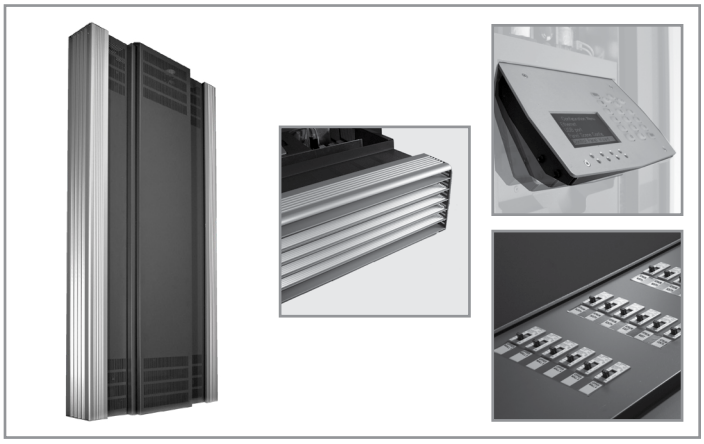
Project		Catalog #		Type	
Prepared by		Notes		Date	



WaveLinx Wired

SC-UN Universal Source Controller

Lighting control panel which contains individual control cards that are the industry's only "true universal" by controlling most load types without interface or multiple cards. Available in 6, 12, and 24 circuit variants.

Typical Applications
Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

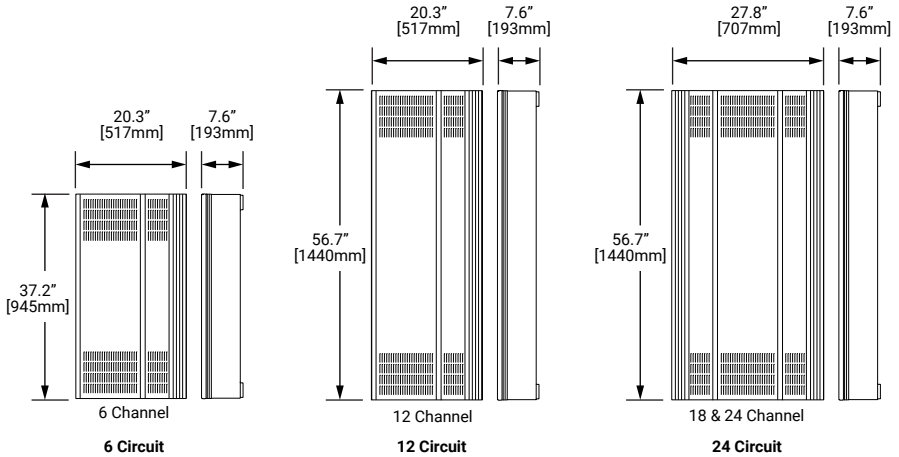
Product Certification

Product Features

Top Product Features

- Forward Phase triac slow rise-time dimmer engine. Capable of withstanding repetitive inrush current of 50 times operating current without impacting lifetime of dimmer or relay.
- Positive air-gap off per circuit
- Single or three phase versions
- Continuous duty, thermal magnetic SWD rated breakers for each circuit
- Bypass per circuit for manual override and providing construction site lighting
- Voltage and frequency compensation to maintain light level during supply fluctuations
- Real-time power metering for each circuit, phase, and the total panel
- Live feed per circuit, via breaker, for emergency lighting connection
- Options to meet Buy American Act requirements

