



Member of the FM Global Group

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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

I. Nonincendive (Div. 2) Version

PAC8000 Series I/O System, Nonincendive Apparatus.

NI / I / 2 / ABCD / T* Ta = 60°C; Ta = 70°C – SCI-701

* See table for temperature codes

Model No.	Description	Suppl. Inst. DWG	T-Code
8704-CA-08	8-Module Carrier, 32 Address	-	T6; T6
8707-CA-08	8-Module Carrier, 32 Address + Earth Bar	-	T6; T6
8709-CA-08	Carrier, 8-Module with Earth Bar, 64 Address System	-	T6; T6
8710-CA-04	4-Module Carrier, 32 Address + Earth Bar	-	T6; T6
8711-CA-NS	4-Module Node Head Carrier, 32 Address	SCI-715	T6; T6
8712-CA-NS	Node Service Carrier With D-Type Connections	SCI-804	T6; T6
8715-CA-BI	Universal BIM Carrier	SCI-857	T6; T6
8716-CA-NS	Node Services Carrier	SCI-934	T6; T6
8717-CA-PS	Power Supply Carrier	SCI-729	T6; T6
8718-CA-NS	Node Services Carrier	SCI-949	T6; T6
8750-CA-NS	Carrier	SCI-965	T6; T6
8751-CA-NS	Carrier	SCI-965	T6; T6
8020-CE-RH	Carrier Extension Connector, Left Hand Power	-	T6; T6
8021-CE-LH	Carrier Extension Connector, Right Hand Power	-	T6; T6
8601-FT-NI	Field Terminal, Non-Incendive	*	T6; T6
8602-FT-ST	Field Terminal, Safe Area, Standard C Unfused	*	T6; T6
8603-FT-FU	Field Terminal, Non-Incendive, Fused	*	T6; T6
8604-FT-FU	Field Terminal, Safe Area, Standard C Fused	*	T6; T6

8605-FT-TC	Field Terminal, (Non-Incendive, Thermocouple)	*	T6; T6
8606-FT-RT	Field Terminal, Non-Incendive, RTD	*	T6; T6
8607-FT-TC	Field Terminal Assembly, 32 Pin	*	T6; T6
8608-FT-NI	Field Terminal Assembly, 32 Pin	*	T6; T6
8610-FT-NA	Field Terminal, Non-Arcing, Standard	*	T6; T6
8611-FT-FU	Field Terminal, Non-Arcing, Fused	*	T6; T6
8612-FT-NA	Field Terminal Assembly, 16 CH	*	T6; T6
8615-FT-4W	Field Terminal, 4-Wire Transmitter System	*	T6; T6
8616-FT-FU	Field Terminal, Non-Incendive, Fused	*	T6; T6
8617-FT-NI	Field Terminal, 16 Channel, Non-Incendive, Standard	*	T6; T6
8618-FT-MT	Mass Termination Assembly, 16 pin	*	T6; T6
8618-FT-NI	Mass Termination Assembly, 16 pin	*	T6; T6
8619-FT-MT	Mass Termination Assembly, 44 pin	*	T6; T6
8620-FT-MT	Field Terminal Assembly	*	T6; T6
8650-FT-PX	Field Terminal, Switch/Prox Inputs	*	T6; T6
8619-FT-NI	Mass Termination Assembly, 44 pin	*	T6; T6
8502-BI-DP	Profibus DP Bus Interface Module	SCI-783	T4; T4
8505-BI-MB	Bus Interface Module C Modbus	SCI-713	T6; T6
8510-MO-NS	Node Services Module	SCI-945	T4; T4
8521	Controller (Name is software dependent)	SCI-956	T4; T4
8851	Controller (Name is software dependent)	SCI-956	T4; T4
8410-NS-PS	Node Services Power Supply Monitor	SCI-960	T4; T4
8910-PS-DC	DC/DC Power Supply	SCI-729	T4A;T4A
8111-DI-AC	Discrete Input Module, Isolated, Sinking, 115Vac	SCI-719	T6; T6
8112-DI-AC	Discrete Input Module, Non-Isolated, Module Powered, 115Vac	SCI-720	T6; T6
8113-DI-AC	Discrete Input Module, Isolated, Sinking, 230Vac	SCI-721	T6; T6
8114-DI-AC	Discrete Input Module, Non-Isolated, Module Powered, 230V ac	SCI-722	T6; T6
8115-DO-DC	Discrete Output Module, Non-Isolated, Module Powered, 20V-60V dc	SCI-723	T6; T6
8116-DO-AC	Discrete Output Module, Non-Isolated, Module Powered, 20V-250Vac	SCI-724	T4; T4
8117-DO-DC	Discrete Output Module, Isolated, Volt-Free Switch, 2V-60V dc	SCI-725	T6; T6
8118-DO-AC	Discrete Output Module, Isolated, Volt-Free Switch, 20V-250V ac	SCI-726	T4; T4

