



PN BADGE D - Hotel access control module

The PN Badge D modules are designed to provide access control in hotel applications, through transponder-equipped ID cards.

This is a state-of-the-art product thanks to its technology: in fact, the access badge is a normal credit card-sized card that has neither a magnetic stripe nor electrical contacts. This completely eliminates the typical failures associated to conventional technology, caused by magnetic stripe damage or contacts oxidation.

The card uses an electro-magnetic field that allows it to communicate contactless with the control module, at a maximum distance of about 4-6cm.

A special circuit is embedded in the card that, upon detecting the signal from the control module, receives its power supply from an antenna inside the card and communicates with the module by sending its control code to it.

The PN Badge module receives this code and compares it to valid codes it stores in memory; if the code is valid, it enables the on-board relay output.

Each module can store up to 16 different card codes (in a range of 65,534), that can be divided in 8 different groups.

The PN Badge D modules are designed to be mounted in built-in 503 boxes.

They are equipped with an electronic card connected to the receiving antenna; their size is three modules, and they are connected directly to the mounting frame of the built-in boxes.

NOTE: to avoid limiting the card detection distance, please do not use metal finishing plates.

The module contains a support relay for direct control of the electric lock.

Each PN Badge module is equipped with the following on-board resources:

- Relay output for lock control (terminal blocks COM-NO). Use this output for locks with alternate current or 24Vcc supplies.
- Relay output for controlling locks with internal limitation resistance (terminal blocks COM-R). The limitation resistance allows to use the bus supply voltage also to control locks with 12Vcc coils.

NOTE: do not use this output for alternate-current or 24Vcc locks.

NOTE: this output can be used for a maximum active time of 1 second, in a 10% operating cycle (1 second active – 9 seconds paused).

The front antenna is equipped with:

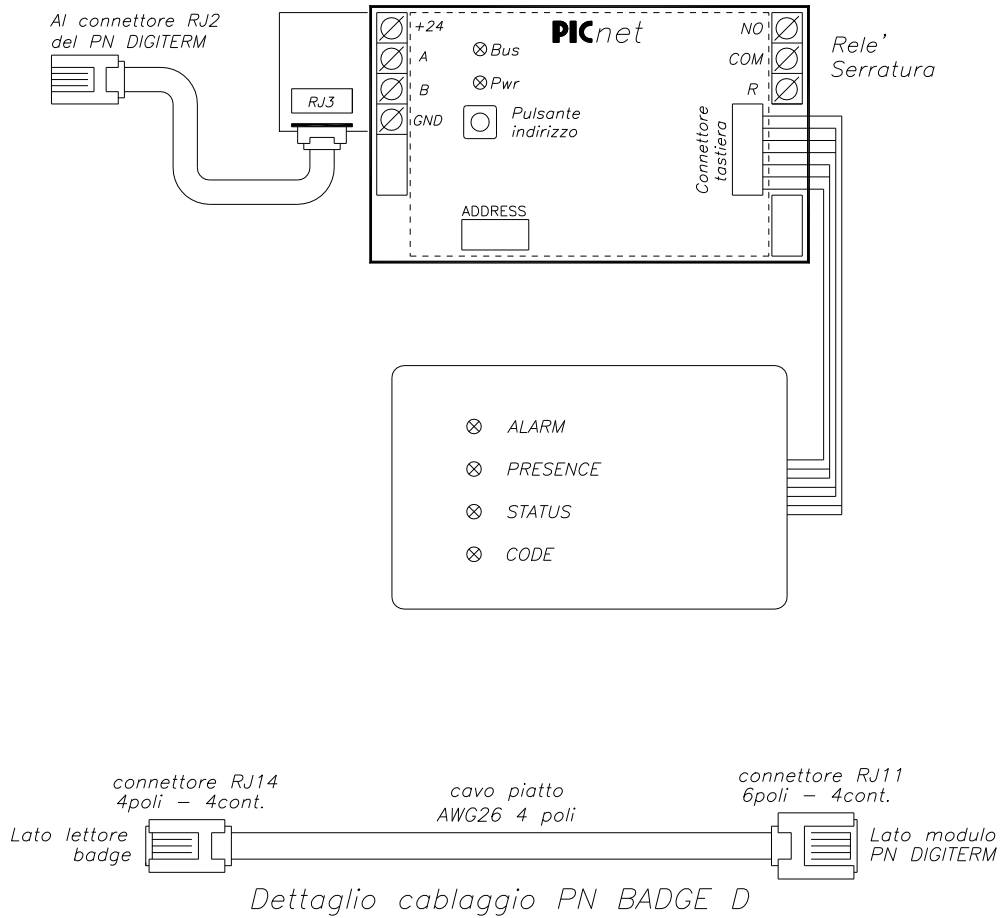
- Red LED alarm output (bathroom alarm or room call)
- Green LED guest present / do not disturb output
- Yellow LED generic status, programmable output (e.g. open window)
- Yellow LED card decoding output

Also, each module is equipped with supply and serial communication identification LEDs.

The module connects directly to the PN DIGITERM room control module and uses no addresses on the PICnet network.

Direct connection to the PN DIGITERM module, besides using no system address, greatly decreases bus traffic, thus enhancing the system's performance.

CONNECTION DIAGRAM



OPERATING SPECIFICATIONS

The access control module PN BADGE D is not connected to the PICnet bus; rather, it is connected directly to the room control module PN DIGITERM, through which the following operations can be performed centrally from the Master unit:

- delete all card codes stored in all the PN Badge modules in the network
- delete one specific card code stored in all the PN Badge modules in the network
- delete all card codes stored in one specific PN Badge module
- delete one specific card code stored in one specific PN Badge module
- store a new card code in memory
- read card codes stored in memory
- read code of last card swiped
- enable / disable one group
- invalid card notification

When the reader detects a card with a code stored in the reader's memory that belongs to an authorised group, the module triggers the lock relay for a programmable amount of time.

The reader can also operate remotely; in this case, the master replaces the control module in driving the lock relay, that can thus be enabled just like any digital output in order to perform more sophisticated functions (e.g., allow some cards access only at some pre-set times, disable a card code upon expiry of a subscription period, anti pass-back function, etc.).

TECHNICAL SPECIFICATIONS

Supply voltage	8Vcc \pm 20% SELV
Current consumption	Min. 25mA – Max. 70mA
Contact rating COM-NO	Max 2 A @ 24Vcc-Vac on resistive load
Contact rating COM-R	Max 2 A @ 12Vcc on resistive load – max 1s ON every 10s
No. card codes in memory	16 in a range of 65534
Operating conditions	0.. +55 °C, 10..90% R.H. dew-free
Storage conditions	-30.. +80 °C, 10..90% R.H. dew-free
Mounting	Built-in 503 box
Size	75x45x22 mm
Index of protection	IP20

SIZE

