

Active Infrared Sensor

1) Technical Specification IR-Sensor 2-Beam and 4-Beam



2-Beam 4-Beam
Active IR Sensors

Active Infrared Sensors

Lens Diameter:		90 mm
Wave length:		890 nm
Lens Qty:	2-Beam	2 lenses
	4-Beam	4 lenses
Lens Distance:	2-Beam	400 mm
	4-Beam	200 mm
Synchronisation:		Intern / Extern
IR Frequency:		1200 Hz
IR Pulse Duration:		0.6 µs

Housing

Material		Aluminum Casting ALMG5
Dimensions:	2-Beam	515 mm x 110 mm x 125mm
	4-Beam	720 mm x 110 mm x 135 mm
Weight:	2-Beam	4.0 kg
	4-Beam	9.5 kg

Zone Length

Average weather condition:	up to 150 m
Heavy fog, snow, rain:	up to 70 m

Power

Internal Power:		12 Vdc
Power	2-Beam	55 mA
Consumption:	4-Beam	70 mA
Alarm Trigger Delay:		20-120 ms
Alarm Signal:		2 sek
Alarm Contact:		Standby dry contact closed
Tamper Contact:		Standby dry contact closed

Environmental

Operating Temperature:	-40° C to 70° C
------------------------	-----------------

2) Description:

- a) The active infrared sensor was developed for extreme harsh environmental conditions and has been used for over 30 years to provide perimeter security. The transmitter and receiver create an invisible pulsed infrared signal and at the moment an intrusion occurs, the zone generates an alarm signal.
- b) Markets using the active infrared security system:
 - Nuclear Plants, Military bases, Airports, Government facilities, Correctional facilities, NATO facilities, Port / Harbor facilities, NASA, Development Centers.
- c) Installation Examples:
 - The active infrared security system can be installed between security fences, buildings, on roof tops, entry / exit gates, airport runways and hangars.
- d) The system was introduced for the first time at the “Essen SECURITY 1998“.

- e) **Major Advantages** using the Active Infrared Intrusion Detection System are:
- The optic and electronic components are installed within a robust cast aluminum housing. The robust cast aluminum housing protects the sensor from electro static discharge (ESD), electromagnetic pulse (EMP), and electromagnetic radiation (EMR).
 - The cast aluminum housing is hermetically sealed and back filled with extra dry air. This prevents the lenses from clouding in extreme temperature deviations.
 - Each sensor can be easy and fast adjusted using three spring-loaded alignment screws.
 - Each lens has an active diameter of 90 millimeters. The alarm is only trigger if the lens is 98.5% covered. The nuisance and false alarms rate is very low in a wide range of environmental conditions.
 - Detection performance greater than 99.8% when properly installed.
 - Multiple sensors can be installed together in a security zone.
 - Simple installation, 5 year warranty and extension program available.
 - Minimal maintenance.
 - Not necessary to have technical experience, only a short training is necessary.

3) How the Active Infrared Sensor / Security Zone works

- b) Multiple active IR-sensors Type 2-Beam and 4-Beam can be installed together and build a Infrared zone. The sensors are mounted inside our Anti-Climb Tower or mounted onto our extrusion tower. The Sensors are synchronised using a coax trigger cable. Each active infrared security zone has an receiver mast and an transmitter mast. Both mast and sensors are also tamper proved.
- c) Multiple active infrared security zones can be synchronized and will work together.
- d) The active infrared security zone can be used at locations creating functional problems for other types of security sytems. For example the active infrared securty zone will work at locations: over water, next to metal fences, next to drive and walk ways, in front of doors and gates (no physical barrier).
- e) The active infrared zone can be easily integrated / complement other existing security systems (Microwave, Perifeld-M, fiber optic intrusion detection systems, IR cameras, etc.).
- f) The control cable can be monitored for tampering.