* Refer to Installation Drawings of each I/O module for information on Field Terminals to be used.

Special Conditions of Use:

1. The equipment shall be installed in a suitable equipment enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code (ANSI/NFPA 70), meets the requirements of ANSI/ISA 82.02.01 and is in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. The equipment shall be installed only in FM Approved PAC 8000 Series I/O System Apparatus.

Equipment Ratings:

Nonincendive for use in Class I, Division 2, Groups A, B, C and D indoor Hazardous (Classified) Locations, temperature code T6 at ambient temperature of 60°C.

PAC8000 Series I/O System, Nonincendive Apparatus.

NI / I / 2 / ABCD / T6 Ta = 70°C – SCI-701

I / 2 / AEx nA / IIC / T6 Ta = 70°C – SCI-701

Model No.	Description	Suppl. Inst. DWG
8753-CA-NS	Carrier	SCI-1531

Special Conditions of Use:

1. The equipment shall be installed in a suitable equipment enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code (ANSI/NFPA 70), meets the requirements of ANSI/ISA 82.02.01 and is in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. The equipment shall be installed in a suitable equipment enclosure which is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the National Electrical Code (ANSI/NFPA 70), meets the requirements of ANSI/ISA 82.02.01 and is in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application. The enclosure shall, at a minimum, meet the requirements of IP54.
3. The equipment shall be installed only in FM Approved PAC8000 Series I/O System Apparatus.

Equipment Ratings:

Nonincendive for use in Class I, Division 2, Groups A, B, C and D), AEx nA for use in Class I, Zone 2, Group IIC indoor Hazardous (Classified) Locations, temperature code T6 at ambient temperature of 70°C.

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

Class 3600	2011
Class 3611	2004
Class 3810	2005
ANSI/ISA 60079-0 (8753-CA-NS only)	2013
ANSI/ISA 60079-15 (8753-CA-NS only)	2012

PAC8000 Series I/O System, Associated Nonincendive I/O Modules:

8101-HI-TX Analogue Input Module 4-20mA (with HART®).

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-727; Non-Incendive Field Wires;

NI/I/2/ABCD/T4 Ta = 60°C; T3 Ta = 70°C

Non-Incendive Field Wire Parameters;

Each Channel: Voc = 28.7Vdc, Isc = 33mA, Ca = 0.17μF, La = 11.0mH

Special Condition of Use:

1. Used with 8601-FT-NI, 8603-FT-FU, 8615-FT-4W, 8616-FT-FU, 8618-FT-MT or 8619-FT-MT Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8102-HO-IP. Analogue Output Module, 8 Channel, 4-20mA (with HART®).

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-845; Non-Incendive Field Wires;

NI/I/2/ABCD/T4 Ta = 70°C

Non-Incendive Field Wire Parameters;

Each Channel: Voc = 28.7Vdc, Isc = 33mA, Ca = 0.17μF, La = 11.0mH

Special Condition of Use:

1. Used with 8601-FT-NI, 8603-FT-FU, 8616-FT-FU, 8618-FT-MT, 8619-FT-MT, 8618-FT-NI or 8619-FT-NI Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8103-AI-TX. Analogue Input Module, 8 Channel, 4-20mA.

