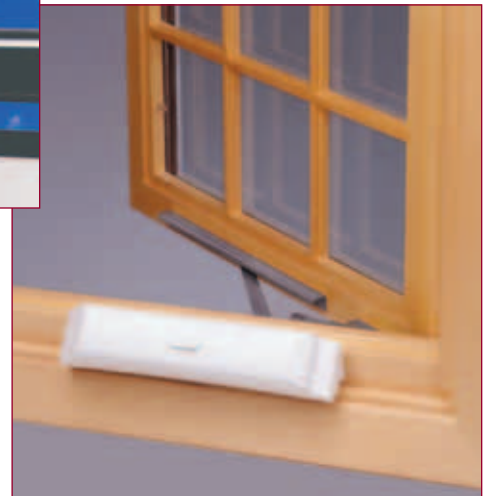


Introducing Truth's next generation of power window systems... Sentry II WLS® for windows and light skylights. Based on the powerful and reliable mechanics from our previous motorization system, we've added a new digital electronics package with built in power conversion. This new Sentry II WLS system truly takes over where Truth's Sentry 2000® left off.

The new electronics package provides many new features to enhance a homes comfort and its owner's peace of mind.

- **Retrofits** onto casement and awning windows and light skylights operated with a hand crank manufactured by Truth Hardware (see Truth Tips). The motor system drives the same input the handle is attached to.
- **Power conversion** built right into the wall mounted control package which accepts direct connection of line voltages from 100 to 240 VAC at 47 to 440 Hz. No more transformers to complicate and add expense to the installation.
- **Power Blind System compatible.** Centralized power window system control is now possible with Sentry II's ability to accept and control most 24 VDC power blind systems. The Sentry II's remote and wall switch can be used to control both window and blind motors for convenient, centralized control.
- **Power Protected Memory** eliminates the need to "reset" or retrain the motor after a power outage. Once the installation is complete the motor never needs further service or adjustments – even after prolonged power outages!
- **RF remote** compatibility built into all motor control packages as a standard feature. Simply order the optional remote to add new and exciting control capability for the homeowner.
- **Rain Sensor** - standard with all kits, automatically closes the window or skylight at the first sign of moisture. Corrosion resistant sensor decreases maintenance cleaning requirements and extends service life.
- **No special preparation** is required by the window or skylight manufacturer. The kits are suitable for new construction or retrofit applications. Please consult with your electrical contractor for a retrofit evaluation.



- **ETL Listed and CE Approved.** Meets all requirements for Class II installations.
- **Safety** - Automatic motor reversal has been engineered into the system which is intended to reverse the motor should an obstruction stop the window while closing. In addition, a screen interlock is provided which, when properly installed, electrically disconnects the motor when the screen is removed. These features are intended to help prevent personal injury which could result from reaching into the window area during its operation.
- **Motorized Sash Locks** are available for use with the WLS system for casement and awning windows. See Truth's Casement and Awning Sash Lock section for complete details.
- **Building Automation Systems** can easily be tied into the control electronics for virtually limitless ventilation possibilities.

SENTRY II WLS CAPACITY

- When used on light skylights, Truth's Sentry II WLS is load rated at 40 lbs at the chain. This equates to a total skylight hatch weight of 80 lbs.
- When used on casement windows, the Sentry II WLS is designed to work on all window systems meeting the AAMA-101 hardware load requirements. (See Truth Tips)

- When used on awning windows, the Sentry II WLS is designed to work on awning windows with a properly sized counter-balance hinge (See Truth Tips) and operator. (Consult awning operator specifications).

CONTROL OPTIONS

The Sentry II WLS kit comes with a standard wall control panel. The same control panel can also accept and control most commercially available 24 VDC mini blinds (not provided by Truth Hardware). The panel also provides feedback to the user via a status light (LED). This small LED shows when the motor is running, or if there are any problems during window or skylights operation.

The optional RF **Hand Held Remote** is available which adds even more flexibility and convenience to a homes windows or skylights.

REMOTE FEATURES INCLUDE:

- **Infinite Number** of windows & skylights can be controlled with a single remote.
- **9 Zones** or "unit codes" are available to allow units to be controlled in groups and organized to a users needs.
- **Motorized Blinds** (supplied by others) can be controlled with the same remote.
- **Control windows and skylights** from one remote – The Sentry II HS

SENTRY II WLS POWER WINDOW SYSTEMS

(for large/heavy skylights) uses the same remote as the Sentry WLS for coordinated ventilation throughout the entire home or building.

