

NEW PRODUCT RELEASE

OPTEX Release notes

June 2016

PASSIVE INFRARED DETECTOR
PIR/MICROWAVE COMBINATION DETECTOR

FMX series

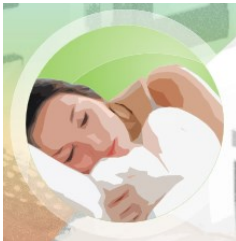
FMX-ST 15m x 15m

FMX-DT 15m x 15m

Key Features

- Complies with EN50131-2-2 (FMX-ST)
- Complies with EN50131-2-4 (FMX-DT)
- Digital quad zone logic
- Silent output
- Advanced sealed optics
- Advanced temperature compensation logic
- Remote LED control
- Selectable plug-in end of line unit (option)
- Microwave area shaping technology (FMX-DT)

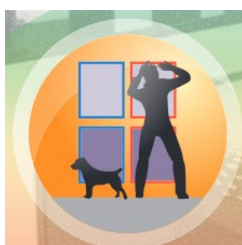
SILENT OUTPUT
Guarantee a good night's rest



RELIABLE TOUGH MOD
Perfect marriage between PIR and MW



FALSE ALARM IMMUNITY
OPTEX CORE platform



DIGITAL QUAD LOGIC
Visual pet immunity



SEALED OPTICS
To prevent potential ingress



Photo Caption

Digital Processing

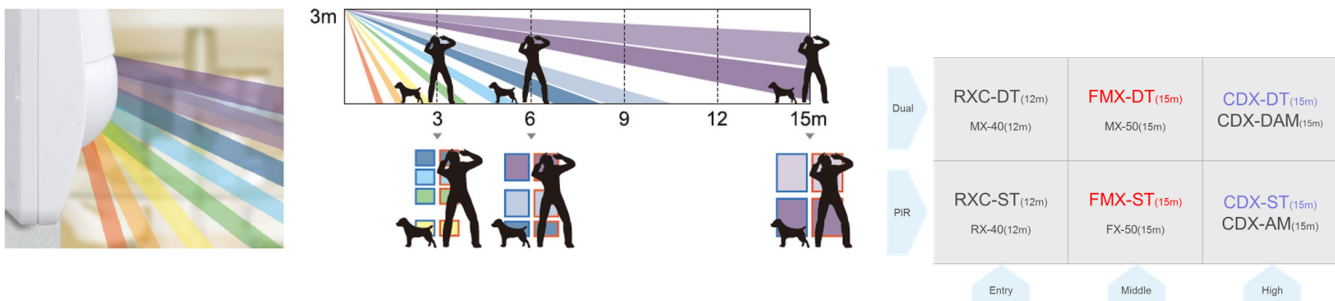
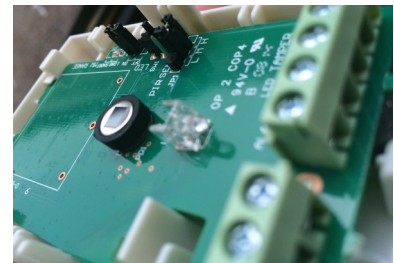
It is impossible to make a simple comparison between the old and the new. However there are fundamental differences.

The KEY change is detection logic. Our previous sensors processed events in an analogue function. The FMX series utilizes advancements in digital technology which is a micro processor called **"CORE PLATFORM"** to improve on reliability, catch performance and versatility.

Digital QUAD Zone Logic

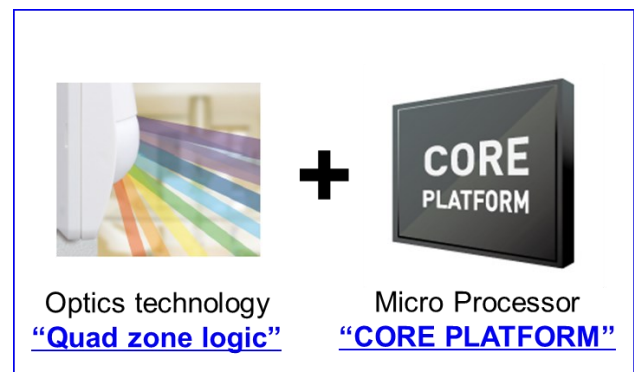
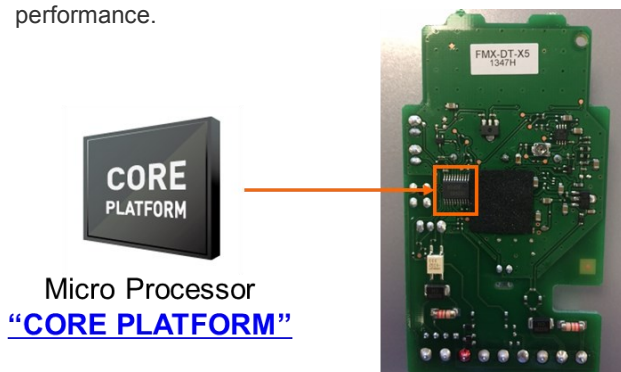
Improved optics accuracy and increased zone capacity makes QUAD zone recognition possible. This 'CORE' feature of our new range of sensors offers unique benefits over conventional detection.

