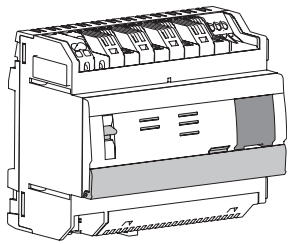


6LE009070B



TJA510N Elcom Controller



EN

Design and layout of the device

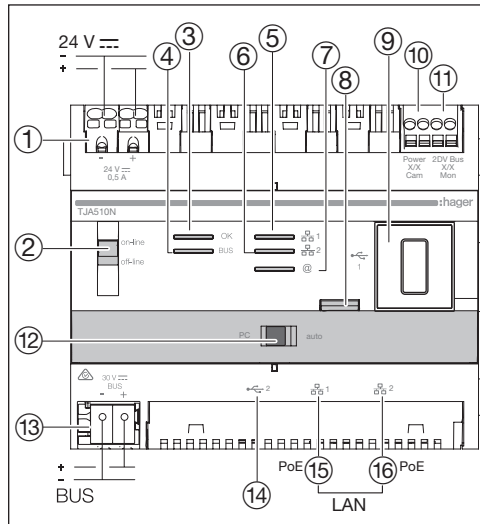


Figure 1: Design and layout of the device

- ① External power supply terminal (24 VDC)
- ② Switch of server operation (on-line/off-line)
- ③ Operation LED (OK)

- ④ LED of Bus status (reserved for future use)
- ⑤ LED of network connection to port 1 (1/2)
- ⑥ LED of network connection to port 2 (1/2)
- ⑦ LED of IP connection availability (@)
- ⑧ Pushbutton for checking presence of Bus voltage (reserved for future use)
- ⑨ USB port for updates (←→)
- ⑩ 2-wire Bus terminal / outdoor plate connection (video input: Power X/X Cam)
- ⑪ 2-wire Bus terminal / indoor connection / (video terminal: 2DV Bus X/X Mon)
- ⑫ Network mode selection switch (DHCP) (PC/auto)
- ⑬ Bus terminal (30VDC) (reserved for future use)
- ⑭ USB port for updates (←→)
- ⑮ Local area network (LAN) connection via RJ-45 or port 1 (1/2)
- ⑯ Local area network (LAN) connection via RJ-45 or port 2 (1/2)

Function

The TJA510N is an access gate allowing to create a link between an IP environment and the Elcom/Hager two-wire door intercom systems. It requires the use of two applications on Smart Phone or tablet: the first one is **hager Pilot** configuration application, and the second one is **elcom access** end-user application for a single residential installation only. This access gates provides new important functions, such as image memory, or remote access to one's own intercom, with overall proactive operation.

Safety instructions

The device must only be installed by a qualified electrician in accordance with the installation standards in force in your country. Do not install outside of the building.

