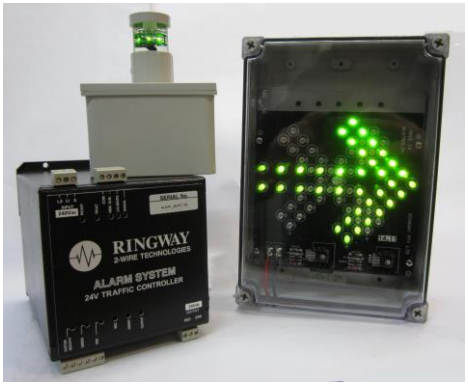
RINGWAY
2-WIRE TECHNOLOGIES



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24V TRAFFIC CONTROL

P/N – ALSUP_24 (TRAFFIC); TC9102G; BLLED

24V TRAFFIC CONTROL SYSTEM BROCHURE

DESCRIPTION:

The 2-Wire system is foolproof, simple & functional. The heart of the traffic control system is the 24V power supply / controller (**ALSUP_24 TRAFFIC**). The controller powers a parallel connected network of alarm enunciators (lights) and operating switches via a two-wire supply bus. There are two enunciator types, a 'Cross / Arrow' LED display (**TC9102G**) and a LED 'Tower' light (**BLLED**). Operating switches connect a resistor across the two-wire when operated. A switch is positioned wherever an operator (driver) needs to request a change of system status. The principle of operation is that the output (field bus) is dual state – Red or Green. The polarity of the two-wire determines the status of the lights and is changed by the controller on detecting a change of state request (increased current due to switch operation) over the two-wire. The controller and lights are set up to control a traffic section or 'block' that may be an intersection, series of intersections, single access tunnel or any combination of these. The lights are set up at the entrance/s to the 'block' under control to either allow access (green light / green arrow) or bar it (red light / red cross). There are 3 x 24V digital inputs to the controller that are used for calibration, manual operation and a remote alarm state. There are three voltage-free output contacts that are used (if required) to indicate the current output state and to confirm the health of the unit. Also see the full system manual (Traffic_Man) for more detail. Multiple options are available for switching the traffic system status, these include infra-red beam detection, mechanical switch detection and light activated switch detection.

FEATURES:

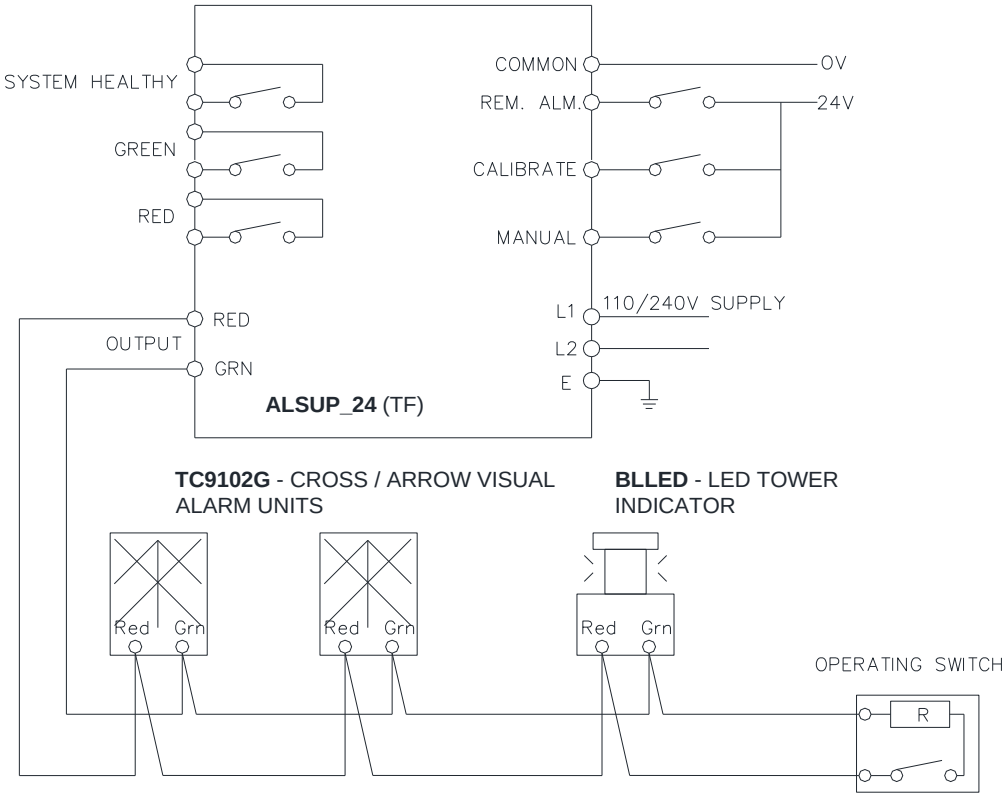
- **Simple**, **robust** and **functional**.
- **Dual operations detected – causes Alarm State (flashing red).**
- **No barriers** – **no repeaters**.
- **Automatic calibration.**
- Manual control for trouble shooting / setup.

APPPLICATIONS:

When the ‘cross/arrow traffic light’ LED enunciators (**TC9102G**) are used a highly visible (underground) solid red LED ‘cross’ is illuminated at each alarm site in the ‘red’ state. The cross is used as a ‘do not proceed beyond this point’ warning to vehicles. The alternate (green) state changes the red ‘cross’ display to a solid green ‘arrow’ at each alarm site. The arrow is used to indicate that traffic may proceed. A 220 Ohm resistor is switched across the 2-wire (either automatically or manually) for at least one second to change the output status. The controller can accommodate a maximum load of 13 traffic lights and 2 BLLED indicators and still be able to sense two simultaneous switch operations.

BRIEF TECHNICAL SPECIFICATIONS:

Power Supply:	110V, 0.5A or 240V, 0.3A ac
Alarm Output:	24V dc, 1.2A
Digital Inputs (24V):	Calibrate, Manual, Remote Alarm
Digital Outputs (voltage free contacts):	Healthy, Red, Green
Indication LEDs:	‘Ready’; ‘Fault’; ‘Red’; ‘Green’ & ‘Output’
Maximum Alarm Units:	TC9102G – 13 units plus BLLED – 2 units
TC9102G:	70mA (24V)
BLLED:	23mA (single row tower), 40mA (double row tower) (24V)
Operating Temperature Range:	-20 → +70 ºC (field devices), 0 → +60 ºC (controller)



2-WIRE TRAFFIC SYSTEM PARALLEL CIRCUIT
1: RED CROSS ILLUMINATES WHEN 'RED' IS POSITIVE
2: GREEN ARROW ILLUMINATES WHEN 'GRN' IS POSITIVE

R = 220 Ohms