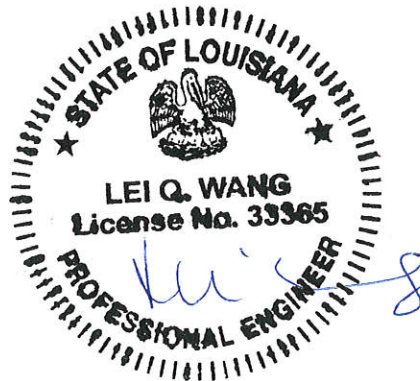


Louisiana
Department of Transportation
And
Development

**Traffic Control Standard
Number 220**

Accessible Pedestrian Signal (APS)



4/7/2021

Revised April 7, 2021

GENERAL

The Accessible Pedestrian Signal (APS), when fully assembled, shall consist of the following two (2) compatible components:

- One (1) Accessible Pedestrian Signal Station
- One (1) Cabinet Control Unit

ELECTRICAL

All wiring must meet applicable NEC requirements.

The APS must operate using a nominal input voltage of 120 volts alternating current (VAC). If the device requires a nominal input voltage of less than 120 VAC, the appropriate voltage converter must be provided.

LABELING

APS Station equipment and CCU equipment must be permanently marked with manufacturer name or trademark, part number, date of manufacture, and serial number.

ENVIRONMENTAL

The APS components must perform all required functions during and after being subjected to the environmental testing procedures described in NEMA TS2 Sections 2.2.7, 2.2.8, and 2.2.9. All parts must be made of corrosion-resistant materials.

CONFLICT MONITORING

The accessible pedestrian signal must monitor the “Walk” condition for conflict operation and must disable the “Walk” functionality upon detection of a conflict.

PRODUCT ID 52850 – Accessible Pedestrian Signal Station (APS Station)

Primary APS Station Components:

- Pedestrian Actuation Sign R10-3e
- Weatherproof Speaker for Audible Messaging
- Vibrating Pushbutton (VPB)
- Enclosure
- Mounting Hardware for Pole Mount

Programming

The APS Station must be programmable using a laptop computer via Contractor supplied software or Contractor supplied programmer.

Pedestrian Actuation Sign

The Station shall come complete with a R10-3E pedestrian signal information sign. Sign must be constructed with ASTM Type IV sheeting and meet MUTCD requirements.

Audible and Tactile Functions

The Locator Tone, Audible Messages, and Audible Beacons features must automatically adjust to the surrounding ambient sound levels and have independent minimum and maximum volume limits. Automatic volume adjustment in response to ambient traffic sound level must be provided up to a maximum volume of 80 decibels.

Audible Messages

Audible messages must emanate from a weatherproof audible speaker via programmable digital audio technology. Station must come with a bank of factory programmed audio messages and tones shall also allow the user access to create custom messages. A minimum of fifteen (15) audio messages shall be programmable per station.

The preprogrammed “Wait” message must only announce once per actuation.

Locator Tone

The locator tone feature must be able to be deactivated and should have three (3) programmable locator tones. The max volume of the locator tone must be 100 decibels.

Vibrating Pushbutton (VPB)

The Vibrating Pushbutton (VPB) must be a single assembly containing an ADA compliant, vibrotactile, directional arrow button. The VPB tactile arrow must be at least 2” in length, field adjustable to two (2) directions, and require no more than 5 pounds of applied force to activate.

VPB must include an Ethernet, serial, or USB programming interface.

Enclosure

The APS Station enclosure must have a NEMA 4X rating and must be black in color. Metal housings shall be finished both inside and out, with a thick black powder coating with two (2) coats of high-grade black enamel. Each coat shall be baked to resist peeling and chipping. Plastic housings shall be constructed from one (1) piece of injection molded black plastic.

Hardware

Do not use self-tapping screws on the APS Station.

PRODUCT ID 52851 – Accessible Pedestrian Signal Cabinet Control Unit (CCU)

Primary CCU Components:

- Cable Assemblies
- Interconnect Board

Functional Characteristics

The CCU will be used as an interface and connect to the APS Station. The CCU shall have labeled LED indicators for each channel operation and shall reset upon loss of internal communication.

This equipment must be able to be installed within a traffic controller cabinet and must allow the use of up to 16 APSs (4 maximum per channel) with a single traffic controller cabinet.

Timing for the Station must be supplied by the “Walk” and “Don't Walk” signals.

Communication

The CCU must have an Ethernet interface and an integral web server to provide information on audible/tactile APS Station status, access to event logs, and remote configuration of APS Station options.

Inputs

“Walk” and “Don't Walk” inputs must be optically isolated 80-150 volts AC/DC, 5mA max. General purpose inputs must be optically isolated 10- 36 volts AC/DC, 10mA max.

Outputs

Outputs must be optically isolated 36 volts AC/DC peak, 300mA solid state fused contact closures. CCUs must include a normally open relay contact fault output.

Hardware

Necessary mounting hardware should be furnished as applicable.

PACKAGING

All boxes must be clearly labeled with the supplier's name, description of the product including the brand and model number of the unit as applicable, and the DOTD Purchase Order number.

Packaging must be designed in such a manner as to prevent damage to the Station while in shipment.

The components of the APS Station must be packaged together one (1) Station per box.

The components of the APS CCU must be packaged together one (1) CCU per box.

WARRANTY

All parts and components must come with a standard manufacturer's warranty.

TECHNICAL SUPPORT AND SUPPLY

Contractor shall maintain an ongoing program of technical support for the APS. Direct technical support personnel shall be available to come to installation sites at no additional cost to the Department.

Contractor must provide twenty-four (24) hours a day, seven (7) days a week technical support personnel that will be on call. Contact information shall be provided to the State Traffic Signal Engineer. Contractor must immediately notify the State Traffic Signal Engineer of any contact information changes.

An adequate inventory of parts to support maintenance and repair of the APS shall be maintained by the Contractor and readily available for delivery within forty-eight (48) hours of order.

TRAINING

At no additional cost to the Department, Contractor shall provide DOTD personnel, as designated by the State Traffic Signal Engineer, with informal "hands-on" training courses, inclusive of all necessary training materials. Training shall take place at various LADOTD District and Section Offices located throughout the State.