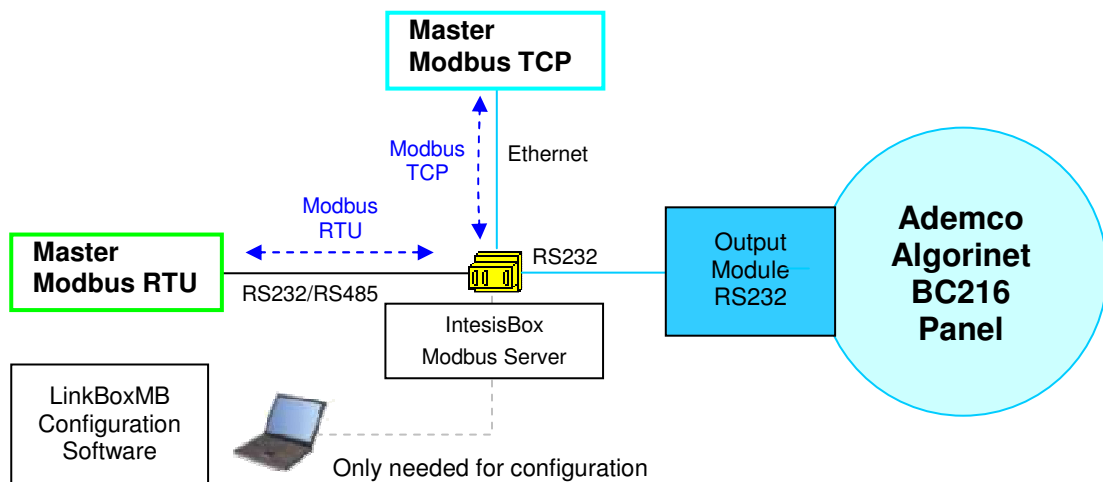# IntesisBox®

Modbus Server – Algorinet BC216

Gateway for the integration of Ademco Algorinet BC216 fire detection panels into Modbus enabled control systems.

Monitor & Control your ALGORINET fire panel remotely from your Control Center using any commercial SCADA or monitoring software with Modbus driver.

IntesisBox has been designed to monitor and control Algorinet fire detection systems (through serial port RS232), from a Modbus master or client device. Only one panel can be integrated connected to one IntesisBox, up to 5000 points in total can be integrated.

IntesisBox connects directly to the serial port RS232 of the Algorinet interface in one side, and in the other side to the Modbus network, via TCP (Ethernet) or RTU (RS232 or RS485) configurable by software.

Immediate availability of the states of Algorinet elements in IntesisBox (event driven protocol). IntesisBox has a fully configurable table associating Algorinet elements with Modbus register addresses, also the value desired in Modbus to indicate any possible state (alarm, fault…) is fully configurable.

Commands towards Algorinet are allowed (Reset, Test, AckAlarm…), the value to use in Modbus for each command is can be configured. A request for retrieving the actual state of all elements in the panel can be triggered from IntesisBox – convenient in case of recovering from communication failure situation.

