

**Photodiode array WELD HOLE DETECTION**



# **Weld Hole Detector**

## **DTR340R/EMR-C**



**Large field of detection**

**For special applications**

**Emitter with LED technology**

E 1134

## Typical applications

The **DTR340R** is a diode array detector. In association with a **EMR-C** LED light emitter (model EMR-C-400, EMR-C-800 or EMR-C-1200) 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 **DTR340R** consists of a lens, a linear diode array, and a processing unit.  
The Emitter **EMR-C** consist of an array of high power red LED.

## Features

The **DTR340R** Weld Hole Detector has been designed for heavy industry with:

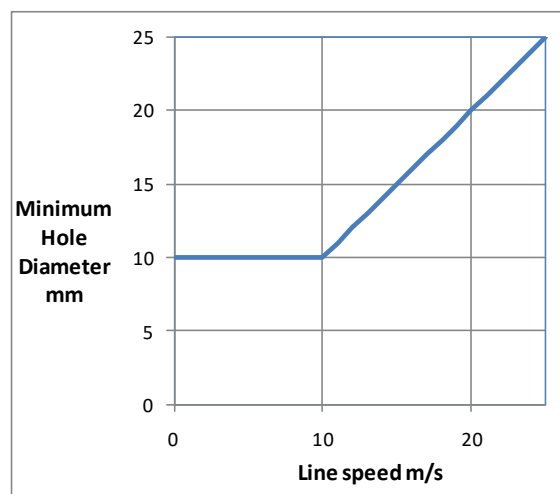
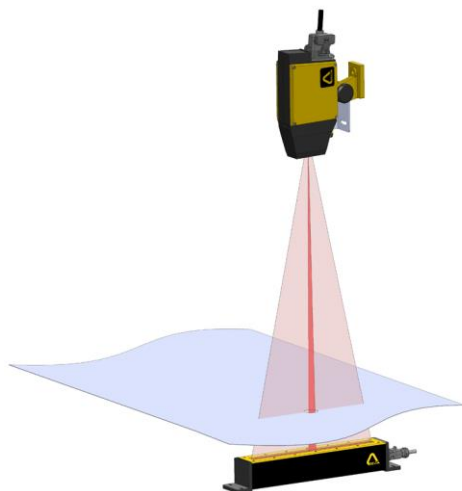
- Adjustable mounting stand (2 axes). In case the sensor needs to be replaced, it can be easily dismantled from the stand, thus keeping the alignment.
- Protective hood.
- Control panel beneath a hinged cover at rear.

## Installation

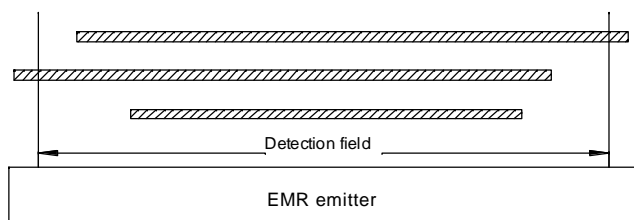
The **DTR340R** sensor detects the light emitted by an **EMR-C** through the weld hole. Receiver and emitter are fixed perpendicular to the line axis in order to take the lateral deviation of the strip into account.

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

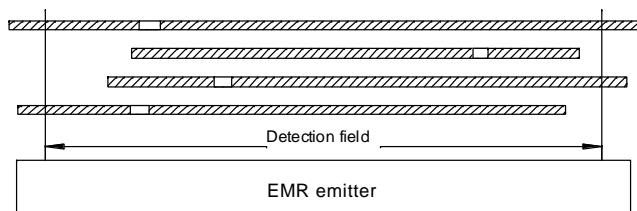
- The receiver's field of view and the light emission of the emitter should completely cover the lateral position of the hole.
- The emitter should cover the field of view of the receiver.
- The minimum hole diameter depending on the line speed is defined in the graph below.



