



GENERAL DESCRIPTION

The Traffic Control Unit (TCU) represents a typical crossroads junction controlled by two pairs of traffic lights together with a pedestrian crossing on one of the approaches.

The unit features a large clear mimic of a junction with the traffic lights and pedestrian crossing represented by large LED's in the appropriate colours. Four buttons are provided that represent the vehicle sensors built into the surface of the road and thus are used to simulate traffic flow. Further buttons are provided to control the pedestrian crossing and provide a 'reset' signal if required.

The TCU offers an ideal starting point for teaching control programming, whether PLC or PC based. It provides a control requirement with which everyone is familiar. Students begin with short programming exercises and progress on to much longer and complex programs that involve the use of time delays and counters etc.

The design of the TCU allows the unit to be easily connected to either a PLC or PC fitted with a suitable interface card. The TCU housed in a protective box with detachable lid.

The Traffic Control Unit can be connected to any PLC that has at least six digital inputs and six digital outputs. For complete control of all features of the unit, eleven digital outputs are required. When connected to a PLC, the TCU requires a 24V d.c. power supply.

The TCU can also be connected to a PC that is fitted with an interface card allowing the control program to be developed in various programming languages. When connected to a PC, the TCU requires a 5V d.c. power supply.

Courseware suggestions include:

- Basic traffic light sequence
- Dual traffic light sequence
- Traffic counting
- Green on-time weighted according to traffic flow
- Pedestrian crossing
- Complete system control
- Adjusted pedestrian priority

The TCU is supplied with a user manual that includes courseware suggestions. Solutions to the various exercises are also provided.

FEATURES:

- Provides a control requirement with which everyone is familiar
- Ideal for introducing control programming of both PC's and PLC's.
- Clear, visual mimic of a crossroad junction
- Can be controlled from a PC or PLC
- Colour coded 4mm sockets

Technical Specification:	
Approximate dimensions	230mm x 285mm x 30mm
Approximate weight	800g
Connectors	26-way IDC for PC/microcontroller connections 2 x 15-way D type for PLC connections Colour coded 4mm terminals provide 24V d.c. connections
Controller I/O requirement	Min: 6 digital inputs, 6 digital outputs Max: 6 digital inputs, 11 digital outputs.
Outputs	11 - red, yellow, green for north/south traffic; red, yellow, green for east/west traffic; red, yellow, green for pedestrian crossing; red, green for pedestrian walk/don't walk
Inputs	6 - push buttons for traffic flow: NS, SN, EW, WE; push buttons for pedestrian crossing request and reset
Fuses	2 x 500mA
PLCs supported by courseware	Selected Allen-Bradley, Mitsubishi & Siemens units.
Power supply required	5V d.c. @ 0.5A for PC/microprocessor control 24V d.c. @ 0.5A for PLC control

Ordering Information:	
Model Number:	TCU
<i>Consists of:</i>	1 x Traffic Control Unit. 1 x Power Supply Unit 1 x Manual 1 x Labworks and Control Software CD

Notes.

1. Specification is subject to change without notice.
2. All dimensions are in mm unless specified otherwise.
3. Warranty 1 year.

Bytronic Ltd., reserves the right to make product improvements at any time and without notice and is not responsible for typographical errors. Bytronic Ltd., recognise all product names used herein as trademarks or registered trademarks of their respective holders.