

# **CCD ARRAY DETECTOR**

## **DR3000**



**Detection of small section product**

**Detection regardless of the transverse position**

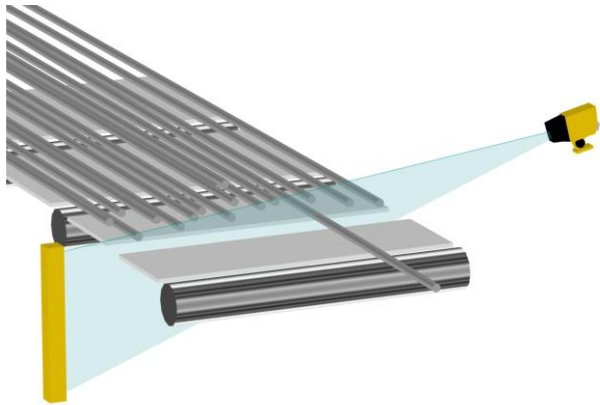
**Design for extremely harsh environment**



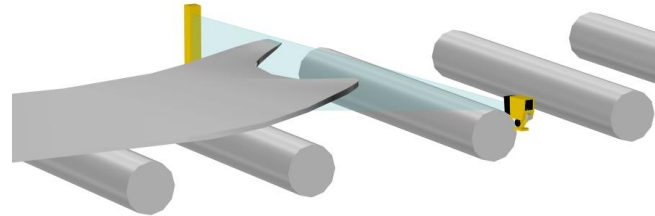
**Typical applications**

The Detector **DR3000** is a linear photodiode array detector.

In association with the **EMR-C** LED emitter, it is able to detect product with small section in a wide field, whatever the transverse position of this product.



Detection of small bars on a wide table.



Detection of head / tail

**Detector DR 3000 - Presentation**

The Detector **DR3000** consists of a lens, a linear diode array and a processing unit enclosed in a cast aluminium case. The image of the viewed area is focused onto the diode array. The output of the Detector **DR3000** switches when a product is within the field of view.

**Features**

The Detector **DR3000** has been designed for heavy industry, with:

- A water cooling jacket and a hood with air purging for protection of the window glass.
- A mounting stand, which is adjustable in two axes. In case the sensor must be replaced, it can be easily dismantled from the stand, without disturbing the alignment.
- Control panel behind a hinged cover, including:
  - Control LED (P.P.): ON when a product is detected.
  - Saturation LED (Sat); On when the diode array is saturated.
  - Sensitivity potentiometer (sens).
  - Jack socket carrying the diode array signal for display on an oscilloscope (Vid).

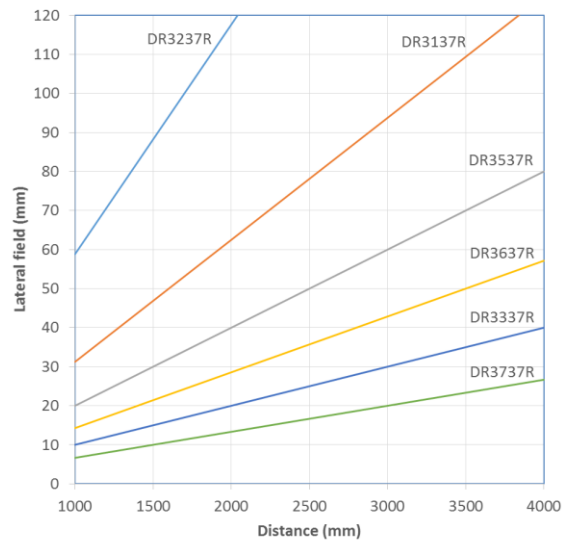
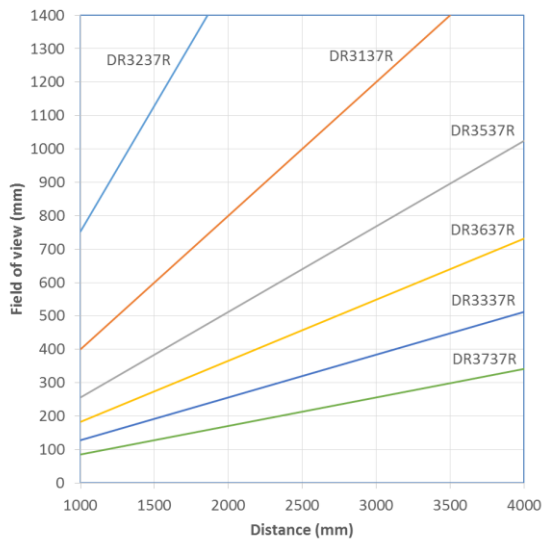
**Technical characteristics**

