NORTECH TRAFFIC

IR300

INTELLIGENT VEHICLE LOOP DETECTOR

The IR300 is a rack based system aimed at Weigh In Motion (WIM) and Vehicle Detection (VD) applications. Accurate vehicle categorisation is dependent on using vehicle length, axle parameters and axle weight.

The IR300 solution utilizes inductive loops and piezoelectric sensors in various configurations as required by the version employed.

SPECIFIC FEATURES

Scalable Solution	The IR300 utilizes inductive and piezoelectric loops in various configurations determined by the version employed. A single detector has 8 inductive and 8 piezoelectric loop channel inputs. There are two size options: • 19": Up to 4 detectors giving a total of 32 inductive and piezoelectric channel inputs. • ½ 19": Up to 2 detectors giving a total of 16 inductive and piezoelectric channel inputs.
Storage and Connectivity	The IR300 has 4 GB of non-volatile memory on board to store PVRs (Per Vehicle Records). Connectivity to the IR300 is available via RS232 and Ethernet interfaces. An FTP server provides PVR acquisition for both real time and historic events. In addition, the Ethernet connectivity facilitates an NTP time synchronisation function to ensure the on-board clock remains accurate, crucial for linking PVR data to video footage or ANPR systems.
IR300/I – Incident Detection	Offers 4 or 6 class bin breakdowns based on vehicle length and vehicle metal mass concentrations.
IR300/C – Classification	Provides incident detection in addition to classification based on length and axle parameters. This variant offers up to 128 vehicle length and wheel/axle configurations to enable assignment of a vehicle to a specific class.
IR300/B – Binary Weight	In addition to incident detection and vehicle classification, this variant offers the loaded/unloaded status of a vehicle based on length, axle parameters and a user configurable TARE weight schedule. A temperature probe facilitates weight adjustment for temperature-induced piezoelectric error.
IR300/W – Weigh in Motion	In addition to incident detection and vehicle classification, this variant offers weight in motion and dual tyre detection. Vehicle categorisation is dependent on using vehicle length, axle parameters and axle weight. A temperature probe facilitates weight adjustment for temperature-induced piezoelectric error.

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APPLICATIONS

- Overweight vehicle monitoring and enforcements
- Verification of heavy vehicle optimal load distribution
- Recording, counting and monitoring of daily road usage.
- Policing of unauthorised vehicle road access
- Pre or Post freeway tollbooth verification
- Pre-set Response Selection: Photograph / Hazard Display / Driver Advisory Signs

TECHNICAL DATA

Memory	Integrated 4GB compact flash memory Removable 4GB data logging Compact Flash card
Speed Range	4 km/h – 210 km/h / Error ±1% or ± 1 km/h in 100 km/h
Vehicle Length Error	Not exceeding 20 cm in 20 metres
Volume Count Error	Not exceeding ±2%
Occupancy Error	Not exceeding ±2%
Headway Resolution	100 milliseconds – 99.9 seconds
Connectivity	Ethernet, RS-232C and RS-422 IEEE signal level compatible and user configurable protocol. FTP Web Server interface NTP Time Server synchronisation User configurable remote monitoring
Digital Input	Opto-isolator 5000V RMS isolation, Input 20mA @ 1.2 Volts
Digital Output	MOSFET Photovoltaic Relay 60 Volt 500mA capability
Loop Input Line	Isolation transformers 1:1 typical 100 µH / Dual transorb 1.5 KE27CA-PPP1500W/40PPC
Piezo Input	SGL transorb 1.5KE9.1CA PPP1500W/40PPC
Compliance	RoHS – EU Directive 2002/95/EC per Category 9 / Annex IA – Exempt provision Ctick / CE compliant IEC/EN61000-4-4, 5, 11, 2
Operating Temperature	-10°C to 65°C operation with a relative humidity of 95%
Power Supply Options	110 Vac – 240 Vac, 12 VDC (Solar Option), 24 VDC and 48 VDC
Plug-in 3U 19 inch Chassis	8 – 32 Channels / 8 Channel Cards 440 x 130 x 300 mm (L x H x D) 4.0 – 5.25 kg
Plug-in 3U ½ 19 inch Chassis	8 – 16 Channels / 8 Channel Cards 225 x 130 x 300 mm (L x H x D) 4.0 – 4.5 kg

ORDERING INFORMATION

Contact	info@nortech.co.za for recommendations on a solution for your application.