SISTF1013-x62-LRT
Install Guide

Contents

Introduction

The Transition Networks SISTF1013-x62-LRT unmanaged Ethernet switches are specifically designed for the CID2 and ATEX certified with hazardous locations requirement. The SISTF1013-x62-LRT supports redundant power input and surge protection. The wide operating temperature range (-40° C to 70° C) and CID2 and ATEX certification can satisfy most harsh or hazardous locations' operating environments.

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Product Description

Models

SISTF1013-262-LRT   Unmanaged hardened switch, (6) 10/100BaseTX, (2) SC MM, 12/48 VDC; 2km
                                  communication distance

SISTF1013-162-LRT   Unmanaged hardened switch, (6) 10/100BaseTX, (1) SC MM, 12/48 VDC; 2km
                                  communication distance

Input Voltage

- 12~48VDC
- 7 pin screw terminal block
- Redundant (2) power input connections
- Reverse polarity protection
- Overload protection

Environmental

- -40°C ≤ Tamb ≤ +70°C operating temperature
- 5% to 95% non-condensing humidity

Compliance Certifications

- CE
- **EN 60950-1**
- **UL 508**
- **UL/cUL Class I Division 2 Groups A,B,C,D**
- **Ex nA op is IIC T4 Gc**

Features

- CID2 and ATEX compliant for harsh industrial environments application
- Six 10/100Base-T(X) and one or two100Base-FX fiber ports
- Triple redundant DC power inputs of terminal block and power jack
- Support auto-negotiation and auto-MDI/MDI-X
- Support store and forward transmission
- Support flow control
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled

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Specifications

Physical Ports

10/100 Base-T(X) Ports in RJ45 with Auto MDI/MDIX	6
Number of Fiber Ports	1 or 2
Fiber Ports Standard	100Base-FX
Fiber Mode	Multi-mode
Fiber Diameter (μm)	62.5/125 m
	50/125 m
Fiber Optical Connector	SC
Typical Distance (Km)	2Km
Wavelength (nm)	1310 nm
Max. Output Optical Power (dbm)	-14 dbm
Min. Output Optical Power (dbm)	-23.5 dbm
Max. Input Optical Power (Sensitivity)	0 dbm
Min. Input Optical Power (Saturation)	-31 dbm
Link Budget (db)	7.5 db

Technology

Ethernet Standards	IEEE 802.3 for 10Base-T
	IEEE 802.3u for 100Base-TX and 100Base-FX
	IEEE 802.3z for 1000Base-T
	IEEE 802.3ab for 1000Base-X
	IEEE 802.3x for Flow control
MAC Table	8192 MAC addresses
Processing	Store-and-Forward
Standards:	IEC 60079-0 Ed.6,, IEC 60079-15 Ed.4, EN60079-0:2012+A11:2013, EN 60079-15:2010, IEC 60079-28 Ed.1, EN 60079-28:2007

LED Indicators

Power Indicator	Green: Power LED x3
Fault Indicator	Amber: Indicate power failed
10/100 Base-T(X) RJ45 Port Indicator	Green for port Link/Act; Amber for Duplex/Collision
10/100/1000Base-T(X) / Fiber Port Indicator	Green for port Link/Act. Amber for Link

Power

Redundant Input power	Triple DC inputs. 12-48VDC on 7-pin terminal block, 12-45VDC on power jack. **Warning**: Power Jack Connector Not for Use in Hazardous Locations. See Installation Instructions. **Warning**: Grounding; PRODUCT DOES NOT SUPPORT POSITIVE GROUND TO THE ENCLOSURE. ONLY NEGATIVE GROUNDING SUPPORTED.
Power consumption (Typ.)	12 Watts
Overload current protection	Present
Reverse polarity protection	Present on Terminal Block

Physical Characteristics

Enclosure	IP-30
Dimensions (W x D x H)	52(W) x106 (D) x 144(H) mm (2.05x4.17x5.67 inch)
Weight	680 g (23.98 oz.)

