

## EU Declaration of Conformity – RF10 Series Speed Sensors

Manufacturer: Motion Sensors, Inc., 786 Pitts Chapel Road, Elizabeth City, NC 27909

Equipment: Intrinsically Safe pickups

Designation/Model: RF10-xxx

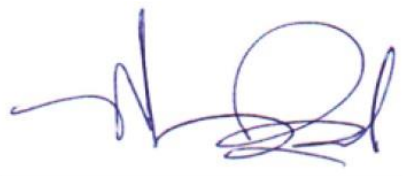
NOTE: "xxx" in Model number may be any combination of numbers and characters representing specific options.

Marking: MOTION SENSORS INC  
ELIZABETH CITY, NC 27909  
RF10-XXX  
SERIAL #: YEAR OF CONSTRUCTION:  
Ex II 1 G  
Ex ia IIC or IIB T6 to T3 Ga  
LCIE 03 ATEX 6280 X  
IECEX LCIE 14.0024 X  
IIC:  $U_i \leq 30V$ ,  $I_i \leq 160mA$ ,  $P_i \leq 0.75W$ ,  $C_i \leq 0\mu F$ ,  $L_i \leq 1.2mH$   
IIB:  $U_i \leq 30V$ ,  $I_i \leq 300mA$ ,  $P_i \leq 1.0W$ ,  $C_i \leq 0\mu F$ ,  $L_i \leq 1.2mH$

This declaration of conformity is issued under the sole responsibility of the manufacturer. The object of the declaration is in conformity with the relevant Union harmonisation Legislation. We hereby declare that the product, which is subject of this declaration, is in conformity with the following standards:

ATEX	ATEX Directive 2014/34/EU: Equipment and protective systems intended for use in potentially explosive atmospheres. <i>Applicable Standards:</i> <i>BS EN IEC 60079-0:2018*; EN 60079-11: 2012</i>	EU-Type Examination Certificate: LCIE 03 ATEX 6280 X
CSA w/NRTL/C	Applicable CSA Requirements: CSA Std. C22.2 No. 142-M1987, CAN/CSA-C22.2 No. 157-92, UL Std No. 508, UL Std No. 913	CSA-Type Examination Certificate: LR105990-1
IECEX	IEC Certification for Explosive Atmospheres. <i>Applicable Standards:</i> <i>BS EN IEC 60079-0:2018*; IEC 60079-11: 2011</i>	IECEX Certificate of Conformity: IECEX LCIE 14.0024 X

\*MSI has performed internal assessments for EN 60079-0:2012+A11-2013 to BS EN IEC 60079-0:2018 revision and IEC 60079-0: 2011 + IS1:2013 to BS EN IEC 60079-0:2018 revision; there is no impact upon product.

