Weld Hole Detector
DTS130

- Large field of detection
- Fast detection
- No interference from ambient light

ISO 9001

E 1133

DELTA - Aéroparc 2 - 12 rue des Cigognes - 67960 ENTZHEIM - FRANCE – TEL : +33 388 78 21 01 FAX : +33 388 76 02 29 - **www.deltasensor.eu**

Typical applications

The DTS is an infrared scanning detector. In association with the EMI infrared emitter, it is able to detect the weld hole made in order to locate the linking weld between two strips.

The DTS sensor is sensitive to infrared emission and therefore is not disturbed by the reflection of sodium vapour or fluorescent lights on the strip.

General Description

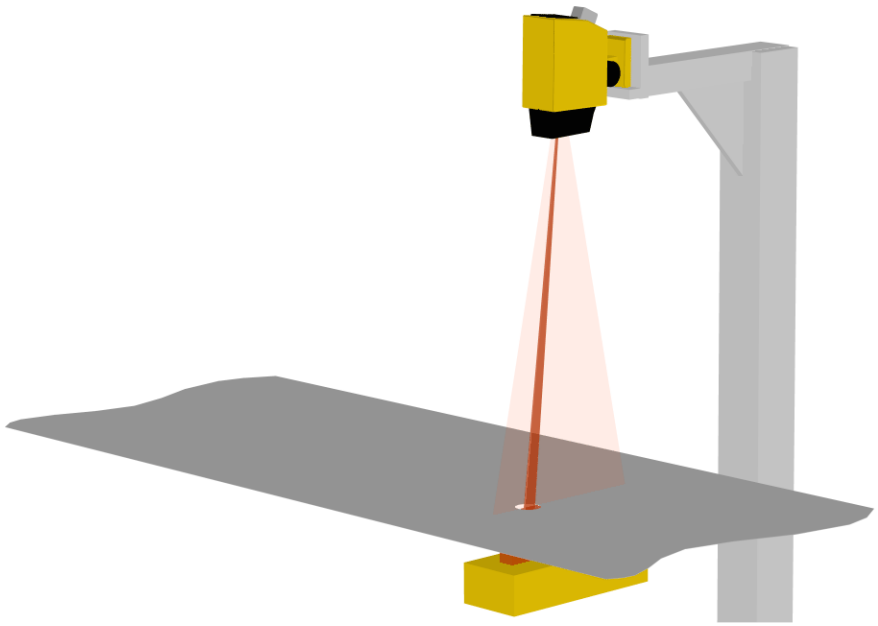
The DTS is a scanning detector. The field of detection is scanned by a multiple mirrors system. When it encounters infrared radiation, the active element of the sensor produces a signal that is processed by the built-in electronic unit and delivers a logic output. The output is kept for 500 ms after the end of the detection.

Features

The DTS weld hole detector, has been designed for heavy industry with :

- Adjustable mounting stand (2 axis). In case the sensor needs to be replaced, it can be easily dismounted from the stand, without disturbing the alignment.
- Protective hood
- Direct sighting through the sensor enabling precise orientation
- Control panel beneath a hinged cover at rear, including viewfinder, test button and indicator light.

Installation



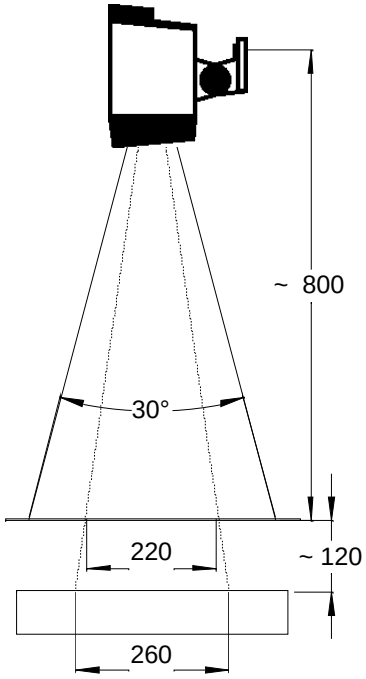
The DTS sensor detects the infrared emission emitted by an EMI through the weld hole. Sensor and emitter are fixed perpendicular to the line axis in order to take the lateral deviation of the strip into account.

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

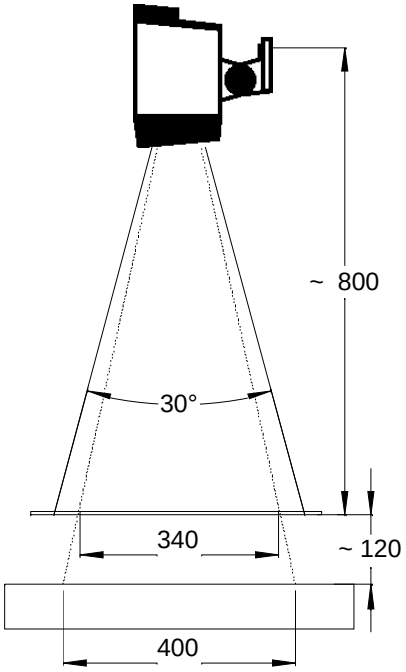
- The DTS field of view should completely cover the lateral position of the hole.
- The emission of the EMI infrared emitter should completely cover the lateral position of the hole.
- When there is no hole, the EMI emitter should be completely covered by the strip regardless of the lateral deviation of the strip. For applications where the emitter is not covered completely by strip, DELTA has developed the DTR.
- The time during which the DTS sensor can see the infrared emission should be more than 1 ms.

