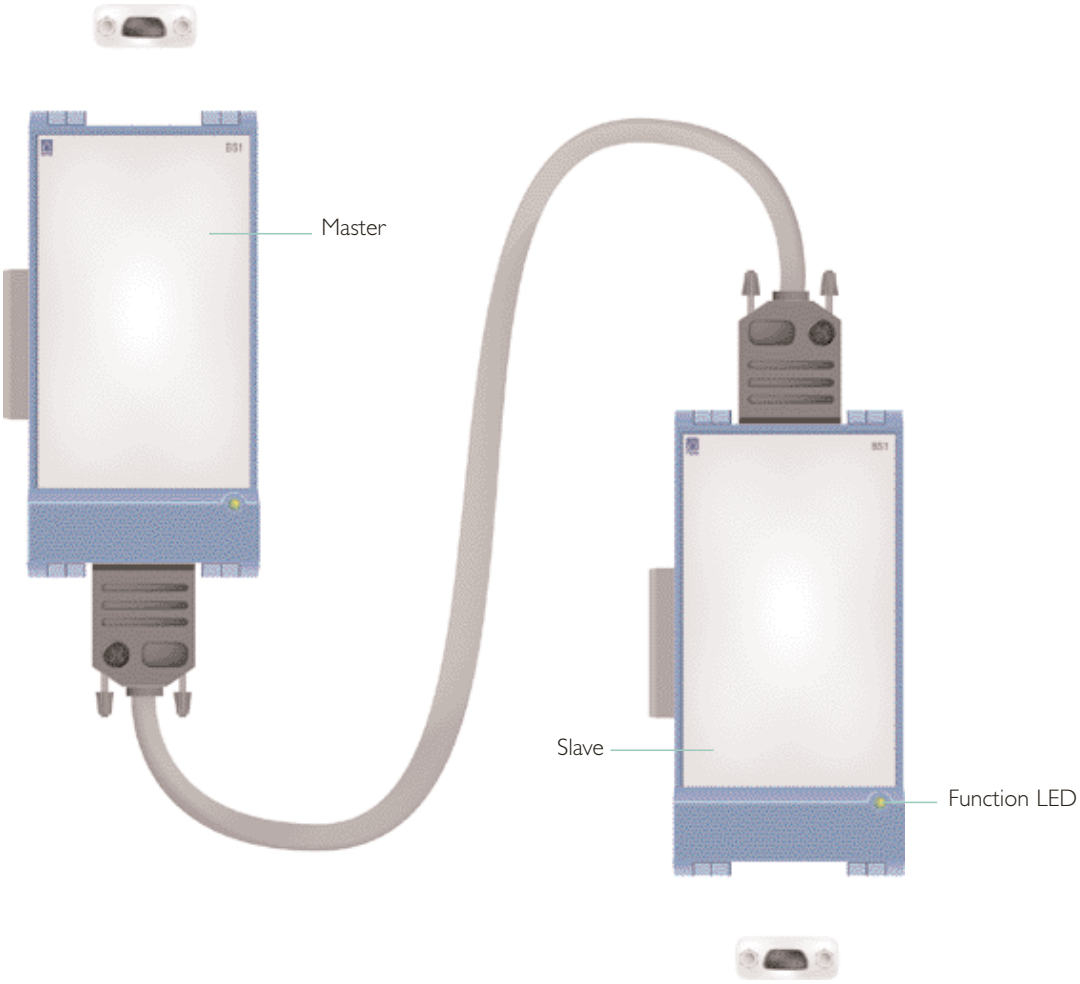
Power connection

Required input voltage for power supply	24 Vac (20 to 30 Vac)
Required mains frequency	50 Hz / 60 Hz
Maximum power consumption for power supply	300 mA
Required fuse per 8 modules	2,5AT

