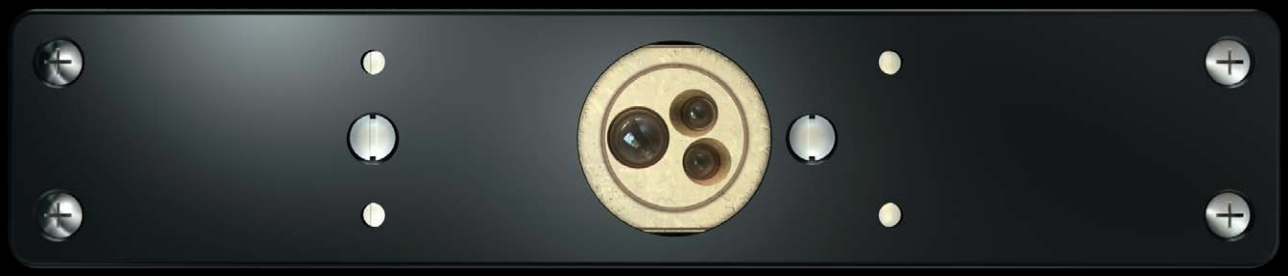


iris INFRARED INTELLIGENT SENSORS

IRMA BASIC

Reliable counting, robust engineering, low system price

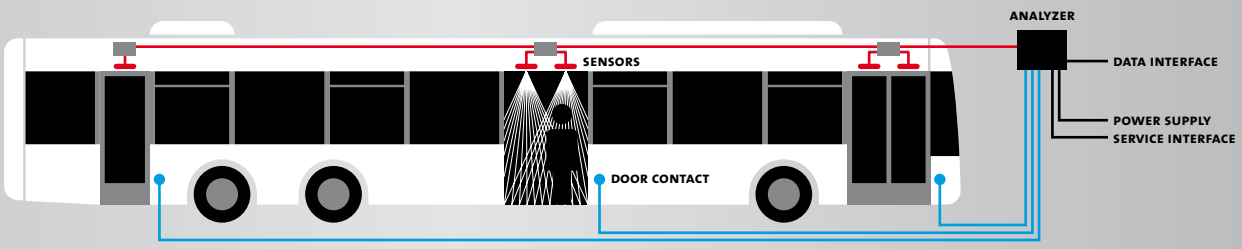
IRMA basic passenger counting system is a low cost entry into passenger counting operations. IRMA basic delivers a continuous and reliable stream of high-quality counting data for applications such as statistical measurement and distribution of revenues or the determination and control of transit system performance (passenger kilometres, pkm).

Discreet and unobtrusive, sensors monitor the door space while permanently sending out IR light pulses, which are reflected by any passengers present and detected again by the sensors.

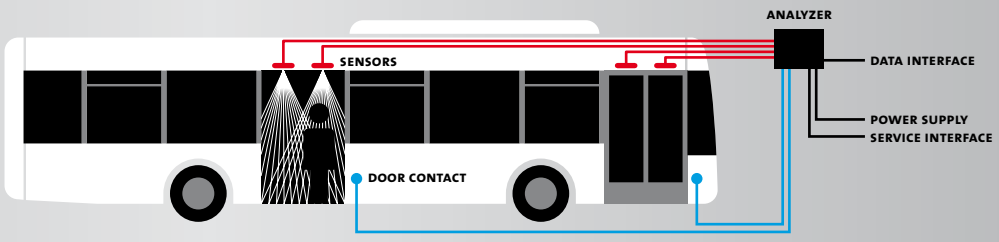
The user can choose between two system architectures: IRMA Basic and Basic CAN. The alternatively available M12 cabling minimizes wiring in vehicles. The sensors are linked to the CAN system bus.

FEATURES

- Highly sensitive active IR detector
- Recognition of the direction of movement (boarding and alighting passengers)
- Support of standard systems interfaces (IBIS, RS232, RS485, J1708) for connection to existing telematics systems (on-board computer, ticket printer)
- Combined use with GLORIA II radio data transmission module possible
- Easy unobtrusive installation within the vehicle
- Optionally, M12-CAN cabling can be provided for simple cabling scheme in multiple-door vehicles (recommended for vehicles with more than two doors)
- Connection of up to 4 reaspectively 8 sensors to one analyzer (for a maximum of 4 wide doors)



On vehicles with more than 2 doors: The analyzer with CAN cabling is designed to connect with up to eight sensors (type IRMA Basic CAN). This allows for four wide doors per analyzer.



On vehicles with 2 or less doors: The analyzer is designed to connect with up to four sensors (type IRMA Basic). This allows for two wide doors per analyzer.

SYSTEM COMPONENTS

Basic CAN Sensor

Analyzer

APPLICATIONS

- Counting of passengers in vehicles with standard requirements regarding counting accuracy
- Distribution of revenues (with downstream statistics)
- Line service profitability
- Monitoring of transit service performance
- Statistical checks on revenue

TECHNICAL DATA

Specifications subject to change. Technically binding is the product data sheet.

Ambient temperature in operation	• - 25 °C ... + 70 °C (- 13 °F ... + 158 °F)
Storing temperature	• - 40 °C ... + 80 °C (- 40 °F ... + 176 °F)
Relative humidity	• < 95 %, non-condensing
MTBF	• > 300.000 h
Protective system	• IP40 (Sensor) • IP30 (Analyzer)
Weight and dimensions	• ca. 350 g, 111 mm x 32 mm x 32 mm (Sensor) • ca. 1000 g, 198 mm x 125 mm x 62 mm (Analyzer)
Power supply	• 9 VDC ... 32 VDC • allowable voltage variation at 24 VDC rated voltage according to EN 50155: class S2 • reverse battery protection - 32 ... + 32 VDC • electrically isolated 1 kVDC
Norm conformity	• e1 certification e1*72/245*2006/28*5221*00(01) • EN50121-3-2 / 2006-07 (EMC) • EN50155 / Temperature class T3 • EN50155 / Voltage class S2 • EN61373 / Class 1, Category A (vibration, shock, train) • EN60721 Part 3–5, Class 5M2 (vibration, shock, automobile) • VDV300 (IBIS protocol) • DIN ISO 7637-2 / 12.2002, severity level III

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