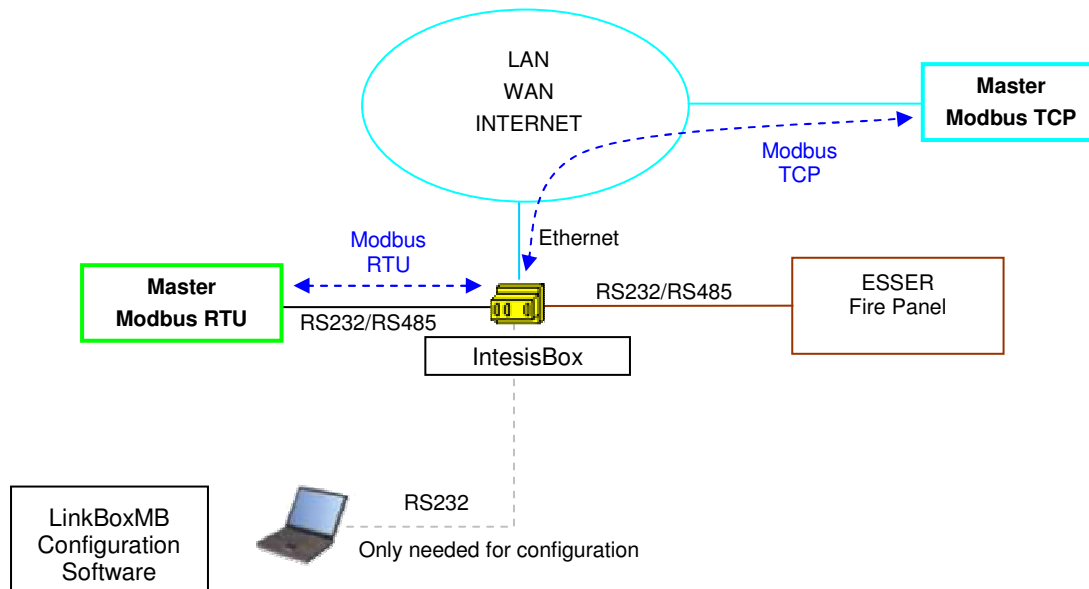




# IntesisBox® Modbus Server - ESSER 8007/8008

Gateway for integration of ESSER 8007/8008 fire panels into Modbus (RTU and TCP) enabled control systems.

**Integrate your ESSER fire panels into your Modbus master device or system (SCADA, BMS, PLC, HMI, TouchPanels...).**



Monitor & Control your network of ESSER fire panels remotely from your Control Center using any commercial SCADA or monitoring software with Modbus TCP driver.

IntesisBox allows Modbus TCP (Ethernet) or Modbus RTU (RS232 or RS485) communication, configurable by software. *IntesisBox is a server device in case of Modbus TCP communication, or a slave device in case of Modbus RTU communication.*

ESSER IDT protocol, either over RS485 or RS232 serial line is supported. Monitoring of the ESSER elements (detectors, outputs, zones) through independent Modbus registers. The Modbus address map is fully configurable. The states desired to be translated to Modbus are also selectable (0-Normal, 1-Alarm...7-Test).

Integration of up to 3000 points is supported by IntesisBox. Commands toward the panel are also supported (reset, disconnect and test of elements...).

IntesisBox Modbus Server series are configured using *LinkBoxMB*, a software tool for windows™ which is supplied along with the purchase of IntesisBox with no additional cost. *The user interface of LinkBoxMB allows simulating the values of the Modbus registers without the need to be physically connected to the panel, very useful while in commissioning phase.*