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Environmental

Storage Temperature   -40° to 85° C (-40° to 185° F)
Operating Temperature   -40°C ≤ Tamb ≤ +70°C
Operating Humidity   5% to 95% Non-condensing

Regulatory Approvals

EMI   FCC Part 15, CISPR (EN55022) class
EMS   EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT),
                                            EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, and
                                            EN61000-4-11
Shock   IEC60068-2-27
Free Fall   IEC60068-2-32
Vibration   IEC60068-2-6
Safety   EN60950-1, UL508 (E331061), UL/cUL Class I Division 2 Group
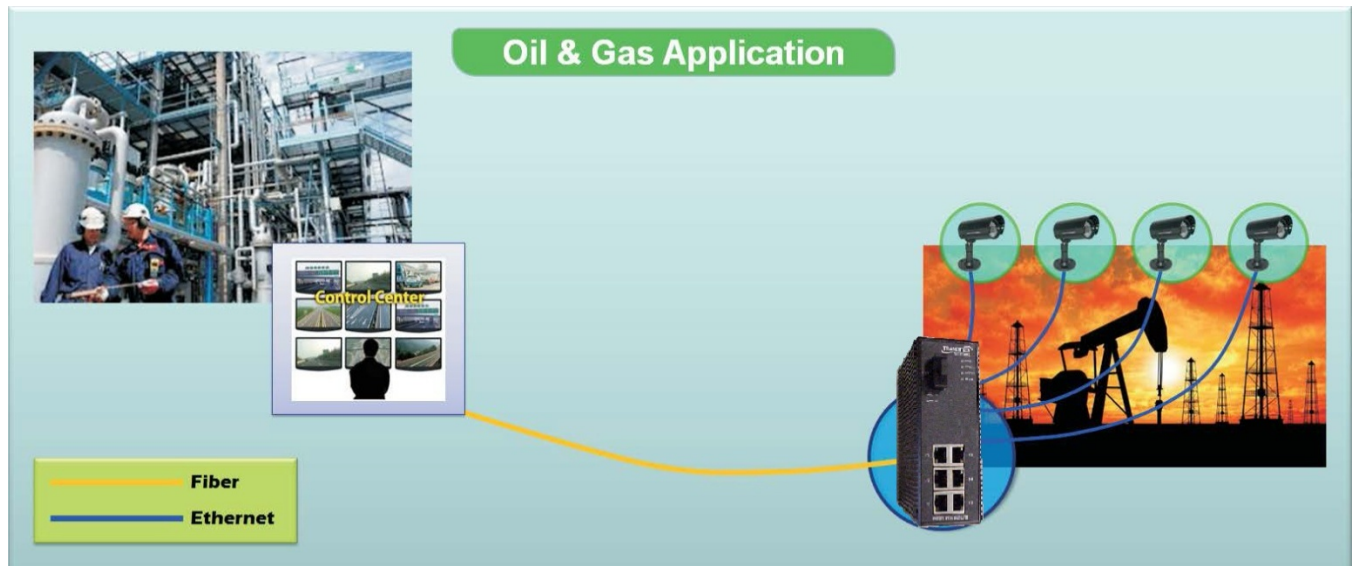   A, B, C and D, DEMKO 15 ATEX 1473X Rev. 0

Warranty   Lifetime

Applications

The SISTF1013-x62-LRT can be used in connecting several Ethernet devices like Ethernet I/O, IPCamera, or other Ethernet switches. In addition, there are three different power inputs to enhance its reliability, two supplied by terminal block, and one by power jack. **Note**: to avoid interruption caused by power outage, when the primary DC power input fails, the backup power input will take over immediately to guarantee non-stop operation.