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-847; Non-Incendive Field Wires;

NI/I/2/ABCD/T4 Ta = 60°C; T3 Ta = 70°C

Non-Incendive Field Wire Parameters;

Each Channel: Voc = 28.7Vdc, Isc = 33mA, Ca = 0.17μF, La = 11.0mH

Special Condition of Use:

1. Used with 8601-FT-NI, 8603-FT-FU, 8615-FT-4W, 8616-FT-FU, 8618-FT-MT, 8619-FT-MT, 8618-FT-NI or 8619-FT-NI Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8104-AO-IP. Analogue Output Module, 8 Channel, 4-20mA.

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-728; Non-Incendive Field Wires;

NI/I/2/ABCD/T4 Ta = 70°C

Non-Incendive Field Wire Parameters;

Each Channel: Voc = 28.7Vdc, Isc = 33mA, Ca = 0.17μF, La = 11.0mH

Special Condition of Use:

1. Used with 8601-FT-NI, 8603-FT-FU, 8616-FT-FU, 8618-FT-MT, 8619-FT-MT, 8618-FT-NI or 8619-FT-NI Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8105-TI-TC. Temperature Input Module (THC/mV Input).

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-714; Non-Incendive Field Wires;

NI/I/2/ABCD/T5 Ta = 70°C

Non-Incendive Field Wire Parameters;

Each Channel: Voc = 10.5Vdc, Isc = 3.6mA, Ca = 14.9μF, La = 1000mH

Special Condition of Use:

1. Used with 8605-FT-TC Field Terminal
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8106-TI-RT Temperature Input Module (RTD or W Input).

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-733; Non-Incendive Field Wires;
NI/I/2/ABCD/T5 Ta = 70°C
Non-Incendive Field Wire Parameters;
Each Channel: Voc = 10.5Vdc, Isc = 3.6mA, Ca = 14.9µF, La = 1000mH

Special Condition of Use:

1. Used with 8606-FT-RT Field Terminal
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8109-DI-DC. Discrete Input Module, Isolated, Sinking, 24 Vdc.

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-717; Non-Incendive Field Wires;
NI/I/2/ABCD/T6 Ta = 70°C
Non-Incendive Field Wire Parameters;
Each Channel: Vmax = 30Vdc, Imax = 100mA, Ci = 0, Li = 0

Special Condition of Use:

1. Used with 8601-FT-NI, 8603-FT-FU, 8610-FT-NA, 8611-FT-FU, 8616-FT-FU, 8618-FT-MT, 8619-FT-MT, 8618-FT-NI or 8619-FT-NI Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8110-DI-DC. Discrete Input Module, Non-Isolated, Module Powered, 24 Vdc.

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-718; Non-Incendive Field Wires;
NI/I/2/ABCD/T6 Ta = 70°C
Non-Incendive Field Wire Parameters;
Each Channel: Voc = 30Vdc, Isc = 15.2mA, Ca = 0.12µF, La = 151mH

Special Condition of Use:

1. Used with 8601-FT-NI, 8603-FT-FU, 8610-FT-NA, 8611-FT-FU, 8616-FT-FU, 8618-FT-MT, 8619-FT-MT, 8618-FT-NI or 8619-FT-NI Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8119-VI-05. Analogue Input Module 1-5V.

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-849; Non-Incendive Field Wires;
NI/I/2/ABCD/T4 Ta = 60°C; T3 Ta = 70°C
Non-Incendive Field Wire Parameters; Each Channel:
Vmax = 30Vdc, Imax = 100mA, Ci = 0, Li = 0

Special Condition of Use:

1. Used with 8615-FT-4W, 8616-FT-FU, 8618-FT-MT, 8619-FT-MT, 8618-FT-NI or 8619-FT-NI Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8121-DI-DC. Discrete Input Module, 16 Channel, 24Vdc, Non-Isolated, Module Powered.