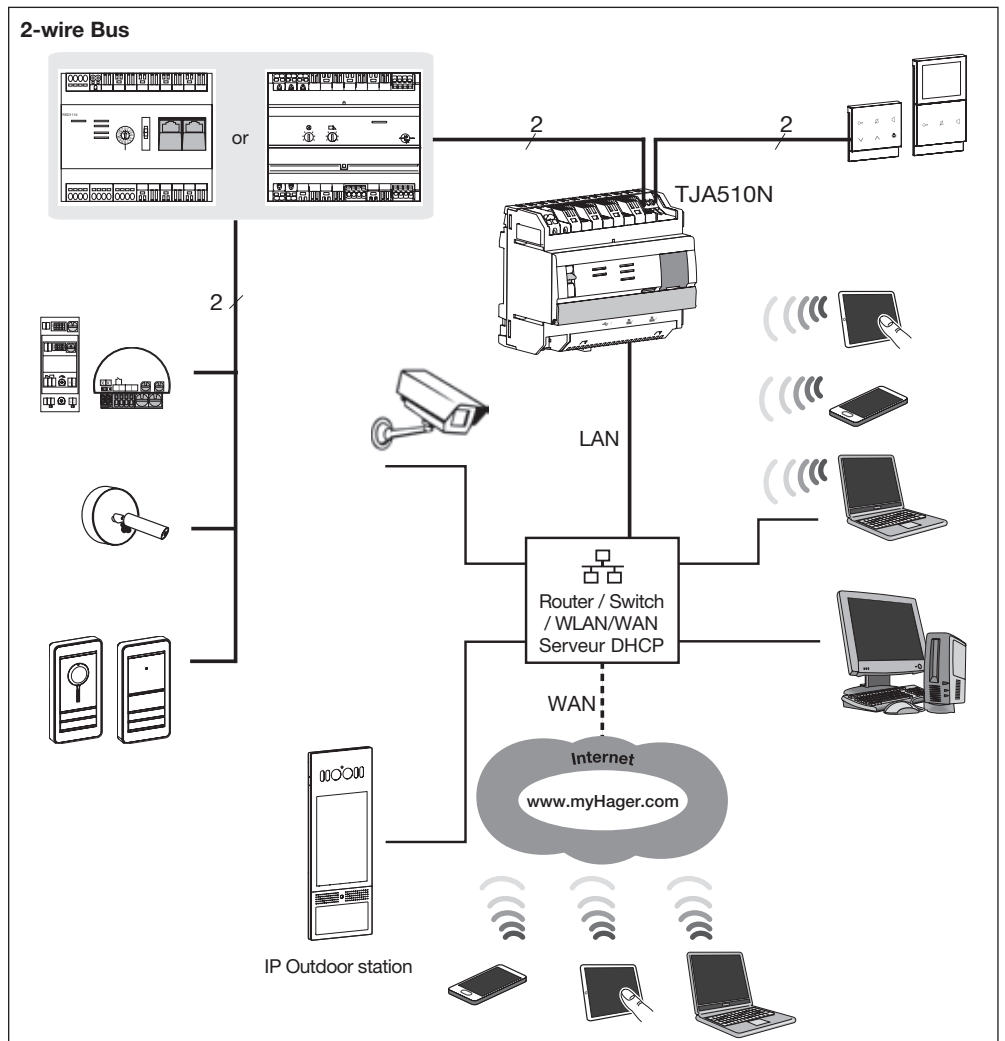


Figure 2: Access gate and its environment

Behavior of the network interface (according to switches)

The 2 Ethernet ports can be used indifferently to connect the access gate to the local area network. They are switched ports connected to the same logical interface on the TJA510N (switch).

Switches		Behavior of the network interface	
②	⑫	Network interface (Ethernet ports ⑮ and ⑯)	IP network status 2-wire Bus status
on-line	Auto	<p>This is the normal mode of operation of the TJA510N when it is connected to an external router (ISP box).</p> <p>The application interface can be configured via a DHCP server or with a fixed IP address.</p> <ul style="list-style-type: none"> As a DHCP client (factory-set default mode), the TJA510N receives an IP address from the DHCP server connected to the network (the router). If, after 40 seconds, no address has been assigned, the TJA510N automatically assumes the fallback address: 192.168.0.253/255.255.255.0. With a static IP address, the TJA510N immediately takes account of the parameters set on the «Server configuration –Internet» tab of the configuration device adjustment menu: <ul style="list-style-type: none"> Interface IP address Subnet mask Default gateway address <p>NB: When there is an IP address conflict on the network (other equipment already using the set IP address), the module will not automatically switch to the fallback address.</p>	On-line
	PC	<p>To be used when a PC is connected directly to the TJA510N. This mode activates the DHCP server included in the module. The 2 ports are interchangeable and configured with the following parameters:</p> <ul style="list-style-type: none"> Interface IP address: 192.168.0.253 Subnet mask: 255.255.255.0 Default gateway address: 192.168.0.1 IP address range that can be attributed by the DHCP-server of the TJA510N: 192.168.0.10 - 192.168.0.50 	
off-line	Auto / PC	<p>This mode is a fallback mode in which the interface of the TJA510N is configured as a DHCP client mode.</p> <ul style="list-style-type: none"> If, after 40 seconds, no address has been assigned by a DHCP server, the TJA510N automatically assumes the fallback address: 192.168.0.253/255.255.255.0. 	Off-line

Interpretation of the LEDs (operating condition)

LED function	LED Ref.	Status	Description
Power	③	Off	Unit without power
		Blinks green	Unit start-up phase
		Lights up green	Unit started
		Blinks red	Unit supplied by the power reserve (10 s max.)
		Lights up red	OS loading error
Ethernet 1 and 2	⑤ and ⑥	Off	No network (or operating on power reserve (10 s max.))
		Blinks green	No DHCP-server detected, operating on fallback IP address
		Lights up green	Network detected and IP address allocated
		Lights up red	IP address conflict
		Blinks red	Waiting for IP address allocation
Remote access	⑦	Off	No connection (deactivation via software)
		Blinks green	Connection attempt
		Lights up green	Connection established
		Lights up red	Connection inaccessible or connection refused

Installation and electrical connection

The access gate TJA510N is power supplied via PoE or via an external power supply. It fits into a protected 2-wire audio/video Bus system, and is connected to an ethernet switch to be integrated into an IP network via a router.

