Trired

Triple passive infrared detector

The TRIRED detector is the best in the market for protecting doors, windows and spacious terraces. It applies an exclusive technology based on a special 3-elements passive infrared.

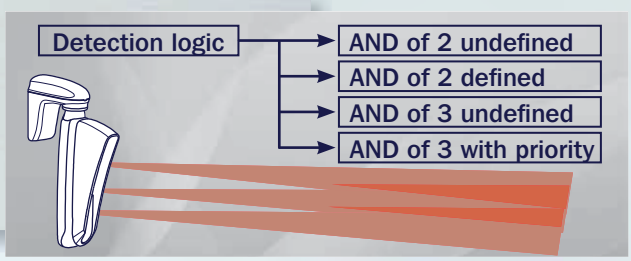
Tecnoalarm
Hi-Tech Security Systems
design by pininfarina

Perimeter protection

The TRIRED is a passive infrared detector for outdoor mounting. It is composed of three independent infrared elements and is equipped with curtain lenses that emit three overlapping beams. It owes its great versatility to a multitude of functioning modes, a respectable coverage, the swivel mounting bracket providing great possibilities of orientation and a sophisticated anti-tamper protection.
This all makes the detector the perfect solution for any kind of protection requirements in outdoor areas.

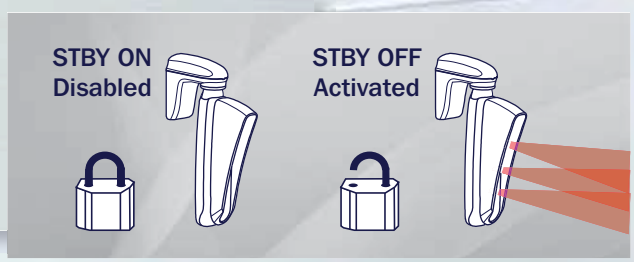
AND detection logic

The functioning of the detector is based on the AND detection logic, i.e. the alarm is only released if two or three infrared sections (according to programming) detect the intrusion in the protected area. There are eight functioning modes, from which to chose the right solution for the required type of protection: 2 undefined beams, 2 defined beams (three modalities), 3 undefined beams, 3 beams with priorities (three modalities).



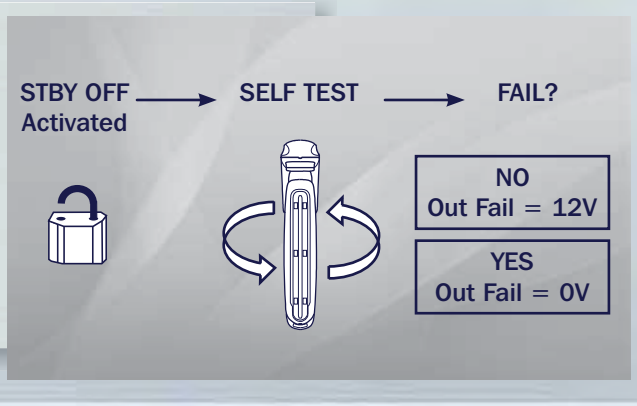
Stand-by voltage

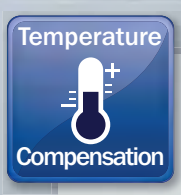
When the alarm system is disarmed the stand-by signal deactivates the detector, i.e. the detection capacity of the detector is inhibited.



Self test

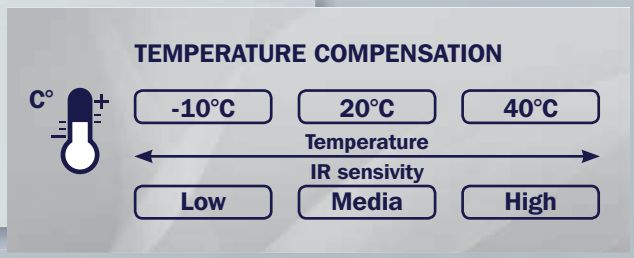
The detector is equipped with a self test function. The test is automatically executed o each activation, i.e. o commutation of the stand-by signal, and has a duration of several seconds. It verifies the efficiency of the three infrared sections and, in case this should fail, changes automatically the detection logic, exclding the inefficient section and forcing the 2 beams mode. The detection signals the failure by commutating the failure output.





