CERTIFICATE OF COMPLIANCE

Certificate Number: **SGSNA/20/CA/00010X**

Contract Number: 801113
Certificate Project Number: BAS-CERT201100010

Certified Product: Universal Isolator
Trademarks: -
Model(s): MTL SUM5 Universal Isolator
Technical Data: SUM5 Universal Isolator – Intrinsically Safe

Class I, II, III Division 1 Groups A, B, C, D, E, F and G
Class I, II Division 2 Groups A, B, C, D, E, F and G
Class III Division 2
[AEx ia Ga] IIC,
[AEx ia Da] IIIC,
Class I, Division 2 Groups A, B, C, D T4
Class II, Division 2 Groups F and G
Class III, Division 2
Class I, Zone 2 AEx ec nC IIC T4 Gc
[Ex ia Ga] IIC,
[Ex ia Da] IIIC,
Ex ec nC IIC T4 Gc
-40 °C ≤ Ta ≤ +70 °C

Sum5 Universal Isolator – Increased Safety/Enclosed Break

Class I, Division 2 Groups A, B, C, D T4
Class II, Division 2 Groups F and G
Class III, Division 2
Class I, Zone 2 AEx ec nC IIC T4 Gc
Ex ec nC IIC T4 Gc
-40 °C ≤ Ta ≤ +70 °C

Intrinsically safe ratings
Um = 30 V
Increased Safety Ratings
20 – 30 Vdc; 1.3 W (max.)

Certification Body

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Certificate Holder: Eaton Electric Limited
Great Marlings, Butterfield, Luton, LU2 8DL, United Kingdom

This certificate supercedes previous certificates issued with the same certificate number. Certification is valid when products are indicated on the SGS directory of certified products at www.sgs.com or using the QR code below. The product is certified according to ISO/IEC Guide 17067, Conformity assessment - Fundamentals of product certification, System 3, and in accordance with:

UL 60079-0 Explosive Atmospheres – Part 0: Equipment – General Requirements – 7th Edition – Revision: March 26, 2019.
UL 60079-7 Explosive Atmospheres – Part 7: Equipment Protection by Increased Safety “e” – 5th Edition – Revision: April 21, 2017.
UL 60079-11 Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety “i" – 6th Edition – Revision: February 15, 2013.
UL 60079-15 Explosive Atmospheres – Part 15: Equipment protection by type of protection “n” – 5th Edition – Revision: April 7, 2020.
CAN/CSA C22.2 No. 60079-0:19 Explosive Atmospheres – Part 0: Equipment – General Requirements (IEC 60079-11: 2017, MOD) – Revision: February 2019.
CAN/CSA C22.2 No. 60079-7:16 Explosive Atmospheres – Part 7: Equipment Protection by Increased Safety “e” – 5th Edition – Revision: October 2016.
CAN/CSA C22.2 No. 60079-11:14 Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety “i" (IEC 60079-11, MOD) – Revision: February 2014.
CAN/CSA C22.2 No. 60079-15:18 Explosive Atmospheres – Part 15: Equipment protection by type of protection “n” – 5th Edition – Revision: November 2018.
UL 913 Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous (Classified) Locations – 8th Edition
UL 121201: Nonincendive Electrical Equipment for use in Class I and II Division 2 and Class III Divisions 1 and 2 Hazardous (Classified) Locations – Ninth Edition, September 15, 2017 combined with CSA C22.2 No. 213-17: Nonincendive Electrical Equipment for use in Class I and II Division 2 and Class III Divisions 1 and 2 Hazardous (Classified) Locations – Third Edition, September 15, 2017

Authorized by: Effective date:

Ron Sinclair
Certifier

Certification Body

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Product description

MTL SUM5 Universal Isolator – Intrinsically Safe Models

The MTL SUM5 Universal Isolator is designed to provide a digital or analogue interface for equipment located in the hazardous area and repeat the signals in the non-hazardous area, whilst restricting the transfer of energy from unspecified non-hazardous area equipment to the intrinsically safe equipment by means of limitation of voltage and current.