- **Built in Thermostat** allows windows and skylights to open and close together, to coordinate a comfortable interior temperature. Takes advantage of true “chimney effect” cooling to reduce energy demands.
- **Rolling Code Technology** proven in garage door openers is built into every remote to provide high security and peace of mind.

WARRANTY: The Sentry II family of products is warranted for one year against defects in materials and workmanship on all electronic and mechanical components. This warranty only covers electrical products that are used to drive manual hardware systems (operators and hinges) manufactured by Truth Hardware.

CONSUMER NOTICE:

The Sentry II WLS power system must be installed by a qualified electrician.

PRODUCT APPLICATION ASSISTANCE:

If you need assistance with product configurations to meet your needs, please visit our website at www.truth.com. Under the “Technical Support” tab you will find all of the technical information needed to properly configure and specify all elements of an automated window installation, including installation instructions, pre-wiring and proper hardware requirements. You can also contact Truth’s highly trained Technical Service Staff who can assist you with the selection of the appropriate hardware. These individuals are available during normal business hours (CST) at 800-324-4487.

ORDERING INFORMATION:

Ordering of the new Sentry II systems is much easier than in the past. All hardware necessary for mounting the system on either a window or skylight is now included in the same kit.

Special Note: Motor covers are ordered separately to help keep your inventory costs down. Sentry II motor kit packaging includes additional space so cover can be added which allows the manufacturer to supply a complete kit to the jobsite.

Sentry II WLS for windows and light skylights

Order 1 each per window:

43.51.00.002 - Sentry II WLS System
12490.XX - Cover (.xx denotes finish code)

Order 1 Hand Held Remote (optional):

43.53.00.002 - Hand Held RF Remote

Finish Codes: The WLS cover is available in .02 Black, .03 Bronze, .23 Chestnut Bronze, .24 Beige, .32 White, & .78 White.

If you are applying the Sentry II to a Pella brand window you must order the following items which include special hardware and instructions.

Order 1 each per window:

43.54.00.002 - Sentry II WLS System - Pella

12490.XX - Cover (.xx denotes finish code)

Order 1 Hand Held Remote (optional):

43.53.00.002 - Hand Held RF Remote

TRUTH TIPS:

1. Truth Hardware does not recommend the use of the Sentry II WLS on any casement window system that does not meet AAMA 101 hardware load requirements. All hardware and motor system warranties are void if the window system does not meet these guidelines.

2. Awning windows must be equipped with a properly sized counter balance hinge such as Truth Hardware’s 13 series or 34 series 4-bar hinges. If an awning window is specified with butt (or continuous) hinges, a skylight operator and motor system must be used. All hardware and motor system warranties are void if these guidelines are not followed. (See Tech Notes).

3. Unless otherwise specified, the Sentry II WLS power window system is designed to operate any properly sized rotary hardware and hinge system manufactured by Truth Hardware. Use of the Sentry II WLS motor system on windows or skylights with manual hardware manufactured by companies other than Truth Hardware is at your own risk. For verification, look for the Truth logo/name stamped on the hinge and operator arm, or consult with the window manufacturer. If your hardware is not manufactured by Truth Hardware, contact Truth’s Technical Service Department for available options at 800-324-4487.