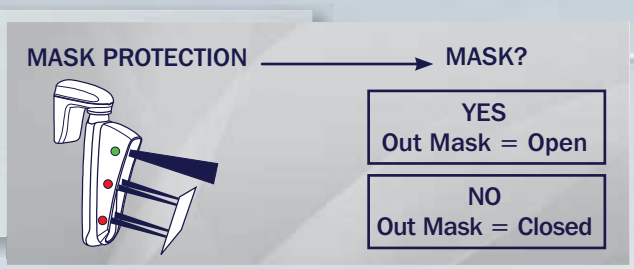
Temperature compensation

The detector is equipped with a temperature probe which measures the surrounding temperature. If necessary, the detector adjusts the sensitivity. The automatic temperature compensation has the scope to guarantee full efficiency of the infrared detector, even in critical operating conditions.



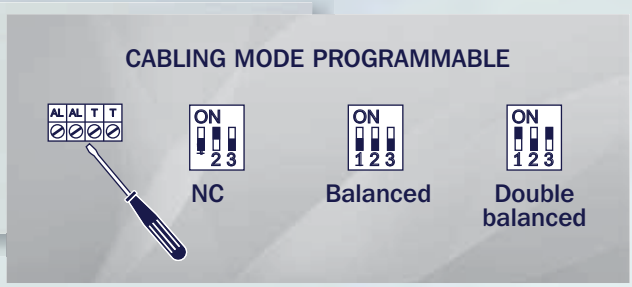
Anti-masking protection

The detector is protected against masking attempts by three anti-masking detectors, one for each infrared section, with programmable sensitivity. If the climatic conditions change, the sensitivity of the anti-masking detectors is automatically adapted to prevent outside influences from compromising the correct functioning. The detector signals the failure by commutation of the failure output.



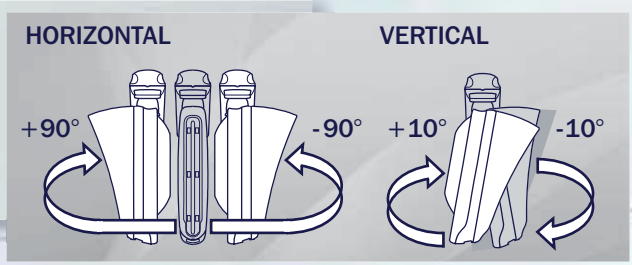
Contact type

A series of dip-switches permit easy and comfortable programming of the contact type as normally closed, end-of-line resistor and double end-of-line resistor.



Orientation

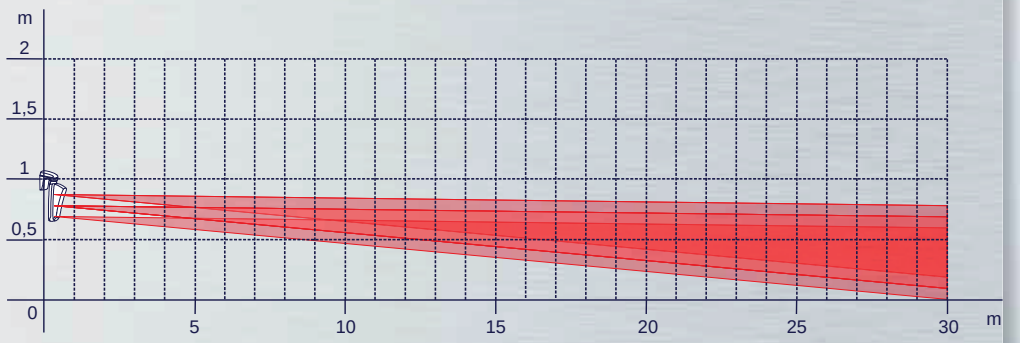
The swivel mounting bracket permits a more precise orientation of the detector towards the zone to be protected. It provides an orientation of +/-90° on the horizontal and +/-10° on the vertical axis. By displacing the electronic board inside the casing along a scale it is possible to obtain another +/-3° on the vertical axis. The mechanical block of the swivel mounting bracket provides high resistance to the attempts at putting out of alignment the detector.