Analog outputs

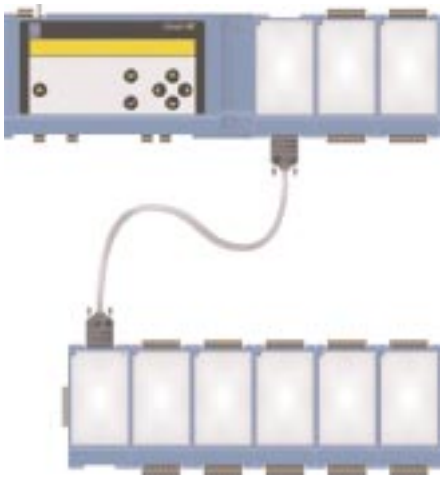
	AO4M	AO2M
Number of analog outputs	4	2
Control range	0 to 10 Vdc	
Maximum load current	10 mA	
Minimum load resistance to be used	1 kΩ	
Maximum load resistance to be used	∞	
Protection	• Short-circuit protection (self-restoring) • Protection from overvoltage connection up to a maximum of 30 Vac	
Resolution	1 mV	
Accuracy (position: Auto)	Control range 0-200 mV : -5 / +50 mV Control range 200-10.000 mV: ± (5 mV + 0.5% of the control)	
Feedback accuracy	± 100 mV	
Watchdog	The watchdog circuit starts up the failsafe procedure when: • communication fails • the base/extension module stops operating	
Failsafe-procedure	The outputs are: • set to 0 (default) • set to a configured failsafe value	
Override	Tumbler switch (Auto/Manual) per output	
Potentiometer	Lineair	
Potentiometer setting range	0 to 10 Vdc	
Signalling	Yellow signalling LED (override active)	

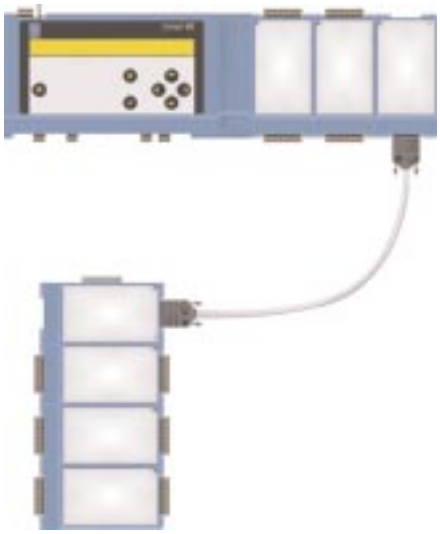
BS1 bus splitter module



When fitting the Compri HX, the modules are fitted by default on one row. Sometimes, however, it is not possible, when there is not enough room in the control panel. In such cases, the BS1 bus splitter module provides the solution. This module enables the internal I/O bus to be split into 2 rows.

A bus splitter module does not affect the maximum number of I/O modules on a base or an extension module.