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-814; Non-Incendive Field Wires;
NI/I/2/ABCD/T4A Ta = 70°C
Non-Incendive Field Wire Parameters;
Each Channel: Voc = 30Vdc, Isc = 3.5mA, Ca = 0.12µF, La = 1000mH

Special Condition of Use:

1. Used with 8617-FT- NI, 8619-FT-MT or 8619-FT-NI Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8122-DI-DC. Discrete Input Module, 16 Channel, 24Vdc Isolated, Sinking.

ANI/I,II,III/2/ABCDFG - SCI-701 and SCI-815; Non-Incendive Field Wires;
NI/I/2/ABCD/T4A Ta = 70°C
Non-Incendive Field Wire Parameters;
Each Channel: Vmax = 30Vdc, Imax = 100mA, Ci = 0, Li = 0

Special Condition of Use:

1. Used with 8617-FT- NI, 8619-FT-MT, or 8619-FT-NI Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8123-PI-QU 2-Channel Pulse/Quadrature Input

NI/I/2/ABCD/T4 Ta = 70°C; ANI/I,II,III/2/ABCDFG – SCI-701 and SCI-952, Non-Incendive Field Wires
NI/I/2/IIC/T4 Ta = 70°C; ANI/I/2/IIC – SCI-701 and SCI-952, Non-Incendive Field Wires
Non-Incendive Field Wire Parameters:
Per Control Drawings

Special Condition of Use:

1. Used with 8601-FT-NI or 8603-FT-FU Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8124-CO-08. Analogue Input Module, 4 Chan. Input/ 4 Chan. Output, 4-20mA.

ANI/I,II,III/2/ABCDFG – SCI-701 and SCI-851; Non-Incendive Field Wires;
NI/I/2/ABCD/T4 Ta = 60°C; T3 Ta = 70°C
Non-Incendive Field Wire Parameters;
Each Channel: Voc = 28.7Vdc, Isc = 33mA, Ca = 0.17µF, La = 11.0mH

Special Condition of Use:

1. Used with 8601-FT-NI or 8603-FT-FU Field Terminals
2. Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in FM Approved PAC8000 Series I/O System Nonincendive Apparatus

8125-DI-DC 32-Channel Switch/Proximity Detector

NI/I/2/ABCD/T4 Ta* = 70°C ; ANI/I, II, III/2/ABCDFG — SCI-993, Non-Incendive field wires;
NI/I/2/IIC/T4 Ta* = 70°C ; ANI/I/2/IIC — SCI-993, Non-Incendive field wires
Non-Incendive Field Wire Parameters: Per Control Drawings
Ta* is reduced to 50°C for mounting orientation other than standard

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure meeting requirements of ANSI/ISA 82.02.01 or in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. Must be installed only in FM Approved PAC8000 Series I/O System Apparatus
3. Used with 8617-FT-NI or 8619-FT-MT Field Terminal.
4. The 8619-FT-MT may be connected by ribbon cable to the 8650-FT-PX Field Terminal, which is in turn connected to the field wiring.

8127-DI-SE 32-Channel Discrete Input Module with Sequence of Events Recording, NAMUR Proximity Detector Inputs

NI/I/2/ABCD/T4 Ta = 70°C ; ANI/I, II, III/2/ABCDEFG – SCI-993, Non-Incendive field wires

NI/I/2/IIC/T4 Ta = 70°C; ANI/I/2/IIC – SCI-993, Non-Incendive field wires

Ta* = is reduced to 50°C for mounting orientation other than standard

Non-Incendive Field Wire Parameters: Per Control Drawings

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure meeting requirements of ANSI/ISA 82.02.01 or in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. Must be installed only in FM Approved PAC8000 Series I/O System Apparatus
3. Used with 8617-FT-NI, 8619-FT-MT, 8619-FT-NI Field Terminals. The 8619-FT-MT may be connected by ribbon cable to the 8650-FT-PX Field Terminal, which is in turn connected to the field wiring.

8810-HI-TX. 8-channel Safety Analogue Input Module 4-20mA with Hart®.