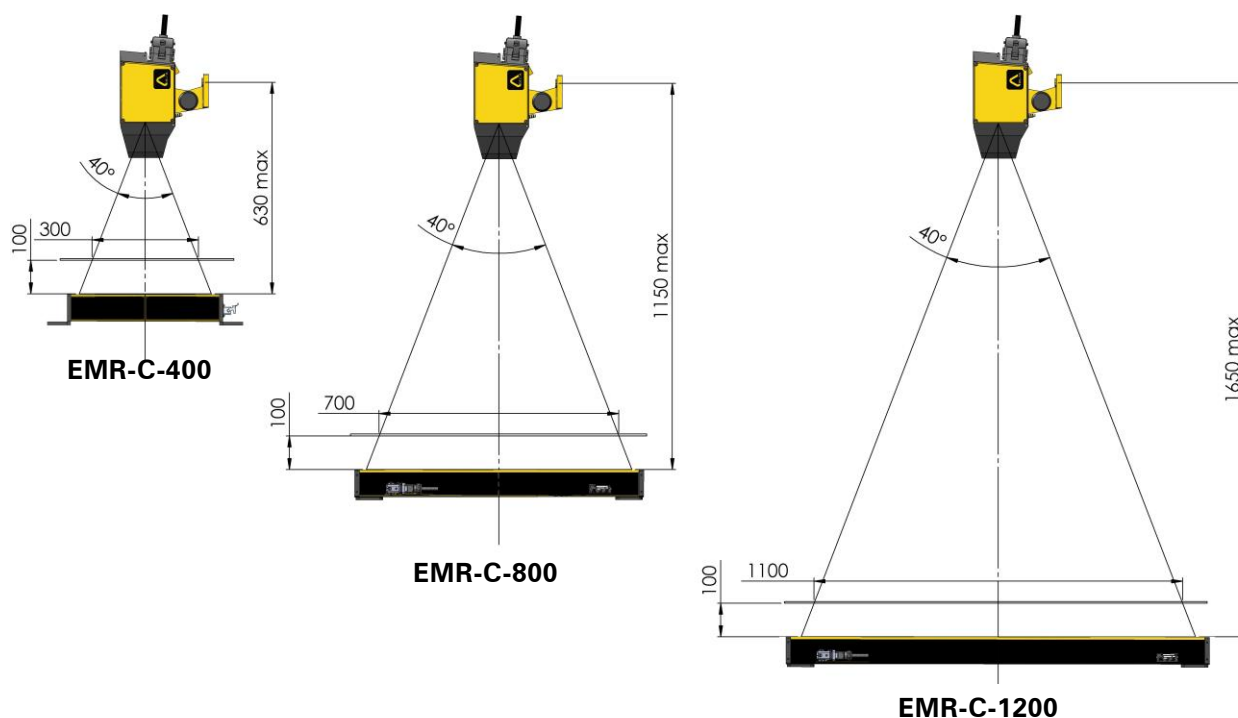
The figure bellow shows the different possible positions of the hole:



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



Hole detection

**Typical installation**

**Characteristics**

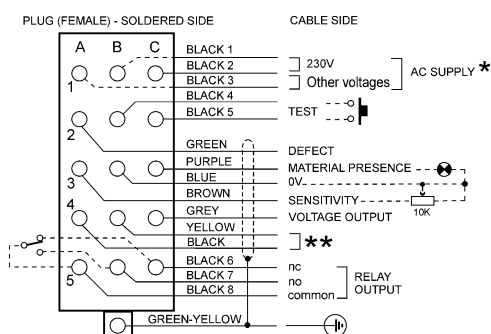

Receiver	DTR340R
Detection angle	40 °
Lateral angle	3.4°
On time (Output)	500 ms
Static output	2 complementary static outputs 24 V 100 Ma
Relay output	Single pole changeover: Switching capacity 550 VA with 250 V max, 5 A max Closing time: 7.5 ms, Opening time: 3 ms
Power supply voltage	220 V (-10%) to 240 V (+10%) - 50 / 60 Hz or 110 V (-10%) to 120 V (+10%) - 50 / 60 Hz
Power consumption	20 VA
Connection	Connector with 2 m cable (other length: 3, 5 or 8 m)
Weight	7 kg
Protection rating	IP66 (cast aluminium housing)
Working ambient temperature	0 °C to 60 °C (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 0V if internal failure or internal temperature > 55°C		
Supply voltage	110 V (-15%) to 240 V (+10%) - 50 / 60 Hz		
Power	20 VA	50 VA	60VA
Connection	Connector with 2 m cable (other length: 3, 5 or 8 m)		
Operating temperature	-20 to 50 °C (0 to 122 °F)		
Weight	4,2 kg	8 kg	12 kg
Protection Rating	IP67		