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## Description

IntesisBox Modbus Server for integration of ESSER 8007/8008 fire panels	
Order Code	Description
<p>IBOX-MBS-ESSER</p> 	<p>This gateway allows to integrate the ESSER panel through Modbus protocol. The gateway acts as a Modbus slave device. Commands toward the panel are allowed.</p> <p><b>Main features</b></p> <ul style="list-style-type: none"> <li>• Software for configuration and test is supplied with the gateway.</li> <li>• Through the user interface, it is allowed to simulate the status of the Modbus registers without the need to be physically connected to the panel.</li> <li>• Allows to be mounted on DIN rail, wall or desktop.</li> <li>• Power from 9 to 30Vdc or 24Vac (Power supply supplied)</li> </ul> <p><b>ModBus features</b></p> <ul style="list-style-type: none"> <li>• ModBus TCP or</li> <li>• ModBus RTU over RS232 or RS485 selectable.</li> <li>• Parameters configurable: IP address, slave number, baud rate, etc.</li> <li>• ModBus functions supported: 01, 02, 03 &amp; 04 for read, 06 for write.</li> <li>• Every register contains the information of a single element.</li> <li>• Registers: of 16 bits MSB..LSB and of 1 bit. Those of 1 bit indicate the state of 0-Normal 1-Alarm, those of 16 bits indicate the different states that can have the element.</li> <li>• Modbus register map user definable.</li> <li>• Capacity of 3,000 Modbus registers.</li> </ul> <p><b>ESSER features</b></p> <ul style="list-style-type: none"> <li>• IDT protocol through RS485 or RS232 connection (TTY board required).</li> <li>• 3 general states of the panel in independent Modbus registers.</li> <li>• Indication of communication error with the panel.</li> <li>• Each Modbus register corresponds to a single element of the panel: detector, output or zone.</li> <li>• Each element to detect is defined in a table indicating zone number, output or detector number, and type of element: detector, output or zone.</li> <li>• The value offered per each Modbus register reflects the state of the element associated in the panel, the possible values are from 0-Normal, 1-Alarm... to 7-TEST.</li> <li>• Commands toward the panel are allowed for reset, disconnect and test the elements.</li> </ul>

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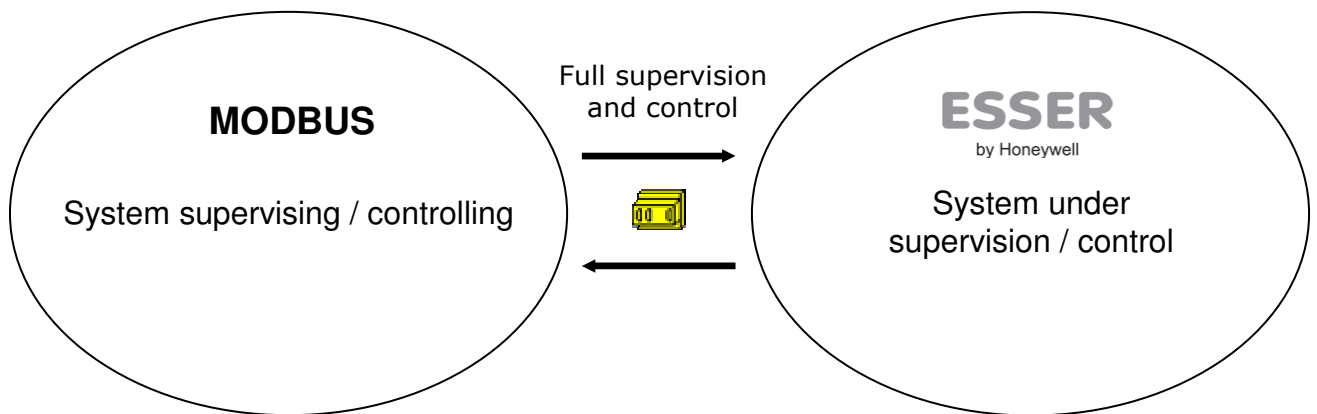
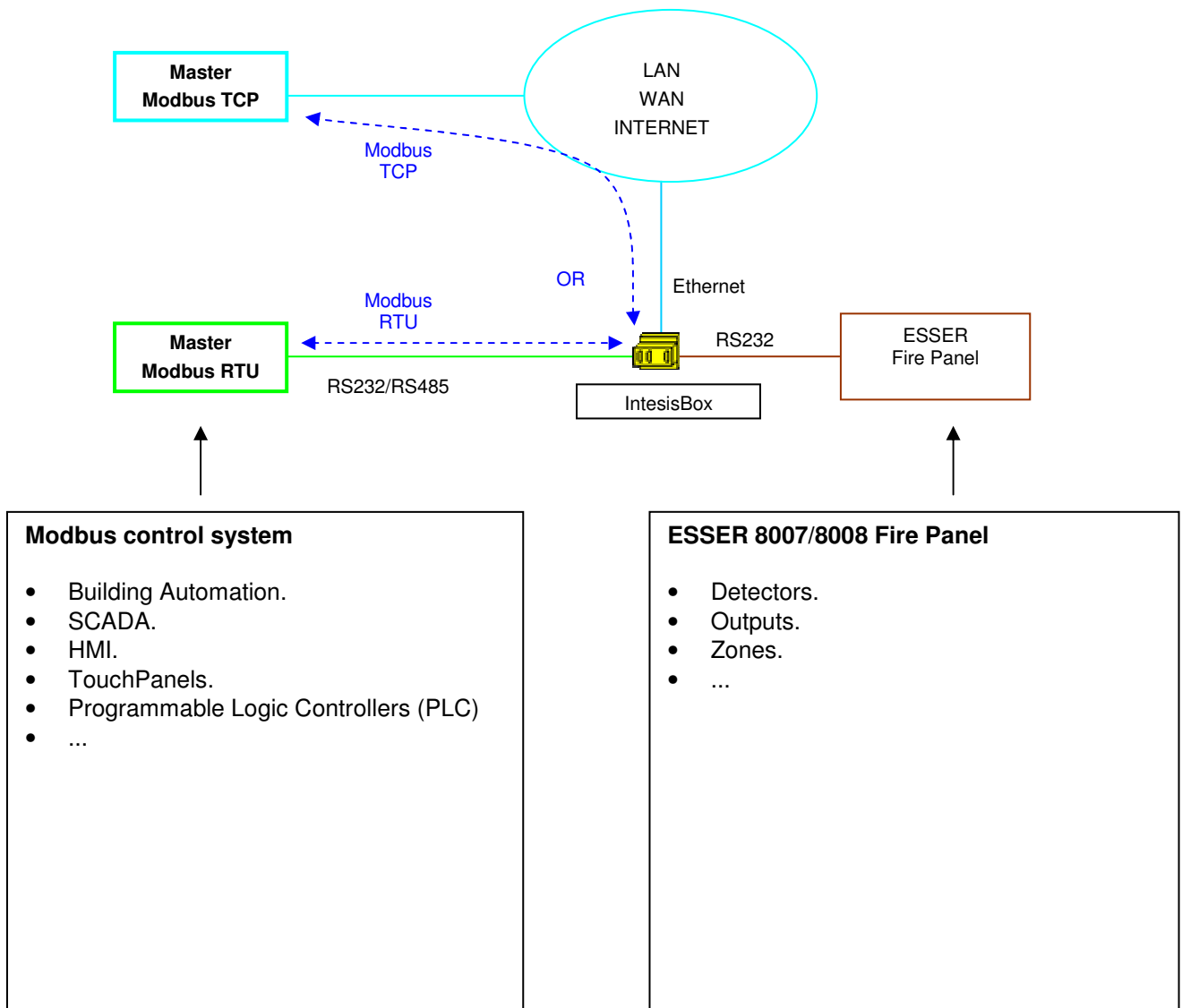
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## Sample applications