The MTL SUM5 Universal Isolator comprises two interconnected modules; an Interface Module (MTL4-ADIO Universal Analogue / Digital Interface Module), and a Base Module, which can either be standard type (MTL4-BSIS IS Module Base) or relay output type (MTL4-BSISR IS Module Relay Base).

The Interface Module comprises an isolating transformer, opto-isolator circuits that provide galvanic isolation between the hazardous and non-hazardous area circuitry and zener diode / resistor arrangements providing voltage and current limitation. The above, together with other electronic components, are mounted on a single printed circuit board and housed in a moulded plastic enclosure. The internal connections between the Interface Module and associated Base Module are made via an edge-connect type plug and socket arrangement.

The Base Module provides the external hazardous area connection via four screw terminals along one side of the base with the non-hazardous area connections being made via a polarised plug connection at the bottom of the base designed to connect to an associated backplane. The Interface Module clips to the other side of the Base Module. In addition to providing the connection facilities, the Base Module also contain additional zener diode and current limiting resistor arrangements to provide further voltage and current limitation on the hazardous area side of the circuit. The Base Module is fitted with Loop Disconnect above the Interface Module that allows the hazardous area terminals to be isolated. The Base Module is also fitted with a RFID circuit to allow identification of the Isolator when fitted in a system. Two Base Module variants are available, the standard MTL4-BSIS IS Module Base and the MTL4-BSISR IS Module Relay Base.

The MTL4-BSIS IS Module Base is additionally fitted with an IS Power Jumper Link on the top edge of the module to allow the output current of the hazardous area outputs to be changed depending on the configuration of the isolator.

The MTL4-BSISR IS Module Relay Base provides a galvanically isolated SPDT relay contacts suitable for switching an intrinsically safe source of up to 30V. The relay contacts are rated 30V and 1A.

The MTL SUM5 Universal Isolator can optionally be fitted with Surge protection on the hazardous area connections by the fitting of a Plug-In Surge Module that plugs into the top of the Base Module. An earth screw connection facility is provided at the bottom of the Base Module to allow for connection to earth arrangement on the backplane required for surge protection. There are two variants of Plug-in Surge Module, the MTL4-SD Plug-In Surge Module designed to be fitted to the MTL4-BSIS IS Module Base, and the MTL4-SDR Plug-In Relay Surge Module designed to be fitted to the MTL4-BSISR IS Module Relay Base.

The configuration of the MTL SUM5 Universal Isolator as either an analogue input or output, or digital input or output, is dependent on the Interface module fitted, the position of the IS Power Jumper Link on the Base Module (where applicable) and the software configuration of the Interface Module fitted.

Input & Output Parameters – MTL4-BSIS IS Module Base & MTL4-ADIO Interface Module

Non-Hazardous Area Connector CON1, Pins 1 to 6 & 9 to 12

U_m = 30V

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The non-hazardous Connector CON1, pins 1 to 6, & 9 to 12 are designed to operate from a d.c. supply voltage of up to 30V supplied from either safety extra low-voltage (SELV) or protective extra low-voltage circuits; for example, equipment complying with the requirements of either the IEC 60950 series, UL/CSA C22.2 No. 61010-1 or a technically equivalent standard.

Digital O/P Configuration - Hazardous Area Terminals 4 w.r.t. 3 (IS Power Jumper Link not Fitted)

U_o = 26.5V C_i = 0
I_o = 90mA L_i = 0
P_o = 0.6W

Digital O/P Configuration - Hazardous Area Terminals 4 w.r.t. 3 (IS Power Jumper Link Fitted)

U_o = 26.5V C_i = 0
I_o = 136mA L_i = 0
P_o = 0.9W

Analogue O/P Configuration – Hazardous Area Terminals 4 w.r.t. 2 (IS Power Jumper Link not Fitted)

U_o = 26.5V C_i = 0.5nF
I_o = 90mA L_i = 0
P_o = 0.6W

Analogue O/P Configuration – Hazardous Area Terminals 4 w.r.t. 2 (IS Power Jumper Link Fitted)

