TRIGA
Powered by Honeywell

# TR-OSI-RI-GW

## Intelligent Imaging Beam Detector

**TR-OSI-RI-GW**

The TR-OSI-RI-GW delivers rapid installation, trouble-free detection, and a minimalist design for challenging open-area applications.

The TR-OSI-RI-GW intelligent addressable reflector-type linear optical beam smoke detector is uniquely suited for protecting large open areas with high ceilings where spot-type smoke detectors are difficult to install and maintain. Ideal applications are warehouses, malls, aircraft hangers, arenas and concert halls. The beam operates primarily on the principle of light obscuration using infrared. The TR-OSI-RI-GW detector is a combined transmitter/receiver and is compatible with GEN2 Series TRIGA fire alarm control panels.

**Fast and Easy Alignment**

Aligning the imager to the reflector is extremely intuitive, fast, and accurate, thanks to the CMOS imager contained in a movable “eyeball” that can move vertically and horizontally. Four LED arrows help the user find the imager’s perfect alignment with the reflector. Once the optimum alignment is found, indicated by all green arrows, the lens is locked with a slide lever. A paintable cover is then placed over the front to secure the lever in locked position.

**Resistant to Building Movement, Sunlight, and Foreign Object Intrusion**

The receiver imager automatically tracks the reflector in case of building movement or support structure movement. This allows the TR-OSI-RI-GW to be highly resistant to movement, eliminating the number one cause of false alarms and/or faults with traditional beam detectors.

Optical filtering, high-speed image acquisition and intelligent software algorithms provide the system with highly improved resistance to false alarms from sunlight, reflected sunlight or any other very bright light sources. Advanced smoke imaging techniques allow the detector to avoid false alarms from partial and sudden blockage from foreign object intrusion.

**Time-saving Automatic Sensitivity Setting**

Unique in the market, the sensitivity of the detector is selected and set automatically at the optimum sensitivity based on the size of the reflector measured in the field of view.

**Drift Compensation**

The detector will adjust its detection thresholds in line with any long-term signal reduction of the beam caused by dust or other contamination of the optical surfaces.

**Equipped with Built-in Imager Heater**

The imager ships standard with an internal heating option to prevent condensation on the optical surface. (External power supply required.)

SIGNALING UL LISTED

## FEATURES & BENEFITS

- Combined transmitter/receiver unit
- Wide 12° field of view
- Fast, easy, and intuitive beam alignment indicated by LED directional arrows
- 50° horizontal and 20° vertical beam adjustment
- Long range coverage of 16-328 ft (5-100m) is standard; no separate long-range kit required
- Automatic sensitivity threshold level setting
- Resistant to building movement; tolerates +/- 1° movement
- Resistant to strong light sources; does not alarm when saturated by sunlight
- Resistant to solid object intrusion
- Remote test station capable for electronic simulated smoke test from ground level
- Status LED indicators visible from the front and bottom
- Automatic drift compensation
- Paintable housing/cover
- Removable plug-in terminal blocks
- Built-in imager heater
- Optional reflector heater kit available

Note: Specifications are subject to change without notice.

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## Technical Specifications

**PHYSICAL**

**Dimensions (Detector):** Height 6” (152.4 mm);
Width 10” (254 mm); Depth 4.5” (114.3 mm)
**Dimensions (Reflector):** Height 9.06” (230 mm);
Width 7.87” (200 mm)
**Weight (Installed):** 2.48 lbs (1.12 kg)
**Weight (Shipping):** 3.91 lbs (1.77 kg)
**Wire Gauge for Terminals:** 14 AWG (2.08 $mm^2$)

**ELECTRICAL**

**TR-OSI-RI-GW**
**Operating Voltage Range**:
Nominal: 24 VDC
Minimum: 15 VDC
Maximum: 32.0 VDC
**Maximum Standby Current**:
13 mA @ 32 VDC
14 mA @ 24 VDC
20 mA @ 15 VDC
**Maximum Alarm Current (LED on):**
22 mA @ 32 VDC
15 mA @ 24 VDC
22 mA @ 15 VDC
**Maximum Devices per SLC Loop:**
The number of TR-OSI-RI-GW devices are limited due to SLC current draw restrictions. Current draws listed above must be considered in coordination with any other devices on a circuit. In general, this limits the number of TR-OSI-RI-GW detectors to up to 4 detectors per loop on a dedicated circuit on TRIGA panels. Any non-beam devices, increased distances or higher gauge wiring on the circuit will decrease available current and total capacity of TR-OSI-RI-GW detectors.
**Available panel current**:
• GEN2 Series: 100 ma supervisory current
• GEN2S Series: 100 ma supervisory current
BEAMHKR
**Voltage Range:** 15 to 32 V
**Maximum Current:** 450 mA Max at 32 V
**Power Consumption:**7.7 W @ 24 V, 15 W @ 32 V
RTS151KEY
**Voltage Range:** 10.2 to 32 VDC
**Current Range:** 9 mA Min to 11 mA Max

**ENVIRONMENTAL**

**Operating Temperature:** UL-Listed for use from
32°F to 100°F (0°C to 37.8°C).
**Application Temperature Range:** -4°F to 131°F (-20°C to +55°C)
**Humidity Range:** 0 to 95% relative humidity, non-condensing

**OPERATIONAL**

**Protection Range:** 16 ft to 328 ft (5 m to 100 m)
**Adjustment Angle:** 20 degrees vertical, 50 degrees horizontal
**Sensitivity Levels:** Level 1 25%, Level 2 30%, Level 3 40%, Level 4 50%
**Test/Reset Features:** Local alarm test switch, local alarm reset switch, Remote test and reset switch (compatible with RTS151 and RTS151KEY(-A) test stations), TR-OSI-RI-GW test filter.
**Smoke Detector Spacing:** On smooth ceilings, 30-60 feet between projected beams and not more than one-half that spacing between a projected beam and a sidewall. Other spacing may be used depending on the ceiling height, airflow characteristics, and response requirements. See NFPA 72.

**ORDERING INFORMATION**

**TR-OSI-RI-GW:** Intelligent imaging beam smoke detector including reflector
**OSP-002**: Laser alignment tool
**OSP-004:** Test filter, 10 pack
**RTS151:** Remote test station
**RTS151KEY:** Test and reset station with key lock, flush mount
**BEAMHKR:** Heater kit for the reflector
**6500-MMK:** Multi-mount accessory for ceiling or wall mounting with additional mounting adjustment

**AGENCY LISTINGS AND APPROVALS**

For exact certification listings for each model,
please reference the respective agency website.
**UL Listed**

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Note: Specifications are subject to change without notice.