Integration of ESSER fire panels into Modbus control systems.



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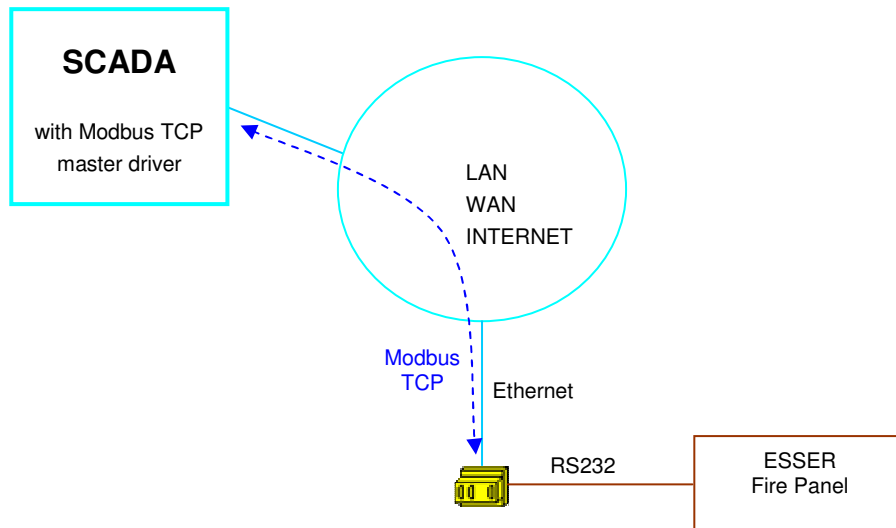
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## Typical application

Monitor & Control of a network of ESSER fire panels remotely from a Control Center using any commercial SCADA or monitoring software with Modbus TCP driver.



