

DE-LISTED

APPROVAL REPORT

**SERIES 4000 INDUSTRIAL FLOW SENSORS
for
HAZARDOUS (CLASSIFIED) LOCATIONS**

Prepared for:

**DATA INDUSTRIAL
11 INDUSTRIAL DRIVE
MATTAPOISETT, MA 02739**

**J.I. 3D7A7.AX
3610
January 28, 1999**

Supercedes Report Dated: January 8, 1999

FACTORY MUTUAL



1151 Boston-Providence Turnpike
P.O. Box 9102
Norwood, Massachusetts 02062

1151 Boston-Providence Turnpike
P.O. Box 9102
Norwood, Massachusetts 02062

J.I. 3D7A7.AX
(3610)

January 28, 1999

SERIES 4000 INDUSTRIAL FLOW SENSORS
FOR
HAZARDOUS AREAS

from

DATA INDUSTRIAL
11 INDUSTRIAL DRIVE
MATTAPOISETT, MA 02739

I INTRODUCTION

1.1 Standards

DATA INDUSTRIAL requested Approval of the apparatus listed in Section 1.2 to be in compliance with the applicable requirements of the following standards:

<u>Title</u>	<u>No.</u>	<u>Issue Date</u>
Intrinsically Safe Apparatus for Use in Class I, II and III, Division 1 Hazardous (Classified) Locations <i>Note: 1.5 factor applied to voltage and current rather than energy.</i>	FMRC 3610	October 1988
Electrical Equipment for Use in Hazardous (Classified) Locations General Requirements	FMRC 3600	August 1998
Electrical and Electronic Test, Measuring, and Process Control Equipment	FMRC 3810	March 1989

FACTORY MUTUAL RESEARCH CORPORATION
JOB IDENTIFICATION J.I. 3D7A7.AX

1.2 Listing -

The following was evaluated as intrinsically safe (entity) for use in Class I, II and III, Division 1, Groups A, B, C, D, E, F and G indoor hazardous (classified) locations in accordance with Drawing No. 06-634-003 rev. A and 06-634-004 rev. A; indoor hazardous (classified) locations and will appear in the Approval Guide as follows:

Model 4abcdefgh. Series 4000 Industrial Flow Sensor.

IS/I,II,III/1/ABCDEFGH/T5; Entity-Dwg. No. 06-634-003/A; Entity-Dwg. No. 06-634-004/A

4-20 mA model

Entity Parameters: $V_{max} = 30v$, $I_{max} = 50.0mA$, $C_i = 0.027 \mu F$, $L_i = 2mH$

Pulse model

Entity Parameters: $V_{max} = 30v$, $I_{max} = 50.0mA$, $C_i = 1.12 \mu F$, $L_i = 2mH$

a = Style 0 or 1.

b = Size 0, 1 or 2.

c = Material 2, 3, 4, 5, 7, 8 or 9.

d = Electronics 02, 03, 12, 13.

e = O-ring 0, 1, 2, 3, 4 or 5.

f = Shaft 0, 1, 2, 3, 4, 5, 6 or 7.

g = Impeller 0, 1 or 2.

h = Bearing PVDF 1, 2 or 3.