Connection of Ethernet Devices

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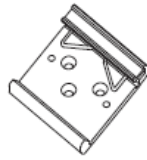
10900 Red Circle Drive
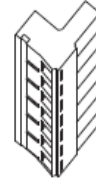Minnetonka, MN 55343

Packing List

Make sure that you have received the following with your SISTF1013-x62-LRT switch:

1. One 45mm DIN-Rail Kit
2. Two 7-Pin Terminal Blocks
3. One Wall Mount Kit
4. One Dust Cover (RJ-45)
5. Six M3x5 Screws
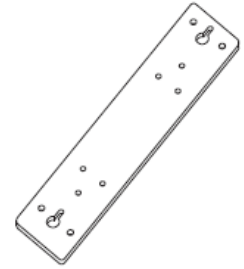6. One printed Documentation Post Card

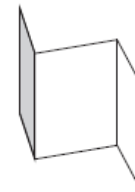① 45mm DIN-Rail kit   ② 7-Pin Terminal block   ③ Wall-mounted Kit
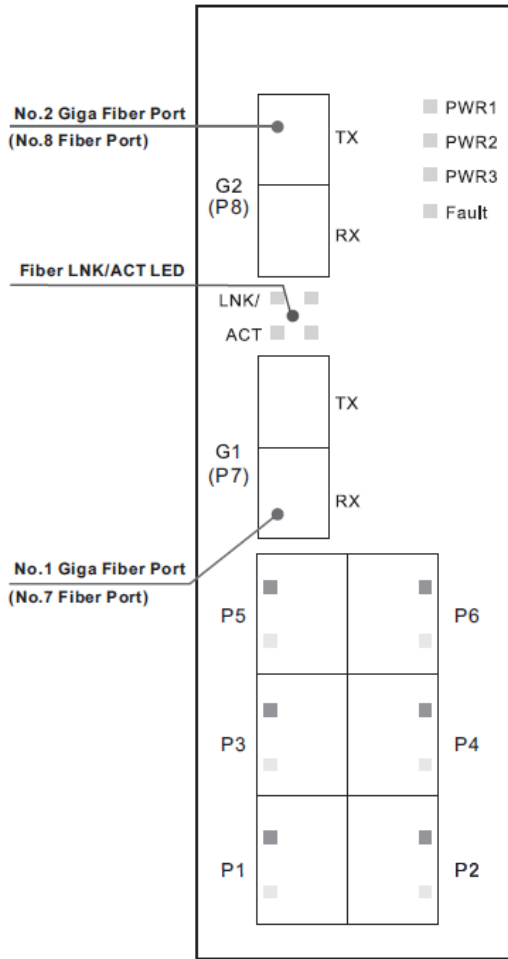
④ Dust Cover(RJ-45)   ⑦ Screw M3x5   ⑥ QIG

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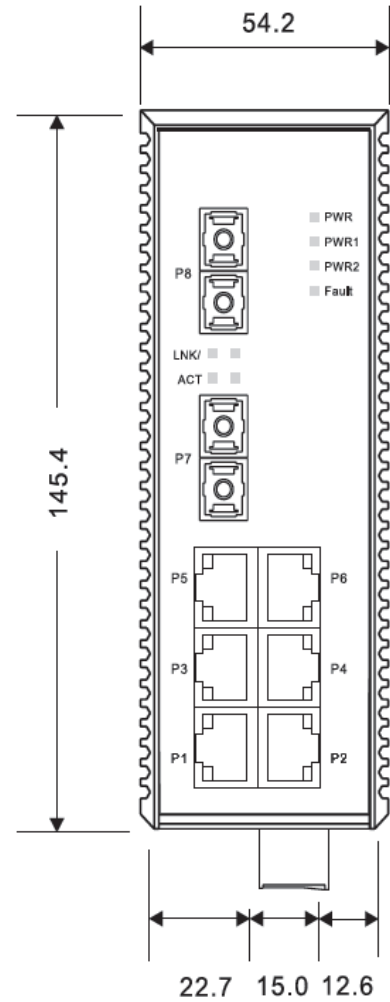Minnetonka, MN 55343