Mounting the device

- The TJA510N shall be installed preferably in the VDI box of your installation. When no VDI box is available, ensure separate routing of heavy and light current conductors.
- Clip device onto DIN rail in accordance with Standard DIN EN 50022.
- Compatible only with intercom systems using Elcom/Hager **2D** technology.
- Only suitable for indoor use and safe from any moisture (IP20/IP30 according to conditions).

Connecting power supply of the device

- PoE power supply: the access gate must be connected to a PoE Ethernet switch according to IEEE 802.3af, for example via Hager switch TN530 (Modular Switch 8 ports 1 Gbit/s including 4 PoE ports).
- External power: the access gate must be connected to a power block, TGA200. **TGA200 power block is suitable to feed only one access gate, and under no circumstances it cannot feed another device of the installation.**

Connection and installation

Connection to 2-wire Bus

A 2-wire Bus system can be installed in various ways. The diagrams below show a star-configuration. For other types of installation, see the documents available on Hager websites.

Integration into a house: The wiring diagram below shows a house equipped with 3 indoor stations and 1 outdoor (street) plate by way of example. Other indoor stations, door stations, and accessory products can be added.

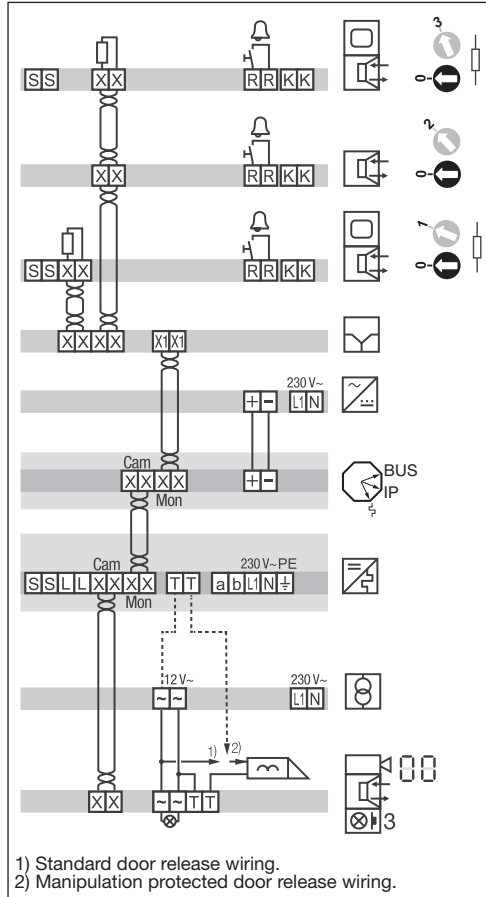


Figure 3: integration into a house installation

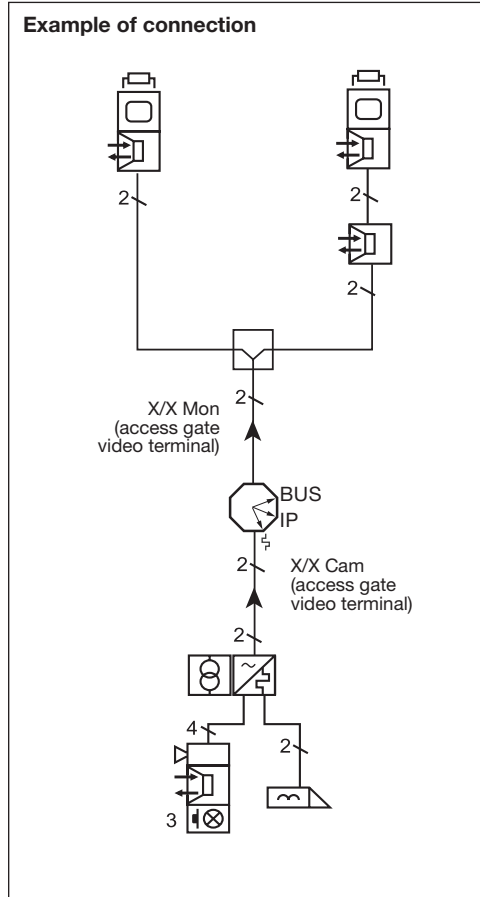


Figure 4: Example of access gate connection

	Indoor station
	Indoor station video
	DIN rail 2-wire Bus line power supply
	DIN rail line power supply 24V=
	Mains transformer 12 V~
	Video distributor 2gang
	IP Access gate /2-wire Bus/Bus
	Storey push-button
	Terminator/Terminating resistor
	Door release
	Outdoor (street) audio plate
	Outdoor (street) video plate
	Wrapped wire pair
	Non wrapped wire pair, e.g. for door release

