

**Issue:** #TB140.2  
**Date:** July 2, 2001  
**Topic:** Lighting control panels

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## Glossary of Terms

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**After-hours** – the time period in a building that is outside of normal business or operating hours when occupancy is expected to be very low.

**Aperture** – a window opening that allows light into a photocell for sensing light level. The aperture is usually adjustable to limit the amount of light that enters the opening.

**Astronomic control** – a method of calculating dusk/sunset and dawn/sunrise times that change with the year's seasons, based on latitude/longitude global position. This method may be used instead of photocell control as a basis for on/off control of exterior lighting.

**Automatic control switch** – a type of switch that can receive control signals over the building's normal power wiring system.

**Blink warning** – an automated method of warning occupants of an impending shut-off of lighting by blinking lights. Sometimes referred to as "flick warning."

**Central/centralized control** – a control method where control for a system is located in one central location. Usually all control commands come from this location and wiring connections originate at this location.

**Channel** – an automation structure that enables lighting or devices that control lighting to be grouped for common control.

**Contact** – an electrically operated device that provides on/off switching control. It is generally operated by line voltage power and usually will switch multiple circuits or wiring segments simultaneously. (See Relay.)

**Control scenario** – a preprogrammed control strategy usually designed for a common commercial or industrial application.

**Dataline** – the wire that connects a system of lighting control panels and compatible devices (i.e., dataline switches and automation modules) through which data communications takes place. It is also often used as a term for network communications. (See "networking.")

**Daylighting** – a lighting control method that changes the amount of light provided by lighting fixtures as the contribution of ambient sunlight changes.

**Distributed control** – where control for a device is located at or near the item being controlled. This is the opposite of centralized control. The benefits of this approach are often better modularity, convenience, and reduced wiring costs.

**Distributed processing** – the capability of a panel or other network components to operate independently of other networked panels while still retaining the ability to share information over the system dataline. This keeps isolated unit failures from affecting other panels and devices in the system.

**Echelon Corporation** – a provider of control system technology and founding member and sponsor of the LonMark® Interoperability Association.

**Egress delay** – a time delay specifically designed to hold lighting ON for an interval of time after a control signal would otherwise have shut lighting OFF, thereby providing illumination for occupants departing from a building.

**Electrically held** – describes a type of switching device, contactor, or relay which requires a supply of constant electrical power to keep or hold it in the ON or OFF state.

**Expansion panel** – a lighting control panel that has no intelligent control capability on its own, but receives some control and command signals through wiring from a main lighting control panel.

**Free topology** – a method of dataline wiring to devices that allows connections, wire runs, and branching in any location and in any direction without compromising the reliability of the dataline communications.

**Home run wiring** – wiring that is run all the way back to a central lighting control or breaker panel from each control point without branching or breaking off in other directions.

**Latching** – (See “mechanically held.”)

**Lighting control panel** – a complete assembly, consisting of a panel interior with relays or contactors and power supply in an enclosure, that is designed specifically to control lighting in a building.

**Linear topology** – a method of wiring devices where the wire must run in a straight line fashion from one device to another to ensure reliable signals reaching all devices.

**LonMark® Interoperability Association** – an organization that promotes LonMark® products, recommends design guidelines for interoperable LonWorks® based products, and verifies that products meet the Association’s guidelines for interoperability.

**LonTalk®** – a standard protocol for device-level communications in control systems. (See LonWorks, Echelon Corporation.)

**LonWorks®** – a networking platform for control systems created by Echelon Corporation that standardizes how devices communicate with each other. (See LonTalk, Echelon Corporation.)

**Main panel** – a lighting control panel with all control and command signal capability in itself. It can operate as a stand alone panel and can also provide control signals to expansion panels.

**Mechanically held** (also called **latching**) - describes a type of switching device, contactor or relay that requires a momentary signal of electrical power to change the switch from one ON/OFF state to the other. After the state change, power is no longer required to hold it in the ON or OFF state.

**Multi-way switching** – the ability to switch the same lighting fixtures or lighting zones from multiple switch locations.

**Normally closed** – a relay or contactor whose manufactured design is to be closed in the resting state.

**Normally open** – a relay or contactor whose manufactured design is to be open in the resting state.

**Networking, network communication** – a type of communication between lighting control panels and devices where electronic information is transmitted and received, usually over a pair of wires.

**Occupied/Unoccupied** – strategy where control scenarios are based on whether a facility or specific facility or specific area within the facility is operating during normal business hours when occupants are expected to be present (Occupied), or after regular working hours when occupancy is expected to be very low (Unoccupied). Sometimes called normal hours/afterhours.

**Panel interior** – the principal hardware infrastructure of the lighting control panel, which provides the mounting framework for the panel's relays or contactors, power supply, control modules, and the panel intelligence boards or cards. In addition, it provides isolation between the line- and low-voltage sections of the panel. It mounts into a corresponding tub or enclosure.

**Photocell** – a device that senses the level of light, usually for the purpose of controlling interior or exterior lighting.

**Photocell lockout** – a control operation that keeps off or "locks out" lighting from being on because a photocell detects adequate contribution of sun light.

**Programmable system switch (PSS)** – a type of switch input available with Complete Control panels. These inputs can be programmed to control any group of relays in the system, either directly or using control scenarios.

**Relay** - an electrically operated device that provides ON/OFF switching control. It generally uses low power signals to operate and switches just a single circuit or wire segment. (See contactor.)

**Shut off/sweep off** – a lighting control event that is intended to shut off lighting; particularly targeted

to turn off lighting that has been left on and is not needed. Sometimes this event can repeat at regular intervals to turn lighting OFF that may have been left ON.

**Smartwiring** – the ability to link automation channels or Dataline switches to a relay or group of relays simply by pushing buttons without the need for external programming tools or software.

**True override time period** – a timed override of lighting that begins timing from the moment an occupant initiates the override until the override time expires. This is in contrast with an override that only persists until the next scheduled system event.

**Tub/Cover or Enclosure**– these are interchangeable terms for the metal case that encloses a lighting control panel. The tub is the steel case itself, the cover serves as a lid for the case. (See also TB#139.2 for more information on this topic.)

**Zero cross switching** – a technique used by switching devices, relays, contactors, etc., that reduces wear and increases life by switching at the instant the AC voltage is zero.