2150 Area Velocity Flow Module and Sensor Safety and Certification Sheet

TELEDYNE ISCO
Everywhereyoulook™

Safety Sheet #69-2003-777
June, 2020

Overview

This document contains the required safety and regulatory information for the 2150 Area Velocity Flow Module and Sensor. The 2150 Area Velocity Flow Module and Sensor Installation and Operation Guide and Warranty Statement are available and can be downloaded from www.teledyneisco.com.

⚠ CAUTION

Cautions identify a potential hazard, which if not avoided, may result in minor or moderate injury. This category can also warn you of unsafe practices, or conditions that may cause property damage.

⚠ WARNING

Warnings identify a potentially hazardous condition, which if not avoided, could result in death or serious injury.

⚠ DANGER

DANGER – limited to the most extreme situations to identify an imminent hazard, which if not avoided, will result in death or serious injury.

Hazard Symbols	
Warnings and Cautions	
	**The exclamation point within the triangle is a warning sign alerting you of important instructions in the instrument's technical reference manual.**
	**The lightning flash and arrowhead within the triangle is a warning sign alerting you of "dangerous voltage" inside the product.**
 	**Pinch point. These symbols warn you that your fingers or hands will be seriously injured if you place them between the moving parts of the mechanism near these symbols.**

Hazard Symbols (Continued)	
Symboles de sécurité	
	**Ce symbole signale l'existence d'instructions importantes relatives au produit dans ce manuel.**
	**Ce symbole signale la présence d'un danger d'électocution.**
 	**Risque de pincement. Ces symboles vous avertit que les mains ou les doigts seront blessés sérieusement si vous les mettez entre les éléments en mouvement du mécanisme près de ces symboles**
Warnungen und Vorsichtshinweise	
	**Das Ausrufezeichen in Dreieck ist ein Warnzeichen, das Sie darauf aufmerksam macht, daß wichtige Anleitungen zu diesem Handbuch gehören.**
	**Der gepfeilte Blitz im Dreieck ist ein Warnzeichen, das Sei vor "gefährlichen Spannungen" im Inneren des Produkts warnt.**
 	**Vorsicht Quetschgefahr! Dieses Symbol warnt vor einer unmittelbar drohenden Verletzungsgefahr für Finger und Hände, wenn diese zwischen die beweglichen Teile des gekennzeichneten Gerätes geraten.**

Before installing, operating, or maintaining this equipment, it is imperative that all hazards and preventive measures are fully understood. While specific hazards may vary according to location and application, take heed in the following general warnings:

⚠ WARNING

This instrument has not been certified for use in "hazardous locations" as defined by the National Electrical Code.

⚠ WARNING

Avoid hazardous practices! If you use this instrument in any way not specified in this manual, the protection provided by the instrument may be impaired.

⚠ AVERTISSEMENT

Éviter les usages périlleux! Si vous utilisez cet instrument d'une manière autre que celles qui sont specifiées dans ce manuel, la protection fournie de l'instrument peut être affaiblie; cela augmentera votre risque de blessure.

⚠ WARNING

The installation and use of this product may subject you to hazardous working conditions that can cause you serious or fatal injuries. Take any necessary precautions before entering a worksite. Install and operate this product in accordance with all applicable safety and health regulations, and local ordinances.

⚠ WARNING

Injury and/or equipment damage can result from connecting modules or cables to a power source exceeding the specified operating voltage range. Check labeling on all modules and cables for voltage ranges.

Technical assistance for the Teledyne ISCO 2150 Area Velocity Flow Module and Sensor can be obtained from:

Teledyne ISCO
4700 Superior St.
Lincoln NE 68504

Phone: (800) 228-4373 or (402) 464-0231
Fax: (402) 465-3022
E-mail: IscoService@teledyne.com or Iscoeps@teledyne.com

Radio Interference Statement

FCC

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 the user will be required to correct the interference at his own expense.

Canada

This ISM apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Ce générateur de fréquence radio ISM respecte toutes les exigences du Règlement sur le materiel brouilleur du Canada.

