APPVL INST 5700 XMTR IECEx Zn 2
EB-20025744
Revision: AA
Number of Pages: 6
Comments:

THIS COMPONENT MUST COMPLY WITH REGULATORY AGENCY REQUIREMENTS. NO CHANGES ARE ALLOWED WITHOUT PRIOR AUTHORIZATION FROM APPROVALS ENGINEERING.

Originator: HVH 10/01/13

Approved: RCS 11/26/13

Rev	ECN	Description	Approval	Date
AA	1049085	Release to Approvals	RCS	11/26/13

Subject: Equipment type	**Transmitter type 5700*1***3A***	
Manufactured and submitted for examination	**Micro Motion, Inc.**	
Address	**Boulder, Co. 80301, USA**	
Standard basis	IEC 60079-0:2011 IEC 60079-15:2010	General requirements Type of protection ´n´
Code for type of protection	**Ex nA nC IIB + H_2 T5 Gc** **Ex nA nC IIC T5 Gc** **IP66/IP67**	
Certificate of Conformity	**IECEx BVS 14. 0037 X**	

1) Subject and Type

Transmitter type 5700*1***3A***

Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:

Type 5 7 0 0 * 1 * * * 3 A * * *

- Options without influence on explosion protection
- Approval
  3 = IECEx: EPL Gc, Ex nA nC, Zone 2
- Letter for conduits
- Output Options
  A = Configurable Outputs
- Display Options
  2 = Backlit dual line Display = Ex ***IIB + H_2
  3 = No Display = Ex ***IIC
  5 = Backlit dual line Display = Ex ***IIC
- Letter for mounting
  I = Integral Mount Transmitter
  B = Remote mount transmitter and remote enhanced core processor
  R = 4-wire remote mount transmitter
  C = 9-wire remote mount transmitter

2) Description

The transmitter is, in combination with a sensor, used for measurement of mass flow and data transmission.

The electrical circuitry of the transmitters is mounted inside a metal enclosure which is divided into three compartments.

In the electronic compartment the EMI Terminal Board, Power Supply Board, Feature Board, Core Board and Backplane Board are mounted. On the Feature board there are four sealed relays with protection type “nC”.

When executed with display, there is one window cover available, either marked as IIB + H_2 (type 5700*12**3A***) or IIC (type 5700*15**3A***).

The terminal compartment is equipped with terminals for the connection of I/O signals and power.

The enclosure can be constructed with a terminal compartment for the connection of remotely operating non-sparking “nA” safe sensors (type 5700C1***3A***) for a 9-wire connection or (type 5700R1***3A***) for a 4-wire connection.

Alternatively, the enclosure can be mounted directly to the sensor via a transition compartment (type 5700I1***3A***). This type of mounting has to be certified separately.

The transmitter is intended to be used in a hazardous dust environment without change to any of the electronics aspects of the design.

3) Parameters

3.1	Mains circuit (J1, terminal 1 - 2)				
	voltage		AC/DC	18 - 240 V + 10 %	
	max. voltage	U	AC/DC	265	V
3.2	Input/output circuits (J3, terminals 1 - 10)				
	voltage	U	AC/DC	30	V
3.3	Input/output circuits (J2, USB)				
	voltage	U	AC/DC	10	V
3.4	Input/output circuits to sensor:				
3.4.1	Drive circuit; (J2 in J-box, DR+ BRN; DR- RED)				
	voltage	U	DC	10,5	V
	current	I		80	mA
3.4.2	Pick-off circuits (J1 in J-box, LPO+ GRN; LPO- WHT; RPO+ BLU; RPO- GRY)				
	voltage	U	DC	17,3	V
	current	I		6,92	mA
3.4.3	Temperature circuit (J1 in J-box, RTD+ VIO; RTD- ORA; RTD-SIG YEL)				
	voltage	U	DC	17,3	V
	current	I		19,26	mA
3.5	Ambient temperature range				
3.5.1	Type 5700*1***3A***	Ta	-40°C to +65°C		

4) Marking

Type 5700*1***3A*** Ta -40°C to +65°C

- type	**- type of protection**
5700*12**3A***	Ex nA nC IIB+H_2 T5 Gc IP66/IP67
5700*1(3 or 5)**3A***	Ex nA nC IIC T5 Gc IP66/IP67

WARNING - DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE MAY BE PRESENT.

5) Special conditions for safe use / Installation instructions

5.1 The permissible ambient temperature range is -40°C to +65°C. The use of the transmitter at an ambient temperature lower than - 20 °C is only admissible, if the cables are suitable and the cable entries resp. blanking plugs are certified for that temperature and use.

5.2 The user interface module shall not be disconnected from the electronic module unless the unit has been de-energized.

5.3 The Rotary and DIP switches on the user interface shall not be switched unless the unit has been de-energized.

5.4 The USB connection in the terminal compartment shall not be used unless the unit has been de-energized.

5.5 The windows cover forms one unit and cannot be taken apart without destroying the cover parts. If a cover is damaged it must be replaced by a new cover.

5.6 The transmitter is intended to be used only in the combination with Micro Motion sensors. The combination with sensors must be certified separately.