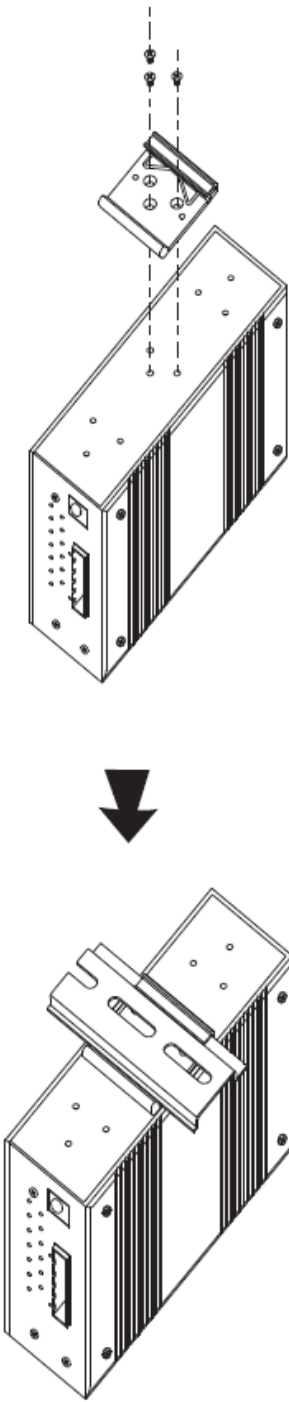# Front Panel and Dimensions

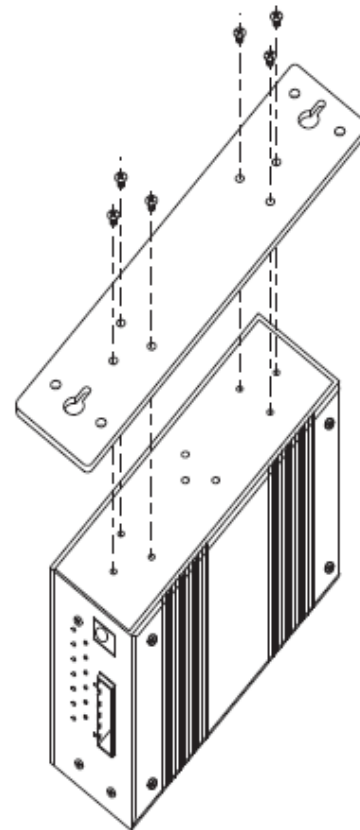**Front Panel**

Dimensions

Installation

DIN Rail Install and Wall Mount Install

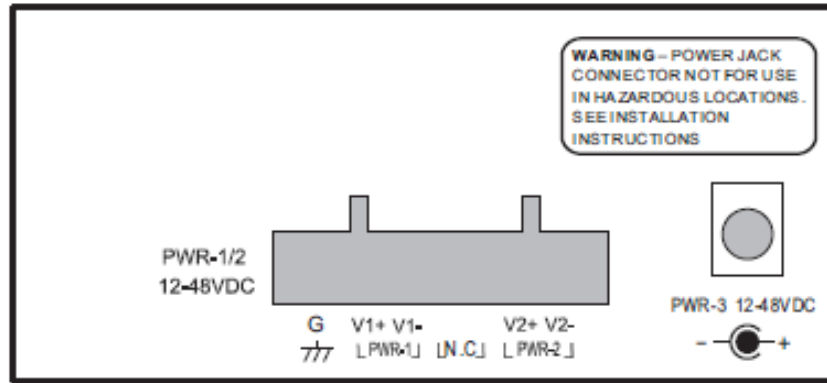**DIN Rail Install**   **Wall Mount Install**

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Power Connection

⚠️ **WARNING** – POWER JACK CONNECTOR NOT FOR USE IN HAZARDOUS LOCATIONS. SEE INSTALLATION INSTRUCTIONS

Conditions of Safe Use

1. Subject devices must be installed in an ATEX Certified IP54 enclosure and accessible only by use of a tool.
2. Subject devices are for use in an area of not more than pollution degree 2 in accordance with IEC 60664-1.
3. Provision shall be made to prevent the rated voltage being exceeded by the transient disturbances of more than 140% of the peak rated voltage.

