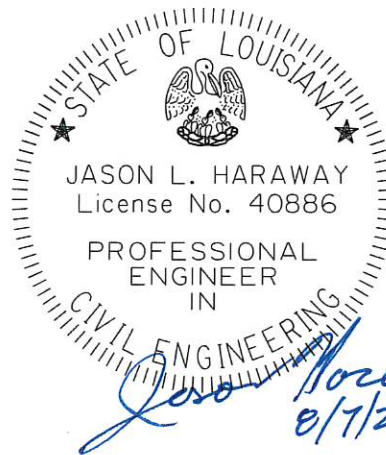


Louisiana  
Department of Transportation  
and  
Development

Traffic Control Standard  
Number 220

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Accessible Pedestrian Signal (APS)



Revised August 07, 2024

## **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(s) 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 either one (1) double sided MUTCD R10-3E pedestrian actuation sign or two (2) single sided MUTCD R10-3E signs. Double sided signs shall have a left pointing arrow on one side and a right pointing arrow on the opposing side for the “PUSH BUTTON TO CROSS” portion of the sign. If providing two (2) single sided signs, one sign shall include a left pointing arrow and one sign shall include a right pointing arrow for the “PUSH BUTTON TO CROSS” portion of the sign. Sign(s) must be constructed with ASTM Type IV sheeting.

## **Audible Functions**

The Locator Tone, Audible Messages, and Audible Beaconing 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 volume of 80 decibels. The maximum volume of the system must be 100 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. The station 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.

## **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**

Self-tapping screws are not allowed.

### **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 APS's (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.