



Member of the FM Global Group

FM Approvals  
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# CERTIFICATE OF COMPLIANCE

## HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment

### **IM33-aEx-Hi. Isolator Barrier.**

AIS / I / 1 / ABCDEFG - IS-1.102; Entity;

I / 0 / AEx [ja] / IIC - IS-1.102; Entity;

NI / I / 2 / ABCD / T5 Ta = 70°C

Entity Parameters Trapezoidal Characteristic:

Terminals	Groups	$V_{oc}/U_o$ (V)	$I_{sc}/I_o$ (mA)	R (ohm)	$P_o$ (W)	$C_a/C_o$ ( $\mu F$ )	$L_a/L_o$ (mH)
1, 2, and 3	A/B/IIC	20.4	81.5	385	640	0.083	0.85
1, 2, and 3	C/IIB	20.4	81.5	385	640	0.360	17.0
1, 2, and 3	D/IIA	20.4	81.5	385	640	0.410	30
4, 5, and 6	A/B/IIC	20.4	81.5	385	640	0.083	0.85
4, 5, and 6	C/IIB	20.4	81.5	385	640	0.360	17.0
4, 5, and 6	D/IIA	20.4	81.5	385	640	0.410	30

a = Number of inputs/outputs: 11, 12, or 22.

### **Special Condition of Use:**

1. The Isolator Barrier shall be installed in a tool secured enclosure in compliance with the mounting, spacing and segregation requirements of the ultimate application.

### **IM34-14Ex-CDRi. Isolator Barrier.**

AIS / I / 1 / ABCDEFG - IS-1.106; Entity;

I / 0 / AEx [ja] / IIC - IS-1.106; Entity;

NI / I / 2 / ABCD / T4 Ta = 70°C

Entity Parameters:

Terminals	Groups	$V_t$ (V)	$I_t$ (mA)	$P_o$ (mW)	$C_a/C_o$ ( $\mu F$ )	$L_a/L_o$ (mH)
1, 2, 3, 4, 5 and 6	A/B	5.0	1.1	1.4	100	500
1, 2, 3, 4, 5 and 6	C	5.0	1.1	1.4	100	500
1, 2, 3, 4, 5 and 6	D	5.0	1.1	1.4	100	500

### **Special Condition of Use:**

1. The Isolator Barrier shall be installed in a tool secured enclosure in compliance with the mounting, spacing and segregation requirements of the ultimate application.

**IM43-13Ex-b. Set-point Monitor.**

NI / I / 2 / ABCD / T4 Ta = 70°C

b = Output type: R or SR.

**Special Condition of Use:**

1. The Isolator Barrier shall be installed in a tool secured enclosure in compliance with the mounting, spacing and segregation requirements of the ultimate application.

**IM43-14Ex-b. Set-point Monitor.**

NI / I / 2 / ABCD / T4 Ta = 70°C

b = Output type: Ri, Sri or CSRi.

**Special Condition of Use:**

1. The Isolator Barrier shall be installed in a tool secured enclosure in compliance with the mounting, spacing and segregation requirements of the ultimate application.

**Equipment Ratings:**

Associated Apparatus with Intrinsically Safe connections to a Class I, Division 1, Groups A, B, C, D, E, F, & G and connections to a Class I, Zone 0, Group IIC, IIB, IIA; indoor hazardous (classified) locations, in accordance with Control Drawings 1.102 or IS-1.106.. Also as Nonincendive for use in a Class I, Division 2, Groups A, B, C, and D indoor hazardous (classified) locations. The equipment has a Temperature Class T4, Ta = 70°C.

The apparatus shall be installed in a final enclosure in order to retain its safety approval.

**FM Approved for:**

TURCK Inc.

Plymouth, Minnesota 55441, USA

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	2011
Class 3810	2005
Class 3610	2010
Class 3611	2004
ANSI/ISA-60079-0	2009
ANSI/ISA-60079-11	2009



Original Project ID: 3027845

Approval Granted: 03/30/2007

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
070402	04/04/2007		
3042273	03/22/2012		

FM Approvals LLC

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Timothy Adam  
Technical Team Manager

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Mar. 22, 2012  
Date