Reference	DR3237R	DR3137R	DR3537R	DR3637R	DR3337R	DR3737R
Focal length	8.5	16	25	35	50	75
Detection angle	40 °	22 °	14 °	10 °	7 °	4.8 °
Lateral angle	3.4 °	1.8 °	1.1 °	0.8 °	0.6 °	0.4 °
Number of diodes	256					
Max. target temperature	1112 °F For applications with a higher target temperature, please contact DELTA.					



## Field of view

The selection of the optics is related to the dimensions of the product to detect, and to the field to control.



## Electrical and other characteristics

Response time / Exposure time	6 ms
Static output	2 complementary static outputs 24 V 100 mA
Relay output	Single pole changeover: Switching capacity 550 VA with 250 V max, 5 A max Closing time : 7.5 ms, Opening time : 3 ms
Power supply voltage	220 V (-10%) to 240 V (+10%) - 50 / 60 Hz or 110 V (-10%) to 120 V (+10%) - 50 / 60 Hz
Power consumption	20 VA
Connection	Connector fitted with silicone cable with protective steel braid Standard length of 2 m (other length: 3, 5 or 8 m)
Weight	7 kg
Protection rating	IP66 (cast aluminium housing)
Working ambient temperature	32 °F to 140 °F without cooling, Up to 250 °F with water cooling: industrial quality water at about 77°F, pressure 1-2 bar and flow 1-2 l/min

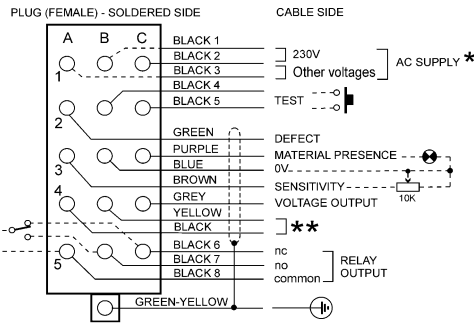
## Light emitter

Emitter	EMR-C-400	EMR-C-800	EMR-C-1200
Emission	Continuous Red LED		
Emission length	400 mm	800 mm	1200 mm
Emission width	30 mm		
Alarm output	Push-pull output, short circuit protection, 0/24 V - 50 mA max OV if internal failure or internal temperature > 131°F		
Supply voltage	110 V (-15%) to 240 V (+10%) - 50 / 60 Hz		
Power	30 VA	50 VA	60VA
Connection	Connector with 2 m cable (other length: 3, 5 or 8 m)		
Operating temperature	0 to 122 °F		
Weight	4 kg	8 kg	12 kg
Protection Rating	IP67		