FMX has 78 unique zones to cover the whole detection area (15m x 15m). At any point within the field of view (FOV), more than 4 zones are required to identify whether it is a human or a pet. (Pet tolerance Target recognition)



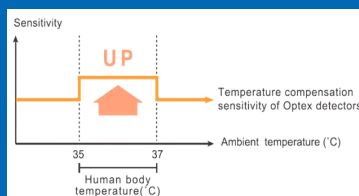
Intelligent Digital Detection

FMX series uses OPTEX's proven optical technology "Quad zone logic" and a micro processor called "CORE PLATFORM" for digital signal analysis. This combination enhances the FMX series for reliability and detection performance.

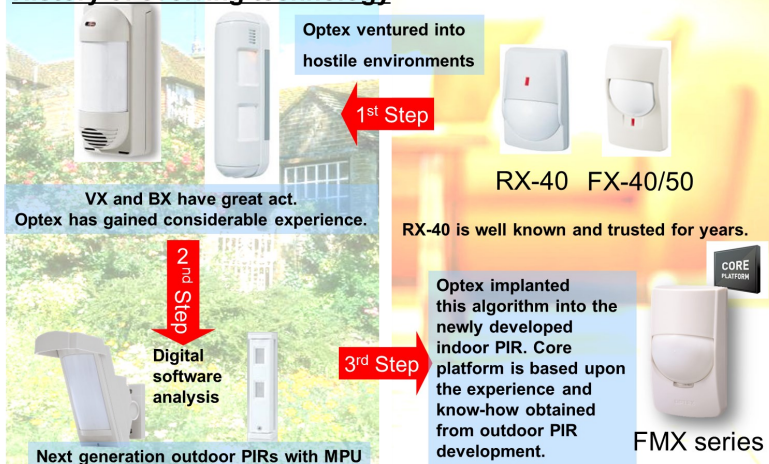


Advance temperature compensation

At a higher ambient temperature, the temperature difference between the background and a human body will be reduced. In this case the PIR could fail to readily detect a human body. With conventional temperature compensation functions, the sensitivity of detector must be set higher at 35°C than the sensitivity at 25°C (normal temperature) in order for the detector to offer a stable performance. However, with this setting, the sensitivity of the detector is excessively high at 40°C or over, which could lead to various problems. To overcome this drawback, Optex's advanced temperature compensation function allows the detector's sensitivity to automatically drop at 40°C or higher so that the detector can perform more reliably within a wider ambient temperature range.

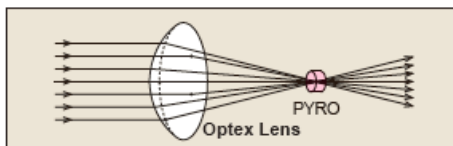


History of evolving technology



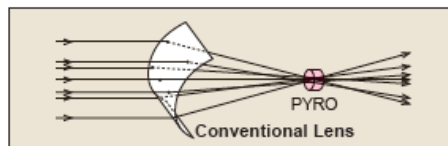
Spherical lens provides a precise focal length to each of the multiple lens segments (uniform distance between each lens segment and the pyroelectric elements). This enables each lens segment to face precisely towards its detection area, and creates detection zones without distortion, achieving a new level in lens design precision.

Optex Spherical Lens

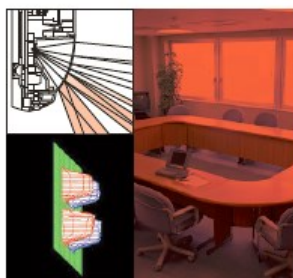


The spherical fresnel lens differs from the conventional flat fresnel lens in that the distance between the lens and the pyro-electric elements is the same across the entire lens (the focal length is always the same). It therefore collects infrared rays more efficiently.

