

**Intelligent
Traffic
Signal
Controller
(ITC)**

Traffic Signal Controller



Simplicity in Traffic Controller

Using a high performance and stable microprocessor, Intelligent Traffic Controller (ITC) is a new, improved and simplified traffic signal controller. ITC is equipped with Philips' 16-bit 80C51XA (Extended Architecture) microcontroller with solid-state indicator similar used in many controller will increase reliable and reduce failure.

Customize to what you want

ITC configuration is designed to be customizable for price optimization without the need to reduce the requirements or performance. ITC is designed to be:

- Full or partial vehicle-actuated controller
- Fully traffic controlling function with or without pedestrian
- Interchange control up to 16-signal groups
- Standalone or a linked controller
- Phase and signal grouping

Accordance to standards

In order to emphasis on standard and quality, ITC is designed and manufactured accordance to ISO 9001:2000 and 14001:2004.

Self-Monitoring

To enhance the functionalities of ITC, it is developed with self-monitoring functions:

- Fail-safe conflict detection
- Lamp failure detection
- Automated real-time self-checking
- Real-time alarm detection
- Triac failure detection

Specification

CPU

Philips' 16-bit 80C51XA (Extended Architecture) Microcontroller with LED indicator is designed for stable and high performance computing. ITC's main CPU will come with 1 serial RS232 connection port for remote configuration. ITC's main CPU is attached with an in-built PS2 keyboard connector and serial RS232 port for remote configuration and LCD for real-time clock display. Backup battery is installed to support low-level detection and alarms.

Controller

	Items	Specification
Electrical	Lamp switching	LED
	Voltage (Input and Output)	230 VAC
	Frequency	50/60Hz
	Supply Tolerance	+15% to -20%
	Power Consumption	Not more than 100W
	Power Factor	0.90
	Power Rating	480W each
	Back-up battery for data and clock	
	Maximum Controller Lamp Load	
	Other components:	<ul style="list-style-type: none"> •Lightning Suppression •Built-in Lighting •Automatic restarts upon power restoration
Chasis/ Cabinet	Standards	Manufactured to compliance to ISO 9001:2000 and 14001:2004
	Operating Temperature Range	0°C – 85°C
	Relative Humidity	
	IP Rating	
	Design	Weather proof, finishing with FF160/4111/CW5 powder coating
Input	Built	600Wx1000Hx400D
	Vehicle Detectors System (loops)	1 – 20
	Pedestrian Push button	1 – 8
	Other Inputs	<ul style="list-style-type: none"> •Central Link (TANOSTM) •Wireless Link (GPRS)
Output	Signal group	1 – 16
	Pedestrian movements groups	1 – 8
	Supported Signal Group	<ul style="list-style-type: none"> •Traffic •Pedestrian •Turn arrow (left and right)
Signal Timing	Resolution and accuracy	1 seconds
	Range of timing to be set for yellow and all-red	1 to 255 seconds
	Number of signal plan	16

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Supported Traffic Signal Operation

ITC is designed for standalone or central linked traffic signaling. Types of traffic signal operation provided are pre-timed operation (manual and fixed time phase sequence), vehicle actuated operation (semi and full), Centralized control (using TANOS™ connected using either direct link or GPRS connection), flashing yellow

Supported Traffic Phasing Methods

ITC is designed to combine multiple signal groups into single or multiple phases. ITC would allow the user to be used as a basic two-phase signalization, exclusive right-turn phasing, leading and lagging green phase, exclusive pedestrian phase, and eight-phase actuated control. ITC is able to support most common phases used.

Other controller features

ITC is embedded with some of the key features to enhance the safety of the traffic controller:

- Pedestrian Wait Lamps
- Flashing yellow and blackout
- Status monitoring using remote application and central link
- Solid State Lighting (LED) indicator for controller's activities
- Failure detection
- Security Signal activation when CPU faulty

ITC Range of products

A wide range of ITC controllers are available to provide the flexibility to select the right controller is placed at the right interchange.

ITC-500 series is the range of traffic signal controller mainly focuses on standalone function. However, all of the ITC shall be equipped with limited central linked functions.

Model	Supported Signal Group	Supported Loop Detector	Supported Pedestrian
ITC-510	1-8	0	1-8
ITC-520	1-6	1-8	1-6
ITC-530	1-16	1-20	1-4

Accessories

ITC is also designed to be incorporated with other optional accessories to increase the efficiency, down time and stability of the controller:

- Extensive loop surge protection
- External power supply
- Lightning protection
- UPS

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