Installation Instructions

1. Cable temperature rating not less than 104° C.
2. The Terminal Block (J9) – Cat. No. 5EHDRC-07P by Dinkle Enterprise Co., Ltd., rated 300 V, 15 A, 105°C, FW-1 mating with Cat. No. 5ESDV-07P by Dinkle Enterprise Co., Ltd., rated 300 V, 15 A, 105°C, FW-2, suitable for 28-12 AWG wire size, torque value 4.5 lb-in.

5EHDRC-07P   5ESDV-07P

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Troubleshooting

1. Is the Amber **Fault** LED lit to indicate power failure?

YES
• Re-install the device. See the installation instructions.
• Proceed to step 2.
YES
• Proceed to step 2.

2. Is one of the Green Power LEDs (**PWR**, **PWR1 PWR3**) lit?
    NO
• Is the power source live and to spec? See "Specifications" on page 3.
    • Is the power adapter properly installed? See "Power Connection" on page 8.
    • Contact Technical Support: US/Canada: 1-800-260-1312, International: 00-1-952-941-7600.
    YES
    • Proceed to step 3.

3. Check the P7 and P8 LEDs.Are the Green for port Link/Act. Amber for Link LEDs lit?
    NO
• Verify that the fiber cable requirements are met. See "Specifications" on page 3.

    YES
    • Proceed to step 4.

4. Check the P1-P6 (RJ-45 copper) LEDs. Are the LEDs lit (green for port Link/Act, amber for Duplex/Collision)?
    NO
• Verify that the RJ-45 copper cable requirements are met. See "Specifications" on page 3.
    YES
    • Contact Technical Support: US/Canada: 1-800-260-1312, International: 00-1-952-941-7600.

Safety Warnings and Cautions

These products are not intended for use in life support products where failure of a product could reasonably be expected to result in death or personal injury. Anyone using this product in such an application without express written consent of an officer of Transition Networks does so at their own risk, and agrees to fully indemnify Transition Networks for any damages that may result from such use or sale.

Attention: this product, like all electronic products, uses semiconductors that can be damaged by ESD (electrostatic discarge). Always observe appropriate precautions when handling.

Warning: Potential for damage to equipment or personal injury.

Warning: Risk of Electrical Shock

Functional grounding point

Protective grounding point

Special considerations

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Service, Warranty and Tech Support

Contact Us

Technical Support
Technical support is available 24 hours a day.
US and Canada: 1-800-260-1312
International: 00-1-952-941-7600
Transition Now 7:00 AM to 6:00 PM CST
Voice Mail: 800-260-1312 x 579 or 952-941-7600 x 579
Chat live via the Web with Transition Networks Technical Support. Log onto www.transition.com and click the Tech Support/Transition Now link.

Web-Based Seminars
Transition Networks provides seminars via live web-based training at www.transition.com click Learning Center.

E-Mail
To ask a question anytime, send an e-mail to our technical support staff at techsupport@transition.com.

Address
Transition Networks
10900 Red Circle Drive,
Minnetonka, MN 55343, U.S.A.
Telephone: 952-941-7600
Toll free: 800-526-9267
Fax: 952-941-2322

Warranty

This warranty is your only remedy. No other warranties, such as fitness for a particular purpose, are expressed or implied. Transition Networks is not liable for any special, indirect, incidental or consequential damages or losses, including loss of data, arising from any cause or theory. Authorized resellers are not authorized to extend any different warranty on transition networks' behalf.
Effective for products shipped May 1, 1999 and after. Every Transition Networks' labeled product purchased after May 1, 1999 will be free from defects in material and workmanship for five years. This warranty covers the original user only and is not transferable.