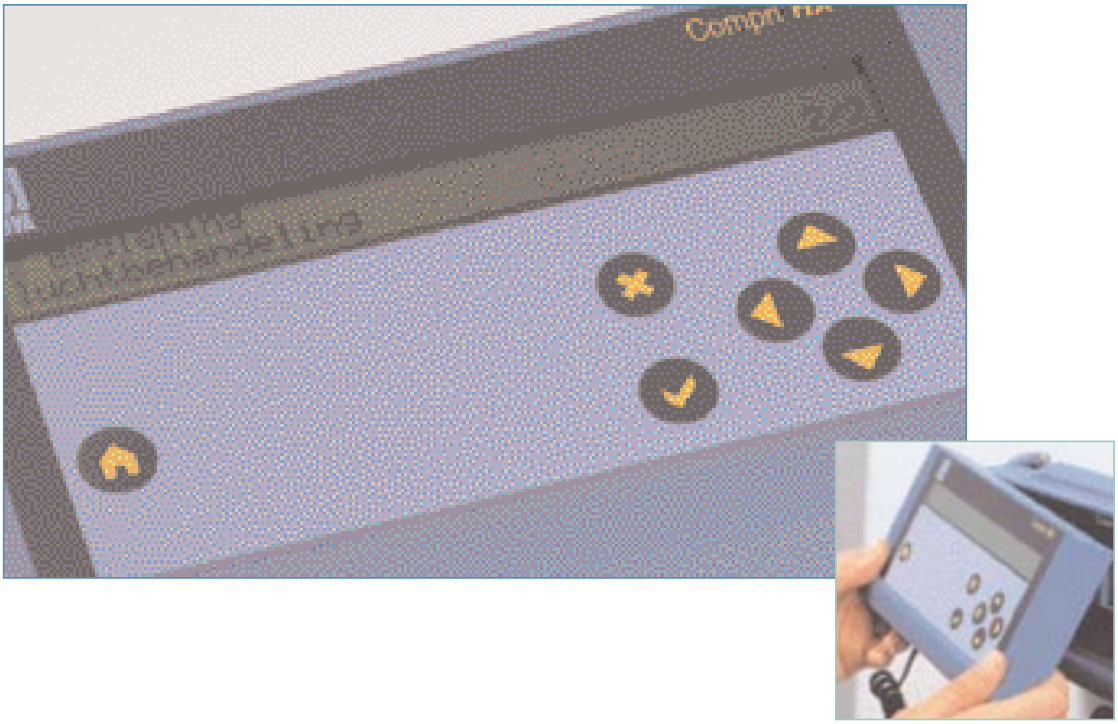




Individual configuration examples

General	
Article number	400012
Dimensions of master component (when installed)	58 x 130 x 60 (WxHxD in mm)
Dimensions of slave component	65 x 130 x 60 (WxH in mm)
Dimensions of dismountable engravable plate	52,8 x 88,6 (WxH in mm)
Total weight	367 grams
Components	• Master component • Slave component • Cable
Master component position	On any place within the row of the base/extension module
Slave component position	The first one in the added row
Maximum cable length	Not applicable, only supplied cable (0.45 m) may be used
Maximum number of BS1 bus splitter modules per base/extension module	1
Protection	Protection against incorrect connection
Bus power supply used	0 mA

Compri LCD display



Priva has developed a special terminal for operating the Compri HX: the Compri LCD display. All current Compri HX settings and variables – and those for other Compris in the network – can be viewed and modified from this display.

The Compri LCD display is fitted with the following features:

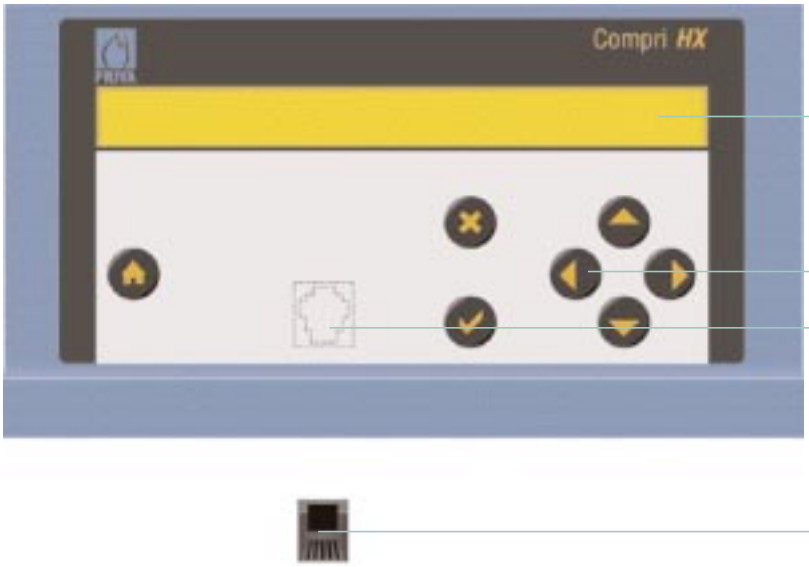
- easy to read characters
- well organized operating keys
- background lighting

The Compri LCD display is connected to the base module by means of standard RJ11 connectors.
Its various installation options include:

- installation on the Compri HX
- installation on the control panel door
- installation on the wall

The Compri LCD display is also suitable for hand operation.