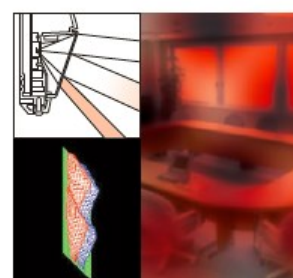
Conventional Flat Lens



Conventional flat lenses inevitably create sensitivity distortion problems when they are bent to fit a curved housing. Optex's spherically designed lens will obtain sharp detection because no bending is required.



Each focused image (detection zone) has sharply defined edges (=accurate sensitivity) and it produces the maximum signal contrast against the background area (=high detection performance). This sharp focus provides the maximum signal power to the detector, compared to a weak, sluggish signal created by a poorly focused zone.



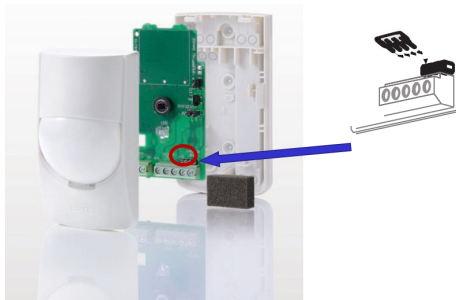
Each focused image (detection zone) has poorly defined borders (=Inaccurate sensitivity) and does not produce sufficient contrast against the background (=low detection performance). Because the IR energy is poorly focused, objects entering these low contrast border areas produce weak, poorly defined electrical signals within the detector.

Plug-in EOL socket

SELECTABLE Plug-in End of line Unit (OPTION)

Item	Alarm	Tamper	Panels
PEU-B	4.7K	4.7K	Old GE/Aritech
PEU-C	1.1K	1.1K	Honeywell Galaxy (U.K.)
PEU-D	1.1K	1.1K	Honeywell Galaxy (Benelux)
PEU-E	1.1K	1.1K	Satel
PEU-F	5.6K	5.6K	DSC
PEU-G	8.2K	8.2K	Guardall
PEU-H	4.7K	2.2K	Old Texecom, Cooper, Scantronics etc.
PEU-I	3.3K	3.3K	New Texecom, NetworX, Inim
PEU-J	6.8K	4.7K	Risco ProSYS
PEU-K	1.0K	1.0K	Siemens SPC

Using Grade 2 wiring, two types of signals (ALARM and TAMPER) can be transmitted via a single pair. There are 10 different PEU's available to match a wide variety of manufacturers panels



Contact Us

Mark Cosgrave

Export Sales Manager

Marandaz House, 1 Cordwallis Park, Clivernock Road,

Maidenhead, Berkshire, SL6 7BU, United Kingdom

Desk: +44 (0) 1628 503635

Mobile: +44 (0) 7980 782236

Skype: markcosgrave

	FX-40/50		FMX-ST	MX-40/50		FMX-DT
	FX-40	FX-50		MX-40	MX-50	
Coverage	12m x 12m 85° wide	15m x 15m 85° wide	15m x 15m 85° wide	12m x 12m 85° wide	15m x 15m 85° wide	15m x 15m 85° wide
Detection zone	72 zones		78 zones	78 zones		78 zones
Mounting height	1.5m > 2.4m		2.2m > 3.0m	1.5m > 2.4m		2.2m > 3.0m
LED indicator	Switchable ON/OFF		Switchable ON/	Switchable ON/OFF		Switchable ON/OFF
Alarm period	Approx. 2.5 sec		Approx. 2.5 sec	Approx. 2.5 sec		Approx. 2.5 sec
Alarm output	N.C., 28 VDC 0.2A max.		N.C., 28 VDC 0.2A max.	N.C., 28 VDC 0.2A max.		N.C., 28 VDC 0.2A max.
Tamper switch	N.C., Open when cover removed		N.C., Open when cover removed	N.C., Open when cover removed		N.C., Open when cover removed
Tamper output	28 VDC 0.1A max.		28 VDC 0.1A	28 VDC 0.1A max.		28 VDC 0.1A max.
Pulse count	Approx. 20 sec. 2 or 4		-	Approx. 20 sec. 2 or 4		-
Sensitivity	-		Switchable LOW/ MID/HIGH	-		Switchable LOW/ MID/HIGH
Warm up period	Approx. 30 sec.		Approx. 60 sec.	Approx. 30 sec.		Approx. 60 sec.
Power input	9.5 to 16 VDC		9.5 to 16 VDC	9.5 to 16 VDC		9.5 to 16 VDC
Current draw	17mA(max).		8mA(normal). 11mA(max). At	18mA(max).		12mA(normal). 15mA (max). At 12 VDC
RF interference			No alarm 10 V/m			No alarm 10 V/m