Circuit symbols and elements of the circuit diagrams (figures 3 to 6)

2-apartment building: the following diagram shows integration of the access gate in 2 apartments equipped with one indoor station and one street door plate. Other indoor stations, door stations and accessory products can be added. **one access gate is required for each apartment.**

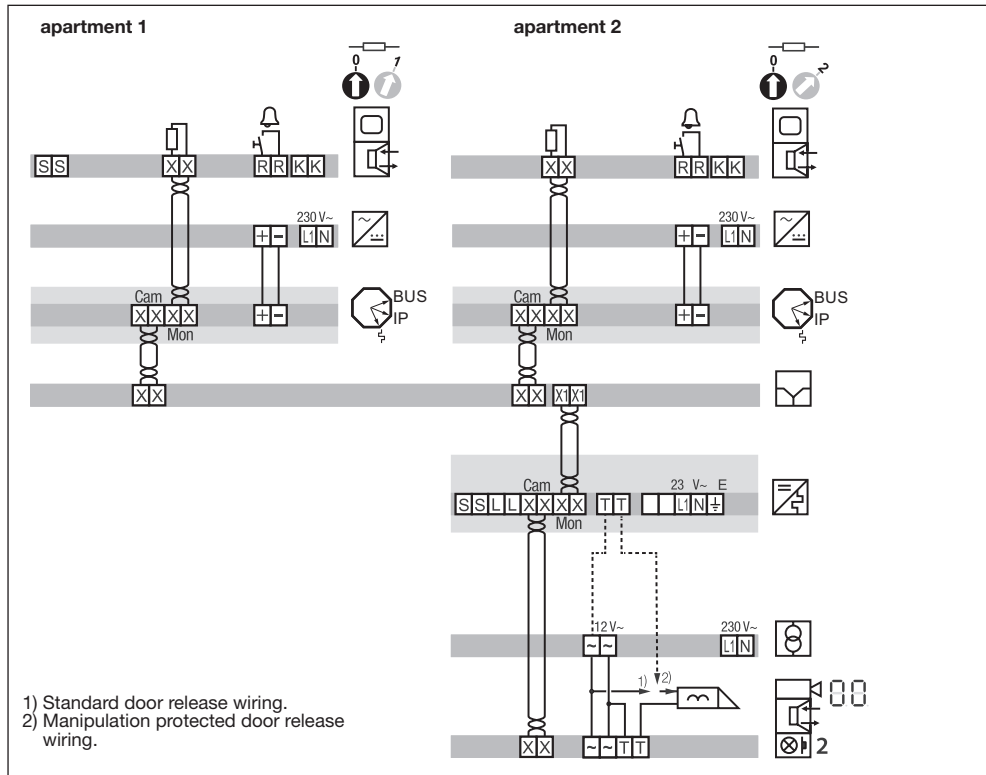


Figure 5: Integration in 2-apartment building

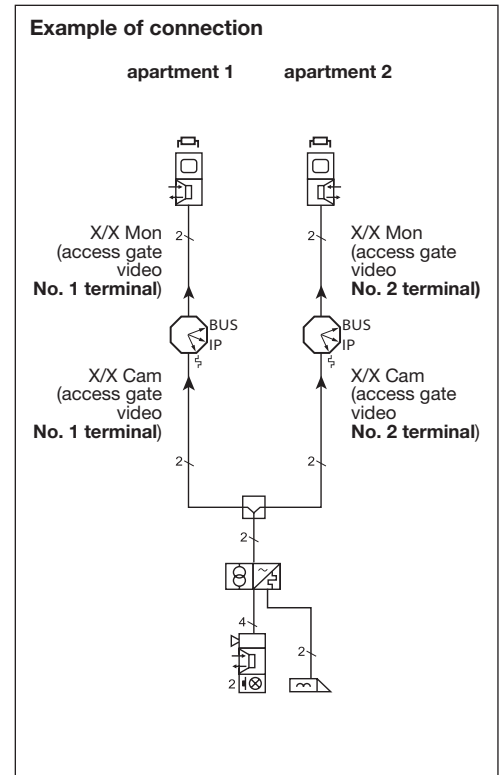


Figure 6: example of 2-access gate installation

Connection with no indoor station

If the 2-wire Bus intercom system is not equipped with an indoor station, and operates only from a mobile device (Smartphone, touch screen) via the **elcom access** application, then you must connect a termination resistance onto the access gate. This resistance is supplied as part of the maintenance set Ref. No. REH109X, and provided with the access gate.

