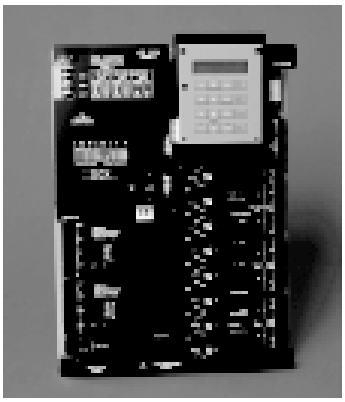
Andover Controls



Infinity

SCX 920 System Controller

The *Infinity* SCX 920 is a stand-alone, programmable, microprocessor-based system controller that is used for Direct Digital Control of chillers, cooling towers, boilers, air handling units, perimeter radiation, lighting, etc. The Infinet's true peer-to-peer communication protocol provides the *Infinity* SCX 920 with the ability to instantly communicate with *Infinity* network controllers such as the CX 9200, as well as the entire network of Andover *Infinity* controllers. Up to 254 SCX 920s can be networked with the *Infinity* CX family of controllers.

The SCX 920 comes standard with a metal cover plate suitable for panel mounting (shown). An optional enclosure is available for wall mounting.

COMMUNICATIONS

Communication to the *Infinity* SCX 920 is handled via the Infinet bus, a twisted pair, half duplex RS-485 interface. Communication is accomplished with a token passing protocol which provides full transparent data transfer between all *Infinity* controllers on the network.

INPUTS

The *Infinity* SCX 920 is capable of sensing sixteen inputs. Each input can accept a digital (on/off), counter (up to 4 Hz), voltage (0-10 VDC), or temperature signal.

OUTPUTS

The *Infinity* SCX 920 has eight Universal outputs providing pulse, variable voltage (0 - 20 VDC), variable current, (0 - 20mA) or on/off control of motors and lighting with Form C relays. In addition, two Form C relays can be combined in software to provide a Tri-State output, for bidirectional control of motors and actuators.

I/O EXPANSION

The SCX 920 contains an I/O expansion port for the addition of low-cost I/O modules directly onto the bottom of the controller. The family of modules includes the EMX 140 (two pneumatic outputs), the EMX 150 (two analog outputs), and the EMX 160 (eight digital inputs), etc.

FEATURES

- **Stand-alone DDC for System Reliability**
- **Peer-to-Peer Communications Provide Transparent Data Transfer**
- ***Plain English*® Language Simplifies Programming**
- **Universal Inputs and Outputs for Flexible Control Configurations**
- **Expandable I/O Meets Additional Point Count Needs**
- **Detachable Input/Output Connectors for Easy Installation**
- **Full Function Manual Overrides Provide Status Feedback**
- **Optional Display/Keypad for Local Information Control**
- **Replaceable Battery Provides Back-Up For 7 Years Accumulated Power Failure of RAM and Real-Time Clock**

PROGRAMMING

Every SCX 920 can be configured to meet the exact distributed control requirements of your application using Andover Controls' powerful *Plain English*™ programming language. Programs can be activated within individual SCX 920s or any network controller. Programs are entered into an SCX 920 using an SX 8000 workstation, LSX 280 Lap-Top Service Tool, or network controller. The program is then stored in, and executed by, the SCX 920.

SOFTWARE CAPABILITIES

The dynamic memory of the SCX 920 can be allocated for any combination of *Plain English* programs, scheduling, alarming, reporting and data logging. Our object-oriented language with intuitive keywords provides easy operation and programming. In addition, *Plain English*'s pre-defined and customized functions and powerful math capabilities reduce programming time for repetitive applications.

LOCAL DISPLAY WITH KEYPAD

An optional 2 x 16 character liquid crystal display provides for local viewing of point values and setpoint modifications in the SCX 920.

SCX 920 Dimensional Drawing

SPECIFICATIONS

ELECTRICAL

Power:	24 /120/ 240 VAC, 50/60 Hz
Power Consumption:	32 VA
Overload Protection:	Fused with 3 A 3AG fuse. MOV protected.
Real-time Clock:	Battery-backed real-time clock.

MECHANICAL

Operating Environment:	32–120 ½°F (0–49°C), 10–95% RH (non-condensing) 32–104°F (0– 40°C) w/display option
Size:	14 11/16"H x 10 11/16"W x 3 3/16"D (373.1H x 271.4W x 81.0D)mm (no enclosure) 19"H x 15"W x 4 3/4"D (482.6H x 381.0W x 120.6D)mm (with enclosure)
Weight:	7.0 lbs. (3.1 kg) (no enclosure) 21 lbs. (9.5 kg) (with enclosure)
Enclosure Type:	UL open class, IP 10 Optional NEMA 1-style enclosure, flammability rating of UL94-5V, IP 20

BATTERY

Battery Back-up:	Replaceable, non-rechargeable, lithium battery. Provides 7 years typical accumulated power failure backup of RAM memory and real-time clock.

COMMUNICATIONS

Communications Interface:	Through Infinet field bus to CX or CMX Network Controller or Lap-Top Service Tool.
Communications Speed:	300 to 19.2k bps
Bus Length:	4,000 ft. (1,220m) standard for Infinet, Infilink amplification module allows extension to longer distances and is required after every group of 32 units on the network.
Bus Media:	Infinet: twisted, shielded pair, approved, low capacitance cable
Comm. Error Checking:	International Standard CRC 16

INPUTS/OUTPUTS

Inputs:	16 Universal: digital (on/off), counter (up to 4 Hz at 50% duty cycle), voltage (0-10 VDC), or temperature (-30– +230½°F) (-34–110 °C)

SPECIFICATIONS (Cont'd)

INPUTS/OUTPUTS Cont'd

Input Voltage Range:	0-10 VDC
Input Impedance:	10 KΩ minimum with pull-up disabled
Input Protection:	Each input can withstand continuous shorting to 120 VAC/DC or up to ±1500 volt transients (24 VAC/DC on SCX 920S)
Input Resolution:	2.5 mV
Input Accuracy:	±5 mV (±.0.46½F over range -10–150) (±0.26°C over range -23.3–65.5°C)
Outputs:	8 Universal software-configurable outputs. Each output configurable as Form C relay, 0-20 mA, 0-20 V or Tri-State. (Tri-State outputs use 2 Form C relays).
Output Rating:	5 A, 24 VAC (Form C/Tri-State), 0-20 mA into maximum 750Ω, 0-20 VDC into minimum 4000Ω, ±1500 V transients.
Output Resolution:	0.1 sec. for Form C/Tri-State, 0.1mA for 0-20mA output, and 0.1 V for 0-20 V output.
Overrides:	Each output is equipped with an HOA switch for manual control of the Form C or Tri-State relay, and an override potentiometer for manual control of the 0-20 mA, and 0-20 VDC output signals.
Expansion Bus:	Interfaces to optional I/O expansion modules

CONNECTIONS

Power:	Three-position barrier strip
Outputs:	Removable two-piece terminal strip
Inputs:	Removable two-piece terminal strip
Infinet Bus:	Removable two-piece terminal strip

GENERAL

Memory Size:	128K EPROM, 64K RAM, 128 Byte EEPROM

AGENCY LISTINGS	UL/CUL 916, 1076 (SCX 920S), FCC, CE

OPTIONS

- 2 x 16 Character Liquid Crystal Local Display
- NEMA 1-Style Enclosure (for Wall Mounting)
- UL-864, UUKL Compliance (SCX 920S)

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