# CIAS

## PERIMETER PROTECTION

### A WIDE RANGE OF PRODUCTS AND TECHNOLOGIES FOR EVERY APPLICATION

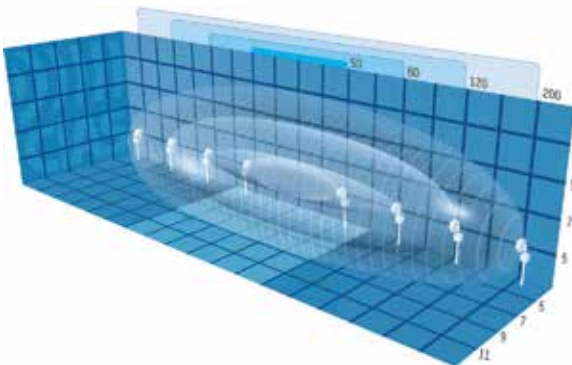# ANALOGUE BARRIERS

## ERMO 482

**50 80 120 200 m**

SINCE1974
CIAS

ERMO 482 is the most seasoned microwave barrier in the CIAS family.

It is a analogue microwave barrier born in 1982 that has been certainly updated over the years but is still one of the most used and appreciated products for its strength, reliability and excellent balance between quality and price.

The product uses parabolic antennas of two types: 100mm for the 50m model and the 200mm for other available ranges: 80, 120 and 200m.

Alignment tool suitable for ERMO 482 and ERMUSA

## ERMUSA

**30 60 80 m**

SINCE1974
CIAS

The product ERMUSA is the smallest and cheapest microwave barrier of the CIAS family.

Renovated with new and better performing planar antennas make it ideal for the protection of short range (30m) and also intermediate (60m and 80m).

This renewal makes it even more useful and versatile for the protection of large corridors, balconies, houses, gallery, facades, so ideal for short, medium and long perimeters.

Alignment tool -light version- suitable for ERMO 482 and ERMUSA

## NEWTON PLUS

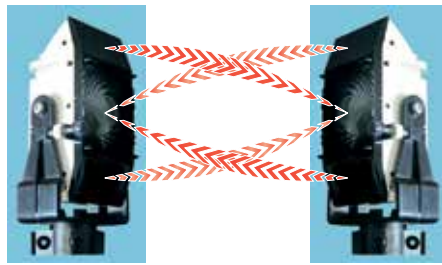**50 100 200 m**

SINCE1974
CIAS

NEWTON PLUS is an active infrared barrier with hybrid IR beams that uses the d.i.s. 100hz technology (double interlaced scanning). Each cell integrates the dual function of transmitter and receiver.

The double controlled A.G.C. enables compensation for variations in the incoming signal to ensure uninterrupted operation of the barrier. This processing of the signal is performed based on a time curve that differentiates exterior phenomena (weather or others) from real intrusion attempts and thereby significantly reduces the number of false alarms.

HYBRID FUNCTION (TX+RX) OF THE OPTICS

**Detection logic**

Detection is carried out by two adjacent beams avoiding the gap of no-detection typical of the traditional infrared barriers. The lower beam can be configured in time-delayed single-detection mode in order to detect possible intrusions by crawling.

## NEWTON LIGHT

**50 100 200 m**

SINCE1974
CIAS

Active infrared barriers with triple optics and ranges up to 200m.

The product is provided with two different versions: stand-alone for a quick and simple installation or kit for tower mounting.

A special filter for sunlight protection allows the barrier to function well even with direct illumination up to 50.000 lux; a set of micrometer screws, display and buzzer on board allow the installer to make settings and easy adjustments with a very high precision.

It is possible to select up to 8 different frequencies for multiple mounting and at the same time adjust the interruption time between 50 and 250msec.

STAND-ALONE VERSION

KIT FOR TOWER MOUNTING VERSION

# DIGITAL BARRIERS

## ERMO 482X PRO 3.0

Digital microwave barrier with digital signal analysis for ranges of 50, 80, 120, 200, 250 and 500m.