What the Warranty Does Not Cover
This warranty does not cover damage from accident, acts of God, neglect, contamination, misuse or abnormal conditions of operation or handling, including over-voltage failures caused by use outside the product's specified rating, or normal wear and tear of mechanical components. If the user is unsure of the proper means of installing or using the equipment, contact Transition Networks' free technical support services.

Establishing Original Ownership
To establish original ownership and provide date of purchase, please complete and return the registration card accompanying the product or register the product on-line on our product registration page.
Transition Networks will at its option:

- Repair the defective product to functional specifications at no charge
- Replace the product with an equivalent functional product
- Refund the purchase price of a defective product

Who to Contact for Returns
To return a defective product for warranty coverage, contact Transition Networks' technical support department for a return authorization number. Transition's technical support department can be reached through any of the

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following means:

How and Where to Send Returns
Send the defective product postage and insurance prepaid to the following address:
Transition Networks, Inc.
10900 Red Circle Drive
Minnetonka, MN 55343 USA
Attn: RETURNS DEPT: CRA/RMA # _____

Failure to properly protect the product during shipping may void this warranty. The return authorization number must be written on the outside of the carton to ensure its acceptance. We cannot accept delivery of any equipment that is sent to us without a CRA or RMA number.
CRA's are valid for 60 days from the date of issuance. An invoice will be generated for payment on any unit(s) not returned within 60 days.
Upon completion of a demo/ evaluation test period, units must be returned or purchased within 30 days. An invoice will be generated for payment on any unit(s) not returned within 30 days after the demo/ evaluation period has expired.
The customer must pay for the non-compliant product(s) return transportation costs to Transition Networks for evaluation of said product(s) for repair or replacement. Transition Networks will pay for the shipping of the repaired or replaced in-warranty product(s) back to the customer (any and all customs charges, tariffs, or/and taxes are the customer's responsibility).
Before making any non-warranty repair, Transition Networks requires a $200.00 charge plus actual shipping costs to and from the customer. If the repair is greater than $200.00, an estimate is issued to the customer for authorization of repair. If no authorization is obtained, or the product is deemed 'not repairable', Transition Networks will retain the $200.00 service charge and return the product to the customer not repaired. Non-warranted products that are repaired by Transition Networks for a fee will carry a 180-day limited warranty. All warranty claims are subject to the restrictions and conventions set forth by this document.
Transition Networks reserves the right to charge for all testing and shipping incurred, if after testing, a return is classified as "No Problem Found."
THIS WARRANTY IS YOUR ONLY REMEDY. NO OTHER WARRANTIES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED. TRANSITION NETWORKS IS NOT LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, INCLUDING LOSS OF DATA, ARISING FROM ANY CAUSE OR THEORY. AUTHORIZED RESELLERS ARE NOT AUTHORIZED TO EXTEND ANY DIFFERENT WARRANTY ON TRANSITION NETWORKS'S BEHALF.

Customer Pays Non-Compliant Return Costs
The customer must pay the non-compliant product(s) return transportation cost to Transition Networks for evaluation of said product(s) for repair or replacement. Transition Networks will pay for shipping the repaired or replaced in-warranty product(s) back to the customer (any and all customs charges, tariffs, or/and taxes are the customer's responsibility).

Non-Warranty Repair Costs
Before making any non-warranty repair, Transition Networks requires a $200 charge, plus actual shipping costs to and from the customer. If the repair is greater than $200, an estimate is issued to the customer for authorization before making the repair. If no authorization is obtained, or the product is deemed not repairable, Transition Networks will retain the $200 service charge and return the product to the customer not repaired.

Repaired Non-Warranty Products
Non-warranted products repaired by Transition Networks for a fee will carry a 180-day limited warranty.
All warranty claims are subject to the restrictions and conventions set forth by this document.
Transition Networks reserves the right to charge for all testing and shipping incurred, if after testing, a return is classified as "No Problem Found."