DELTA - Aéroparc 2 - 12 rue des Cigognes - 67960 ENTZHEIM - FRANCE – TEL : +33 388 78 21 01 FAX : +33 388 76 02 29 - **www.deltasensor.eu**

Typical installation



DTS130 + EMI260



DTS130 + EMI400

Characteristics

Sensor : DTS130

CE

Reference	*DTS130*
Scanning angle	30 °
Lateral angle	3 °
Response time	1 ms
On time	500 ms
Static output	2 complementary static outputs 24 V 100 mA
Relay output	Single pole changeover Switching capacity 550VA with 250V 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 meters cable
Weight	7 kg
Protection rating	IP 66 (cast aluminium housing)
Working ambient temperature	-20 °C to 60 °C (0 °F to 140 °F)

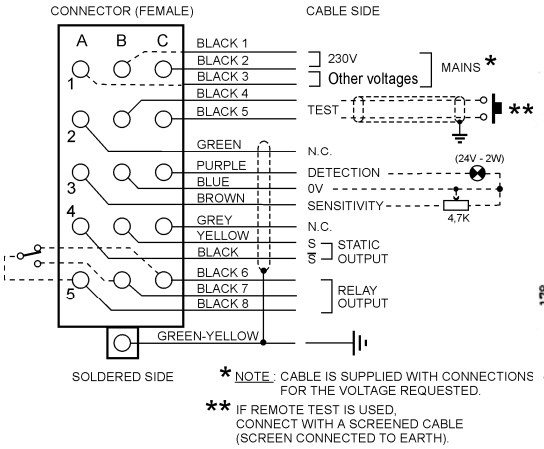
Infrared emitter : EMI

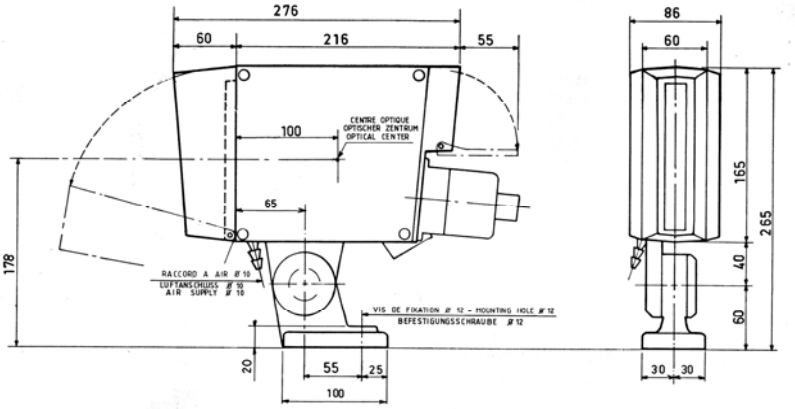
Reference	*EMI260*	*EMI400*
Emission length	260 mm	400 mm
Emission width	38 mm	
Operating voltage	220 V (-10%) to 240 V (+10%) - 50 / 60 Hz 110 V (-10%) to 120 V (+10%) - 50 / 60 Hz	
Power 230 V 115 V	600 W 600 W	800 W 280 W
Connection	2 meters cable with protective metallic braid	
Weight	4 kg	5 kg
Protection	IP 20	

DELTA - Aéroparc 2 - 12 rue des Cigognes - 67960 ENTZHEIM - FRANCE – TEL : +33 388 78 21 01 FAX : +33 388 76 02 29 - **www.deltasensor.eu**

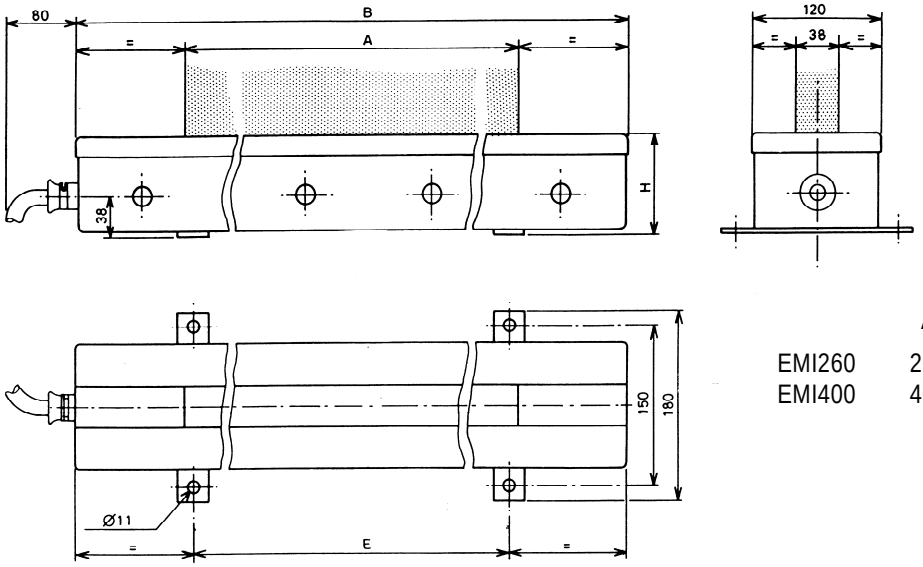
Connection and Dimensions

DTS130





EMI260 - EMI400



	A	B	E	H
EMI260	260	460	370	78
EMI400	400	600	400	78

Reference for order

DTS130

Supply voltage

230 V AC
115 V AC

EMI . . .

260 400	Emission length	Supply voltage

230 V AC
115 V AC

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.cn@deltasensor.com
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.in@deltasensor.com
DELTA USA, Inc. (North America)
Tel: +1 (412) 429 3574 - Fax: +1 (412) 429 3348 - info@delta-usa.com
DELTA Sensor (Russia)
Tel: + 7 495 792 3037 - Fax: +7 495 792 3039 - deltasensor@sovintel.ru