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 Algorinet panel, very useful while in commissioning phase.*
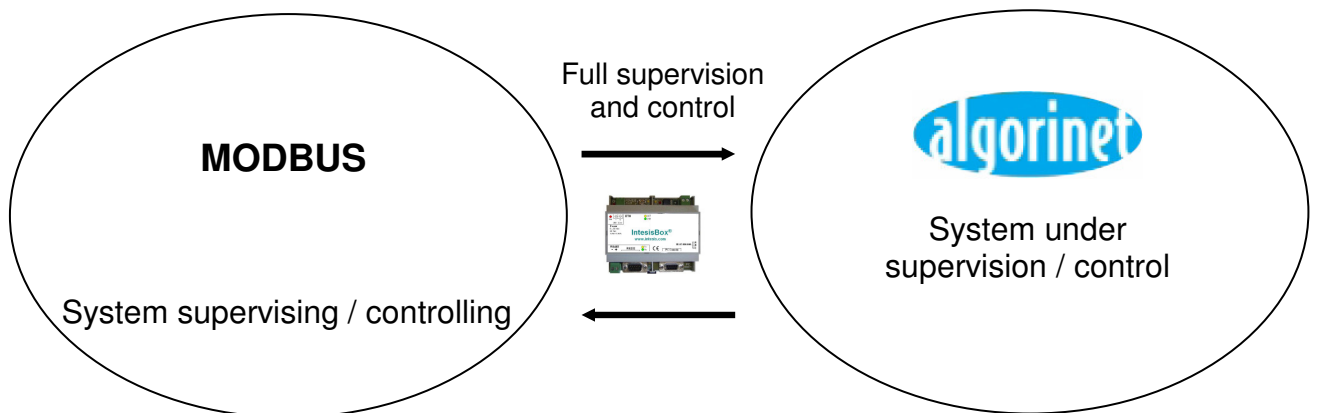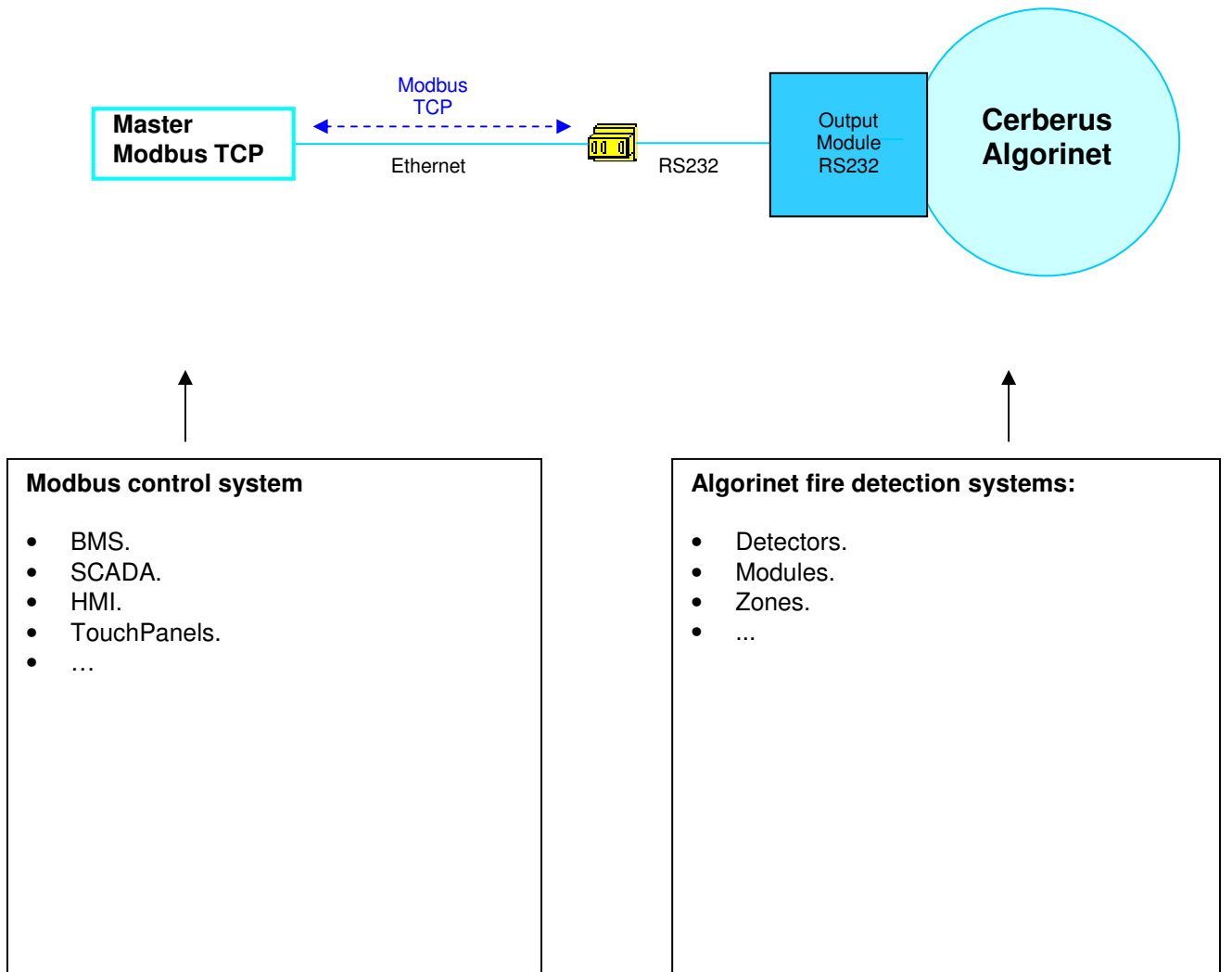
Intesis software

URL	http://www.intesis.com
email	info@intesis.com
tel	+34 938047134

IntesisBox capacity

Element	Max.	Notes
Number of Panels	1	Only one panel is supported by IntesisBox.
Number of Points	5000	Number of points that can be defined in IntesisBox.