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## Modbus interface of IntesisBox

<b>Modbus interface</b>	
Device type	Slave.
Modbus modes supported	TCP, RTU RS232 or RS485.
Modbus TCP configuration parameters	<ul style="list-style-type: none"> <li>• IP address.</li> <li>• Subnet mask.</li> <li>• Default gateway.</li> <li>• TCP port.</li> </ul>
Modbus RTU configuration parameters	<ul style="list-style-type: none"> <li>• RS232/RS485.</li> <li>• Baud rate, parity.</li> <li>• Slave number.</li> </ul>
<b>Points</b>	
Modbus data types	All the points are of data type UNSIGNED INT in the Modbus interface.
<b>Functions supported</b>	
	<ul style="list-style-type: none"> <li>• Modbus functions supported: 01, 02, 03 &amp; 04 for read, 06 for write.</li> <li>• Every register contains the information of a single element.</li> <li>• Registers: of 16 bits MSB..LSB and of 1 bit. Those of 1 bit indicate the state of 0-Normal 1-Alarm, those of 16 bits indicate the different states that can have the element.</li> <li>• Modbus register map user definable.</li> <li>• Capacity of 3,000 Modbus registers.</li> </ul>



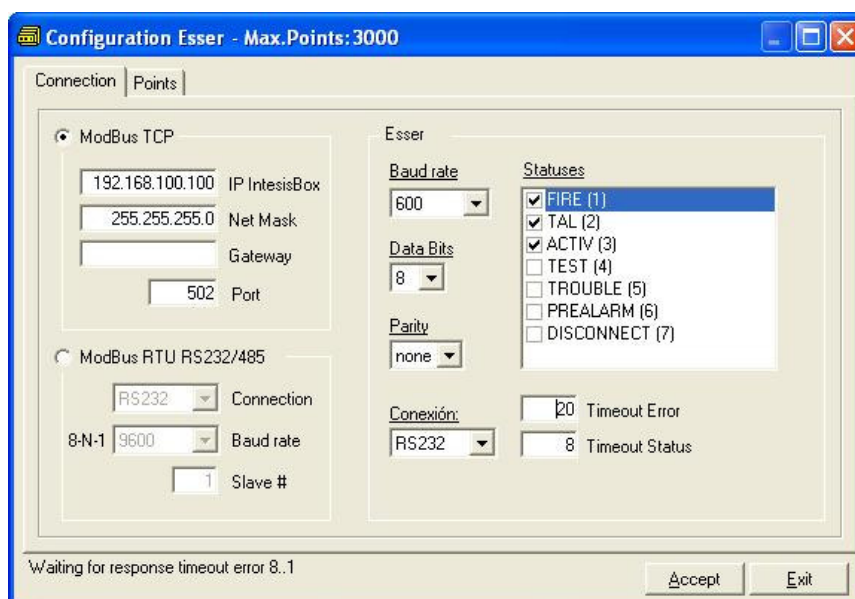
## ESSER interface of IntesisBox

<b>ESSER interface</b>	
Type	Serial connection.
Configuration parameters	<ul style="list-style-type: none"> <li>• Baud rate, data bits, parity.</li> <li>• RS232/R485 connection (TTY board required). IDT protocol.</li> <li>• Waiting timeout for a response of the ESSER panel.</li> <li>• Waiting timeout for change status point back to normal.</li> <li>• ESSER codes that will force alarm activation.</li> </ul>
Interactivity with ESSER system	<ul style="list-style-type: none"> <li>• ESSER points can be read and write from the gateway.</li> <li>• Modbus value reflecting each possible state is fully configurable.</li> </ul>
Main features	<ul style="list-style-type: none"> <li>• 3 general states of the panel in independent Modbus registers.</li> <li>• Indication of communication error with the panel.</li> <li>• Each Modbus register corresponds to a single element of the panel: detector, output or zone.</li> <li>• Each element to detect is defined in a table indicating zone number, output or detector number, and type of element: detector, output or zone.</li> <li>• The value offered per each Modbus register reflects the state of the element associated in the panel, the possible values are from 0-Normal, 1-Alarm... to 7-TEST.</li> <li>• Commands toward the panel are allowed for reset, disconnect and test the elements</li> </ul>