Dimensional and Mounting Details



additional product diagrams

Order Information

Catalog Number

Domestic Preferences (1)	Catalog Number	Description	Product	Voltage	Number of Circuits	Source Controller Type	Phase	Panel Feed	Branch Breaker Rating (Amps)
[Blank] =Standard **BAA** = Buy American Act **TAA** = Trade Agreements Act	**SC120-06-UN-1P-ML-20**	Universal 120V Cabinet with 6 Circuits for Most Loads, Single Phase, Main Lugs, 16A per Circuit	SC	120V	06	UN = All Loads	1P = Single Phase	ML = Main Lugs	20
	SC120-12-UN-1P-ML-20	Universal 120V Cabinet with 12 Circuits for Most Loads, Single Phase, Main Lugs, 16A per Circuit	SC	120V	12	UN = All Loads	1P = Single Phase	ML = Main Lugs	20
	SC120-06-UN-3P-ML-20	Universal 120V Cabinet with 6 Circuits for Most Loads, 3 Phase, Main Lugs, 16A per Circuit	SC	120V	06	UN = All Loads	3P = 3 Phase	ML = Main Lugs	20
	SC120-12-UN-3P-ML-20	Universal 120V Cabinet with 12 Circuits for Most Loads, 3 Phase, Main Lugs, 16A per Circuit	SC	120V	12	UN = All Loads	3P = 3 Phase	ML = Main Lugs	20
	SC120-24-UN-3P-ML-20	Universal 120V Cabinet with 24 Circuits for Most Loads, 3 Phase, Main Lugs, 16A per Circuit	SC	120V	24	UN = All Loads	3P = 3 Phase	ML = Main Lugs	20
	SC277-06-UN-1P-ML-20	Universal 277V Cabinet with 6 Circuits for Most Loads, Single Phase, Main Lugs, 16A per Circuit	SC	277V	06	UN = All Loads	1P = Single Phase	ML = Main Lugs	20
	SC277-06-UN-3P-ML-20	Universal 277V Cabinet with 6 Circuits for Most Loads, 3 Phase, Main Lugs, 16A per Circuit	SC	277V	06	UN = All Loads	3P = 3 Phase	ML = Main Lugs	20
	SC277-12-UN-3P-ML-20	Universal 277V Cabinet with 12 Circuits for Most Loads, 3 Phase, Main Lugs, 16A per Circuit	SC	277V	12	UN = All Loads	3P = 3 Phase	ML = Main Lugs	20
	SC120-06-UN-1P-ML-20	Universal 120V Cabinet with 24 Circuits for Most Loads, 3 Phase, Main Lugs, 16A per Circuit	SC	120V	06	UN = All Loads	1P = Single Phase	ML = Main Lugs	20

Notes

(1) Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

Product Specifications

Key Features

The Universal Source Controller line of lighting control panels set a new standard in architectural lighting control. Each Source Controller contains individual control cards that are the industry's only "true universal" by controlling most load types without interface or multiple cards. In addition, each panel has onboard Ethernet, A/V interface, Contact Closure, DMX input, voltage sensing, real-time individual circuit power metering, and Phase Sense™ technology designed to ensure control even during individual phase failure.

- 6, 12, and 24 circuit variants
- Forward Phase triac slow rise-time dimmer engine. Capable of withstanding repetitive inrush current of 50 times operating current without impacting lifetime of dimmer or relay.
- Positive air-gap off per circuit
- Single or three phase versions
- Continuous duty, thermal magnetic SWD rated breakers for each circuit
- Bypass per circuit for manual override and providing construction site lighting
- Voltage and frequency compensation to maintain light level during supply fluctuations
- Real-time power metering for each circuit, phase, and the total panel
- Live feed per circuit, via breaker, for emergency lighting connection

Mechanical

Enclosure Size:

- 6 Circuit cabinet: 20.3" W X 37.2" H X 7.6" D (517mm x 945mm x 193mm)
- 12 Circuit cabinet: 20.3" W X 56.7" H X 7.6" D (517mm x 1440mm x 193mm)
- 24 Circuit cabinet: 27.8" W X 56.7" H X 7.6" D (707mm x 1440mm x 193mm)

Weight:

- 6 Circuit Cabinet
  - Packed: 100 lbs (45 Kg) / Unpacked: 88 lbs (40 Kg)
- 12 Circuit Cabinet
  - Packed: 160 lbs (72 Kg) / Unpacked: 132 lbs (60 Kg)
- 24 Circuit Cabinet
  - Packed (24): 220 lbs (100 Kg) / Unpacked: Unpacked (24): 200 lbs (90 Kg)

Environment:

- **Operating temperature:** 32°F to 104°F (0°C to 40°C)
- **Relative humidity operating:** 0 to 95% non-condensing
- For indoor use only

Mounting: Wall mounted design

- No regular maintenance requirements du to natural convection cooling, i.e. no fans or filters
- Single circuit dimmer card

Electrical

Load types:

- Incandescent
- Magnetic and Forward Phase electronic low voltage - Factory Approved Transformer only.
- Neon / cold cathode
- Non-dim (switched)
- Analog fluorescent ballast control
  - 2-wire fluorescent loads
  - 3-wire fluorescent loads (Lutron ECO-10 and Hi-Lume)
  - 4-wire fluorescent loads, 0-10 VDC Isolated (40 µA max per circuit leakage to line)
- Each 0-10V output supports up to 50 ballasts/drivers that draw the standard 2mA each

Software Specifications

Programming

- An LCD graphical user interface and keypad for ease of programming and configuration. The interface can be used for programming single area systems there is no need to use a PC. The GUI also allows programming of the astronomical timeclock.

