



**Photodiode array WELD HOLE DETECTION**

# **Weld Hole Detector**

## **DTR340**



**Large field of detection**

**For special applications**

Lt 1134



**Typical applications**

The **DTR340** is a diode array detector. In association with the **EMR** LED light emitter, it is able to detect the weld hole made in order to locate the linking weld between two strips.

**General description**

The Weld Hole Detector **DTR340** consists of a lens, a linear diode array, and a processing unit. The Emitter **EMR** consist of an array of high power red LED.

**Features**

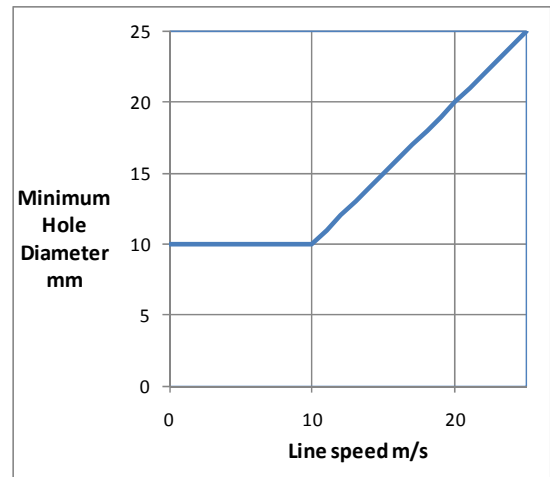
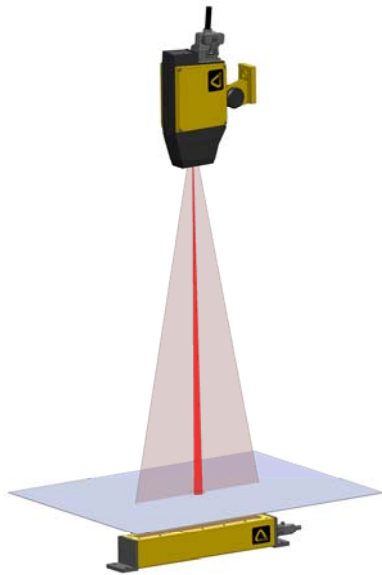
- The **DTR340** Weld Hole Detector has been designed for heavy industry with:
- Adjustable mounting stand (2 axes). In case the sensor needs to be replaced, it can be easily dismantled from the stand, thus keeping the alignment.
  - Protective hood.
  - Control panel beneath a hinged cover at rear.

**Installation**

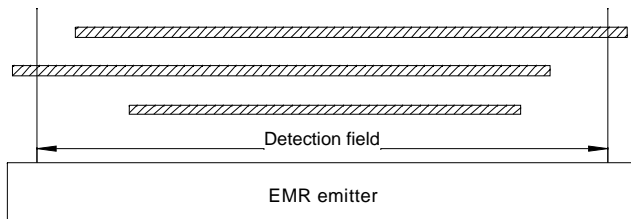
The **DTR** sensor detects the light emitted by an **EMR** through the weld hole. Sensor and emitter are fixed perpendicular to the line axis in order to take the lateral deviation of the strip into account.

The following conditions have to be held for a proper detection:

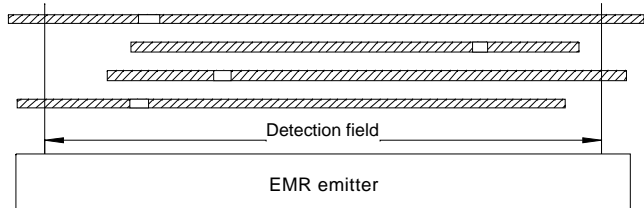
- The **DTR** field of view and the emission of the **EMR** emitter should completely cover the lateral position of the hole.
- The **EMR** emitter should cover the field of view of the **DTR** sensor.
- The minimum hole diameter depending on the line speed is define in the graph below.



The figure bellow shows the different possible positions of the hole:



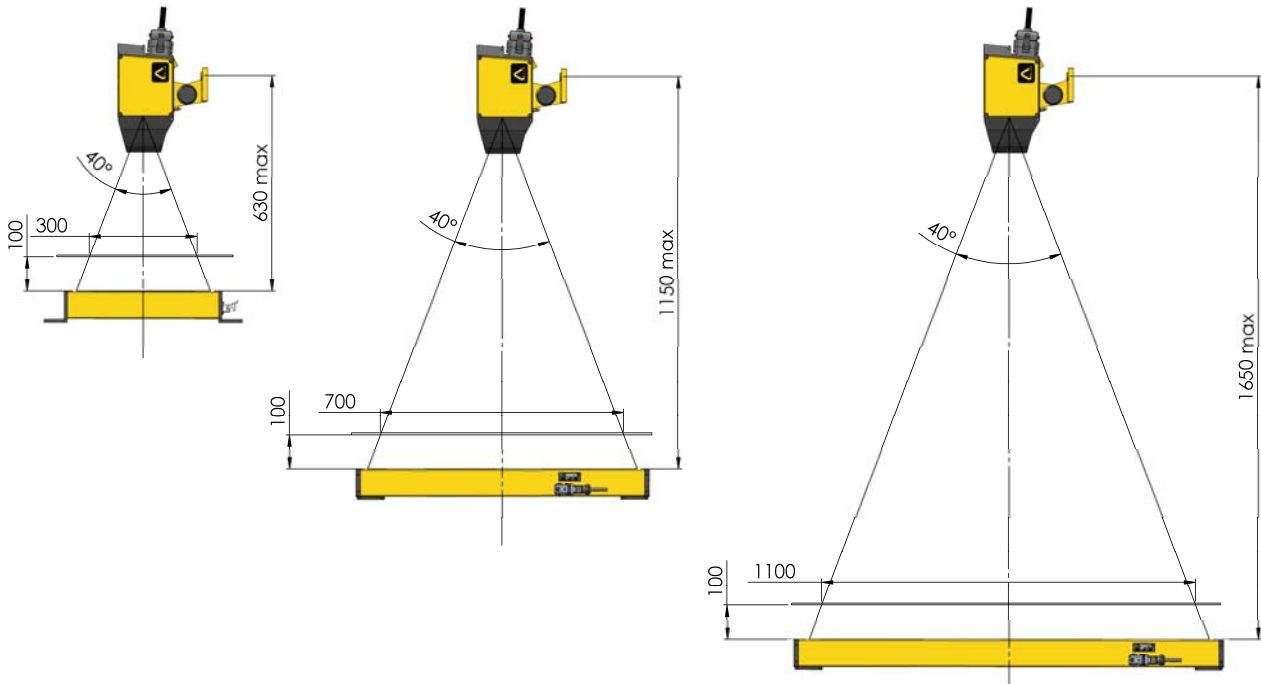
No detection, even if the strip is not fully covering the light emitter