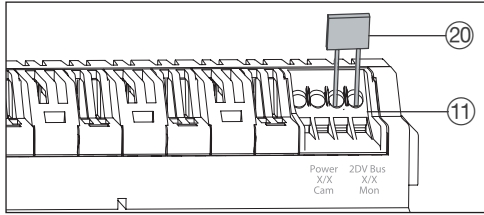


Figure 7: connection of the termination resistance

- ① Connection terminal: 20V Bus X/X Mon
- ② Termination resistance

IP connection Configuration

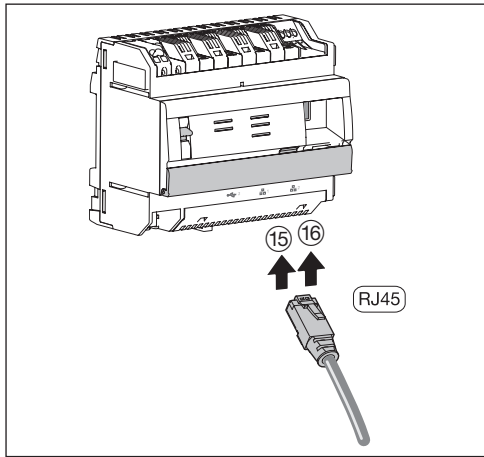


Figure 8: IP connection

Access gate TJA510N is connected to the local IP network through one of the two Ethernet ports ⑮ or ⑯. Integration of access gate between IP environment and door intercom two-wire system is done via the **hager Pilot** configuration application. It is a true central configuration unit of intelligence embedded in the access gate and the Hager Cloud infrastructure, which is required for correct system operation. In order to access this configuration interface:

1. Download the **hager Pilot** application from AppStore or Google Play Store,



2. connect the access gate to a WI-FI router,

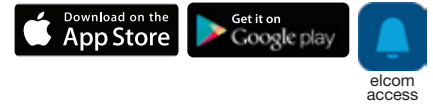
! We strongly recommend to the fitter to use his own router DHCP (Wifi + 3G/4G) equipment to perform system configuration and tests locally (via Wifi) or via Internet (3G/4G).

3. On your mobile terminal: from the WI-FI parameters menu, select the WI-FI router to which the access gate has just been connected,
4. Start the hager Pilot application, a selection window is displayed:
 - select server TJA510N-XXXXX of the installation,
 - the connection window will appear on the screen.
5. Enter your login to connect to the server. Login: **admin** and Passwords: **1234** are the default values.

i Document for help with system configuration is available for fitter in the settings menu of the gateway (⚙️).

Operation

In a single home installation, the access gate allows users to establish a link with the traditional intercom system from the local area network (LAN), and Internet via the **elcom access** application. It processes data in the two directions, and allows interoperating a broad range of connected devices (smart phones, touch screens, IP cameras) with i2Bus Bus-based installations (street door plates, indoor stations, i2Bus cameras, relays, etc). Download the **elcom access** application from AppStore or Google Play Store.



Technical specifications

External power supply ① or PoE ⑮⑯	24 V → 30 V $\overline{\text{---}}$ via Hager TBTS of type TGA200 or via PoE Supply
Typical / standby consumption of 2-wire Bus	35 mA / 12 mA - 24 V $\overline{\text{---}}$
Consumption on the auxiliary supply	760 mA max - 24 V $\overline{\text{---}}$
Standby consumption on the 24V Ethernet and SB not connected	330 mA
Maximum dissipation (24V output)	10 W without USB, 15W max with 2 USB
PoE Supply Consumption	13W under PoE Class 3 W
Ethernet Network communication	2 x 100 / 1000 Base T
Max length of 24V power cable	10 m
Bus connection ⑩⑪	0,2 mm ² - 1,5 mm ²
Power socket ①	0,75 - 2,5 mm ²
IP/Ethernet network socket ⑮⑯	2 x RJ45
Operating temperature	-5 °C → + 45 °C
Storage temperature	- 20 °C → + 70 °C
Width (REG)	6TE
Dimensions (LxHxW)	106 x 90 x 67 mm
USB2 Interface ⑨⑭	2
Installation mode	DIN Rail (EN50022)
Operating altitude	< 2000 m
Pollution level	2
Surge voltage	4 kV
Protection rating	<ul style="list-style-type: none"> • box: IP20 • box under faceplate: IP30
Impact resistance	IK04



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