ANI / I / 2 / ABCD – SCI-701 and SCI-1002; Nonincendive Field Wires;

NI / I / 2 / ABCD / T4 Ta = 70°C

Nonincendive Field Wire Parameters: Per Control Drawings

Special Conditions of Use:

1. The 8810-HI-TX Analogue Input Module must be installed in a suitable equipment enclosure meeting the requirements of ANSI/ISA 82.02.01 or in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. Must be installed only in FM Approved PAC8000 Series I/O System Apparatus.
3. Used with 8601-FT-NI, 8603-FT-FU, 8615-FT-4W, 8616-FT-FU, 8618-FT-MT or 8619-FT-MT Field Terminals. The 8619-FT-MT may be connected by ribbon cable to the 8650-FT-PX Field Terminal, which is in turn connected to the field wiring.

8811-IO-DC. 8-channel Safety Discrete Input/Output Module.

NI / I / 2 / ABCD / T4 Ta = 70°C – SCI-701 and SCI-1004

Special Conditions of Use:

1. The 8811-IO-DC Discrete Input/Output Module must be installed in a suitable equipment enclosure meeting the requirements of ANSI/ISA 82.02.01 or in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. Must be installed only in FM Approved PAC8000 Series I/O System Apparatus.
3. Used with 8610-FT-NA, 8611-FT-FU or 8616-FT-FU Field Terminals.

8132-AI-UN. 8-Channel Isolated Universal Module

ANI / I / 2 / ABCD – SCI-701 and SCI-1013;

NI / I / 2 / ABCD / T5 Ta = 70°C

Nonincendive Field Wire Parameters: See Control Drawings SCI-701 and SCI-1013

Special Conditions of Use:

1. The equipment shall be installed in a suitable equipment enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code (ANSI/NFPA 70), meets the requirements of ANSI/ISA 82.02.01 and is in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. The equipment shall be installed only in FM Approved PAC8000 Series I/O System Apparatus.
3. The equipment shall be used with 8607-FT-TC or 8608-FT-NI Field Terminals.

8139-SH-DC. 126-Channel Addressable Smoke and Heat Module

NI / I / 2 / ABCD / T5 Ta = 70°C – SCI-701 and SCI-1018

Special Conditions of Use:

1. The equipment shall be installed in a suitable equipment enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code (ANSI/NFPA 70), meets the requirements of ANSI/ISA 82.02.01 and is in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. The equipment shall be installed only in FM Approved PAC8000 Series I/O System Apparatus.
3. The equipment shall be used with 8610-FT-NA or 8611-FT-FU Field Terminals.

8129-IO-DC. 8-channel Supervised Discrete Input/Output Module.

NI/I/2/ABCD/T4 Ta=70°C – SCI-701 and SCI-1004

Special Conditions of Use:

1. The 8129-IO-DC Discrete Input/Output Module must be installed in a suitable equipment enclosure meeting the requirements of ANSI/ISA 82.02.01 or in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. Must be installed only in FM Approved PAC8000 Series I/O System Apparatus.
3. Used with 8610-FT-NA, 8611-FT-FU or 8616-FT-FU Field Terminals.

8133-HI-TX. 8-channel Supervised Analogue Input Module 4-20mA with Hart.®

NI/I/2/ABCD-SCI-701 and SCI-1002; NIFW;

NI/I/2/ABCD/T4 Ta=70°C

Nonincendive Field Wiring Parameters:

$V_{OC}=28.7\text{ V}$, $I_{SC} = 33\text{ mA}$, $C_a= 0.10\mu\text{F}$, $L_a = 0.52\text{ mH}$, $P_o = 950\text{ mW}$

Special Conditions of Use:

1. The 8133-HI-TX Analogue Input Module must be installed in a suitable equipment enclosure meeting the requirements of ANSI/ISA 82.02.01 or in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. Must be installed only in FM Approved PAC8000 Series I/O System Apparatus.
3. Used with 8601-FT-NI, 8603-FT-FU, 8615-FT-4W, 8616-FT-FU, 8618-FT-MT or 8619-FT-MT Field Terminals.

Equipment Ratings:

Nonincendive electrical apparatus for use in Class I, Division 2, Groups A, B, C and D with Nonincendive and Non-Arcing Field Wires and for Class I, Division 2, Groups A, B, C and D indoor hazardous (Classified) locations.