U_o = 26.5V C_i = 0.5nF
I_o = 136mA L_i = 0
P_o = 0.9W

Digital I/P Configuration – Hazardous Area Terminals 2 w.r.t. 3

U_o = 10V C_i = 0.5nF
I_o = 0.13mA L_i = 0
P_o = <1mW

The hazardous area terminals 2 w.r.t. 3 are also considered suitable for the connection of an external intrinsically safe source with a U_o = 30V and I_o = 100mA. When an intrinsically safe source is connected to these terminals the capacitance and either the inductance or inductance to resistance ratio (L/R) of the hazardous area connections must not exceed the values detailed in the certificate of the intrinsically safe source.

Hazardous area terminals 1 & 4 must not be used when a source is connected to these terminals.

Digital I/P Configuration – Hazardous Area Terminals 1 w.r.t. 2

U_o = 10V C_i = 0.5nF
I_o = 14mA L_i = 0
P_o = 35mW

Analogue I/P Configuration – Hazardous Area Terminals 2 w.r.t. 3

U_o = 10V C_i = 0.5nF

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I_o = 0.13mA L_i = 0
P_o = <1mW

The hazardous area terminals 2 w.r.t. 3 are also considered suitable for the connection of an external intrinsically safe source with a U_o = 30V and I_o = 100mA. When an intrinsically safe source is connected to these terminals the capacitance and either the inductance or inductance to resistance ratio (L/R) of the hazardous area connections must not exceed the values detailed in the certificate of the intrinsically safe source.

Hazardous area terminals 1 & 4 must not be used when a source is connected to these terminals.

Analogue I/P Configuration – Hazardous Area Terminals 4 w.r.t 2 (IS Power Jumper Link not Fitted)

U_o = 26.5V C_i = 0.5nF
I_o = 90mA L_i = 0
P_o = 0.6W

Analogue I/P Configuration – Hazardous Area Terminals 4 w.r.t 2 (IS Power Jumper Link Fitted)

U_o = 26.5V C_i = 0.5nF
I_o = 136mA L_i = 0
P_o = 0.9W

Analogue I/P Configuration – Hazardous Area Terminals 2 & 4 w.r.t 3 (IS Power Jumper Link not Fitted)

U_o = 26.5V C_i = 0.5nF
I_o = 90mA L_i = 0
P_o = 0.6W

Analogue I/P Configuration – Hazardous Area Terminals 2 & 4 w.r.t 3 (IS Power Jumper Link Fitted)

U_o = 26.5V C_i = 0.5nF
I_o = 136mA L_i = 0
P_o = 0.9W

Load Parameters

The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the hazardous area load connected must not exceed the following values:

GROUP	CAPACITANCE (µF)	INDUCTANCE (mH)	OR L/R RATIO (µH/ohm)
Hazardous Area Terminals 4 w.r.t. 3 (IS Power Jumper Link not Fitted)			
IIC	0.095	4.29	58
IIB*	0.73	17.1	235
IIA	2.45	34.3	471
I	4.3	56.3	774
Hazardous Area Terminals 4 w.r.t. 3 (IS Power Jumper Link Fitted)			
IIC	0.095	2.00	39
IIB*	0.73	8.40	157
IIA	2.45	16.4	315
I	4.3	56.3	517
Hazardous Area Terminals 4 w.r.t. 2 (IS Power Jumper Link not Fitted)			

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GROUP	CAPACITANCE (µF)	INDUCTANCE (mH)	OR	L/R RATIO (µH/ohm)
IIC	0.094	4.29		58
IIB*	0.72	17.1		235
IIA	2.44	34.3		471
I	4.29	56.3		774
Hazardous Area Terminals 4 w.r.t. 2 (IS Power Jumper Link Fitted)				
IIC	0.094	2.00		39
IIB*	0.72	8.40		157
IIA	2.44	16.4		315
I	4.29	56.3		517
Hazardous Area Terminals 2 w.r.t. 3				
IIC	3.0	1,000		109,401
IIB*	20.0	1,000		437,606
IIA	100	1,000		875,213
I	180	1,000		1,435,897
Hazardous Area Terminals 1 w.r.t. 2				
IIC	3.0	172.4		1,015
IIB*	20.0	656.4		4,063
IIA	100	1,000		8,126
I	180	1,000		13,333
Hazardous Area Terminals 2 & 4 w.r.t. 3 (IS Power Jumper Link not Fitted)				
IIC	0.094	4.29		58
IIB*	0.72	17.1		235
IIA	2.44	34.3		471
I	4.29	56.3		774
Hazardous Area Terminals 2 & 4 w.r.t. 3 (IS Power Jumper Link Fitted)				
IIC	0.094	2.00		39
IIB*	0.72	8.40		157
IIA	2.44	16.4		315
I	4.29	56.3		517

