



**Caterpillar Inc.**  
100 NE Adams Street,  
Peoria, IL 61629 USA  
[www.cat.com](http://www.cat.com)  
UENR8482



# Operational Document

## Supplemental Information

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### **Regulatory Compliance Information For Machine Security System MSS3s (A5:S3)**

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**Name of product:** Cat® Machine Security System (MSS3s)

**Make:** Cat® Brand

**Model:** MSS3s (A5:S3)

**Part Number:** 432-8664

**Type:** Wireless Device (To provide Security for machines with or without electronic controls via RFID Communication)

**SMCS Code:** 7631

The A5:S3 part number 467-9245 is the buy-level part that includes a radio equipment and a software tied to the machine integration. The radio equipment contained in the A5:S3 is 432-8664.

Such radio equipment complies with the applicable regional product compliance requirements as demonstrated with the attached DoC. The software included in the buy-level part does not impact regulatory performance parameters.





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**Name of product:** Cat® Key FOB

**Make:** Cat® Brand

**Model:** Key FOB

**Part Number:** 285-3231

**Type:** Wireless Device (Chip-key for operator identification with RFID)

**SMCS Code:** 7631





## Properties (Main parameters affecting safety i.e. voltage rating, radio frequency range, current, temperature)

### MSS3s Safety Parameters

Input Voltage	
Operating Voltage Range	9VDC to 32VDC
Protection	Reverse Polarity
RFID Communication	
Transmit Frequency	134.2Khz
Transmit Frequency Range	129kHz – 139.2kHz
Transmit Output Power	12dBμA/m @ 10m 23dBμA/m @ 3m
Current Consumption (max)	
Max operational current draw	1.5A @ 24V
Environment	
Operating Temperature	-40° C (-40° F) to 85° C (185° F)
Storage Temperature	-50° C (-58° F) to 85° C (185° F)
ESD Protection (ISO 10605)	+/-8kV direct, +/- 15kV air



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## **sDoC (Simplified Declaration of Conformity)**

### **European Union**



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Hereby, Caterpillar Inc. declares this radio equipment is in compliance with directive “2014/53/EU”.  
The full text of the European Declaration of Conformity is available at the following web address:

<https://www.cat.com/radio-compliance>

### **Great Britain**



**Caterpillar Inc. 100 NE Adams Peoria, IL  
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Hereby, Caterpillar Inc. declares this radio equipment is in compliance with the relevant statutory requirements. The full text of the Great Britain Declaration of Conformity is available at the following web address:

<https://www.cat.com/radio-compliance>

**Caterpillar suggests that the Declaration of Conformity is obtained shortly after purchase.**



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## Disclaimer Notice

The transmission of information from this product link device may be subject to various legal requirements depending on the jurisdiction in which the equipment outfitted with the device is located. These legal requirements may include, but are not limited to, radio frequency use authorization. The transmission of information from this device must be limited to those locations where all legal requirements for the use of this device and communication network have been satisfied. Note that if the equipment outfitted with this device is located in or relocated to a location where (i) the transmission of information from the device would not comply with the legal requirements of the local jurisdictional or (ii) the transmission or processing of such information across multiple locations would not be legal, Caterpillar disclaims any liability related to such failure to comply, and Caterpillar may discontinue the transmission of information from that equipment. Consult your Cat dealer with any questions that concern the operation of this system in a specific jurisdiction.

## Certification Notices

### Canada Notice to Users

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions:


- This device may not cause interference.
- This device must accept any interference, including interference that may cause undesired operation of the device.

### FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause interference.
- This device must accept any interference received, including interference that may cause undesired operation.

## Certification Markings

 H-16264 **Argentina** – This device is approved for use in Argentina. Certificate ID: EX-2022-47267656- -APN-REYS#ENACOM. CT:24771.170629153019.13

**Bolivia** – This device is approved for use in Bolivia. Certificate No.: ATT-DJ-RA-H-TL LP 482/2021



Nº 1130-16-7855 **Brazil** – This device is approved for use in Brazil. Certificate No.: UL-BR 16.0575; 1130-16-7855



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**Gabon** – This device is approved for use in Gabon. Certification No: 373/ARCEP/2023



**Hong Kong** – This device is approved for use in Hong Kong.



**Indonesia** – This device is approved for use in Indonesia. Certification No: 94350/SDPPI/2023. Client ID: 822.

**Iraq** – This device is approved for use in Iraq. Certification No: CMC TA 2407678



**Kazakhstan** – This device is approved for use in Kazakhstan. Certificate No.: EAC KZ 7100841.13.12.01746

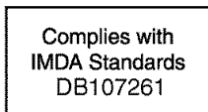
**Kuwait** – This device is approved for use in Kuwait. Type Approval Certificate Ref No.: 1824



**Qatar** – This device is approved for use in Qatar.



**Russia** – This device is approved for use in Russia.



**Singapore** – This device is approved for use in Singapore. Certificate No.: N0967-22



**South Africa** – This device is approved for use in South Africa. Certificate ID: TA 2016/1369



식별부호: MSIP-RRM-CTU-MSS3S

**South Korea** – This device is approved for use in South Korea. Type Approval Certificate No.: MSIP-RMM-CTU-MSS3S

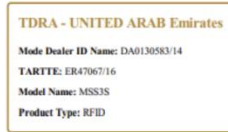




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**Ukraine** – This device is approved for use in Ukraine.



