The ST750P family is closely related to the acclaimed ST900 range of Siemens high performance traffic controllers. It is optimised for use as a pedestrian controller and provides Pelican, Puffin and Toucan control strategies at both LV (230V) and ELV (48V) drive levels.

In common with the ST900 controllers, the ST750P family is compatible with the whole range of Siemens street furniture, including Helios LED signals, LED nearside signals and LED wait indicators, all offering significant power cost savings over conventional solutions.

Integrated 230V and ELV 48V lamp switching

Where standard LV lamp switching is required, the ST750P provides the ideal solution, whilst retaining the robust and proven design features of the ST700P. For totally ELV installations, the ST750P ELV provides a highly innovative 48V system based on the successful ST900 ELV intersection controller.

The use of ELV, as implemented in the ST750P ELV controller, offers a wide range of benefits, including:

- Increased electrical safety for members of the public in the event of damage to the signal installation
- Increased electrical safety for personnel working on or around the intersection
- Reduced power costs
- Reduced cabling costs
- Improved lamp monitoring of very low power LED traffic and pedestrian signals.

Variety of construction options

Recognising the need for installation flexibility, the ST750P family of LV and ELV controllers offers three housing solutions:

Small cabinet: Utilising the popular T400S cabinet, this implementation offers ample space for mounting additional equipment such as outstation monitoring units or detectors, whilst minimising the impact of the controller footprint in locations where space is at a premium.

Large cabinet: This controller version utilises the standard ST900 cabinet and provides extensive additional space for large equipment such as rack-based outstation transmission units or other equipment that requires the provision of 19-inch rack mounting space.

Rack module: Containing all essential controller electronics within a self-contained unit, this option allows the controller to be installed in a wide range of cabinets. Specially designed mounting kits considerably ease installation, providing a particularly cost-effective route to pedestrian crossing modernisation.

- Fully integrated LV 230V and ELV 48V lamp drive systems
- Optimised for Pelican, Puffin and Toucan control
- Range of cabinet options
- Easy configuration using Windows-based data generation package (IC4) with optional emulator
- Integrated lamp monitoring
- Extensive self-test facility for rapid system validation
- Dual processor safety system
- Approved to TR2500

ST750P
pedestrian controller family

Traffic Controls

SIEMENS

Advanced architecture

To ensure maximum reliability and to reduce the maintenance impact of the new ST750 family, extensive use of proven existing components has been made.

For LV implementations, the reliable ST700 pedestrian controller module and lamp switches are used, offering standard 230V lamp switching with the option to directly drive pedestrian signals at 48V, without the need for additional transformers.

For total ELV implementations, widespread use has been made of proven ST900 ELV components. Additionally, this controller incorporates a new, high-speed serial bus architecture, allowing greater freedom in the location of a range of dedicated components, including ST900 I/O cards and intelligent detector backplanes.

Where required, integral TC12 OTU cards may be used to expand both controller types, which are also fully compatible with the Siemens semi-integral OMU and UTMC OTU.

User configurable

ST750P configuration data sets are prepared using the highly acclaimed and easy to use IC4 configurator. The configuration process is further simplified by the provision of prepared 'read-only' default files which may be modified to adjust all site-dependent variables prior to downloading, minimising the need for on-street changes. However, where required, specific settings such as timings and other parameters, including detector allocations and SDE parameters, may be adjusted on-site using a standard controller handset.

The optional emulator is a feature-rich tool which links seamlessly with IC4 to provide an advanced environment for de-bugging and proving ST750P configurations. Using the same software source files as the controller firmware, it ensures a highly accurate representation of the controller operation on a PC.

Enhanced safety features

Two independent microprocessors and comprehensive hardware 'self-check' features provide exceptional levels of controller safety. This is further improved by full equivalence monitoring on all aspect drives (red, amber, green), ensuring that the incorrect display of any signal colour is prevented.

Lamp monitoring is provided and is fully compatible with Siemens' LED signals. Additionally, the ST750P ELV also provides full lamp monitoring of compatible nearside signals.

Technical specification

Pedestrian control strategies

- Puffin: Near-sided and Far-sided
- Toucan: Near-sided and Far-sided
- Pelican: Far-sided
- Pedestrian: Far-sided

Each available in single and dual versions

Modes of operation

- Manual, Vehicle Actuated, Fixed Vehicle Period, Urban Traffic Control, Cableless Linking, Local Linking

Housings

- Small T400S cabinet: 1210mm (h) x 470mm (w) x 370mm (d)
- Standard ST800 cabinet: 1160mm (h) x 725mm (w) x 420mm (d)
- Basic controller module: ST750P LV 170mm (h) x 265mm (w) x 265mm (d)
- Basic controller module: ST750P ELV 350mm (h) x 410mm (w) x 270mm (d)

Electrical

- Power supply: 115V -20% +15% 230V -20% +15%
- Supply frequency: 50/60Hz

Lamp switch

- Lamp-switching technology: Solid state

Standard LV 230V controller

- Maximum load per output: 4A
- Number of hardware phases: 4 max
- Maximum controller lamp load: 1.9KW
- Lamp supply voltage: 230V AC
- ELV wait drive (48V AC): 200W (per pedestrian phase)
- Signal dimming: 120V, 140V, 160V

ELV 48V controller

- Maximum load per output: 2A
- Number of hardware phases: 4 max
- Maximum controller lamp load: 400W
- Lamp supply voltage 48V RMS (rectified and negative w.r.t. protective earth)
- Signal dimming: 27.5V RMS (rectified and negative w.r.t. protective earth)

Environmental

- Supply interruption: Continuous operation up to 50ms break
- Supply failure: Automatic restart without intervention
- Operating temperature: -25°C to +70°C

Other facilities

- Direct load of configuration into controller without need for configuration PROM
- Built-in SDE/SA

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