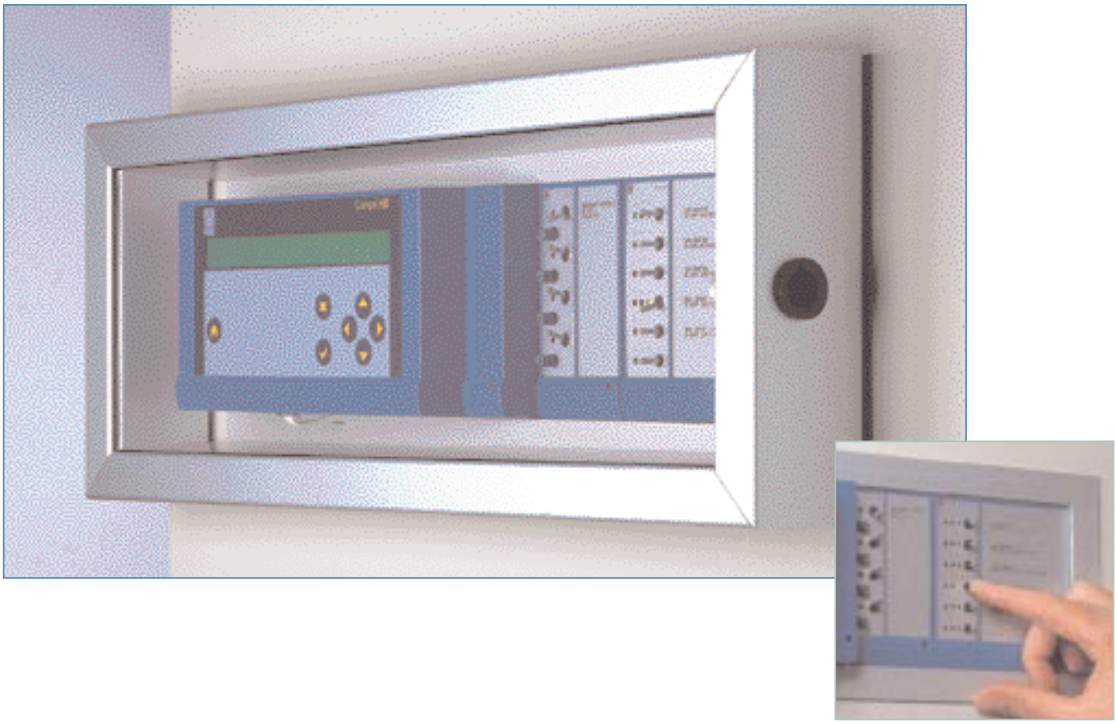
The information from the Compri HX can also be viewed, modified and analysed using the Priva Top Control software. A variety of graphical operating packages are available for this purpose. The operator navigates through the building control system using his/her mouse and thereby oversees everything that takes place within the installation using the clear process diagrams.



General

Article number	400003
Structure	Front guard Dismountable back section
Dimensions (when installed)	200 x 108 x 25 (WxHxD in mm)
Weight	320 grams
Installation options	• Can be snapped on to the base/extension module • Can be screw-fitted for assembly
Connection options	On the base module
Connector type for connection of Compri HX	RJ11
Cable type (if length > 10 m)	Twisted pair (3x2)
Maximum cable length	100 m
Number of keys	7
Display type	LCD 2 x 40 characters
Display backlighting	Automatically on/off

Easy to fit...