* Group IIB parameters also applicable for associated apparatus [Ex ia Da] IIIC

Notes:

1) The above load parameters apply when one of the two conditions below is given:
   - the total L_i of the external circuit (excluding the cable) is < 1% of the L_o value or
   - the total C_i of the external circuit (excluding the cable) is < 1% of the C_o value.

2) The above parameters are reduced to 50% when both of the two conditions below are given:
   - the total L_i of the external circuit (excluding the cable) is ≥ 1% of the L_o value and
   - the total C_i of the external circuit (excluding the cable) is ≥ 1% of the C_o value.

   The reduced capacitance of the external circuit (including cable) shall not be greater than 1µF for Groups IIB, IIA & I and 600nF for Group IIC.

   The values of L_o and C_o determined by this method shall not be exceeded by the sum of all of the L_i plus cable inductances in the circuit and the sum of all of the C_i plus cable capacitances respectively.

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Input & Output Parameters – MTL4-BSISR IS Module Relay Base & MTL4-ADIO Interface Module

Non-Hazardous Area Connector CON1, Pins 1 to 6 & 9 to 12

U_m = 30V

The non-hazardous Connector CON1, pins 1 to 6, & 9 to 12 are designed to operate from a d.c. supply voltage of up to 30V supplied from either safety extra low-voltage (SELV) or protective extra low-voltage circuits; for example, equipment complying with the requirements of either the IEC 60950 series, UL/CSA C22.2 No. 61010-1 or a technically equivalent standard.

Relay Contact Connections - Hazardous Area Terminals 1 (NO), 2 (NC) & 3 (COM)

U_i = 30V U_o = 0
C_i = 0 I_o = 0
L_i = 0

The relay contacts are rated to maximum 30V and 1A.

MTL SUM5 Universal Isolator –Division 2 Models Only

The MTL SUM5 Universal Isolator System is designed to provide a digital or analogue interface for equipment located in the hazardous area and repeat the signals in either the non-hazardous or zone 2 mounted equipment, whilst restricting the transfer of energy from unspecified non-hazardous area / zone 2 equipment to other hazardous area equipment by means of limitation of voltage and current.

The system comprises a Carrier (two variants – MTL4-ZS16 or MTL4-ZSHUIO) to which up to sixteen MTL SUM5 Isolators can be mounted. An optional Diagnostic Module Alarm (two variants – MTL4-DMA & MTL4-DMR) can be fitted to provide diagnostics of the isolators fitted to the carrier.

The MTL4-ZS16 & MTL4-ZSHUIO Carriers are DIN rail or surface mounted assemblies comprise a single printed circuit board which is fitted with dual-redundancy supply circuitry which supplies the MTL SUM5 Isolators and the optional Diagnostic Module Alarm. The carrier also provides the non-hazardous area external connection facilities for the Isolators and Diagnostic Module Alarm. The carriers are also fitted with a RFID circuit to allow identification of the carrier. In terms of the differences between the MTL4-ZS16 & MTL4-ZSHUIO Carriers, the only difference is the external control system connection facilities. The MTL4-ZS16 Carrier is fitted with screw terminal connections, whereas, the MTL4-ZSHUIO Carrier is fitted with D-Type plug and socket connection.

Each MTL SUM5 Universal Isolator comprises two interconnected modules; an Interface Module (MTL4-ADIO Universal Analogue / Digital Interface Module), and either a light blue coloured IS Base Module (MTL4-BSIS) or a light grey coloured General Purpose Base Module (MTL4-BSGP).

