



TechNotes

Revision 9/18/2020

Planning Document for ILC-xx0 controller

Wiring Instructions/Wiring Topology and Notes for Proper Preparation of ILC-xx0 Intelligent Lighting Controllers

Please refer to appropriate section for your installation.

For Controllers used with FLLA (constant voltage) luminaries	Section 1
For Controllers used with Constant Current Fixtures (Monochrome or RGBW)	Section 2

Platform	Weblink	Typology	Wire Type/Gauge
Section 1: For Connectivity with Constant Current FLLA Linear Strips			
CS-Bus wiring from -e-Node to ILC-xx0 controller, and -ILC-xxx to ILC-xxx controllers	-Wiring Directions https://www.convergingsystems.com/bin/doc/ilc/ilc_manual_2_0_rev1.pdf see page 21/22 (see "CS-Bus Wiring Instructions") -Total Run of CS-Bus using CAT cable: 4000 feet (no T's or Y's permitted)	Daisy-Chain Wiring -Detail: Daisy chain from Port 0 of e-Node downstream to alternating ports on ILC-xx0 devices (i.e. Port 0 on e-Node to Port 1 on first ILC-xxx, Port 0 on first ILC-xxx to Port 1 on next ILC-xxx)	-Purpose: From e-Node to each downstream ILC-xx0 controller (and from any ILC-xx0 controller to another connected controller): CAT 5+ or better (1-1 wiring with color pairs as shown) -Type: Category (CAT 5e or better) Note: must observe twisted pairs on 1&2, 3&4, and 5&6 – simply cut off 4 th pair on both ends. -Gauge: http://www.convergingsystems.com/bin/doc/cable_length_DD.pdf
ILC-100m and monochrome FLLA Linear strips	-Wiring Directions https://www.convergingsystems.com/bin/doc/ilc/ilc_manual_2_0_rev1.pdf see page 15 ("2-Pin Connector Block") -Total Wattage Supported: 100 watts* - Maximum length of any FLLA strip using a single power feed: 16.4 feet.	Parallel Wiring. -Detail: Home run from ILC-xx0 output connector to start of each FLLA strip (or Parallel runs to subsequent downstream FLLA strips).	-Purpose: From ILC-xx0 controller to connected load: -Type: 2-conductor solid or stranded CL2/CL3 speaker cable -Gauge: http://www.convergingsystems.com/bin/doc/cable_length_DD.pdf Typically, 18~ 14 awg depending upon run. See above chart for exact type.
ILC-300 and RGB linear strips.	-Wiring Directions https://www.convergingsystems.com/bin/doc/ilc/ilc_manual_2_0_rev1.pdf see page 15 ("4-Pin Connector Block")	Parallel Wiring. -Detail: Home run from ILC-xx0 output connector to start of each FLLA strip (or Parallel runs to subsequent downstream FLLA strips).	Purpose: From ILC-xx0 controller to connected load: -Type: 4-conductor solid or stranded CL2/CL3 speaker cable -Gauge: http://www.convergingsystems.com/bin/doc/cable_length_DD.pdf