## Configuration tool

LinkBoxMB	<ul style="list-style-type: none"> <li>• Visual engineering tool, easy of use, for gateway's configuration and supervision compatible with Microsoft Windows operating systems, supplied with the gateway free of charge.</li> <li>• Multi-window tool allowing to supervise simultaneously the communication activity with both protocols (systems), real time values for all the signals allowing to modify any value (very useful for test purposes), console window showing debug and working status messages, and configuration windows to configure all the gateway's parameters and signals.</li> <li>• Signals configuration in plain text files (tab separated) for easy and quick configuration using Microsoft Excel (very useful in projects with a lot of points).</li> <li>• Allows configuring the gateway's parameters and signals while in off-line (not connected to the gateway).</li> <li>• Connection to the gateway for download the configuration and supervision by using serial COM port of the PC (serial cable supplied with the gateway).</li> <li>• Allows configuring all the external protocols available for IntesisBox® Modbus Server series.</li> <li>• Upgrades for this software tool available free of charge whenever a new protocol is added to the IntesisBox® Modbus Server series.</li> <li>• Multi-project tool allowing having in the engineer's PC the configuration for all the sites with different IntesisBox® Modbus Server series gateways.</li> <li>• Multi-language tool, all the language-dependent strings are in a plain text file (tab separated) for easy modification or addition of new languages.</li> <li>• A list of system commands is available to send to the gateway for debugging and adjust purposes (Reset, Date/time consultation/adjust, Firmware version request...).</li> </ul>
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## Mechanical & Electrical characteristics

