SAFEPASS

Solution for safer pedestrian crossings

Tacse

Road & Railway Traffic Signal Solutions

SAFEPASS

Solution for safer pedestrian crossings

INTRODUCTION

SAFEPASS is a smart solution, fully designed and manufactured by TACSE, based on an autonomous control that regulates the phases of different traffic lights, depending on the demand from pedestrians. This solution is especially designed for two-way streets with no traffic intersection, where the flow of vehicles is usually high (and therefore they have priority), but there is also a need to facilitate the crossing to pedestrias, giving them enough time to do it safely.

THE SAFEPASS SYSTEM ELEMENTS

(a) 2 poles (one for each flow direction), that could be 6 m overhead curved poles (see **figure 1**) or 2.4 m straight poles (see **figure 2**).

(b) 4 LED traffic lights for vehicles in Φ 200 mm (13/200 model), with 1 red module and 2 blanking yellow modules.

(c) 2 LED traffic lights for pedestrians in Φ 200 mm (12/200 model), with a green pedestrian module and a dual module with red pedestrian (for the red phase) and green countdown (for the green phase).

(d) 2 vandal proof pedestrian push-buttons.

(e) 1 metal cabinet, that could be mounted on the pole (see **figure 1**) or on the floor (see **figure 2**), wherein the control system and a light sensor is housed.

(f) The support arms and contrast pannels necessary for the installation of traffic lights.

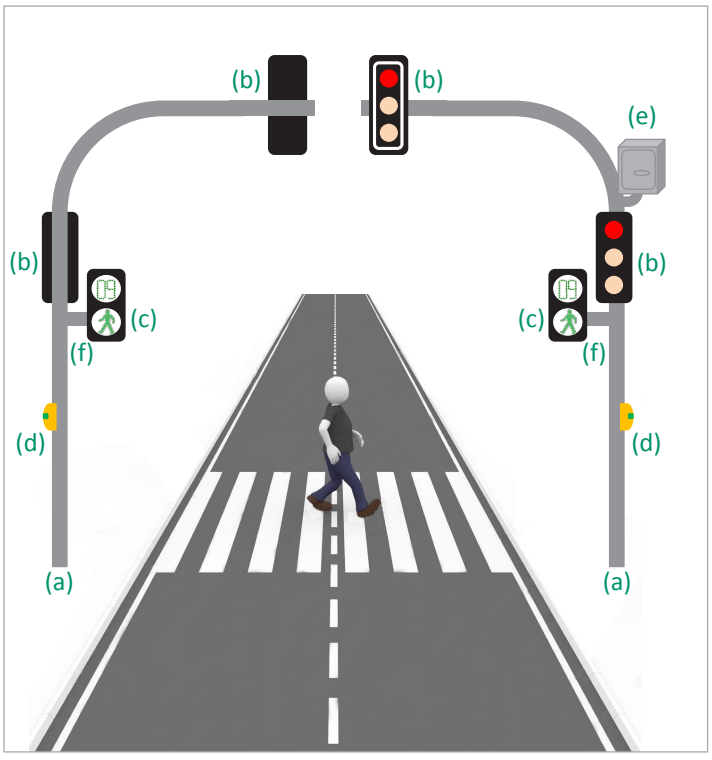

Figure 1: Pedestrian crossing type 1

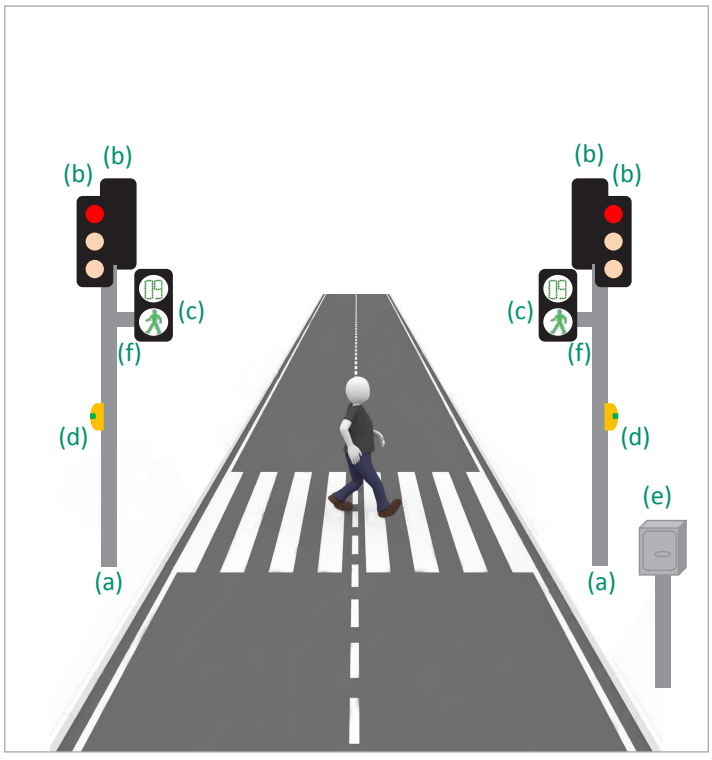

Figure 2: Pedestrian crossing type 2

OPERATION AND PHASES

- SAFEPASS is a complete and fully autonomous solution, which is characterized by its easy installation and maintenance.
- The standard voltage is 230 Vac. On request it could run to 12 Vdc, allowing the use of solar panels and batteries..
- It is possible to configurate the crossing time and the transition times between phases, adapting the solution to different scenarios.
- A light sensor that regulates the brightness of the lights depending on the ambient light level is included.

The system works always within one of the following 3 phases, which will be repeated cyclically:

1. Wating phase: when there are no pedestrians waiting to cross, the control gives priority to vehicles. Therefore, the vehicle traffic lights are on alternate flashing amber (indicating prudence), while the pedestrian traffic lights are red.

2. Pass request phase: when a pedestrian wants to cross, he activates the button. If there has been no request for passage in the last 2 minutes, vehicular traffic lights will change to steady amber and, after a few seconds, they will turn to red (giving sufficient time for vehicles to stop). A few seconds later, the pedestrian traffic lights will turn green, and the green countdown will start showing the time remaining to cross. But if there had been any request for passage within 2 minutes before, the panel will wait up to 2 minutes and, only then, stop the vehicle and give priority to pedestrians.

3. Crossing phase: it is the time a pedestrian has to cross safely until the pedestrian green lights start blinking, and the green countdown is set to zero, indicating that the time to cross is over. At that time, the pedestrian traffic lights return to red and, a few seconds later, the vehicle traffic lights switch to flashing amber alternate, starting again the waiting phase (of at least 2 minutes) until a new pedestrian pushes the button again.