4. The Sentry II WLS system is rated for use in indoor applications only.

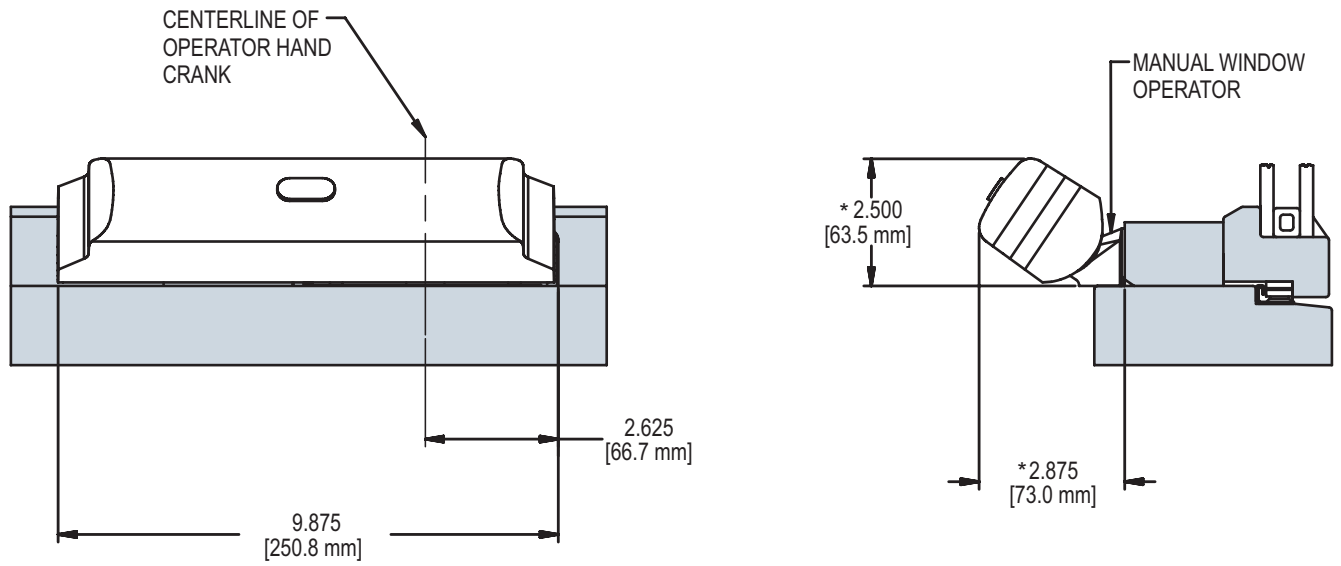
5. The Sentry II WLS power skylight system is designed to be used on skylight operators that lift to open and pull to close in the center of the skylight. Therefore, the stiles of the skylight panel must be rigid enough in the closed position to ensure proper corner pull-in for a weather tight seal and rigid enough in the open position to provide proper skylight stability when supported at a single center point. The wider the skylight is, the more significant this issue can become. For more assistance, contact Truth Hardware Technical Services.

6. The Sentry II WLS requires 1 amp of 120 VAC.

INCLUDE TRUTH SPECS IN YOUR NEXT SKYLIGHT PROJECT

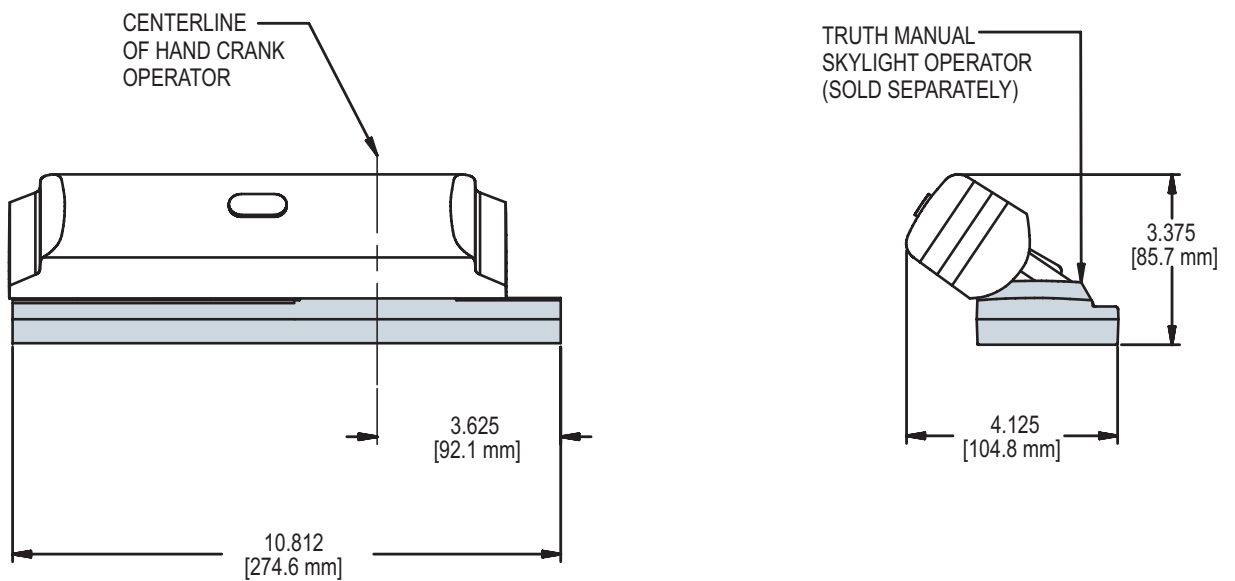
Motorized system for skylights (not exceeding 80 lbs), awning or casement windows. Mounting should accommodate wood, PVC or metal skylights and windows. Motorized system shall replace the handle on crank type skylight, casement or awning window operators manufactured by Truth Hardware. The motor drive to be constructed of a high pressure zinc die cast housing, containing hardened steel drive gears and a high torque 24 volt DC motor. Interchangeable drive adapter allows the system to be compatible with all Truth operators and many other window hardware systems not manufactured by Truth (contact Truth Technical Services for a list of compatible hardware). Mounting hardware to be provided to accommodate a wide range of window profile shapes and materials. Unit to be available with a decorative plastic cover which allows convenient access to mechanical components and easy installation. The control system is to be supplied with standard line voltages from 100 to 240 VAC at 47 to 440 Hz. (no transformer required). The wall mounted motor control is to come complete with its own receptacle box and cover plate. Motor system kit shall include: motor drive, decorative cover, wall control, and mounting hardware. This motor system shall be “Sentry II WLS” series as manufactured by Truth Hardware, Owatonna, MN.