The internal microprocessor uses Fuzzy logic to analyse the received signal giving very high performance in detection probability and low false alarm rates.
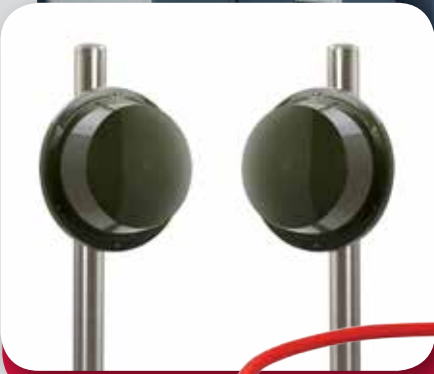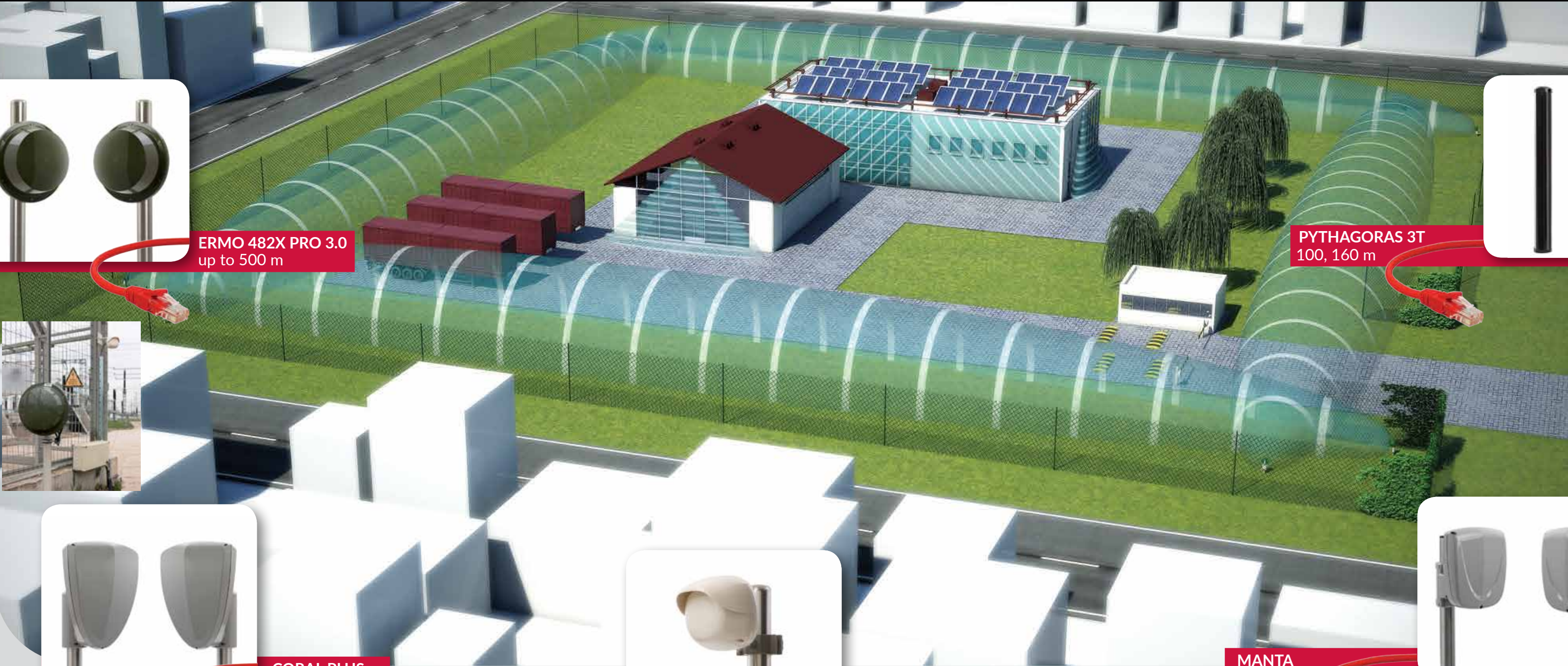
**Digital analysis using Fuzzy logic - FBM**

ERMO 482X PRO 3.0 monitors the signal, comparing it with behaviour models using algorithms based on "Fuzzy" logic (fuzzy behaviour models - FBM) to decide if the signal was created by a real intruder or some other factor. The size, shape and rate of change of the signal are continuously measured and compared with typical stored signals.