The Interface Module comprises an isolating transformer, opto-isolator circuits that provide galvanic isolation between the hazardous and non-hazardous area circuitry and zener diode / resistor arrangements providing voltage and current limitation. The above, together with other electronic components, are mounted on a single printed circuit board and housed in a moulded plastic enclosure. The internal connections between the Interface Module and associated Base Module are made via an edge-connect type plug and socket arrangement.

The Base Modules provides the external hazardous area connection via four screw terminals along one side of the base with the non-hazardous area / zone 2 connections to the carrier being made via a polarised plug connection at the bottom of the base. The Interface Module clips to the other side of the Base Modules. The Base Modules are fitted with

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Loop Disconnect above the Interface Module that allows the hazardous area terminals to be isolated. The Base Modules are also fitted with a RFID circuit to allow identification of the Isolator when fitted in a system.

The MTL4-BSIS IS Module Base in addition to providing the connection facilities also contain additional zener diode and current limiting resistor arrangements to provide further voltage and current limitation on the hazardous area side of the circuit. The module is additionally fitted with an IS Power Jumper Link on the top edge of the module to allow the output current of the hazardous area outputs to be changed depending on the configuration of the isolator.

The MTL4-BSGP General Purpose Base Module is designed to only be fitted in and connected to Zone 2 certified equipment.

Each MTL SUM5 Universal Isolator can optionally be fitted with Surge protection on the hazardous area connections by the fitting of a Plug-In Surge Module (MTL4-SD Plug-In Surge Module) that plugs into the top of the Base Module. An earth screw connection facility is provided at the bottom of the Base Module to allow for connection to earth arrangement on the backplane required for surge protection.

Either a MTL4-DMA Diagnostic Module Alarm or MTL4-DMR Diagnostic Module Relay Alarm can be fitted on the carrier to provide diagnostics alarming of the isolators fitted to the carrier. The modules comprises a common printed circuit board mounted in a moulded plastic enclosure with LED's fitted on the top of the module to provide local diagnostic fault indication. External connections to the module are made via a plug and socket connection in the base of the module for direct connection to the carrier. The MTL4-DMA Diagnostic Module Alarm is partially populated module providing a configuration port and basic diagnostic alarming, whereas the MTL4-DMR Diagnostic Relay Alarm is additionally fitted with 16 relays that can provide contact or trip alarms for each of the isolators fitted to the carrier.

The configuration of each MTL SUM5 Universal Isolator fitted on the Carrier as either an analogue input or output, or digital input or output, is dependent on the Interface module fitted, the position of the IS Power Jumper Link on the Base Module (where applicable) and the software configuration of the Interface Module fitted.

This certificate covers the installation of the MTL SUM5 Universal Isolators (IECEx BAS 19.0018X), and associated Carriers and Diagnostic Module Alarm in a Zone 2 location.

Electrical Parameters

Carrier Input & Output Parameters – MTL4-ZS16

Power Supply Input POWER V1, V2, 0V, 0V (CON27), Terminals 1 to 4

Maximum Rated Supply Voltage = 30V

The power supply input terminals POWER V1, V2, 0V & 0V pins 1 to 4 are designed to operate from a d.c. supply voltage of 20 to 30Vd.c.supplied from either safety extra low-voltage (SELV) or protective extra low-voltage circuits; for example, equipment complying with the requirements of either the IEC 60950 series, IEC 61010-1 or a technically equivalent standard.