8140-DI-AC 16 -Channel DI, 115Vac block isolated sinking

NI / I / 2/ ABCD / T4 Ta = 70°C - SCI-701 and SCI-1500

Special Conditions of Use:

1. The 8140-DI-AC shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 500.
2. The 8140-DI-AC shall only be mounted in an FM Approved PAC8000 series carrier module.
3. The 8140-DI-AC shall only be used with an 8612-FT-NI Field Terminal.

Equipment Ratings:

Nonincendive for use in Class I, Division 2, Groups A, B, C and D indoor Hazardous (Classified)



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Locations. Temperature code T6 at an ambient of 60°C in accordance with control drawing SCI-701 and SCI-1500

8142-DO-DC 16-Channel DO, 12-42Vdc non-isolated, module powered

NI / I / 2/ ABCD / T4 Ta = 70°C - SCI-701 and SCI-1502

Special Conditions of Use:

1. *The 8142-DO-DC shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 500.*
2. *The 8142-DO-DC shall only be mounted in an FM Approved PAC8000 series carrier module.*
3. *The 8142-DO-DC shall only be used with an 8612-FT-NI or 8620-FT-MT Field Terminal.*

Equipment Ratings:

Nonincendive for use in Class I, Division 2, Groups A, B, C and D indoor Hazardous (Classified)
Locations. Temperature code T6 at an ambient of 60°C in accordance with control drawing SCI-701 and SCI-1502

8612-FT-NA 16-Channel 115Vac Block Isolated FTA

NI / I / 2/ ABCD / T6 Ta = 70°C

1. *Special Condition of Use:*
2. *The 8612-FT-NA shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 500.*

Equipment Ratings:

Nonincendive for use in Class I, Division 2, Groups A, B, C and D, indoor Hazardous (Classified)
Locations Temperature code T6 at an ambient of 60°C

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

Class 3600	2011
Class 3611	2004
Class 3810	2005

II. Nonincendive (Div. 2) with Associated Intrinsic Safety (Div. 1) Version

PAC8000 Series I/O System, Associated Intrinsically Safe I/O Modules:

Model 8201-HI-IS. 8-Channel Analog Input, 4-20 mA with HART®

AIS/I,II,III/1/ABCDEFG - SCI-772 and SCI 776; Entity;

NI/I/2/ABCD/T4 Ta = 70 °C

Entity Parameters, each channel:

Voc = 28 Vdc, Isc = 93 mA, Ca = 0.14 µF, La = 4.38 mH, Po = 0.65 W

Special Condition of Use:

1. *The 8201-HI-IS Module must be used with 8621-FT-IS or 8622-FT-IS Field Terminals.*
2. *The 8201-HI-IS Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.*
3. *The 8201-HI-IS Module must be installed only in Factory Mutual Research Approved PAC8000 Series I/O*



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System Auxiliary Associated IS Apparatus.

Model 8204-AO-IS. 8-Channel Analog Output, 4-20 mA

AIS/I,II,III/1/ABCDEFGF - SCI-772 and SCI-985; Entity;

NI/I/2/ABCD/T4 Ta = 70 °C

Entity Parameters, each channel:

Voc = 24.6 Vdc, Isc = 93 mA, Ca = 0.116 µF, La = 4.3 mH, Po = 0.57W

Special Condition of Use:

1. The 8204-AO-IS Module must be used with 8621-FT-IS or 8622-FT-IS Field Terminals.
2. The 8204-AO-IS Module shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. The 8204-AO-IS Module must be installed only in Factory Mutual Research Approved PAC8000 Series I/O System Auxiliary Associated IS Apparatus.

8215-DO-IS. 4-Channel IS DO, Solenoid Driver.

AIS/I,II,III/1/ABCDEFGF - SCI-772 and SCI-778; Entity;

NI/I/2/ABCD/T4 Ta = 70°C

Entity Parameters, each channel:

Voc = 25 V dc, Isc = 110 mA, Po = 0.69 W, Ca = 0.19 µF, La = 3.15 mH.

