

Runway Visual Range

AGIVIS FSI Forward Scatter System



Features

- o Forward scatter visibility sensor
- o Rugged field proven sensor design
- o AGIVIS 2000 based system processing
- o Low maintenance high reliability system design



Aeronautical & General
Instruments Ltd

AGI has designed and manufactured airport meteorological systems for over 20 years. Many of the major UK airports use the AGIVIS 2000 Transmissometer based Runway Visual Range (RVR) system. As the demand for air traffic increases and regional airports expand their capacity, existing manual runway visibility methods can become a bottleneck. The AGIVIS FSI system is a cost effective way to automate this measurement.

Specifications

o Visibility Measurement	10m to 75km
o Accuracy	10m to 16km 10% 16km to 30km 20%
o Optical Scattering angle	45°
o Optical monitoring	Window contamination detection and compensation. Optical path blockage detection. Light source stability measurement.
o RVR Measurement	Meeting CAP 670 and ICAO requirements
o Operating Temperature	-40 to +50 C
o Humidity	0 – 100% RH

AGIVIS FSI System

Three subsystems make up the AGIVIS FSI System

- o Forward Scatter sensor
- o Field Site Electronic Unit (FSEU)
- o Field Site Processor system

The Forward Scatter sensor has proved its measurement capability in many world wide independent tests and is field proven for well over 10 years.

The sensor design uses a 45 degree measurement angle with a horizontal alignment. Its design also ensures that the sample volume area is undisturbed, regardless of wind direction and precipitation conditions. A no dew window heater is fitted as standard with an optional hood heater to protect the sensor against weather extremes.

To ensure trouble free operation the sensor continuously monitors the viewing window compensating for contamination. The system indicates when window cleaning is required. Present weather measurement is also available using back scatter sensor on the VPF 730.

The established field proven AGIVIS 2000 processing system is used to process and display the visibility data. A field site electronics unit (FSEU) supports both the forward scatter sensor and a background luminance monitor.

The Field Site Processor system is the hub of the FSI system. It takes the data from the runway lighting system, sensor data and background Luminance monitor and calculates an RVR value. RVR values from each of the deployed sensors are displayed on custom AGI multi purpose colour displays.

These configurable displays can also show other parameters such as runway direction, station identity, ILS and MLS status.

Reliability and Maintenance

Self monitoring software routines in the FSI system continuously monitor system performance. Alerts are indicated on operator consoles in an easily understood format. Reliability is one of the system design criteria and any system failures can be rectified in less than 30 minutes.



About AGI

AGI is backed by over 30 years of experience in the design, development, manufacture and installation of defence systems and provides full Integrated Logistic Support services, training, installation and documentation.

AGI is accredited to International Quality Standards ISO 9001/BS5750 Part 1 and Tick-IT software procedures.

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