

4.1 Note:

En augmentant la distance entre le lecteur et la source d'interférence, l'influence décroît. Utiliser seulement des alimentations électriques stabilisées. deister electronic GmbH propose des alimentations appropriées. Pour réduire l'influence d'interférences électriques externes, connecter l'écran de protection du câble à la masse (GND) de l'alimentation électrique.

5. Regulatory notices for Europe:

Hereby, deister electronic declares that the radio equipment type PRD i is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <http://go.deister.com/ce>

5. Zulassungen für Europa:

Hiermit erklärt deister electronic, dass der Funkanlagentyp PRD i der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: <http://go.deister.com/ce>

5. Avis Réglementation Europe:

Le soussigné, deister electronic, déclare que l'équipement radioélectrique du type PRD i est conforme à la directive 2014/53/UE. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: <http://go.deister.com/ce>



6. FCC/IC

This device complies with Industry Canada licence-exempt RSS standard(s) and part 15 of the FCC Rules, specifically FCC Part 15.209 & IC RSS-210.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

6. 1 End-product compliance

The modules include internal loop antenna(s). The end-product must be professionally installed in such manner that only the internal antenna(s) can be used. The module is conform to the requirements of USA / Canada. This has to be verified for every end device in which the module is installed.

6.1.1 General requirements

Any changes to hardware, hosts or co-location configuration may require new radiated emission; SAR evaluation and/or testing; along with NS testing.. Refer to Appendix A for details.

The regulatory compliance of the module does not exempt the end-product from being evaluated against applicable regulatory demands; for example, FCC Part 15B and ICES-003 criteria.

Only the internal antenna(s) may be used.

Power Supply must be 12-24 VDC, 200 mA (minimum)

Device must be mounted no less than 5 mm and no more than 15 mm from inside enclosure. The enclosing device must be wall mounted.

Any notification to the end user about how to install or remove the integrated radio module is NOT allowed.

6. 1.2 Co-location (simultaneous transmission)

If the module is to be co-located with another transmitter, additional measuremts for simultaneous transmission are required under Rule 15.209 (FCC) and RSS-210 (IC) including CW testing at both 125KHz and 13.56 MHz and test under normal operation. Refer to KDB 996369 D04 as a best practices guide in this circumstance.

6.1.3 Configuration Changes

Changes to this module may only be made at the factory. For assistance contact the office nearest you from the offices on the right.

6.2 End-product labeling requirements

6.2.1 IC Compliance

The host product shall be properly labelled to identify the modules within the host product. The Innovation, Science and Economic Development Canada certification label of a module shall be clearly visible at all times when installed in the host product; otherwise, the host product must be labelled to display the Innovation, Science and Economic Development Canada certification number for the module, preceded by the word "Contains" or similar wording expressing the same meaning, as shown in Figure 5.

Le produit hôte devra être correctement étiqueté, de façon à permettre l'identification des modules qui s'y trouvent. L'étiquette d'homologation d'un module d'Innovation, Sciences et Développement économique Canada devra être posée sur le produit hôte à un endroit bien en vue, en tout temps. En l'absence d'étiquette, le produit hôte doit porter une étiquette sur laquelle figure le numéro d'homologation du module d'Innovation, Sciences et Développement économique Canada, précédé du mot « contient », ou d'une formulation similaire allant dans le même sens et qui va comme suit:

Figure 5

This device contains:

FCC ID: IXLPRDI5

IC: 1893B-PRDI5

6.2.2 FCC Compliance

The host product shall be properly labelled to identify the modules within the host product. The FCC certification label of a module shall be clearly visible at all times when installed in the host product; otherwise, the host product must be labelled to display the FCC certification number for the module, preceded by the word "Contains" or similar wording expressing the same meaning, as shown in Figure 5.

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In accordance with 47 CFR Section 15.19, the end-product shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions; (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

When the device is so small or for such use that it is not practicable to place the statement above on it, the information shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed.

In case, where the final product will be installed in locations where the end-user is not able to see the FCC ID and/or this statement, the FCC ID and the statement shall also be included in the end-product manual.