Special Condition of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
2. Must be installed only in FM Approved PAC8000 Series I/O System Auxiliary Associated IS Apparatus.
3. Used with 8621-FT-IS or 8622-FT-IS Field Terminals.

8220-DI-IS. 16-Channel IS DI, Switch/Proximity Detector.

AIS/I,II,III/1/ABCDEFGF - SCI-772 and SCI-779; Entity;

NI/I/2/ABCD/T4 Ta = 70°C

Entity Parameters, each channel:

Voc = 10.5 V dc, Isc = 14 mA, Po = 0.04 W, Ca = 2.67 µF, La = 176 mH.

Special Condition of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
2. Must be installed only in FM Approved PAC8000 Series I/O System Auxiliary Associated IS Apparatus.
3. Used with 8624-FT-IS or 8623-FT-IS Field Terminals.

Equipment Ratings:

Associated Intrinsically Safe apparatus with connections to Class I, II, III Division 1, Group A, B, C, D, E, F and G in accordance with Entity requirements when installed per applicable Installation Drawings; Nonincendive for Class I, Division 2, Group A, B, C and D hazardous (classified) indoor locations.

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

Class 3600	2011
Class 3610	2010
Class 3611	2004
Class 3810	2005

III. Nonincendive (Div. 2) with Associated Intrinsic Safety (Div. 1) Version

Model 8202-HO-IS. 8-Channel IS AO, 4-20mA with HART®

AIS/I,II,III/1/ABCDEFGF – SCI-772 and SCI-938, Entity;

NI/I/2/ABCD/T4 Ta = 70°C

[I/O] AEx [ia] IIC – SCI-772 and SCI-938 Entity;

I/2/IIC/T4 Ta = 70°C

Entity Parameters Each Channel:

Voc(Uo) = 24.6V, Isc(Io) = 93mA, Ca(Co) = 0.116µF, La(Lo) = 4.3mH, Po = 0.57W

Special Condition of Use:

1. The 8202-H-IS Module must be used with 8621-FT-IS or 8622-FT-IS Field Terminals.
2. Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in Factory Mutual Research Approved PAC8000 Series I/O System Auxiliary Associated IS Apparatus.

Model 8205-TI-IS. 8-Channel IS THC/mV Input

AIS/I,II,III/1/ABCDEFGF - SCI-772 and SCI-932, Entity;

NI/I/2/ABCD/T4 Ta = 70°C

[I/O]AEx [ia] IIC - SCI-772 and SCI-932 Entity;

I/2/IIC/T4/Ta = 70°C

Entity Parameters: Per Control Drawing SCI-932

Special Condition of Use:

1. The 8205-TI-IS Module must be used with 8625-FT-IS Field Terminal
2. Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in Factory Mutual Research Approved PAC8000 Series I/O System Auxiliary Associated IS Apparatus.

Model 8206-TI-IS. 8-Channel IS RTD/Ω Input

AIS/I,II,III/1/ABCDEFGF - SCI-772 and SCI-933, Entity;

NI/I/2/ABCD/T4 Ta = 70°C

[I/O] AEx [ia] IIC - SCI-772 and SCI-933 Entity;

I/2/IIC/T4 /Ta = 70°C

Entity Parameters: Per Control Drawing SCI-933

Special Condition of Use:

1. The 8206-TI-IS Module must be used with 8626-FT-IS Field Terminal
2. Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in Factory Mutual Research Approved PAC8000 Series I/O System Auxiliary Associated IS Apparatus.

Model 8223-PI-IS. 2-Channel Pulse/Frequency Input

AIS/I,II,III/1/ABCDEFGF - SCI-772 and SCI-927, Entity;

NI/I/2/ABCD/T6 Ta = 70°C

[I/O] AEx [ia] IIC - SCI-772 and SCI-927, Entity;

I/2/IIC/T6/Ta = 70°C

Entity Parameters: Per Control Drawing

Special Condition of Use:

1. The 8223-PI-IS Module must be used with 8621-FT-IS or 8622-FT-IS Field Terminals
2. Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. Must be installed only in Factory Mutual Research Approved PAC8000 Series I/O System Auxiliary Associated IS Apparatus.