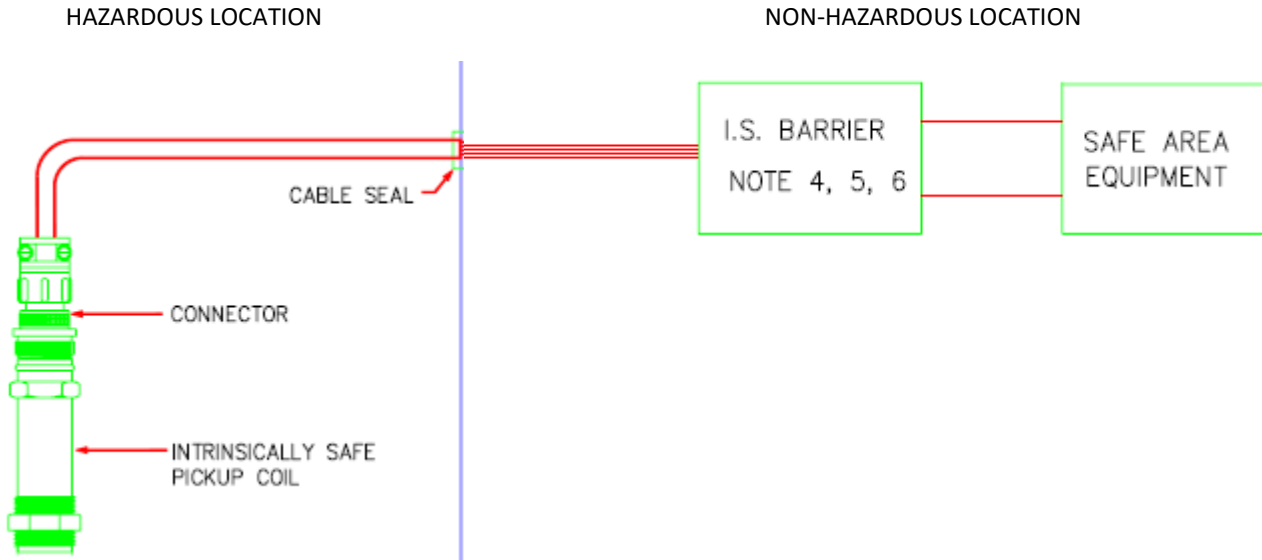


**Marcy Bergman Pritchard**  
**President**  
**Motion Sensors, Inc.**

SIGNED: 10/17/19

EU-Type Examination Certificate & IECEX Certificate issued by:  
Laboratoire Central Des Industries Electriques  
Avenue du General-Leclerc 33  
F-92266 Fontenay-aux-Roses  
(Notified Body Number: 0081)

CSA-Type Examination Certification issued by:  
Canadian Standards Association  
Toronto, ON Canada



Notes:

1. For CSA-NRTL Installations: Installation should be in accordance with ANSI/ISA RP12.6 "Installation of Intrinsically Safe Systems for Hazardous Locations" and the National Electric Code (ANSI/NFPA 70). For ATEX Installations: Installation should be in accordance with ATEX Directive for Installation of Intrinsically Safe systems in hazardous locations and in accordance with the relevant local Electric Codes.
2. For CSA Installations: Install in accordance with Canadian Electric Code Part 1. For ATEX Installations: Install in accordance with the relevant local Electric Code.
3. Pickup coils equipped with the "MS" type connector are only suitable for hazardous locations Class 1, Division 1, Groups A, B, C, D; Class II, Division 1 Group G, Class III, and Coal Dust. Pickup coils with an "NPT" connector or "pigtail" leads can be used in hazardous locations Class 1, Division 1, Groups A,B,C,D; Class II, Division 1, Groups E, F, G, and Class III. For ATEX installations, pickup coils are suitable for use in Ex ia IIC or IIB hazardous locations, where Exia is defined as Intrinsically Safe/Securite Intrinseque.
4. For entity installations, select a CSA or ATEX certified barrier that satisfies the following:
 
$$V_{max} \geq V_{oc}; \quad C_i + C_{cable} \leq C_a;$$

$$I_{max} \geq I_{sc}; \quad L_i + L_{cable} \leq L_a$$
5. For system installations, select a CSA or ATEX certified single channel barrier having the parameters of 28 Vdc (Max) and 300 ohms (Min).
6. Barriers must be installed in accordance with manufacturer's instructions.

**Special Conditions for Safe Use**

The RF10 series pickups are intrinsically safe electrical equipment and can be used in potentially explosive atmospheres. The terminal block can be only connected to certified intrinsically safe equipment and the combination must be compatible in regards with intrinsic safety rules and the electrical parameters in the below table.

**CSA Entity Parameters**

NOTE: Electrical specification V, and I, of the barriers installed with the pickup cannot exceed any of the following values.

Class/Group (CSA)	Vmax	I <sub>max</sub>	C <sub>i</sub> (F)	L <sub>i</sub> (mH)
Class I, Gr A, B, C, D; Class II Group E,F,G; Class III	30	160	0	1.2
Class I Group C,D; Class II Group E,F,G; Class III	30	300	0	1.2

**ATEX Entity Parameters**

NOTE: Electrical specification U, I, and P of the barriers installed with the pickup cannot exceed any of the following values.

Gas Group (ATEX)	U <sub>i</sub> (V) V <sub>max</sub>	I <sub>i</sub> (mA) I <sub>max</sub>	P <sub>i</sub> (W)	C <sub>i</sub> (F)	L <sub>i</sub> (mH)
IIC	30	160	.75	0	1.2
IIB	30	300	1.9	0	1.2

**Maximum Ambient Temperature:**

The maximum ambient temperature of the RF10 series is -50°C to +175°C, in accordance with the following temperature classes:

T6	T5	T4	T3
+80°C Max	+95°C Max	+130°C Max	+175°C Max

**Marking:**

The RF10 series shall be marked with either CSA or ATEX identification, or a combination label, as applicable and shall be identified by the part number, date code (AA BB), and Lot Identification number (YYYYYY).

**WARNING: Do not separate when energized.**