6. 3 End-product user manual instructions

6.3.1 IC Compliance

User manuals for license-exempt radio apparatus shall contain the following text, or an equivalent notice that shall be displayed in a conspicuous location, either in the user manual or on the device, or both:

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

PRD i

Wiring & Installation Instructions Anschluß & Installationshinweise Instructions d'Installation et de Raccordement

V201009
#896407

English
Deutsch
Français

Under FCC regulations, the User Manual must also contain reference to and items containers within 15.21, 15.27 and 15.105 of the FCC Regulations.

Under Industry Canada regulations, this radio transmitter can only operate using the internal antenna only.

Le manuel d'utilisation des appareils radio exempts de licence doit contenir l'énoncé qui suit, ou l'équivalent, à un endroit bien en vue dans le manuel d'utilisation ou sur l'appareil, ou encore aux deux endroits.

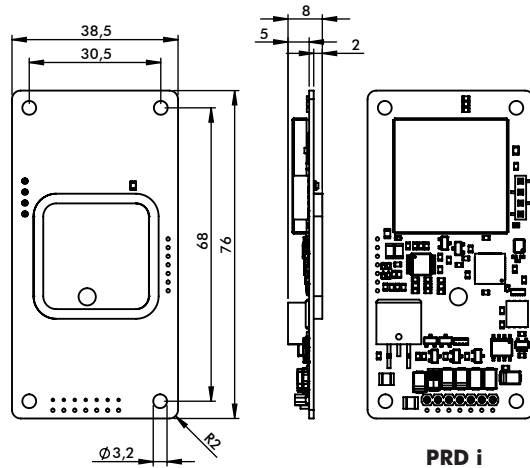
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage; (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Conformément aux réglementations d'Industrie Canada, cet émetteur radio ne peut fonctionner qu'avec l'antenne interne.

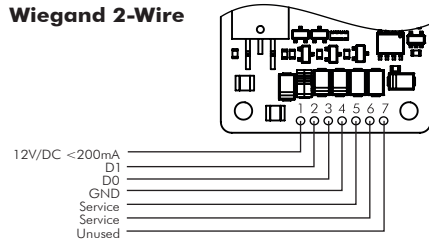
7. Warranty Note • Garantiehinweis • Remarque garantie

Bei nicht sachgemäßer Benutzung des Gerätes erlischt die Garantie! • Improper use of the device will void the warranty! • Utilisation incorrecte de l'appareil

1. Dimensions / Abmessungen (mm)



2.1 Wiegand 2-Wire



Pull-up's have to be connected to the D0/D1 data lines respectively. The value of the pull-up's depends on the current and voltage which is required for the controller-input.

Die Datenausgänge D0/D1 müssen mit Pull-Up Widerständen beschaltet werden. Der Wert der Pull-Up-Widerstände hängt von der Eingangsspannung des Controllers ab.

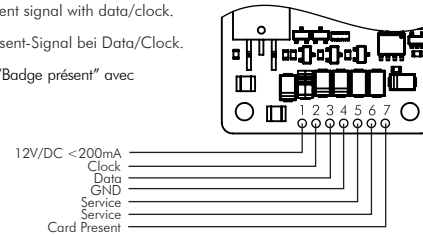
Des résistances de pull-up doivent être connectées respectivement sur les bornes D0/D1. La valeur de ces résistances dépend du courant et de la tension requise à l'entrée du contrôleur.

2.2 Magstripe-Emulation Data/Clock

No Card present signal with data/clock.

Kein Card Present-Signal bei Data/Clock.

Pas de signal "Badge présent" avec data/clock.

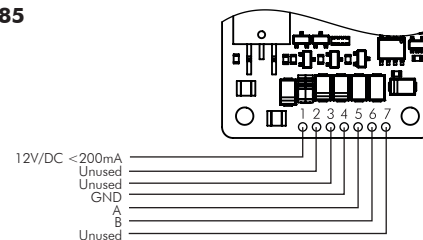


Pull-up's have to be connected to the clock and to the data lines respectively. The value of the pull-up's depends on the current and voltage which is required for the controller-input.