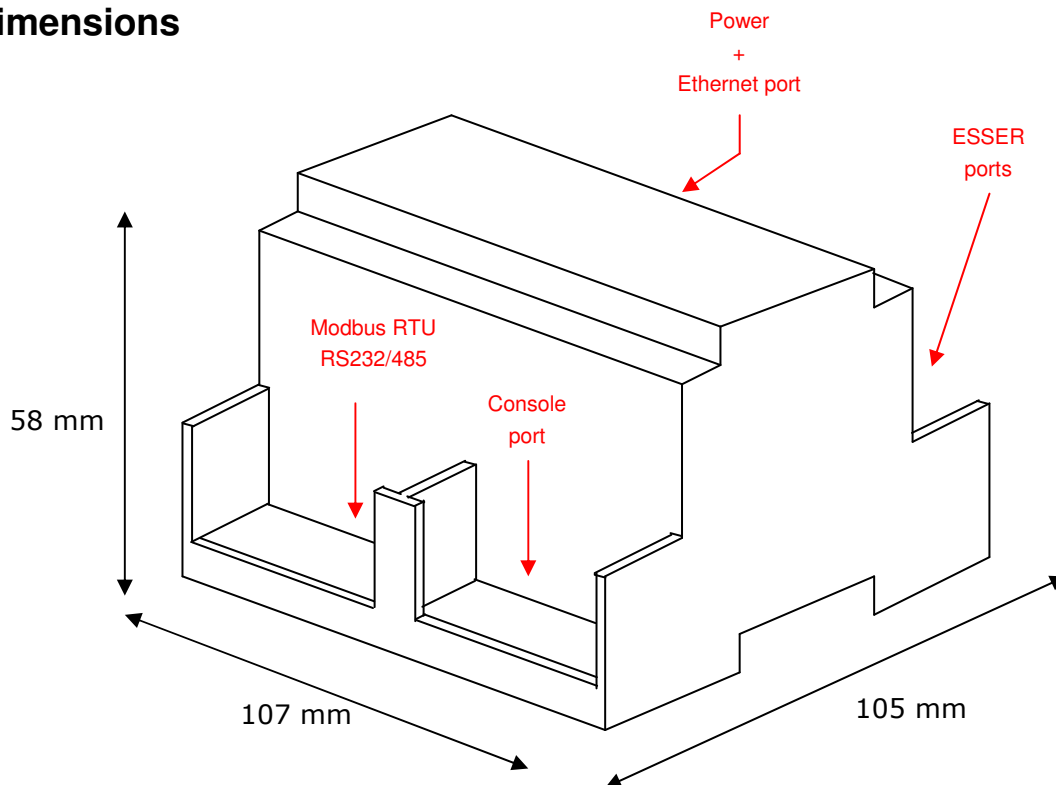


Enclosure	Plastic, type PC (UL 94 V-0). Dimensions: 107mm x 105mm x 58mm.
Color	Light Grey. RAL 7035.
Power	9 to 30Vdc +/-10% 1.4W. 24Vac +/-10% 1.4VA. Plug-in terminal bloc for power connection (2 poles).
Mounting	Surface. Wall. DIN rail EN60715 TH35.
ESSER ports	1 x Serial RS232 (DB9 male DTE). 1 x Serial RS485 (Plug-in screw terminal block 2 poles).
Modbus RTU ports	1 x Serial RS232 (DB9 male DTE). 1 x Serial RS485 (Plug-in screw terminal block 2 poles).
Modbus TCP port	1 x Ethernet 10BT RJ45.
LED indicators	1 x Power. 2 x Serial port (ESSER) activity (Tx, Rx). 2 x Serial port (Modbus RTU) activity (Tx, Rx). 2 x Ethernet port link and activity (LNK, ACT).
Console port	RS232. DB9 female connector (DCE).
Configuration	Via console port. <sup>1</sup>
Firmware	Allows upgrades via console port.
Operational temperature	-40°C to +70°C
Operational humidity	5% to 95%, non condensing
Protection	IP20 (IEC60529).
RoHS conformity	Compliant with RoHS directive (2002/95/CE).
Certifications	CE

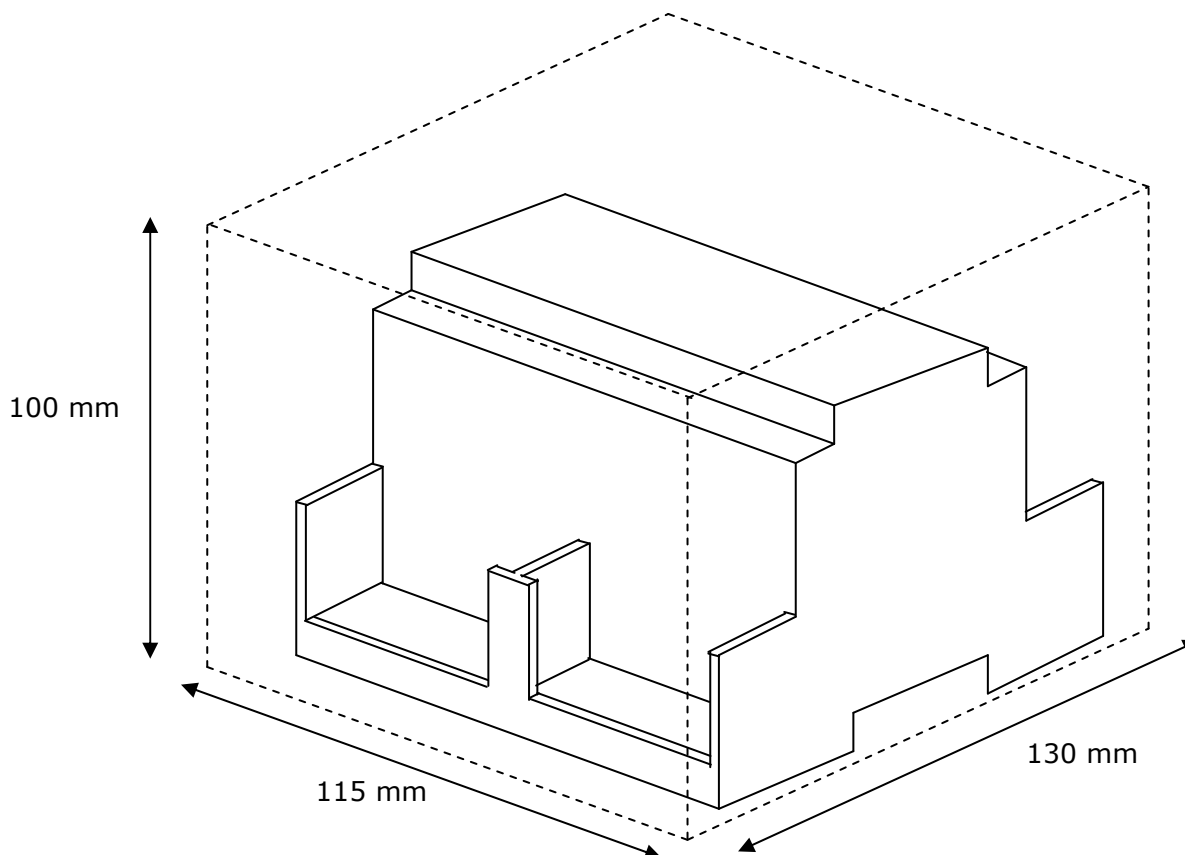
<sup>1</sup> Standard cable DB9male - DB9female 1,8 meters long is supplied with the device for connection to a PC COM port for configuring and monitoring the device. The configuration software, compatible with Windows® operating systems, is also supplied.



## Dimensions



Recommended available space for its installation into a cabinet (wall or DIN rail mounting), with space enough for external connections:



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