FIG. 1 WLS MOTOR SYSTEM APPLIED TO AWNING/CASEMENT WINDOW



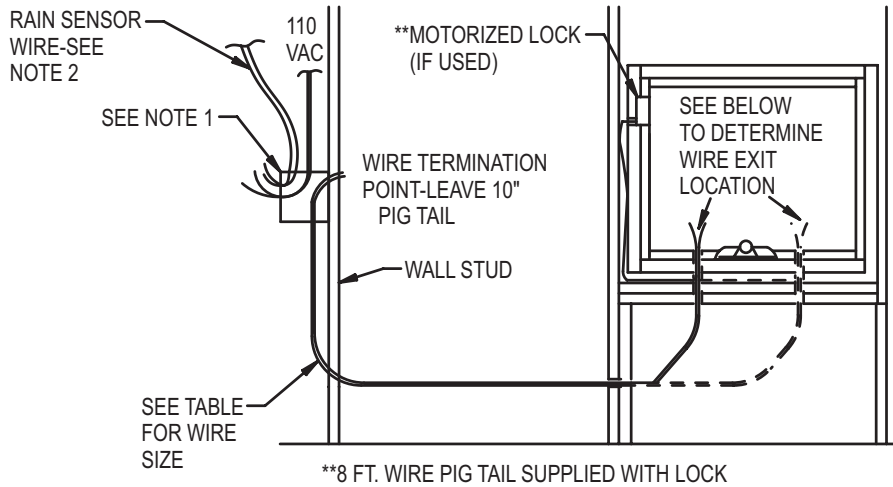
* THESE DIMENSIONS WILL VARY SLIGHTLY DEPENDING ON MANUAL OPERATOR USED

FIG. 2 WLS MOTOR SYSTEM APPLIED TO SKYLIGHT WINDOW



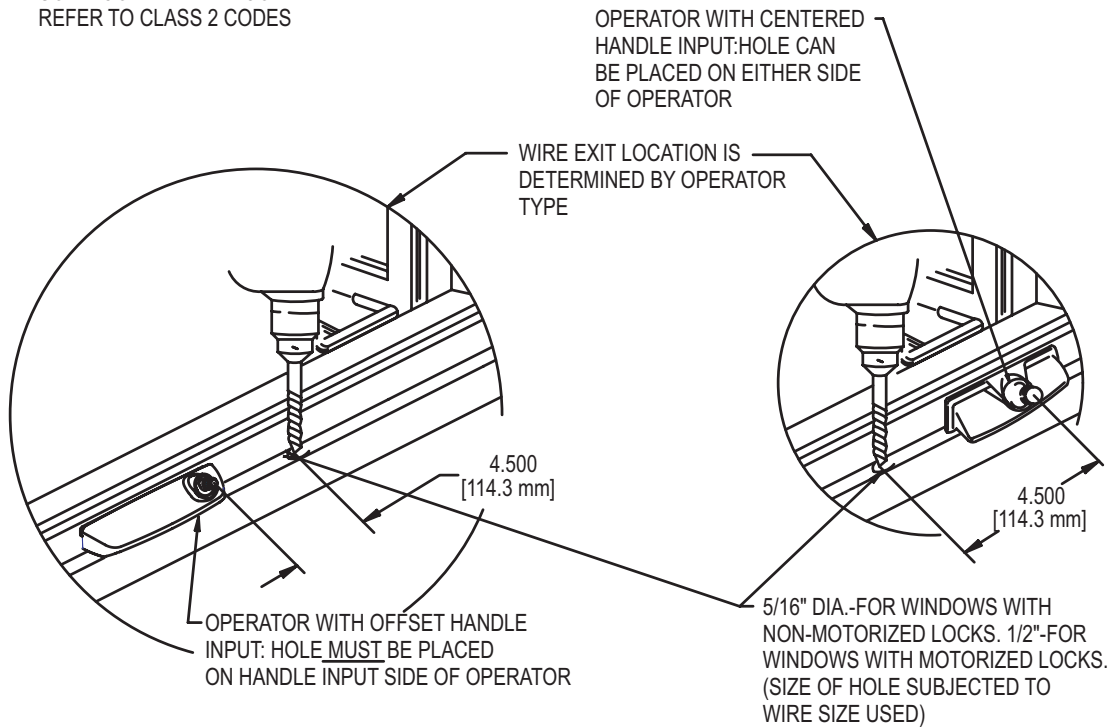
SENTRY II WLS POWER WINDOW SYSTEMS

FIG. 3 SENTRY II PRE-WIRING FOR CASEMENT/AWNING WINDOWS



WIRE SIZE (CLASS 2)	TOTAL DISTANCE FROM CONTROL PANEL TO MOTOR	NUMBER OF CONDUCTORS		
		MOTOR ONLY	MOTOR + 1 LOCK	MOTOR + 2 LOCKS
18 AWG	50 ft (15m)MAX	2	4	6
14 AWG	100 ft (30m)MAX			
12 AWG	150 ft (60m)MAX			