The sensor is able to detect intruders walking, running, crawling or rolling.

Every event that generates an alarm or a significant change in the received signal is date/time stamped and stored in memory and can be analysed in real time and/or later thanks to the WAVE-TEST2 software.

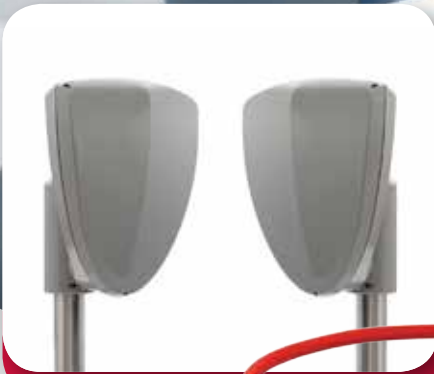**ERMO 482X PRO 3.0**
up to 500 m

## CORAL PLUS

Coral Plus is a digital microwave barrier for protections up to 220 m. It makes easy and quick the installation phases keeping a quality level significantly above average.

It's innovative design ensures the best environmental impact thanks to the integrated junction box and internal cable pass age completely protected.

**CORAL PLUS**
100, 220 m

**Easy to install**

Coral Plus has been designed with particular attention to the practicalities of the installation with particular care to the structure and adjustment elements.

Sensitivity setting has been simplified providing 10 different selectable steps for 10 different reaction mode.

Coral Plus includes an on-board electronic system for the evaluation of the alignment accuracy, an integrated audible signal and a walk-test function.

## MURENA PLUS

Murena Plus is a microwave digital dual doppler. This sensor was born to give a quality solution to all customers requiring the highest security performance together with the utmost ease of use. Murena can be remotely managed and its most distinguishing feature is the ability to calculate, through the phase variation analysis of its two different doppler emitted signals, dimension and position of the moving target.

All that valuable information from the signal are processed with "Fuzzy Logic" analysis, which is what enables Murena to distinguish between human intrusion and environmental or animal noise, far better than other products now on the market.

Moreover Murena is able to define the dimension of target to detect so avoiding unwanted false alarms when small animals or, to the extreme opposite, motor vehicles, get through.

**MURENA PLUS**
12, 24 m (12 m Curtain)

The orientable bracket gives the possibility to have the wiring completely hidden inside making all the installation procedures easy and fast too.
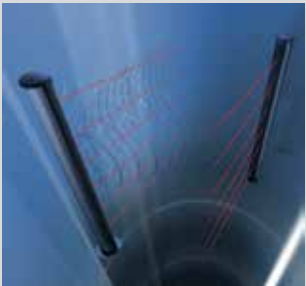
## PYTHAGORAS 3T

Pythagoras 3T is an intelligent barrier designed with multiple technology and based on digital signal analysis, available for ranges up to 160m. The different technologies used allow the barrier to adapt to the size of the corridor to be protected, avoiding disturbances from fences or vegetation and eliminating the limits that the various technologies used individually may have: these are usually climatic conditions for the infrared and the limited space available for the microwave.

**PYTHAGORAS 3T**
100, 160 m

BUILT IN
ANTI-CLIMBING KIT

**MANTA**
50, 80 m

## MANTA

Manta is a digital microwave barrier for outdoor protection with range of 50 and 80m designed in order to satisfy the need of security of the residential and commercial applications. this barrier is providing the same very high detection performance, typically guaranteed by those devices such as the model ERMO 482X PRO 3.0 that is normally used to protect sites considered at very high risk.