Ref.: IBOX-MBS-ALGORI

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Sample applications

Integration of any Algorinet fire panel device into Modbus control systems.

Modbus control system

- BMS.
- SCADA.
- HMI.
- TouchPanels.
- …

Algorinet fire detection systems:

- Detectors.
- Modules.
- Zones.
- ...

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Typical application

Monitor & Control of a ALGORINET fire panel remotely from a Control Center, using any commercial SCADA or monitoring software with Modbus TCP driver.

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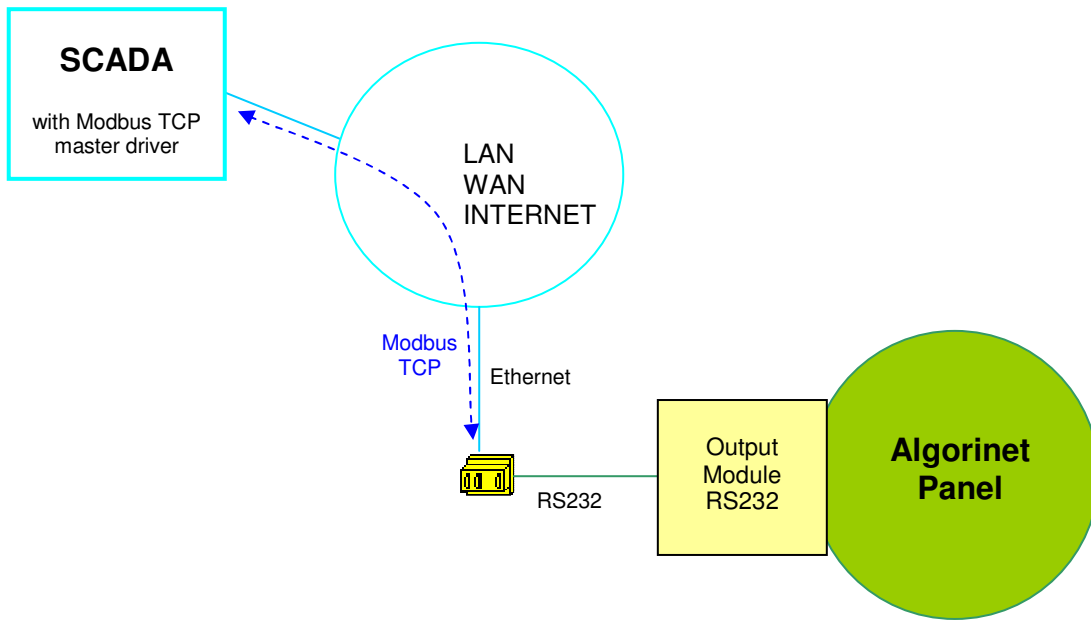
Algorinet interface of IntesisBox

General	
Max. points	5000
Virtual signals	Communication error with Algorinet system. Available from Modbus.

Algorinet interface	
Type	Serial RS232 for connection to Algorinet serial port RS232.
Configuration parameters	• Control panel states to visualize. • States for Algorinet system points. • Commands for Algorinet system points. • Timeout for panel response.
Interactivity with Algorinet system	• Read and write is allowed in Algorinet. (send of commands towards the panel). • The Modbus value reflecting each possible state is fully configurable.

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Modbus interface of IntesisBox

Modbus interface	
Device type	Slave.
Modbus modes supported	TCP, RTU RS232 or RS485.
Modbus TCP configuration parameters	- IP address. - Subnet mask. - Default gateway. - TCP port.
Modbus RTU configuration parameters	- RS232/RS485. - Baud rate. - Slave number.

Points	
Parameters configurable per point	Generic fields. - Point description. Useful to identify the point's location into the building. - Active (Yes/No). Useful to deactivate points maintaining the configuration for later use. - Point address (1…5000). *This information, along with the description of points, must be supplied to the engineer in charge of setting up the integration into the Modbus system.*
Modbus data types	All the points are of data type UNSIGNED INT in the Modbus interface.