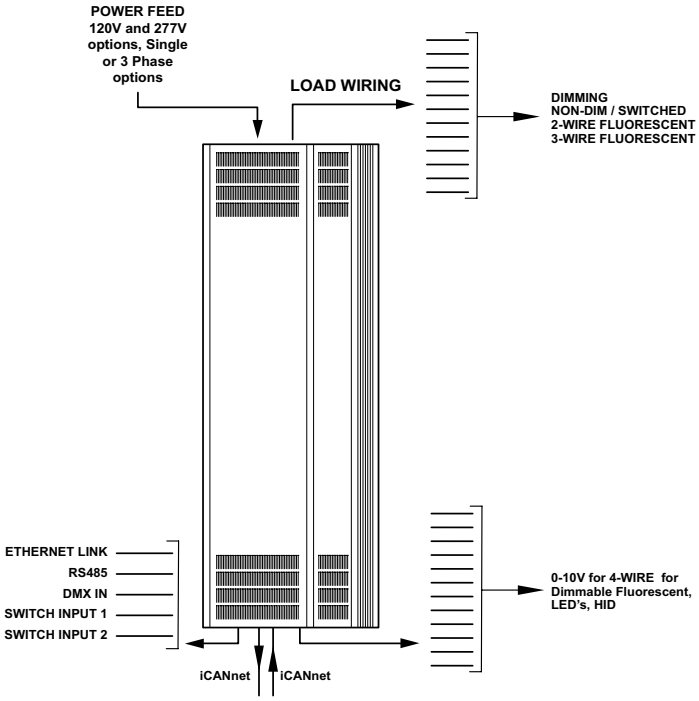
Interfacing

- All SC-UN Source Controllers have RS485 and Ethernet over UDP connections to allow for control by third party systems (Building Management System, Audio/Visual, etc.) through the use of open protocol ASCII message commands
- Two contact closure inputs for integration with auxiliary equipment and emergency lighting input
- DMX512 input for control by entertainment systems
- Power metering information is available via Ethernet over UDP through the use of open protocol ASCII message commands

Warranty

Consult website for warranty information

Wiring Diagrams



iCANnet cable type – Cooper LCCNP (Non Plenum) Cable or LCCP (Plenum) or Belden 1502R (Non Plenum) or 1502P (Plenum).

Each Source Controller can power up to 10 wallstations/devices. For more than 10 wallstations/devices per Source Controller add a 15 VDC External Power Supply. Wallstations/devices must be within 1,000 ft. of the Source Controller.

For wallstations/devices further from a Source Controller add a 15 VDC External Power Supply. 100 Devices per physical segment on iCANnet, maximum segment distance of 1000m/3200ft. A BN-2-NA can be added to combine more than 100 devices together (up to 65,000 total) and to extend network cable distance.

