

# M300-2G

Long range 13.56 MHz  
contactless coupler

## Features

- ISO15693 communication standard
- Operating distance: up to 1.5 m (gate configuration)
- Serial communication speed: up to 115.2 kbps
- Small size: 16 x 10 cm
- Separate 50 ohm antenna
- Power consumption: lower than 1A in active mode
- Single 12V to 15V power supply
- Digital automatic antenna tuning and verification
- Cryptographic security management
- 250 bytes communication buffer
- Protection against outbound conditions to protect customer system
- Evaluation kits available

## Typical applications

- Access control
- Mass transit
- Ski pass
- Electronic identification
- Tracking objects
- Logistics
- Libraries
- Assets management

[www.insidecontactless.com](http://www.insidecontactless.com)

The **M300-2G** is a high performance 13.56 MHz contactless coupler compliant with ISO 15693 standard, specifically designed to provide long communication distance with contactless chips.

## Ease of installation and Use

**Auto-tuning function** makes easier the installation of couplers and antennas. No need to tune manually anymore.

**Antenna tuning verification** helps to tune the antenna or protect the reader when the antenna operates in abnormal conditions.

**Single 12V to 15V power supply** makes easier the connection to a wide range of power supplies.

## A Cost-Effective Coupler

Thanks to its optimized design and small size (16 x 10 cm), the **M300-2G** is very cost-effective.

## Secure

The **M300-2G** provides state-of-the-art security, including secret key management and cryptographic calculations that enable secure authentication and communication between the smart card and the coupler, as well as the host.

## Additional Software Download for Customization

The **M300-2G** offers an extra memory space where application providers can download additional software to optimize transaction time with the transponder or to customize features.

## Integration Flexibility

The **M300-2G** works with an external 50 ohm antenna that can be placed in a quite distant separate location. The A300x products family provides a selection of antennas with varying sizes and operating distances.

## Application Compatibility

INSIDE's couplers come with application compatibility. Therefore, applications developed on INSIDE's couplers can be easily transferred to other couplers.

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# M300-2G

## Order reference

OEM version M300-2G  
Can also be delivered in a casing form R300-2G

## Kits offer

### Product

Long Range Kit

### Description

The long range kit allows developers to evaluate INSIDE's technology and makes subsequent integration a straightforward experience.

## Key technical data

### Electrical characteristics

Pin	Description	Min	Typical	Max	Unit
	DC voltage	+12	+15	+15.5	V
	Ripple < 30 MHz			50	mV
	Supply current		0.5	1	A
GND	Ground				

### General specifications

Operating frequency 13.56 MHz  
Operating temp° -20°C to +70°C  
Physical dimensions 16 x 10 cm  
( $\Delta$  : 0.5 mm)  
Operating Distance up to 1.5 m  
(Depending on the type of transponder and antenna)

### Interfaces

Host interfaces RS232  
Baud Rate default 9600 bps (up to 115.2 kbps)  
ISO standards 15693

## M300-2G block diagram / mechanical diagram