**United Arab Emirates** – This device is approved for use in United Arab Emirates.



**United Kingdom** – This device is approved for use in United Kingdom.



**United States** – This device is approved for use in United States. FCC ID: PQMMSS3S



## **Conditions for Assembly, Storage, Transfer and Disposal**

All MSS3s locations use isolation mounts regardless of location. The isolation mounts cannot be removed to allow only the use of the M6 bolt for hard-mounting.

### **Mounting Locations**

Ensure that the following guidelines are met when mounting the MSS3s Machine Security System.

- Mount the MSS3s inside the cab if used for operator ID applications.
- Ensure that the radio frequency propagation is not inhibited. Do not fully enclose the transceiver in metal. The transceiver may be mounted to a metal plate inside a panel or compartment as long as most of the panel material is non-metallic.

### ***Term and Conditions of Storage and Transportation***

The product is packed in consumer packaging of manufacturer. The product should be stored in the factory packing and storage conditions for climatic factors of Group 4 in accordance with GOST 15150-69. When loading and transportation requirements on warning labels on the boxes must be followed, shocks and bumps that can affect the appearance and performance of the device should not be allowed. Transportation can be done by all kinds of covered transport vehicles. When transporting by air, ensure that the device is transported in a sealed compartment.

### **Transfer and Disposal**

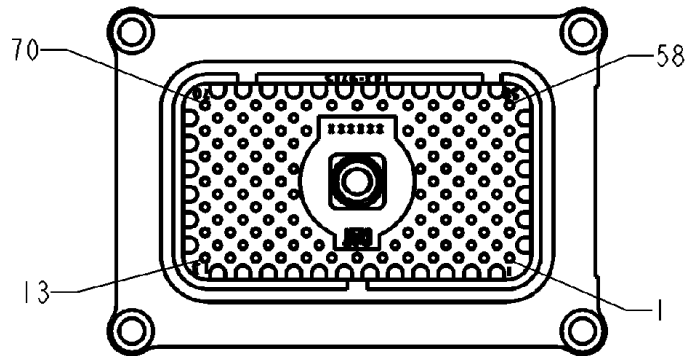
Contact an authorized dealer to determine the disposal and transfer conditions.



## Electrical Connection

### MSS3s:

Pinout of 70-pin Ampconnector



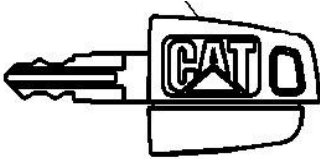
Pin #	Description
1	CAT DATA LINK +
3	CAT DATA LINK -
5	20 mA SWITCH TO +BATTERY OUTPUT
7	LED DRIVER OUTPUT 1
9	LED DRIVER OUTPUT 2
11	KEY READER SIGNAL
13	KEY READER RETURN
18	SWITCH TO GROUND INPUT 2
19	LED DRIVER RETURN
24	+BATTERY
26	-BATTERY
29	CAN HI
31	CAN LO
40	2A NEUTRAL START OUTPUT
42	2A SOURCING OUTPUT RETURN
45	ON/OFF INPUT
47	CRANK POSITION INPUT
52	SWITCH TO GROUND INPUT 1
53	300mA SOURCING OUTPUT RETURN
58	2A SOURCING OUTPUT
60	NEUTRAL START INPUT
62	300mA SOURCING OUTPUT 1
64	300mA SOURCING OUTPUT 2
66	300mA SOURCING OUTPUT 3
68	300mA SOURCING OUTPUT 4
70	KEY SWITCH INPUT

Pin #	Description
5	20 mA SWITCH TO +BATTERY OUTPUT
40	2A NEUTRAL START OUTPUT
58	2A SOURCING OUTPUT
42	2A SOURCING OUTPUT RETURN
62	300mA SOURCING OUTPUT 1
64	300mA SOURCING OUTPUT 2
66	300mA SOURCING OUTPUT 3
68	300mA SOURCING OUTPUT 4
53	300mA SOURCING OUTPUT RETURN
24	+BATTERY
26	-BATTERY
29	CAN HI
31	CAN LO
3	CAT DATA LINK -
1	CAT DATA LINK +
47	CRANK POSITION INPUT
13	KEY READER RETURN
11	KEY READER SIGNAL
70	KEY SWITCH INPUT
7	LED DRIVER OUTPUT 1
9	LED DRIVER OUTPUT 2
19	LED DRIVER RETURN
60	NEUTRAL START INPUT
45	ON/OFF INPUT
52	SWITCH TO GROUND INPUT 1
18	SWITCH TO GROUND INPUT 2



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### **KeyFOB:**



### **Preventative Maintenance**

No preventative maintenance is required for these devices.

### **Safe Operation**

To Ensure the safe operation of this device proper wire harness must be connected to the device as well as it must be mounted as per the instructions.

### **Information about the faults and corrective actions**

Before calling to the dealer for repair, check the integrity of the electric wires, and cycle the battery power to the device. Cycling battery power can be accomplished by:

- Turning the machines master disconnect off and then back on.
- Unplugging the harness from the device and then plugging the harness back in.
- Disconnecting the negative cable from the negative battery terminal and then reconnect the cable.

If these solutions do not help, call the local dealer for service.

### **Date of Manufacture**

Contact an authorized dealer to determine the date of manufacture using the serial number.