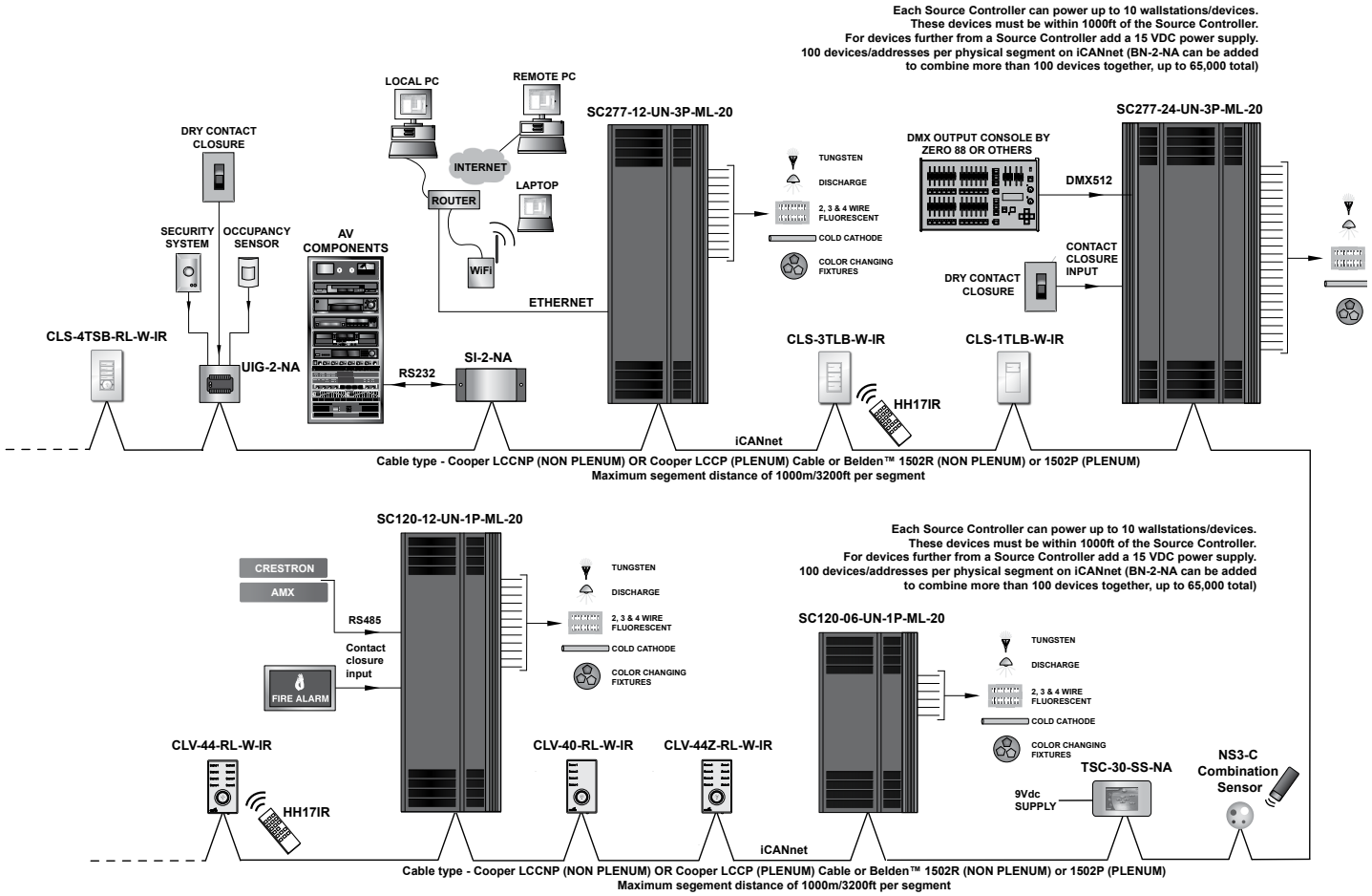
Maximum BTU Dissipation

6 Circuit Unit	1050 BTU @ 100%
12 Circuit Unit	2100 BTU @ 100%
24 Circuit Unit	4200 BTU @ 100%

Feed Wiring

Application	Wire Range (AWG)	Amp Rating per Pole
24 Channel 3-phase Panel		
Phase	4/0-6	128
Neutral	350 MCM - 6	192
Earth	2-14	N/A
12 Channel 3-phase Panel		
Phase	2/0-12	64
Neutral	2/0-12	96
Earth	2-14	N/A
12 Channel 1-phase Panel		
Phase	350 MCM - 6	192
Neutral	350 MCM - 6	288
Earth	2-14	N/A
6 Channel 3-phase Panel		
Phase	2/0-12	32
Neutral	2/0-12	48
Earth	2-14	N/A
6 Channel 3-phase Panel		
Phase	2/0-14	69
Neutral	2/0-14	144
Earth	2-14	N/A

System architecture



Sample System Topology:

This diagram shows the main components of the WaveLinx wired and PRO wireless connected lighting system.

