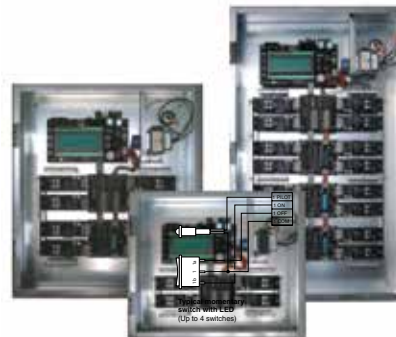## PROGRAMMABLE LIGHTING CONTROL PANEL
ILC APPRENTICE II

DESCRIPTION

The **ILC Apprentice II (APII)** is a programmable lighting control panel that can network up to 48 control points and up to 32 LightSync™ devices via RJ-45 ports. The onboard USB 2.0 port connected to a PC with the Apprentice II Pro software allows control of the panel via a PC. Add-on cards are easy to install and add capabilities such as Metasys N2, Modbus, LonWorks, BACnet, and DTMF telephone switching. The lighting control panel incorporates a user friendly interface, solid reliability, and the flexibility to easily comply with energy codes.

FEATURES

- *365-day programmable lighting control panel*
- *Ships complete, easy to install*
- *Device LightSync communication for up to 32 devices*
- *Network up to 48 control relays*
- *No special programming devices needed*
- *Panel sizes to accomodate 4, 8, and 16 relay outputs*
- *Available with 4 to 48 hardwired low voltage inputs*
- *48 programmable relay groups, presets, and timers*
- *All ON, All OFF push buttons for relay override*

- *Daylight Saving Time adjustment and astronomical clock standard*
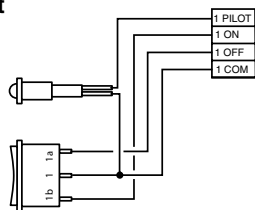- *Optional add-on input and communication modules*

Typical momentary switch with LED
(Up to 4 switches)

SPECIFICATIONS

Supply Voltage	120 or 277 ± 10% VAC, 50/60 Hz	**Field Device Comm.**	Lightsync™ protocol w/32 addresses
Auxiliary Supply Output	N/A = Do not show spec item or fill in any value		8 Lightsync devices direct from "Master"
Short Circuit Current (SCCR)	Not specified	**PSR**	Added LightSync device P.S. for 20 more devices
Lighting Relay Output Capacity		**APII-yy-X**	Other "Expansion" Panels (2 max)
	4 to 48 maximum	**LS-PB-C**	1-6 Button wall switch w/green LED
Master (A)	PNL size-4, 8 or 16 relays slots	**LSKS**	Key wall switch w/green LED
Expander (X)	PNL size-4, 8, or 16 relay slots	**LSPSC**	Photo cell Indoor or outdoor
	(panels up to 11)	**LSIM-R**	4-Input module for 2-4 wire wall switches
DI Hard Wire (HW) Inputs	4 wire low voltage (Pilot, ON-DI, OFF-DI)	**LSOS8I-R**	8 input for Occupancy sensors (order sensor
Digital In (DI)	QTY from 4-48, in groups of 4		separately)
Pilot out	3mA @5V	**Configuration**	Built in LCD screen w/buttons
Digital In (DI)	Manual or momentary	**Special features**	48 Zones and 48 Groups, and 48 Preset
Relay/Contactor	SPST Solid state 0-crossover contact non-		schedules
	latching , N.O or N.C., (per order)	**Operating Temperature**	32° to 112°F (0° to 50°C)
Resistive	20A at 120/277 VAC	**Operating Humidity**	10% to 90% non-condensing
Ballast	20A at 120/277 VAC	**Enclosure Mounting**	Surface w/key hinged door (Flush trim ring
Tungsten	20A at 120/277 VAC		available)
Relay Cycle Life	10,000,000 cycles	**Enclosure Rating**	NEMA 1
Relay Termination	Terminals, 14–10 AWG solid or stranded	**Dimensions**	Master and Expansion panel sizes
Relay Override	All relay ON/OFF button and keyboard display	**APII-04**	12.0" H x 14.0" W x 4.0"D
Dimming Output Capacity	None		(30.5 x 35.6 x 10.2 cm)
Display	1" x 3", 4 line LCD w/button interface	**APII-08**	16.0" H x 14.0" W x 4.0"D
Internal Clock	Astronomic w/48 Programmable schedules and		(40.6 x 35.6 x 10.2 cm)
	DST	**APII-16**	24.0" H x 14.0" W x 4.0"D
BAS Communication	One option Board allowed, BACnet/ MSTP,		(61.0 x 35.6 x 10.2 cm)
	BACnet/ IP, LonWorks, N2, MODBUS, TCP/IP,	**Warranty**	1 year
	Touch tone phone		

