



### RNS-100 Redundant Network Switch

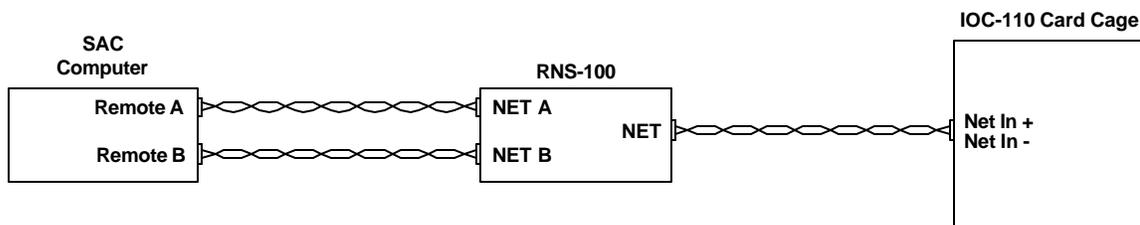
## 1. Intent & Scope

This document describes the installation procedure for the RNS-100 Redundant Network Switch

## 2. Description

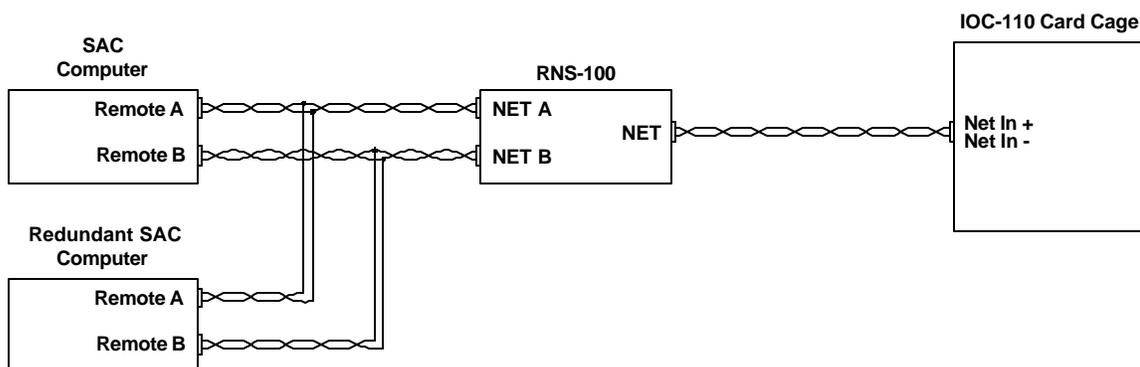
The RNS-100 Redundant Network Switch is used to connect one of two LonWorks networks to a card cage. Both LonWorks networks originate at the same SAC computer. The two networks provide back-up if one of the networks fails.

The SAC sends a message over the LonWorks network to the RNS-100 to specify which LonWorks network is to be used for the card cage. A block diagram of the LonWorks connection to a single SAC computer is shown below.



**SAC Computer and Card Cage Connections to an RNS-100**

If a redundant SAC computer is used the block diagram of the LonWorks connections are shown in the following block diagram.



**SAC Computer, Redundant SAC Computer and Card Cage Connections to an RNS-100**

### 3. Installation

The RNS-100 is designed to mount on the the rear panel of the IOC-110 I/O card cage. The back of the RNS-100 has 4 metal U shaped tabs which are inserted into the 4 rectangular shaped openings in the rear panel of the IOC-110 I/O card cage.

The RNS-100 has a 10-pin male header located on the left side of the RNS-100. The pins are labeled as follows:

Pin Number	Function
1	PWR +
2	GND
3	EARTH
4	NET C
5	NET C
6	NET A
7	NET A
8	EARTH
9	NET B
10	NET B

The RNS-100 requires a +12 Vdc power supply (which can be obtained from the card cage power supply between the +12 Vdc and GND terminals). The RNS-100 draws 100 mA of current and is protected by an internally mounted 1 Amp mini fuse (Littlefuse part 273.001).

The NET C pair are connected to Net In+ and Net In – terminals on the 8-pin terminal block located on the rear panel of the IOC-110 I/O card cage.

The NET A pair are connected by means of a twisted pair to the SAC computer LonWorks terminals Remote A.

The NET B pair are connected by means of a twisted pair to the SAC computer LonWorks terminals Remote B.

Note: The polarity of the LonWorks connections is not critical.

### 4. Card Settings

Each card in the card cage must have certain parameters set correctly in order for the RNS-100 switch to operate correctly.

In the hardware configuration the RNS-100 must be assigned a unique ID number. Each card in the card cage should have this ID Number specified in its configuration data base as the “RNS card” (page 2 of the hardware configuration database for a card). In the databases for the RNS card and every card in the card cage the selection for “Net A channel” should be Remote A (page 1 of the hardware configuration database for a card). The selection for “Net B channel” is set to Remote B automatically and cannot be changed.

In the Exchange database for the SAC computer the “PC A: PCLTA 1 Side A” entry should be selected as Remote A, and for “PC A: PCLTA 1 Side B ” the entry Remote B should be selected.