FM Approvals
Member of the FM Global Group

FM Approvals
1151 Boston-Providence Turnpike
P.O. Box 9102 Norwood, MA 02062 USA
T: **781 762 4300** F: 781 762 9375 www.fmglobal.com

CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

IM33-aEx-Hi/24VDC. Isolator Barrier.
AIS / I / 1 / ABCDEFG — IS-1.102; Entity;
I / 0 / AEx [ia] / IIC — IS-1.102; Entity;
NI / I / 2 / ABCD / T4 Ta = 70°C
Entity Parameters:

Terminals	Group	V_{oc}/U_o	I_{sc}/I_o	P_o	C_a/C_o	L_a/L_o
		(V)	(mA)	(mW)	(μF)	(mH)
1, 2, and 3	A/B	21.2	89	472	0.18	4.5
1, 2, and 3	C	21.2	89	472	1.24	17.3
1, 2, and 3	D	21.2	89	472	4.68	35.9
4, 5, and 6	A/B	21.2	89	472	0.18	4.5
4, 5, and 6	C	21.2	89	472	1.24	17.3
4, 5, and 6	D	21.2	89	472	4.68	35.9

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-aEx-b. Isolator Barrier.
AIS / I / 1 / ABCDEFG — IS-1.106; Entity;
I / 0 / AEx [ia] / IIC — IS-1.106; Entity;
NI / I / 2 / ABCD / T4 Ta = 70°C
Entity Parameters:

Terminals	Group	V_t	I_t	P_o	C_a/C_o	L_a/L_o
		(V)	(mA)	(mW)	(μF)	(mH)
1, 2, 3, 4, 5 and 6	A/B	5.0	7.6	9.5	100	500
1, 2, 3, 4, 5 and 6	C	5.0	7.6	9.5	1000	1000
1, 2, 3, 4, 5 and 6	D	5.0	7.6	9.5	1000	5000

a = Number of inputs/outputs: 11 or 12.
b = Output type: i, Ri, Ci, or CRi.
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.

IM35-aEx-Hi/24VDC. Isolator Barrier.
AIS / I / 1 / ABCDEFG — IS-1.105; Entity;
I / 0 / AEx [ia] / IIC — IS-1.105; Entity;
NI / I / 2 / ABCD / T5 Ta = 70°C
Entity Parameters Trapezoidal Characteristic:

		V_{oc}/U_o	I_{sc}/I_o	R	P_o	C_a/C_o	L_a/L_o
Terminals	Groups	(V)	(mA)	(ohm)	(W)	(μF)	(mH)
1 and 2	A/B/IIC	15.6	59.6	527	0.5	0.15	1.0
1 and 2	C/IIB	15.6	59.6	527	0.5	0.30	25
4 and 5	A/B/IIC	15.6	59.6	527	0.5	0.15	1.0
4 and 5	C/IIB	15.6	59.6	527	0.5	0.30	25

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.

Equipment Ratings:

Associated Apparatus with Intrinsically Safe connections to a Class I, II, & III, Division 1, Groups A, B, C, D, E, F, & G and connection to a Class I, Zone 0, Group IIC, IIB, IIA; indoor hazardous (classified) locations, in accordance with Control Drawing IS-1.102, IS-1.105, 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.

Approved for:

TURCK Inc.
3000 Campus Dr.
Plymouth MN 55441

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

Class 3600	1998
Class 3810	1989
Class 3611	2004
Class 3610	1999

Original Project ID: 3019352 FM Approval Granted: 9/19/05

Subsequent Revision Reports / Date FM Approval Amended

Report Number	Date	Report Number	Date

FM Global Technologies LLC

George A. Smith
Assistant Vice President
FM Approvals

19 Sept 2005
Date