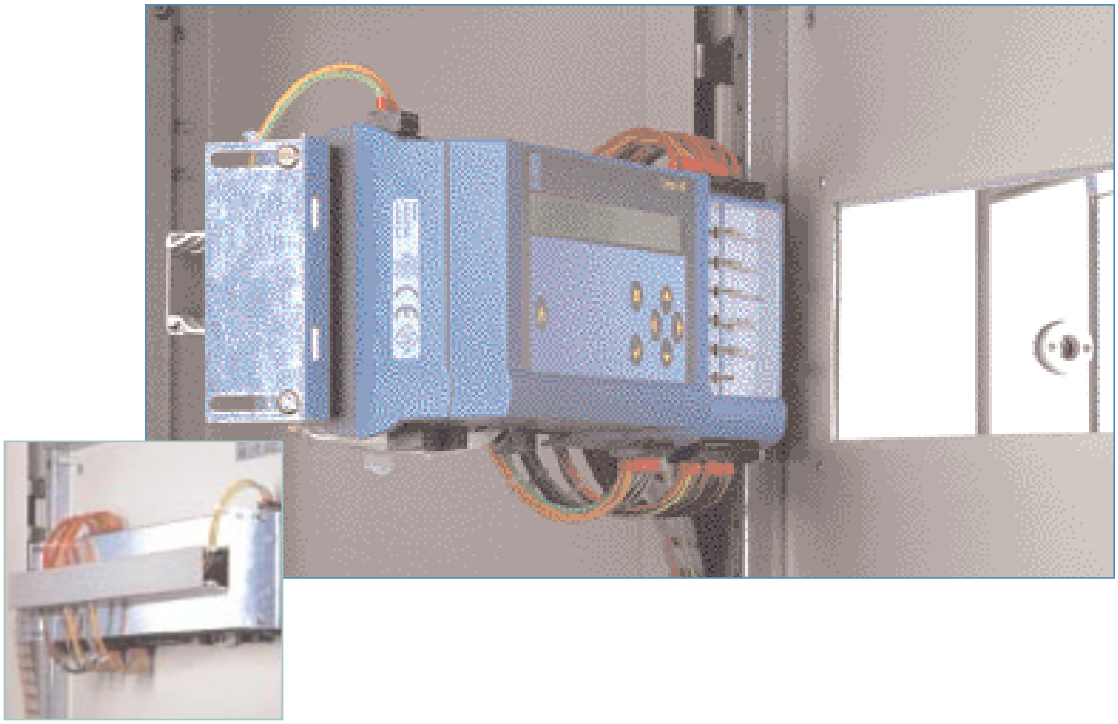
In order to operate and view the override switches and signalling LEDs from the outside of the control panel door, the Compri HX can be built into the control panel door. For this, a panel fitting set is available.

This panel fitting set is based on a simple construction. Behind a cavity in the door there is a construction part onto which the Compri HX is fitted. The construction part can be fitted in a rotatable way, so that the Compri is accessible from all corners.

The panel fitting set comes in three versions and can be made to fit any door width. The Compri HX can be built into almost every type of control panel door. Per module that needs to be fitted into this, a suitable panel-fitting set can be chosen.

Another important advantage of the door-fitting is that in the control panel itself, more space will become available. The fact that for this concept no additional electronic components are required reduces the risk of errors.

...into the control panel door



General

	Panel fitting set Frame width 475 mm	Panel fitting set Frame width 675 mm	Panel fitting set Frame width 875 mm
Article numbers	400013	400014	400015
Weight	approx. 1300 grams	approx. 1600 grams	approx. 1900 grams
Width cupboard frame (middle/middle)	475 mm	675 mm	875 mm
Dimensions construction parts	495x130 mm	695x130 mm	895x130 mm
Available width for modules and earth neutral point	375 mm	575 mm	775 mm
Construction depth (excl. cable tray)	Max. 90 mm		
Fitting possibility construction part	Left or right turning		
Ornamental strip	To be tailored for application		
Colour ornamental strip	Aluminium colour		

Priva Building Intelligence develops intelligent building control systems that leave nothing to chance. Priva supplies its systems through the Priva Partner network, a select grouping of reputable installation firms and system integrators with a thorough knowledge of our smart systems.