WIRING

Low Voltage Input
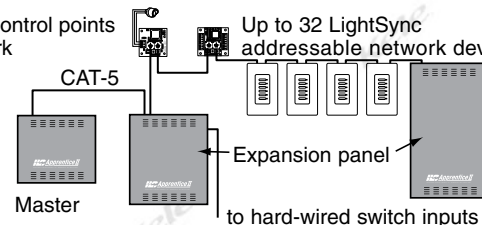
| 1 PILOT |
| 1 ON |
| 1 OFF |
| 1 COM |

Typical momentary switch with LED
(Up to 4 switches)

NOTE: Can be light sensor, occupancy, or room switch.
NOTE: Input can be programmed for individual or group outputs

Device Lightsync™ Network

Up to 48 control points per network

CAT-5

Up to 32 LightSync addressable network devices

Master

Expansion panel
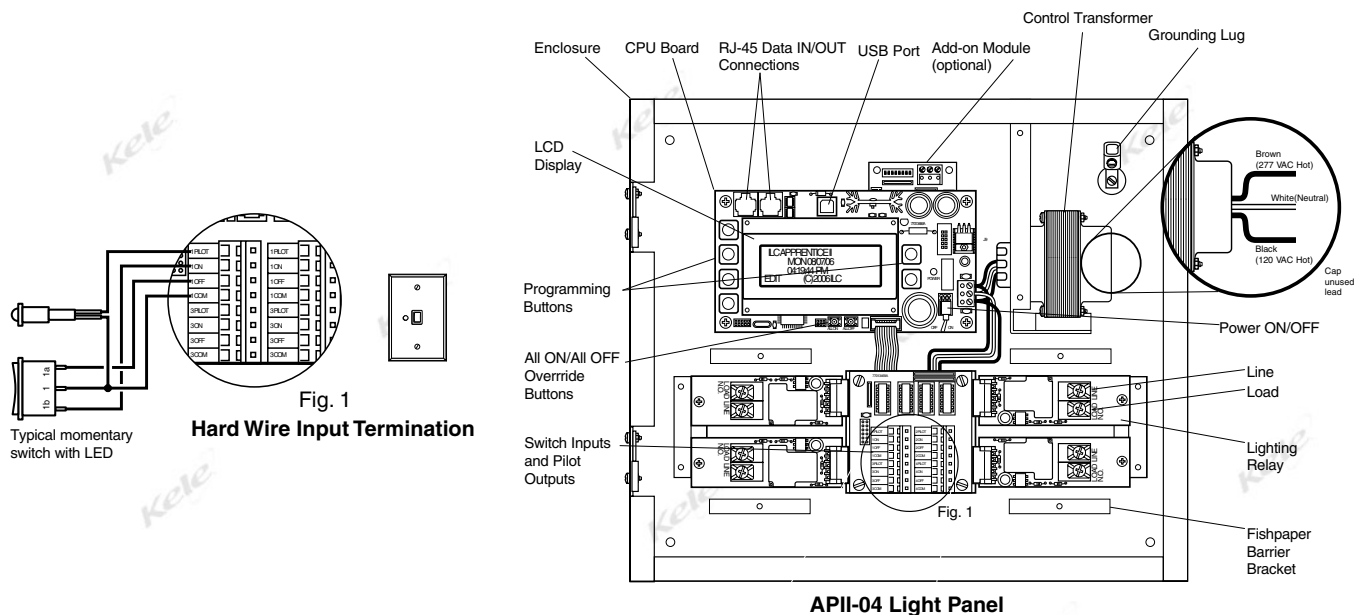
to hard-wired switch inputs