SOLID CORE WIRE RECOMMENDED
REFER TO CLASS 2 CODES

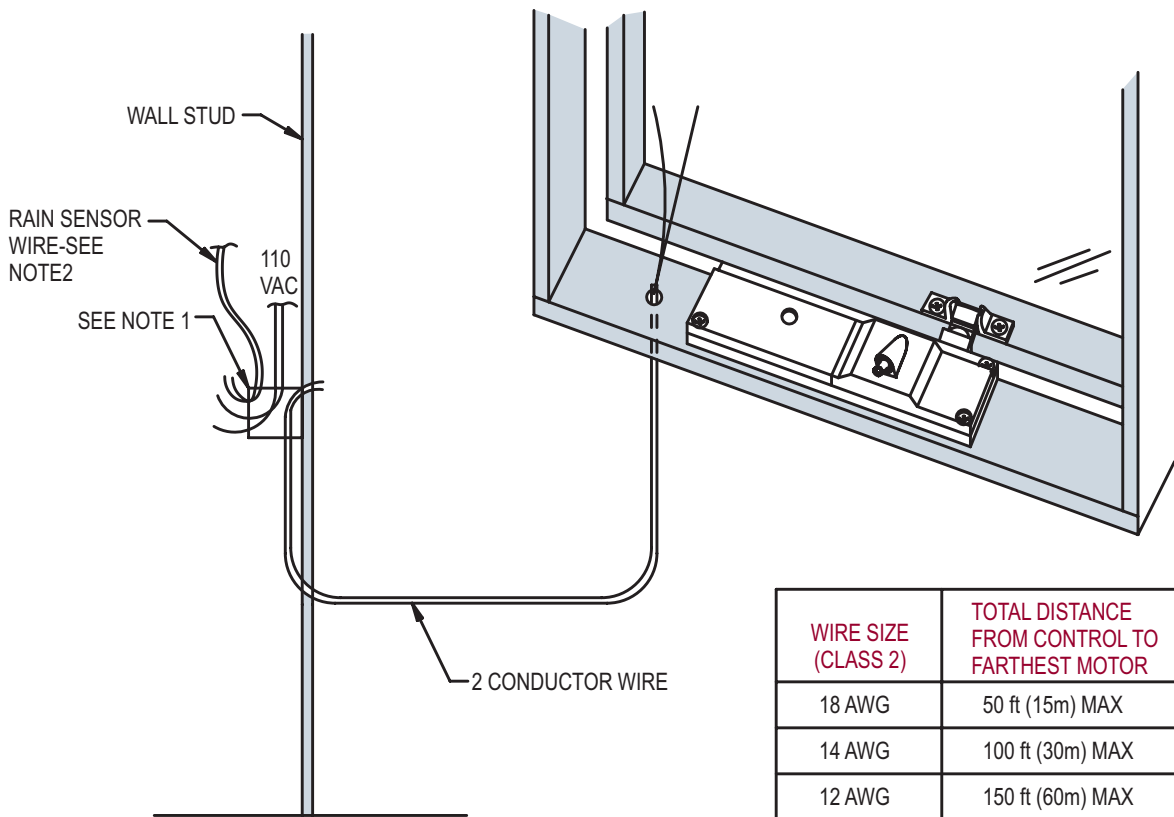


NOTE:

1. EACH POWERED WINDOW REQUIRES A CONTROL PANEL. CONTROL PANEL FITS A FINISHED WALL OPENING OF 3 7/8" WIDE BY 4 1/8" HIGH. (RECEPTICAL BOX IS SUPPLIED AS AN INTEGRAL PART OF THE CONTROL PANEL.) CONTROL PANEL CAN BE LOCATED IN A REMOTE LOCATION IF THE CONTROL PANEL IS NOT INTENDED TO BE THE PRIMARY MEANS OF CONTROL. (EXAMPLE: RF REMOTE CONTROL OF BUILDING AUTOMATION CONTROL SYSTEM)

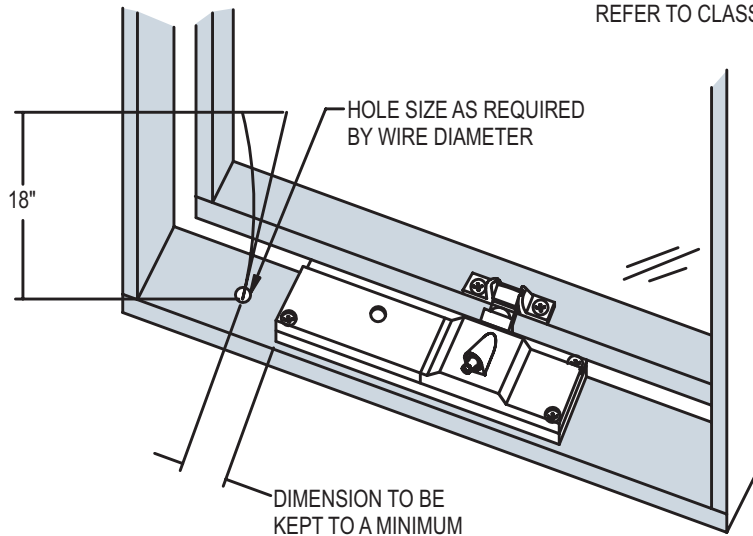
2. RAIN SENSOR WIRE MUST BE 22 GAUGE TWISTED, SHIELDED PAIR

FIG. 4 SENTRY II WLS PRE-WIRING FOR SKYLIGHTS



WIRE SIZE (CLASS 2)	TOTAL DISTANCE FROM CONTROL TO FARTHEST MOTOR
18 AWG	50 ft (15m) MAX
14 AWG	100 ft (30m) MAX
12 AWG	150 ft (60m) MAX

SOLID CORE WIRE RECOMMENDED
REFER TO CLASS 2 CODES



NOTE:

1. EACH POWERED SKYLIGHT REQUIRES A CONTROL PANEL. CONTROL PANEL FITS A FINISHED WALL OPENING OF 3 7/8" WIDE BY 4 1/8" HIGH. (RECEPTACLE BOX IS SUPPLIED AS AN INTEGRAL PART OF THE CONTROL PANEL) CONTROL PANEL CAN BE LOCATED IN A REMOTE LOCATION IF THE CONTROL PANEL IS NOT INTENDED TO BE THE PRIMARY MEANS OF CONTROL. (EXAMPLE: RF REMOTE CONTROL OR BUILDING AUTOMATION CONTROL SYSTEM)
2. RAIN SENSOR WIRE MUST BE 22 GAUGE TWISTED, SHIELDED PAIR



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