Group Alarm Connections ALARM 1A & 1B and ALARM 2A & 2B (CON28), Terminals 1 to 4

Maximum Rated Voltage per alarm = 32V
Maximum Rated Current per alarm = 250mA

Channel Alarm Connections on MTL4-DMR 34-way header, Channels 1-16 (CON6)

Maximum Rated Voltage per channel = 32V

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Maximum Rated Current per channel = 250mA

Isolator DCS Connections, Terminals A, B & C of Slots 1 to 16 (CON18 to CON26)

Terminal No.	DCS Connection Description	Terminal No.	DCS Connection Description
A1	VOUT Isolator Slot 1	A9	VOUT Isolator Slot 9
B1	VIN Isolator Slot 1	B9	VIN Isolator Slot 9
C1	0V Isolator Slot 1	C9	0V Isolator Slot 9
A2	VOUT Isolator Slot 2	A10	VOUT Isolator Slot 10
B2	VIN Isolator Slot 2	B10	VIN Isolator Slot 10
C2	0V Isolator Slot 2	C10	0V Isolator Slot 10
A3	VOUT Isolator Slot 3	A11	VOUT Isolator Slot 11
B3	VIN Isolator Slot 3	B11	VIN Isolator Slot 11
C3	0V Isolator Slot 3	C11	0V Isolator Slot 11
A4	VOUT Isolator Slot 4	A12	VOUT Isolator Slot 12
B4	VIN Isolator Slot 4	B12	VIN Isolator Slot 12
C4	0V Isolator Slot 4	C12	0V Isolator Slot 12
A5	VOUT Isolator Slot 5	A13	VOUT Isolator Slot 13
B5	VIN Isolator Slot 5	B13	VIN Isolator Slot 13
C5	0V Isolator Slot 5	C13	0V Isolator Slot 13
A6	VOUT Isolator Slot 6	A14	VOUT Isolator Slot 14
B6	VIN Isolator Slot 6	B14	VIN Isolator Slot 14
C6	0V Isolator Slot 6	C14	0V Isolator Slot 14
A7	VOUT Isolator Slot 7	A15	VOUT Isolator Slot 15
B7	VIN Isolator Slot 7	B15	VIN Isolator Slot 15
C7	0V Isolator Slot 7	C15	0V Isolator Slot 15
A8	VOUT Isolator Slot 8	A16	VOUT Isolator Slot 16
B8	VIN Isolator Slot 8	B16	VIN Isolator Slot 16
C8	0V Isolator Slot 8	C16	0V Isolator Slot 16

Terminal Parameters (all positions):

Maximum Rated Voltage = 32V
Maximum Rated Current = 300mA

Carrier Input & Output Parameters – MTL4-ZSHUIO

Power Supply Input POWER V1, V2, 0V, 0V (CON20), Terminals 1 to 4

Maximum Rated Supply Voltage = 30V

The power supply input terminals POWER V1, V2, 0V & 0V, pins 1 to 4 are designed to operate from a d.c. supply voltage of 20 to 30Vd.c.supplied from either safety extra low-voltage (SELV) or protective extra low-voltage circuits; for example, equipment complying with the requirements of either the IEC 60950 series, IEC 61010-1 or a technically equivalent standard.

Group Alarm Connections ALARM 1A & 1B and ALARM 2A & 2B (CON28), Terminals 1 to 4

Maximum Rated Voltage per alarm = 32V
Maximum Rated Current per alarm = 250mA

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Channel Alarm Connections on MTL4-DMR 34-way header, Channels 1-16 (CON6)

Maximum Rated Voltage per channel = 32V
Maximum Rated Current per channel = 250mA

Isolator DCS Connections, VIN & 0V, Slots 1-16 (CON18)

Terminal No.	DCS Connection Description	Terminal No.	DCS Connection Description
1	VIN Isolator Slot 1	20	0V Isolator Slot 1
2	VIN Isolator Slot 2	21	0V Isolator Slot 2
3	VIN Isolator Slot 3	22	0V Isolator Slot 3
4	VIN Isolator Slot 4	23	0V Isolator Slot 4
5	VIN Isolator Slot 5	24	0V Isolator Slot 5
6	VIN Isolator Slot 6	25	0V Isolator Slot 6
7	VIN Isolator Slot 7	26	0V Isolator Slot 7
8	VIN Isolator Slot 8	27	0V Isolator Slot 8
9	VIN Isolator Slot 9	28	0V Isolator Slot 9
10	VIN Isolator Slot 10	29	0V Isolator Slot 10
11	VIN Isolator Slot 11	30	0V Isolator Slot 11
12	VIN Isolator Slot 12	31	0V Isolator Slot 12
13	VIN Isolator Slot 13	32	0V Isolator Slot 13
14	VIN Isolator Slot 14	33	0V Isolator Slot 14
15	VIN Isolator Slot 15	34	0V Isolator Slot 15
16	VIN Isolator Slot 16	35	0V Isolator Slot 16
17	Unused	36	Unused
18	Unused	37	Unused
19	Unused		