Network Note: Communication network is 3000 FT max. For networks greater than, 3000 FT add PSR.

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LIGHTING CONTROLS

PROGRAMMABLE LIGHTING CONTROL PANEL
ILC APPRENTICE II

WIRING

Enclosure CPU Board RJ-45 Data IN/OUT Connections USB Port Add-on Module (optional) Control Transformer Grounding Lug

LCD Display

Programming Buttons

All ON/All OFF Overrride Buttons

Switch Inputs and Pilot Outputs

Brown (277 VAC Hot)
White (Neutral)
Black (120 VAC Hot)
Cap unused lead

Power ON/OFF

Line
Load

Lighting Relay

Fishpaper Barrier Bracket

Fig. 1

APII-04 Light Panel

Fig. 1
Hard Wire Input Termination

Typical momentary switch with LED

ORDERING INFORMATION

MODEL	DESCRIPTION				
APII	Apprentice II Lighting Control Panel* (System can expand to 48 relays/48 inputs with X panels)				
	ENCLOSURE TYPE / SIZE				
	04	Four relays (Holds 1 IB-4 interface board)			
	08	Eight relays (Holds 2 IB-4 interface boards)			
	16	Sixteen relays (Holds 4 IB-4 interface boards)			
		PANEL TYPE			
		A[1]	Stand alone master panel with display and keypad (Comes with 1 IB-4 board)		
		X[2]	Expansion panel (no display or keypad). (Comes in 4, 8 or 16 pnl increments)		
			RELAY TYPE (Select below for inclusion in "A" or "X" panels)		
			SR1NO	Normally open (04-4 relays, 08-8 relays, 16-16 relays)**	
			SR1NC	Normally closed (04-4 relays, 08-8 relays, 16-16 relays)**	

| APII | - | 04 | - | A | - | SR1NO |

Example: **APII-04A-SR1NO** ILC Apprentice II standard controller in a 04 enclosure type with 4 N.O. relays.

* All master panels ship with one IB-4 input board installed.

** No mixing of NO vs NC on initial order. Field change out of SR1 relays can mix relay types.

*** Expansion panels communicate with the master panel over the hard wired LightSync™ Network

[1] Master "A" panels can power up to 8 LightSync™ devices. More than that requires a "PSR" repeater.

[2] You can add expansion panels up to a maximum of 48 relay slots per system, empty slots count.

	ACCESSORIES
93000378	Lightsync Addressable Photocell
APII-BNIP	APII BACnet /IP interface card
APII-BNMSTP	APII BACnet/MSTP interface card
APII-LON	APII LONWorks interface card
APII-MB	APII MODBUS interface card
APII-N2	APII Metasys N2 protocol interface card
APII-TL	APII Telephone override touch and voice
APIITCP/IP	APII TCPIP Interface card
IB-4	APII 4 Input expansion board
LS-PB-C-WH-1	Switch assembly, one pushbutton, white
LVSMIPLWH	Low Voltage Switch, Momentary, 1 Button, w/Pilot LED, White
PSR	Power Source Repeater for network's greater than 3000 ft and up to 20 more Lightsync™ devices
SR1-NC	APII Lighting panel relay (NC)
SR1-NO	APII Lighting panel relay (NO)

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