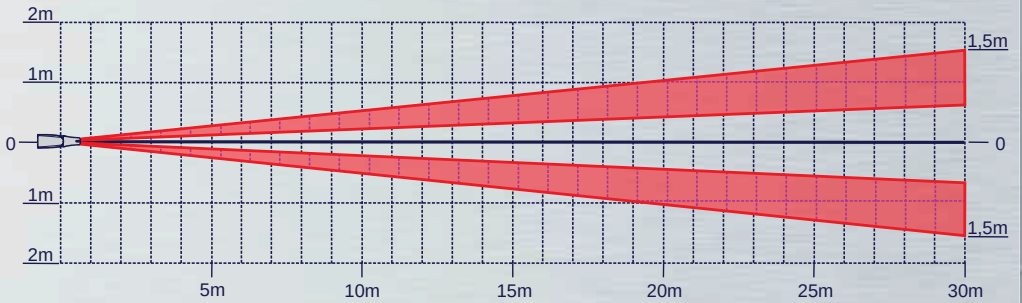
Coverage

The three infrared sections equipped with curtain lenses, project three beams which overlap vertically. The beams are propagated horizontally over a maximum distance of 30 meters. The height and the width of the beams depend on the detection range set. At the maximum range the beams have a height of 134cm and a width of 3 meters.

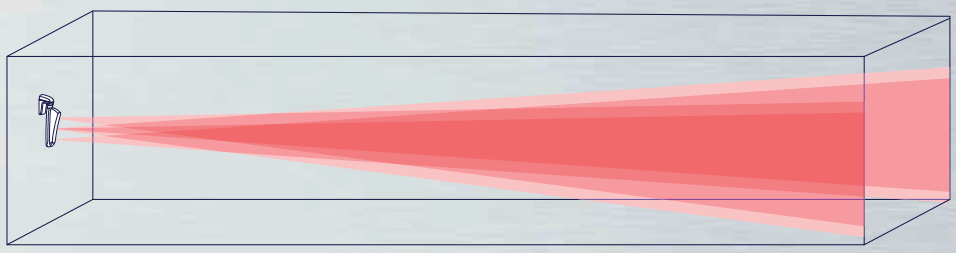
Horizontal diagram



Vertical diagram



Perspective view

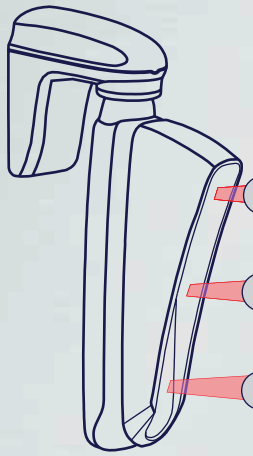


TECHNICAL AND FUNCTIONAL SPECIFICATIONS

DETECTION	Infrared sections	3 dual element PIR
	Infrared beams	3 with curtain pattern
	Levels	3 on the same axis
	Range	Adjustable max. 30m
DETECTION LOGIC	AND 2 undefined beams	1 mode
	AND 2 defined beams	3 modes
	AND 3 undefined beams	1 mode
	AND 3 beams with priority	3 modes
	Pulse count	Independent for each beam
ANTI-TAMPER PROTECTION	Anti-opening	Micro-switch
	Anti-detachment	Micro-switch
	Anti-masking	3 sensors
	Programmable anti-masking sensitivity	2 settings
OUTPUTS	Alarm	NC – electronic relay
	Tamper	NC – electronic relay
	Mask	NC – electronic relay
	Fail (failure)	Normally +12V
INPUT	Stby	Stand-by input with negative polarity

FUNCTIONS	Self test	Automatic on each activation
	Temperature compensation	Automatic
POWER SUPPLY	Rated voltage	12V DC
	Operating voltage	10V...14.5V DC
CONSUMPTION	Stand-by	27mA @ 12V DC
	Alarm (max.)	25mA @ 12V DC
CONTACT TYPE	NC – EOL – DEOL	programmable by dip-switch
PHYSICAL SPECIFICATIONS	Functioning temperature	-20°C...+65°C
	Environmental class	II
	Protection class	IP55-IK04
	Security grade	3 (EN-50131-1)
	Orientation	+/-90° horiz. axis - +/-10° vert. axis
	Casing	Anti-static UV resistant ABS
	Dimensions (L x H x D)	400 x 82 x 260mm
	Weight	1.2kg
COMPATIBILITY	EN-50131-1	
	EN-50131-2-4	

DETECTION LOGIC



Detection logic	Enabled beams	Alarm release	Detection sequence
AND 3 undefined beams (1)	All three	Interruption of all 3 beams	Irrelevant
AND 3 beams with priority (2)	All three	Interruption of 3 beams priority first	Priority first
AND 2 undefined beams (3)	All three	Interruption of 2 beams whichever	Irrelevant
AND 2 defined beams	2 beams (1+2 or 1+3 or 2+3)	Interruption of 2 determined beams	Irrelevant

All specifications listed in this brochure are subject to change without notice.

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