Compliance Certifications

- CE
- EN60950
- UL508
- UL/cUL Class I Division 2 Groups A,B,C,D
- Ex nA op is IIC T4 Gc

Declaration of Conformity

DECLARATION OF CONFORMITY

Transition Networks, Inc.
Manufacture's Name

10900 Red Circle Drive, Minnetonka, Minnesota 55343 U.S.A.
Manufacture's Address

DECLARES THAT THE PRODUCT(S)
SISTF1013-162-LRT
SISTF1013-262-LRT

CONFORM TO THE FOLLOWING PRODUCT REGULATIONS:

CE, IEC 60079-0 Ed.6, IEC 60079-15 Ed.4, EN 60079-0:2012+A11:2013, EN 60079-15:2010, IEC 60079-28 Ed.1,
EN 60079-28:2007, UL/cUL Class I Division 2 Groups A,B,C,D,
Ex nA op is IIC T4 Gc, FCC Part 15, CISPR (EN55022) class
EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, and EN61000-4-11
IEC60068-2-27, IEC60068-2-32, IEC60068-2-6, EN60950-1, UL508 (E331061), DEMKO 15 ATEX 1473X Rev. 0

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standards(s).

Minnetonka, Minnesota	March 27, 2015		
Place	Date	Signature	
		Stephen Anderson	Vice President of Engineering
		Full Name	Position

28141B

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European Regulations

WARNING: This is a Class A product. In a domestic environment, this product could cause radio interference in which case the user may be required to take adequate measures.

Achtung ! Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten. In diesem Fäll ist der Benutzer für Gegenmaßnahmen verantwortlich.

Attention ! Ceci est un produit de Classe A. Dans un environment domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilsateur de prende les measures spécifiques appropriées.

In accordance with European Union Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003, Transition Networks will accept post usage returns of this product for proper disposal. The contact information for this activity can be found in the 'Contact Us' portion of this document.

CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network. Der Anschluss dieses Gerätes an ein öffentlickes Telekommunikationsnetz in den EG-Mitgliedstaaten verstösst gegen die jeweligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

Electrical Safety Warnings

Electrical Safety

IMPORTANT: This equipment must be installed in accordance with safety precautions.

Elektrische Sicherheit

WICHTIG: Für die Installation dieses Gerätes ist die Einhaltung von Sicherheitsvorkehrungen erforderlich.

Elektrisk sikkerhed

VIGTIGT: Dette udstyr skal 13nstallers I overensstemmelse med sikkerhedsadvarslerne.

Elektrische veiligheid

BELANGRIJK: Dit apparaat moet in overeenstemming met de veiligheidsvoorschriften worden geïnstalleerd.

Sécurité électrique

IMPORTANT : Cet équipement doit être utilisé conformément aux instructions de sécurité.

Sähköturvallisuus

TÄRKEÄÄ : Tämä laite on asennettava turvaohjeiden mukaisesti.

Sicurezza elettrica

IMPORTANTE: questa apparecchiatura deve essere installata rispettando le norme di sicurezza.

Elektrisk sikkerhet

VIKTIG: Dette utstyret skal 13nstallers I samsvar med sikkerhetsregler.

Segurança eléctrica

IMPORTANTE: Este equipamento tem que ser instalado segundo as medidas de precaução de segurança.

Seguridad eléctrica

IMPORTANTE: La instalación de este equipo deberá llevarse a cabo cumpliendo con las precauciones de seguridad.

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Elsäkerhet

OBS! Alla nödvändiga försiktighetsåtgärder måste vidtas när denna utrustning används.

Record of Revisions

Rev	Date	Description of Changes
A	1/9/15	Initial release for SISTF1013-x62-LRT.
B	4/13/16	Add certifications.

Trademark notice

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Address comments on this product or manual to:

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