

Dual Channel Inductive Loop Traffic Detector

TD450L



The TD450 is a four channel microprocessor based detector designed specifically for traffic control applications.

The primary function of the detector is to detect vehicle presence by means of an inductance change caused by the vehicle passing over a wire loop buried under the road surface. Faster operating characteristics make this unit suitable for road traffic vehicle speeds.

The TD454L, while providing separate vehicle presence outputs per channel, may also be configured to operate as a direction logic detector or in a speed/headway logic mode.

FEATURES

Traffic Data options:

The TD454L detector may be configured to provide various outputs. The normal mode provides a variable presence output. Directional logic (A to B) outputs can be derived from the loop pairs of CH1 + CH2.

Selectable Presence Time and Sensitivity:

The detector presence time may be set to passage (pulse) output or varying pre-selected maximum presence times.

Speed & Headway mode:

This detector can operate in a Speed detection or Headway measurement mode.

Pre-set thresholds may be set by means of the detector DIP switches. Outputs are triggered when the pre-set speed threshold is exceeded or when the vehicle following distance is less than the pre-set value.

These functions are primarily intended to be utilised in the switching of variable messages, for traffic calming or for traffic analysis purposes.

Loop Isolation Protection:

Loop isolation transformers provide protection against lightning and transient damage and allows for operation with single point to ground sensor loops.

PART NUMBER

879FT0022	TD452L – 4 Channel logic	240V AC
879FT0036	TD454L – 4 Channel logic	12-24V

Fault monitor:

A separate fault output relay is provided that operates under conditions of loop failure, or detector / power faults

Fail safe Outputs:

The detector output is “fail-safe”, providing a permanent call to the controller in the event of loop or detector failure.

APPLICATIONS

- Vehicle actuated traffic control
- Traffic counting
- Speed discrimination
- Following distance discrimination
- Toll equipment

TECHNICAL DETAILS

Self tuning range:	20-1500 μ H
Sensitivity:	Four step adjustable on face-plate: High: 0.02% Δ L/L Medium High: 0.05% Δ L/L Medium Low: 0.1% Δ L/L Low: 0.5% Δ L/L
Frequency:	Four step adjustable on face plate, 12- 80kHz (frequency determined by loop geometry)
Output Configuration:	4 output relays: Relay 1 = Presence Output or Direction (A - B) option or headway pulse Relay 2 = Presence Output or Direction (A - B) option or speed/headway pulse Relay 3 = Presence output. Relay 4 = Presence output.
Response time:	Turn on / turn off is 60ms.
Presence: time	4-position Presence selection on faceplate: 1 second 4 minutes 40 minutes or indefinite (Approx. 1hour for 3% Δ L/L)
Operating Modes:	Mode selection on faceplate: 1. Normal presence all channels 2. Direction logic on two channels 3. Speed / Headway modes
Indications:	The following face-plate indications are provided: Red LED – power and diagnostics; Green LED per channel output Green – detect
Protection:	Loop isolation transformer, zener diode clamping on loop inputs and gas discharge tube protection
Power requirements:	240V AC \pm 15% 48-60Hz 3VA max @ 230V OR 12V -10% to 24V +10% AC/DC
Output relays and Rating:	1A @ 230V AC Normally open contacts per channel (fail-safe)



NORTECH
TRAFFIC

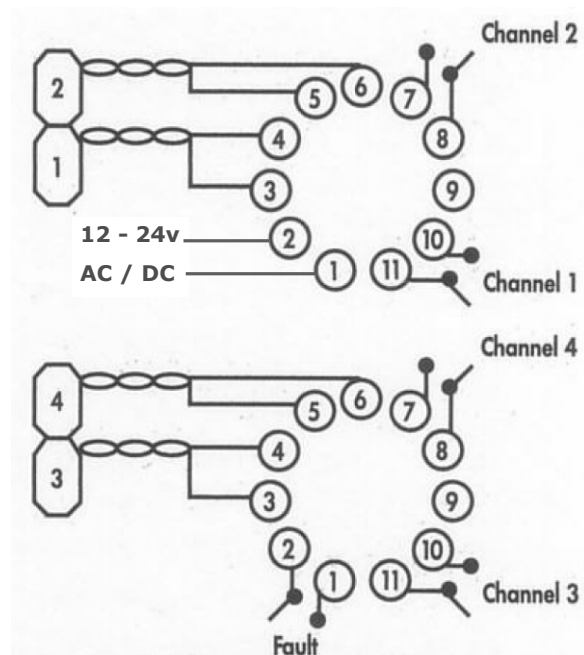
TD450L

Operating temperature range: -40°C to +80°C

Mechanical detail:

Material:	High heat ABS blend
Dimensions:	113(H) x 57(W) x 131(L)mm
Mounting:	Shelf mount
Connector:	dual rear mount 11-pin submagnal (86CP11) and VDE Mains connector on 240V model.

WIRING DETAILS



INCLUDED ITEMS

302FT0041	2 x 1 metre flying lead
	Mains VDE Connector for 240V model