DECLARATION OF CONFORMITY

CE
ISM1-A

Application of Council Directive:	2014/30/EU – The EMC Directive 2014/35/EU – The Low Voltage Directive
Manufacturer's Name:	Teledyne Isco, Inc.
Manufacturer's Address:	4700 Superior, Lincoln, Nebraska 68504 USA Mailing Address: P.O. Box 82531, Lincoln, NE 68501
Equipment Type/Environment:	Laboratory Equipment for Light Industrial/Commercial Environments
Trade Name/Model No:	2150 Area Velocity Flow Module and Sensor
Year of Issue:	2016
Standards to which Conformity is Declared:	EN 61326-1:2013 EMC Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use EN 61010-1:2010 Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use

Standard	Description	Severity Applied	Performance Criteria
EN61000-4-2	Electrostatic Discharge	Level 2 - 4kV contact discharge Level 3 - 8kV air discharge	B B
EN61000-4-3	Radiated RF Immunity	80 MHz to 1000MHz 80% AM at 1kHz Level 1 – 10V/m	*B
EN61000-4-4	Electrical Fast Transient	Level 1 – 1kV on I/O lines	B
EN61000-4-5	Surge on I/O Lines	1kV common mode, 0.5KV differential mode	B
EN61000-4-6	Conducted RF on I/O lines	150 kHz to 80 MHz, 3V rms, 80% modulated	B
CISPR11/ EN 55011	RF Emissions	Group 1, Class A Industrial, Scientific, and Medical Equipment	PASS

* Standard requires performance criteria A, however, tests show some degradation of performance due to RF at 10V/m, in that flow rates are affected beyond the tolerances published in the instrument's specifications.

We, the undersigned, hereby declare that the design of the equipment specified above conforms to the above Directive(s) and Standards as of September 13, 2016.

Edward J. Carter
USA Representative

TELEDYNE ISCO
A Teledyne Technologies Company

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60-2002-155
Rev B

DECLARATION OF CONFORMITY

ISM1-A

Application of Council Directive:	2014/30/EU – The EMC Directive 2014/35/EU – The Low Voltage Directive 2011/65/EU – The RoHS Directive
Manufacturer's Name:	Teledyne Isco
Manufacturer's Address:	4700 Superior, Lincoln, Nebraska 68504 USA Mailing Address: P.O. Box 82531, Lincoln, NE 68501
Equipment Type/Environment:	Laboratory Equipment for Light Industrial/Commercial Environments
Trade Name/Model No:	2191 Battery Module
Year of Issue:	2017
Standards to which Conformity is Declared:	EN 61326-1:2013 EMC Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use EN 61010-1:2010 Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use

I, the undersigned, hereby declare that the design of the equipment specified above conforms to the above Directives and Standards as of October 16, 2017.

Edward J. Carter
USA Representative

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60-2002-158
Rev B

产品中有毒有害物质或元素的名称及含量

Name and amount of Hazardous Substances or Elements in the product

部件名称 Component Name	有毒有害物质或元素 Hazardous Substances or Elements					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二联苯 (PBDE)
线路板 Circuit Boards	X	O	O	O	O	O
外部电缆 External Cables	O	O	O	O	X	O

产品中有毒有害物质或元素的名称及含量：Name and amount of Hazardous Substances or Elements in the product

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在ST/ 标准规定的限量要求以下。

O: Represent the concentration of the hazardous substance in this component's any homogeneous pieces is lower than the ST/ standard limitation.

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出ST/ 标准规定的限量要求。

(企业可在此处，根据实际情况对上表中打"X" 的技术原因进行进一步说明。)

X: Represent the concentration of the hazardous substance in this component's at least one homogeneous piece is higher than the ST/ standard limitation.

(Manufacturer may give technical reasons to the "X"marks)

环保使用期由经验确定。

The Environmentally Friendly Use Period (EFUP) was determined through experience.

生产日期被编码在系列号码中。前三位数字为生产年(207 代表 2007 年) 。随后的一个字母代表月份：A 为一月，B 为二月，等等。

The date of Manufacture is in code within the serial number. The first three numbers are the year of manufacture (207 is year 2007) followed by a letter for the month. "A" is January, "B" is February and so on.

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线路板 Circuit Boards	X	O	O	O	O	O

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