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April 23, 2008

Mr. Stan Przybylowicz
Fairchild Industrial Products Co.
3290 West Point Boulevard
Winston-Salem, NC 27103
USA

Customer ID: 1000001257

Subject: Type 4 and IP65 Testing and Examination of Fairchild IPC's T\*6000 and T\*6100 Series Pneumatic

Transducers against ANSI/NEMA 250:2003 and ANSI/IEC 60529:2004 - Final Report.

Project ID: 3030711

Dear Mr. Przybylowicz:

As you requested, FM Approvals has completed the Type 4 and IP65 testing of the Fairchild Industrial Products Co. TA6000, TD6000, TA6100 and TD6100 Pneumatic Transducers against the ANSI/NEMA 250 and ANSI/IEC 60529 Standards respectively. This program does not result in any FM Approval being granted but the testing and documentation will remain on file at FM Approvals and may be applicable for future applications.

The purpose of the subject program was to perform the herein described gasket preconditioning and hosedown testing for Type 4 and IP65 testing on one T\*6000 and one T\*6100 as submitted and described below.

## 1. T\*6000 and T\*6100 Description

The T\*6000 and T\*6100 Pneumatic Transducers both consist of a nozzle body, process connection assembly, and cover assembly with a ½ inch-14 NPT entry or DIN connector assembly. The cover assembly on both models contains a vent. The model T\*6100 contains an additional enclosure compartment between the nozzle body and process connection assembly. The DIN connector version of each transducer housing was subjected to the testing described in Section 2 and 3 of this report. The testing in this program is considered applicable to models TA6000, TD6000, TA6100 and TD6100. The construction of these products is described in the following drawing.

Drawing No.	Drawing Title	Revision	Date
20746	CONTROL DRAWING T6100 & T6000W NEMA 4	Α	3/5/2008

## 2. ANSI/NEMA 250: Type 4 Examination and Testing of T\*6000 and T\*6100

#### 2.1 ANSI/NEMA 250: Gasket Preconditioning

Samples of the T\*6000 and T\*6100 transducer housings with DIN connector assemblies were subjected to 168 hours continuous storage at 90°C and 90% Relative Humidity.

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# 2.2 ANSI/NEMA 250: Type 4 Hosedown Test

Following the preconditioning outlined in Section 2.1, the T\*6000 and T\*6100 samples were subjected to a stream of water from a hose with a 1 inch (25.4 mm) nozzle that delivers at least 65 gallons (246 liters) per minute. The stream of water was directed at each sample from all sides from a distance of 10 to 12 feet (3 to 3.7 meters) and was moved along each possible entry point at a uniform nominal rate of 6 mm/sec (¼ inch/sec). At the conclusion of the test, the housings were opened and inspected. The T\*6000 and T\*6100 housings had excluded the entry of water in accordance with the requirements of ANSI/NEMA 250 for Type 4 protection. This is satisfactory.

### 3. ANSI/IEC 60529: IP65 Examination and Testing of T\*6000 and T\*6100

### 3.1 ANSI/IEC 60529: IP6X Dust Exclusion Test

The T\*6000 and T\*6100 samples were suspended in a circulating dust atmosphere of 200 mesh talc. The test sample was connected to a vacuum pump adjusted to draw a vacuum of 20mBar for a total of eight hours. At the conclusion of the test, the test samples were removed from the test chamber, excess dust was removed from the samples' surface and each test sample was opened. The T\*6000 and T\*6100 housings had excluded the entry of dust in accordance with the requirements of ANSI/IEC 60529 for IP6X protection. This is satisfactory.

### 3.2 ANSI/IEC 60529: IPX5 Hosedown Test

The T\*6000 and T\*6100 samples were subjected to a stream of water from a hose with a ¼ inch (6.3 mm) nozzle that delivers at least 3.3 gallons (12.5 liters) per minute. The stream of water was directed at each sample from all sides from a distance of 8.2 to 9.8 feet (2.5 to 3.0 meters) for 3 minutes. At the conclusion of the test, the housings were opened and inspected. The T\*6000 and T\*6100 housings had excluded the entry of water in accordance with the requirements of ANSI/IEC 60529 for IPX5 protection. This is satisfactory.

All test data pertaining to this program will be held on file at FM Approvals in Project Data Record File, 3030711, Class 3615. The issuance of this letter report is considered to be the completion of this program. A final bill will be issued to you for work associated with this program.

If you should have any questions, please do not hesitate to contact the undersigned.

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