

AddressPro®: AREA Function Definition and Applications

The AddressPro® AREA feature (described below) allows for AddressPro® Digital Dimming Systems to be subdivided into 12 separate groups or AREAs. Each AREA can be programmed with 12 unique zones and lighting scenes can then be individually programmed and controlled by wall controls local to each AREA while not affecting the other AREAs. All AREAs are still part of the same larger system for global control capabilities from a master device.

AddressPro® Introduction

AddressPro® is a digital lighting control system providing dimming capabilities for fluorescent, CFL, incandescent and low voltage lamps. A hardwired, 2-wire communication link carries AddressPro® digital commands from control devices to ballasts and/or dimming modules. The AddressPro® command set allows operators to establish selected groups of luminaires as lighting zones, and to create lighting scenes, which can be recalled at the touch of a button. Please refer to the description of the AddressPro® digital dimming system in the Dimming & Controls section of the Universal Lighting Technologies web site, www.universalballast.com, for a further explanation of these features.

The intent of this application note is to introduce the 'AREA' function as a new feature of the AddressPro® lighting control system, and to describe a new AddressPro® control device, the ES5705CTL, which provides access to this new function.

The Objective of AREAs

In the basic AddressPro® system, (one without AREA capability) an AddressPro® control bus (a pair of control wires) connects the control devices, ballasts and dimming modules in a loop. The user subdivides the fixtures in this loop by assigning each to a zone. Up to twelve zones can be assigned and a fixture can only be assigned to one zone. Control devices cannot be assigned to the specific zones. They remain capable of controlling all devices (in all zones) on the bus.

If more than twelve zones are needed, or if one or more of the control devices is required to manipulate a subset of the system without affecting the remainder, the system can be divided into multiple, independent sub-systems by simply breaking the control bus at selected locations. Once this is done, each independent bus can be subdivided (by programming assignments) into as many as twelve zones. Control devices affect only the devices on that bus which the control itself was connected. However, all fixtures in the multiple subdivisions cannot be controlled at the same time.

Consider the following example: A small business office, comprising a single reception area, a conference room and two offices, is wired with AddressPro® components as a single, large bus system. Controls include four wall stations, one in each room. An OFF command issued by any one of the controls, will turn off all of the lights in all four rooms. That is, an occupant in the conference room could turn-off the lights in the reception area, and an occupant in the reception area could inadvertently control the lights in the conference room.

One solution would be to wire the rooms as four separate circuits. This would permit independent control in each of the four rooms, but provides no means for global, system control. Universal recognized this and determined that the 'AREA' feature was necessary. The 'AREA' feature, described below and enabled by use of the new ES5705CTL control device solves this issue.

The AddressPro® AREA Feature

The AddressPro® 'AREA' feature provides a method of subdividing the system using programming assignments instead of making actual breaks in the control circuit. AddressPRO® control devices can be given an AREA number assignment, while ballasts and dimming modules can be given an AREA number assignment and a zone number assignment within that AREA.

Control devices assigned to a particular AREA can only control ballasts and dimming modules that have been assigned to the same AREA. A notable exception is assignment of a control device to AREA # 0. Commands issued from control devices assigned to AREA #0 are honored by all ballasts and dimming modules, regardless of their own AREA assignments. This capability permits installation of local control devices, controlling only the particular AREA to which the control has been assigned. Also, global control devices, which have been assigned to AREA #0 can control all ballasts and dimming modules connected to the entire control circuit.

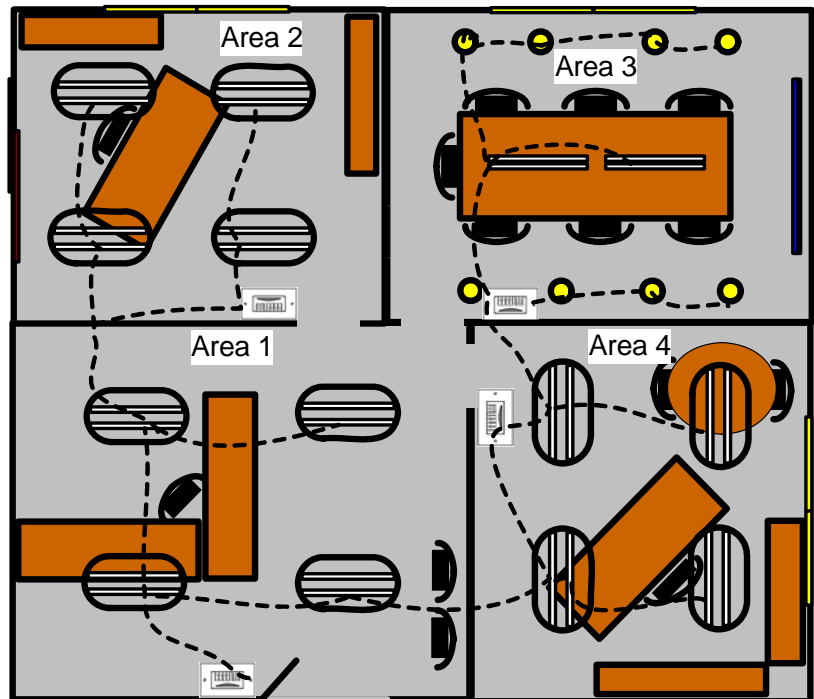
The AddressPro® AREA feature allows a single system to be easily subdivided into independent sub-systems with dedicated controls. It further allows this subdivision to be made using programming assignments instead of costly wiring changes. Finally, it permits connection of a global control device, which can assert control over all AREAs.

ES5705CTL AREA Programming Remote

The new ES5705CTL AddressPro® Area Programming Remote adds the AREA assignment feature to all of the functionality of the original ES5704CTL Zone Programming Remote. Please refer to the Dimming & Controls section of the Universal Lighting Technologies web site at www.universalballast.com for all technical details and operating instructions.

Application Example:

The example shown has two offices, one conference room and one reception area. All of the controls and luminaires are connected to the AddressPro® control loop. By using the ES5705CTL, four AREAs can be programmed so that each room can be individually controlled by the local wall control. The wall control in the reception room (Area 1) can also be programmed for use as a global control device to control the lights in all of the rooms. This function could be used at the end of the workday to ensure that all of the lights are turned off.



--- AddressPro®
Control Loop

AddressPro®
Wall Control