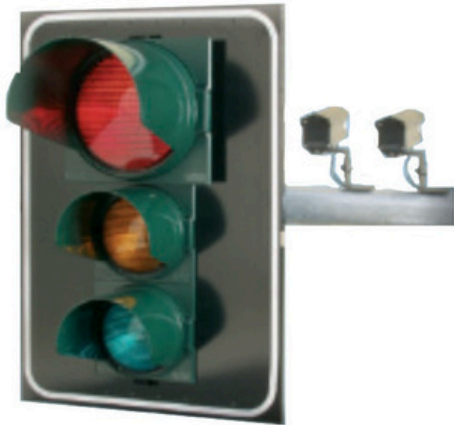




SCAE



SPC300

Pedestrian Traffic Controller and Vehicle Overspeed Deterrent

The SPC300 traffic signal controller manages pedestrian crossing systems with or without the vehicle speed limiting function.

It supports the management of two radar devices to detect vehicle speed, immediately triggering a stop signal on the lane where the speed limit violation is detected.

Upon request, the system can be integrated with equipment to document red-light violations through photographic evidence.

Multiple operating conditions can be configured for different scenarios; here are some examples:

NORMAL CONDITION (Vehicles at regular speed and no pedestrians present):

- Green vehicle signal L1;
- Green vehicle signal L2;
- Red pedestrian signal.

SPEED LIMIT EXCEEDED DETECTION (Side 1):

- Red vehicle signal L1 (for a programmable duration);
- Green vehicle signal L2;
- Red pedestrian signal.

SPEED LIMIT EXCEEDED DETECTION (Side 2):

- Green vehicle signal L1;
- Red vehicle signal L2 (for a programmable duration);
- Red pedestrian signal.

PEDESTRIAN CALL (OR SPEED LIMIT EXCEEDED ON BOTH SIDES):

- Red vehicle signal L1;
- Red vehicle signal L2;
- Green pedestrian signal (for a programmable duration).



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Controller Capacity

The SPC300 traffic signal controller is designed to manage a maximum of:

- 3 Traffic Signal Groups (9 Triac power outputs), including:
 - 2 groups of 3 triacs each for vehicle signal head control;
 - 1 group composed of either two or three triacs for pedestrian signal head control.
- 8 Opto-isolated digital inputs for signal acquisition.

Controls and Safety

The controller is equipped with the following standard safety checks:

- Verification of proper green light activation (conflicting greens and logical consistency with issued commands);
- Amperometric monitoring for detecting burned-out red signal lamps;
- Microprocessor "watchdog" control;
- If any of these safety checks are triggered, the system automatically enters emergency mode (flashing mode).

Programming

Controller programming is performed via PC using standard terminal emulation software such as Windows HyperTerminal.

This interface allows the user to input phase timing parameters into the controller.

In addition to data entry, this function also enables reading of stored values from the controller's memory.

Human-Machine Interface

The user interface consists of a control panel that allows the selection of the following operating modes:

- Automatic;
- Manual;
- Flashing;
- All-Red.

A solid-state LED indicator displays status alerts as follows:

- 1 Hz flashing – Conflict in green signal check triggered;
- 5 Hz flashing – Burned red signal lamp detected.



Construction Features

The SPC300 traffic signal controller is built as a compact single-board unit, equipped with:

- Power supply for logic voltages and 24 VDC input signal powering;
- 1 microprocessor with reprogrammable onboard Flash memory;
- 1 serial EEPROM for configuration data storage;
- 1 RS232 serial communication port;
- 8 opto-isolated inputs operable at 24 VDC;
- 1 14-pin M+F connector with screw terminals for input signal wiring;
- 11 4 mm² terminals for connecting traffic signal head command outputs.

Enclosure

Constructed in hot-molded fiberglass-reinforced polyester, with the following dimensions:

- Height: 850 mm;
- Width: 590 mm;
- Depth: 320 mm;
- Protection rating: IP55.

Electrical Specifications

- Power supply: 230V AC -20% / +15%;
- Consumption (excluding signal lamps): 10 VA;
- Maximum total output power: 3200 W;
- Maximum power per output: 800 W;
- Output protection: 4A EF-type fuses.

Environmental Conditions

- Operating temperature range: -20°C to +60°C;
- Relative humidity: up to 98%.