Die Datenausgänge Data/Clock/Card Present müssen mit Pull-Up Widerständen beschaltet werden. Der Wert der Pull-Up-Widerstände hängt von der Eingangsspannung des Controllers ab.

Des résistances de pull-up doivent être connectées respectivement sur les bornes Clock et Data. La valeur de ces résistances dépend du courant et de la tension requise à l'entrée du contrôleur.

2.3 RS-485



The device is equipped with line transceivers according to the RS-485 standard. Be sure to terminate the RS-485 bus appropriately.

Die Datenleitungen A und B müssen entsprechend des RS-485 Standards beschaltet werden.

L'unité est équipée de drivers de ligne correspondant au standard RS-485. Assurez-vous que les terminaisons du bus RS-485 sont appropriées.

3. Technical Data

Dimensions:
mm (inch)

38,5 x 76 x 8 (1.52 x 2.99 x 0.31)
transient and reverse polarity protection

Electrical protection:
Operating temperature:

+5 ... +60 (+41 ... +140)

Read distance:
mm (inch)

up to 50 (2), dependent on transponder type and local environment

Interface:
Protocol:

Open Collector, RS-485
Wiegand, Data/Clock, Magstripe, deBus, deBus crypt, OSDP V2, customized

Power supply:

12V/DC <200mA

Operating frequency:

13.56 MHz, 125 kHz

Electrical connection:

7-PIN soldering pads and socket for flexstrip
Unique number, free defined segment

3. Technische Daten

Abmaße:
mm

38,5 x 76 x 8
Transienten- und Verpolungsschutz

Elektrischer Schutz:
Betriebstemperatur:

+5...+60

Lesereichweite:
mm

bis zu 50, abhängig von Transpondertyp und Umgebungsbedingungen

Schnittstellen:
Protokoll:

Open Collector, RS-485
Wiegand, Data/Clock, Magstripe, deBus, deBus crypt, OSDP V2, kundenspezifisch

Spannungsversorgung:

12V/DC <200mA

Arbeitsfrequenz:

13,56 MHz, 125 kHz

Elektr. Anschluss:

7-PIN Lötanschluß und Buchse für Flexstrip
Seriennummer, frei definierbare Segmente

3. Données Techniques

Dimensions:
mm

38,5 x 76 x 8

Protection électrique:

protection surtensions
protection inversion de polarité

Temp. de fonctionnement:
°C

+5...+60

Distance de lecture:
mm

jusqu'à 50 dépendant du type de transpondeur et de l'environnement local

Interface:
Protocol:

Open Collector, RS-485
Wiegand, Data/Clock, Magstripe, deBus, deBus crypt, OSDP V2, à la demande

Alimentation:

12V/DC <200mA

Fréquence de fonctionnement:

13,56 MHz, 125 kHz

Connexions électriques:

7 pastilles à souder et socle pour flexstrip

Formats:

Numéro de série Unique, segment définilablement

4. Warning:

It is possible that external interference sources will influence the read range, e.g. monitors, switching power supplies, power cables parallel to data cables, mounting on metal etc. LCD monitors have a minimal influence on the read range. In particular the reader should be mounted on non-metallic material, such as plastic or wood. Metal screws (M6 - ISO 1207, 4762 or 7045) for mounting the reader have an insignificant influence on the read range. **The unit needs to be operated with a power source with limited power consumption according to EN 62368-1:2016-05 annex Q.1.**

4.1 Note:

With growing distance between reader and interference source, the influence decreases. Use only linear regulated power supplies. deister electronic GmbH offers suitable power supplies. To reduce the influence of external electrical interference, connect the cable shield to ground (GND) of the power supply.