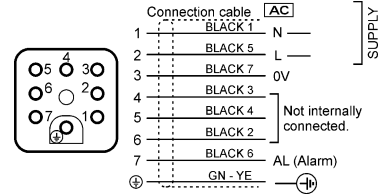
## Connection

### DR3000

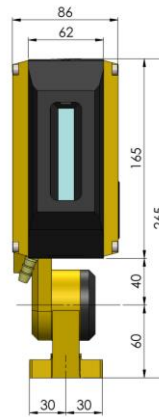
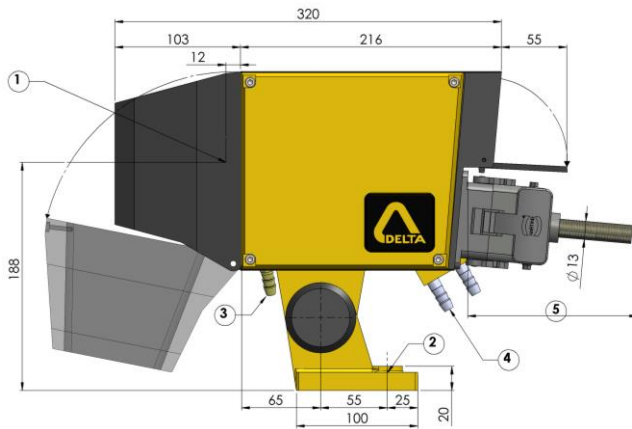


\* NOTE: CABLE IS SUPPLIED WITH CONNECTIONS FOR THE VOLTAGE REQUESTED.  
 \*\* NOT INTERNALLY CONNECTED.

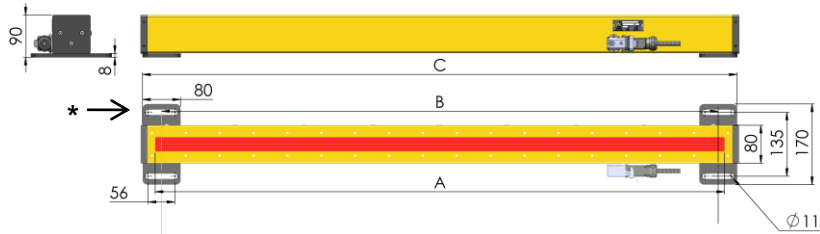
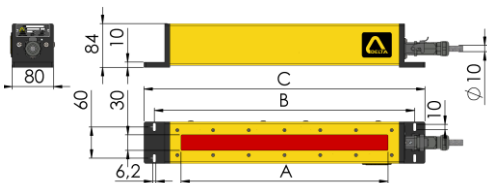
### EMR-C



## Dimensions



- ① Optical Center
- ② Mounting with screw Ø 12
- ③ Air Supply Ø 10
- ④ Water supplies Ø 10
- ⑤ Connector clearance 120 mm



	A	B	C
EMR-C-400	400	503	523
EMR-C-800	800	775	860
EMR-C-1200	1200	1175	1260

\* Note: The fixing plate can be mounted in different positions (bottom / side of the emitter).

## Reference for order

Receiver: **DR3•37 R**

Focal length	
2: 8.5	6: 35
1: 16	3: 50
5: 25	7: 75

Supply voltage	
230 VAC	
115 VAC	

Emitter: **EMR-C-•••• 115/230 VAC**

Length (mm)
400
800
1200

### DELTA

Tel : +33 388 78 21 01 - Fax : +33 388 76 02 29  
 info@deltasensor.eu - www.deltasensor.eu

### DELTA Sensor (China)

Tel: +86 519 8188 2500 - Fax: +86 519-8188 2400 - info@deltasensor.com.cn

### DELTA Vertriebsgesellschaft mbH (Germany)

Tel: +49 700 3358 2736 - Fax: +49 700 3358 2835 - info.de@deltasensor.eu

### DELTA Sensor (India)

Tel: +91 11 4054 8170 - Fax: +91 11 4054 8172 - info@deltasensor.co.in

### DELTA Sensor (Russia)

Tel: + 7 916 682 6027 - info.ru@deltasensor.eu

## DELTA USA INC. (North America)

CARNEGIE OFFICE PARC - BUILDING 2, SUITE 180  
 600 NORTH BELL AVENUE, CARNEGIE, PA 15160

Tel: (412) 429 3574 Fax: (412) 429 3348  
 info@delta-usa.com www.delta-usa.com

Subject to change without prior notice

Lt 1041 4