Terminal Parameters (all isolator slots above):

Maximum Rated Voltage = 32V
Maximum Rated Current = 300mA

Isolator Input & Output Parameters -

Hazardous Area Terminals - MTL4-BSIS IS Module Base & MTL4-ADIO Interface Module

If the hazardous area terminals are being connected to certified intrinsically safe equipment located in either Zone 0 & Zone 1 hazardous area, the maximum values for the intrinsically safe circuits and associated load parameters have to be taken from IECEx Certificate No. IECEx BAS 19.0018X.

The following I/O parameters are for the connection of certified Zone 2 mounted equipment:

Hazardous Area Terminals 4 w.r.t. 3, 4 w.r.t 2, 2 w.r.t 3, 1 w.r.t. 2, and 2 & 4 w.r.t 3:

Maximum Rated Voltage = 32V
Maximum Rated Current = 300mA

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Ratings are irrespective of Isolator and Base configuration (Analogue or Digital, O/P or I/P, IS Power Jumper Link fitted or not fitted).

Hazardous Area Terminals - MTL4-BSGP General Purpose Module Base & MTL4-ADIO Interface Module (Zone 2 Connection only)

The following I/O parameters are for the connection of certified Zone 2 mounted equipment:

Hazardous Area Terminals 4 w.r.t. 3, 4 w.r.t 2, 2 w.r.t 3, 1 w.r.t. 2, and 2 & 4 w.r.t 3:

Maximum Rated Voltage = 32V
Maximum Rated Current = 300mA

Ratings are irrespective of Isolator and Base configuration (Analogue or Digital, O/P or I/P)

Conditions of Acceptability

MTL SUM5 Universal Isolator – Intrinsically Safe Version

1. The non-hazardous area connections of the equipment must be supplied from either safety extra low-voltage (SELV) or protective extra low-voltage (PELV) circuits; for example, equipment complying with the requirements of either the IEC 60950 series, UL/CSA C22.2 No. 61010-1 or a technically equivalent standard.
2. When fitted with the optional surge module the equipment is not capable of withstanding the 500V dielectric strength test required by clause 6.3.13 of UL/CSA C22.2 No. 60079-11: 2011. This must be taken into account when installing the equipment.

MTL SUM5 Universal Isolator – Increased Safety/Enclosed Break Version

1. The equipment must be installed in an area of Pollution Degree 2 or better, as defined in IEC 60664-1, and in an enclosure that provides a degree of protection of at least IP54 and meets the relevant requirements of UL/CSA C22.2 No. 60079-0 and UL/CSA C22.2 No. 60079-7.
2. The ambient temperature stated on this certificate refers to the temperature within the enclosure into which it must be installed in accordance with condition number 1).
3. The equipment is marked with a temperature classification of T4 in a maximum ambient temperature of 70°C. When the equipment is installed in its enclosure, the maximum ambient temperature of the equipment inside the enclosure must not exceed the maximum ambient temperature.
4. When fitted with the optional MTL4-SD Plug-in Surge Module the equipment is not capable of withstanding the 500V dielectric strength test in accordance with clause 7.1 of UL/CSA C22.2 No. 60079-7. This must be taken into account during installation.
5. All connections to, and between the modules forming the equipment the must not be inserted or removed unless either the area in which the equipment is installed is known to be non-hazardous, or the circuit to which it is connected has been de-energised.

Certification Body

Consumer and Retail Services, a division of SGS North America Inc.
620 Old Peachtree Road, Ste. 100, Suwanee, GA 30024, USA
t +1 770 570 1800 f +1 770 277 1240 www.sgs.com