Model 8230-AI-IS. 8-Channel IS AI, 0-10V / Potentiometer



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AIS/I,II,III/1/ABCDEF - SCI-772 and SCI-962, Entity;

NI/I/2/ABCD/T4 Ta = 70°C

[I/O] AEx [ia] IIC - SCI-772 and SCI-962 Entity;

I/2/IIC/T4 Ta = 70°C

Entity Parameters Each Channel [non-linear]:

Voc(Uo) = 15.75V, Isc(Io) = 20mA, Ca(Co) = 0.22µF, La(Lo) = 5mH, Po = 0.315W

Special Condition of Use:

1. *The 8230-AI-IS Module must be used with 8623-FT-IS Field Terminal*
2. *Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.*
3. *Must be installed only in Factory Mutual Research Approved PAC8000 Series I/O System Auxiliary Associated IS Apparatus.*

Equipment Ratings:

Associated Intrinsically Safe apparatus with connections to Class I, II, III, Division 1, Group A, B, C, D, E, F and G; Class I, Zone 0, AEx [ia] in accordance with Entity requirements when installed per applicable Installation Drawings; nonincendive for Class I, Division 2, Group A, B, C and D; Class I, Zone 2, IIC hazardous (classified) indoor locations.

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

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

IV. Nonincendive (Div. 2) Version

PAC8000 Series I/O System Auxiliary Associated IS Apparatus:

NI / I / 2 / ABCD / T* Ta = 70°C, SCI-772 and Supplementary Instructions below.

*See table for Temperature codes

Model No.	Description	Supl. Inst. DWG	T-Code
8727-CA-08	8-Module Carrier + Earth Bar	-	T6
8720-CA-04	4-Module Carrier + Earth Bar	-	T6
8723-CA-RB	Railbus Isolator Carrier	-	T6
8724-CA-PS	I/O Module Power Supply Carrier	-	T6
8725-CA-RB	Railbus Isolator Carrier	-	T6
8729- CA-08	IS Carrier, 8 Module, 64-Address System	-	T6
8031-CE-LH	IS Carrier Extender, Left Hand	-	T6
8030-CE-RH	IS Carrier Extender, Right Hand	-	T6
8920-PS-DC	IS Module Power Supply, 24 V dc	SCI-780	T4
8922-RB-IS	Railbus Isolator	SCI-781	T4



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8621-FT-IS	Field Terminal, Intrinsically Safe Standard	-	T6
8622-FT-IS	Field Terminal, Intrinsically Safe, Loop Disconnect	-	T6
8623-FT-IS	Field Terminal, Intrinsically Safe 16 Channel DI	-	T6
8624-FT-IS	Field Terminal, Intrinsically Safe 8 Channel DI, Loop Disconnect	-	T6
8625-FT-IS	Field Terminal, Intrinsically Safe, Thermocouple	-	T6
8626-FT-IS	Field Terminal, Intrinsically Safe, RTD	-	T6
8405-LK-ZE	Loop-Disconnect Links Packs	-	T6

Special Condition of Use:

- 1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.*
- 2. Must be used only with FM Approved PAC8000 Series I/O System Modules.*

Equipment Ratings:

Nonincendive Class I, Division 2, Groups A, B, C and D with Nonincendive and Non-Arcing Field Wires for indoor hazardous (Classified) locations.

FM Approved for:

GE Intelligent Platforms, Inc.
Charlottesville, VA 22911
USA



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

Class 3600	2011
Class 3610	2010
Class 3611	2004
Class 3810	2005

Original Project ID: 3034007

Approval Granted: September 24, 2008

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
091015	November 12, 2009		
3037469	January 8, 2010		
100527	June 7, 2010		
100622	June 30, 2010		
100517	August 4, 2010		
111005	October 14, 2011		
3052554	October 8, 2014		

FM Approvals LLC

J.E. Marquedant
Manager, Electrical Systems

8 October 2014
Date