4. Warnung:

Es ist möglich, dass externe Störquellen die Lesereichweite beeinträchtigen. Dazu zählen z.B. Monitore, Schaltnetzteile, Stromkabel, Datenkabel oder die Montage des Lesers direkt auf Metall. LCD-Monitore haben nur einen minimalen Einfluss auf die Lesereichweite. Im Normalfall sollte der Leser auf nicht-metallisches Material wie Plastik oder Holz montiert werden. Metallschrauben (M6 - ISO 1207, 4762 oder 7045) für die Montage des Lesers haben einen unbedeutenden Einfluss auf die Lesereichweite. **Das Gerät ist mit einer Stromquelle mit begrenzter Leistung nach EN 62368-1:2016-05 Anhang Q.1 zu betreiben.**

4.1 Hinweis:

Bei größer werdender Entfernung der Störquelle reduziert sich deren Einfluss auf den Leser. Benutzen Sie nur linear geregelte Netzteile. Die deister electronic GmbH bietet entsprechende Netzteile an. Um den Einfluss externer, elektrischer Störungen zu vermeiden, verbinden Sie den Masseanschluß (GND) mit der Erdungsklemme des Netzteils.

4. Attention:

Il est possible que certaines sources d'interférences extérieures puissent influencer sur la distance de lecture, ex.: moniteurs, mise en/hors service d'alimentations électriques, câbles d'alimentations à proximités des câbles de données, montage sur du métal, etc. Les moniteurs LCD ont une influence minimale sur la distance de lecture. En particulier, le lecteur devra être monté sur une surface non-métallique, comme sur du plastique ou du bois. Les vis en métal (M6 - ISO 1207, 4762 ou 7045) pour le montage du lecteur ont une influence insignifiante sur la distance de lecture. **Le système doit être alimenté avec une alimentation dont la puissance de consommation est limitée conformément à la norme EN 62368-1:2016-05 annexe Q.1.**

APPENDIX A—OEM INTEGRATION OF THE PRDI/5 MODULE GUIDELINES FOR INTEGRATORS

1. Applicable FCC Rules

The following FCC Rules are applicable to this Modular Transmitter

FCC Part 15C including Sections 15.203; 15.204(b); 15.204(c); 15.207; 15.27(a); 15.31(i)

2. Operational Use Conditions

- Restricted to use in a non-conductive solid enclosure
- Restricted to use in a fixed mount configuration end product

3. Limited Module Procedures

This is not a limited module and no limited module restrictions apply.

4. Trace Antenna Designs

This module includes a 13.56 MHz Trace (Patch) Antenna that is furnished and fully configured as part of the module. No modifications to the trace antenna are permitted nor is the use of any external trace antenna.

5. RF Exposure Considerations

This product is in full compliance with applicable FCC Rules as long as the restrictions in paragraph 2 above are followed.

6. Module Antennas

The following antennas are provided within the module:

Manufacturer	Antenna	Description	Type	Length (mm)	Width (mm)	Other Info	Connector Type	Notes
Deister Electronics	Wire Coil	Inductive Coil tuned to 125 KHz	Inductive Coil	31	59		Integral	1
Deister Electronics	Patch Coil	Inductive Patch tuned to 13.56 MHz	Patch	35	70		Integral	

No additional or external antennas are allowed.

7. Label & Compliance

Provide a physical or e-label stating “Contains FCC ID” with the finished OEM product.

8. Product Manual Requirements

The finished OEM product Manual must contain the following specified text in a prominent location in the Manual’s text:

*Changes or modifications not expressly approved by the party responsible for compliance could void the user's
authority to operate the equipment*

Note:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

9. Testing Requirements

The finished OEM product must be tested in accordance with KDB Publication 996369 D04 Module Integration Guide. Test modesshould take into consideration different operational conditions for a standalone modular transmitter in a host, as well as for multiple simultaneously transmitting modules or other transmitters in a host product.

To configure the module for integrated testing:

- a. Ensure the Use Conditions are in compliance with paragraph 2 above.
- b. Ensure the Module is supplied with power as specified elsewhere in this document within the finished product.

10. Part 15 Disclaimer

The modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification.

11. EMI Consideration

It is recommended to use D04 Module Integration Guide recommending as "best practice" RF design engineering testing and evaluation in case non-linear interactions generate additional non-compliant limits due to module placement to host components or properties.

12. Product Configuration and Other Technical Changes

This product may be modified and/or reconfigured by the manufacturer.

If changes are required to being considered contact the manufacturer as follows:

Deister Electronics USA, Inc.
8576 Wellington Road
Manassas, Virginia USA 20109
Telephone: +1.703.368.2739
Email: info.us@deister.com