



# M210H

## Couplers

A low power multi standard contactless 13.56 MHz RF COUPLER

The M210H is a low cost contactless coupler designed to provide the communication interface between the host and a range of contactless chips, including INSIDE's PicoTag, PicoCrypt and any other ISO 14443A/B or ISO 15693 compliant product.

### An open and flexible solution

By implementing an open standards architecture approach the M210H is able to offer system integrators a wider choice for contactless products and greater flexibility in application development.

### Where space and power are limited

Measuring only 6 x 4 cm with an on board antenna and consuming typically 30mA in active operation, the M210H is ideal for contactless applications where reduced cost, space and low power are required such as hand held terminals and battery operated systems.

### Security

For applications requiring data protection, the M210H fulfils the function of security module which provides secret key management and cryptographic calculations necessary for communication and authentication of the contactless transponder.

### An easy fit for contact readers

Through the combination of an ISO 7816 (T=O) interface, small physical size and easy integration capability, the M210H offers an ideal solution for contact card reader manufacturers looking for an efficient way to upgrade their offer with contactless technology.

### Application compatibility

INSIDE's couplers are designed to maintain application compatibility. This means that applications developed on one coupler may be easily transferred to a different coupler without any required changes.

## Features

- Easy system integration
- On board antenna
- Typical transaction < 100ms
- Cryptographic security management
- ISO 14443-A/B and ISO 15693 compatible contactless RF interface
- Serial interface to standard micro-controllers
- Transparent mode providing open contactless interfaces

## Typical applications

- Access control
- Portable terminals
- Contact card reader upgrade with contactless communication

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### Ordering Information

#### Product

Proximity coupler M210H

#### Ordering code

M210H

The M210H has an integrated antenna therefore no external components are required.

### Electrical characteristics

Pin	Description	Min	Typical	Max	Unit
VDD	DC voltage	4.75	5	5.25	V
	Ripple < 30 MHz			50	mVss
	Supply current		35		mA
	Standby current (disable mode)			1	μA

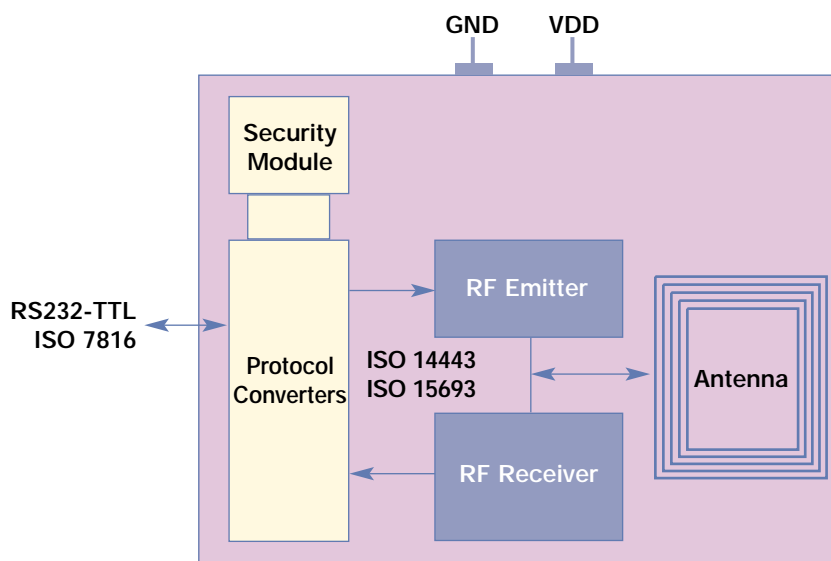
#### General specifications

Operating frequency 13.56 MHz  
 Operating temp° -20°C to + 70°C  
 Physical dimensions 60 x 41.5 mm  
 Operating distance up to 6 cm  
 (Depending on the type of transponder and antenna)

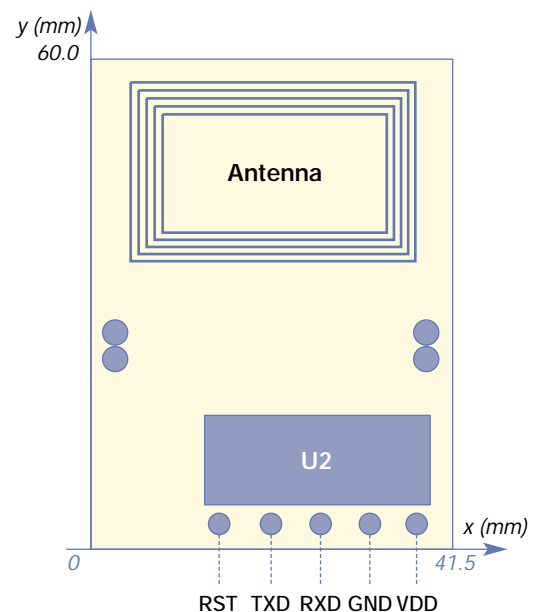
#### Interfaces

Host interfaces RS232-TTL / ISO 7816-3 /  
 Baud rate Default 9600 bps  
 (up to 115.2K bps)  
 Supported ISO 14443 A/B  
 contactless standards ISO 15693-2

## M210H block diagram



## Mechanical diagram



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