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Configuration tool

| LinkBoxMB	• 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.
	• 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.
	• 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).
	• Allows configuring the gateway's parameters and signals while in off-line (not connected to the gateway).
	• Connection to the gateway for download the configuration and supervision by using serial COM port of the PC (serial cable supplied with the gateway).
	• Allows configuring all the external protocols available for IntesisBox® Modbus series.
	• Upgrades for this software tool available free of charge whenever a new protocol is added to the IntesisBox® Modbus series.
	• Multi-project tool allowing having in the engineer's PC the configuration for all the sites with different IntesisBox® Modbus series gateways.
	• Multi-language tool, all the language-dependent strings are in a plain text file (tab separated) for easy modification or addition of new languages.
	• 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…).

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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	Wall. DIN rail EN60715 TH35.
Modbus TCP port	1 x Ethernet 10BT RJ45.
Modbus RTU ports	1 x RS232. DB9 male connector (DTE). 1 x RS485. Plug-in terminal bloc (2 poles).
Cerberus port	1 x RS232. DB9 male connector (DTE).
LED indicators	1 x Power. 2 x Algorinet serial port activity (Tx, Rx). 2 x Modbus RTU serial port activity (Tx, Rx). 2 x Ethernet port link and activity (LNK, ACT).
Console port	RS232. DB9 female connector (DCE).
Configuration	Via console port.[1]
Firmware	Allows upgrades via console port.
Operational temperature	0°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

[1] 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

Power
+
Ethernet port

Algorinet
port

Modbus RTU
ports

Console
port

58 mm

107 mm

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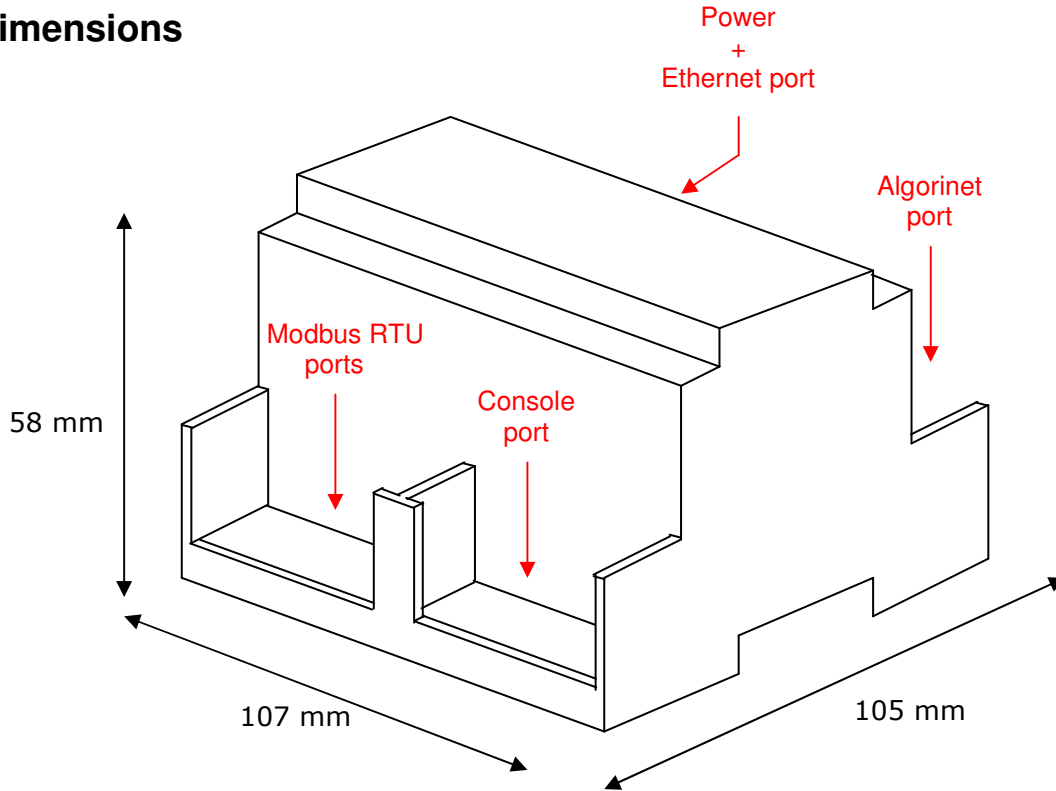
Recommended available space for its installation into a cabinet (wall or DIN rail mounting), with space enough for external connections:

100 mm

115 mm

130 mm

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