The reliability of Manta, in ideal conditions, may provide 1 false alarm/per unit/per year thanks to its powerful dsp (digital signal processing) that works through special "fuzzy logic rules".

# COMMON FEATURES FOR ALL DIGITAL PRODUCTS
**(ERMO 482XPRO 3.0, MANTA, CORAL PLUS, MURENA PLUS, PYTHAGORAS 3T)**

## FUZZY LOGIC

*FUZZY LOGIC INSIDE*

The microprocessor puts the different technologies in synergy with each other following "Fuzzy logic rules".
The signal received is analysed and compared with typical behaviour patterns, using algorithms that determine with precision the presence of an intruder.
The result is a very high detection performance and a small number of false alarms.

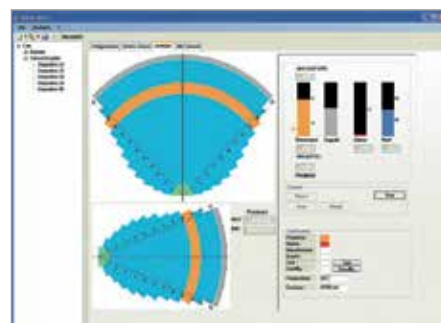## SOFTWARE WAVE-TEST2



## IP-DOORWAY

*IP-READY PoE*



IP-Doorway is an interface designed to make all the CIAS digital detectors "IP-ready". Using the IP-Doorway, the barrier or sensor in which it is installed has all the elements of an "IP native detector".
With an ethernet CAT5E FTP cable it is possible to power the product while also remotely managing the alarm data and configuration.
It immediately becomes clear that there is a significant economic advantage to the installer as, using a single cable, means that almost anything can be implemented with ease.
The product can be powered using the PoE 802.3AF standard or by using a dc voltage of 13.8 Vdc, commonly used in intruder detection systems. Since IP-Doorway handles the TCP; UDP; HTTP; DHCP; ICMP; ARP; RARP protocols, it can be used for many different types of data management.



WAVE-TEST2: universal software for setting up and maintenance for the whole range of microwave bistatic barriers and dopplers.

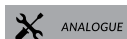## SPECIFICATIONS — ANALOGUE BARRIERS

| | ERMO 482 — 6 YEAR WARRANTY / ANALOGUE / 100% MICROWAVE | ERMUSA — 6 YEAR WARRANTY / ANALOGUE / 100% MICROWAVE |
|---|---|---|
| RANGE | 50, 80, 120, 200 m | 30, 60, 80 m |
| FREQUENCY | X-band certified in many countries and conforms to CE, USA and Canadian standards | X-band certified in many countries and conforms to CE standards |
| POWER SUPPLY | 19Vac/13.8Vdc/24Vdc - (battery charger 13,8 Vdc) | 13,8Vdc |
| TEMPERATURE | -35°C/+65°C | -35°C/+65°C |
| CHANNELS | 4 | 4 |
| OUTPUTS | ALARM, FAULT, TAMPER managed via relays | ALARM, FAULT, TAMPER managed via relays |
| IP GRADE | IP65 | IP65 |

| | NEWTON LIGHT — 2 YEAR WARRANTY | NEWTON PLUS — 2 YEAR WARRANTY |
|---|---|---|
| RANGE | 50, 100, 200m | 50, 100, 200m |
| CHANNELS | 8 | 4 |
| ALIGNMENT | optic + buzzer + display | optic + buzzer |
| DISQUALIFICATION | yes | 100 and 200m versions only |
| HEATERS | only on kits for tower mounting version | yes |
| POWER SUPPLY | 12Vdc - 100mA | 13,8 Vdc - 220 Vac (optional) |
| TEMPERATURE | -35°C/+65°C | -35°C/+65°C |
| RESPONSE TIME | adjustable from 50ms to 250ms | adjustable from 50ms to 800ms |
| SUN IMMUNE | special filter 50.000 lux | special hybrid filters |
| OUTPUTS | ALARM, FAULT, TAMPER managed via relays | ALARM, FAULT, TAMPER managed via relays |
| IP GRADE | IP55 | IP55 |