PRIVA Building Intelligence

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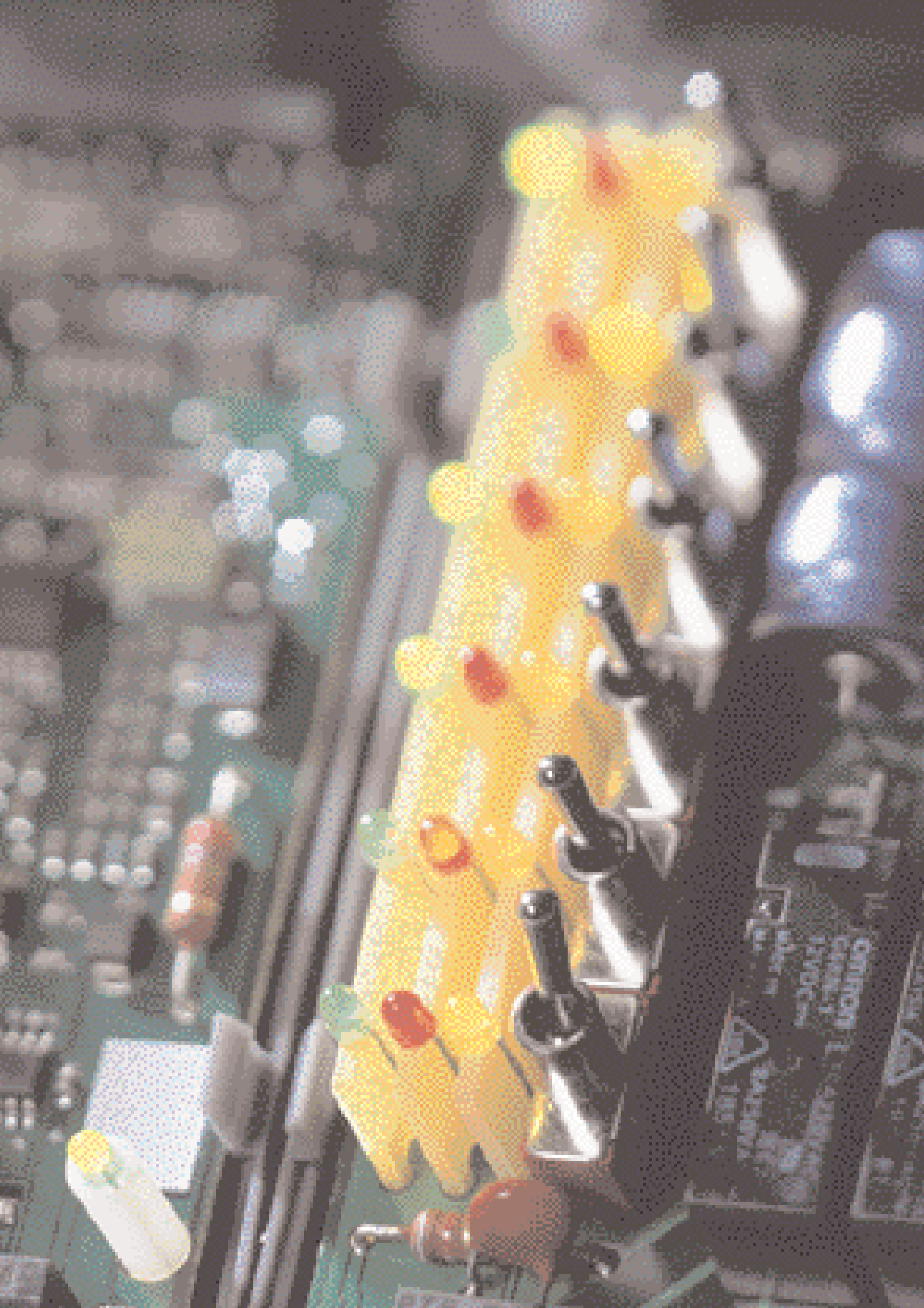

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