Hole detection



## Typical installation



## Characteristics



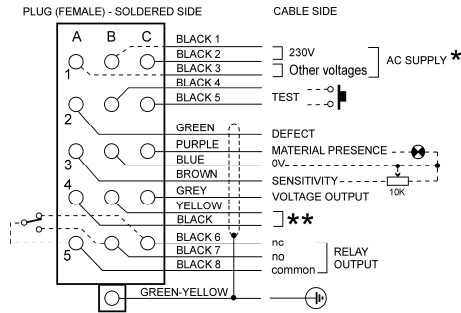
Receiver	DTR340R
Detection angle	40 °
Lateral angle	3.4°
On time (Output)	500 ms
Static output	2 complementary static outputs 24 V 100 mA
Relay output	Single pole changeover : Switching capacity 550 VA with 250 V max, 6 A max Closing time : 7.5 ms, Opening time : 3 ms
Power supply voltage	220 V (-10%) to 240 V (+10%) - 50 / 60 Hz or 110 V (-10%) to 120 V (+10%) - 50 / 60 Hz
Power consumption	20 VA
Connection	Connector with 2 m cable (other length: 3, 5 or 8 m)
Weight	7 kg
Protection rating	IP66 (cast aluminium housing)
Working ambient temperature	32°F to 140 °F

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 > 55°C		
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		



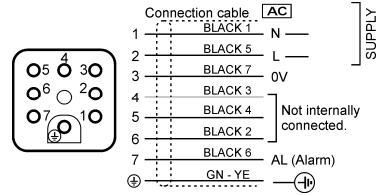
## Connection

### DTR340R

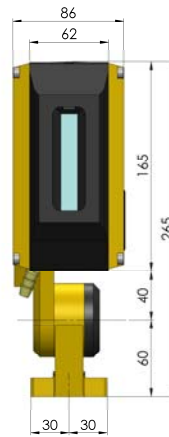
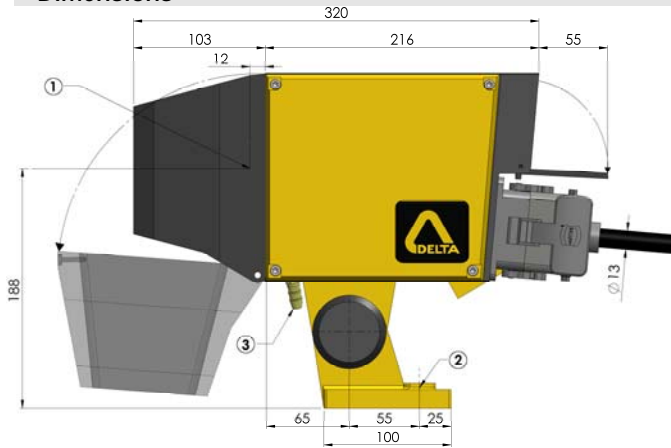


\* NOTE: CABLE IS SUPPLIED WITH CONNECTIONS FOR THE VOLTAGE REQUESTED.  
 \*\* NOT INTERNALLY CONNECTED.

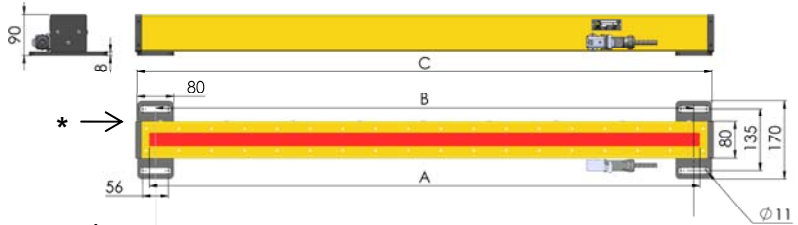
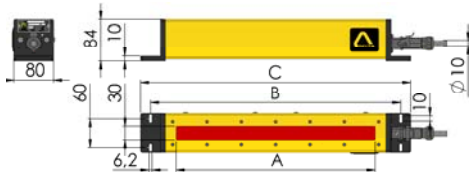
### EMR-C



## Dimensions



- ① Optical Center
- ② Mounting with screw  $\varnothing 12$
- ③ Air supply  $\varnothing 10$



	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: **DTR340R**

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: +86 519-85068855 - Fax: +86 519-85068865 - 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 1134 **4**