# SPECIFICATIONS    DIGITAL BARRIERS

## ERMO 482X PRO 3.0 / MANTA

| | ERMO 482X PRO 3.0 | MANTA |
|---|---|---|
| RANGE | 50, 80, 120, 200, 250, 500 m | 50, 80 m |
| FREQUENCY | K/X-band certified in many countries and conforms to CE, USA and Canadian standards | X-band certified in many countries and conforms to CE standards |
| MODULATION CHANNELS | 16 crystal controlled | 16 crystal controlled |
| PROBABILITY OF DETECTION | 99% | 98% |
| FALSE ALARM RATE | 1/unit/year | 1/unit/year |
| TEMPERATURE | –40 °C / +70 °C | -35°C / +65°C |
| ALARM OUTPUTS | 3 solid state relays for alarm, fault, tamper | 3 solid state relays for alarm, fault, tamper |
| OUTPUTS | ALARM, FAULT, TAMPER managed via relays or RS-485. Over IP output available through IP-DOORWAY | ALARM, FAULT, TAMPER managed via relays or RS-485. Over IP output available through IP-DOORWAY |
| POWER SUPPLY | 19Vac - 13.8Vdc, 24Vdc or PoE 802.3AF (using IP-Doorway) | 13,8 Vdc or PoE 802.3AF (using IP-Doorway) |
| ALIGNMENT | incorporated audio-visual instrument with self-check | incorporated audio-visual instrument with self-check |
| SPECIAL | Software WAVE-TEST2 for remote maintenance | Software WAVE-TEST2 for remote maintenance |
| IP GRADE | IP66 | IP65 |

## PYTHAGORAS 3T / CORAL PLUS

| | PYTHAGORAS 3T | CORAL PLUS |
|---|---|---|
| RANGE | 100, 160 m | 100, 220 m |
| FREQUENCY | X-band certified in many countries and conforms to CE standards | X-band certified conforms to CE, USA and Canadian standards |
| TEMPERATURE | -35° C / +65° C | -35°C/+65°C |
| OUTPUTS | ALARM, FAULT, TAMPER managed via relays. Over IP output available through IP-DOORWAY | ALARM, FAULT, TAMPER managed via relays. Over IP output available through IP-DOORWAY |
| POWER SUPPLY | 13,8 Vdc, 220 Vac | 13,8 Vdc or 19 Vac, 24 Vdc (with optional Coral-power) or PoE 802.3AF (with optional IP-DOORWAY). |
| CHANNELS | 16 microwave and 4 infrared | 16 crystal controlled |
| ALIGNMENT | incorporated audio-visual instrument with self-check | incorporated audio-visual instrument with self-check |
| ANALISYS | AND, OR + 6 scenarios | 10 configuration levels |
| CONFIGURATION | Software WAVE-TEST2 for remote maintenance | Software WAVE-TEST2 for remote maintenance |
| IP GRADE | IP55 | IP65 |

## MURENA PLUS

| | MURENA PLUS |
|---|---|
| RANGE | 12, 24m (CURTAIN version 12mt also available) |
| TEMPERATURE | -40°C +65°C |
| FREQUENCY | X-band certified in many countries and conforms to CE, USA and Canadian standards |
| HORIZONTAL PLANE | 90° (Murena 12) - 40° (Murena 24) - 20° (Murena Curtain) |
| VERTICAL PLANE | 45° (Murena 12) - 20° (Murena 24) - 90° (Murena Curtain) |
| POWER SUPPLY | 13,8 Vdc or PoE 802.3 AF (using IP-Doorway) |
| CONFIGURATION | Software WAVE-TEST2 for remote maintenance |
| OUTPUTS | ALARM, FAULT, TAMPER managed via relays. Over IP output available through IP-DOORWAY |
| IP GRADE | IP65 |