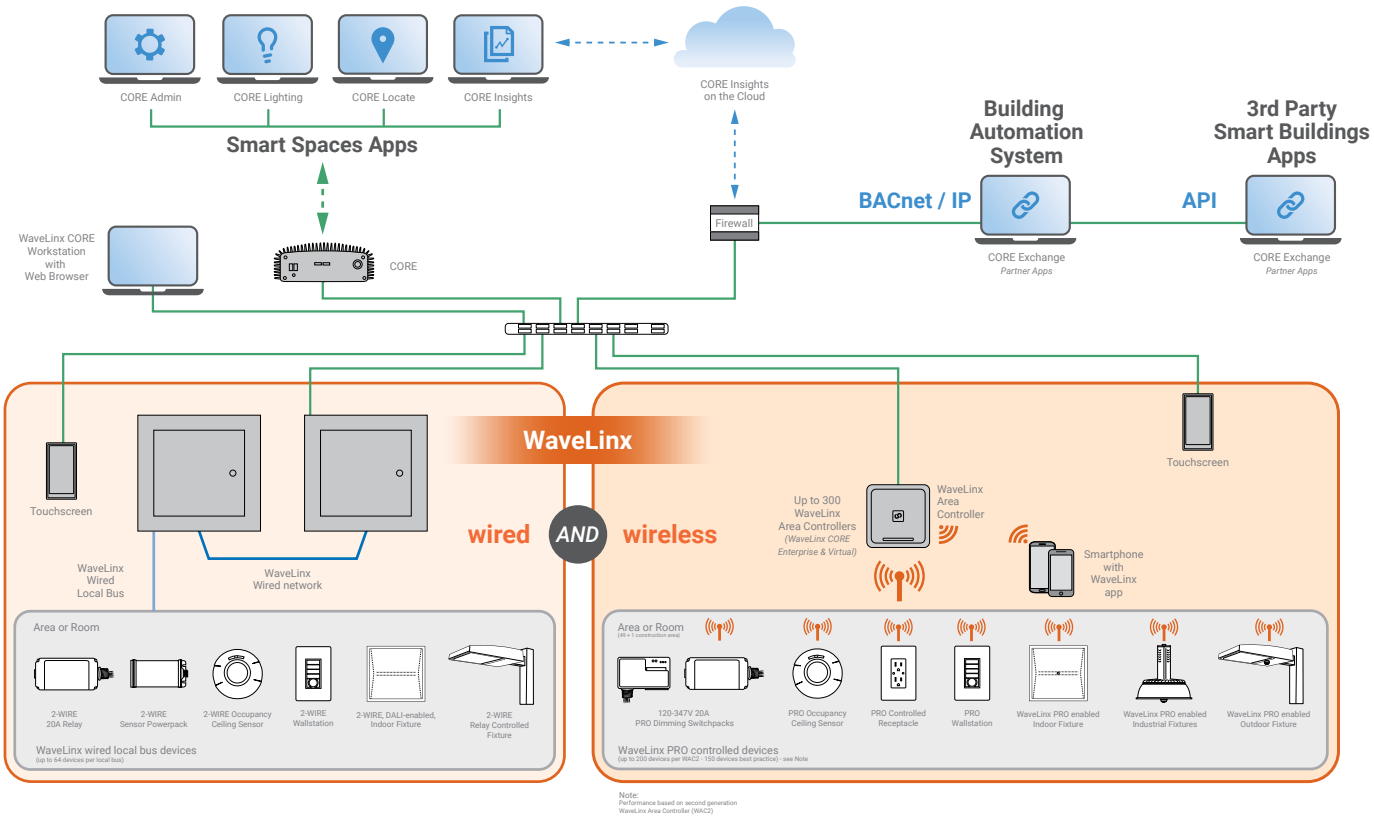
The **WaveLinx PRO wireless system** communicates using wireless mesh technology based on the IEEE 802.15.4 standard. A PoE LAN connection for each WaveLinx Area Controller (WAC) is required for power and data access to the building lighting network.

The **WaveLinx wired system** controls the devices using relay, 0-10V, DMX and the WaveLinx wired digital local bus. The WaveLinx wired system connects to the building LAN using the EG2 module. Each WaveLinx wired area controller communicates on the WaveLinx wired network.

WaveLinx Area Controllers (WAC) and WaveLinx Ethernet Gateways (EG2) communicate with WaveLinx CORE over the Ethernet network.

Please refer to the WaveLinx PRO Wireless Network and IT Guidance Technical Guide and WaveLinx Wired Network and IT Guidance Technical Guide for more information.

View WaveLinx Network and IT Guidance Technical Guide



Control Systems

- WaveLinx
- WaveLinx wired
- VividTune

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com