



## Aritech DD 400 Series

## Dual Technology Detectors

- High performance PIR verified by a high quality microwave module
  - DD 450 - 12 m coverage - 7 curtains
  - DD 470 - 16 m coverage - 9 curtains
  - DD 490 - 20 m coverage - 7 curtains
- Precision sealed "Gliding Focus Curtain" mirrors
- Unique Twin Opposed Antennae
- Custom dual technology ASIC
- PIR : Uses the latest generation 4D signal processing
- Microwave : Advanced proprietary "DoM" signal processing
- Extremely low microwave power with optional daydisable
- Alarm memory versions (selectable control polarity)
- Excellent RFI and white light rejection



### Twin Opposed Antennae

Firstly the DD 400 Series of detectors makes no compromises because it is a dual technology detector. It utilises all the good features of our PIR's, including sealed Gliding Focus Mirrors and the latest 4D signal processing. Add to that the Aritech high quality microwave module, where the latest design using Twin Opposed Antennae has been used to ensure a better signal to noise ratio and better microwave direction. The end result are products with sharp detection and excellent false alarm immunity.

### Distance of Motion (DoM) Processing

This proprietary microwave processing converts the analogue signal into a digital one where the custom ASIC can effectively measure the distance travelled by the intruder, irrespective of the intruders speed or distance from the detector. This gives a significantly more uniform microwave signal over

the entire protected area and prevents microwave "hot spots" close to the detector.

### Volumetric Curtains of Detection

Benefitting from the success of the EV series PIR's, the DD400 also features solid curtains of detection. Full undercrawl protection gives maximum security while the special characteristics of a "curtain" ensures not only better intruder detection but also better PIR stability from the environment. A further advantage is better performance in warm environments where conventional PIR's optics suffer from range collapse.

### "4D" Signal processing

4D signal processing is the latest generation of PIR processing taken from the EV400 *Plus*. 4D allows the PIR channel to intelligently analyse a signal pattern and distinguish between real human movement and false alarm

hazards. The PIR channel in it's own right is resistant to false alarms by analysing the size, shape and speed of successive signals. The "Moving Pole Filters" recently added to the 4D processing ensures real immunity to traditionally harsh environments.

### True Range Control

Unlike other competitor detectors, the DD 400 series is able to adjust both the PIR and Microwave channels - simultaneously. Due to the strength of the Gliding Focus Curtain Mirror, it is possible to reduce how hard the detector is working in smaller rooms, in both the PIR and Microwave channels, making the detector even more stable, without compromising it's excellent detection.

### Accessory

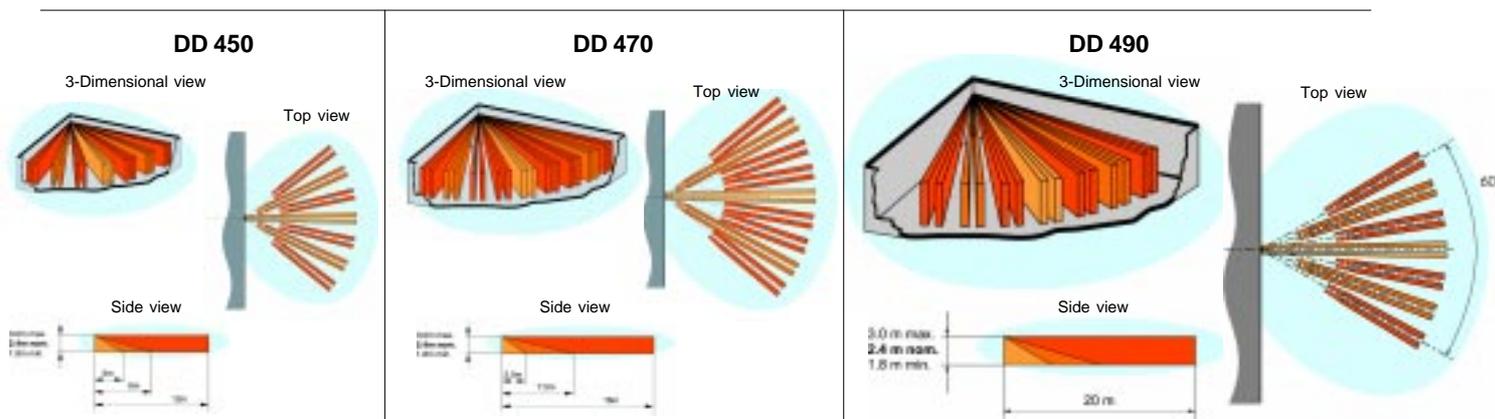
A wall and ceiling mount bracket is available providing flexibility to install and aim the detector where required.



## How to order

DD 455	Dual technology detector with 7 curtains of 12 m, NC relay
DD 456	As per DD 455, with changeover relay
DD 457	As per DD 455, plus memory + microwave disable
DD 458	As per DD 456, plus memory + microwave disable
DD 475	Dual technology detector with 9 curtains of 16 m, NC relay
DD 476	As per DD 475, with changeover relay
DD 477	As per DD 475, plus memory + microwave disable
DD 478	As per DD 476, plus memory + microwave disable
DD 495	Dual technology detector with 7 curtains of 20 m, NC relay
DD 496	As per DD 495, with changeover relay
DD 497	As per DD 495, plus memory + microwave disable
DD 498	As per DD 496, plus memory + microwave disable
ST 400	Pry-off tamper kit
SB 01	Wall/Ceiling mount bracket ( $\pm 45^\circ$ horizontal, 0 or $-5^\circ$ vertical)

## Pattern



## Technical data

Supply voltage	9 - 15 V dc; Max. ripple 2 V peak to peak at 12 V dc	
Current consumption	<b>DD 455/457/475/477/495/497</b>	<b>DD 456/458/476/478/496/498</b>
Normal operation	14.5 mA	19.5 mA
In alarm, LED on	22 mA max.	27 mA
Outputs	Alarm : NC (DD 455/457/475/477/495/497) or changeover (DD 456/458/476/478/496/498), contacts rated 80 mA at 28 V dc Tamper : NC contact, rated 100 mA at 28 V dc	
Alarm time	min. 2.5 sec.	
Mounting height	1.8 to 3.0 metres	
Target speed	min. 0.2 - max. 3.0 m/s	
Microwave frequency	2450 MHz	
Microwave power	0.005 $\mu\text{W}/\text{cm}^2$ at 1.0 m	
Coverage	DD 450 series 7 curtains of 12 metres. Range can be reduced to 7 or 5 metres. DD 470 series 9 curtains of 16 metres. Range can be reduced to 10 or 7 metres. DD 490 series 7 curtains of 20 metres. Range can be reduced to 12 or 7 metres. Pattern may be adapted using mirror masks supplied.	
Environmental limits	$-10^\circ$ to $+50^\circ$ C; Max. 95 % humidity	
Field of view	86° (DD 450/470); 60° (DD 490)	
Housing meets (with sealed cable entry)	IP30 - IK02	
Dimensions	126 x 74 x 54 mm	

CE The DD 400 complies with the essential requirements of the EMC directive 89/336/EMC.

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