

CONFIDENTIAL & PROPRIETARY

OTO-CS v.0r1

Radio Modem-CS



USER MANUAL

- SPRS Ready
- Self-contained
- Extended service life
- Highly robust communication protocol

The OTOCS transceiver is an autonomous transceiver that is used primarily for the communication of identification, control and management information using RF (radio frequencies). The radio may be used in conjunction with automotive vehicle starter modules in order to provide remote start functionality.

System description.

The OTOCS system has been developed with the goal of providing the following services.

- Data transfer, logging and Telemetry
- Automated fleet management
- Automated remote start/stop – Lock/unlock functions

The use of the OTOCS enables automated and remote data collection. It also offers the ability to control and monitor the property on which our proprietary transceivers are affixed. This monitoring and control is done according to schedules and specific conditions that have been previously established.

The transceiver operates using a communication protocol that is both highly secure and robust. It contains a proprietary information recovery and patterning encoding.

The OTOCS was developed in order to minimize the use of space and energy. One of the main criteria for the development was reduced operating cost. This is achieved by virtue of the fact that energy consumption is kept to a minimum by maximizing overall system efficiency.

This device complies with Industry Canada's licence-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.

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.

Please note: The minimum separation distance between the device's antenna and all persons during normal operation is 25 centimeters.

Warning: Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment. Do not attempt to tamper or make any changes to this device.

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'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Avertissement pour conformité de l'exposition RF. L'antenne (s) utilisée pour cet émetteur doit être installée pour fournir une distance de séparation d'au moins 25 cm de toutes personnes et ne doit pas être située à proximité ou fonctionner en conjonction avec une autre antenne ou émetteur. Tout changement ou modification non expressément approuvé par la partie responsable de la conformité risque d'invalider l'autorisation accordée à l'utilisateur d'utiliser cet appareil. Les utilisateurs et les installateurs doivent recevoir des instructions d'installation de l'antenne et des conditions de fonctionnement du transmetteur satisfaisant le respect de l'exposition aux RF.

Characteristics	Advantages	Benefits
Rugged reinforced enclosure	<ul style="list-style-type: none"> The enclosure is made of moulded high density and reinforced fiberglass material. 	<ul style="list-style-type: none"> The enclosure is extremely solid and resistant thus guaranteeing durable protection. The enclosure is also built to withstand elevated temperatures.
Secure and robust communication protocol	<ul style="list-style-type: none"> The RF environment is more and more saturated, hence the need for robust communication means. 	<ul style="list-style-type: none"> Data is transmitted using an encoding system that maintains a very high degree of data integrity. It is therefore possible to recover data even in extreme circumstances.

Technical specifications

General information

Outside dimensions (Enclosure)

Height :	44.45 mm (1.75 inches)
Width :	190.50 mm (7.50 inches)
Length :	127.00 mm (5.00 inches)
Material :	ABS
Color :	Black

Operational & Environmental

Operating temp. :	-40 +85°C
Environmental protection :	IP6x (non-immersed)

Specifications (TX / RX)

Receiver

Span (freq.) :	902.000MHz ~ 928.000MHz
Modulation :	SSFH / 2FSK
Sensitivity:	-114 dBm

Transmitter

Span (freq.) :	902.000MHz ~ 928.000MHz
Modulation :	FH / 2FSK
Encoding :	Variable encoding
Output power :	MAX (1 watt- conducted)

Electrical

Supply voltage (lead in) :	12Vdc
Internal voltage:	3.3Vdc
Electrical consumption:	Variable. Peak 0.05%

Certifications

Industry Canada	RSS-247 Rev. 1
FCC (United-States)	Part 15 (C)