



Ventilation control and tunnel access



ref. TA11

TA11 is a study system used to regulate the CO2 level in a motorway tunnel. It consists of a fan for air renewal and an electrical cabinet grouping the regulation system components. The cabinet and fan are placed on a wheeled frame and connected by a 5m cable.

OPERATION

On the cabinet's door, a potentiometer simulates the CO2 level in the tunnel. Depending on the CO2 level, the PLC controls the fan's rotation speed and plans the access to the 4 traffic lanes represented by 8 indicator lights positioned above the cabinet. A stand-alone fire sensor indicates there is a fire in the tunnel. An electronic buzzer warns that the CO2 level is too high. An anemometer fixed in the fan's air flow controls the rotation. This regulation system is PC monitored via the Schneider® software supplied.

THE MAIN CABINET COMPONENTS

- 1 TWIDO PLC
- 1 2.2kW speed controller
- 1 TWIDO analogue card controls the 4-20mA or 0-10V speed controller signal.
- 1 Ethernet card is used to connect the entire system to an IP computing network such as, for example, the establishment's network to monitor operations from a remote computing room.
- Controls on the front of the door:
 - General Start/Stop button
 - Emergency stop
 - CO2 level potentiometer
 - Auto/Manual
 - Fan Start/Stop button
 - Potentiometer for the fan air flow
 - Warning buzzer if excessive CO2 level
 - RJ45 connector for the PC link
 - Electrical protective devices for users and equipment.

MONITORING FUNCTIONS ON THE PC SCREEN

Display on digital displays and by curves

- CO2 level and air flow in the tunnel
- number of open or closed traffic lanes
- presence of a fire in the tunnel
- controls access to each traffic lane
- regulates the fan air flow
- triggers the fire alarm
- select the Auto or Manual operating mode

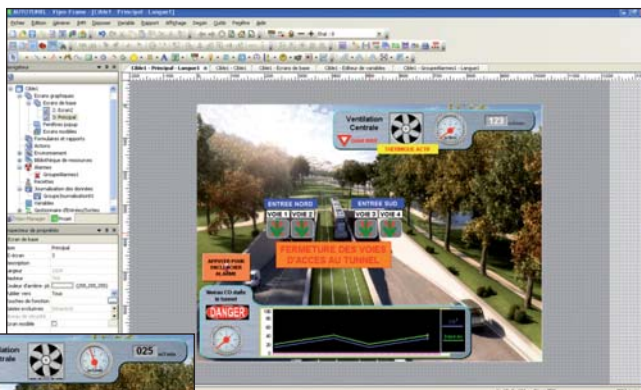
Complete unit supplied ready for operation with monitoring.

The PLC is supplied as well as the monitoring program and wiring diagrams. Are also supplied: The Teachers/Students tutorials on PLC programming, monitoring, the Ethernet network, analogue regulation.

FEATURES OF THE UNIT

- Wheeled frame 750x670mm
- Total height: 1870mm
- Powered by a 400V three-phase hypra socket
- 1000VA Fan, 96m3/min maximum flow rate, 400V three-phase, Ø 400mm

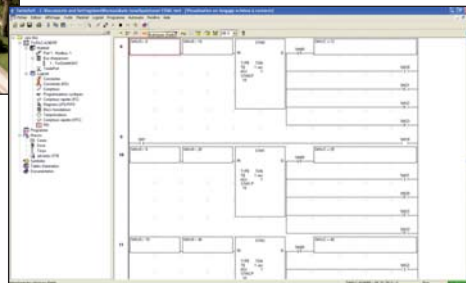
Monitoring software program



Monitoring from a PC.



TWIDO PLC program.



➔ **COMPLETE RANGE MODELS WITH PLC**