## Connection

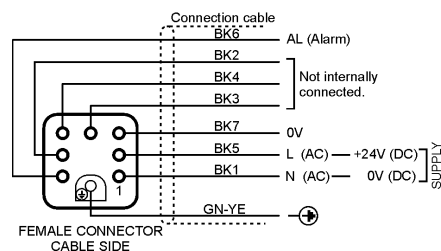
### DTR340R



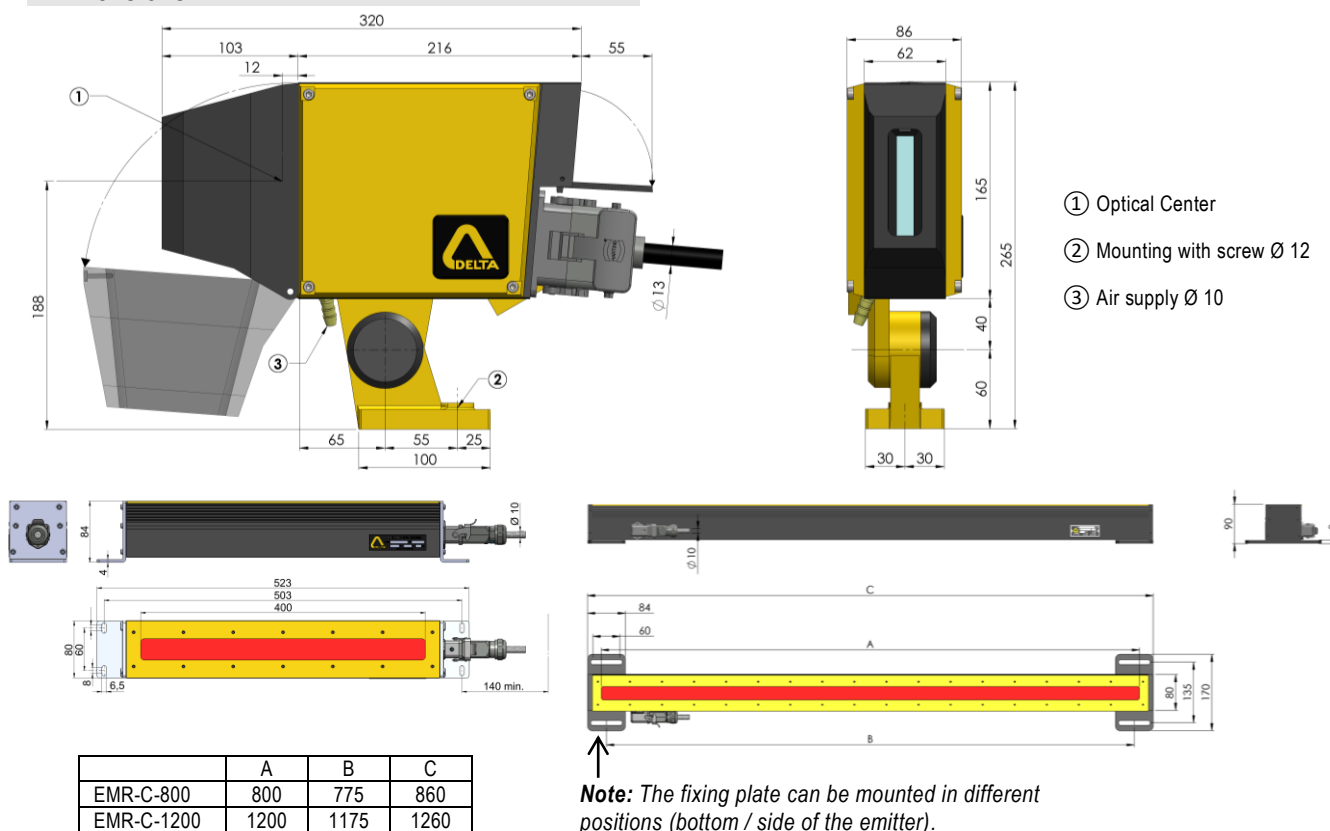
\* NOTE: CABLE IS SUPPLIED WITH CONNECTIONS FOR THE VOLTAGE REQUESTED.

\*\* NOT INTERNALLY CONNECTED.

### EMR-C



## Dimensions



## Reference for order

Receiver: **DTR340R**

Supply voltage  
230 VAC  
115 VAC

Emitter: **EMR-C- • • • • 115/230 VAC**

Length (mm)  
400  
800  
1200

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Subject to change without prior notice

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