	<p>-Total Wattage Supported: 100 watts*</p> <p>- Maximum length of any FLLA strip using a single power feed: 16.4 feet</p>		<p>Typically, 18~ 14 awg depending upon run. See above chart for exact type.</p>
<p>ILC-400 and RGBW FLLA linear strips.</p>	<p>-Wiring Directions</p> <p>https://www.convergingsystems.com/bin/doc/ilc/ilc_manual_2_0_rev1.pdf</p> <p>see page 16 (“5-Pin Connector Block/for RGBW mode”)</p> <p>-Total Wattage Supported: 100 watts*</p> <p>- Maximum length of any FLLA strip using a single power feed: 16.4 feet</p>	<p>Parallel Wiring.</p> <p>-Detail: Home run from ILC-xx0 output connector to start of each FLLA strip (or Parallel runs to subsequent downstream FLLA strips).</p>	<p>Purpose: From ILC-xx0 controller to connected load:</p> <p>-Type: 5-conductor solid or stranded CL2/CL3 speaker cable</p> <p>-Gauge: http://www.convergingsystems.com/bin/doc/cable_length_DD.pdf</p> <p>Typically, 18~ 14 awg depending upon run. See above chart for exact type.</p>
<p>ILC-400 and monochrome FLLA linear strips.</p>	<p>-Wiring Directions</p> <p>https://www.convergingsystems.com/bin/doc/ilc/ilc_manual_2_0_rev1.pdf</p> <p>see page 17 (“4-Pin Connector Block/for 4-CH Mono Mode”)</p> <p>-Total Wattage Supported: 100 watts*</p> <p>- Maximum length of any FLLA strip using a single power feed: 16.4 feet</p>	<p>Parallel Wiring.</p> <p>-Detail: Home run from ILC-xx0 output connector to start of each FLLA strip (or Parallel runs to subsequent downstream FLLA strips).</p>	<p>Purpose: From ILC-xx0 controller to connected load:</p> <p>-Type: 2-conductor solid or stranded CL2/CL3 speaker cable</p> <p>-Gauge: http://www.convergingsystems.com/bin/doc/cable_length_DD.pdf</p> <p>Typically, 18~ 14 awg depending upon run. See above chart for exact type.</p>
<p>ILC-400 and bi-white (monochrome) FLLA linear strips.</p>	<p>-Wiring Directions</p> <p>https://www.convergingsystems.com/bin/doc/ilc/ilc_manual_2_0_rev1.pdf</p> <p>see page 17 (“4-Pin Connector Block/for Bi-White Mode”)</p> <p>-Total Wattage Supported: 100 watts*</p> <p>- Maximum length of any FLLA strip using a single power feed: 16.4 feet</p>	<p>Parallel Wiring.</p> <p>-Detail: Home run from ILC-xx0 output connector to start of each FLLA strip (or Parallel runs to subsequent downstream FLLA strips).</p>	<p>Purpose: From ILC-xx0 controller to connected load:</p> <p>-Type: 3-conductor solid or stranded CL2/CL3 speaker cable</p> <p>-Gauge: http://www.convergingsystems.com/bin/doc/cable_length_DD.pdf</p> <p>Typically, 18~ 14 awg depending upon run. See above chart for exact type.</p>

Section 2: For Connectivity with Constant Current Monochrome or RGBW Fixtures



<p>ILC-450 to constant current RGBW fixture</p> <p>Note: must select proper ILC-450 model for targeted fixture—contact factory</p>	<p>-Wiring Directions</p> <p>https://www.convergingsystems.com/bin/doc/ilc/ilc_manual_2_0_rev1.pdf</p> <p>see page 17 (“8-Pin Connector Block”)</p> <p>-Maximum number of fixtures connected to each ILC-400 with 48vdc power supply: typically 4</p> <p>-Model Use: Must use an ILC-450/350ma unit with fixtures requiring 350 ma. Alternatively, must use an ILC-450/700ma unit with fixtures requiring 700 ma.</p>	<p>Series Wiring.</p> <p>-Retail: Direct run from 8-pin white output connector on ILC-450 to first fixture (to “IN” connector). Daisy-chain connection from 1st fixture (OUT connector) to each permitted downstream fixture (IN connector).</p> <p>-EOL Terminator: Req’d on last fixture</p>	<p>Purpose: From ILC-450 controller to connected load:</p> <p>-Type: 8-conductor solid CL2/CL3 thermostat cable</p> <p>-Gauge: 20 awg for system runs up to 233 feet. (Larger gauge wire will not fit into the 8-pin connector)</p>
<p>ILC-400 and constant current monochrome fixtures (<i>all of same type - current and voltage identical</i>).</p> <p>Note: Must use a Meanwell power supply with adjustable pots for current and voltage.</p> <p>-Set up the system and insert a volt meter and set it to DC VOLTAGE and connect that meter in series with circuit and adjust the power supply’s VOLTAGE POTENTIOMETER under load to the fixture’s maximum.</p> <p>-Similarly, add all the current requirements of all the lamps and adjust the power supply’s CURRENT POTENTIOMETER under load to this maximum current setting.</p>	<p>-Wiring Directions</p> <p>https://www.convergingsystems.com/bin/doc/ilc/ilc_manual_2_0_rev1.pdf</p> <p>see page 17 (“4-CH Mono Mode”)</p> <p>-Total Wattage Supported: 100 watts*</p> <p>- Maximum number of any identical fixtures over entire four channels of ILC-400: variable so long as wattage is < above rating.</p>	<p>Parallel Wiring</p> <p>-Detail: Direct run from 8-pin white output connector on ILC-400 to first fixture. Daisy chain connection from 1st fixture to each permitted downstream fixture. EOL terminator plugged into last fixture.</p> <p>-EOL Terminator: None</p>	<p>Purpose: From ILC-400 controller to connected load</p> <p>-Type: 2-conductor solid or stranded CL2/CL3 speaker cable</p> <p>-Gauge: http://www.convergingsystems.com/bin/doc/cable_length_DD.pdf</p> <p>Typically, 18~ 14 awg depending upon run. See above chart for exact type.</p>